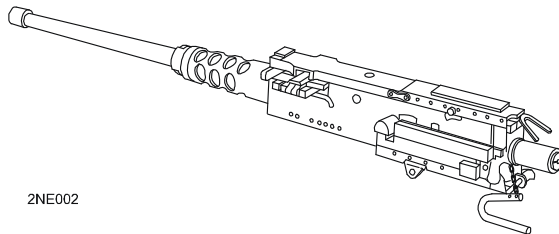
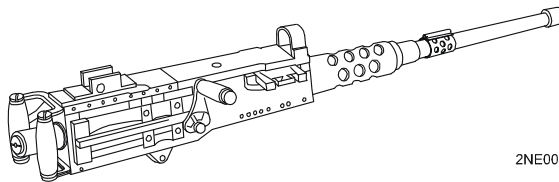


***ARMY TM 9-1005-213-10
MARINE CORPS TM 02498B-10/2
AIR FORCE TO 11W2-6-3-161
NAVY SW361-AB-MMO-010**

**OPERATOR'S MANUAL
for
MACHINE GUNS, CALIBER .50; M2, HEAVY BARREL**

**FLEXIBLE, W/E (1005-00-322-9715) (EIC: 4AG)
M48 TURRET TYPE (1005-00-957-3893) (EIC: 4BB)
FLEXIBLE, W/O EQUIP (1005-00-726-5636) (USMC)
UP GUNNED WEAPONS STATION (UGWS) (1005-01-362-6237 (USMC)
SOFT MOUNT (1005-01-343-0747) (NAVY)
FIXED TYPE RIGHT HAND FEED (1005-00-122-9339) (NAVY)
FIXED TYPE LEFT HAND FEED (1005-00-122-9368) (NAVY)**



***Superseded TM 9-1005-213-10, 01 June 2001, including all changes.**

**HEADQUARTERS, DEPARTMENTS OF THE ARMY, AIR FORCE,
AND NAVY AND COMMANDANT OF THE MARINE CORPS**

FEBRUARY 2010

Marine Corps PCN 184 024983 00

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WARNING - This document contains export-controlled technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751 et seq) or Executive Order 12470. Violations of these export laws are subject to severe criminal penalties.

DESTRUCTION NOTICE - Destroy by any method that will prevent disclosure of contents or reconstruction of the document.

WARNING SUMMARY

This warning summary contains general safety warning and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel. Also included are explanations of safety and hazardous materials icons used within the Technical Manual.

FIRST AID

For first aid information, refer to FM 4-25.11, First Aid.
Air Force personnel should refer to AFMAN 44-163(I).
Marine Corps personnel refer to MCRP 3-02G

EXPLANATION OF SAFETY WARNING ICONS



FLYING PROJECTILE – spring loaded parts could release and hit body causing injury or death.



EAR PROTECTION - headphones over ears shows that noise level will harm ears.



EXPLOSION - rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.



EYE PROTECTION - person with goggles shows that the material will injure eyes.



WEAPON FIRE - accidental discharge of a weapon could penetrate the body causing serious injury or death.

WARNING SUMMARY - Continued

GENERAL SAFETY WARNINGS DESCRIPTION

WARNING



Hearing protection must be worn when firing this weapon.

WARNING



Headspace and timing should be checked and adjusted before firing weapon, after assembling weapon, and after replacing barrel.

Improper headspace and timing can cause malfunctions, damage to the gun, and injury to personnel.

Immediate action should be applied to a hot weapon within 10 seconds (cook-off). If round is not removed within 10 seconds, wait 15 minutes. Keep the weapon trained on the target.

Never open the cover on a hot weapon. An open cover cook-off could occur and result in serious injury or death.

Do not expose ammunition to the direct rays of the sun.

Depending on climate condition, do not leave live rounds laying on top of hot expended brass.

Round may fall to surface and possibly explode.

WARNING



When the machine gun has been in action, clear machine gun before anyone moves in front of the muzzle. Clearing consists of unloading the machine gun and visually inspecting weapon to ensure all rounds have been removed. Do not release the bolt or press the trigger.

To avoid accidental firing, remove ammunition, clear weapon and verify that chamber is clear.

WARNING SUMMARY - Continued

Keep fingers out of chamber to prevent injury.

Chamber may be hot. Use caution while inspecting T-slot.

Use only ammunition authorized for use in the M2 machine gun.

Do not oil or grease ammunition. Oiled cartridges will produce excessive chamber pressure.

Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing.

Never remove backplate assembly from any weapon until the chamber has been cleared.

Do not remove backplate unless the bolt is in the forward position.

Do not attempt to charge machine gun without the backplate assembled to machine gun. Stand to one side when removing backplate.

Never attempt to lift machine gun by the backplate group assembly in the upright position.

Do not attempt to release the firing pin with cocking lever forward. The cocking lever could spring back forcibly and serious injury to the hand.

To prevent accidental firing, immediately after a firing exercise, request field maintenance remove the side plate trigger assembly from the receiver when the M2 flex machine gun has been used on the M63 antiaircraft mount. The side plate trigger is to be stored in the container attached to the M63 antiaircraft mount.

The climatic temperature of various global regions will make a difference as to what constitutes a hot gun. A cook-off can occur within 50 rounds when the weapon and ammunition have been sitting in the sun.

Heat protective mitten should be used when barrel is hot. When bolt latch release and trigger are both held down, machine gun will fire automatically (flex only).

Do not close cover when bolt is held rearward as damage may occur when bolt goes forward.

WARNING SUMMARY - Continued

While removing barrel buffer assembly and barrel extension assembly, maintain thumb pressure on buffer accelerator.

Firing the M2 machine gun with improperly set headspace or timing, or installing the barrel without retracting the charging handle to view the square on the barrel locking spring through the 3/8 in. hole on the right side of the receiver, will result in an explosion causing damage to the machine gun and/or death or injury to the gun crew.

WARNING



Appropriate eye protection is recommended when cleaning your weapon and/or its parts.

EXPLANATION OF HAZARDOUS MATERIALS ICONS



CHEMICAL - drops of liquid on hand shows that the material will cause burns or irritation to human skin or tissue.



EYE PROTECTION - person with goggles shows that material will injure eyes.



FIRE – flame shows that a material may ignite and cause burns.



VAPOR – human figure in a cloud shows that material vapors present a danger to life or health.

WARNING



Chemical resistant gloves must be worn while using dry cleaning solvent.

DEFINITION OF THE FOLLOWING ALERTS THROUGHOUT THIS MANUAL:

WARNING – Identifies a clear danger to the person doing that procedure.

CAUTION – Identifies risk of damage to the equipment.

NOTE – Used to highlight essential procedures, conditions, statements, or convey important instructional data to the user.

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LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: The portion of text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and changed pages/work packages are:

Original..... 12 February 2010

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 50 AND TOTAL NUMBER OF WORK PACKAGES IS 18 CONSISTING OF THE FOLLOWING:

Page/WP No.	*Change No.	Page/WP No.	*Change No.
Title	0	WP 0019 00	0
a - d	0	WP 0021 00	0
A - B	0	WP 0022 00	0
i - iv	0	WP 0023 00	0
WP 0001 00	0	WP 0024 00	0
WP 0002 00	0	WP 0025 00	0
WP 0003 00	0	WP 0026 00	0
WP 0004 00	0	WP 0027 00	0
WP 0005 00	0	WP 0028 00	0
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WP 0007 00	0	WP 0030 00	0
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WP 0013 00	0	WP 0036 00	0
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WP 0015 00	0	WP 0038 00	0
WP 0016 00	0	PULLOUT-1/-2.....	0
WP 0017 00	0	Index	0
WP 0018 00	0		

*Zero in this column indicates an original page or work package.

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*ARMY TM 9-1005-213-10
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NAVY SW361-AB-MMO-010

HEADQUARTERS,
DEPARTMENTS OF THE ARMY,
AIR FORCE AND NAVY AND
COMMANDANT OF THE MARINE CORPS
WASHINGTON, D.C., 12 February 2010

Operator's Manual

MACHINE GUNS, CALIBER .50; M2, HEAVY BARREL

FLEXIBLE, W/E (1005-00-322-9715) (EIC: 4AG)
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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any errors, or if you would like to recommend any improvements to the procedures in this publication, please let us know. The preferred method is to submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications) through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is <https://aeeps.ria.army.mil>. The DA Form 2028 is located under the Public Applications section in the AEPS Public Home Page. 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, e-mail, or fax your comments or DA Form 2028 directly to the U.S. Army TACOM Life Cycle Management Command. The postal mail address is U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LCL-MPP / TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The e-mail address is tacomlcmc.daform2028@us.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726. Air Force users will submit requests for changes or reports of errors utilizing AFTO Form 22, Technical Manual (TM) Change Recommendation and Reply, in accordance with the guidance in Air Force Technical Order 00-5-1.

***SUPERSEDURE NOTICE.** Supersedes TM 9-1005-213-10, 01 June 2001, including all changes.

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HOW TO USE THIS MANUAL

GENERAL

Knowing how to use this manual is very important.

- a. References are to pages in this manual.
- b. Throughout this manual, text is keyed to illustrations by numbered callouts. When an item is called out in a procedure, a number in parentheses in the text corresponds with a number on the illustration.

INDEXES

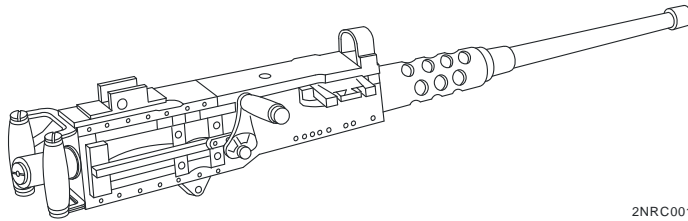
This manual is organized to help you quickly find the information needed. There are two useful indexes:

- a. **Table of Contents.** The Table of Contents lists, in the order of presentation, all chapters, sections, appendixes, and alphabetical index and gives the page numbers where they begin.
- b. **Alphabetical Index.** This index, located in the back, is an extensive subject index for the entire manual. The page numbers following each entry tell where in the manual to find a particular subject.

CHAPTER 1

**GENERAL INFORMATION,
EQUIPMENT DESCRIPTION
AND
THEORY OF OPERATION**

OPERATOR**GENERAL INFORMATION**



2NRC001

SCOPE

Type of Manual: Operator's Manual

Model Number and Equipment Name: Machine Gun, Caliber .50; M2, heavy barrel, flexible type, and Fixed M48 turret type, UGWS, soft mount, and fixed type machine guns. For maintenance of the M3 Tripod Mount, MK93 Mod 0 and Mod 1 Mounts refer to TM 9-1005-245-13&P. Air Force users refer to Air Force Technical Order 11 W2-8-1-322 for maintenance of the M3 Tripod Mount and Air Force Technical Order 11 W2-8-32-4 for MK64 Mount maintenance procedures.

Purpose of Equipment: To provide automatic weapon suppression fire for offensive and defensive purposes. This weapon can be used effectively against personnel, light armored vehicles, and low flying/slow flying aircraft. The caliber .50, M2 flexible version is used as a ground gun on either the M3 Tripod Mount or with the MK 93 Mod 0 Mount on the M3 Tripod. The caliber .50, M2, Fixed M48 turret type, fixed type and soft mount are installed on mounts of several different types of combat vehicles and ships.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. Navy users refer to applicable preventive maintenance instructions. Marine Corps forms and procedures for equipment maintenance will be those prescribed by TM 4700-15/1. Air Force users refer to TO 11W1-1-10, Historical Data Recording of Inspection, Maintenance, and Firing Data for Ground Weapons, and AFI 36-2226, Combat Arms Program for applicable forms and records.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your machine gun 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. If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to <https://aeps.ria.army.mil/aepspublic.cfm> (scroll down and choose the "Submit Quality Deficiency Report" bar). The Internet form lets you choose to submit an Equipment Improvement Recommendation (EIR), a Product Quality Deficiency Report (PQDR) or a Warranty Claim Action (WCA). You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual or to us at: Commander, RDECOM-ARDEC, ATTN: AMSRD-AAR-QEP-A, 1 Rock Island Arsenal, Rock Island, IL 61299-7300. EIRs may be emailed to ROCK-QDRS@conus.army.mil. We will send you a reply.

Marine Corps personnel shall submit SF 368s in accordance with MCO 4855.10. PQDRs should be submitted via the Product Data Reporting and Evaluation Program (PDREP) at <http://www.nslcptsmh.csd.disa.mil/pdrep/pdrep.htm>. As an alternative, non-encrypted PQDRs may be submitted via the same site using the On-Line EZ-PQDR feature (when submitted via EZ, a PDREP User ID is not required; however a CAC is required).

Air Force users submit Materiel Deficiency Report (MDR) and Quality Deficiency Report (QDR), in accordance with Technical Order 00-35D-54 and Air Force Instruction (AFI) 21-115.

Navy users submit SF 368, Quality Deficiency Report (QDR), to Commanding Officer, Naval Weapons Support Center, Code 4081, Crane, IN 47522-5020.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of 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. 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, Quality Deficiency Report. Use of key words such as "corrosion", "rust", "deterioration", or "cracking" will assure that the information is identified as a CPC problem. The form

should be submitted to: Commander, US Army Armament, Research Development and Engineering Center, ATTN: AMSTA-AR-QAW, Rock Island, IL 61299-7300. Marine Corps personnel are encouraged to submit SF 368 in accordance with MCO 4855.10, Quality Deficiency Report (QDR), to: Commander, Marine Corps Logistics Base (Code 808), Albany, GA 31704-5000. Air Force users should submit a Quality Deficiency Report (QDR) in accordance with Technical Order 00-35D-54 and Air Force Instruction (AFI) 21-115.

OZONE DEPLETING SUBSTANCES (ODS)

N/A

DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE

Refer to TM 750-244-7, for procedures concerning destruction of material to prevent enemy use.

PREPARATION FOR STORAGE OR SHIPMENT

Refer to TM 9-1005-213-23&P.

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