

A black rifle is positioned vertically in the center of the image, lying on a dense bed of green ferns. The rifle's barrel and receiver are visible, and it is surrounded by the intricate, feathery patterns of the fern leaves. The lighting is natural, highlighting the textures of both the metal and the foliage.

***U.S. DEPARTMENT
OF DEFENSE***

***SNIPER AND
COUNTER
SNIPER
TACTICS -
THE OFFICIAL
U.S. ARMY
MANUAL***

U.S. Department of Defense

Sniper and Counter Sniper Tactics - The Official U.S. Army Manual

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Preface

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This field manual provides information needed to train and equip snipers and to aid them in their missions and operations. It is intended for use by commanders, staffs, trainers, snipers, and soldiers at training posts, Army schools, and units.

This manual is organized as a reference for snipers and leads the trainer through the material needed to conduct sniper training. Subjects include equipment, weapon capabilities, fundamentals of marksmanship and ballistics, field skills, mission planning, and skill sustainment. The left-handed firer can become a sniper, but all material in this book is referenced to the right-handed firer.

The proponent for this publication is Headquarters, United States Army Infantry School. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to the Commandant, United States Army Infantry School, ATTN: ATSH-IN-S3, Fort Benning, GA 31905-5596.

This publication complies with the following international agreements:

| | |
|----------------|---|
| STANAG 2020 | Operational Situation Report |
| STANAG 2022 | Intelligence Report |
| STANAG 2084 | Handling and Reporting of Captured Enemy Equipment and Documents |

| | |
|----------------|--|
| STANAG 2103 | Reporting Nuclear Detonations, Radioactive Fallout and Biological and Chemical Attacks, and Predicting Associated Hazards |
| STANAG 2934 | Artillery Procedures-AARTY-1 |
| STANAG 3204 | Aeromedical Evacuation |
| STANAG 6004 | Meaconing, Intrusion, Jamming, and Interference Report |

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

Introduction

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The sniper has special abilities, training and equipment. His job is to deliver discriminatory highly accurate rifle fire against enemy targets, which cannot be engaged successfully by the rifleman because of range, size, location, fleeting nature, or visibility. Sniping requires the development of basic infantry skills to a high degree of perfection. A sniper's training incorporates a wide variety of subjects designed to increase his value as a force multiplier and to ensure his survival on the battlefield. The art of sniping requires learning and repetitiously practicing these skills until mastered. A sniper must be highly trained in long-range rifle marksmanship and field craft skills to ensure maximum effective engagements with minimum risk.

1-1. Mission

The primary mission of a sniper in combat is to support combat operations by delivering precise long-range fire on selected targets. By this, the sniper creates casualties among enemy troops, slows enemy movement, frightens enemy soldiers, lowers morale, and adds confusion to their operations. The secondary mission of the sniper is collecting and reporting battlefield information.

a. A well-trained sniper, combined with the inherent accuracy of his rifle and ammunition, is a versatile supporting arm available to an infantry commander. The importance of the sniper cannot be measured simply by the number of casualties he inflicts upon the enemy. Realization

of the sniper's presence instills fear in enemy troop elements and influences their decisions and actions. A sniper enhances a unit's firepower and augments the varied means for destruction and harassment of the enemy. Whether a sniper is organic or attached, he will provide that unit with extra supporting fire. The sniper's role is unique in that it is the sole means by which a unit can engage point targets at distances beyond the effective range of the M16 rifle, this role becomes more significant when the target is entrenched or positioned among civilians, or during riot control missions. The fires of automatic weapons in such operations can result in the wounding or killing of noncombatants.

b. Snipers are employed in all levels of conflict. This includes conventional offensive and defensive combat in which precision fire is delivered at long ranges. It also includes combat patrols, ambushes, countersniper operations, forward observation elements, military operations in urbanized terrain, and retrograde operations in which snipers are part of forces left in contact or as stay-behind forces.

1-2. Organization

In light infantry divisions, the sniper element is composed of six battalion personnel organized into three 2-man teams. The commander designates missions and priorities of targets for the team and may attach or place the team under the operational control of a company or platoon. They may perform dual missions, depending on the need. In the mechanized infantry battalions, the sniper element is composed of two riflemen (one team) located in a rifle

squad. In some specialized units, snipers may be organized according to the needs of the tactical situation.

a. Sniper teams should be centrally controlled by the commander or the sniper employment officer. The SEO is responsible for the command and control of snipers assigned to the unit. In light infantry units, the SEO will be the reconnaissance platoon leader or the platoon sergeant. In heavy or mechanized units, the SEO may be the company commander or the executive officer. The duties and responsibilities of the SEO are as follows:

(1) To advise the unit commander on the employment of snipers.

(2) To issue orders to the team leader.

(3) To assign missions and types of employment.

(4) To coordinate between the sniper team and unit commander.

(5) To brief the unit commander and team leaders.

(6) To debrief the unit commander and team leaders.

(7) To train the teams.

b. Snipers work and train in 2-man teams. One sniper's primary duty is that of the sniper and team leader while the other sniper serves as the observer. The sniper team leader is responsible for the day-to-day activities of the sniper team. His responsibilities are as follows:

(1) To assume the responsibilities of the SEO that pertain to the team in the SEO'S absence.

(2) To train the team.

(3) To issue necessary orders to the team.

(4) To prepare for missions.

(5) To control the team during missions.

c. The sniper's weapon is the sniper weapon system. The observer has the M16 rifle and an M203, which gives the

team greater suppressive fire and protection. Night capability is enhanced by using night observation devices.

1-3. Personnel Selection Criteria

Candidates for sniper training require careful screening. Commanders must screen the individual's records for potential aptitude as a sniper. The rigorous training program and the increased personal risk in combat require high motivation and the ability to learn a variety of skills. Aspiring snipers must have an excellent personal record.

a. The basic guidelines used to screen sniper candidates are as follows:

(1) *Marksmanship*. The sniper trainee must be an expert marksman. Repeated annual qualification as expert is necessary. Successful participation in the annual competition-in-arms program and an extensive hunting background also indicate good sniper potential.

(2) *Physical condition*. The sniper, often employed in extended operations with little sleep, food, or water, must be in outstanding physical condition. Good health means better reflexes, better muscular control, and greater stamina. The self-confidence and control that come from athletics, especially team sports, are definite assets to a sniper trainee.

(3) *Vision*. Eyesight is the sniper's prime tool. Therefore, a sniper must have 20/20 vision or vision correctable to 20/20. However, wearing glasses could become a liability if glasses are lost or damaged. Color blindness is also considered a liability to the sniper, due to his inability to detect concealed targets that blend in with the natural surroundings.

(4) *Smoking*. The sniper should not be a smoker or use smokeless tobacco. Smoke or an unsuppressed smoker's cough can betray the sniper's position. Even though a sniper may not smoke or use smokeless tobacco on a mission, his refrainment may cause nervousness and irritation, which lowers his efficiency.

(5) *Mental condition*. When commanders screen sniper candidates, they should look for traits that indicate the candidate has the right qualities to be a sniper. The commander must determine if the candidate will pull the trigger at the right time and place. Some traits to look for are reliability, initiative, loyalty, discipline, and emotional stability. A psychological evaluation of the candidate can aid the commander in the selection process.

(6) *Intelligence*. A sniper's duties require a wide variety of skills. He must learn the following:

- Ballistics.
- Ammunition types and capabilities.
- Adjustment of optical devices.
- Radio operation and procedures.
- Observation and adjustment of mortar and artillery fire.
- Land navigation skills.
- Military intelligence collecting and reporting.
- Identification of threat uniforms and equipment.

b. In sniper team operations involving prolonged independent employment, the sniper must be self-reliant, display good judgment and common sense. This requires two other important qualifications: emotional balance and field craft.

(1) *Emotional balance.* The sniper must be able to calmly and deliberately kill targets that may not pose an immediate threat to him. It is much easier to kill in self-defense or in the defense of others than it is to kill without apparent provocation. The sniper must not be susceptible to emotions such as anxiety or remorse. Candidates whose motivation toward sniper training rests mainly in the desire for prestige may not be capable of the cold rationality that the sniper's job requires.

(2) *Field craft.* The sniper must be familiar with and comfortable in a field environment. An extensive background in the outdoors and knowledge of natural occurrences in the outdoors will assist the sniper in many of his tasks. Individuals with such a background will often have great potential as a sniper.

c. Commander involvement in personnel selection is critical. To ensure his candidate's successful completion of sniper training and contribution of his talents to his unit's mission, the commander ensures that the sniper candidate meets the following prerequisites before attending the US Army Sniper School:

- Male.
- PFC to SFC (waiverable for MSG and above).
- Active duty or ARNG and USAR.
- Good performance record.
- No history of alcohol or drug abuse.
- A volunteer (with commander recommendation).
- Vision of 20/20 or correctable to 20/20.
- No record of disciplinary action.
- Expert marksman with M16A1 or M16A2 rifle.

- Minimum of one-year retrainability.
- Career management field 11.
- Pass APFT (70 percent, each event).

1-4. Sniper and Observer Responsibilities

Each member of the sniper team has specific responsibilities. Only through repeated practice can the team begin to function properly. Responsibilities of team members areas follows:

a. The sniper—

- Builds a steady, comfortable position.
- Locates and identifies the designated target.
- Estimates the range to the target.
- Dials in the proper elevation and windage to engage the target.
- Notifies the observer of readiness to fire.
- Takes aim at the designated target.
- Controls breathing at natural respiratory pause.
- Executes proper trigger control.
- Follows through.
- Makes an accurate and timely shot call.
- Prepares to fire subsequent shots, if necessary.

b. The observer—

- Properly positions himself.
- Selects an appropriate target.
- Assists in range estimation.
- Calculates the effect of existing weather conditions on ballistics.

- Reports sight adjustment data to the sniper.
- Uses the M49 observation telescope for shot observation.
- Critiques performance.

1-5. Team Firing Techniques

A sniper team must be able to move and survive in a combat environment. The sniper team's mission is to deliver precision fire. This calls for a coordinated team effort. Together, the sniper and observer—

- Determine the effects of weather on ballistics.
- Calculate the range to the target.
- Make necessary sight changes.
- Observe bullet impact.
- Critique performance before any subsequent shots.

Equipment

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This chapter describes the equipment necessary for the sniper to effectively perform his mission. The sniper carries only what is essential to successfully complete his mission. He requires a durable rifle with the capability of long-range precision fire. The current US Army sniper weapon system is the M24. (See Appendix B for the M21 sniper weapon system.)

Section I

M24 Sniper Weapon System

The M24 sniper weapon system is a 7.62-mm, bolt-action, six-shot repeating rifle (one round in the chamber and five rounds in the magazine). It is designed for use with either the M3A telescope (day optic sight) (usually called the M3A scope) or the metallic iron sights. The sniper must know the M24's components, and the procedures required to operate them (Figure 2-1, page 2-2). The deployment kit is a repair/maintenance kit with tools and repair parts for the operator to perform operator level maintenance (Figure 2-2, page 2-3.)

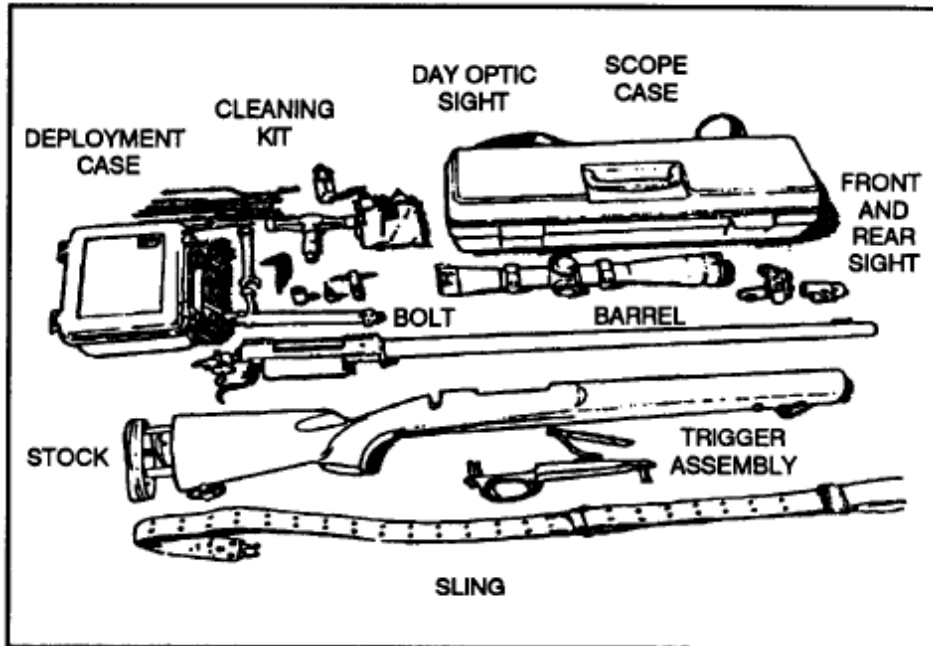


Figure 2-1. M24 sniper weapon system.

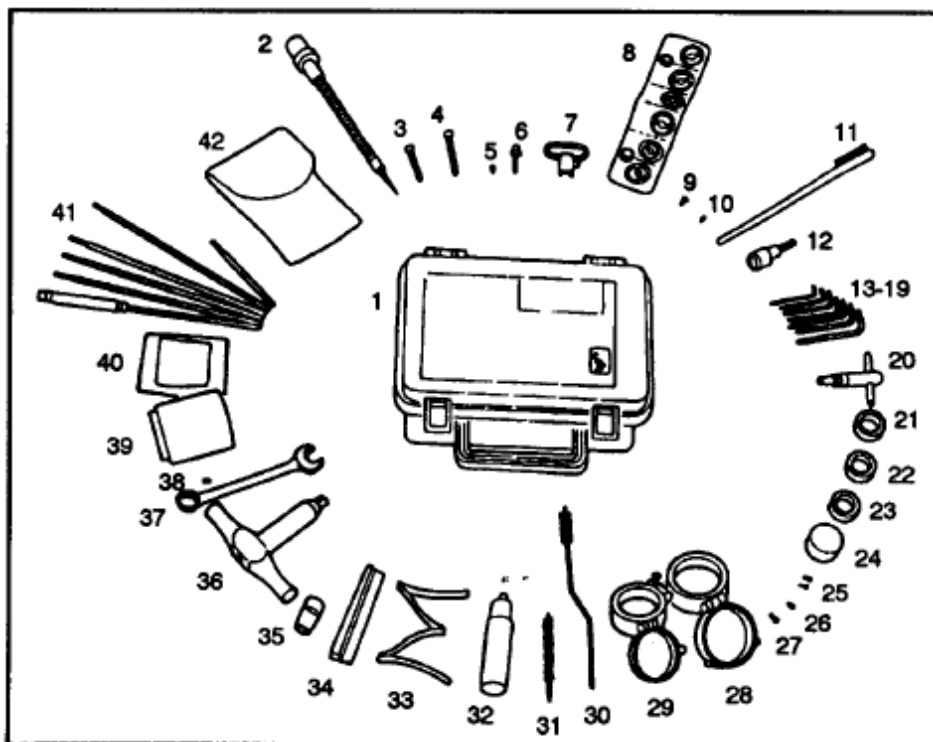


Figure 2-2. The deployment kit.

| | |
|--|---|
| 1 DEPLOYMENT CASE | 22 DAY OPTICT SIGHT ELEVATION DIAL WITH SCEWS |
| 2 FIRING PIN ASSEMBLY | 23 DAY OPTIC FOCUS DIAL WITH SCREWS |
| 3 FRONT GUARD SCREW | 24 DAY OPTIC SIGHT ADJUSTMENT DIAL DUST COVER |
| 4 REAR GUARD SCREWS | 25 DAY OPTIC SIGHT RING SCREWS |
| 5 FRONT SIGHT BASE SCREW | 26 DAY OPTIC SIGHT BASE SCREWS |
| 6 SWIVEL SCREW | 27 DAY OPTIC SIGHT BASE REAR |
| 7 SWIVEL, SLING | 28 DAY OPTIC SIGHT DUST COVER, FRONT |
| 8 FRONT SIGHT INSERT KIT | 29 DAY OPTIC SIGHT DUST COVER, REAR |
| 9 REAR SIGHT BASE SCREW | 30 BRUSH, CHAMBER |
| 10 TRIGGER PULL ADJUSTMENT SCREW | 31 BRUSH, BORE |
| 11 BRUSH, CLEANING SMALL | 32 OIL BOTTLE |
| 12 SOCKET WRENCH ATTACHMENT 3/8-INCH DRIVE HEX BIT 5/32-INCHES | 33 MAGAZINE SPRING |
| 13 050-INCH KEY, SOCKET HEAD SCREW | 34 MAGAZINE FOLLOWER |
| 14 1/16-INCH KEY, SOCKET | 35 SOCKET, SOCKET WRENCH HEAD SCREW 1/2-INCH |
| 15 5/64-INCH KEY, SOCKET HEAD SCREW | 36 T-HANDLE TORQUE WRENCH |
| 16 3/32-INCH KEY, SOCKET HEAD SCREW | 37 WRENCH, BOX AND OPEN 1/2-INCH |
| 17 7/64-INCH KEY, SOCKET HEAD SCREW | 38 REAR SIGHT BASE PLUG SCREW |
| 18 1/8-INCH KEY, SOCKET HEAD SCREW | 39 DAY OPTIC SIGHT SUNSHADE |
| 19 5/32-INCH KEY, SOCKET HEAD SCREW | 40 SWABS, CLEANING, SMALL ARMS |
| 20 T-HANDLE COMBINATION WRENCH | 41 CLEANING ROD KIT |
| 21 DAY OPTIC SIGHT WINDAGE DIAL WITH SCREWS | 42 LENS CLEANING KIT |

Figure 2-2. The deployment kit (continued).

2-1. Operations and Functions

To operate the M24 sniper weapon system, the sniper must know the information and instructions pertaining to the

safety, bolt assembly, trigger assembly, and stock adjustment.

a. Safety. The safety is located on the right rear side of the receiver. When properly engaged, the safety provides protection against accidental discharge in normal usage.

(1) To engage the safety, place it in the "S" position (Figure 2-3).

(2) Always place the safety in the "S" position before handling, loading, or unloading the weapon.

(3) When the weapon is ready to be fired, place the safety in the "F" position (Figure 2-3).

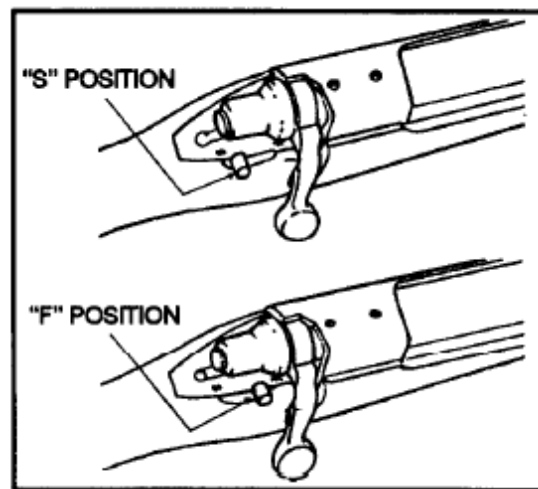


Figure 2-3. Safety.

b. Bolt Assembly. The bolt assembly locks the cartridge into the chamber and extracts the cartridge from the chamber.

(1) To remove the bolt from the receiver, release the internal magazine, place the safety in the "S" position, raise the bolt handle, and pull it back until it stops. Then push the bolt stop release (Figure 2-4) and pull the bolt from the receiver.

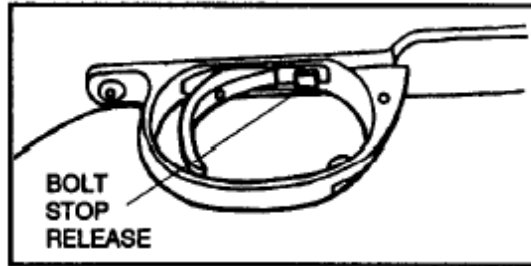


Figure 2-4. Bolt stop release.

(2) To replace the bolt, ensure the safety is in the "S" position, align the lugs on the bolt assembly with the receiver (Figure 2-5), slide the bolt all the way into the receiver, and then push the bolt handle down.

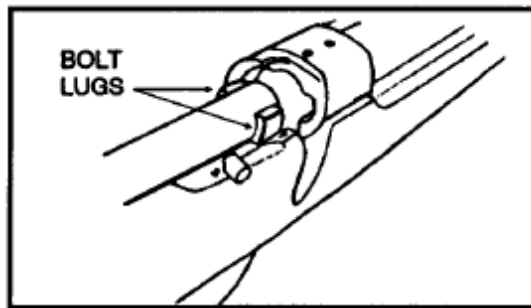


Figure 2-5. Bolt alignment.

WARNING

NEVER REMOVE THE TRIGGER MECHANISM, OR MAKE ADJUSTMENTS TO THE TRIGGER ASSEMBLY, EXCEPT FOR THE TRIGGER PULL FORCE ADJUSTMENT.

c. Trigger Assembly. Pulling the trigger fires the rifle when the safety is in the "F" position. The operator may adjust the trigger pull force from a minimum of 2 pounds to a maximum of 8 pounds. This is done using the 1/16-inch socket head screw key provided in the deployment kit. Turning the trigger adjustment screw (Figure 2-6) clockwise increases the force needed to pull the trigger. Turning it

counterclockwise decreases the force needed. This is the only trigger adjustment the sniper should make.

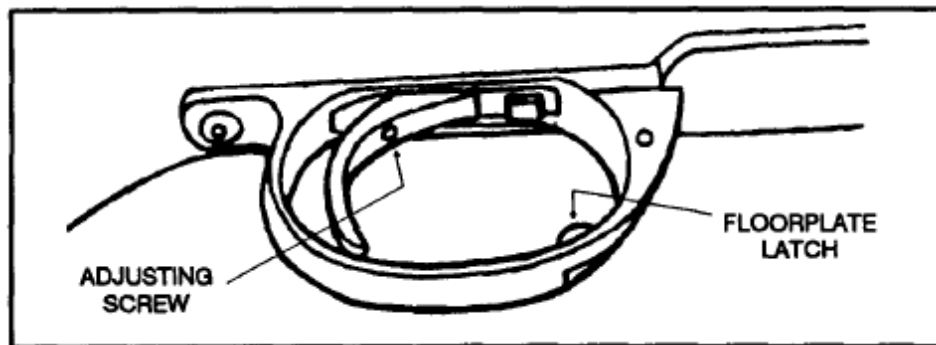


Figure 2-6. Trigger adjustment.

d. Stock Adjustment. The M24's stock has an adjustable butt plate to accommodate the length of pull. The stock adjustment (Figure 2-7) consists of a thin wheel and a thick wheel. The thick wheel adjusts the shoulder stock. The thin wheel locks the shoulder stock.

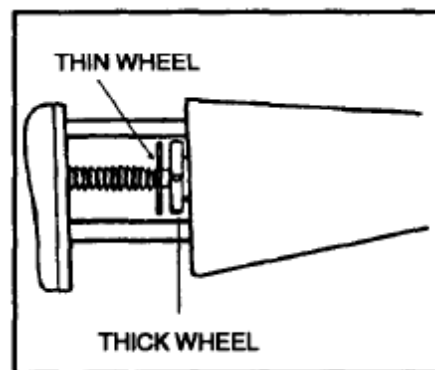


Figure 2-7. Stock adjustment.

- (1) Turn the thick wheel clockwise to lengthen the stock.
- (2) Turn the thick wheel counterclockwise to shorten the stock
- (3) To lock the shoulder stock into position, turn the thin wheel clockwise against the thick wheel.
- (4) To unlock the shoulder stock, turn the thin wheel counterclockwise away from the thick wheel.

e. Sling Adjustment The sling helps hold the weapon steady without muscular effort. The more the muscles are used the harder it is to hold the weapon steady. The sling tends to bind the parts of the body used in aiming into a rigid bone brace, requiring less effort than would be necessary if no sling were used. When properly adjusted, the sling permits part of the recoil of the rifle to be reabsorbed by the nonfiring arm and hand, removing recoil from the firing shoulder.

(1) The sling consists of two different lengths of leather straps joined together by a metal D ring (Figure 2-8). The longer strap is connected to the sling swivel on the rear stud on the forearm of the rifle. The shorter strap is attached to the sling swivel on the buttstock of the rifle. There are two leather loops on the long strap known as keepers. The keepers are used to adjust the tension on the sling. The frogs are hooks that are used to adjust the length of the sling.

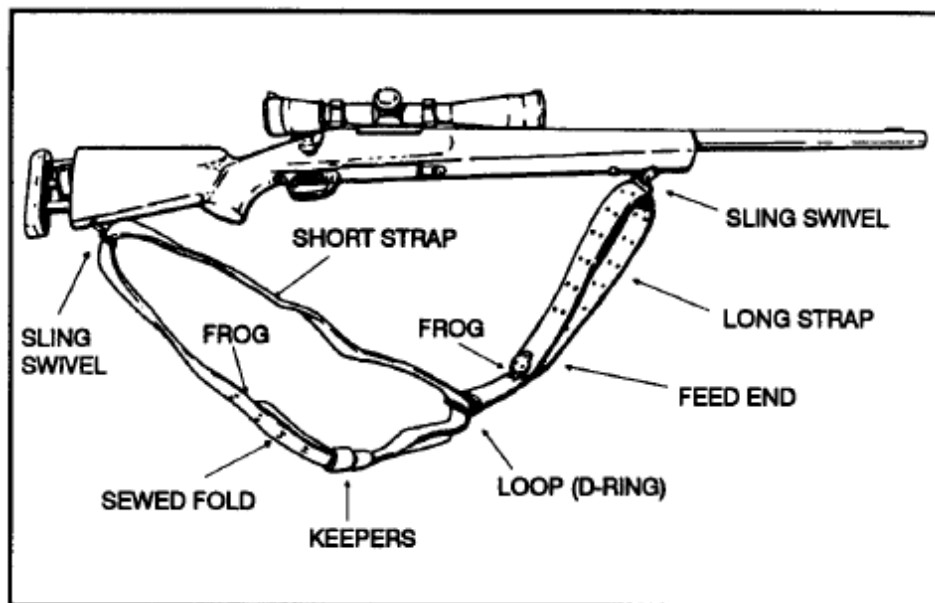


Figure 2-8. Leather Sling.

(2) To adjust the sling, the sniper disconnects the sling from the buttstock swivel. Then, he adjusts the length of the metal D ring that joins the two halves of the sling. He then makes sure it is even with the comb of the stock when attaching the sling to the front swivel (Figure 2-9).



Figure 2-9. Sling adjustment.

(3) The sniper adjusts the length of the sling by placing the frog on the long strap of the sling in the 4th to the 7th set of adjustment holes on the rounded end of the long strap that goes through the sling swivel on the forearm (Figure 2-10).

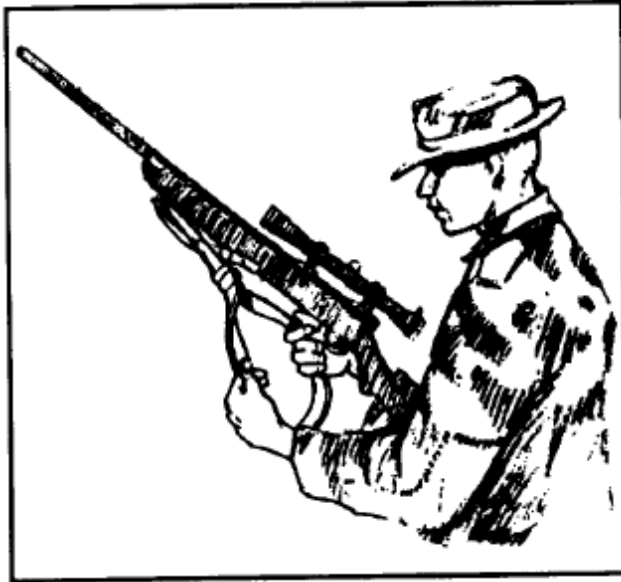


Figure 2-10. Adjusting the length of the sling.

(4) After adjusting the length, the sniper places the weapon on his firing hip and supports the weapon with his firing arm. The sniper turns the sling away from him 90 degrees and inserts his nonfiring arm.

(5) The sniper slides the loop in the large section of the sling up the nonfiring arm until it is just below the armpit (Figure 2-11). He then slides both leather keepers down the sling until they bind the loop snugly round the nonfiring arm.

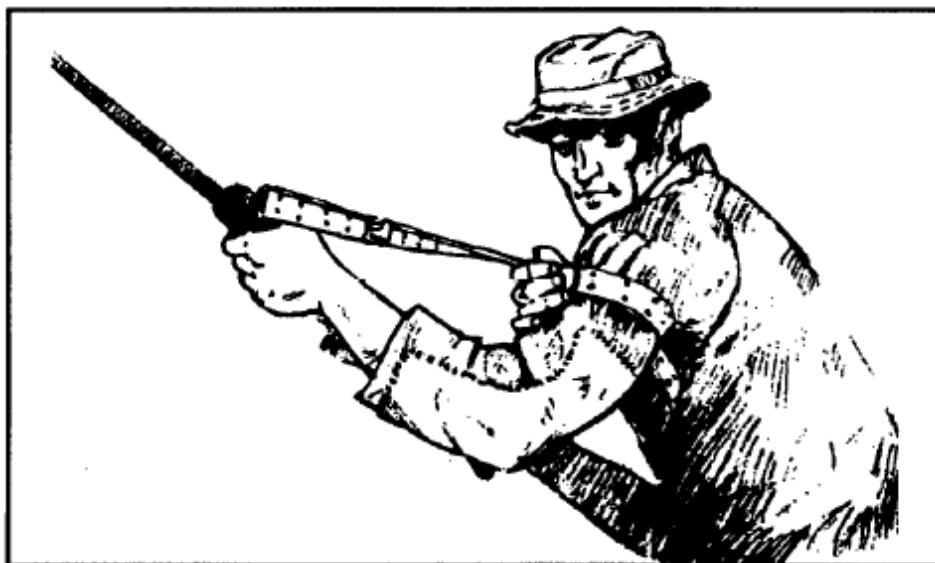


Figure 2-11. Placing the sling around the nonfiring arm.

(6) The sniper moves his nonfiring hand from the outside of the sling to the inside of the sling between the rifle and the sling. The sniper then grasps the forearm of the weapon, just behind the sling swivel with his nonfiring hand. He forces it outward and away from his body with the nonfiring hand (Figure 2-12).

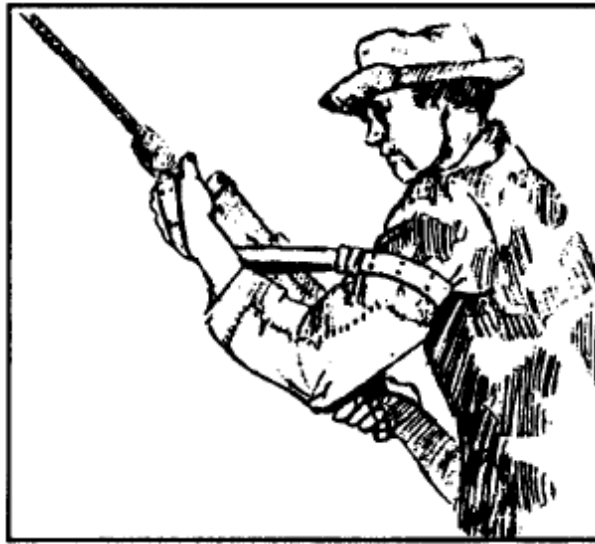


Figure 2-12. Proper placement of the sling.

(7) The sniper pulls the butt of the weapon into the pocket of his shoulder with the firing hand. He then grasps the weapon at the small of the stock and begins the aiming process.

2-2. Inspection

The sniper performs PMCS on the M24 SWS. Deficiencies that cannot be repaired by the sniper requires manufacturer repair. He must refer to TM 9-1005-306-10 that is furnished with each weapon system. The sniper must know this

technical manual. He should check the following areas when inspecting the M24:

- a. Check the appearance and completeness of all parts.
- b. Check the bolt to ensure it locks, unlocks, and moves smoothly.
- c. Check the safety to ensure it can be positively placed into the "S" and "F" positions easily without being too hard or moving too freely.
- d. Check the trigger to ensure the weapon will not fire when the safety is in the "S" position, and that it has a smooth, crisp trigger pull when the safety is in the "F" position.
- e. Check the trigger guard screws (rear of trigger guard and front of internal magazine) for proper torque (65 inch-pounds).
- f. Check the scope mounting ring nuts for proper torque (65 inch-pounds).
- g. Check the stock for any cracks, splits, or any contact it may have with the barrel.
- h. Inspect the scope for obstructions such as dirt, dust, moisture, or loose or damaged lenses.

2-3. Care and Maintenance

Maintenance is any measure taken to keep the M24 SWS in top operating condition. It includes inspection, repair, cleaning and lubrication-Inspection reveals the need for repair, cleaning, or lubrication. It also reveals any damages or defects. When sheltered in garrison and infrequently used, the M24 SWS must be inspected often to detect dirt, moisture, and signs of corrosion, and it must be cleaned accordingly. The M24 SWS that is in use and subject to the elements, however, requires no inspection for cleanliness,

since the fact of its use and exposure is evidence that it requires repeated cleaning and lubrication.

a. M24 SWS Maintenance. The following materials are required for cleaning and maintaining the M24 SWS:

One-piece plastic-coated .30 caliber cleaning rod with jag (36 inches).

- Bronze bristle bore brushes (.30 and .45 calibers).
- Cleaning patches (small and large sizes).
- Carbon cleaner.
- Copper cleaner.
- Rust prevention.
- Cleaner, lubricant, preservative.
- Rifle grease.
- Bore guide (long action).
- Swabs.
- Pipe cleaners.
- Medicine dropper.
- Shaving brush.
- Pistol cleaning rod.
- Rags.
- Camel's-hair brush.
- Lens tissue.
- Lens cleaning fluid (denatured or isopropyl alcohol).

b. M24 SWS Disassembly. The M24 SWS will be disassembled only when necessary, not for daily cleaning. For example, when removing an obstruction from the SWS that is stuck between the stock and the barrel. When disassembly is required, the recommended procedure is as follows:

- Place the weapon so that it is pointing in a safe direction.
- Ensure the safety is in the "S" position.
- Remove the bolt assembly.
- Loosen the mounting ring nuts on the telescope and remove the telescope.
- Remove the action screws.
- Lift the stock from the barrel assembly.
- For further disassembly, refer to TM 9-1005-306-10.

c. M24 SWS Cleaning Procedures. The M24 SWS must always be cleaned before and after firing.

(1) The SWS must always be cleaned before firing. Firing a weapon with a dirty bore or chamber will multiply and speed up any corrosive action. Oil in the bore and chamber of a SWS will cause pressures to vary and first-round accuracy will suffer. Clean and dry the bore and chamber before departure on a mission and use extreme care to keep the SWS clean and dry en route to the objective area. Firing a SWS with oil or moisture in the bore will cause smoke that can disclose the firing position.

(2) The SWS must be cleaned after firing since firing produces deposits of primer fouling, powder ashes, carbon, and metal fouling. Although ammunition has a noncorrosive primer that makes cleaning easier, the primer residue can still cause rust if not removed. Firing leaves two major types of fouling that require different solvents to remove carbon fouling and copper jacket fouling. The SWS must be cleaned within a reasonable time after firing. Use common sense when cleaning between rounds of firing. Repeated firing will not injure the weapon if it is properly cleaned before the first round is fired.

(3) Lay the SWS on a table or other flat surface with the muzzle away from the body and the sling down. Make sure not to strike the muzzle or telescopic sight on the table. The cleaning cradle is ideal for holding the SWS.

(4) Always clean the bore from the chamber toward the muzzle, attempting to keep the muzzle lower than the chamber to prevent the bore cleaner from running into the receiver or firing mechanism. Be careful not to get any type of fluid between the stock and receiver. If fluid does collect between the stock and receiver, the receiver will slide on the bedding every time the SWS recoils, thereby decreasing accuracy and increasing wear and tear on the receiver and bedding material.

(5) Always use a bore guide to keep the cleaning rod centered in the bore during the cleaning process.

(6) Push several patches saturated with carbon cleaner through the barrel to loosen the powder fouling and begin the solvent action on the copper jacket fouling.

(7) Saturate the bronze bristle brush (NEVER USE STAINLESS STEEL BORE BRUSHES-THEY WILL SCRATCH THE BARREL) with carbon cleaner (shake the bottle regularly to keep the ingredients mixed) using the medicine dropper to prevent contamination of the carbon cleaner. Run the bore brush through at least 20 times. Make sure the bore brush passes completely through the barrel before reversing its direction; otherwise, the bristles will break off.

(8) Use a pistol cleaning rod and a .45 caliber bronze bristle bore brush, clean the chamber by rotating the patch-wrapped brush 8 to 10 times. DO NOT scrub the brush in and out of the chamber.

(9) Push several patches saturated with carbon cleaner through the bore to push out the loosened powder fouling.

(10) Continue using the bore brush and patches with carbon cleaner until the patches have no traces of black/gray powder fouling and are green/blue. This indicates that the powder fouling has been removed and only copper fouling remains. Remove the carbon cleaner from the barrel with several clean patches. This is important since solvents should never be mixed in the barrel.

(11) Push several patches saturated with copper cleaner through the bore, using a scrubbing motion to work the solvent into the copper. Let the solvent work for 10 to 15 minutes (NEVER LEAVE THE COPPER CLEANER IN THE BARREL FOR MORE THAN 30 MINUTES).

(12) While waiting, scrub the bolt with the toothbrush moistened with carbon cleaner and wipe down the remainder of the weapon with a cloth.

(13) Push several patches saturated with copper cleaner through the barrel. The patches will appear dark blue at first, indicating the amount of copper fouling removed. Continue this process until the saturated patches have no traces of blue/green. If the patches continue to come out dark blue after several treatments with copper cleaner, use the bronze brush saturated with copper cleaner to increase the scrubbing action. Be sure to clean the bronze brush thoroughly afterwards with hot running water (quick scrub cleaner/degreaser is preferred) as the copper cleaner acts upon its bristles as well.

(14) When the barrel is clean, dry it with several tight fitting patches. Also, dry the chamber using the .45 caliber bronze bristle bore brush with a patch wrapped around it.

(15) Run a patch saturated with rust prevention (not CLP) down the barrel and chamber if the weapon is to be stored for any length of time. Stainless steel barrels are not immune from corrosion. Be sure to remove the preservative

by running dry patches through the bore and chamber before firing.

(16) Place a small amount of rifle grease on the rear surfaces of the bolt lugs. This will prevent galling of the metal surfaces.

(17) Wipe down the exterior of the weapon (if it is not covered with camouflage paint) with a CLP-saturated cloth to protect it during storage.

d. Barrel Break-in Procedure. To increase barrel life, accuracy, and reduce cleaning requirement the following barrel break-in procedure must be used. This procedure is best accomplished when the dWS is new or newly rebarreled. The break-in period is accomplished by polishing the barrel surface under heat and pressure. This procedure should only be done by qualified personnel. The barrel must be cleaned of all fouling, both powder and copper. The barrel is dried, and one round is fired. The barrel is then cleaned again using carbon cleaner and then copper cleaner. The barrel must be cleaned again, and another round is fired. The procedure must be repeated for a total of 10 rounds. After the 10th round the SWS is then tested for groups by firing three-round shot groups, with a complete barrel cleaning between shot groups for a total of five shot groups (15 rounds total).

The barrel is now broken in, and will provide superior accuracy and a longer usable barrel life. Additionally, the barrel will be easier to clean because the surface is smoother. Again the barrel should be cleaned at least every 50 rounds to increase the barrel life.

e. Storage. The M24 SWS should be stored (Figure 2-13) using the following procedures: