

Chapter 5 Rifle Marksmanship

5-1. Rifle marksmanship: fundamentals

- a. The Soldier must understand the five key rifle marksmanship fundamentals before approaching the firing line.
 - (1) Establish a **steady position** that allows observation of the target.
 - (2) Apply proper **aiming** of the rifle at the target by aligning the sight system.
 - (3) Apply proper **breath control** without disturbing the alignment.
 - (4) Apply proper **trigger squeeze** without disturbing the alignment.
 - (5) Follow-through by keeping your finger on the trigger all the way through the rear and releasing the trigger after the recoil has stopped (2 sec).
- b. When expanded with additional techniques and information, these rifle marksmanship skills will aid the firer in achieving target hits under many conditions.
- c. Applying the five fundamentals rapidly and consistently is called “the integrated act of firing.”
 - (1) **Steady position.** When the Soldier approaches the firing line, he should assume a comfortable, steady firing position in order to hit targets consistently. The time and supervision each Soldier has on the firing line are limited. Therefore, he must learn how to establish a steady position during dry-fire training. The firer is the best judge as to the quality of his position. If he can hold the front sight post steady through the fall of the hammer, he has a good position. The steady position elements (see figure 5-1) are as follows:



Figure 5-1. Steady position elements

- (a) **Non-firing handgrip.** Hand forms a “U” by placing the thumb and forefinger over the handguard.
 - (b) **Rifle butt stock placed in pocket of firing shoulder.**
 - (c) **Firing hand grip.** Firing hand forming a “V” sitting high on the pistol grip; slight rearward pressure
 - The forefinger is placed on the trigger so that the lay of the rifle is not disturbed when the trigger is squeezed.
 - A slight rearward pressure is exerted by the remaining three fingers to ensure that the butt of the stock remains in the pocket of the shoulder, minimizing the effect of recoil.
 - (d) **Firing elbow placement.** The location of the firing elbow is important in providing balance.
 - The exact location, however, depends on the firing/ fighting position used. For example, kneeling, prone, sitting, or standing.
 - Placement should allow shoulders to remain level.
 - Keep the magazine firmly on the ground.
 - (e) **Non-firing elbow:** ensure elbows are firmly on the ground stabilizing the weapon;
 - (f) **Head:** the head is erect with proper cheek to stock contact for every round.
- (2) **Aiming.** open both eyes, scan sector, acquire target; close non-firing eye, focus is on front of sight post; tip on front sight post is center of rear hole; eye is directly lined up with center of rear sight
- (a) It involves placing the tip of the front sight post in the center of the rear sight aperture (see figure 5-2).

(b) Any alignment error between the front and rear sights repeats itself for every 1/2 meter the bullet travels.

(c) For example, at the 25-meter line, any error in rifle alignment is multiplied 50 times. If the rifle is misaligned by 1/10 inch, it causes a target at 300 meters to be missed by 5 feet.

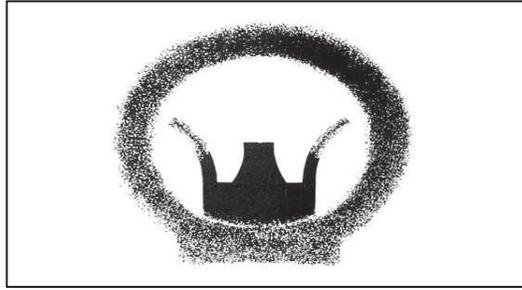


Figure 5-2. Correct sight picture

(3) **Focus of the eye.** A proper firing position places the eye directly on line with the center of the rear sight.

(a) When the eye is focused on the front sight post, the natural ability of the eye to center objects in a circle and to seek the point of greatest light (center of the aperture) aid in providing correct sight alignment.

(b) For the average Soldier firing at combat-type targets, the natural ability of the eye can accurately align the sights.

(c) Therefore, the firer can place the tip of the front sight post on the aiming point, but the eye must be focused on the tip of the front sight post.

(d) This causes the target to appear blurry, while the front sight post is seen clearly.

(e) Two reasons for focusing on the tip of the front sight post are:

- Only, a minor aiming error should occur since the error reflects only as much as the Soldier fails to determine the target center. A greater aiming error can result if the front sight post is blurry due to focusing on the target or other objects.

- Focusing on the tip of the front sight post aids the firer in maintaining proper sight alignment (see figure 5-2).

(4) **Sight picture.** Once the Soldier can correctly align his sights, he can obtain a sight picture.

(a) A correct sight picture has the target, front sight post, and rear sight aligned.

(b) The sight picture includes two basic elements: sight alignment and placement of the aiming point.

- Placement of the aiming point varies, depending on the engagement range.

- Figure 5-3 shows a Soldier obtaining a correct sight picture as it relates to figure 5-2. The aiming point is the center of mass, and the sights are in perfect alignment. This is a correct sight picture.



Figure 5-3. Prone unsupported showing correct sight alignment

(5) **Front sight.** The front sight post is vital to proper firing and should be replaced when damaged.

(a) The post should be blackened anytime it is shiny since precise focusing on the tip of the front sight post cannot be done otherwise.

(b) Two techniques that can be used are the carbide lamp and the burning plastic spoon.

(6) **Aiming practice.** Aiming practice is conducted before firing live rounds.

(a) During day firing, the Soldier should practice sight alignment and placement of the aiming point.

(b) This can be done by using training aids such as the M15A1 aiming card and the Riddle sighting device.

(7) **Breath control.** As the firer's skills improve and as timed or multiple targets are presented, he must learn to hold his breath at any part of the breathing cycle. Two types of breath control techniques are practiced during dry fire:

(a) The first is the technique used during zeroing and when time is available to fire a shot (see figure 5-4, top graph).

- There is a moment of natural respiratory pause while breathing when most of the air has been exhaled from the lungs and before inhaling.

- Breathing should stop after most of the air has been exhaled during the normal breathing cycle.

- The shot must be fired before the Soldier feels any discomfort.

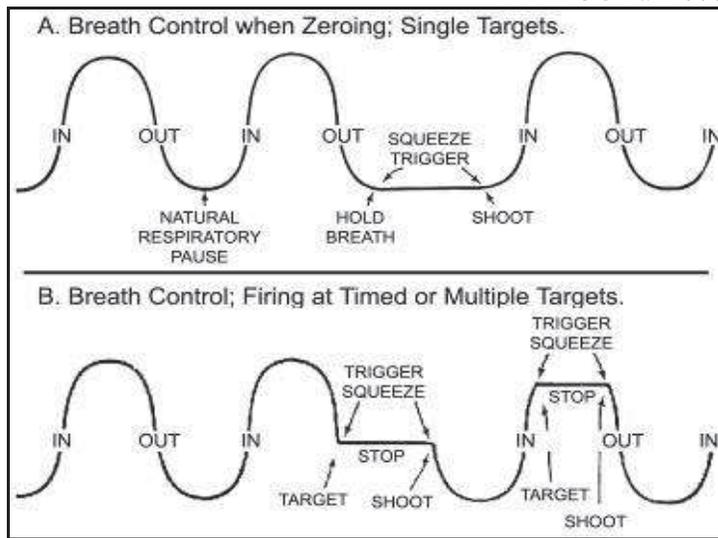


Figure 5-4. Breath control

(b) The second breath control technique is employed during rapid fire (short-exposure targets [see figure 5-4, bottom graph]). Using this technique, the Soldier holds his breath when he is about to squeeze the trigger.

(8) **Trigger squeeze.** Any sudden movement of the finger on the trigger (see figure 5-5) can disturb the lay of the rifle and cause the shot to miss the target. The precise instant of firing should be a surprise to the Soldier.



Figure 5-5. Trigger squeeze

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(a) The Soldier's natural reflex to compensate for the noise and slight punch in the shoulder can cause him to miss the target if he knows the exact instant the rifle will fire.

(b) The Soldier usually tenses his shoulders when expecting the rifle to fire, but it is difficult to detect since he does not realize he is flinching.

(c) When the hammer drops on a dummy round and does not fire, the Soldier's natural reflexes demonstrate that he is improperly squeezing the trigger.

(d) A novice firer can learn to place the rifle in a steady position and to correctly aim at the target if he follows basic principles.

(e) If the trigger is not properly pulled, the rifle is misaligned with the target at the moment of firing.

(f) The trigger finger (index finger on the firing hand) is placed where it naturally lies.

- The trigger finger must pull the trigger smooth, slow, steady to the rear so that the hammer falls without disturbing the lay of the rifle.

- When a live round is fired, it is difficult to see what effect trigger pull had on the lay of the rifle.

- Therefore, it is important to experiment with many finger positions during dry-fire training to ensure the hammer is falling with little disturbance to the aiming process.

(g) As the firer's skills increase with practice, he needs less time spent on trigger squeeze.

(h) Novice firers can take five seconds to perform an adequate trigger squeeze. As skills improve, he can squeeze the trigger in a second or less.

(i) The proper trigger pull should start with a smooth, slow, steady to the rear pull on the trigger during the initial aiming process.

(j) The firer applies more pressure after the front sight post is steady on the target and he is holding his breath.

(9) Follow-through. Keep finger on the trigger all the way to the rear; ease the trigger forward without taking your finger off, only after the recoil has stopped (2 sec).

5-2. Rifle marksmanship: firing positions combat applicable training course (CATC)

a. All firing positions are taught during basic rifle marksmanship training.

b. During CATC training, the basic firing positions used are the prone position, the kneeling position, and the seated position. IET Soldier's qualify from the prone supported, prone unsupported, and kneeling firing positions.

c. All offer a stable platform for firing the rifle and are the positions used during basic record fire.



Figure 5-6. Prone unsupported position

d. Prone unsupported position. This firing position (see figure 5-6) offers another stable firing platform for engaging targets.

(1) To assume this position, the Soldier faces his target, and drops to the ground, breaking his fall with the butt of the weapon.

(2) Legs are spread apart, toes pointing out assuming a natural point of aim.

(3) Both elbows are placed on the ground to support the upper body with the magazine offering stabilization.

(4) The firing hand is placed on the pistol grip; the non-firing hand is placed on the upper handguard.

(5) Elbow and knee pads can be worn to relieve pressure and IBA induced pain in these areas. The butt of the weapon should be placed between the SAPI plate and bicep to help stabilize the weapon and absorb recoil.



Figure 5-7. Kneeling firing position

(6) This position (see figure 5-7) offers another firing platform for engaging targets.

(a) To assume the kneeling firing position, the Soldier keeps his left foot in place, steps back with the right foot, then drops to the right.

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(b) He places the left non-firing hand on the upper handguard with the upper arm (triceps) on the left knee for support.

(c) The right hand is placed on the pistol grip with the butt of the weapon between the SAPI plate and bicep to help stabilize the weapon and absorb recoil.

(d) The ball of the right foot should rest firmly on the ground so the Soldier can sit back with his buttock on the heel. Relaxing and leaning forward into the position can help absorb recoil.

(e) The butt of the weapon should be placed between the SAPI plate to help stabilize the weapon and absorb recoil.



Figure 5-8. Seated firing position

(7) Seated position. This firing position (see figure 5-8) offers another firing platform for engaging targets.

(a) To assume the sitting position the Soldier assumes a seated position with legs tucked.

(b) He places the left non-firing hand on the upper handguard with the elbows on both knees for support.

(c) The right hand is placed on the pistol grip with the butt of the weapon between the SAIP plate and bicep to help stabilize the weapon and absorb recoil.

5-3. Rifle marksmanship: positions of the coach

a. The coach constantly checks and assists the firer in applying marksmanship fundamentals during firing.

b. He observes the firer's position and his application of the steady position elements.

c. The coach is valuable in checking factors the firer is unable to observe for himself and in preventing the firer from repeating errors.

d. During an exercise, the coach should be positioned where he can best observe the firer when he assumes position.

e. He then moves to various points around the firer (sides and rear) to check the correctness of the firer's position.

- f. The coach requires the firer to make adjustments until the firer obtains a correct position.
- g. When the coach is satisfied with the firing position, he assumes a coaching position alongside the firer.
- h. The coach usually assumes a position like that of the firer, which is on the firing side of the Soldier (see figure 5-9).

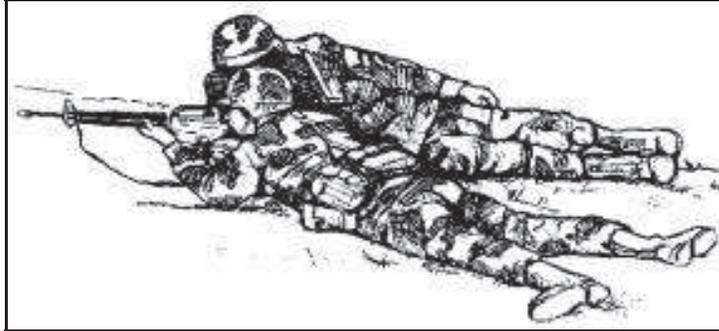


Figure 5-9. Prone position of coach (right-handed firer)

5-4. Rifle marksmanship: checklist for the coach

- a. In order to determine and eliminate rifle and firer deficiencies, the coach checks to see that the:
 - (1) Rifle is cleared and defective parts have been replaced.
 - (2) Ammunition is clean, and the magazine is properly placed in the pouch.
 - (3) Sights are blackened and set correctly for small (day) aperture vs. large (limited visibility).
- b. The coach also observes the firer to see:
 - (1) position elements.
 - (2) If he properly loads the rifle.
 - (3) If he obtains the correct sight alignment (with the aid of an M16 sighting device).
 - (4) If he holds his breath correctly (by watching his back at times).
 - (5) If he applies proper trigger squeeze, determines whether he flinches or jerks by watching his head, shoulders, trigger finger, and firing hand and arm.
 - (6) If the firer is tense and nervous, the coach has him breathe deeply several times to relax.
- c. Supervisory personnel and peer coaches correct errors as they are detected. If many common errors are observed, it is appropriate to call the group together for more discussion and demonstration of proper procedures and to provide feedback.

5-5. Weapons status

See figure 5-10 for weapons status.



Figure 5-10. Weapons status

5-6 Weapons clearing

See figure 5-11 for weapons clearing

M16/M4Series Rifles**Clear the rifle.**

- a. Attempt to place the selector lever on SAFE. If the weapon is not cocked, the lever cannot be placed on SAFE.
- b. Remove the magazine from the rifle, if there is one present.
- c. Lock the bolt open
 - (1) Pull the charging handle rearward.
 - (2) Press the bottom of the bolt catch.
 - (3) Allow the bolt to move forward until it engages the bolt catch.
 - (4) Return the charging handle to the forward position.
 - (5) If the selector lever is not on SAFE, place it on SAFE.
- d. Observe the receiver and chamber to ensure positively that they do not contain ammunition.
- e. Allow the bolt to go forward by pressing the upper portion of the bolt catch.
- f. Place the selector lever on SEMI and squeeze the trigger.
- g. Pull the charging handle fully rearward and release it, allowing the bolt to go forward.
- h. Place the selector lever on SAFE.



Figure 5-11. Weapons clearing