

FM 23-8

DEPARTMENT OF THE ARMY FIELD MANUAL

U.S. RIFLE

7.62MM, M14 AND M14E2



HEADQUARTERS, DEPARTMENT OF THE ARMY
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*This manual supersedes FM 23-8, 7 December 1959, including C 1, 20 May 1960, and C 2, 15 August 1962.

CHAPTER 1

INTRODUCTION

1. Purpose and Scope

a. This manual is a guide for commanders and instructors in presenting instruction in the mechanical operation of the M14 and M14E2 rifles. It includes a detailed description of the rifle and its general characteristics; procedures for detailed disassembly and assembly; an explanation of functioning; a discussion of the types of stoppages and the immediate action applied to reduce them; a description of the ammunition; and instructions on

the care, cleaning, and handling of each weapon and its ammunition.

b. Marksmanship training is covered in FM 23-71 and FM 23-16.

c. The material contained herein is applicable without modification to both nuclear and nonnuclear warfare.

d. Users of this manual are encouraged to submit recommended changes or comments to improve the publication. Comments should be keyed to the specific page, paragraph, and line of the text

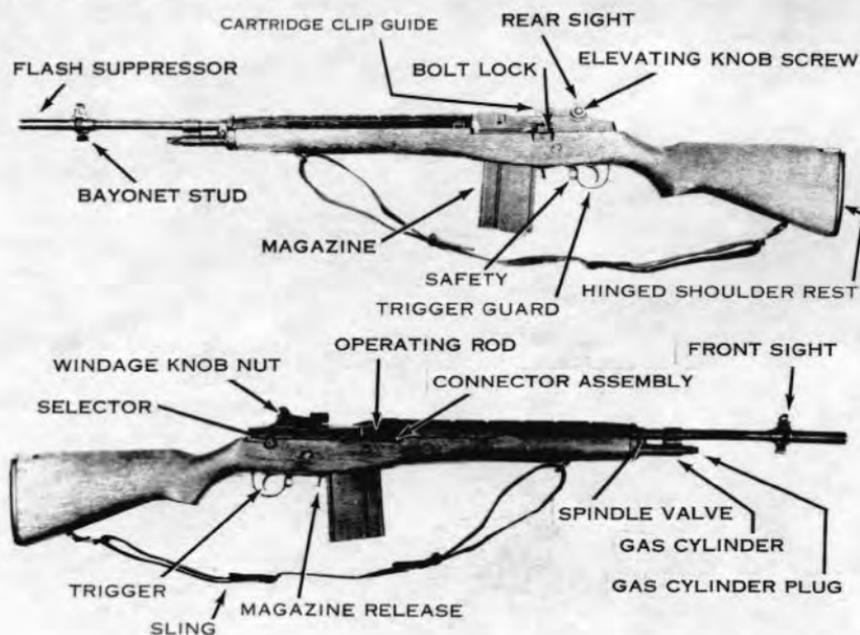


Figure 1. The M14 rifle.

in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to the Commandant, United States Army Infantry School, Fort Benning, Ga., 31905.

2. Importance of Mechanical Training

The rifle is the Infantryman's basic weapon. It gives him an individual and powerful capability for combat. To benefit the most from this capability, the Infantryman must develop two skills to an equal degree: he must be able to fire his weapon well enough to get hits on battlefield targets, and he must know enough about its working parts to keep it operating. The Infantryman attains his firing skill in marksmanship training. He learns how to keep his rifle in operable condition through mechanical training.

3. Description of the Rifles

a. M14 Rifle.

- (1) The U.S. rifle, 7.62mm, M14 (fig. 1) is a light-weight, air-cooled, gas-operated, magazine-fed, shoulder weapon. It is designed primarily for semiautomatic fire.
 - (2) When employed as an automatic rifle, the selector and bipod M2 must be installed (fig. 2).
 - (3) The flash suppressor is designed with a wide rib on the bottom to reduce muzzle climb and the amount of dust raised by muzzle blast.
- (4) The lug on the rear of the flash suppressor is used to secure a bayonet, a grenade launcher, and a blank firing attachment.
 - (5) The spindle valve is used when launching a grenade to prevent gas operation of the rifle, thus avoiding damage to the weapon.

b. M14E2 Rifle.

- (1) The U.S. rifle, 7.62mm, M14E2 (fig. 3) is an air-cooled, gas-operated, magazine-fed, shoulder weapon. It is capable of semiautomatic or automatic fire; however, it is designed primarily for automatic fire. It features a stabilizer assembly, modified bipod, front and rear handgrip, straight line stock, and a rubber recoil pad.
- (2) The M14E2 stock group is the "straight line" type with a fixed rear handgrip and a folding front handgrip which lies flat along the bottom of the stock when not in use. The location of the front handgrip can be adjusted to one of five positions in 1-inch increments to accommodate all gunners. The rubber recoil pad reduces the effects of recoil. The hinged shoulder rest provides vertical control of the butt end of the rifle. The butt swivel pivots 90° to the left for ease of carrying.
- (3) The stabilizer assembly consists of a perforated steel sleeve which slides over the flash suppressor and is fastened to the muzzle over the bayonet lug by a screw and a locknut. The stabilizer provides muzzle stability and reduces recoil.

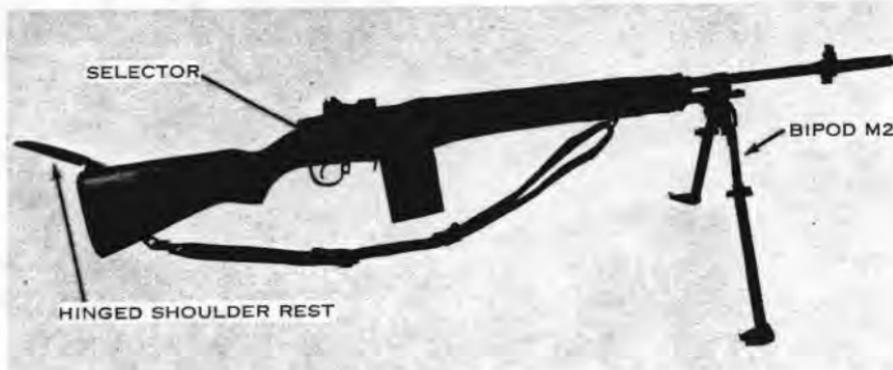


Figure 2. The M14 rifle with selector and M2 bipod.

- (4) The M2 bipod is modified by the addition of a sling swivel and a longer pivot pin to accommodate the swivel.
- (5) The M14E2 utilizes a sling with an extra hook assembly. The portion of the sling between the handgrip and the bipod provides additional muzzle control during firing. The portion of the sling between the front handgrip and the bipod allows

the average firer, by applying rearward pressure on the front handgrip, to increase the pressure of the bipod on the ground to approximately 35 pounds, reducing dispersion considerably. When the weapon is carried at sling arms, the sling must be disconnected from the handgrip assembly.

4. General Data

Weights in Pounds (approximate):

M14 rifle with full magazine and cleaning equipment.....	11¼
M14 rifle with full magazine, cleaning equipment, selector, and bipod.....	13
Empty magazine.....	½
Full magazine (with ball ammunition).....	1½
Cleaning equipment.....	¾
M2 bipod.....	1¾
M14E2 rifle with full magazine.....	14¾

Lengths in Inches (approx.):

M14, overall, with flash suppressor.....	44¼
M14E2, overall, with stabilizer assembly.....	44¼

Sights:

Front.....	fixed
Rear.....	adjustable (one click of elevation or windage moves the strike of the bullet .7 centimeter at 25 meters).



Figure 3. The M14E2 rifle (top—left side view; bottom—right side view).

<i>Trigger Pull in Pounds:</i>	
Minimum.....	5.5
Maximum.....	7.5
<i>Muzzle Velocity</i>	2,800 f.p.s. (853 m.p.s.).

Cyclic Rate of Fire (rounds per minute) 700-750

Rates of Fire. (These can be maintained without danger to the firer, or damage to the weapon):

<i>Semiautomatic</i> (rounds per minute):	
1 minute.....	40
2 minutes.....	40
5 minutes.....	30
10 minutes.....	20
15 minutes.....	20
20 minutes.....	20
30 minutes (or more).....	15

<i>Automatic</i> (rounds per minute):	
1 minute.....	60
2 minutes.....	50

*The bipod adds much stability to the rifle and enables the automatic rifleman to effectively engage targets semiautomatically in excess of 400 meters.

5 minutes.....	40
10 minutes.....	30
15 minutes.....	30
20 minutes.....	25
30 minutes (or more).....	20

Range in Meters:

Maximum effective (semiautomatic, without bipod).	460
Maximum effective (semiautomatic, with bipod).	*700
Maximum effective (automatic, with bipod).	**460
Maximum.....	3725

Ammunition..... see chapter 6.

Definitions:

<i>Cyclic rate</i>	the rate at which the weapon fires automatically.
<i>Maximum effective range</i>	the greatest distance at which a weapon may be expected to fire accurately to inflict casualties or damage.

**Enemy squad formations and hasty crew-served weapons emplacements may be effectively engaged up to this range; bunker apertures, windows and like targets, which require precise accuracy, can best be engaged using semiautomatic fire.

CHAPTER 2

MECHANICAL TRAINING

5. General

a. The individual soldier is authorized to disassemble his rifle to the extent called field stripping. Chart I shows the parts he is permitted to disassemble with and without supervision. The amount of disassembly he is permitted to perform without supervision is adequate for normal maintenance.

b. *The frequency of disassembly and assembly should be kept to a minimum consistent with maintenance and instructional requirements.* Constant disassembly causes excessive wear of the parts and leads to their early unserviceability and to inaccuracy of the weapon.

c. The rifle has been designed to be taken apart and put together easily. No force is needed if it is disassembled and assembled correctly. The parts of one rifle, *except the bolt*, may be interchanged with those of another *when necessary*. *Bolts should never be interchanged for safety reasons.*

d. As the rifle is disassembled, the parts should be laid out from left to right, on a clean surface and in the order of removal. This makes assembly easier because the parts are assembled in the reverse order of disassembly. The names of the parts (nomenclature) should be taught along with disassembly and assembly to make further instruction on the rifle easier to understand.

6. Clearing the Rifle

The first step in handling any weapon is to clear it. To clear the rifle, first attempt to engage the safety. (If unable to place the safety in the safe position, continue with the second step of removing the magazine.) Remove the magazine by placing the right thumb on the magazine latch and

curl the remaining fingers around the front of the magazine. Press in on the magazine latch, rotate the base of the magazine toward the muzzle end of the rifle (fig. 4), and remove it from the magazine well. With the knife edge of the right hand, pull the operating rod handle all the way to the rear, reach across the receiver with the right thumb and press in on the bolt lock (fig. 5). Verify the

Chart I. Disassembly Authorization

Part	Individual soldier	Armorer	Maintenance personnel
SEPARATION INTO THREE MAIN GROUPS.....	X		
DISASSEMBLY:			
BARREL AND RECEIVER GROUP.....	X		
Front sight.....			X
Rear sight.....		X	
Flash suppressor.....			X
Spindle valve.....			X
Sear release.....		X	
Selector and selector shaft lock.....		X	
Bipod M2.....	X		
Connector assembly (spring and plunger).....			X
Bolt lock.....		X	
Cartridge clip guide.....			X
Operating rod guide.....			X
Barrel from receiver.....			X
Stabilizer assembly M14E2.....	X		
STOCK GROUP:			
Stock liner.....			X
Upper sling swivel bracket.....			X
Stock ferrule.....			X
MAGAZINE.....	X		
BOLT.....		X	
Bolt roller from bolt stud.....			X
FIRING MECHANISM.....		X	
Magazine latch.....			X
Sear from trigger.....			X

safety, tilt the rifle, and look inside the chamber and receiver to insure that they contain no rounds.

7. Disassembly Into Three Main Groups

a. The three main groups are the firing mechanism, the barrel and receiver, and the stock.

b. After the rifle is cleared, the operating parts should be forward for disassembly. To do this, pull back on the operating rod handle and allow the bolt to go forward.

c. To remove the firing mechanism, grasp the rear of the trigger guard with the thumb and forefinger of your right hand and pull downward and outward until the mechanism is released (fig. 6). Lift out the firing mechanism.

d. To separate the barrel and receiver from the stock, lay the weapon on a flat surface with the sights up and muzzle to the left. Grasp the receiver with the left hand over the rear sight and raise the rifle a few inches. With the right hand, strike down on and grasp the small of the stock, separating the barrel and receiver from the stock. The three main groups are shown in figure 7.

e. The components of the M14E2 rifle are shown in figure 8.

8. Assembly of the Three Main Groups

a. Place the barrel and receiver group on a flat surface, sights down. Pick up the stock group and engage the stock ferrule in the front band, then lower the stock group onto the barrel and receiver group.

b. Open the trigger guard and place the firing mechanism straight down into the receiver, making sure that the guide rib on the firing mechanism enters the recess in the receiver (fig. 9). Place the butt of the weapon on the left thigh, sights to the left, insuring the trigger guard has cleared the trigger. With the palm of the right hand, strike the trigger guard fully engaging it to the receiver.



Figure 4. Removing the magazine.



Figure 5. Locking the bolt to the rear.

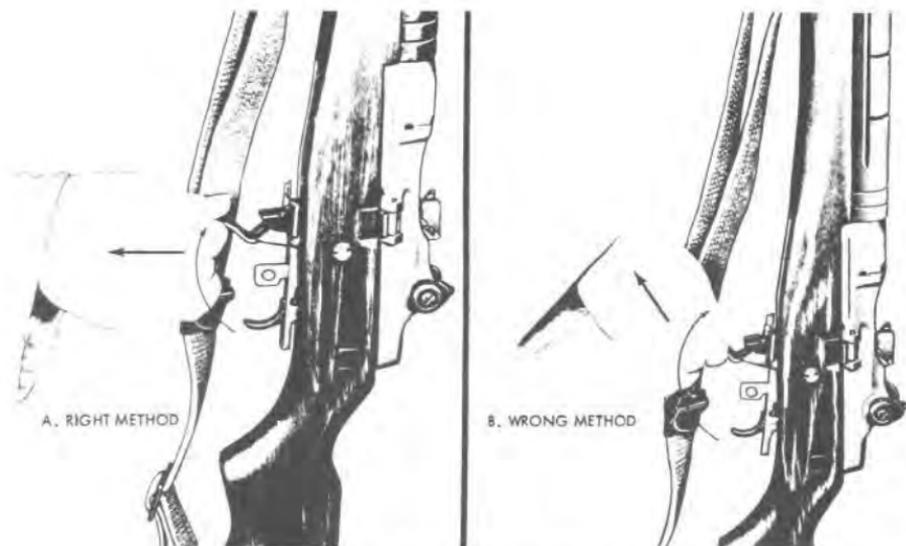


Figure 6. Removing firing mechanism.



Figure 7. The three main groups.



Figure 8. Components of the M14E2 rifle.



Figure 9. Replacing the firing mechanism.

9. Disassembly of the Barrel and Receiver Group

a. Removing the Connector Assembly. Place the barrel and receiver group on its left side with the operating rod handle up and the muzzle away from you. On rifles modified for selective firing, press in and turn the selector until the face marked "A" is toward the windage knob (fig. 10). With the bolt closed, place the right thumb on the rear of the connector assembly, the first finger on the sear release bracket and the second finger inside the rear of the receiver (fig. 11). Push forward with the thumb until the forward end of the assembly can be lifted off the connector lock with the thumb and forefinger of the left hand (2, fig. 11). (Note that the rifle shown in 1, 2, and 3, fig. 11 has not been modified for selective firing.) Turn the con-

connector assembly (3, fig. 11) clockwise until the elongated hole in the connector assembly is aligned with the elongated stud on the sear release. Lower the front end of the connector assembly and lift the rear end off the elongated stud of the sear release.

b. Removing the Operating Rod Spring and Operating Rod Spring Guide. Place the barrel and receiver group on a flat surface, sights down, muzzle to the left. With your left hand, pull toward the muzzle on the operating rod spring to relieve pressure on the connector lock (1, fig. 12). With your right forefinger, pull the connector lock toward you and, allowing the operating rod spring to expand slowly, disconnect and remove the operating rod spring and operating rod spring guide (2, fig. 12). Separate these two parts.

c. Removing the Operating Rod. Turn the barrel and receiver group so the sights are up and the muzzle is pointing away from you. Pull back the operating rod handle until the guide lug on its inside surface is aligned with the disassembly notch on the right side of the receiver. Rotate the operating rod downward and outward, then pull it to the rear, disengaging it from the operating rod guide (fig. 13).

d. Removing the Bolt. Grasp the bolt by the roller and, while sliding it forward, lift it upward and outward to the right front with a slight rotating motion (fig. 14).