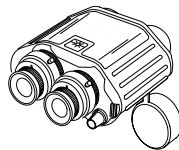


TM 9-1240-408-13&P

OPERATOR'S, UNIT, AND DIRECT SUPPORT MAINTENANCE MANUAL
for
BINOCULAR: STABILIZED, M25
(NSN 1240-01-410-7418)



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

HEADQUARTERS, DEPARTMENT OF THE ARMY

31 MARCH 2000

TM 9-1240-408-13&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 MARCH 2000

TECHNICAL MANUAL
OPERATOR'S, UNIT, AND DIRECT SUPPORT
MAINTENANCE MANUAL
for
BINOCULAR: STABILIZED, M25
(NSN 1240-01-410-7418)

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028-2 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is <http://aeeps.ria.army.mil>. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax, or email your letter, DA Form 2028, or DA Form 2028-2 direct to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-LC-CIP-WT, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

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HOW TO USE THIS MANUAL

The safest, easiest, and best way to operate and maintain the M25 Stabilized Binocular is to use this manual. Learning to use this TM is as easy as reading through the next few pages of this section. Knowing what is in this manual and how to use it will save you time and work and will help you avoid exposing yourself to unnecessary hazards while performing your job.

So where do you start?

Right here, if this is the first time you are using this TM. Be sure to completely read this section on how to use this manual first. There's a lot of information here that you need to know.

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Organization

This manual covers the operation and maintenance of the M25 Stabilized Binocular. The manual itself is divided into seven chapters, including supporting information. The seven chapters, and what they contain, are found in the Table of Contents in the front of this manual. For example, to learn about operating the M25 Stabilized Binocular, you would look in the table of contents and discover that Chapter 2 provides all pertinent information about the operation of the binocular. Since Chapter 2 covers a great deal of information, you will have to scan the chapter to find the specific information you will need.

In Chapter 7, you will find the supporting information. Each work package provides specific information that will assist you in performing the various operational and maintenance tasks. The work packages provide such information as additional references (i.e. other TMs or FMs), as in WP 0029 00, and Expendable and Durable Items List, as in WP 0046 00. Become familiar with all supporting information work packages and what they contain before beginning any operational or maintenance task.

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HOW TO USE THIS MANUAL - Continued

Am I ready to use the TM?

If you've taken the time necessary to read this section, and are sure of the location and arrangement of the different sections of this TM, you are ready to begin. Remember, this TM has been arranged with you, the user, in mind. Your safety and ability to perform the operational and maintenance tasks in the most efficient manner possible hinge on your ability to perform and understand the information contained in this manual. If you fully understand the arrangement and purpose of this TM, and have taken the time to read through this section, you will have no trouble operating and maintaining the binocular in the manner for which it was designed.

OPERATOR, UNIT, AND DIRECT SUPPORT

BINOCULAR: STABILIZED, M25

GENERAL INFORMATION

SCOPE

Type of Manual

Operator's, Unit, and Direct Support Maintenance, including Repair Parts and Special Tools List (RPSTL).

Model Number and Equipment Name

BINOCULAR: stabilized, M25.

Purpose of Equipment

The M25 Stabilized Binocular is designed to allow target detection, recognition, and identification at approximately twice the range of standard binoculars. It can also be used for observation from rotary or fixed wing aircraft and tracked or wheeled land vehicles.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, Functional User's Manual for the Army Maintenance Management System (TAMMS).

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your binocular 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 or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to us at Commander, U.S. Army Armament Research, Development and Engineering Center, ATTN: AMSTA-AR-QAW-A, Rock Island, IL 61299-7630 (Fax: DSN 793-6653, Commercial (309) 782-6653) (E-mail: qawqdrs@ria.army.mil). We'll send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

CORROSION PREVENTION AND CONTROL (CPC) - Continued

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using SF 368, Product Quality Deficiency Report. Use of key words such as "corrosion", "rust", "deterioration", or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to:

Commander

U.S. Army Armament Research, Development and Engineering Center

ATTN: AMSTA-AR-QAW-A (R)/Customer Feedback Center

Rock Island, IL 61299-7300

Fax: DSN 793-6653, Commercial (309) 782-6653

E-Mail: qawqdrs@ria.army.mil

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Smash all optical elements to prevent enemy use.

PREPARATION FOR SHIPMENT OR TURN IN

Refer to WP 0023 00 for instructions on preparation for storage or turn-in.

WARRANTY

The M25 Binocular is under Fraser-Volpe Corporation warranty for one year. Report all defects in material or workmanship on a Quality Deficiency Report (QDR) utilizing the Army Electronic Product Support (AEPS) web site: <http://aeeps.ria.army.mil>. If assistance is needed in submitting the QDR in AEPS, contact (309) 782-6764 or 7698 (DSN 793-6764 or 7698). Alternately, QDRs may also be recorded on a SF 368 and submitted to: QAWQDRS@ria.army.mil; faxed to (309) 782-6653 or 7609 (DSN 793-6653 or 7609); or mailed to Cdr, TACOM-ARDEC, ATTN: AMSTA-AR-QAW-C, Rock Island, IL 61299-7300.

NOMENCLATURE CROSS REFERENCE LIST

Common Name	Official Nomenclature
Arctic Pack	Battery Power Supply
Eyecup	Eyeshield, Optical Instrument
Hand Strap	Webbing Strap
Neck Strap	Webbing Strap
Optical Case	Transportation Case

LIST OF ABBREVIATIONS/ACRONYMS

Abbreviation	Acronym
Hz	Hertz
SB	Stabilized Binocular
VDC	Volts Direct Current

SAFETY, CARE, AND HANDLING

Handle the M25 Stabilized Binocular and its accessories with care. Dropping the binocular can damage or misalign the optics. Keep the binocular clean and dry. Store all components in the hard transportation case when not in use or when transporting to other locations. Follow the instructions outlined in this TM to ensure the best usage and service for the binocular.

DO NOT use a dry cloth to clean the glass lenses of the binocular. Specific cleaning instructions are given in WP 0013 00.

DO NOT disassemble the binocular beyond that authorized by this TM. They are purged and sealed units.

DO NOT attempt to force the binocular focus adjustments beyond their stop limits, as this will damage internal and external parts.

DO NOT unnecessarily expose the binocular to severe weather elements.

**SUPPORTING INFORMATION FOR REPAIR PARTS, SPECIAL TOOLS,
TMDE, AND SUPPORT EQUIPMENT****Common Tools and Equipment**

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE), CTA 50-970, Expendable/Durable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items, as applicable to your unit.

Special Tools, TMDE, and Support Equipment

Refer to WP0031 00 for a list of special tools that are used on this equipment. Also, refer to WP 0031 00 for the Maintenance Allocation Chart.

Repair Parts

Repair parts are listed and illustrated in supporting information work packages 0033 00 through 0041 00.

END OF WORK PACKAGE

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CHAPTER 1

DESCRIPTION AND THEORY OF OPERATION

OPERATOR'S, UNIT, AND DIRECT SUPPORT

**BINOCULAR: STABILIZED, M25
(NSN 1240-01-410-7418)**

EQUIPMENT DESCRIPTION AND DATA

**EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES;
LOCATION AND DESCRIPTION OF MAJOR COMPONENTS;
EQUIPMENT DATA**

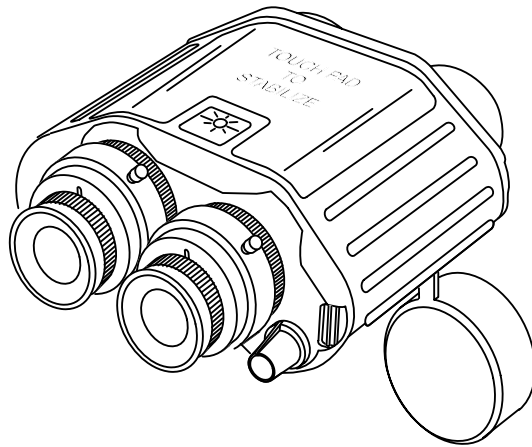
EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

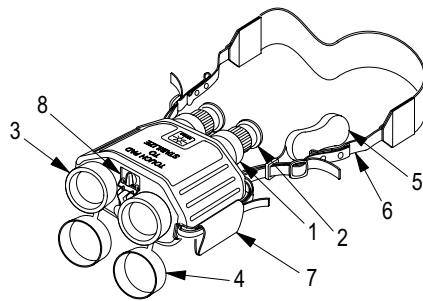
The M25 Binocular is a 14X Binocular with a built-in gyroscopically controlled optical stabilizer, minimizing effects of hand tremor and platform vibration.

**EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES -
Continued**

The M25 binocular has user removable day eyepieces that can be replaced with optional eyepieces containing GEN III Image Intensifier Tubes, to provide for night vision capability.

The binocular operates either from internal batteries (2 "AA" cell), or from 6-30 volts direct current (VDC) applied through a connector. The unit comes with a neck strap and is supplied with the following: technical manual, hand strap, special purpose cable assembly, hard transportation case, and soft carrying pouch. The performance of correct and timely maintenance will ensure continued serviceability.



LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

EYEPiece (1). Two detachable pieces used to look through binocular. They adjust for focus and individual eye spacing.

EYECUP (2). Rubber end on eyepiece. Folds back for viewing with eyeglasses.

OBJECTIVE LENS (3). Located on each side of battery box.

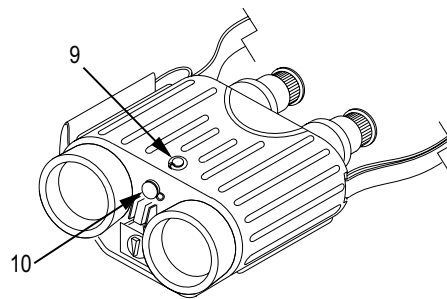
LENS CAP (4). Rubber cover for protection of objective lens when Stabilized Binocular is not in use.

LENS CAP (5). Rubber cover for protection of eyepiece lenses when Stabilized Binocular is not in use.

NECK STRAP (6). Allows operator to carry binocular around neck.

HAND STRAP (7). When adjusted properly, allows for easy operation with one hand.

BATTERY BOX (8). Houses two "AA" batteries required to supply power to Stabilized Binocular.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

TRIPOD MOUNTING HOLE (9). Hole located on the bottom of binocular for securing binocular to a tripod.

VEHICLE POWER PLUG (10). Connects special purpose cable assembly to binocular for use with external power source.