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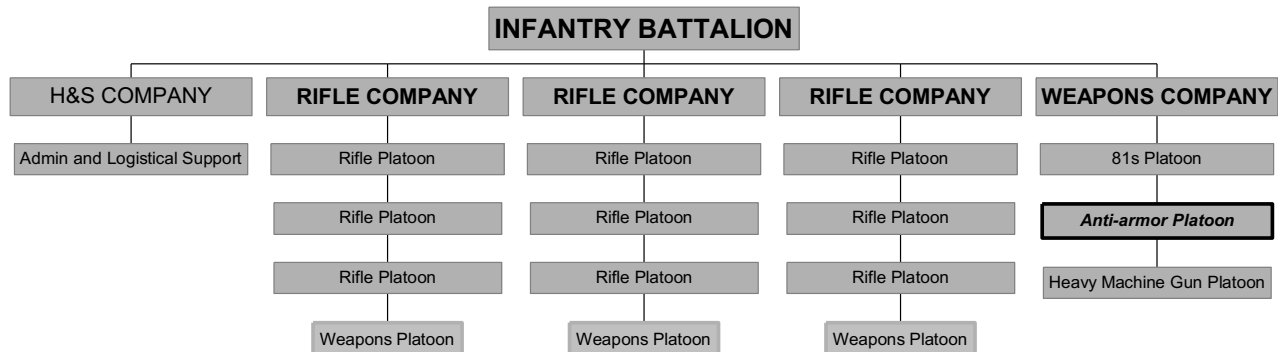
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STUDENT OUTLINE

INTRODUCTION TO AN ANTI-TANK ASSAULT GUIDED MISSILEMAN

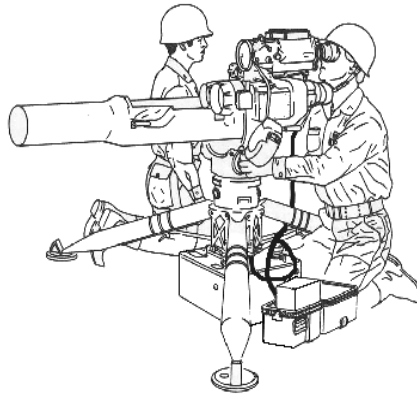
LESSON PURPOSE. The purpose of this lesson is to discuss the organization and responsibilities of an Anti-Tank Section in an Infantry Weapons Company. The lesson also discusses the basic concepts of anti-armor warfare as these concepts pertain to Marine Corps anti-armor operations.

1. LOCATION OF THE ANTI-ARMOR PLATOON. The anti-armor platoon is located in a weapons company of an infantry battalion. They provide both medium and long-range anti-armor support for the infantry battalion. This support is for the destruction of enemy armor, to include tanks, armored personnel carriers, and armored support vehicles. They may also be assigned to an anti-armor team to provide support against point targets such as bunkers and crew served weapons positions. The anti-armor platoon is made up of two sections, the TOW section and the Javelin section.

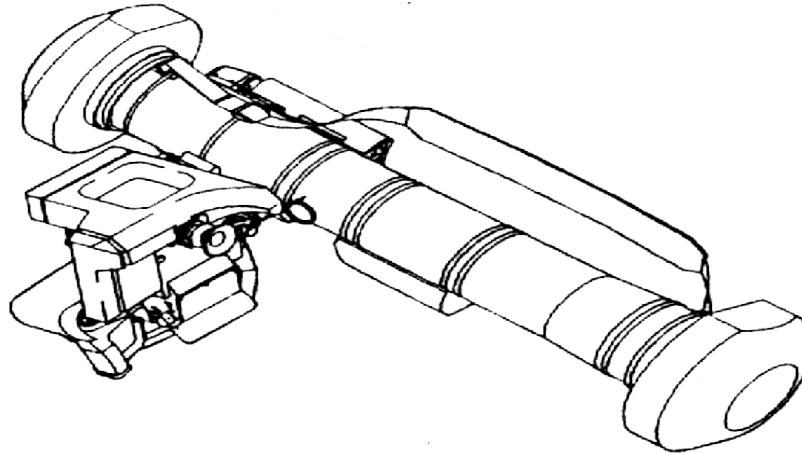


2. ANTI-ARMOR WEAPONS. There are two anti-armor weapons organic to the Weapons Company in a infantry battalion. These weapons are:

a. **TOW.** The TOW (Tube-launched, Optically tracked, Wire-command-link guided missile system) is the heavy anti-armor weapon system (HAW) organic to the tank battalion, which is made up of one platoon with twenty-four launchers, the light armored reconnaissance battalion with sixteen anti-tank LAV's, and the infantry battalion having one 8 gun section per Weapons Company. The TOW section is made up of a Command element and two squads, with a total of 22 Marines. Each squad is made up of for 4 TOW's, 2 teams of two TOW's each. The TOW has a maximum range of 3,750 meters.



b. Javelin. The Javelin is a fire-and-forget, man-portable medium antitank weapon that consists of a Command Launch Unit (CLU) and encased missile. The infantry battalion having one 6 gun section per Weapons Company. The range of the Javelin is 2,000 meters.



(1) Infantry Battalion Combined Anti-Armor Team (CAAT) Platoon. Infantry battalion Combined anti-armor Platoon with TOW's are more commonly called Combined Anti-Armor Teams (CAAT). A CAAT platoon in today's weapons company, ideally, will have nine vehicles: four TOW variant HMMWVs and five machinegun variant HMMWVs. The platoon is broken up into two sections, each consisting of two teams of two vehicles (1) TOW and (1) machinegun. The fifth machinegun HMMWV is the Platoon Commander's vehicle. This organization is often modified depending on specific assigned missions and unit specified standard operating procedures (SOP). However, TOW's should always be employed in no less than pairs at any time. In pairs, TOW's can overcome their slow rate of fire. One TOW alone will be ineffective and become overrun in all but the most restricted of terrain.

(2) Javelin Section. The Javelin section is made up of a Command element and two squads, with a total of 17 Marines. The section can provide

general support for the battalion, but will most often be used as direct support for a rifle company.

3. Table of organization for TOW and javelin Sections

a. TOW Section.

1. Command Element. The command element consists of the following:

(a) One Platoon Commander: 1st Lieutenant (0302).

(b) One Platoon Sergeant: Gunnery Sergeant/Staff Sergeant (0369).

2. Squad. A squad consists of the following:

(a) One squad leader: Sergeant (0352)

(b) Two Team Leaders: Corporal (0352)

(c) Four gunners: Lance Corporal (0352)

(d) Four A-gunners: Lance Corporal or below (0352)

b. Duties Within the TOW Section.

(1) Section Leader. The section leader (0369/SSGT) is responsible for the following tasks:

(a) Carrying out the orders of the platoon commander.

(b) The discipline, appearance, training, control, conduct, and welfare of the section at all times.

(c) The tactical employment, fire discipline, fire control, and maneuver of his section.

(d) The condition, care, and economical use of his section's weapons and equipment.

(e) Advising the platoon commander on the most effective tactical use of the Javelin missile system.

(2) Squad Leader. (0352/Sgt) Two Marines within the TWO section are squad leaders. A squad leader is responsible for the following tasks:

(a) Carries out the orders of the section leader.

(b) Performs first echelon maintenance on the Command Launch Unit.

(c) The proper identification of armored fighting vehicles and targets of opportunity.

(d) The engagement of targets while in the support of an attack or defense.

(2) Team Leader. (0352/Cpl) Four Marines within the TOW section are team leaders. A team leader is responsible for the following tasks:

(a) Carries out the orders of the squad leader.

(b) Performs first echelon maintenance on the Command Launch Unit.

(d) The proper identification of armored fighting vehicles and targets of opportunity.

(e) The engagement of targets while in the support of an attack or defense.

(4) Gunner. (0352/LCpl) Eight Marines within the TOW section are gunners. A gunner is responsible for the following tasks:

(a) Carries out the orders of the Team leader.

(b) Performs first echelon maintenance on the Command Launch Unit.

(c) Prepares the Javelin for firing.

(d) The proper identification of armored fighting vehicles and targets of opportunity.

(e) The engagement of targets while in the support of an attack or defense

(4) Assistant Gunner/Ammo Man. (0352/PVT-LCPL) The remaining eight Marines are the assistant-gunners/ammo men. Their duties are:

(a) Carries out the orders of the gunner.

(b) Assists with the performance of first echelon maintenance on the Command Launch Unit.

(c) Carries additional missiles.

(d) Assume the gunner's responsibilities if the gunner becomes a casualty.

(d) Ensure the back blast area is secure.

(5) Driver. (0352/Pvt-LCpl) One Marine will be designated as the team's driver. His duties are as follows:

- (a) Carries out the orders of the team leader.
- (b) Performs first echelon maintenance on the vehicle assigned to the section.
- (c) Assists in the re-supply of missiles to the TOW gun teams.

b. Javelin Section.

1. Command Element. The command element consists of the following:

- (a) One section leader: staff sergeant (0369).
- (b) One driver: private (0352).

2. Squad. A squad consists of the following:

- (a) One squad leader: sergeant (0352)
- (b) Three gunners: corporal (0352)
- (c) Three A-gunners: lance corporal or below (0352)

b. Duties Within the Javelin Section.

(1) Section Leader. The section leader (0369/SSGT) is responsible for the following tasks:

- (a) Carrying out the orders of the platoon commander.
- (b) The discipline, appearance, training, control, conduct, and welfare of the section at all times.
- (c) The tactical employment, fire discipline, fire control, and maneuver of his section.
- (d) The condition, care, and economical use of his section's weapons and equipment.
- (e) Advising the platoon commander on the most effective tactical use of the Javelin missile system.

(2) Squad Leader/Gunner. (0352/Sgt) Two Marines within the Javelin section are squad leader/gunners. A squad leader/gunner is responsible for the following tasks:

- (a) Carries out the orders of the section leader.

Unit. (b) Performs first echelon maintenance on the Command Launch

(c) Prepares the Javelin for firing.

(d) The proper identification of armored fighting vehicles and targets of opportunity.

(e) The engagement of targets while in the support of an attack or defense.

(3) Gunner. (0352/Cpl) Six Marines within the Javelin section are gunners. A gunner is responsible for the following tasks:

(a) Carries out the orders of the Squad leader.

Unit. (b) Performs first echelon maintenance on the Command Launch

(c) Prepares the Javelin for firing.

(d) The proper identification of armored fighting vehicles and targets of opportunity.

(e) The engagement of targets while in the support of an attack or defense

(4) Assistant Gunner/Ammo Man. (0352/PVT-LCPL) The remaining eight Marines are the assistant-gunners/ammo men. Their duties are:

(a) Carries out the orders of the gunner.

(b) Assists with the performance of first echelon maintenance on the Command Launch Unit.

(c) Carries additional missiles.

(d) Assume the gunner's responsibilities if the gunner becomes a casualty.

(e) Ensure the back blast area is secure.

(5) Driver. (0352/Pvt) One Marine will be designated as the section's driver. His duties are as follows:

(a) Carries out the orders of the section leader.

(b) Performs first echelon maintenance on the vehicle assigned to the section.

(c) Assists in the re-supply of missiles to the Javelin gun teams.

4. WEAPONS AND EQUIPMENT ORGANIC TO THE TOW AND JAVELIN SECTIONS. In addition to the Marine's personal and mission essential gear he may be carrying the follow equipment:

a. Section leader

- (1) M9 9mm Pistol.
- (2) K-BAR.
- (3) Lensatic compass.
- (4) Binoculars.

b. Squad Leader/Gunner

- (1) M-16A4 rifle.
- (2) M-7 or M-9 bayonet.
- (3) Command Launch Unit (CLU).
- (4) TOW/Javelin missile.

c. Assistant gunner

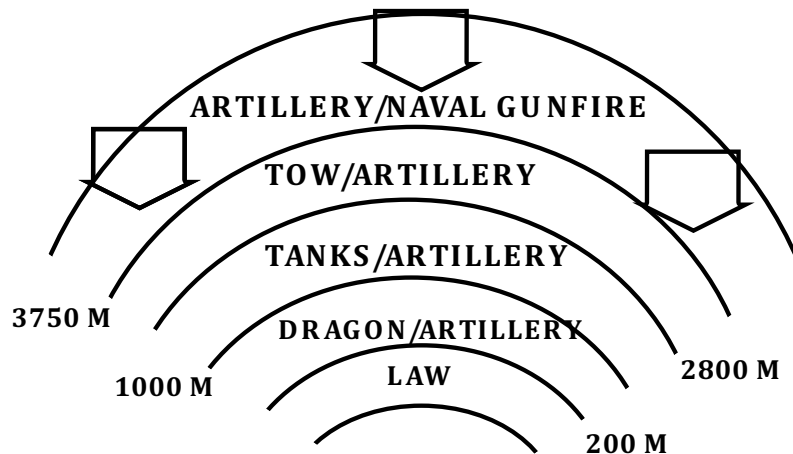
- (1) M-16A4 rifle.
- (2) M-7 or M-9 bayonet.
- (3) TOW/Javelin missile.

d. Driver

- (1) M-16A4 rifle.
- (2) M-7 or M-9 bayonet.

5. MISSION OF ANTI-ARMOR WARFARE. Anti-armor warfare is a two-fold mission. The primary mission of anti-armor warfare is to destroy enemy armored vehicles, such as tanks, infantry fighting vehicles (IFV), armored personnel carriers (APC), and other support vehicles. This is accomplished by initiating mass anti-armor weapons fire. Anti-armor weapons have a secondary mission to provide fire support against point targets such as bunkers and crew-served weapons.

a. Initiating Mass Anti-Armor Weapons Fire. In order to accomplish the primary mission of anti-armor warfare, you must become familiar with the two methods used to initiate the anti-armor fire. These two methods are:



(1) HAW-MAW-LAW. HAW-MAW-LAW takes into account each type of anti-armor weapon usually available to the infantry. These are the heavy anti-armor weapons TOW's and tanks, medium anti-armor weapons Javelin, and light anti-armor weapons SMAWs and AT-4s. It is a concept in which friendly anti-armor weapons engage enemy targets at their maximum effective ranges. The TOW'S and tanks will begin to engage at 4,000 meters, company mortars will engage at 3,000, and so on, down to the Light anti-armor weapons. All weapons continue to fire, until the enemy is destroyed or higher command dictates a displacement. This allows the enemy force to be slowly destroyed as they approach the point of no penetration (PNP), or the area that the command has ordered that no enemy armor shall cross.

The advantage of this method of engagement is that the enemy is under constant anti-armor fire from at least 4,000 meters away, all along their axis of advance. You may also force the enemy armor to change direction. The disadvantage of this method is that you may not destroy the bulk of the armor force, because they may change their direction of movement and their new axis of advance may not be within your sectors of fire.

(2) Massed Surprised Fires. This method of engagement utilizes all anti-armor weapons engaging the enemy force simultaneously, from the range of the light anti-armor weapons. This method requires the least amount of coordination and preparation.

The advantage of this method is that the initial violent volleys will kill and demoralize many vehicles in a short amount of time unlike HAW, MAW, LAW, which destroys them at a slow, constant rate. However, the disadvantage of this method is that you must wait to fire until the enemy armor gets well within your desired standoff distances for your heavy anti-armor weapons. There is a good chance that the enemy's mass and momentum will carry the force into friendly positions. This method is ideal in the ambush of individual or small armor units.

b. Common Anti-Armor Weapons Characteristics. Anti-armor warfare may have many different characteristics, however, there are four, which are common to all. These common characteristics are:

- (1) High first round hit probability.
- (2) High effectiveness-to-weight ratio. Lightweight, infantry portable weapons, such as a SMAW or Javelin can defeat a heavily armored vehicle.
- (3) Direct fire weapons. They require a clear line of sight to the target.
- (4) Large signature effect. The large white smoke and dust cloud from the back blast can be seen from a great distance.

6. Six Fundamentals of Employment. There are six basic principles utilized to properly employ an anti-armor unit. Ensure you perform each of the following steps:

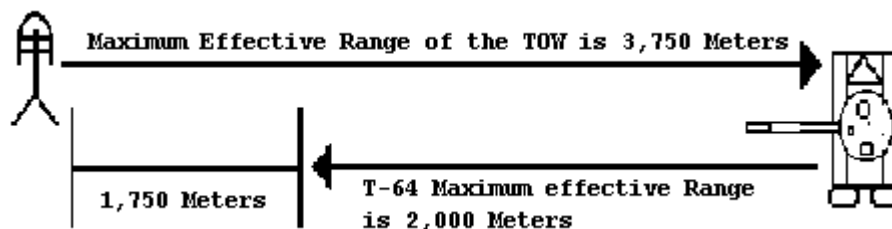
a. Reconnaissance. If there is enough time, conduct a thorough ground reconnaissance. Try and find out if there are any recent aerial photographs of your assigned area, or talk to someone who has operated there. Identify prominent terrain features and likely enemy armor approaches, from the front, flanks and rear.

b. Terrain Evaluation. In the offense, the terrain approaching the objective and on the objective itself, is evaluated to determine the best positions for the employment of your weapons. This position should accommodate both offensive and defensive postures. In the defense, the terrain should be evaluated both from the friendly and enemy points of view.

Under no circumstances, should you overlook the enemy's ability to negotiate natural and man-made obstacles.

c. Selection of Position. Always use the terrain to your maximum advantage. Some general principles for positioning are:

(1) Use the terrain for maximum cover and concealment from aerial and ground observation, and for the concealment of the weapon's back blast. Ensure you have covered and concealed routes to and from your firing positions.



(2) Position the weapons in areas, which provide clear and overlapping fields of fire out to the weapons maximum effective range, if possible. This will increase your "standoff." Standoff is the range that a weapons maximum effective range exceeds that of an opposing weapons maximum effective range. A good example would be the TOW, maximum effective range of 3,750 meters and the T-64 MBT maximum effective range of 2,000 meters. The standoff of those two weapons is 1,750 meters. The TOW can fire 1,750 meters before the T-64 can. The T-64 will have to cover 1,750 meters before he can fire effectively on the TOW.

(3) If possible, employ your weapons to engage the enemy from the flank. Frontal fires, against tanks, should be avoided as a general rule. When advancing, the tank's heavily armored glacis plate, firepower and crew observation is generally oriented toward the front, making it difficult but not impossible, to detect a weapon firing from the flank or rear.

(4) Employ your weapons so they are mutually supported. Mutual support provides a high degree of protection for the weapons' crews by ensuring complete and continuous coverage of the likely enemy avenues of approach. Mutual support consists of the following:

(a) Interlocking and overlapping field of fire.

(b) Position individual weapons so they can be re-orientated to cover specific areas not necessarily in their primary sector of fire.

(c) Integrate with nearby friendly infantry and armor units to enhance local security. Anti-armor weapons are vulnerable not only to tanks, but also to assaulting infantry.

(5) Avoid conspicuous terrain features. Features such as prominent hilltops and road junctions are often used as registration points for enemy indirect fire weapons.

d. Fire Planning.

(1) In the offense, fire plans are designed for continuous protection during occupation of the assembly area and along the route to the objective, as well as on the objective itself. Fires are planned to provide all around security. Ensure that overlapping fires cover all gaps in the event a weapon crew becomes a casualty.

(2) In the defense, fire plans are designed to integrate all units throughout the forward defensive area and the reserve forces as well. If the enemy armor succeeds in penetrating the forward edge of the battle area (FEBA), anti-armor weapons should be in a position to assist in repelling the attack. Should this fail, the forward defense forces attempt to slow or stop the enemy to permit the reserve to execute a counterattack.

e. Saturate the Battlefield. This fundamental requires the coverage of the battlefield by different types of anti-armor weapons. Enemy armor is first engaged by anti-armor aircraft at long ranges, as he approaches he is then engaged by artillery. This is followed by long range anti-armor guided missiles, friendly tanks, medium range anti-armor guided missiles and finally by anti-armor rockets. The overall view is progressive; as the enemy armor forces approach; more and more weapons of various types engage them. Whichever weapon is engaging the fire will be massed. Heavy sustained

section or platoon volleys are more effective than sections or platoons firing one or two uncoordinated missiles/rockets at a time.

f. Use Obstacles. The tank is heavily dependent on suitable terrain for movement. By skillful use of existing obstacles such as unstable soil, steep slopes or wooded areas and reinforcing man-made obstacles, such as the log post, the tank ditch or minefield, the infantryman can gain an advantage over attacking armor. Obstacles will allow the infantry to help canalize the enemy armor movement, and hopefully delay his advance. In addition, they are used to enhance the effectiveness of friendly anti-armor fires. All obstacles should be covered by indirect fire. However, no type of obstacle will completely stop the advance of a large, determined armor force.

References: FM 23-34, TOW Weapon System pages 1-1, 1-2, and 3-1 through 3-6. FMFM 2-11, Anti-Armor Operations pages 3-12 through 3-29, Table of Organization Number 1027H T/O 1027H