

RIFLEER PROGRAM



Weapons Handling

Safety Rules:

Rule 1 - Treat every weapon as if it were loaded.

When a person takes charge of a rifle in any situation, she must treat the weapon as if it were loaded, determine its condition and continue applying the other safety rules.

Rule 2 - Never point a weapon at anything you do not intend to shoot.

You must maintain muzzle awareness at all times.

Rule 3 - Keep your finger straight and off the trigger until you are ready to fire.

A target must be identified before taking the weapon off safe and moving the finger to the trigger.

Rule 4 - Keep the weapon on safe until you intend to fire.

A target must be identified before taking the weapon off safe. This rule is intended to eliminate the chance of the weapon discharging by accident.

Status Check

A Rifleer must know the condition of her weapon at all times. When a Rifleer takes charge of any weapon in any situation, she must determine its condition.

- 1. Determine if a magazine is present.
- 2. Ensure the rifle is on safe.
- 3. Conduct a chamber check.
- 4. Grasp the charging handle.
- 5. Pull the charging handle slightly to the rear and visually and physically inspect the chamber.
- 6. Insert one finger into the ejection port and feel whether a round is present.



Weapons Commands

Weapons commands dictate the specific steps required to load and unload the rifle. Six commands are used in weapons handling:

Load. This command is used to take the weapon from having no magazine in the rifle to inserting a loaded magazine with the safety on, no round in the chamber.

Make Ready. This command is used to chamber a round in the rifle

Fire. This command is used to specify when a Rifleer may engage targets.

Cease-Fire. This command is used to specify when a Rifleer must stop target engagement.

Unload. This command is used to take the weapon from any condition to unloaded, empty chamber, magazine removed, and safety on.

Unload and Show Clear. This command is used when an observer must check the weapon to verify that no ammunition is present before the rifle is cleared, empty, and safety on.

Loading the Rifle - Perform the following steps to load the rifle:

- 1. Ensure the rifle is on safe.
- 2. Withdraw the magazine from the magazine pouch.
- 3. Observe the magazine to ensure it is filled.
- 4. Fully insert the magazine in the magazine well.
- 5. Without releasing the magazine, tug downward on the magazine to ensure it is seated.
- 6. Fasten the magazine pouch.

Making the Rifle Ready - Perform the following steps to make the rifle ready for firing:

- 1. Pull the charging handle to the rear and release.
- 2. To ensure ammunition has been chambered, conduct a chamber to ensure a round has been chambered.
- 3. Check the sights (to ensure proper battlesight zero setting, correct rear sight aperture, etc.).

Fire - On the command "Fire":

- 1. Aim the rifle
- 2. Take the rifle off safe
- 3. Pull the trigger

Cease-Fire - On the command "Cease Fire":

- 1. Place your trigger finger straight along the receiver.
- 2. Place the weapon on safe.

Unloading the Rifle - Perform the following steps to unload the rifle:

- 1. Ensure the weapon is on safe.
- 2. Remove the magazine from the rifle and retain it on your person.
- 3. Pull the charging handle to remove any round from the chamber



Principles of Reloading

The first priority when performing a reload is to get the rifle reloaded and back into action. The second priority when performing a reload is to retain the magazine so when you move, the magazine moves with you. When time permits, retain magazines securely on your person (e.g., in magazine pouch, flak jacket, and cargo pocket).

The combat situation may dictate dropping the magazine to the deck when performing a reload. This is acceptable as long as it is picked up before moving to another location. Take cover before reloading. Always reload before leaving cover to take advantage of the protection provided by cover. When moving, your focus should be on moving, therefore every effort should be made to not reload while on the move.

When reloading, your focus is on the magazine change. When reloading, draw the weapon in close to your body so you can see what you are doing and retain positive control of the magazine. When the new magazine is inserted, tug on it to ensure it is seated.

Retain your empty magazines. When there is a lull in the action, refill those magazines so they will be available for future use. During a lull in the action, replace your magazine when you know you are low on ammunition. This ensures a full magazine of ammunition in the rifle should action resume. Do not wait until the magazine is completely empty to replace it.

Tactical Reload

A Tactical Reload is performed when the weapon is in condition 1 by replacing the magazine before it runs out of ammunition. To perform a Tactical Reload, perform the following steps:

- 1. Withdraw a filled magazine from the magazine pouch. With the same hand, press the magazine button and remove the partially filled magazine so it can be retained in the remaining fingers.
- 2. Fully insert the filled magazine into the magazine well and tug downward on the magazine to ensure it is properly seated.
- 3. Store the partially filled magazine in the magazine pouch with rounds up and projectiles pointing away from the body.
- 4. Fasten the magazine pouch.

Dry Reload

A dry reload is required when the magazine in the weapon has been emptied and the bolt has locked to the rear. To perform a dry reload:

- 1. Press the magazine release button.
- 2. Remove the empty magazine and retain it on your person when time permits.
- 3. Fully insert a filled magazine into the magazine well and tug downward on the magazine to ensure it is properly seated.
- 4. Pull the charging handle to chamber a round or depress the bolt catch to allow the bolt carrier to move forward and observe the round being chambered.



Malfunction Clearance

If the rifle fails to fire, a malfunction has likely occurred and needs to be addressed.

Once the rifle ceases firing, the Rifleer must visually or physically observe the ejection port to identify the problem before she can clear it. The steps taken to clear the weapon are based on observation of one of the following three indicators:

Indicator: The bolt is forward or the ejection port cover is closed.

To return the weapon to operation:

- Seek cover if the tactical situation permits.
- Tap Tap the bottom of the magazine.
- Rack Pull the charging handle to the rear and release it.
- Bang -Sight in and attempt to fire.

Indicator: Brass is obstructing chamber area(usually indicating a double feed or failure to eject)

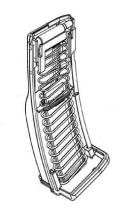
To return the weapon to operation:

- Seek cover if the tactical situation permits.
- Attempt to remove the magazine.
- Attempt to lock the bolt to the rear

If the bolt will not lock to the rear, rotate the rifle so the ejection port is facing down; hold the charging handle to the rear as far as it will go and shake the rifle to free the round(s). If the rounds do not shake free, hold the charging handle to the rear and strike the butt of the rifle on the ground or manually clear the round. Conduct a reload. Sight in and attempt to fire.

Indicator: The bolt is locked to the rear.

- Seek cover if the tactical situation permits.
- Conduct a dry reload.
- Sight in and attempt to fire.





Rifle Maintenance

Normal care and cleaning of the rifle will result in proper functioning of its all parts. Improper maintenance can cause stoppages, reducing combat readiness and effectiveness.

Materials

- Cleaner, lubricant, and preservative (CLP).
- Cleaning rod
- Patch holder section, swabs, patches, pipe cleaners, and clean rags.
- Brushes: bore, chamber, and general purpose

Inspection

While cleaning the rifle, and during each succeeding step in the preventive maintenance process, inspect each part for cracks and chips and ensure parts are not bent or badly worn. Inspection is a critical step to ensure the combat readiness of your rifle. It is performed normally during rifle cleaning (prior to lubrication), how-ever, it can be performed throughout the preventive maintenance process.

Cleaning the receiver

- Attach the patch holder onto your cleaning rod.
- Point the muzzle down and insert the non-patch end of the rod into the chamber. Attach the handle to the cleaning rod section and pull a CLP-moistened patch through the bore.
- Attach the bore brush to the. Put a few drops of CLP on the bore brush. Insert the rod into the
 barrel from the chamber end, attach the handle, and pull the brush through the bore. Repeat 3
 times. Remove bore brush and attach the patch holder to the rod with a CLP moistened patch
 insert the rod into the barrel from the chamber end, attach the handle, and pull the patch
 through the bore.
- Inspect the bore for cleanliness by holding the muzzle to your eye and looking into the bore.
- Repeat the above steps until the patches come out of the bore clean.
- Attach the chamber brush and one section of the cleaning rod to the handle. Moisten it well
 with CLP and insert it into the chamber.
- Scrub the chamber and bolt lugs using a combination of a plunging and clockwise rotating action.
- Note: Do not reverse direction of the brush while it is in the chamber.
- Clean the interior portion of the receiver with the general-purpose brush and CLP.
- Dry the bore, chamber, and the interior of the receiver with rifle patches, swabs, and clean rags until they come out clean. Then moisten all interior surfaces with CLP.
- Wipe the barrel, gas tube, and handguards clean with a rag.
- Wipe dirt from the firing mechanism using a general-purpose brush, clean patch, pipe cleaners, and swabs.
- Clean the outside of the receiver with the general purpose brush and CLP. Clean the buttplate and rear sling swivel.
- Wipe the inside of the magazine well with a rag.



- Clean the outer and inner surfaces of the bolt carrier with a general-purpose brush.
- Clean the bolt carrier key with a pipe cleaner.
- Clean the locking lugs, gas rings, and exterior of the bolt with the general-purpose brush.
- Insert a swab into the rear of the bolt and swab out the firing pin recess and gas ports.
- Clean the extractor with the general-purpose brush, ensuring all the carbon is removed from underneath the extractor lip.
- Clean extractor pin, firing pin, and firing pin retaining pin using the general-purpose brush and CLP.
- Clean charging handle assembly with the general purpose brush and patches.

Lubrication

Lubrication is performed as part of the detailed procedure for preventive maintenance. Lubrication procedures are also performed in preparation for firing.

In all but the coldest arctic conditions, CLP is the lubricant for the rifle. Remember to remove excess CLP from the bore and chamber before firing.

- After cleaning the rifle, lube the inside of the upper receiver, bore, chamber, outer surfaces of the barrel, and surfaces under the handguard.
- Generously lube the moving parts inside the lower receiver and their pins.
- Lightly lube the charging handle and the inner and outer surfaces of the bolt carrier.

Field Maintenance

Preventive maintenance in the field is performed when detailed disassembly and cleaning is not practical due to operational tempo or the level of threat. To perform limited field preventive maintenance:

- Field strip the weapon system
- Remove the bolt carrier group.
- Do not disassemble the bolt carrier group further.
- Clean the bolt carrier group.
- Clean the receiver without further disassembly
- Clean the bore and chamber.
- Lubricate the rifle.
- Reassemble the rifle and perform a user serviceability inspection.



Fundamentals: Marksmanship, natural point of aim, firing positions, trajectory, & zeroing

The fundamentals of marksmanship are aiming, breathing, and trigger control. These techniques provide the foundation for all marksmanship principles and skills. At longer ranges, the target appears to be smaller and a more precise shot is required to accurately engage the target. The fundamentals are more critical to accurate engagement as the range to the target increases. To be accurate at longer ranges, the Rifleer must take the time to slow down and accurately apply the fundamentals. At shorter ranges, the enemy must be engaged quickly before he engages. As the size of the target increases, and the distance to the target decreases, the fundamentals, while still necessary, become less critical to accuracy.

Sight Alignment

Sight alignment is the relationship between the front sight post and rear sight aperture and the aiming eye. This relationship is the most critical to aiming and must remain consistent from shot to shot. To achieve correct sight alignment:

- Center the tip of the front sight post vertically and horizontally in the rear sight aperture.
- Imagine a horizontal line drawn through the center of the rear sight aperture. The top of the front sight post will appear to touch this line.
- Imagine a vertical line drawn through the center of the rear sight aperture. The line will appear to bisect the front sight post.

Sight Picture

Sight picture is the placement of the tip of the front sight post in relation to the target while maintaining sight alignment. Correct sight alignment but improper sight placement on the target will cause the bullet to impact the target incorrectly on the spot where the sights were aimed when the bullet exited the muzzle. To achieve correct sight picture, place the tip of the front sight post at the center of the target while maintaining sight alignment. Center mass is the correct aiming point so that point of aim/point of impact is achieved.

Acquiring and Maintaining Sight Alignment and Sight Picture

The human eye can focus clearly on only one object at a time. For accurate shooting, it is important to focus on the tip of the front sight post. When the shot is fired, focus must be on the tip of the front sight post; peripheral vision will include the rear sight and the target. The rear sight and the target will appear blurry.

Proper cheek weld and placement of the rifle butt in the shoulder aid in establishing sight alignment quickly. The rifle butt's placement in the shoulder serves as the pivot point for presenting the rifle up to a fixed point on the cheek (stock weld).

Breathing



It is critical to interrupt your breathing at a point of natural respiratory pause before firing a long-range shot or a precision shot from any distance. A respiratory cycle lasts 4 to 5 seconds. Inhaling and exhaling each require about 2 seconds. A natural pause of 2 to 3 seconds occurs between each respiratory cycle. The pause can be extended up to 10 seconds. During the pause, breathing muscles are relaxed and the sights settle at their natural point of aim. To minimize movement, it is best to fire the shot during the natural respiratory pause. The basic technique is as follows:

- Breathe naturally until the sight picture begins to settle.
- Take a slightly deeper breath.
- Exhale and stop at the natural respiratory pause.
- Fire the shot during the natural respiratory pause.

This may not be possible in a combat environment. It may be necessary to take several deep breaths before holding the breath. You should not make an exaggerated effort to perform breath control. A natural respiratory pause will help stabilize the shooter's sight picture. The basic technique is as follows:

- Take a deep breath filling the lungs with oxygen.
- Hold the breath and apply pressure to the trigger.
- Fire the shots.

Trigger Control

Trigger control is the skillful manipulation of the trigger that causes the rifle to fire without disturbing sight alignment or sight picture. Controlling the trigger is a mental process, while pulling the trigger is a physical process.

- After obtaining sight picture, apply smooth continuous pressure rearward on the trigger until the shot is fired.
- During recovery, release the pressure on the trigger slightly to reset the trigger after the first shot is delivered (indicated by an audible click). Do not remove the finger from the trigger. This places the trigger in position to fire the next shot without having to reestablish trigger finger placement.

Follow-Through

Follow-through is the continued application of the fundamentals until the round has exited the barrel. In combat, follow-through is important to avoid altering the impact of the round by keeping the rifle as still as possible until the round exits the barrel.

Recovery

It is important to get the rifle sights back on the target for another shot. This is known as recovery. Shot recovery starts immediately after the round leaves the barrel. To recover quickly, you must physically bring the sights back on target as quickly as possible.



Shooting Position

There are three elements of a good shooting position bone support, muscular relaxation, and natural point of aim.

Bone Support

The body's skeletal structure provides a stable foundation to support the rifle's weight. A weak shooting position will not withstand a rifle's repeated recoil when firing at the sustained rate or buffeting from wind. To attain a correct shooting position, the body's bones must support as much of the rifle's weight as possible. Proper use of the sling provides additional support. The weight of the weapon should be supported by bone rather than muscle because muscles fatigue whereas bones do not. By establishing a strong foundation for the rifle utilizing bone support, the Rifleer can relax as much as possible while minimizing weapon movement due to muscle tension.

Muscular Relaxation

Once bone support is achieved, muscles are relaxed. Muscular relaxation helps to hold the rifle steady and increase the accuracy of the aim. Muscular relaxation also permits the use of maximum bone support to create a minimum arc of movement and consistency in resistance to recoil. Muscular relaxation cannot be achieved without bone support. During the shooting process, the muscles of the body must be relaxed as much as possible. Muscles that are tense will cause excessive movement of the rifle, disturbing the aim. When proper bone support and muscular relaxation are achieved, the rifle will settle onto the aiming point, making it possible to apply trigger control and deliver a well-aimed shot.

Natural Point of Aim

The point at which the rifle sights settle when in a firing position is called the natural point of aim. Since the rifle becomes an extension of the body, it may be necessary to adjust the position of the body until the rifle sights settle naturally on the desired aiming point on the target. When in a shooting position with proper sight alignment, the position of the tip of the front sight post will indicate the natural point of aim. When completely relaxed, the tip of the front sight post should rest on the desired aiming point. One method of checking for natural point of aim is to aim in on the target, close the eyes, take a couple of breaths, and relax as much as possible. When the eyes are opened, the tip of the front sight post should be positioned on the desired aiming point while maintaining sight alignment.

For each shooting position, specific adjustments will cause the rifle sights to settle center mass, achieving a natural point of aim. In all positions, the natural point of aim can be adjusted by

- Varying the placement of the left hand in relation to the handguards.
- Moving the left hand forward on the handguards to lower the muzzle of the weapon, causing the sights to settle lower on the target.
- Moving the left hand back on the handguards to raise the muzzle of the weapon, causing the sights to settle higher on the target.
- Varying the placement of the stock in the shoulder.
- Moving the stock higher in the shoulder to lower the muzzle of the weapon, causing the sights to settle lower on the target.
- Moving the stock lower in the shoulder to raise the muzzle of the weapon, causing the sights to settle higher on the target.
- Natural point of aim can be adjusted right or left by adjusting body alignment in relation to the target.



Prone Position

The prone position provides a very steady foundation for shooting and presents a low profile for maximum concealment. However, the prone position is the least mobile of the shooting positions and may restrict a one's field of view for observation. In this position, the Rifleer's weight is evenly distributed on the elbows, providing maximum support and good stability for the rifle. Once on the ground, stretch your legs out behind you. Spread your feet a comfortable distance apart with the toes pointing outboard and the inner portion of the feet in contact with the ground.

- As much of the body mass should be aligned directly behind the rifle as possible.
- If body alignment is correct, weapon recoil is absorbed by the whole body and not just the shoulder.
- Grasp the pistol grip with the right hand and place the rifle butt in the right shoulder pocket.
- Lower the head and place the cheek firmly against the stock to allow the aiming eye to look through the rear sight aperture.
- Rotate the left hand up, pinching the handguard between the thumb and forefinger.
- Slide both elbows outboard on the ground so there is outboard tension against the sling (moving the elbows out tightens the sling) and both shoulders are level. The elbows should provide a tripod of support with the body.
- Adjust the position of the left hand on the hand guard to allow the sling to support the weapon and the front sight to be centered in the rear sight aperture.



(Prone)

Sitting Position

There are three variations of the sitting position: crossed ankle, crossed leg, and open leg. Experiment with all the variations and select the position that provides the most stability for firing. Although the sitting position provides an extremely stable base, it limits lateral movement and maneuverability. It has several variations that can be adapted to the individual. The sitting position provides greater elevation than the prone position while still having a fairly low profile.



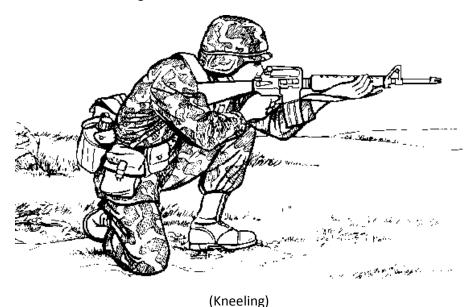


(Sitting)

The Kneeling Position

The kneeling position is quick to assume and easy to maneuver from. It is usually assumed after initial engagement has been made from a standing position. It can easily be adapted to available cover. A tripod is formed by the left foot, right foot, and right knee when the Rifleer assumes the position, providing a stable foundation for shooting. The kneeling position also presents a higher profile to facilitate a better field of view as compared to the prone and sitting positions.

The kneeling position can be assumed by either moving forward or dropping back into position, depending on the combat situation. For example, it may be necessary to drop back into position to avoid crowding cover, or to avoid covering uncleared terrain.





Standing Position

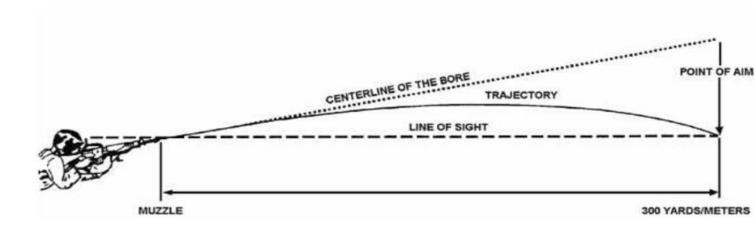
The standing position is the quickest position to assume and the easiest to maneuver from. It allows greater mobility than other positions. The standing position is often used for immediate combat engagement. The standing position is supported by the shooter's legs and feet and provides a small area of contact with the ground. In addition, the body's center of gravity is high above the ground. Therefore, maintaining balance is critical in this position.



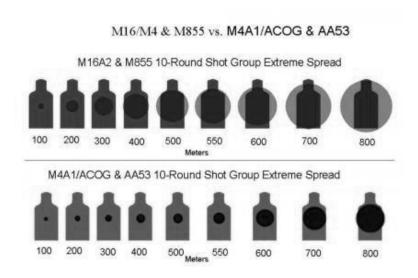
(Standing)



Trajectory: In flight, a bullet does not follow a straight line but travels in a curve or arc, called trajectory. Trajectory is the path a bullet travels to the target. As the bullet exits the muzzle, it travels on an upward path, intersecting the line of sight (because the sights are above the muzzle). As the bullet travels farther, it begins to drop and intersects the line of sight again.



Zeroing: Zeroing is adjusting the sights on the weapon to cause the shots to impact where the individual aims. This can apply to iron sights or optics such as red dots and scopes. To be combat effective, it is necessary to zero your rifle to distances appropriate for battle. A correct Battlesight Zero will allow you to easily engage human sized targets anywhere from 0-300 meters and beyond (depending on the mechanical accuracy of your weapon).





Because not everyone has access to a 300 meter shooting range, we will be using a 25 meter target to create a field expedient Battlesight Zero. The target in **Appendix A** is intended to be printed on standard 8.5"x11" printer paper.

Zeroing involves adjusting the rear sight and the front sight so that your point of aim matches the impact of the bullet on target.



(Point of Aim)

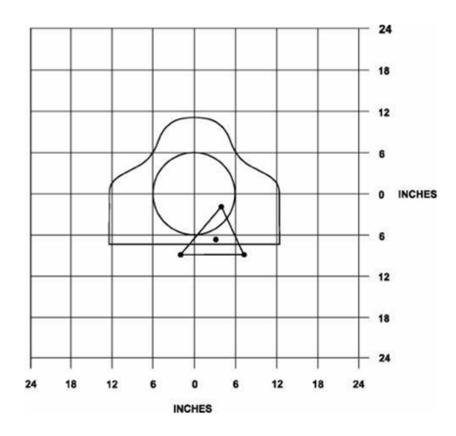
Elevation: Elevation is the vertical axis. Adjusting the elevation means to move the point of impact up or down on the target.

Windage: Windage is the horizontal axis. Adjusting the windage means to move the point of impact left or right on the target.

Perform the following steps to zero the rifle:

- Fire a 3-shot group at one of the boxes on the 25m Zeroing Target
- Triangulate the shot group to find the center.
- Determine the vertical distance in inches from the center of the shot group to the center of the target.
- Make elevation adjustments on the front sight post to move the center of the shot group to the center of the target.
- Determine the horizontal distance from the center of the shot group to the center of the target.
- Make lateral adjustments to the windage to move the center of the shot group to the center of the target.
- Repeat preceding steps until shot group is centered.





(Triangulating a shot group)

Cover is anything that protects an individual from enemy fire. Cover may be an existing hole, a hastily dug shelter, or a well-prepared fighting position with overhead protection.

Concealment is anything that hides an individual from enemy view, but it may not afford protection. Concealment can be obtained from buildings, trees, crops, and skillful use of ground contours. An individual can use any object or terrain feature that protects him from enemy fire, hides him from enemy view, allows him to observe the enemy, and provides support for a firing position.

Supported Firing Positions: Supports are foundations for positions; positions are foundations for the rifle. To maximize the support the position provides, the firing position should be adjusted to fit or conform to the shape of the cover. Elements of a sound firing position, such as balance and stability, must be incorporated and adjusted to fit the situation and type of cover. A supported firing position should minimize exposure to the enemy, maximize the stability of the rifle, and provide protection from enemy observation and fires. A Rifleer can use any available support (e.g., logs, rocks, sandbags or walls) to stabilize his firing position. The surrounding combat environment dictates the type of support and position used.



Target Engagement:

Immediate threat target engagement is characterized by short-range engagement (i.e., less than 50 meters) with little or no warning that requires an immediate response to engage an enemy. This type of engagement is likely in close terrain (e.g., urban, jungle). If this type of engagement is likely, the large rear sight aperture (0-2) could be placed up to provide a wider field of view and detection of targets. Marksmanship skills include quick presentation and compression of the fundamentals (i.e., quick acquisition of sight picture, uninterrupted trigger control). At close ranges, perfect sight alignment is not as critical to accuracy on target. However, the front sight post must be in the rear sight aperture; proper sight alignment is always the goal.

Multiple Target Engagements: When engaging multiple targets, a shooter must prioritize each target and carefully plan his shots to ensure successful target engagement. Mental preparedness and the ability to make split-second decisions are the key to successful engagement of multiple targets. The proper mindset allows a Rifleer to react instinctively and to control the pace of the battle rather than just reacting to the threat.

After the first target is engaged, a Rifleer must immediately engage the next target and continue to engage targets until they are eliminated. While engaging multiple targets, a Rifleer must be aware of his surroundings and not fixate on just one target. He must rapidly prioritize the targets, establish an engagement sequence, and engage the targets. A Rifleer also must maintain constant awareness and continuously search the terrain for additional targets.

To engage multiple targets, the Rifleer performs the following steps:

- The first target with two rounds.
- The recoil of the rifle can be used to direct the recovery of the weapon on to the next target. As the weapon is coming down in its recovery, the shooter physically brings the sights onto the desired target. Pressure is maintained on the trigger throughout recovery and trigger control is applied at a rate consistent with the shooter's ability to establish sight picture on the desired target.
- When possible, such as when all targets are of equal threat, the shooter should engage targets in a direction that maximizes his ability to support and control the weapon.
- The preceding steps are repeated until all targets have been engaged.



RQT – Rifleer Qualification Test

The RQT in Appendix B is a target designed to be used at 25 meters. The RQT target is intended to be printed on 11"x17" paper.

A score of 210 or above in combination with a demonstrable understanding of the general principles in this document qualifies the candidate for a Rifleer Patch.

The target is designed in such a way that it simulates various distances. Stage 1 simulates a man sized target at 100 yards, for example. Stage 2 simulates a man sized target at 200 yards. Stage 3, 300 yards, and Stage 4 is 400 yards. The purpose of this drill is to establish basic marksmanship skills by applying the fundamental techniques discussed in this manual.





