

**UNITED STATES MARINE CORPS**  
School of Infantry  
Training Command  
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CS00402  
03 JAN 06

**STUDENT HANDOUT**

**M136 LIGHT ANTIARMOR WEAPON**

**1. Learning Objectives**

a. **Terminal Learning Objective**. Given a M287 9mm tracer bullet training device, targets at 100, 200, and 300 meters, six rounds, while wearing a fighting load, engage targets with the M287 9mm tracer bullet training device to achieve three hits of six rounds fired. (MCCS.16.02)

b. **Enabling Learning Objectives**

(1) Given a requirement, identify the characteristics of an M136 light anti-armor weapon in accordance with FM 23-25. (MCCS.16.02a)

(2) Given a requirement, identify the nomenclature of an M136 light anti-armor weapon in accordance with FM 23-25. (MCCS.16.02b)

(3) Given requirement, identify armored vehicle weaknesses in accordance with FM 23-25 (MCCS.16.02c)

(4) Given a M136 light armored weapon, wearing a fighting load, inspect a M136 light armored weapon, in accordance with FM 23-25 (MCCS.16.02d)

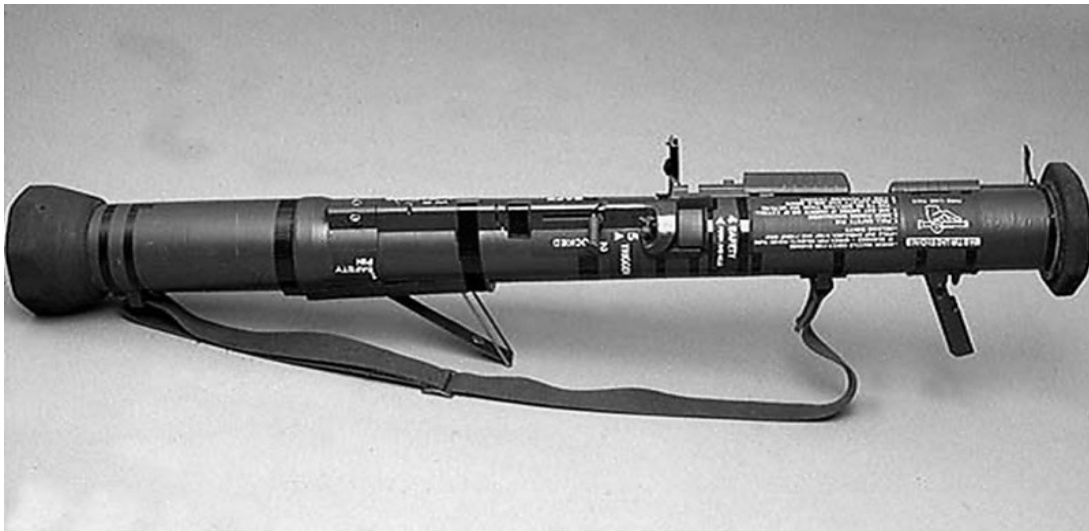
(5) Given an M136 light armored weapon, while wearing a fighting load, prepare a M136 light armored weapon for firing in accordance with FM 23-25. (MCCS.16.02e)

(6) Given a M136 light armored weapon, while wearing a fighting load, demonstrate the four firing positions in accordance with FM 23-25. (MCCS.16.02f)

(7) Given a M287 9mm tracer bullet training device, targets at 100, 200, and 300 meters, six rounds, while wearing a fighting load, apply the fundamentals of marksmanship in accordance with FM 23-25. (MCCS.16.02g)

(8) Given a M136 light armored weapon, while wearing a fighting load, perform misfire procedures in accordance with FM 23-25. (MCCS.16.02h)

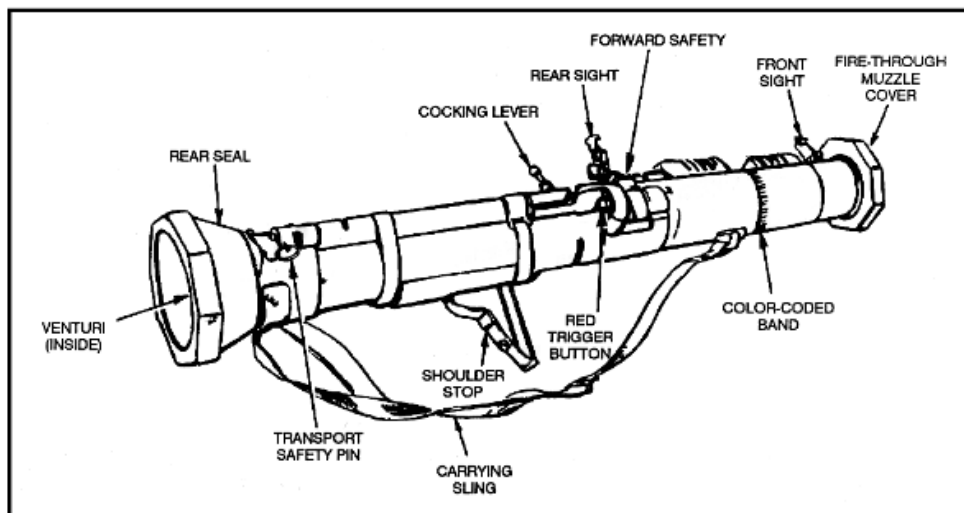
2. **Characteristics of the AT-4**. The M136 AT-4 is a lightweight, self-contained, anti-armor weapon. It consists of a free flight, fin-stabilized; rocket-type cartridge packed in an expendable, one-piece, fiberglass-wrapped tube. It is man-portable and fired from the right shoulder only. It is issued as a round of ammunition and requires minimum operator maintenance. The launcher serves as a watertight packing container for transportation and storage.



## 2. Nomenclature

- a. Weight: 6.7kg (14.8 lbs)
- b. Caliber: 84mm
- c. Length: 1,020mm (40 in)
- d. Muzzle Velocity: 290mps (950 fps)
- e. Operating temperature range: -40c to 60c (-40F to 140F)
- f. Maximum range: 2,100 meters
- g. Maximum effective range: 300 meters
- h. Minimum target engagement: Training 30 meters  
Combat 10 meters
- i. Back Blast: 100 meters to the rear 90-degree fan.

j. M136 AT-4 Components: The AT-4 is issued as a round of ammunition and is completely sealed. Only the external components can be inspected. The components of the AT-4 are:



**Figure 3-6. Inspection.**

- k. Transport Safety Pin. Provides safety for transporting. It is attached to the launcher by a lanyard.
- l. Cocking Lever. Cocks firing mechanism.
- m. Fire-Through Muzzle Cover. Keeps out moisture and prevents foreign objects from entering the muzzle.
- n. Color-Code Band. The color of the band indicates the type of rocket. Black with gold band is high explosive antitank, gold or yellow band is a field handling trainer and no band indicates a m287 9mm tracer bullet trainer.
- o. Shoulder Stop. Helps stabilize the launcher on the shoulder.
- p. Sights.
- q. Front Sight. Consists of a sight blade, center post, and right and left lead posts.
- r. Rear Sight. Consists of a sight blade, range setting knob, range indicator, 2-mm peephole, and 7-mm peephole.
- s. Venturi. Performs two functions.
- t. Protects the weapon from damage if dropped.
- u. Directs the flow of the back blast.
- v. Forward Safety. Must be fully depressed and held before pressing trigger button or launcher will not fire.
- w. Red Trigger Button. Fires the weapon.
- x. Carrying Sling. Provides a means for carrying the launcher.
- y. Firing Mechanism. It includes the red trigger button, the enclosed firing rod with firing rod spring, the transport safety pin, the cocking lever, and the forward safety.

3. **Armored Vehicle Weaknesses**. Armored vehicles usually have their heaviest armor in front, because they are designed mainly for offensive operations against other armored vehicles. All vehicles are vulnerable to repeated hits on their flanks and

rear, though the flank offers the largest possible target. Firers should always aim center of mass to increase the probability of a hit. The older the vehicle model, the less protection it has against anti-armor weapons. The M136 AT4's warhead has excellent penetration ability and lethal after-armor effects. The extremely destructive, 440 gram shaped-charge explosive penetrates more than 14 inches (35.6 cm) of armor. Armored vehicle weak points are as follows: See figure 3-3.

a. Obstacles. Natural or man-made obstacles can be used to force the armored vehicle to slow, stop, or change direction. This pause enables the firer to achieve a first-round hit. If he does not achieve a catastrophic kill on the first round, he or another firer must be ready to engage the target vehicle immediately with another round.

b. Armored Vehicle. An armored vehicle without close protection (dismounted infantry) in woods, MOU, or other restrictive terrain is vulnerable to close attack. This type of attack is most likely to originate from well-armed infantry-type teams organized into armor-killer teams. (Non-infantry units may also be required to perform this mission.) Skilled firers from these teams should engage the suspension or engine compartment of vehicles that have appliqué or reactive armor. When an armored vehicle is buttoned up--all hatches are closed and personnel are inside the vehicle--the crew cannot see well enough to protect itself from close attacks or attacks from the flanks or rear. The personnel inside cannot see anything within 10 meters of the vehicle, and they cannot shoot at anything (using their main guns) within 20 meters.

4. Inspection. Since the AT-4 is issued as a round of ammunition rather than a weapon, the launcher is completely sealed. Inspection is limited to visual examination of the external components. The launcher is waterproof. If the fire-through muzzle cover is intact, the launcher remains waterproof until it is fired. The overall condition of the launcher should be inspected before it is used. The firer should ensure the following: See figure 3-6.

a. The rear seal is not cracked or damaged. The rear seal is inside the venturi and is made of brown plexiglass. Before firing, ensure that there are no foreign objects obstructing the rear of the launcher.

b. The transport safety pin is in place, and fully inserted. The lanyard is attached.

c. The cocking lever is in the safe position and folded down.

d. The sight functions properly. Open the sight covers to see if the sights pop up and are not damaged.

e. The forward safety does not move when depressed.

f. The red trigger button is not missing, broken, or damaged.

g. The launcher body has no cracks, dents, or bulges.

h. The carrying sling is not frayed and is attached firmly to the launch tube.

i. The shoulder stop is not broken or damaged, and that it unsnaps and folds down.

#### 5. Preparing and Firing the AT-4.

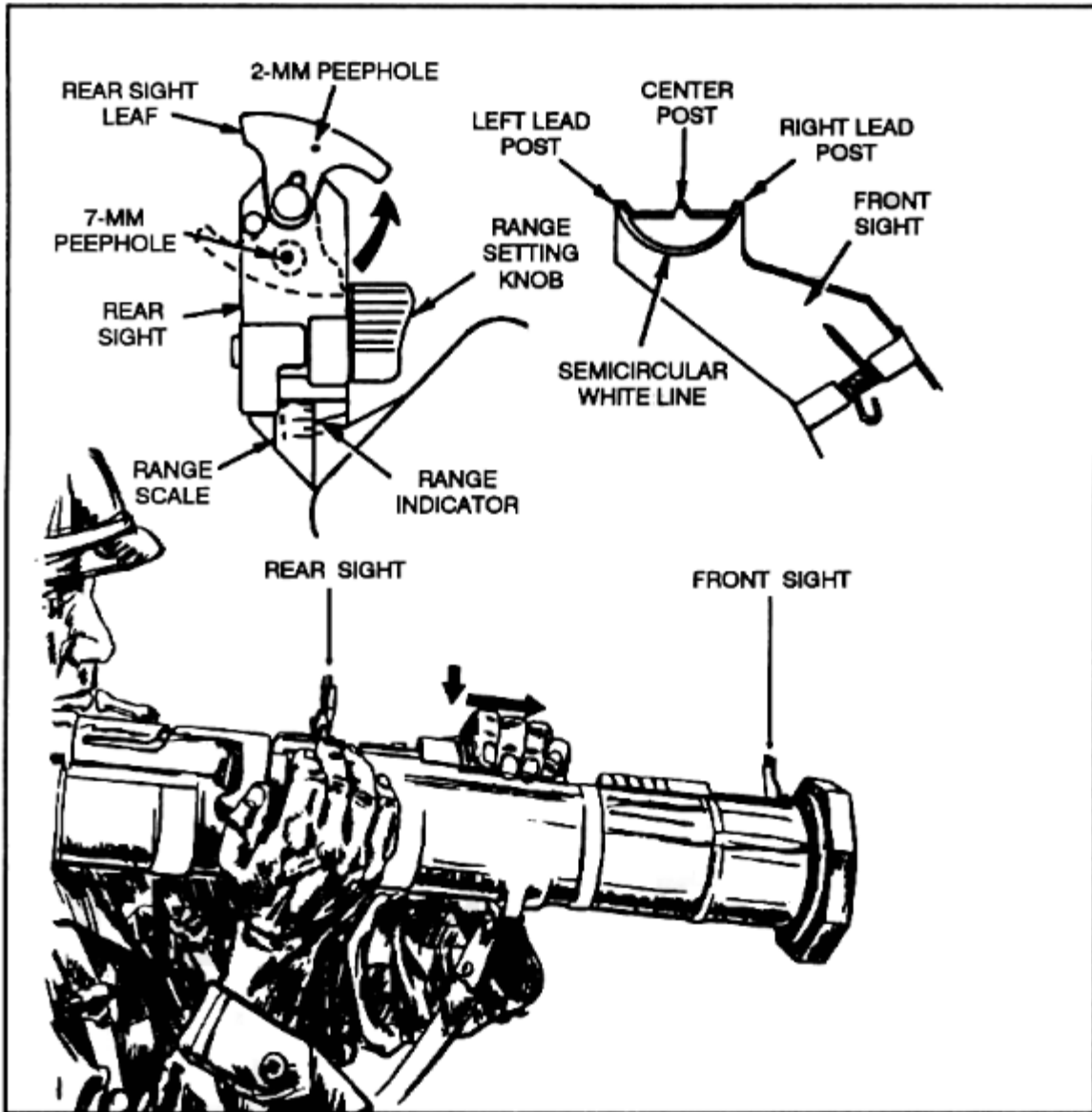
a. Remove the launcher from the carrying position and cradle it in the left arm.

b. Keep the weapon pointed toward the target and keep the back blast area clear. The total back blast area extends 100 meters to the rear of the launcher in a 90-degree fan.

c. Remove the transport safety pin by pulling it out with the right hand and releasing it.

d. Unsnap the shoulder stop, unfold it, and place launcher on the right shoulder.

e. Release the sights. Release the front sight by pressing down on the sight cover and sliding the cover to the rear. Release the rear sight by pressing down on the rear sight cover and sliding the cover to the front. Each sight pops up after release procedures. See figure 3-10.



**Figure 3-10. Sights.**

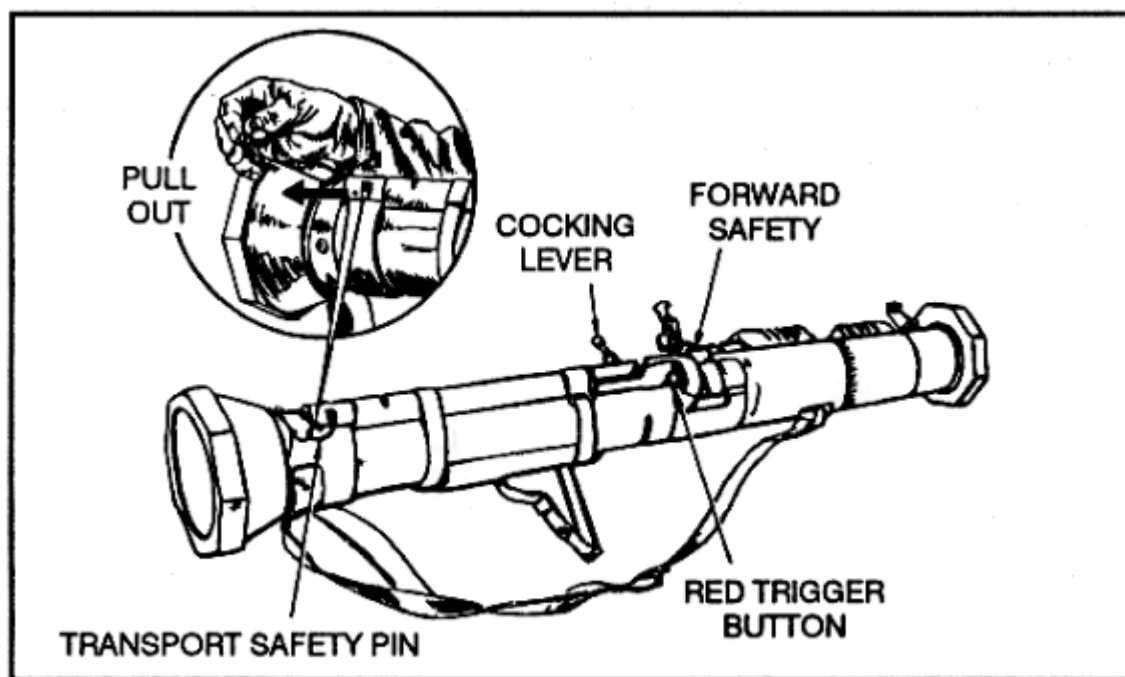
f. Adjust the rear sight. When the rear sight is uncovered, it is preset on 200 meters, which is the battle sight setting. During target engagement for targets more than 200 meters, a sight adjustment is necessary; for targets less than 200 meters, no adjustment is necessary. The sight is adjustable below 200 meters; however, due to the flight dynamics of the projectile, adjusting the range setting does not increase the probability of hits for targets less than 200 meters. Turn the range setting knob toward to desired setting.

g. Cocking the launcher. Cock the launcher by unfolding the cocking lever with the right hand. Place the thumb under the cocking lever and, with the support of the fingers in front of the firing mechanism, push the cocking lever forward and then downward to the right. Let the cocking lever slide back. See figure 3-8.

h. Back Blast. Check the back blast area. (100 meters to the rear 90-degree fan).

i. Shoulder Stop. Press shoulder stop against shoulder. For added stability, grasp the carrying sling near the muzzle with the left hand and pull back on the carrying sling until the shoulder stop is snug against the shoulder.

j. Safeties. Using the index and middle fingers of the right hand, press the forward safety all the way to the left and hold it. At the same time, pull the launcher into the shoulder with your left hand, keeping the right hand against the forward edge of the firing mechanism housing for firing stability. Obtain a proper sight picture. See figure 3-7.



**Figure 3-7. Firing mechanism and transport safety pin.**

## 6. Firing Positions.

a. Standing Position. Place the launcher at shoulder level pointed at the target and step under it keeping your feet a comfortable distance apart. Using your left hand grab the launcher or the carrying strap. Keep both elbows tucked in. When tracking a target, rotate at the hips.

b. Kneeling Position. There are two ways to use the kneeling position. One way is to sit back on your right foot; the other way is to keep your right thigh vertical. The second way is better for moving targets. The left foot is always pointed at the target.

c. Sitting Position. You may shoot in the cross leg or open leg position. Remember to keep the launcher pointed down range when getting into this position.

d. Prone Position. Lay the launcher on the deck pointed at the target. Lie on your stomach at a minimum of 90 degrees from the launcher to keep clear of the back blast. The launcher is placed on your right shoulder with your elbows beneath the launcher. This is the least stable of the positions.

7. **Fundamentals of Marksmanship.** Many factors contribute to light anti-armor weapon marksmanship. Marines who combine these factors well and continue to practice doing so can retain their skills. The factors are grouped into four basic areas known as marksmanship fundamentals: steady hold, aiming procedures, breath control, and trigger manipulation.

a. **Steady Hold Position.** On the M136 AT4 with your left hand, grasp the carrying sling where it attaches to the launcher near the muzzle. With your right hand on the trigger mechanism, pull the shoulder stop into your right shoulder pocket.

b. **Aiming Procedures.** Aiming procedures include placing the eye correctly, obtaining a sight picture, and aligning the sight. Combining these procedures is critical to correctly aiming the light anti-armor weapon.

c. With eye placement before sighting the weapon, estimate the range. For the M136 AT4, place your firing eye between 2 1/2 to 3 inches (no nearer than 2 1/2 inches) from the rear sight. This distance is necessary to prevent possible injury from the weapon's recoil and for correct sight alignment with the AT4.

d. **Sight Alignment.** Align the sights correctly with the target. To do this for the AT4, position the rear sight so that the white semicircle of the front sight is a hazy line around the bottom half of the rear sight opening. Position the front sight posts on the target. Align the sight by moving your head forward or backward.

**NOTE:** When firing the M136 AT4, do not place your eye within 2 ½ inches of the rear sight. The AT4's recoil could cause the rear sight to injure your firing eye.

e. **Breath Control.** Breath control is as important when firing a light anti-armor weapon as it is when firing an individual weapon. Breathing while firing can cause a miss. To control breathing, the firer breathes deeply a couple of times, takes one last deep breath, exhales partly, holds his breath, sights, and fires.

f. **Trigger Manipulation.** To fire the AT4, the firer must apply firm and steady forward pressure to the trigger with the thumb of his firing hand. Soldiers can practice trigger manipulation and control techniques on an expended launcher or tracer trainer.

g. **Interrogating Fundamentals of Marksmanship.** Correct sight alignment is critical. Sight alignment errors increase as the range to the target increases. Therefore, maintaining the correct relationship between the rear and front sights is as important as placing the aiming point. The steps for doing this should become automatic. No matter how quickly they are done, these steps are always distinct, because the human eye can only focus at one distance and on one point at a time. The firer focuses on the front sight to obtain correct sight alignment, then places the aiming point to complete the sight picture. He shifts or adjusts the position of the launcher as necessary. The whole time he is pressing the trigger, he maintains the sight picture. Remember smooth is fast.

8. **Misfire Procedures.** A misfire is usually caused by one of the following factors: The forward safety is not depressed far enough to disengage the safety. The firing mechanism is faulty. The propelling charge explosive train is faulty.

a. **Combat Environment.** If a misfire occurs in combat conduct the following.

(1) Release the forward safety.

(2) Remove your right hand from the firing mechanism and cock the weapon again.

(3) Try to fire again. If the launcher still does not fire, maintain the same firing position and return the cocking lever to the SAFE (uncocked) position.

(4) Move the launcher from your shoulder, keeping the launcher pointed toward the enemy. Reinsert the transport safety pin.

(5) In combat, break off the sights to identify the misfired launcher. In training, however, you would not want to damage the field handling trainer (FHT), so identify the misfired launcher simply by leaving the sights up.

(6) Place the launcher on the ground, pointed toward the enemy, and use another launcher. As soon as you can, dispose of the misfired launcher IAW unit SOP.

b. Training Environment. If a misfire occurs on a live-fire training range, the Marine responds as follows:

(1) Shouts "Misfire" as soon as the launcher fails to fire, while maintaining the original sight picture.

(2) Releases the forward safety.

(3) Re-cock the launcher: Immediately removes his right hand from the firing mechanism and pushes the cocking lever forward with the heel of his right hand until the lever locks with a loud clicking noise.

**NOTE:** Marines will always repeat back blast command while performing immediate action, and recheck the backblast area.

(4) Press the forward safety all the way down and try to fire again. If the launcher still fails to fire, release the forward safety and move the cocking lever to the SAFE (uncocked) position. Move the launcher from your shoulder, keeping the weapon pointed toward the target.

(5) Reinsert the transport safety pin, wait two minutes, then carefully lay the launcher on the ground, muzzle toward the target.

**NOTE:** Notify the local ammunition supply and issue point of any unusual occurrence, whether the weapon fires or not. Examples include excessive overpressure, recoil, or heat on your face after you have fired the weapon (caused by propellant burning after the round leaves the muzzle).

**Performance Checklist 1 (M136 Anti-Armor Weapon Handling):**

Performance Evaluation Checklist		
<b>1. Inspect A M136 Light Anti-Armor Weapon</b>	<b>Yes</b>	<b>No</b>
a. Ensure rear seal is in place and undamaged.		
b. Ensure transport safety pin is in place/inserted.		
c. Ensure cocking lever is in place and in safe position.		
d. Ensure rubber fire through muzzle cover is in place and undamaged.		
e. Verify launcher has correct color-codes.		
f. Ensure sights are functional.		
g. Ensure forward safety does not move when depressed.		
h. Ensure red trigger button is not missing.		
I. Verify the launcher body has no cracks, dents, or bulges.		
j. Ensure the carrying sling is in place and not frayed.		
k. Ensure the shoulder stop is not broken or damaged.		
<b>2. Prepare A M136 Light Anti-Armor Weapon For Firing</b>	<b>Yes</b>	<b>No</b>
a. Remove the M136 from its carrying position and cradle the weapon in the left arm.		
b. Keep the weapon pointed toward the target and keep the back blast area clear.		



c. With right hand, pull and release the transport safety pin.		
d. Unsnap, unfold, and hold the shoulder stop with the right hand and place the weapon in the right shoulder.		
e. Stabilize the weapon with the right hand and open the sights with the left.		
f. Press down and pull backward on the front sight cover until the front sight pops up, then press down and forward on the rear sight cover until the rear sight pops up.		
g. Set rear sight for correct range to target.		
h. Cock the launcher.		
i. Ensure back blast area is all clear, "back blast area all secure."		
j. Aim in, sound off "rocket", depress and hold down forward safety.		
k. Press red trigger button to fire weapon.		
<b>3. Demonstrate The Four Firing Positions</b>	<b>Yes</b>	<b>No</b>
a. Demonstrate the standing position.		
(1) Grasp the sling near the launcher with left hand and the shoulder stop with right hand. Raise the launcher above shoulder level.		
(2) Execute a left face, rotate shoulder under the launcher, and spread feet a comfortable distance apart.		
(3) Move left foot 15 to 24 inches forward, keeping hips level and weight balanced on both feet.		
(4) Tuck both elbows tightly into your body.		
(5) Release the shoulder stops and place right hand on the trigger. Place firing eye 2 1/2 to 3 inches from the rear sight.		
b. Demonstrate the kneeling position.		
(1) Kneel from basic standing position onto right knee, keeping left thigh parallel to the ground.		
(2) Rotate lower right leg 90 degrees to the left (removing right foot from exposure to back blast).		
(3) Keep right thigh and back straight and perpendicular to the ground.		
(4) Point left foot in the direction of fire and tuck elbows in to your sides.		
c. Demonstrate the sitting position.		
(1) Sit on buttocks while facing the target, and spread feet a comfortable distance apart.		
(2) Lean forward and place the backs of upper arms on knees, avoiding bone-to-bone contact.		
d. Demonstrate the prone position.		
(1) Lie on stomach with body at a 90-degree angle to direction of fire, and with body and legs to the left of the direction of fire.		
(2) Ensure that neither the body nor the legs are in the back-blast area.		
(3) Hold the launcher in place against upper right arm. For stability, apply extra pressure on the firing mechanism with right hand.		
<b>4. Perform Misfire Procedures</b>	<b>Yes</b>	<b>No</b>
a. Shout misfire, maintain sight picture.		
b. Release forward safety.		
c. Re-cock the cocking lever.		
d. Check the back blast area, fully depress and hold down the forward safety and press the red trigger button.		
e. If the launcher still fails to fire, release the forward safety and return the cocking lever to the "S" un-cocked position.		
f. Take the launcher off the shoulder, keeping the muzzle pointed toward the target.		
g. Reinsert the transport safety pin.		
h. Misfire during training; shout misfire, once removing from		

shoulder keep aiming downrange for 2 minutes.		
i. Misfire for combat; remove from shoulder, break off sights, do not shout misfire		
j. Lay the faulty launcher on the ground with the muzzle pointed toward the target.		
<b>5. State The Characteristics Of The M136 Anti Armor Weapon</b>	<b>Yes</b>	<b>No</b>
a. State Lightweight		
b. State Self Contained		
c. State Anti-Armor Weapon		
<b>6. Identify the Nomenclature of the M136 Anti-Armor Weapon</b>	<b>Yes</b>	<b>No</b>
a. Identify the Fire-through Muzzle Cover		
b. Identify the Front Sight		
c. Identify the Color Coded Band		
d. Identify the Forward Safety		
e. Identify the Rear Sight		
f. Identify the Cocking Lever		
g. Identify the Trigger Button		
h. Identify the Shoulder Stop		
i. Identify the Carrying Sling		
j. Identify the Transport Safety Pin		
k. Identify the Venturi		
l. Identify the Rear Seal (Inside)		

**Performance Checklist 2 (M136 Light Anti-Armor Weapon Target Engagement):**

<b>Performance Evaluation Checklist</b>		
<b>1. Apply The Fundamentals Of Marksmanship</b>	<b>Yes</b>	<b>No</b>
a. Steady hold.		
(1) With left hand, grasp the carrying sling where it attaches to the launcher near the muzzle.		
(2) With right hand on the trigger mechanism, pull the shoulder stop into right shoulder pocket.		
b. Aiming procedures.		
(1) Before sighting the weapon, estimate the range. Place firing eye between 2 1/2 to 3 inches from the rear sight.		
(3) Position the rear sight so that the white semicircle of the front sight is a hazy line around the bottom half of the rear sight opening. Position front sight posts on the target. Align sight by moving head forward or backward.		
(4) Adjust the rear sight for the correct range and place the center sight post in the center of the target.		
c. Breathe deeply a couple of times, take one last deep breath, exhale partly, and hold breath, sight, and fire.		
d. Apply firm and steady forward pressure to the trigger with the thumb of firing hand.		
<b>2. Achieve Three Hits Of Six Rounds Fired</b>	<b>Yes</b>	<b>No</b>
<b>3. State a Armored Vehicle Weakness</b>	<b>Yes</b>	<b>No</b>
a. State Flanks		
b. State Rear		

**Reference and Pages: FM 23-25 Light Anti-armor Weapons Field Manual, pages 3-1 through 6-9, A-1 through A-4, B-6 through B-6, and C-1 through C-8.**