

Manuals.plus /

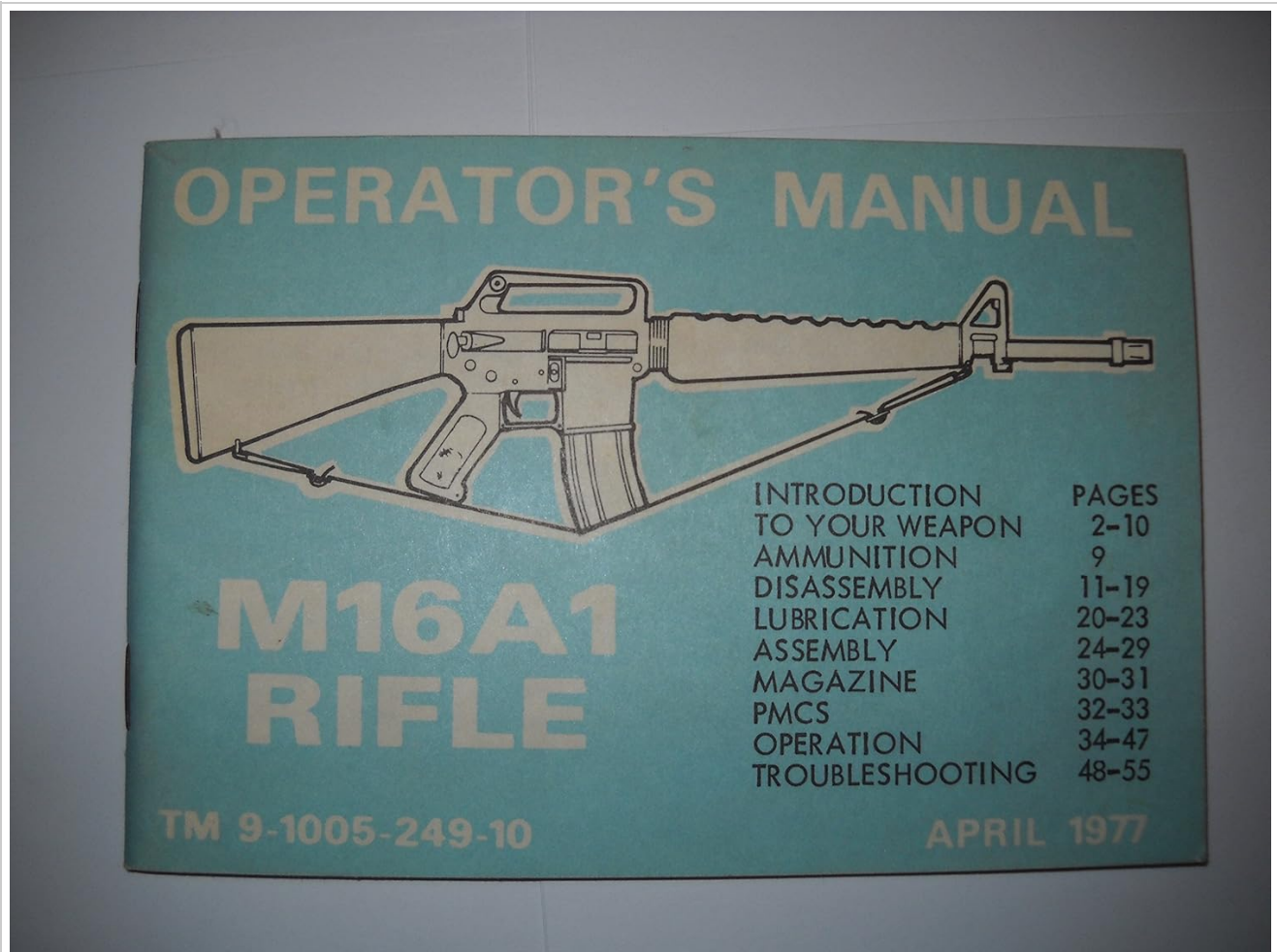
- › US Army /
- › TM 9-1005-249-10 (1977) Operator's Manual for M16A1 Rifle

US Army M16A1 Rifle

TM 9-1005-249-10 (1977) Operator's Manual for M16A1 Rifle

Official US Army Publication

MANUAL COVER



This image displays the front cover of the TM 9-1005-249-10 Operator's Manual for the M16A1 Rifle, published in April 1977. The cover features a line drawing of the M16A1 rifle against a light blue background. Key sections of the manual are listed on the right side, including Introduction, Ammunition, Disassembly, Lubrication, Assembly, Magazine, PMCS, Operation, and Troubleshooting, along with their respective page ranges.

1. INTRODUCTION TO THE M16A1 RIFLE

This manual provides detailed instructions for the operation and maintenance of the M16A1 Rifle. It is intended for personnel responsible for handling, maintaining, and troubleshooting this weapon system. Adherence to the procedures outlined herein is essential for safe and effective use.

1.1 General Information

The M16A1 is a lightweight, air-cooled, gas-operated, magazine-fed, shoulder-fired weapon that can be fired either in semi-automatic or automatic mode. It is designed for individual combat and is effective against personnel targets.

1.2 Safety Precautions

Always treat every weapon as if it were loaded. Keep the muzzle pointed in a safe direction. Keep your finger off the trigger until you are ready to shoot. Be sure of your target and what is beyond it. Always wear appropriate eye and ear protection when firing.

2. AMMUNITION

The M16A1 rifle uses 5.56mm NATO ammunition. Only authorized and specified ammunition types should be used. Using incorrect ammunition can lead to weapon malfunction, damage, or serious injury.

2.1 Ammunition Types

- **Ball (M193):** Standard full metal jacket projectile.
- **Tracer (M196):** Used for observation of fire, incendiary effects, and signaling.
- **Dummy (M199):** Inert cartridge used for training and function checks.

2.2 Magazine Loading

Magazines are typically 20 or 30-round capacity. Load cartridges into the magazine by pressing them down and sliding them to the rear under the feed lips. Ensure cartridges are seated correctly to prevent feeding issues.

3. ASSEMBLY AND DISASSEMBLY

Proper assembly and disassembly are crucial for cleaning, inspection, and maintenance. Always ensure the weapon is clear and safe before beginning any disassembly procedures.

3.1 Field Stripping (Disassembly)

1. Ensure the weapon is unloaded and the chamber is clear.
2. Remove the magazine.
3. Push out the takedown pin and pivot the upper receiver from the lower receiver.
4. Push out the pivot pin to separate the receivers.
5. Remove the charging handle and bolt carrier group from the upper receiver.
6. Disassemble the bolt carrier group into its components.

3.2 Reassembly

Reassemble the rifle by reversing the disassembly steps. Ensure all pins and components are correctly seated and secured. Perform a function check after reassembly to verify proper operation.

4. LUBRICATION AND MAINTENANCE (PMCS)

Regular lubrication and preventive maintenance are vital for the reliability and longevity of the M16A1 rifle. PMCS (Preventive Maintenance Checks and Services) should be performed before, during, and after operation.

4.1 Cleaning and Lubrication

- Clean the bore, chamber, and gas tube thoroughly using appropriate cleaning solvents and brushes.
- Clean all carbon buildup from the bolt carrier group, especially the bolt and firing pin.
- Apply a light coat of lubricant to all moving parts, including the bolt carrier group, charging handle, and trigger components.

4.2 PMCS Procedures

Inspect the rifle for any signs of wear, damage, or missing parts. Check the functionality of the safety selector, trigger, and charging handle. Ensure the sights are secure and functional. Report any deficiencies to appropriate personnel.

5. OPERATION

Understanding the operational procedures of the M16A1 is critical for effective use in various scenarios.

5.1 Loading and Firing

1. Insert a loaded magazine into the magazine well until it locks into place.
2. Pull the charging handle fully to the rear and release it to chamber a round.
3. Set the selector switch to "SEMI" for semi-automatic fire or "AUTO" for automatic fire (if applicable).
4. Aim at the target and press the trigger to fire.

5.2 Clearing the Weapon

To clear the weapon, remove the magazine, pull the charging handle to the rear to extract any chambered round, visually inspect the chamber and magazine well, and then release the charging handle. Place the selector on "SAFE" (if possible with hammer down).

6. TROUBLESHOOTING

This section addresses common malfunctions and provides steps to resolve them. Always follow safety procedures when troubleshooting.

6.1 Common Malfunctions

- **Failure to Feed:** Check magazine seating, inspect for bent feed lips, ensure proper ammunition.
- **Failure to Eject:** Inspect extractor and ejector for damage or fouling. Ensure proper lubrication.
- **Failure to Fire:** Check for light primer strikes, inspect firing pin, ensure ammunition is correctly seated.
- **Stovepipe:** Clear the obstruction by cycling the charging handle.

6.2 Immediate Action (SPORTS)

- Slap the magazine.

- Pull the charging handle to the rear.
- Observe the chamber.
- Release the charging handle.
- Tap the forward assist.
- Shoot.

7. SPECIFICATIONS OF THE M16A1 RIFLE

M16A1 Rifle Key Specifications (General)

Feature	Detail
Caliber	5.56mm NATO (.223 Remington)
Action	Gas-operated, rotating bolt
Overall Length	Approx. 39 inches (991 mm)
Barrel Length	20 inches (508 mm)
Weight (unloaded)	Approx. 6.3 lbs (2.89 kg)
Feed System	20 or 30-round detachable box magazine
Rate of Fire	Cyclic: 750-900 rounds/min (approx.)
Sights	Adjustable rear sight, fixed front sight post

Note: These specifications are general for the M16A1 rifle and may vary slightly based on specific configurations or manufacturing tolerances. This manual focuses on operational and maintenance procedures.

8. SUPPORT AND FURTHER INFORMATION

This document is a historical operator's manual published by the US Army in 1977. As such, direct product support or warranty information for the M16A1 rifle itself is not applicable through this publication. For current military personnel, refer to contemporary field manuals and chain of command for support and updated procedures.

For historical reference or collector information, additional resources may be available through military archives or specialized historical firearms communities.

