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Preface

The mission of air defense artillery is to protect the force and selected geopolitical assets from aerial attack, missile attack, and surveillance. FM 44-44 is the doctrinal forward area air defense (FAAD) manual for the Avenger platoon, section, and squad. It explains how Avenger provides air defense for the force and survives on the battlefield.

This manual also details tactics, techniques, and procedures used by the Avenger platoon when engaged in decisive offensive and defensive operations. Most importantly, it describes how Avenger platoons, sections, and squads protect deploying or deployed forces and critical assets by preventing enemy aerial platforms (unmanned, rotary, and fixed wing) and missiles from locating, striking, and destroying them.

This manual is required reading for commanders, platoon leaders, platoon sergeants, and section and squad leaders who will direct and supervise the employment of Avenger weapon systems. Other recommended essential reading includes—

- FM 7-8 Infantry Rifle Platoon and Squad
- FM 7-20 The Infantry Battalion
- FM 7-30 Infantry, Airborne, and Air Assault Brigade Operations
- FM 44-43 Bradley Stinger Fighting Vehicle Platoon and Squad Operations
- FM 44-64 FAAD Battalion and Battery Operations (TBP)
- FM 44-100 US Army Air Defense Operations
- FM 71-1-1 Tank and Mechanized Infantry Company Team
- FM 71-2 The Tank and Mechanized Infantry Battalion Task Force
- FM 71-3 Armored and Mechanized Infantry Brigade
- FM 71-123 Tactics and Techniques for Combined Arms Heavy Forces: Armored Brigade, Battalion/Task Force, and Company/Team

FM 44-44 is unclassified. Therefore, threat information contained in the publication is general in nature. Where detailed and current information is required, consult authoritative threat sources. Classified information pertaining to Avenger capabilities, limitations, and AD planning is found in (S)FM 44-100A(U)(TBP).
This publication implements the following international standardization agreements (STANAGs):

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The proponent of this publication is the United States Army Air Defense Artillery School. Send comments and recommendations on DA Form 2028 directly to Commandant, US Army Air Defense Artillery School, ATTN: ATSA-TAC-D, Fort Bliss, TX 79916-3802.

Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.
CHAPTER 1

AVENGER PLATOON OPERATIONS
AND ORGANIZATION

This chapter discusses missions, capabilities, organization, and roles of the Avenger platoon. The Avenger plays an integral role in the combined arms team, especially with winning the information war. The Avenger missions are to counter enemy RISTA efforts and to provide low-altitude air defense to the force and its critical assets.

The Army ADA mission is to protect the force and selected geopolitical assets from aerial and missile attack and surveillance. The Avenger platoon leader must understand Army operations doctrine so that the platoon’s employment is synchronized with the supported force’s main effort. The FAAD mission is to provide low-altitude air defense protection to the force and its critical assets. FAAD contributes to force-protection operations by countering threat RISTA and lethal aerial platforms. FAAD weapon systems ensure the force has the freedom to maneuver during combat operations.

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PLATOON IN ARMY OPERATIONS

FM 100-5 describes how the Army organizes and applies combat power and synchronizes operating systems on the battlefield to achieve victory. There are five tenets which describe the characteristics of a successful operation. These tenets apply to all leaders of combat, combat support, and combat service support organizations. The Avenger leader must practice and train within these tenets to be successful on the battlefield.

INITIATIVE

Initiative sets or changes the terms of battle by action and implies an offensive spirit in the conduct of all operations. Initiative requires that leaders anticipate events on the battlefield so that they and their units can act and react faster than the enemy. Applied to individual soldiers and leaders, initiative requires a willingness and ability to act independently within the framework of the commander’s intent. The Avenger platoon must be able to anticipate enemy actions and organize its assets to defeat or destroy the enemy air threat before the air threat can negatively impact the friendly force or asset.

AGILITY

Agility is the ability of friendly forces to react faster than the enemy and is a prerequisite for seizing and holding the initiative. It is as much a mental as a physical quality. For the Avenger platoon, agility is the ability to adjust platoon coverage to meet varying air threats. The decision support matrix (DSM) and the execution matrix are examples of tools that the Avenger platoon leader may use to achieve agility through rapid concentration of air defense weapons against enemy air platforms.

DEPTH

Depth is the extension of operations in time, space, resources, and purpose. It is the ability to gain information and influence operations throughout the battlefield. The Avenger platoon achieves depth by using air defense direct fire and early warning assets throughout the entire supported unit’s area of operations.

SYNCHRONIZATION

Synchronization is arranging activities in time and space to mass at the decisive point. It requires a clear understanding of the supported unit commander’s intent. The Avenger platoon achieves synchronization by massing fires at the critical point on the battlefield. An example of synchronization for the Avenger platoon is the proper positioning of fire units (FUs) on the battlefield to mass fires at the critical point, according to the supported commander’s intent, to destroy or defeat any enemy air threat.
VERSATILITY

Versatility is the ability to meet diverse mission requirements. The Avenger platoon must be flexible to meet diverse mission requirements. An example of versatility for an Avenger platoon is the ability to transition quickly from a defensive to an offensive mission.

ORGANIZATION OF PLATOON

The Avenger platoon is organic to divisional ADA battalions, armored cavalry regiments, and ADA brigades. The platoon must support a wide variety of missions dependent on the supported unit.

The Avenger platoon is configured into two different organizational structures. The Avenger Platoon Organization illustration depicts an Avenger platoon that consists of a platoon headquarters (HQ) and three Avenger sections. Units may configure their platoons into two sections of three squads, based on METT-T, but the next two illustrations depict the correct doctrinal platoon structure. The platoon HQ consists of the platoon leader, platoon sergeant, and two driver-radio operators. The Avenger section consists of two squads with one FU per squad. The senior sergeant is the section leader and is also a squad leader for one of the squads. Each squad consists of a driver and gunner.

ADA battalions in heavy divisions, ACRs, and separate heavy
brigades have four FUs per platoon as depicted in the following illustration. All others have six FUs per platoon as previously shown.

PLATOON PERSONNEL RESPONSIBILITIES

The responsibilities of personnel assigned to Avenger platoons are diverse. This section outlines the general responsibilities of the platoon personnel.

PLATOON LEADER

The Avenger platoon leader has dual responsibilities. He commands the Avenger platoon and in this capacity is responsible for its tactical employment and logistics. He may also be the special staff officer for air defense for the supported unit commander.

PLATOON SERGEANT

The platoon sergeant is second in command of the platoon. He must be proficient in all of the tasks normally accomplished by the platoon leader and be prepared to assume the platoon leader's responsibilities at a moment's notice. He must ensure that subordinate leaders are trained to perform leader duties two levels above their position in addition to their normal duties. He is responsible for the discipline and coordination of all logistics and maintenance support the platoon requires. The platoon

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AVENGER PLATOON ORGANIZATION-
HEAVY DIVISION

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PLT HQ

2 HMMWVs
1 1LT
1 SFC
2 PFCs

SEC 1

1 Avenger
1 SSQ
1 PFC

SEC 2

1 Avenger
1 SSQ
1 PFC

1 Avenger
1 SGT
1 SPCs

1 Avenger
1 SGT
1 SPC
The section leader may assume duties and responsibilities similar to the platoon leader when a section is task-organized separately from the Avenger platoon. He may be the air defense officer (ADO) for the supported unit, responsible for coordination with the staff. However, the Avenger section leader's primary responsibility is FU employment.

The section or squad leader has overall responsibility for the section or squad. The section or squad leader designates targets, routes of movement, and vehicle positions; determines weapons to be fired; and issues fire commands. He also maintains communications and carries out the platoon leader's or platoon sergeant's directives. The section or squad leader has primary responsibility for the maintenance of the Avenger and the training of his section or squad.

The section or squad leader has overall responsibility for his Avenger weapon system. The section or squad leader observes the battlefield to detect and identify targets. He issues fire control orders based on the current rules of engagement (ROE). The section leader is responsible for the proper emplacement of his assigned weapon system. The section or squad leader is also the primary driver.

**GUNNER**

The gunner observes the battlefield to detect and identify targets. The gunner is the primary operator of the weapon system. He is responsible for assisting the section or squad leader in the operation and maintenance of the Avenger weapon system. He must be prepared to assume all the duties and responsibilities of the section or squad leader.

**BATTLE CAPTAIN CONCEPT**

The battle captain concept is a technique used to assist the ADO and PSG in C2 and logistics throughout planning, preparation, and execution. He is usually the senior section leader and is especially useful in helping the PSG transition to the platoon leader job. He can brief the PSG on the current tactical situation should the PSG have to become the platoon leader. The battle captain can also assist the platoon leader with all aspects of planning, preparation, and execution. His involvement can enhance command and control. The battle captain’s responsibilities are as follows:

- Prepares to assume duties as PSG.
- Briefs PSG on current tactical situation (platoon and supported unit) to assist PSG’s
transition to platoon leader.
  • Maintains contact and situational awareness with the supported unit.
  • Assists with platoon command and control.

- Assists with PCIs, RSOP, and platoon rehearsals.
- Assists with planning and executing platoon service and support plan.

**CHARACTERISTICS AND CAPABILITIES**

The Avenger weapon system is a lightweight, day or night, limited adverse weather FU employed to counter low-altitude aerial threats. The FU consists of two turret-mounted standard vehicle mounted launchers (SVMLs), a machine gun, a forward looking infrared (FLIR) sight, a laser range finder (LRF), and an identification, friend or foe (IFF). The gyrostabilized turret is mounted on the high-mobility multipurpose wheeled vehicle (HMMWV). The FU can launch a missile or fire the machine gun on the move or from a stationary position with the gunner in the turret.

It can also be remotely operated from a location up to 50 meters away. Onboard communications equipment provides for radio and intercom operations. The system is capable of climbing a 31-degree slope at 4 MPH and traversing a 22-degree side slope from either side of the vehicle. Target engagement, and weapon characteristics and capabilities are addressed in Appendix K of this manual.

**STINGER MISSILE**

The Avenger’s primary weapon is the Stinger missile. The technical data is critical to

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Avenger operations. See the Stinger Technical Data illustration on page 1-6. For more information, see TM 9-1425-433-10.

M3P .50-CALIBER MACHINE GUN

The machine gun allows for aerial target engagement within the missile's dead zone and is also used for self-defense. See the illustration on bottom of page 1-6.

The M3P machine gun has limited range and only 200 available rounds. Due to limited ammunition supply onboard, strict firing discipline is essential. The machine gun has a no-fire zone from positive 10 degrees to negative 10 degrees in elevation, and a cutout zone from 270 to 18 degrees in azimuth toward the front of the HMMWV. The turret is mounted on a modified M998 or M1097 HMMWV. The HMMWV provides good mobility over all types of terrain. The Avenger system is powered by two 12-volt system batteries that can be monitored on the HMMWV electrical system.

COMPONENTS

Platoon members must be knowledgeable of the Avenger’s characteristics and capabilities. All platoon members must actively seek to minimize the Avenger’s limitations to maximize its combat effectiveness on the battlefield. See the Avenger Components illustration.

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**AVENGER COMPONENTS**

Legend:
1. Radio antenna
2. Missile pod
3. Canopy
4. Laser range finder
5. FLIR
6. IFF antenna
7. HMMWV
8. Battery box
9. Ammunition box
10. Ammunition chute
11. Machine gun
12. Heater/ventilator
13. Elevation drive motor

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