

6. Basic Marksmanship and Safety.

6-1. Basic Rifle and Range Safety.

You will have the chance to learn basic rifle marksmanship (BRM) skills during BCT. This means a lot of time learning weapon and range safety before being allowed to fire a weapon on a range. This chapter will teach you some basics of rifle marksmanship, including rifle and range safety rules, basic techniques for holding a rifle and using the built-in sights, and basic firing positions. Your BRM training may be live firing with small caliber civilian rifles, live firing with military weapons (specifically, the M-16 family), or firing on a modern military weapons simulator. Regardless of the type of firing you do, you will use proper rifle handling and range safety procedures at all times.

The 12 Golden Rules for Safe Rifle Handling (Applies to all Firearms)

- Always treat the rifle as loaded.
- Always keep the rifle pointed in a safe direction.
- Always keep your finger straight and off the trigger until you are ready to shoot.
- Always keep the rifle unloaded until you are ready to use it.
- Never point the rifle at anything you don't intend to destroy.
- Be sure of your target and what is beyond it.
- Learn the mechanical and handling characteristics of the rifle you are using.
- Always use proper ammunition.
- Be sure the barrel is clear of obstructions before loading and shooting.
- If your rifle fails to fire when the trigger is pulled, hold your shooting position for several seconds; then with the muzzle pointed in a safe direction, carefully unload the rifle.
- Don't rely on the rifle's safety selector to keep it from firing.
- Be aware of your surroundings when handling rifles so you don't trip or lose your balance and accidentally point and/or fire the rifle at anyone or anything.

Range Safety

- Follow the 12 Golden Rules for Safe Rifle Handling.
- Know and follow all the rules of the Shooting Range.
- Listen and do what the Range Master tells you to do.
- If applicable, uncase and case your rifle at the shooting position, never behind the safety line.
- Always keep the barrel pointed down range.
- Always keep the rifle on safe until you intend to shoot.
- Always wear eye and ear protection when shooting.
- Never shoot at water or hard surfaces.

6-2. Marksmanship Fundamentals.

The Cadet must understand the four key rifle marksmanship fundamentals before approaching the firing line at the range.

- Establish a steady position that allows observation of the target.

- Apply proper aiming of the rifle at the target by aligning the sight system.
- Apply proper breath control without disturbing the alignment.
- Apply proper trigger squeeze without disturbing the alignment.

Applying the above four fundamentals rapidly and consistently is called “the integrated act of firing.”

Steady Position: When the Cadet approaches the firing line, he should assume a comfortable, steady firing position (Figure 6-1) in order to hit targets consistently. The time and supervision each Cadet 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 for the M-16/M-4 are as follows:

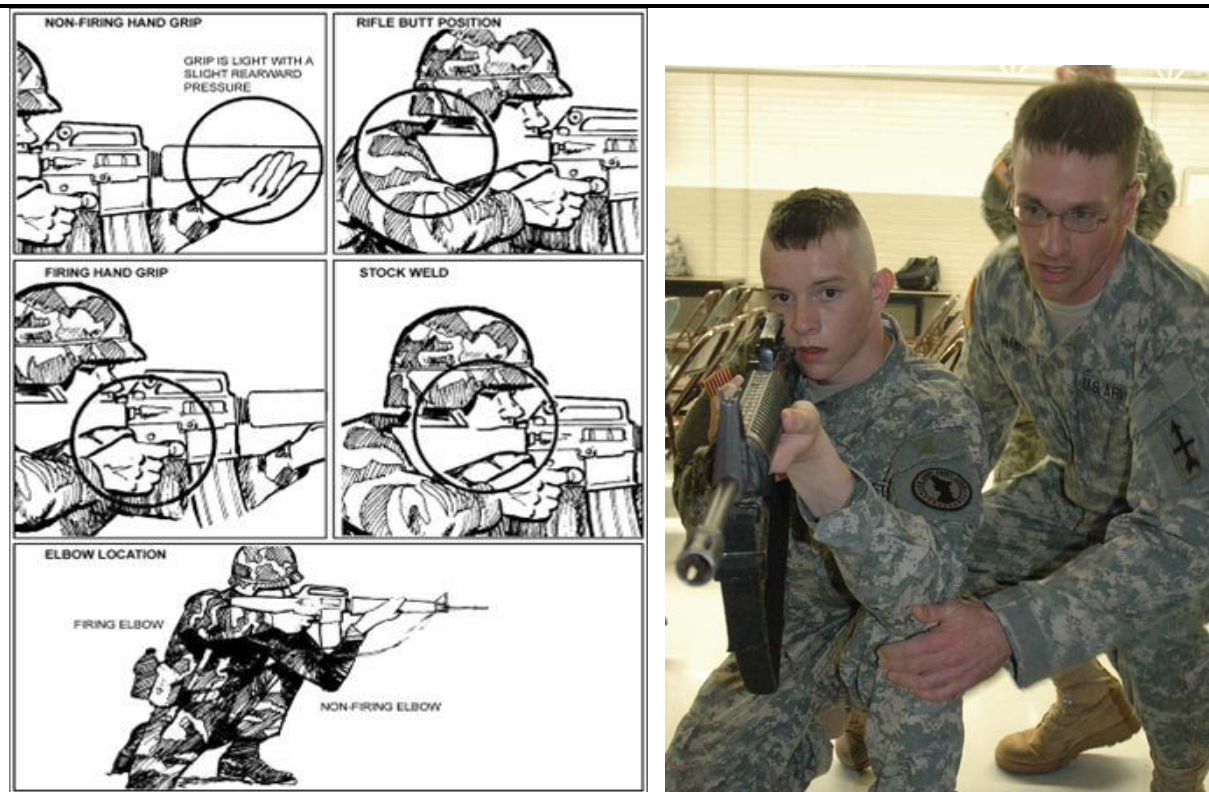


Figure 6-1. The steady position

- Non-firing handgrip: The rifle hand guard rests on the heel of the hand in the V formed by the thumb and fingers. The grip of the non-firing hand is light, and slight rearward pressure is exerted.
- Rifle butt position: The butt of the stock is placed in the pocket of the firing shoulder. This reduces the effect of recoil and helps ensure a steady position.
- Firing handgrip: The firing hand grasps the pistol grip so that it fits the V formed by the thumb and forefinger.

- 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.
- Firing elbow placement: The location of the firing elbow is important in providing balance.
 - The exact location, however, depends on the firing position used, for example, kneeling, prone, or standing.
 - Placement should allow shoulders to remain level.
- Non-firing elbow: The non-firing elbow is positioned firmly under the rifle to allow for a comfortable and stable position.
- Stock weld: The stock weld is taught as an integral part of various positions. Two key factors emphasized are that the stock weld should provide for a natural line of sight through the center of the rear sight aperture to the front sight post and to the target.
 - The firer's neck should be relaxed, allowing his cheek to fall naturally onto the stock.
 - Through dry-fire training, the Cadet is encouraged to practice this position until he assumes the same stock weld each time he assumes a given position. This provides consistency in aiming, which is the purpose of obtaining a correct stock weld.
 - Proper eye relief is obtained when a Cadet establishes a good stock weld.
 - Cadets should begin by trying to touch his nose close to the charging handle when assuming a firing position.
- Support: If artificial support (sandbags, logs, stumps) is available, it should be used to steady the position and to support the rifle. If it is not available, then the bones, not the muscles, in the firer's upper body must support the rifle.
 - Muscle relaxation: If support is properly used, the Cadet should be able to relax most of his muscles.
 - Using artificial support or bones in the upper body as support allows him to relax and settle into position. Using muscles to support the rifle can cause it to move.
- Natural point of aim: When the Cadet first assumes his firing position; he orients his rifle in the general direction of his target.
 - He then adjusts his body to bring the rifle and sights exactly in line with the desired aiming point.
 - When using proper support and consistent stock weld, the Cadet should have his rifle and sights aligned naturally on the target.
 - When this correct body-rifle-target alignment is achieved, the front sight post must be held on target, using muscular support and effort.
 - As the rifle fires, the muscles tend to relax, causing the front sight to move away from the target toward the natural point of aim.
 - Adjusting this point to the desired point of aim eliminates this movement.

Aiming: Focusing on the front sight post is a vital skill the firer must acquire during practice.

- Having mastered the task of holding the rifle steady, the Cadet must align the rifle with the target in exactly the same way for each firing.
- The firer is the final judge as to where his eye is focused.
- The instructor/trainer emphasizes this point by having the firer focus on the target and then focus back on the front sight post.
- Rifle sight alignment (alignment of the rifle with the target) is critical.
 - It involves placing the tip of the front sight post in the center of the rear sight aperture (Figure 6-2).
 - Any alignment error between the front and rear sights repeats itself for every 1/2 meter the bullet travels. 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.

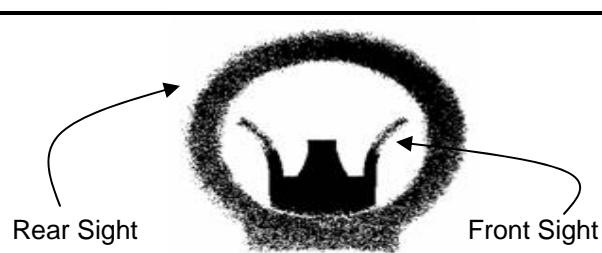


Figure 6-2. Correct sight picture

- Focus of the eye: A proper firing position places the eye directly on line with the center of the rear sight.
 - 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.
 - For the average Cadet firing at silhouette-type targets, the natural ability of the eye can accurately align the sights; 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.
 - This causes the target to appear blurry, while the front sight post is seen clearly.
 - 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 Cadet 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 (Figure 6-2).
- Sight picture: Once the Cadet can correctly align his sights, he can obtain a sight picture.
 - A correct sight picture has the target, front sight post, and rear sight aligned.
 - 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 6-3 shows a silhouette at 250 meters. The aiming point is the center of mass, and the sights are in perfect alignment. This is a correct sight picture.
- A technique to obtain a good sight picture is the side aiming technique (Figure 6-4).
 - The side aiming technique involves positioning the front sight post to the side of the target in line with the vertical center of mass, keeping the sights aligned.
 - The front sight post is moved horizontally until the target is directly centered on the front sight post.



Figure 6-3. Correct sight picture at 250 meters



Figure 6-4. Side aiming technique

- Front sight: The front sight post is vital to proper firing and should be replaced when damaged.
- Aiming practice: Aiming practice is conducted before firing live rounds.
 - During day firing, the Cadet should practice sight alignment and placement of the aiming point.
 - This can be done by using training aids such as the M15AI aiming card and the target box paddle.

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:

- The first is the technique used during zeroing and when time is available to fire a shot (Figure 6-5, 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 Cadet feels any discomfort.
- The second breath control technique is employed during rapid fire (short-exposure targets [Figure 6-5, bottom graph]).
 - Using this technique, the Cadet holds his breath when he is about to squeeze the trigger.

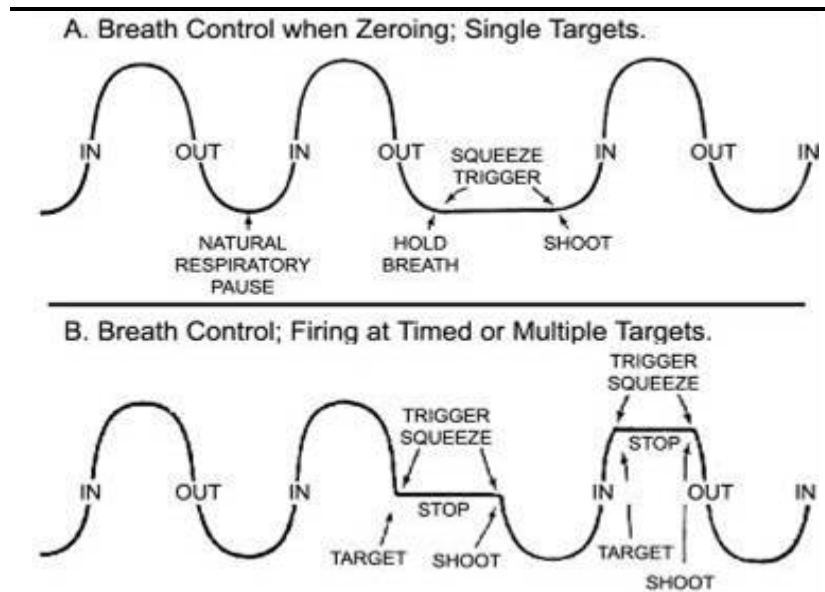


Figure 6-5. Breath control

Trigger squeeze: Any sudden movement of the finger on the trigger 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 firer.

- The Cadet'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.
- The Cadet usually tenses his shoulders when expecting the rifle to fire, but it is difficult to detect since he does not realize he is flinching.
- 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.
- If the trigger is not properly squeezed, the rifle is misaligned with the target at the moment of firing.
- The trigger finger (index finger on the firing hand) is placed on the trigger between the first joint and the tip of the finger (not the extreme end) and is adjusted depending on hand size, grip, and so on.
 - The trigger finger must squeeze the trigger 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.

- As the firer's skills increase with practice, he needs less time spent on trigger squeeze.
- 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.
- The proper trigger squeeze should start with slight pressure on the trigger during the initial aiming process.
- The firer applies more pressure after the front sight post is steady on the target and he is holding his breath.

6-3. Marksmanship – Firing Positions.

During initial fundamental training, the prone supported and unsupported positions are taught. The supported fighting position may also be taught, depending on range availability. All of these firing positions offer a stable platform for firing the rifle and are the positions used during basic record fire. The other positions (standing unsupported, standing supported, kneeling, and sitting) may be added later in training to demonstrate a variety of shooting positions from which a firer can accurately and safely fire a rifle.

Supported Fighting Position

This position provides the most stable platform for engaging targets (Figure 6-6).



Figure 6-6. Supported fighting position

- Upon entering the position, the Cadet adds or removes dirt, sandbags, or other supports to adjust for his height.
- He then faces the target, executes a half-face to his firing side, and leans forward until his chest is against the firing hand corner of the position.
- He places the rifle hand guard in a V formed by the thumb and fingers of his non-firing hand, and rests the non-firing hand on the material (sandbags or berm) to the front of the position.
- The Cadet places the stock butt in the pocket of his firing shoulder and rests his firing elbow on the ground outside the position.
- When prepared positions are not available, the prone supported position can be substituted.

- Once the supported fighting position has been mastered, the firer should practice various unsupported positions to obtain the smallest possible wobble area during final aiming and hammer fall.

Prone Unsupported Position

This firing position (Figure 6-7) offers another stable firing platform for engaging targets.

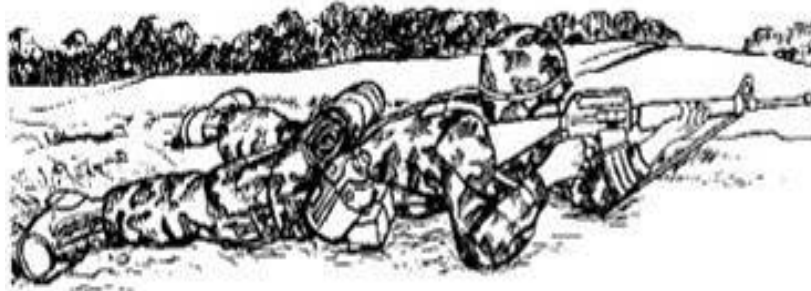


Figure 6-7. Prone unsupported position

- To assume this position, the Cadet faces his target, spreads his feet a comfortable distance apart, and drops to his knees.
- Using the butt of the rifle as a pivot, the firer rolls onto his non-firing side, placing the non-firing elbow close to the side of the magazine.
- He places the rifle butt in the pocket formed by the firing shoulder, grasps the pistol grip with his firing hand, and lowers the firing elbow to the ground.
- The rifle rests in the V formed by the thumb and fingers of the non-firing hand.
- The Cadet adjusts the position of his firing elbow until his shoulders are about level, and pulls back firmly on the rifle with both hands.
- To complete the position, he obtains a stock weld and relaxes, keeping his heels close to the ground.

6-4. Review Questions.

6-1. BRM is a term meaning:

- a. Basic Rifle Marksmanship
- b. Basic Rifle Manual
- c. Beginning Rifle Marksmanship
- d. Basic Rifle Maneuvers

6-2. Basic rifle safety includes:

- a. Treat weapons as being loaded
- b. Load the rifle before getting ready to shoot to make sure the ammunition fits properly
- c. Trust that the weapon's safety selector will keep the weapon in a "safe" mode
- d. Point the weapon at objects or people because you know that the weapon is unloaded

- 6-3. The steady position helps the Cadet to:
- Hit targets consistently
 - Be as comfortable as possible
 - Make up for poorly learned marksmanship skills
 - Move freely as the situation dictates
- 6-4. Correct rifle sight alignment includes:
- Placing the bottom of the front sight in line with the bottom of the rear sight
 - Placing the top of the front sight in line with the top of the rear sight
 - Centering the front sight in the rear sight
 - There isn't a consistent sight alignment for every shooter
- 6-5. Proper breath control techniques include:
- Fire while breathing in
 - Fire while breathing out
 - Fire while breathing rapidly
 - Fire during the natural pause between breaths
- 6-6. Proper trigger squeeze is important so that:
- The shooter feels less impact
 - Proper sight alignment is kept during the shot
 - A steady position is kept by the shooter
 - The shooter gets used to a consistent feeling during shooting
- 6-7. Proper trigger squeeze techniques include:
- Squeezing the trigger with the space between the first joint and the tip of the finger on the trigger finger
 - Squeezing the trigger with the middle knuckle of the trigger finger
 - Squeezing the trigger with the extreme tip of the trigger finger
 - Squeezing the trigger with the first knuckle of the trigger finger