FM 17-36

DEPARTMENT OF THE ARMY FIELD MANUAL

DIVISIONAL ARMORED AND AIR CAVALRY UNITS

HEADQUARTERS, DEPARTMENT OF THE ARMY
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UNITED STATES ARMY INFANTRY SCHOOL
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DIVISIONAL ARMORED CAVALRY SQUADRON OPERATIONS BGC60

ERRATA SHEET

1. References on Advance Sheet, BGC60 refer to 1968 edition of FM 17-36.

2. Corresponding paragraphs for 1965 edition of FM 17-36 are:

1968	1965
Para 1-3	Para 3
Para 3-3 to 3-5	Para 12-15
Para 4-19	Para 30
Para 5-5	Para 74
Para 5-18	Para 108
Para 8-2 to 8-4	Para 188-190
Para 9-7 to 9-9	Para 220-222
Section VI, Chapter 10	Section VI, Chapter 11
Section II, Chapter 10	Section II, Chapter 11
Section IV, Chapter 10	Section IV, Chapter 11

FIELD MANUAL
No. 17-36

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *8 October 1965*

DIVISIONAL ARMORED AND AIR CAVALRY UNITS

*This manual supersedes FM 17-36, 21 December 1961, including C 1, 6 May 1963, and C 2, 1 July 1964; FM 17-35, 11 February 1960; and FM 57-17, 22 September 1959.

PART ONE
GENERAL

CHAPTER 1
GENERAL

1. Purpose

This manual provides doctrine for the employment of the reconnaissance platoon, the armored cavalry platoon, troop, and divisional squadron, and the air cavalry troop. Doctrine for the employment of the scout platoon is contained in FM 17–15; however, the information in this manual on definitions, missions, fundamentals, communications, and duties applies to all reconnaissance type platoons.

2. Scope

a. This manual covers basic doctrine in tactics, techniques of employment, organization, exercise of command, control, movements, and tactical operations appropriate to reconnaissance platoons of combat battalions, all armored cavalry platoons and troops, all air cavalry troops, and divisional armored cavalry squadrons.

b. The procedures described herein are intended as a guide only and are not to be considered inflexible. Each situation in combat must be resolved by an intelligent interpretation and application of the doctrine set forth herein.

c. This manual is designed to be used in conjunction with FM 17–1. General information contained in FM 7–11, FM 7–15, FM 7–20, FM 7–30, FM 17–15, FM 17–30, and FM 54–2 may be used as applicable.

d. Unless otherwise specified, the material presented herein is applicable without modification to both nuclear and nonnuclear warfare.

e. Figure 1 shows the symbols most frequently used in illustrations throughout this manual. For other military symbols, refer to FM 21–30.

f. Users of this manual are encouraged to submit recommended changes or comments to improve the manual. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to US Army Combat Developments Command Armor Agency, Fort Knox, Ky.

3. Missions of Armored and Air Cavalry Units

a. Armored and air cavalry units are organized to perform reconnaissance and to provide security for the unit to which assigned or attached and to engage in offensive, defensive, and delaying action as an economy of force unit. The employment of armored and air cavalry units on such missions permits the higher commander to concentrate the efforts of other elements of the command on more decisive objectives or on other aspects of the mission.

b. The majority of missions assigned to armored and air cavalry units are primarily of a reconnaissance and security nature. In many instances troops of the squadron will perform one of the types of reconnaissance as a part of the overall squadron security mission. When troops of the squadron are assigned one type of security mission, they perform continuous reconnaissance. Therefore, a reconnaissance mission provides a certain degree of security, and a security mission provides information of the enemy and the area of operations.

c. The security force orients its location or movement on the force being secured whereas the unit conducting a reconnaissance mission

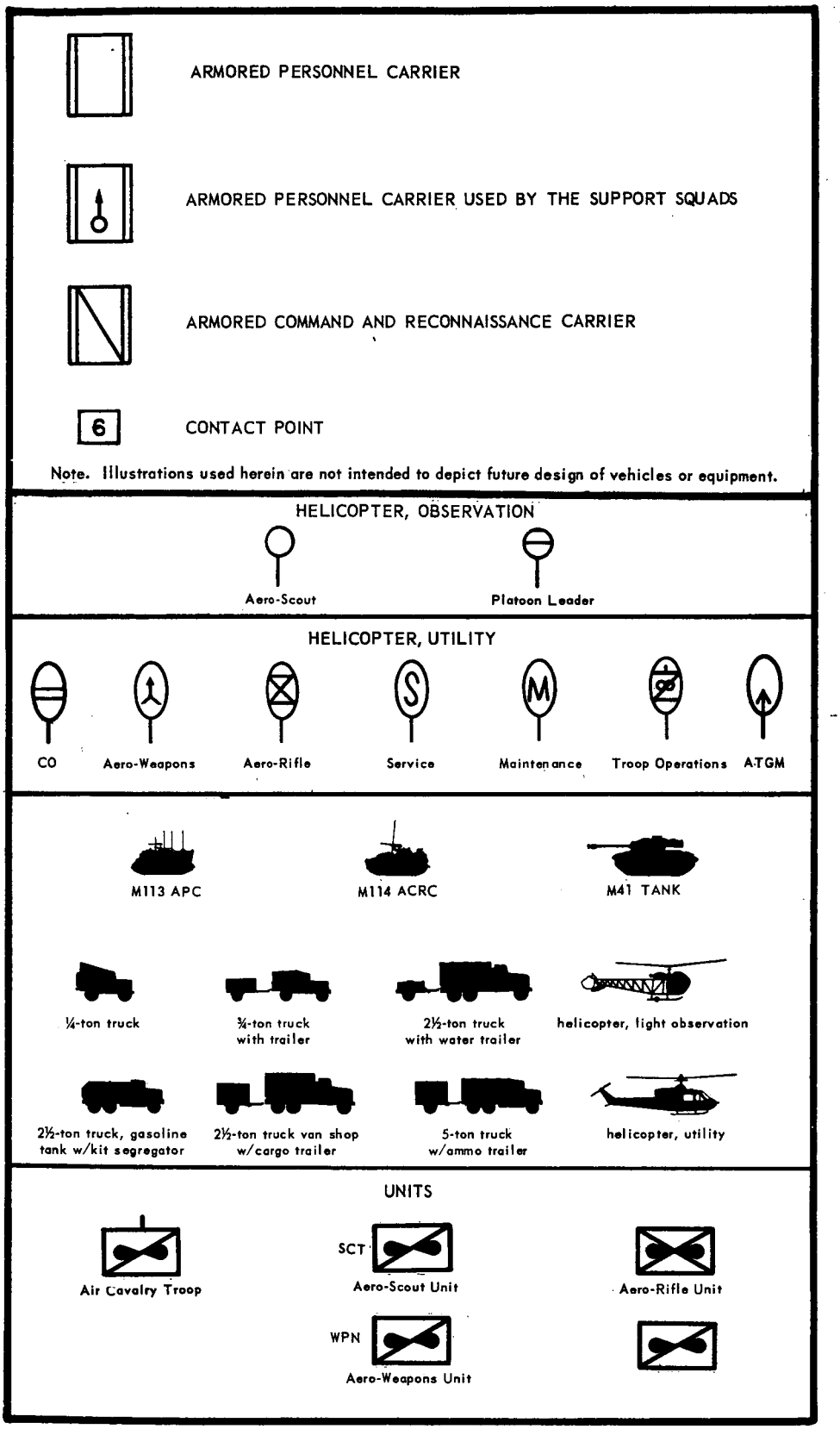


Figure 1. Symbols used in manual.

orients its location or movement on intelligence objectives. For a detailed discussion of reconnaissance and security missions, see FM 17–1.

(1) Reconnaissance definitions, missions, and fundamentals.

(*a*) *Reconnaissance.* Reconnaissance is the directed effort in the field to collect information of the enemy and the area of operations by ground and air means.

(*b*) *Types of reconnaissance missions.*

1. *Route reconnaissance.* Route reconnaissance is the directed effort to obtain information of the route, obstacles, and enemy along a specific route and the terrain adjacent to the route which would affect movement along the route.
2. *Zone reconnaissance.* Zone reconnaissance is the directed effort to obtain detailed information of all routes, terrain, and enemy forces within a zone defined by boundaries.
3. *Area reconnaissance.* Area reconnaissance is the directed effort to obtain detailed information of all routes, terrain, and enemy forces within a specific and clearly defined area.

(*c*) *Reconnaissance in force.* Reconnaissance in force is a limited-objective operation by a force of sufficient size to discover and test the enemy's dispositions and strengths, or to develop other intelligence.

(*d*) *Fundamentals of reconnaissance.*

1. Orient on the location or movement of intelligence objectives.
2. Report all information accurately and rapidly.
3. Avoid decisive engagements.
4. Maintain contact with the enemy.
5. Develop the situation.

(2) *Security definition, missions, and fundamentals.*

(*a*) *Security.* Security as applies to armored and air cavalry, includes all measures taken by a command to protect itself from observation or surprise.

(*b*) *Types of security missions.*

1. *Advance guard.* An advance guard is a security force, primarily offensive in nature, which operates to the front of a moving force to insure its uninterrupted advance and to protect it from enemy surprise attack by defeating or delaying the enemy within its capabilities.
2. *Flank guard.* A flank guard is a security force that operates to the flank of a moving or stationary force to protect it from enemy ground observation, direct fire, and surprise attack by defeating or delaying the enemy within its capabilities.
3. *Rear guard.* A rear guard is a security force that operates to the rear of an advancing or withdrawing force to protect it from enemy surprise attack or annoyance by defeating or delaying the enemy within its capabilities.
4. *Screening force.* A screening force, by surveillance over an extended frontage to the front, flank, or rear of a moving or stationary force provides early warning by observing, reporting, and maintaining visual contact with enemy forces encountered.
5. *General outpost or covering force.* A general outpost or a covering force is a mobile, tactically self-contained security force that operates at a considerable distance to the front, flank, or rear of a moving or stationary force, with the mission of making an early development of the situation, defeating hostile forces if possible, and deceiving, delaying, and disorganizing enemy forces until the main force can adequately react to cope with the situation.
6. *Rear area security force.* A rear area security force protects rear area units, installations, and routes of communication from at-

tack by enemy airborne and air-landed forces, guerrillas, and infiltrators.

(c) *Fundamentals of security.*

1. Orient on the location or movement of the force being secured.
2. Perform continuous reconnaissance.
3. Provide timely and accurate warning.
4. Provide space for maneuver.
5. Maintain enemy contact.

d. Economy of force is the skillful and prudent use of combat power to accomplish the mission with minimum expenditure of resources.

(1) Economy of force implies appropriate allocation, not husbanding, of the available means to perform secondary tasks to insure sufficient combat power at the point of decision. Armored and air cavalry units are organized and equipped to perform economy of force missions, thus permitting a commander to maneuver the preponderance of his other forces to another area for a decisive blow.

(2) In the economy of force role, armored and air cavalry units can be employed in any offensive, defensive, or retrograde operation in areas and on missions not requiring the combat power of a tank unit. They can also be employed as an economy of force to fill a gap.

4. Characteristics of Armored and Air Cavalry Units

a. General. Successful operations by armored and air cavalry units depend on the maximum use of the inherent favorable characteristics of armor-protected firepower, air-to-ground weapons, ground and air mobility, shock effect, extensive and multiple means of communications, and flexibility. Air cavalry units normally should be employed in close conjunction with ground units so that the capabilities of ground and air elements will mutually complement each other. These basic characteristics are discussed in FM 17–1. Air-to-ground weapons are discussed in appendix III.

b. Firepower. Armored and air cavalry units have mobile firepower in the form of tank weapons, air-to-ground weapons, machineguns, mortars, and individual weapons.

c. Mobility. Armored and air cavalry units are completely air or surface mobile in organic vehicles and can move rapidly cross-country on roads or trails, and in the air. Their many light, tracked vehicles provide excellent cross-country mobility. The swimming capability of the armored command and reconnaissance carrier, the armored personnel carrier, and the self-propelled mortar provide an inland water crossing capability. Scout and dismounted rifle and mortar elements can be readily transported throughout the battle area by Army aircraft.

d. Shock Effect. Shock effect in armored and air cavalry units is enhanced by mobility and firepower, and the armor shielding afforded by its ground vehicles.

e. Extensive and Flexible Communications. Armored and air cavalry units have an extensive and flexible communications system. Although FM voice radio is the primary means employed between troop and squadron, AM radio (voice or CW) and telephone (wire communication) are also available. This capability enables a great volume of traffic to be handled, and provides a means for maintaining communications over greater distances than would be possible using only FM voice radio.

f. Flexibility. Cross-country and air mobility of certain elements, extensive and flexible communications, and responsiveness to command permit armored and air cavalry units to operate over wide areas and at extended distances in accomplishing rapidly changing and varied missions.

CHAPTER 2

EMPLOYMENT OF ARMORED AND AIR CAVALRY UNITS

5. General

Actions of armored and air cavalry units in combat are governed by the application of the principles of war and certain guiding fundamentals of employment for armor, which are discussed in FM 17–1, and for air cavalry, which are discussed in this manual. The success of these units depends to a large degree on the tactical ingenuity of commanders in applying these principles and fundamentals.

6. Principles of War

The principles of war govern all military operations. They are the major factors that commanders must consider in achieving success on the battlefield. In combat, the plan of each commander, regardless of level, must be based on a specific mission and on the logical application of the principles of war. Principles of war are discussed in detail in FM 17–1.

7. Factors Affecting Employment

The successful employment of armored and air cavalry units depends on the commander's careful and continuous consideration of certain influencing factors. These are the mission, enemy, terrain and weather, and troops available (METT). The four factors are considered constantly and simultaneously by the commander. A detailed discussion of these factors is contained in FM 17–1.

8. Alternate Equipment

Alternate equipment may be substituted when an armored cavalry unit organic to an infantry division is to be employed in an air transportable role. Appropriate authority will select the most desirable equipment to suit the mission. Capabilities of substituted equipment must be considered when employing the unit.

9. Combat Support for Armored and Air Cavalry Units

Armored and air cavalry units, depending on their assigned mission and forces available, may be supported by artillery, engineer, tactical air force, and Army aviation elements and reinforced by tanks and mechanized infantry. FM 17–1 provides general guidance on combat support for armor units. Specific guidance for armored and air cavalry units is given throughout this manual at each level and for each type of operation discussed. The use of smoke is covered in FM 3–50.

PART TWO
ARMORED CAVALRY TROOP
CHAPTER 3
GENERAL

Section I. GENERAL

10. Purpose and Scope

Part Two covers the organization, tactics, and techniques employed by the armored cavalry platoon and troop. Reconnaissance, offensive, security, defensive, and retrograde operations are covered in separate sections. The armored cavalry troops of divisions and armored cavalry regiments are similar in organization and conduct operations in essentially the same manner; therefore, the tactics and techniques for each type of operation discussed in this manual pertain to each of these platoons and troops.

11. Missions and Capabilities of the Armored Cavalry Troop

a. The armored cavalry troop is designed to perform reconnaissance, provide security, and engage in offensive, defensive, and delaying action as an economy of force unit. It is employed on missions that complement the squadron mission or the mission of the unit to which it is attached. The armored cavalry troop has the following capabilities:

(1) Collection of information of intelligence value, including information on potential nuclear targets and nuclear damage assessment.
(2) Providing flank security for a larger unit on one flank.
(3) Acting as part of a security force between two larger units.
(4) Acting as part of a divisional general outpost (GOP) or a corps covering force in defensive operations; acting as part of a division covering force in offensive and retrograde operations.
(5) Providing a screen for a larger unit.
(6) Performing rear area security as part of a larger force.
(7) Conducting offensive, defensive, and retrograde operations in reconnaissance and security missions or as an economy of force unit.
(8) Conducting chemical agent detection and radiological monitoring and survey operations.
(9) Performing damage control operations as part of a larger force.

b. The armored cavalry troop is capable of operating as an independent force for a limited period of time. The troop may be reinforced as required by the mission.

Section II. ORGANIZATION

12. General

The armored cavalry troop consists of a troop headquarters and three armored cavalry platoons. Figure 2 shows the organization of the armored cavalry troop.

13. Troop Headquarters, Armored Cavalry Troop

The armored cavalry troop headquarters consists of a headquarters section, a ground surveillance section, and a maintenance section.

a. Headquarters Section. The headquarters section comprises the troop command post. It is the operations and administrative center of the troop and is usually under the supervision of the executive officer. It consolidates and reports information, and communicates, makes liaison, and plans with higher headquarters and adjacent units. Logistical requirements of the troop are also coordinated by this section. The headquarters section is composed of the troop commander, executive officer, first sergeant, supply sergeant, communications chief, liaison sergeant, liaison agent, two intermediate-speed radio operators, troop clerk, a commander and driver for the armored command and reconnaissance carrier, and drivers for the armored personnel carrier and wheeled vehicles in the section.

b. Ground Surveillance Section. The ground surveillance section consists of a surveillance section chief and four radar operators. Two radar operators also drive the section's two armored personnel carriers required to transport the two short range radar sets and personnel of the section. The mission of this section is to provide short range ground radar surveillance for the troop.

c. Maintenance Section. The maintenance section performs organizational maintenance on the vehicles, radios, and weapons of the troop. It performs vehicle evacuation within its capability. The section comprises a maintenance sergeant, recovery mechanics, tracked vehicle mechanics, radio mechanics, and a turret mechanic. Equipment in the section includes a tracked recovery vehicle, an armored personnel carrier, and necessary light trucks.

14. Armored Cavalry Platoon

The armored cavalry platoon consists of a platoon headquarters, scout section, tank section, rifle squad, and a support squad (fig. 3).

a. Platoon Headquarters. Platoon headquarters consists of the platoon leader and a scout driver. Transportation is provided by an armored command and reconnaissance carrier.

b. Scout Section. The scout section consists of two scout squads, each with six men. Each squad consists of a squad leader, assistant squad leader, two scout observers, and two drivers. The section leader also commands the

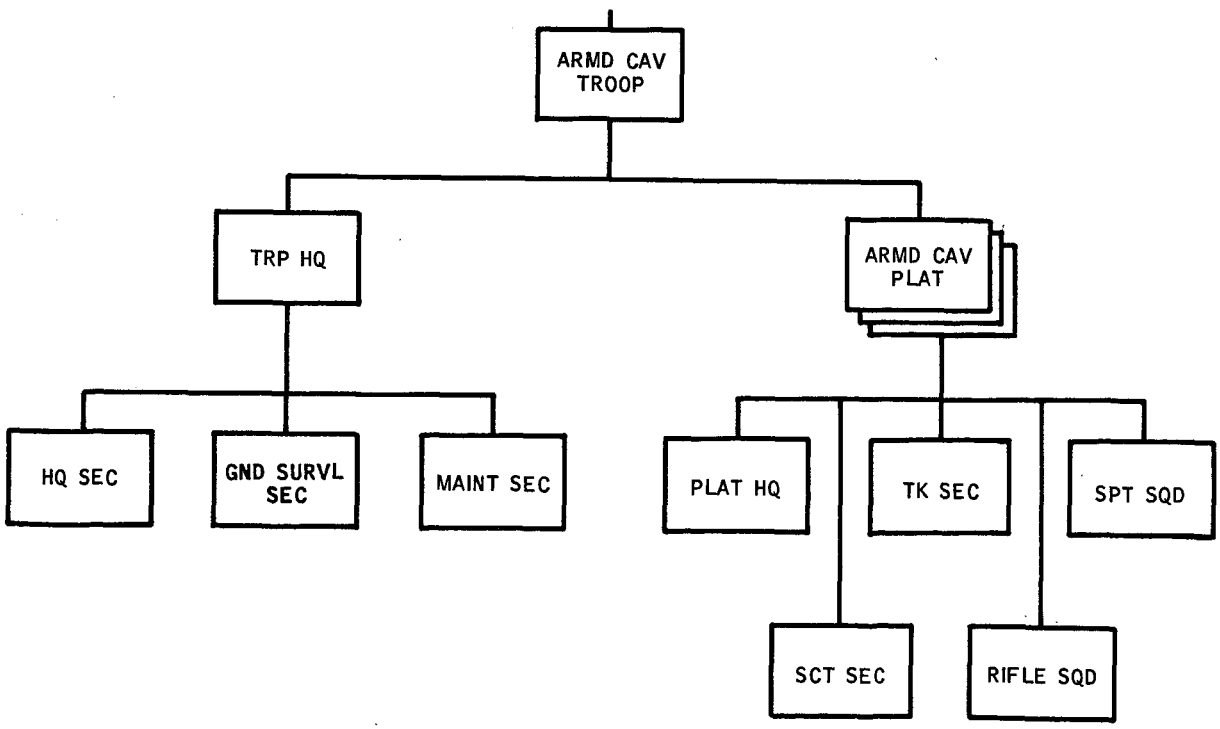


Figure 2. Organization, armored cavalry troop.

first squad. There are two armored command and reconnaissance carriers in each squad.

c. Tank Section. The tank section has three light-gun tanks. Each crew includes a tank commander, gunner, driver, and loader. The platoon sergeant, also the section leader, commands one tank.

d. Rifle Squad. The rifle squad consists of a squad leader, two fire teams, one rifleman designated as a machinegunner, and a driver. Each fire team consists of a team leader, an automatic rifleman, a grenadier, and a rifleman. Transportation is provided by an armored personnel carrier.

e. Support Squad. The support squad consists of a squad leader, gunner, assistant gunner, ammunition bearer, and driver. The support weapon is mounted on an armored mortar carrier.

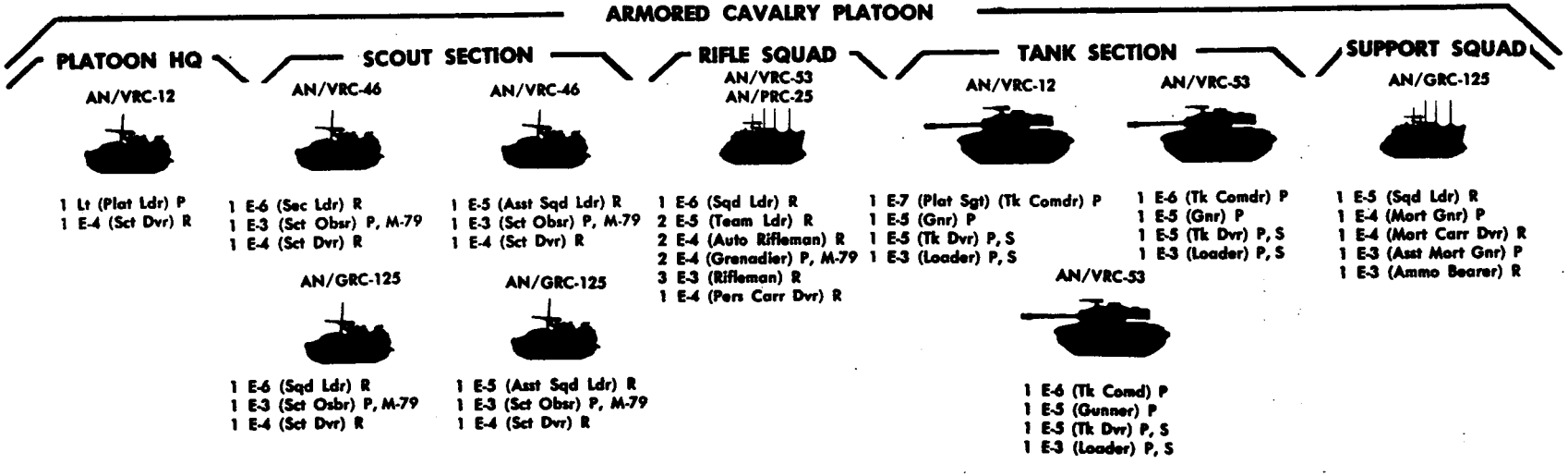


Figure 3. Manning chart for armored cavalry platoon.

Section III. DUTIES OF KEY PERSONNEL

15. Duties of Key Personnel, Troop Headquarters

a. Troop Commander. The troop commander is responsible for the training, tactical employment, health and welfare, discipline, and administration of the troop. To discharge these responsibilities efficiently, he must train and use his subordinates to the fullest, and continually supervise the actions of the troop.

b. Executive Officer. The executive officer is second in command of the troop. He keeps abreast of the tactical situation and must be prepared to assume command at any time. As the principal assistant to the troop commander, the executive officer supervises the functioning of the troop support elements and the activities of the troop command post. The executive officer is responsible for the movement, location, and security of the troop command post. He insures that communication is maintained with the platoons, the troop commander, and the next higher headquarters.

c. First Sergeant. The first sergeant is the troop commander's administrative assistant; however, his duties may vary from administrative and supply matters to command responsibilities. He assists the executive officer in the operation of the command post and supervision of logistical support elements of the troop.

d. Communications Chief. The communications chief assists the troop commander and executive officer on communications matters. He normally commands the command post vehicle and assists the executive officer and the first sergeant with the operation of the troop CP. He trains communication personnel and supervises the installation, operation, and maintenance of troop communications systems. During operations he insures that radio operators maintain efficient communication, that they record all incoming and outgoing messages, and that they are relieved properly.

e. Liaison Sergeant. The liaison sergeant provides direct communication facilities between the troop command post and higher headquarters. He keeps informed of the existing tactical situation and the plans of the unit to which he is sent. Also, he may provide a radio relay station, carry messages and orders, and guide personnel or elements to the troop command post.

f. Motor Sergeant. The motor sergeant commands the maintenance section and advises the troop commander and executive officer on maintenance matters. He supervises and trains mechanics, except the radio mechanics; requests, issues, and stores repair parts; keeps maintenance records; and exercises overall supervision of organizational maintenance.

g. Supply Sergeant. The supply sergeant is the troop commander's supply assistant. He maintains appropriate supply records, submits reports as required, and requests necessary supplies to sustain the troop.

h. Surveillance Section Chief. The surveillance section chief commands the surveillance section and assists the troop commander on surveillance matters. He trains radar operators and supervises installation, operation, and maintenance of surveillance equipment.

16. Duties of Key Personnel, Platoon

a. General. The platoon leader and noncommissioned officers in the armored cavalry platoon must be capable of employing the troops and equipment for which they are responsible. Within the platoon, each leader must be able to react rapidly and with initiative in any situation. He must have a knowledge of combined arms tactics and be able to employ his unit alone or as part of a larger force.

b. Platoon Leader. The platoon leader is responsible to the troop commander for the discipline, training, combat readiness, and control of his platoon, and its maintenance and equipment. The platoon leader must know the capabilities and limitations of the men and equipment in the platoon, and he must be thoroughly familiar with all aspects of command and leadership as discussed in FM 17–1.

c. Platoon Sergeant. The platoon sergeant is second in command of the platoon. He commands elements of the platoon as directed by the platoon leader and assumes command of the platoon in the absence of the platoon leader. Normally, when the platoon leader is mounted

in the command and reconnaissance carrier of platoon headquarters, the platoon sergeant will command the tank section. When the platoon leader uses a tank, the platoon sergeant may use the platoon leader's command and reconnaissance carrier. The platoon sergeant assists the platoon leader in maintaining discipline, in training, and in maintaining control of the platoon. He assists in matters pertaining to maintenance of equipment, supply, and other platoon administrative matters.

d. Section and Squad Leaders. Section and squad leaders are responsible to the platoon leader for the training, discipline, tactical employment, and control of their units. They closely supervise the maintenance and operation of all vehicles and equipment that are organic to their elements. Each section or squad leader must be thoroughly familiar with the operational techniques of his own and other elements of the platoon. This is essential for effective combined arms action within the platoon.

e. Tank Commanders. Tank commanders direct the movement, firing, maintenance, and supply of their tanks. They also supervise first aid and evacuation of wounded crew members. They are responsible to the platoon leader for the tactical employment of their tanks and the training and discipline of their crews.

CHAPTER 4

EMPLOYMENT OF THE ARMORED CAVALRY PLATOON

Section I. GENERAL

17. General

a. The armored cavalry platoon is the basic tactical unit of the armored cavalry troop. Its organization and equipment permit its employment in numerous roles. It is capable of performing reconnaissance, providing security, and executing combat missions as an economy of force unit.

b. The platoon is organized, equipped, and trained to operate as a team. It should be employed as a unit.

c. The armored cavalry platoon in the armored cavalry troop rarely will be detached for independent missions.

Section II. RECONNAISSANCE OPERATIONS

18. General

a. Reconnaissance is the directed effort in the field to collect information of the enemy and the area of operations by ground and air means. The armored cavalry platoon usually performs reconnaissance to obtain information about the enemy. Reporting of enemy information will, therefore, take first priority. Information about the area of operations that has tactical significance, such as terrain, trafficability, etc., should be reported promptly. Information of available resources, such as repair materials, food, water, fuel, or utilities, should be reported as directed.

b. Reconnaissance may be accomplished mounted, dismounted, or by combined mounted and dismounted action. Normally, the platoon will combine mounted and dismounted action. Scout elements employ stealth, infiltration and observation, and movement to obtain information. When necessary, the platoon will fight to accomplish its reconnaissance mission. Both positive and negative information are reported.

c. The armored cavalry platoon is organized and equipped to operate most effectively along a single route or axis of advance. When more than one route or axis of advance is assigned, the platoon will cover the additional routes or axes of advance with elements from the platoon. (See figures 4–6 for armored cavalry platoon reconnaissance formations.)

19. Route Reconnaissance

a. Route reconnaissance is the directed effort to obtain information of the route, obstacles, and enemy along a specific route and the terrain adjacent to the route which would affect movement along the route (fig. 5).

b. The armored cavalry platoon may be directed to conduct route reconnaissance. If so, the platoon is normally assigned and can best reconnoiter one route. Route reconnaissance may be conducted forward of or to the rear of friendly dispositions.

c. When the platoon performs route reconnaissance forward of friendly lines, enemy information will usually be of primary concern. The platoon reconnoiters the route or routes assigned and all terrain adjacent to the route, which, if occupied by the enemy, could influence movement along that route. The armored cavalry platoon operates as a unit, using the formation best suited to the terrain and enemy

situation. It takes necessary steps to insure constant local security. Scouts or tanks may lead the formation (figs. 4, 6, and 7).

(1) Scouts mounted in armored vehicles do not have the capability of moving by stealth. Using the inherent armor protection and cross-country capability of these vehicles, scouts will normally lead the formation. When there is a threat of enemy armor or armor-protected antitank weapons, the tank section must be prepared to lead.

(2) Scouts mounted in unprotected vehicles will usually lead the formation when very little or no enemy action has been encountered, fields of fire or terrain favors enemy ambush, and natural obstacles are prevalent. The tank section will usually lead the formation, with scouts employed on the flanks, when the platoon is approaching a known enemy position or when enemy small arms fire interferes with the rapid advance of the platoon.

d. Route reconnaissance behind friendly lines usually is performed to determine the advisability of using routes that are indicated by map reconnaissance as suitable for the movement of a large force.

e. All members of the platoon must have a working knowledge of the road, bridge, and overhead clearance requirements and inland water crossing capabilities of their own and supported units. The platoon should report route and bridge conditions, location and condition of bypasses, fords, and obstacles, and information of the enemy or terrain that are likely to affect the movement of friendly elements.

f. Engineers should be placed in support of the armored cavalry platoon when they will facilitate the advance of the platoon and assist in collecting technical information. Engineers may assist the armored cavalry platoon by clearing mines, removing roadblocks, constructing hasty bridging, or constructing bypasses.

g. For action on contact with the enemy refer to paragraph 24.

20. Zone Reconnaissance

a. Zone reconnaissance is the directed effort to obtain detailed information of all routes, terrain, and enemy forces within a zone defined by boundaries.

b. The armored cavalry platoon may be assigned a zone reconnaissance mission. Zones are assigned by the troop commander to coordinate movement, control fires, and fix responsibility. Boundaries are used to designate platoon zones. Factors determining the width of the platoon zone are the pattern of the road net, terrain features, anticipated enemy activity, type of information desired, and time available for accomplishing the mission. The platoon can most effectively perform zone reconnaissance within a zone containing only one route. When performing this type reconnaissance, the platoon reconnoiters and reports information on all routes, key or dominating terrain, and the location, strength, and disposition of the enemy within the platoon zone. Less important terrain features in the zone are reconnoitered as thoroughly as time permits or the situation requires. The platoon must insure that terrain information is obtained and that no enemy forces are undetected. The platoon operates as a unit, using the formation best suited to the terrain and enemy situation. Normally, scouts reconnoiter roads, trails, and terrain features within the zone while the remainder of the platoon advances along the best route or axis of advance available, prepared to support the scout section anywhere in the zone (fig. 8).

c. For action on contact with the enemy refer to paragraph 24.

21. Area Reconnaissance

Area reconnaissance is the directed effort to obtain detailed information of all routes, terrain, and enemy forces within a specific and clearly defined area.

a. Area reconnaissance is performed to gain information of a definite locality such as towns, woods, or crossing sites over a water obstacle. In an area reconnaissance, the armored cavalry platoon moves by the most direct route to the area to be reconnoitered. During movement to the area to be reconnoitered, unless otherwise

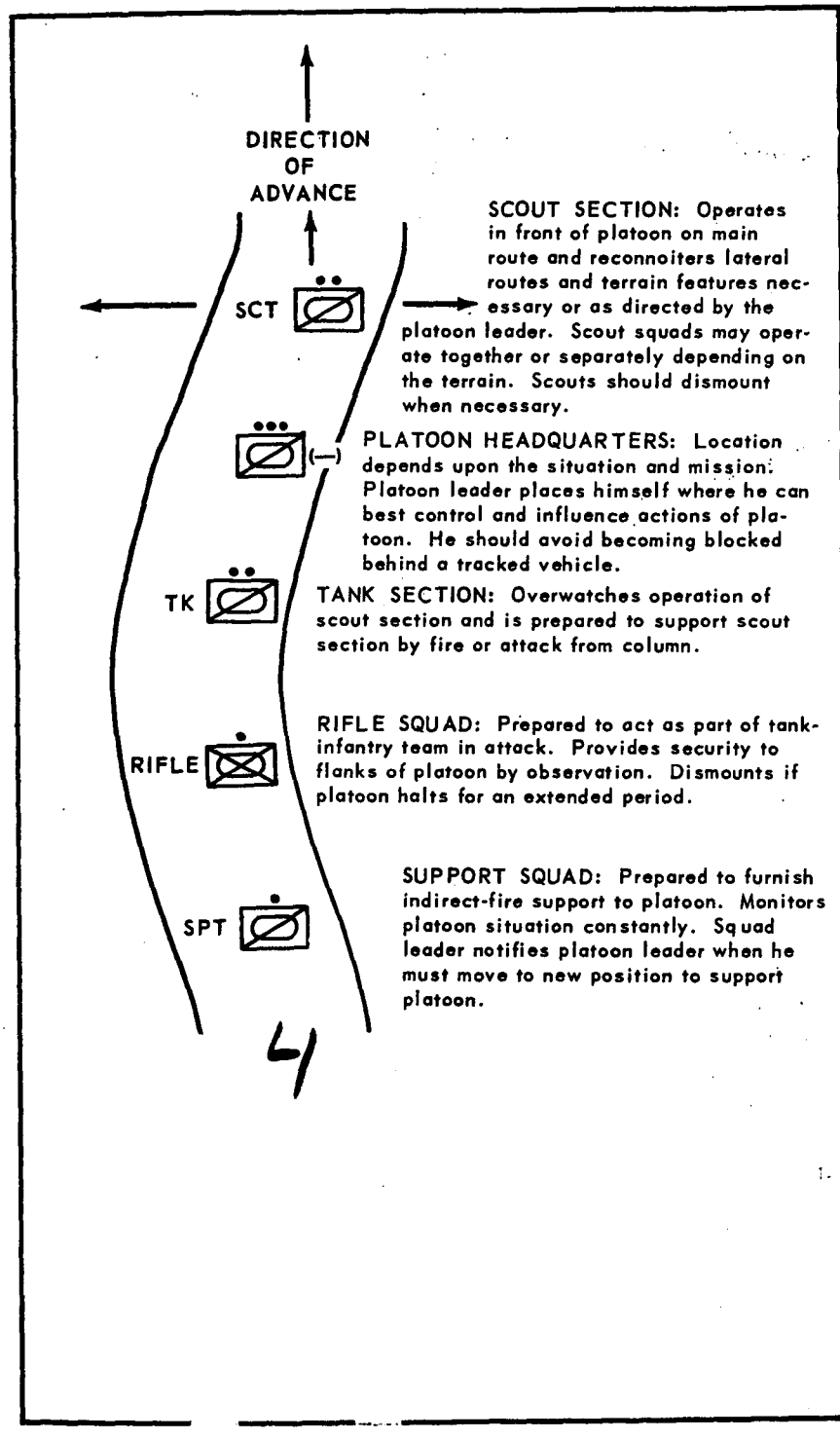


Figure 4. Armored cavalry platoon conducting reconnaissance; scout section leading.

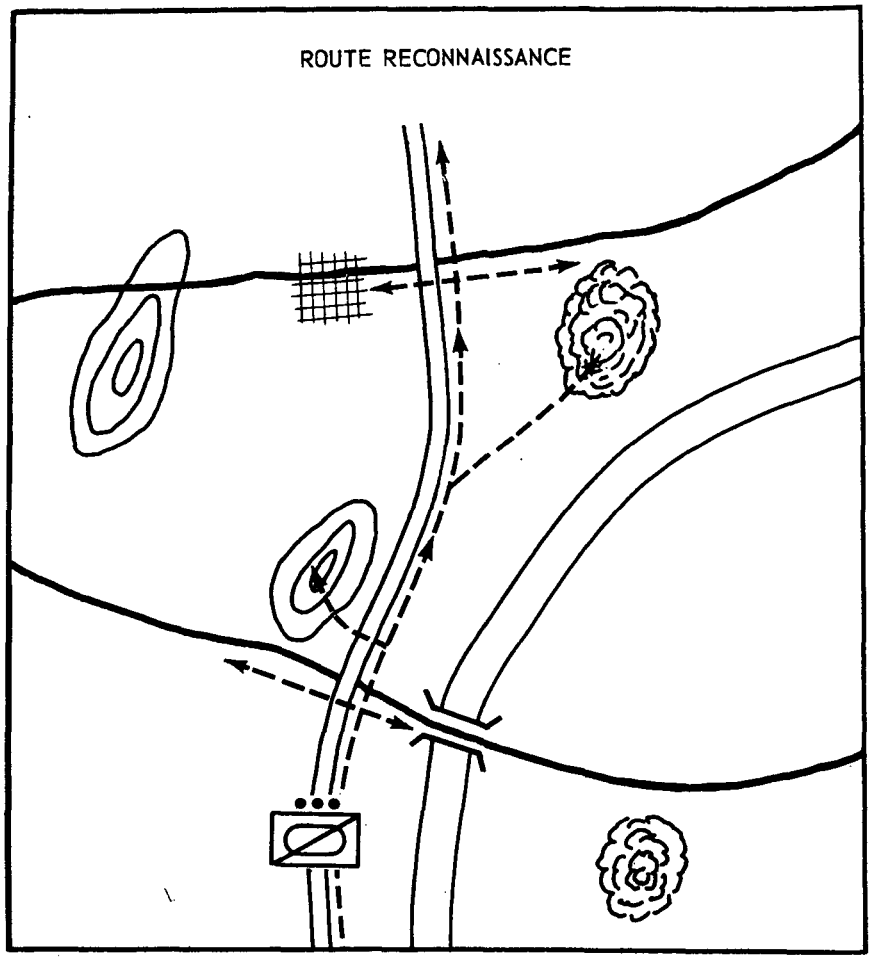


Figure 5. Armored cavalry platoon conducting route reconnaissance.

ordered, the platoon should report and bypass enemy opposition. When the platoon arrives at the designated area, it performs reconnaissance in the same manner as for zone reconnaissance.

b. In moving from the location where the mission was first assigned to the area to be reconnoitered, the platoon adopts a formation that will permit rapid, secure movement. This formation is usually the same as that used for a route reconnaissance, with either the tanks or scouts leading.

c. The platoon leader plans the reconnaissance in detail to insure that the area is systematically covered, particularly roads and trails, key terrain, and suspected enemy locations. If the area restricts vehicular movement, dismounted patrols from the scout section and rifle squad will normally reconnoiter the area (fig. 9).

d. See paragraph 24 for actions on contact during area reconnaissance operations.

22. Movement During Reconnaissance

a. One of the outstanding characteristics of the armored cavalry platoon is its mobility. In addition to excellent cross-country mobility, it also has an inland water crossing capability with its armored command and reconnaissance carriers and armored personnel carriers. This mobility can be exploited best by aggressive action.

b. When the situation is vague or when time is critical, the platoon will advance in column and at maximum speed with scout elements moving to the front by bounds. The distance between vehicles will vary with the terrain. The tanks maintain observation over the area in which the scouts are operating. The purpose of

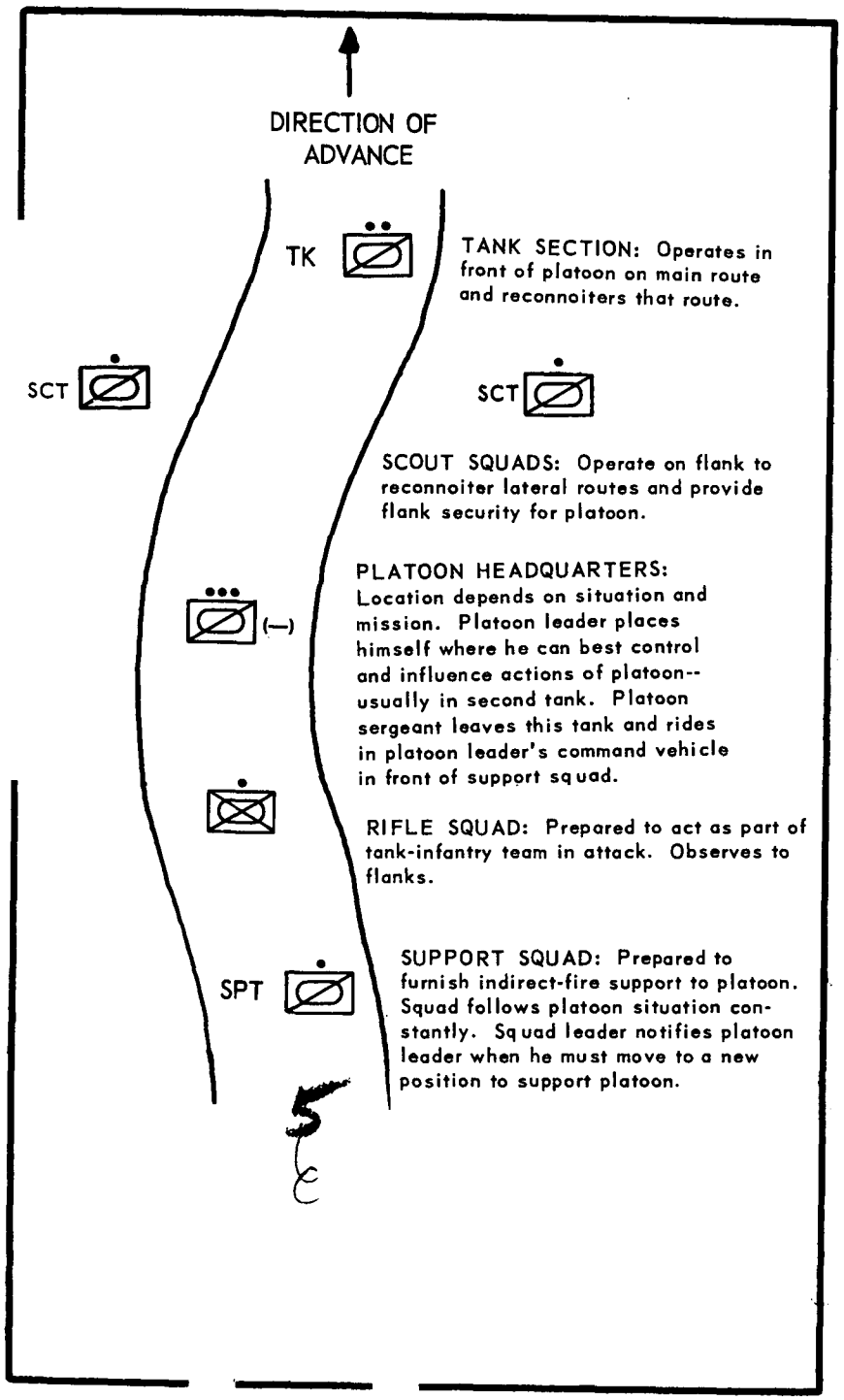


Figure 6. Armored cavalry platoon conducting reconnaissance; tank section leading.

SCOUT SECTION: Protects advance of platoon by reconnoitering high ground on flanks. The scout section leader controls one scout-tank team.

TANK SECTION: One or two tanks operate with a scout squad to provide support for advancing scouts. Tanks should be mutually supporting when possible. Platoon sergeant controls one scout-tank team.

PLATOON LEADER: Locates himself in position where he can best control actions of platoon. This is usually along route of advance of platoon.

RIFLE SQUAD: Moves along route of advance prepared to support either one or both of the scout-tank teams.

Figure 7. Armored cavalry platoon in reconnaissance Y formation.

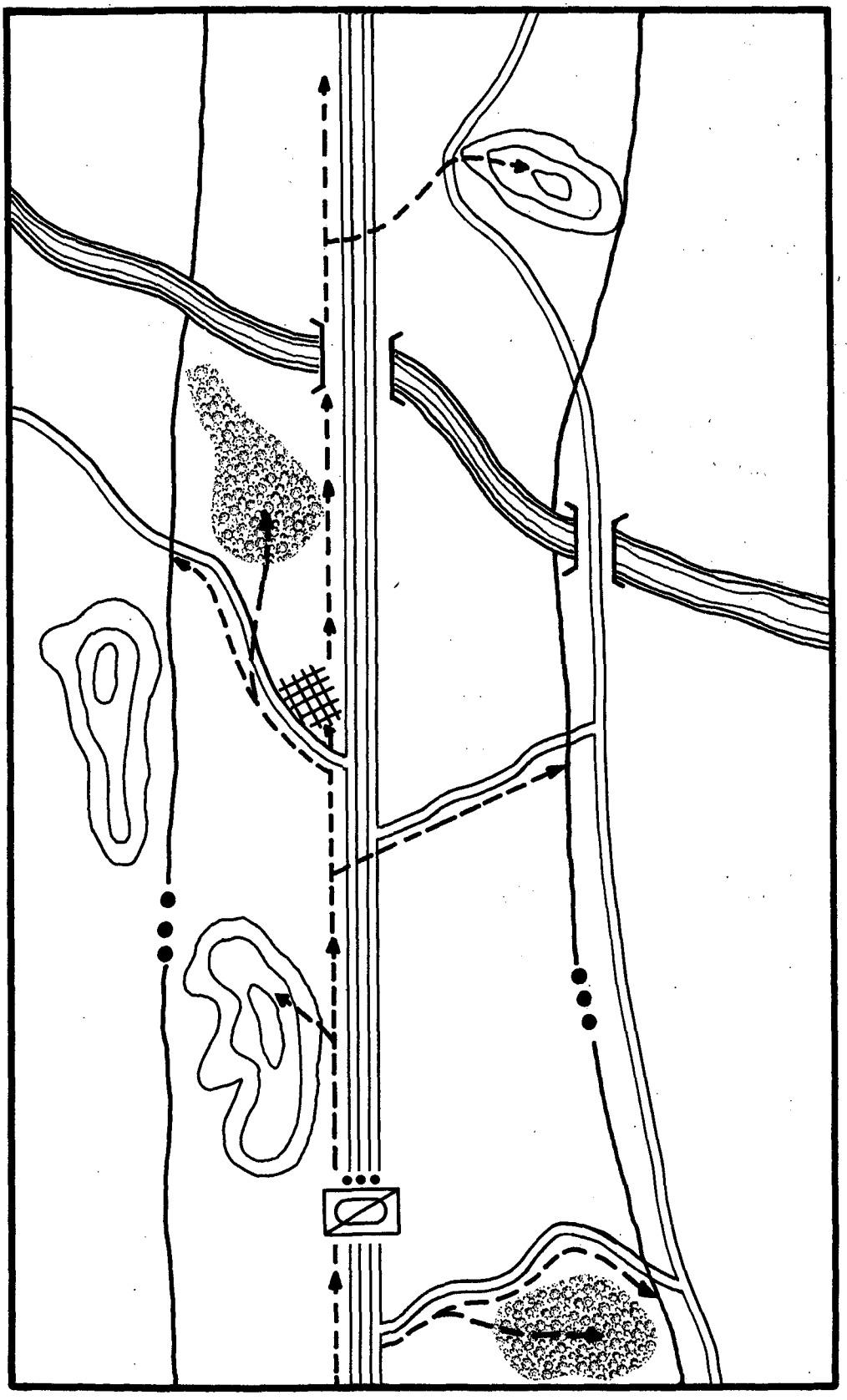


Figure 8. Armored cavalry platoon conducting zone reconnaissance.

extending the formation to this degree is to permit the platoon to move at maximum speed and, at the same time, minimize the possibility of involving the entire platoon in an ambush or trap or exposing all elements of the platoon to enemy fire at one time.

c. When enemy contact becomes imminent or has been made, all elements of the platoon will normally advance by bounds with one element covering the movement of another.

d. During reconnaissance missions the platoon normally advances along one axis or route in column formation. In cross-country operation, some lateral dispersion within these formations is made. Formations frequently employed by the armored cavalry platoon are illustrated in figures 4, 6, and 7.

e. Usually the scout section will lead the platoon in the advance. In units where scouts are mounted in unprotected vehicles, the determination as to which element will lead is based upon a consideration of the factors of METT. When scout elements lead, they normally work in pairs and move by bounds (fig. 10). This procedure assists in locating enemy positions, furnishes fire to cover the movement of leading vehicles, and insures rapid transmission of information. The following basic techniques of movement are used by scout elements.

(1) Before moving, the leader of the scout element must determine his next position and the most favorable covered and concealed route to it. During movement, the scout element must move as rapidly as the situation permits, being on the alert for the enemy and ready to move quickly to cover and concealment.

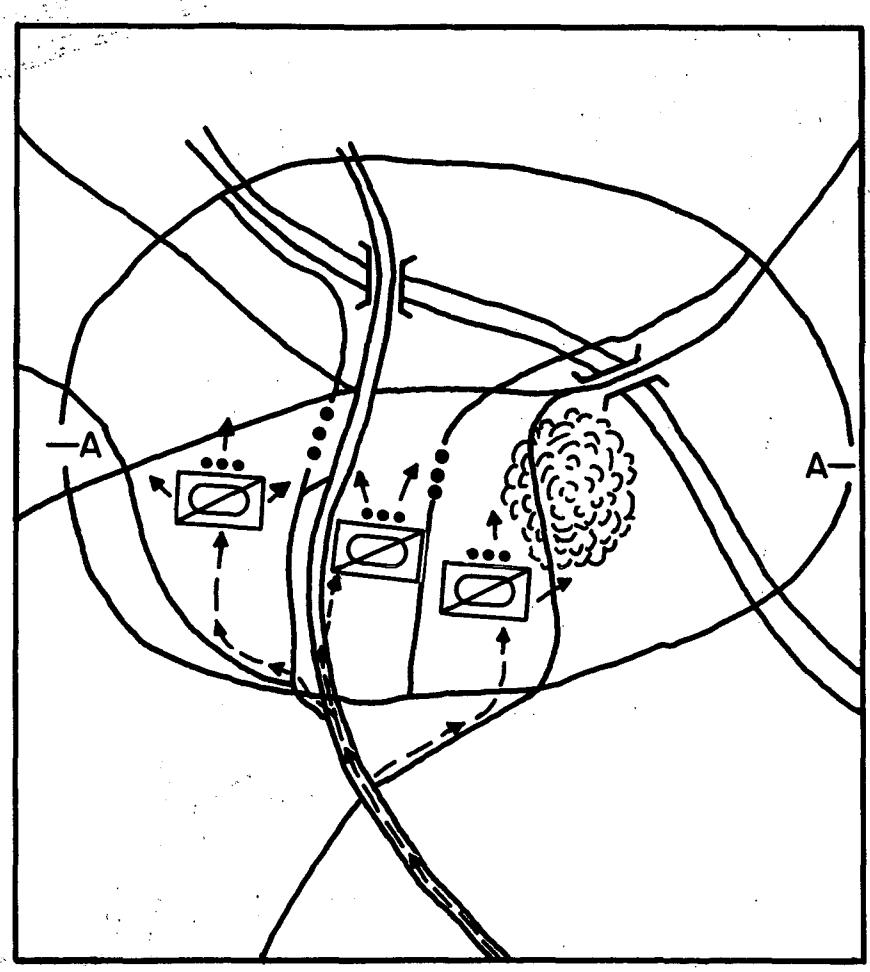


Figure 9. Armored cavalry troop conducting area reconnaissance.

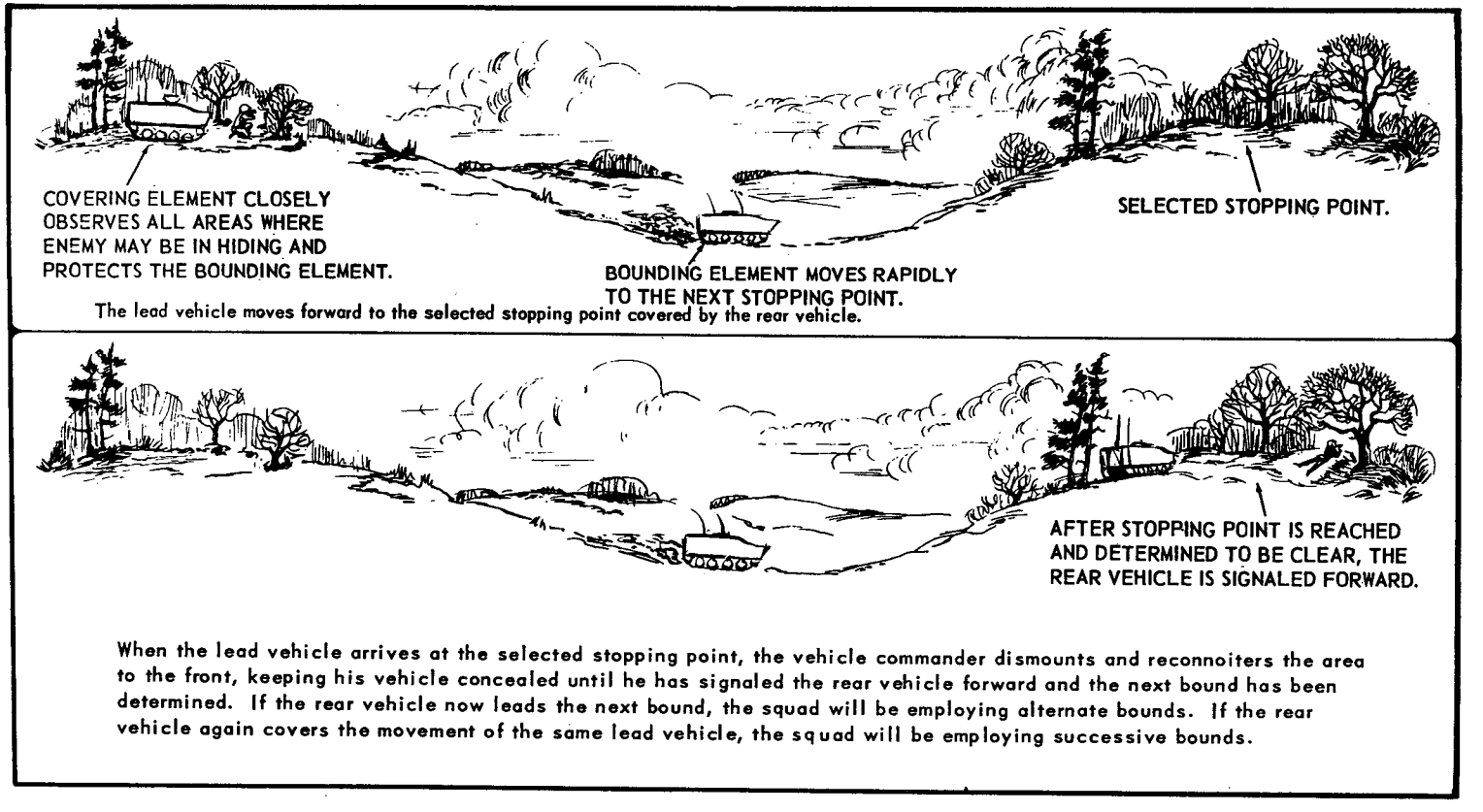


Figure 10. Scout squad moving by bounds.

(2) When approaching a position that will afford new areas of observation, the commander of the leading vehicle should stop his vehicle and dismount while in defilade, to prevent enemy forces beyond the position from detecting his presence. The fundamentals of individual movement discussed in FM 21–75 are applicable. When the position is secure, the overwatching scout element moves forward. Should the commander and observer move forward dismounted the driver should man the caliber .50 machinegun and cover their advance.

(3) Troops must not become vehicle-bound. When the vehicle is stationary, they should dismount to improve observation, prevent enemy detection, and provide security.

(4) The distance of each bound is determined by the nature of the terrain and the range at which the covering element can effectively support the moving element. Normally, this distance should not exceed the effective range of small arms fire.

(5) Movement in each bound must be completed rapidly; however, it should not be done so rapidly that efficiency of operation and coordination between elements are lost.

(6) When covering elements have been signaled forward, they should take the shortest and fastest route forward to avoid delaying the continuation of movement.

(7) When the movement of advancing vehicles is being covered, observation must be directed at terrain from which fire is expected and not on the moving vehicles. In so doing, crews of the supporting vehicles are usually able to detect enemy fire more easily and to engage hostile forces more rapidly. Vehicles within the scout squad, or scout squads within the section, should advance employing either successive or alternate bounds (figs. 11 and 12).

(*a*) *Successive bounds.* In this method, the leading element, covered by the rear element, advances and takes up positions to support the advance of the rear element. The rear element, upon arriving at a position abreast of the leading element, halts and again supports the advance of the leading element. Only one element moves at any one time. This method is normally employed when contact is imminent. This method provides more protection during movement.

(*b*) *Alternate bounds.* In this method, the leading element halts and takes up positions to support the advance of the rear element, which then advances past the leading element and takes up positions. The initial leading element then leapfrogs the initial rear element and advances to a new position. Only one element moves at any one time. This method of movement is usually more rapid than successive bounds.

f. Tanks usually move by bounds, overwatching the scout section and the platoon leader.

g. The rifle squad usually follows the tank section. It is prepared to be part of a tank infantry team if offensive action is required. During movement the rifle squad provides some security to the platoon by observing to the flanks. When the tank section halts, the riflemen provide dismounted local security.

h. Normally, the support squad displaces forward from one firing position to another by bounds. The support squad should remain far enough to the rear of the platoon formation to allow employment of the mortar at the minimum range of the weapon. The squad leader monitors the platoon net to stay abreast of the situation and he must advise the platoon leader frequently of his status, location, and time of displacement. The support squad provides some security during movement by observing to the rear.

i. The platoon leader places himself where he can best control the platoon with particular attention to the scouts. He must rely on the platoon sergeant to directly control the movement of the tank section and the rifle squad.

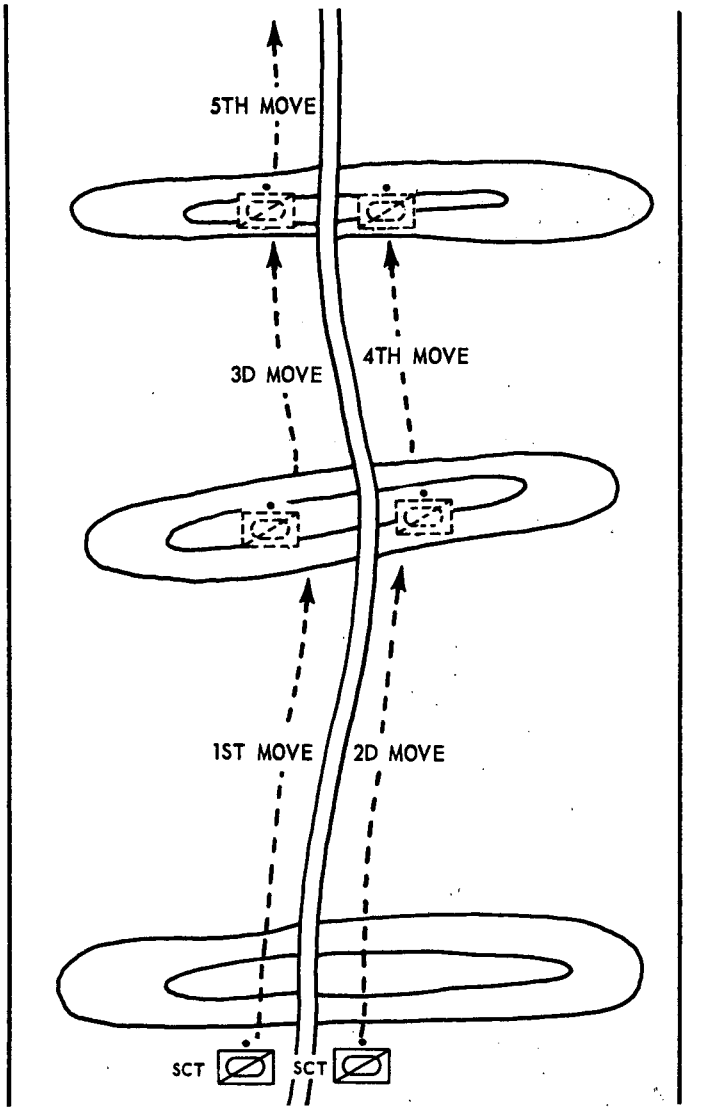


Figure 11. Scout section moving by successive bounds.

23. Reconnaissance by Fire

a. Reconnaissance by fire is accomplished by firing on likely or suspected enemy positions in an attempt to cause the enemy to disclose his present positions by movement or by return fire. During reconnaissance by fire, troops with binoculars must continually observe the positions being reconnoitered, so that any enemy movement or return fire will be definitely located. Reconnaissance by indirect fire has the added advantage of security for the scouts directing the fire and observing enemy reaction.

b. Reconnaissance by fire may be used when time is critical. It is made at the risk of losing further surprise, but it tends to lessen the probability of moving into a well-concealed enemy position without being aware of its presence. Within the platoon, reconnaissance by fire is normally accomplished by the tanks and support squad. When scouts employ this technique, they must insure that their vehicles are in protected firing positions or they should dismount and fire from covered or concealed positions.

c. If the enemy returns the fire, the unit proceeds to develop the situation. If the fire is not returned, the unit continues on its mission. However, caution should be exercised, because

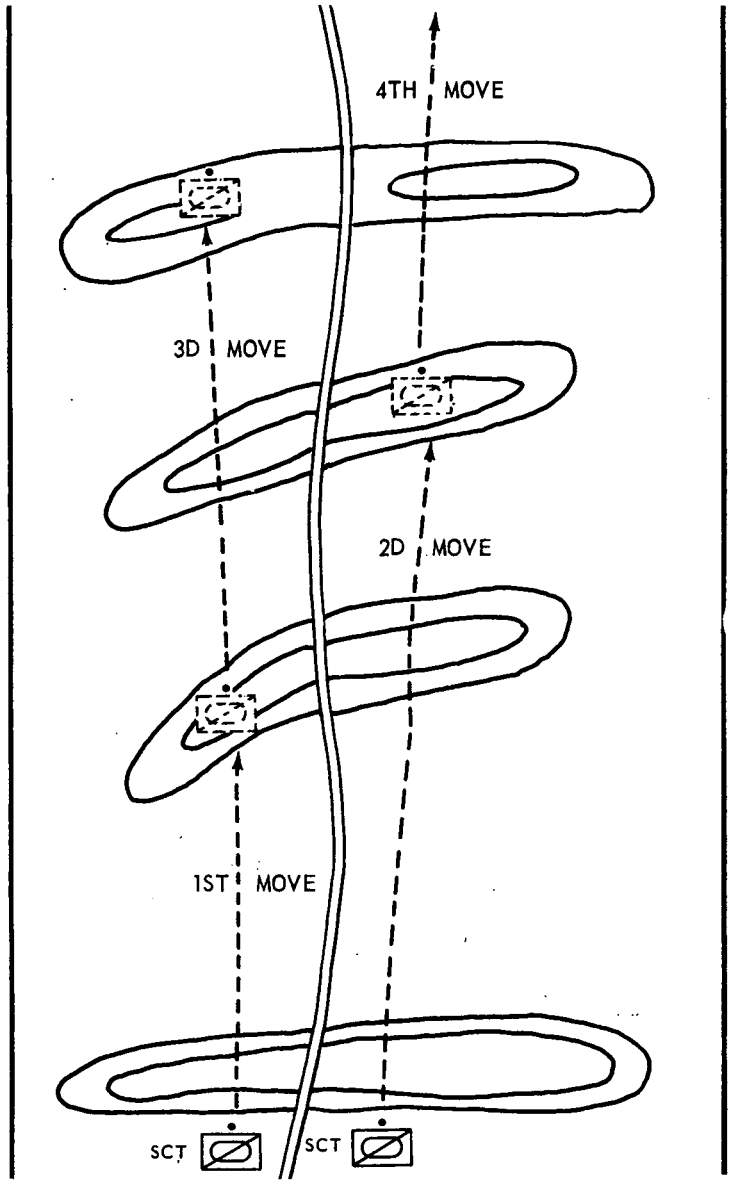


Figure 12. Scout section moving by alternate bounds.

reconnaissance by fire may fail to draw the fire of seasoned enemy troops.

d. If the enemy fails to return the fire, it may be necessary for elements of the scout section to move to the flanks or rear of the suspected position to check it. If available, air vehicles will facilitate movement of the ground element.

24. Action on Contact

When contact with an enemy force is made, the action taken by the platoon leader and his platoon falls into four distinct steps.

a. Deploy and Report.

(1) The platoon deploys to positions from which it can fire at or observe the enemy.

(2) The platoon leader makes a report of the enemy contact to the troop commander immediately.

b. Develop the Situation. The platoon leader takes the necessary action to determine the location, strength, composition, and disposition of the enemy encountered. The platoon uses two methods in developing the situation: reconnaissance by fire or patrols, or both.

(1) *Reconnaissance by fire.* In this method the weapons of the platoon are fired on known or suspected positions in an effort to make the enemy disclose his position by returning the fire or by moving. For further discussion of this method refer to paragraph 23.

(2) *Patrols.* Mounted or dismounted patrols from the scout section move to positions from which they can observe known or suspected enemy positions. The rifle squad may also be used to provide additional men for dismounted patrols. Patrols provide better secrecy and consequently a better opportunity to surprise the enemy.

c. Choose a Course of Action. After developing the situation the platoon leader must choose a course of action that will take care of the immediate situation as well as assist him in his assigned mission.

d. Report. The platoon leader now makes a complete report to his troop commander. This report includes the enemy situation as it has been developed and the course of action the platoon leader will adopt. The troop commander normally approves the decision of the platoon leader. He will, however, disapprove the decision if it interferes with the overall mission of the troop.

25. Reconnaissance of a Bridge or Defile

Visual reconnaissance is made for enemy positions before leading elements of the platoon across a bridge or into a defile. When mines, boobytraps, or ambushes are suspected, patrols reconnoiter the approaches of the bridge or defile. Reconnaissance of a bridge includes checking underneath as well as on top for mines, boobytraps, demolition charges, or weakened construction. Any demolitions located should be removed or neutralized. The tank section and support squad cover the movement of scout elements to the far side, and then the remainder of the platoon passes over the bridge or through the defile. When it is not possible to cross a bridge, fording sites will be selected and reconnoitered. Reconnaissance will include selection of entrances and exits and checking for underwater obstacles and demolitions. In selecting fording sites platoon personnel must consider the inland water crossing capability of the unit to which assigned or attached.

26. Reconnaissance of a Town, Obstacle, or Enemy Position

a. In reconnoitering a town, obstacle, or enemy position, the unit should make an attempt to approach it from the flanks or rear. If time is available, the reconnaissance should be made dismounted; however, if time is short, the unit will remain mounted. In either case, detailed observation with binoculars will precede the actual reconnaissance. If the terrain permits, scouts should be positioned where they can observe approaches other than the one being used by the platoon while reconnoitering the near edge of town.

b. When time is available, dismounted patrols move forward, covered by the remaining elements of the unit. The number of patrols depends upon the size of the objective and upon available approaches, cover, and concealment. If the patrols find that the near edge of the area is clear, the remainder of the unit, less the support squad, moves forward. The dismounted patrols then continue the reconnaissance, overwatched and followed closely by the rest of the unit.

c. A mounted reconnaissance should usually start with a reconnaissance by fire. Then the mounted patrol moves forward rapidly, overwatched by the tanks and supported by the support squad. If the near edge of the area is clear, the overwatching elements move forward and the advance continues. Vehicles move through a town by bounds in a staggered formation, covering the buildings on the opposite side of the street by observation and fire. It is desirable for dismounted troops to precede the vehicles.

27. Reconnaissance at Night

a. Reconnaissance operations are slow and less effective at night. Night reconnaissance is usually limited to dismounted patrolling, observation of routes, and the use of listening posts. Only against light enemy resistance and with favorable terrain and routes of advance can vehicular reconnaissance be used without being preceded by dismounted patrols. Engines

and tracked vehicle movements can be heard for considerable distances. Observation is limited, making vehicles highly susceptible to ambush.

b. When mounted reconnaissance is necessary at night, it is carefully planned after a detailed map reconnaissance. When possible, visual reconnaissance is conducted during daylight. Key individuals prepare sketches showing the road net and landmarks that can be easily identified at night.

c. Measures are taken before departure to muffle equipment noises, prevent light reflections, and reduce light from flashlights or vehicular lights.

d. Elements of the platoon move to successive positions by bounds. The degree of caution with which the platoon moves is determined by the known or suspected proximity of hostile forces.

28. Reconnaissance Operations Behind Enemy Lines

Armored cavalry elements may be employed on reconnaissance missions in rear of enemy forces. Members of the armored cavalry platoon, particularly scouts and riflemen, should be trained in mounted and dismounted reconnaissance operations behind enemy forces. Further discussion is included in paragraphs 308 through 313.

29. Chemical Agent Detection and Radiological Monitoring and Survey Operations

The armored cavalry platoon is capable of conducting chemical agent detection and radiological monitoring and survey operations. Although the scout section will most frequently be employed for this purpose, everyone in the platoon must be trained to conduct such operations. For guidance on radiological monitoring and survey operations, see paragraphs 300 through 304.

30. Reconnaissance Instructions

a. Reconnaissance instructions must be complete and must include exactly what combat information is to be obtained, the time by which the information must be reported, where the information is to be sought, and when the mission is to be executed. Essential details may include—

(1) Pertinent information of the enemy and friendly troops.
(2) Plans of the higher commander.
(3) Specific information desired.
(4) Zone, area, or route to be reconnoitered.
(5) When, where, and how information is to be reported to the higher commander.
(6) Time of departure. TIME OF EXECUTION
(7) Phase lines, check points, contact points, objectives, and, when desirable, the times they are to be reached.
(8) Action to be taken when the mission is completed.

b. A route, zone, or area reconnaissance mission is assigned to the armored cavalry platoon as a unit, usually by oral order. The platoon leader then issues orders to his platoon. When the situation permits, he will assemble his key noncommissioned officers to receive the order. After the reconnaissance has started, additional instructions are disseminated by radio, by messenger, or by the platoon leader in person.

31. Transmitting Information

a. Rapid transmission of information is essential to the success of any reconnaissance mission. All members of armored cavalry units must be indoctrinated with the need for rapid and accurate transmission of all positive or negative information gathered. Use of a standard report format facilitates transmission of essential information (fig. 13). A unit has not fully accomplished its mission until it has reported the results of its reconnaissance to higher headquarters.

b. Information is transmitted without delay from squad or section to platoon, and from platoon to higher headquarters. Positive and negative information, regardless of its apparent value, is forwarded to higher headquarters. This information may be of extreme importance to the higher headquarters when considered in conjunction with information received from other sources. Negative information is often as important as positive information.

Section III. OFFENSIVE OPERATIONS

32. General

a. The armored cavalry platoon may be required to attack to accomplish its assigned mission. It may attack as part of a troop or independently. The attack may be coordinated or it may be an attack from march column.

b. FM 17–1 and FM 17–15 contain additional information on the fundamentals of attack, techniques of employing tanks and infantry, control measures, and other basic considerations of offensive action.

33. Preparation for a Coordinated Attack

a. Before the platoon leader can reach a decision to attack or formulate his attack plan, the situation at hand must be developed in enough detail to permit him to make an estimate of the situation. He must analyze the mission, enemy situation, terrain and weather, and troops available. He must consider, evaluate, and compare the courses of action open to him and then decide on the course of action that is most likely to succeed. For a discussion of the estimate of the situation, see FM 17–1.

b. Whether the platoon attacks alone or as part of the troop, it is important that the platoon leader make both a map and a ground reconnaissance of the area of operations. By so doing, he is better able to make a valid estimate of the situation and arrive at a sound decision.

34. Control Measures

To control his platoon in the attack, the platoon leader uses certain control measures, the type and number of which depend on the mission. In the planning stage, the platoon will normally be assigned an objective by the troop commander. This objective is a control measure in itself and all efforts of the platoon are directed toward its capture. Other control measures that may be used are the attack position; line of departure; axis of advance, zone, or direction of attack and checkpoints. These measures and others used during offensive actions are discussed in FM 17–1.

35. Planning for a Coordinated Attack

The platoon plan of attack includes the scheme of maneuver and the plan of fire support. Before completing his plan of attack, the platoon leader conducts a reconnaissance and completes his estimate of the situation. The platoon leader's plan must be simple, yet it must contain all essential details. It should include—

a. The composition and location of the base of fire, targets to be fired on, and control measures to lift or shift fires.

b. The composition of the maneuvering force, the route it will take to the objective and, if applicable, when the rifle squad will be dismounted.

c. Provisions for security during the attack, reorganization and consolidation after the attack, and resumption of the advance.

36. Composition of the Maneuvering Force in a Platoon Attack

a. The maneuvering force should contain the maximum available combat power. It should seek to strike the enemy force on the flanks or in the rear. In a mounted attack the armored cavalry platoon normally uses the tank section and rifle squad in the maneuvering force. Scout elements may accompany the maneuvering force to provide flank security and to assist in movement of the force by selecting covered or concealed routes. Scout elements mounted in armored vehicles may also join other elements in closing with the enemy, adding their vehicular mounted weapons to the firepower of the maneuvering force. If a dismounted attack is required, the maneuvering force may consist only of scouts and the rifle squad (fig. 14).

b. Normally, the platoon leader should mount in the platoon sergeant's tank and directly control the actions of the maneuvering element throughout the attack. He must have communication with other elements of the platoon. The platoon sergeant commands the element not directly under the platoon leader. Radio will be the primary means of communication, but alternate control means such as arm and hand signals, flag signals, and pyrotechnics should be planned.

SPOT REPORT

ALPHA--What is identification of person sending information?

BRAVO--What enemy was observed and in what strength?

CHARLIE--Where and when was the enemy observed?

DELTA--What was the enemy doing?

ECHO--What are you doing about it?

EXAMPLE

ALPHA--Rattlesnake 16.

BRAVO--5 medium tanks.

CHARLIE--Coordinates 596715. 0930 hours.

DELTA--Moving south on Highway 17.

ECHO--Keeping them under observation.

Figure 13. Spot report format.

37. Composition of the Platoon Base of Fire

a. The base of fire element should consist of the minimum force necessary to limit the enemy's capability to interfere with the movement of the maneuver elements and, within its capabilities, to neutralize or destroy the enemy. In the platoon, it normally consists of the support squad. Tanks, riflemen, or scout elements may assist the base of fire. Tanks are placed in the base of fire only if the terrain or enemy dispositions prevent their employment in the maneuvering force. Riflemen and scouts are employed to assist the base of fire when the composition of the enemy force is such that friendly automatic weapons can provide effective suppressive fire.

b. Elements of the platoon employed in the base of fire are normally controlled by the platoon sergeant.

38. Supporting Fires for a Platoon in a Coordinated Attack

Supporting fires for the platoon must be planned by the platoon leader. If support squads are massed under troop control, mortar fire is requested through the troop commander. Supporting artillery fires are requested through the troop commander or the artillery forward observer when available.

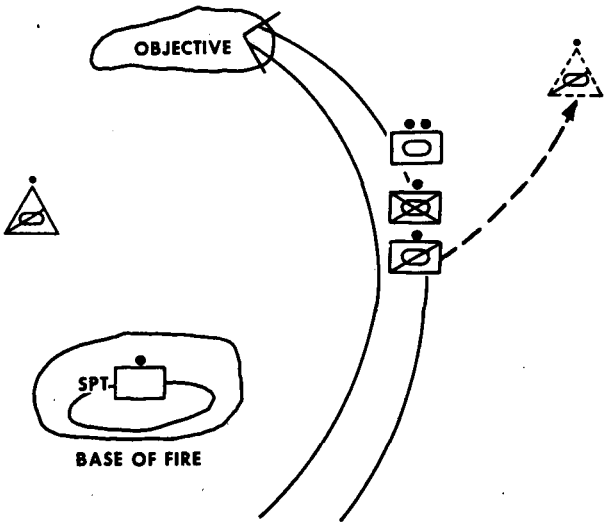


Figure 14. Attack formation, armored cavalry platoon.

39. Platoon Operation Order

a. The platoon leader's order for the attack is given orally. It is desirable to issue the order to key members of the platoon from a vantage point where they can view the terrain over which the attack will take place. If this cannot be done, the platoon leader will issue his order at any convenient location, using a map or sketch of the area to outline his plan. The platoon leader should adhere to the standard operation order format in issuing his order.

b. The platoon leader usually issues the order to the platoon sergeant and section and squad leaders. These key noncommissioned officers then disseminate the instructions to their units. Time permitting, all members of the platoon should be afforded an opportunity to see the terrain over which the attack will take place.

40. Attack Position

a. If the plan of attack requires the use of an attack position, this position is occupied for the shortest possible time. Every effort is made to move rapidly through the attack position, if used, in the specified attack formation and to cross the line of departure without halting. When the situation requires that the maneuvering elements halt in the attack position, the platoon leader should insure that local security is established; use is made of available cover

and concealment; the platoon is in the prescribed formation; and readiness of platoon is reported to the troop commander.

b. Section and squad leaders make an inspection of their units and correct deficiencies as the situation permits.

41. Actions of the Maneuvering Force

a. The maneuvering force closes with the enemy as rapidly as possible. Maximum use is made of cover and concealment during the advance, and the maneuvering force should advance as close as possible to the objective before employing fire and movement.

b. The maneuvering force places maximum fire on the enemy as soon as it is within effective range. The fire of the maneuvering force, reinforced by the base of fire, pins down the enemy, denies him observation and movement, and destroys his troops and equipment.

c. The decision as to when and where to dismount the rifle squad, if it is to be dismounted, is the decision of the platoon leader and is based on the situation. When the rifle squad is dismounted, the squad leader must insure that there are personnel operating with each of the three tanks. It may be possible for one fire team to operate with a pair of tanks, while the other fire team operates with one tank. The terrain and situation will dictate how the squad is employed to provide maximum coverage to the tank section.

d. FM 17–1 contains additional information on employment of the maneuvering force.

42. Actions of the Base of Fire

a. The mission of the base of fire is to pin the enemy to the ground and neutralize his weapons, thereby permitting freedom of action by the maneuvering force. The base of fire normally *does not join the maneuver force* in the final assault against the objective. The base of fire may consist of organic mortars, supporting artillery, armed Army aircraft, tactical air, and naval gunfire. The use of tanks in a base of fire is justified *only* when terrain precludes their employment in the maneuvering force. Supporting fires are lifted or shifted at the last possible moment to keep the enemy troops pinned down until the assault elements are upon them. These fires must be lifted or shifted soon enough to prevent losses to friendly troops. A preselected, readily identifiable terrain feature and/or signal is used to coordinate the lifting and shifting of supporting fires and the final deployment of the attacking echelon in preparation for conducting an assault against an enemy position. Complete details for fire support planning are contained in FM 6–20–1 and FM 6–20–2.

b. Elements in the platoon assisting the base of fire displace forward on prearranged plan or order. The support squad should be left in position until its fires are masked or the objective is secure. When the support squad displaces, indirect support fires should be obtained from other available sources.

43. Actions of Key Personnel During the Attack

a. The platoon leader, who is normally with the maneuvering force, controls the conduct of the attack and varies the platoon formation to meet changes in the situation. His major concern is to seize the objective. Additionally, he keeps the troop commander informed of the terrain and enemy resistance encountered, reporting any change in the situation. Upon meeting strong resistance that the platoon cannot engage effectively, he requests supporting fires through the troop commander and keeps the commander informed of the situation.

b. The platoon sergeant and section and squad leaders assist the platoon leader by carrying out orders aggressively during the attack, by supervising and controlling the actions of their units, by constantly observing in their immediate areas, and by keeping the platoon leader informed of the situation.

44. The Conduct of the Attack

a. On order, all weapons in the base of fire begin firing. This fire is distributed over the entire objective. When the maneuvering force arrives at the objective and masks the supporting fires, the base of fire lifts its fire or shifts fire beyond and to the flanks of the objective. This action is controlled by radio, observation, or prearranged signals.

b. Fires of the maneuvering force should strike the objective before the time that supporting fires are lifted. When the base of fire

lifts or shifts its fires, the maneuvering force should move directly onto the objective in the assault. Tanks use their main guns and machineguns, and armored vehicles use their machineguns while closing with the enemy. Dismounted elements use assault fire. The actual closing with the enemy must be aggressive, continuous, and well coordinated. All enemy troops who continue to resist are killed and all weapons are destroyed or captured. The objective must be secured completely.

c. When the maneuver force masks supporting fires, the base of fire should be prepared to displace forward on order.

45. Actions on the Objective

a. When the objective is taken, the position is consolidated and the platoon is reorganized for subsequent action.

b. The objective should be consolidated in minimum time. Plans for consolidation should be included in the platoon operation order for the attack. Actions by the platoon during consolidation include:

(1) Establishing security by the scout section to the front and flanks.

(2) Preparation by the tank section and rifle squad to repel counterattacks, to continue the advance, or to defend the position, as required by the mission.

(3) Positioning the support squad for fire support during continuation of the advance or for defense. Further requests for fire support by artillery and other fire support agencies may be made at this time.

c. Actions of the platoon in the reorganization include—

(1) Reporting by all sections and squads on the status of personnel, equipment, and ammunition.

(2) Redistributing personnel, equipment, and ammunition as necessary.

(3) Report by the platoon leader to the troop commander on the status of the platoon.

(4) Evacuation of casualties, prisoners, and damaged equipment.

(5) Accomplishing supply as time and the situation permit.

46. Resumption of Advance

As a result of the platoon leader's continuous estimate of the situation, his knowledge of the troop commander's plan, and his own mission, a formation is adopted that will enable the platoon to readily resume operations. The platoon may reorganize while continuing to move and continue to advance without halting after overrunning an objective. Continued movement will allow little opportunity to reassign individuals within the platoon. The platoon leader will call for status reports from each section and squad and will report this information to the troop command post. When the situation permits he will make the necessary changes to insure the continued operational effectiveness of his platoon.

Section IV. SECURITY OPERATIONS

47. General

a. Security, as applied to armored and air cavalry, includes all measures taken by a command to protect itself from observation or surprise. A unit performing a security mission must give adequate warning of hostile approach to allow the main body to take appropriate action. When possible, the security force will engage the enemy and delay or defeat him. The distance that a security force operates from the main body varies according to an analysis of the factors of METT. Security forces will normally organize or operate along key terrain. They should be far enough from the main body to afford the main body time and space to react to any enemy threat that develops.

b. Refer to FM 17–1 for a detailed discussion of fundamentals and techniques applicable to security operations.

48. Platoon as Advance Guard

a. An advance guard is a security force, primarily offensive in nature, that operates to the front of a moving force to insure its uninterrupted advance and to protect it from enemy surprise attack by defeating, destroying, or de-

laying the enemy within its capabilities. The platoon normally performs this mission for its parent troop or as a part of a larger force.

b. When performing an advance guard mission, the platoon normally employs a formation similar to the formation used in route reconnaissance.

c. The platoon operates as fast as the situation will allow. It performs continuous reconnaissance to the front and flanks and destroys or forces withdrawal of small enemy groups before they can hinder the main body. When enemy contact is made the platoon follows actions-on-contact procedures. The platoon should be prepared to join or assist the attack by the main body. An advance guard must be far enough in front of the main body to insure that the commander has freedom of action in the employment of his force. However, it must not be so far in front that it can be destroyed by enemy attack before assistance can reach it. Distances are reduced at night, in close terrain, and under conditions of low visibility.

d. The platoon, acting as an advance guard for the troop, normally advances in column with scouts moving by bounds until contact is made. When contact with the enemy is imminent and the terrain favors this technique all elements within the platoon move by bounds. For additional details on employment of the advance guard, see FM 17–1.

e. When contact with an enemy force is made, the action taken by the platoon leader and his platoon falls into four distinct steps as described in paragraph 24.

49. Platoon as Flank Guard

a. A flank guard is a security force that operates to the flank of a moving or stationary force to protect it from enemy ground observation, direct fire, and surprise attack by defeating, destroying, or delaying the enemy within its capabilities.

b. The platoon will frequently participate in a flank guard mission as part of a larger security force. A single platoon cannot perform a mobile flank guard mission. Reconnaissance platoons of combat battalions have the capability of occupying one blocking position of a stationary protected unit.

c. When participating in a flank guard operation as part of the troop, the platoon may be employed as an advance or rear guard for the troop. It may also be employed to occupy blocking positions or to screen an area when the troop is overextended. For further details on flank guard, see paragraph 105.

d. When protecting the flank of a larger unit, the platoon will occupy a blocking position that dominates the major avenue of enemy approach into the flank of the main body. The platoon normally governs its movement on the advance of the main body; or moves at the direction of the main body commander. The platoon can effectively occupy only one blocking position at a time. Additional flank coverage can be obtained by establishing observation posts. In a mobile situation, the platoon will normally move from one blocking position to another along its selected route of advance. If the advance of the main body is uninterrupted, then the platoon may move continuously along its assigned route, with scouts checking key terrain and likely avenues of enemy approach on the exposed flank.

50. Platoon as Rear Guard

a. General. A rear guard is a security force that operates to the rear of an advancing or withdrawing force to protect it from enemy surprise attack or annoyance by defeating, destroying, or delaying the enemy within its capabilities.

b. Platoon as Rear Guard for Advancing Force. The platoon may act as rear guard for the troop or larger unit moving in column formation on one route. When the main body is advancing, the platoon, as rear guard, detects and delays enemy forces attacking the rear of the main body. The platoon follows the main body at a distance prescribed by the main body commander and usually moves on the same route of advance. The platoon will employ delay techniques with its combat power oriented to the rear. The scout section is employed to the rear and flanks to establish contact with enemy forces that attempt to move between the rear guard and the main body.

c. Platoon as Rear Guard for Withdrawing Force. When the platoon provides rear guard for a withdrawing force, it employs delaying

action techniques, usually withdrawing by bounds. The rate of movement is based on that of the main body or on prearranged plans. The platoon executes the rear guard mission by moving along the route over which the main body has moved, keeping itself between the main body and the enemy. The platoon leader selects a series of delaying positions along the route and withdraws by bounds from one position to another. The area to the flanks must be kept under constant observation by the scouts and available Army aircraft to prevent the enemy from bypassing the rear guard platoon. The platoon leader maintains communication with the main body to insure that his movement is in consonance with that of the main body and to keep the main body commander informed of the situation. The platoon normally remains one delaying position behind the main body.

51. Platoon as Screening Force

a. General. A screening force exercises surveillance over an extended frontage to the front, flank, or rear of a moving or stationary force to provide early warning by observing, reporting, and maintaining visual contact with all enemy forces encountered. The platoon may be employed as a screening force when an extended frontage cannot otherwise be secured. The commander who assigns the screening mission will define this area of responsibility. When assigned this type of mission, the platoon provides early warning by observing and reporting enemy activity. Within its capability, it destroys small enemy patrols that reach the line of observation posts and impedes the advance of the main enemy force by employing indirect fires.

b. Planning. The screening force may be positioned forward, to the flanks, or to the rear of the main body. The platoon leader or higher commander selects the general location for establishing a series of observation posts and contact points between and forward of the line of OP's. When selecting the location of OP's the following should be considered:

(1) Overlapping fields of observation with other OP's.
(2) Concealment of OP's and access routes.
(3) Ease of installation.
(4) Maintenance of communication.
(5) Avoidance of landmarks.

c. Observation Posts. Observation posts are located on the forward slope for maximum observation and background concealment, or on the reverse slope for ease of occupation and freedom of movement. Mounted or dismounted patrolling is conducted between contact points consistent with the need for security. The armored cavalry platoon operates a screen most effectively when not more than three observation posts are assigned (fig. 15). (Two OP's are manned by the scout squads and the third by the rifle squad.) This provides good radio communication and sufficient troops for patrolling and manning OP's. For short periods, depending on the mission, the armored cavalry platoon can establish a maximum of six observation posts. However, the use of six OP's will reduce the effectiveness of the screen. When six OP's are employed, they are manned by placing a scout vehicle each on four positions, a dismounted fire team with portable radio on the fifth position, and a fire team and the personnel carrier (in defilade) on the sixth position. The disadvantages of six OP's are the loss of mobility for the platoon, insufficient troops for patrolling, and one-half the OP's must use short range portable radios for communication. The tank section and support squad are positioned internally to assist in repelling small enemy patrols and extricating OP's and to provide rear security. Once enemy contact is established, visual contact must be maintained. The OP's withdraw, on order, to successive OP positions, maintaining visual contact; reporting enemy strength, location, disposition, and composition; and adjusting supporting fires to impede the enemy's advance. When available, short range ground radar should be used, particularly during periods of reduced visibility, to cover major avenues of enemy approach. All observation posts must have a means of communication, and it is desirable to have one automatic weapon at each OP. Once visual contact has been made with the enemy, it must be maintained. OP's make accurate and timely reports and may direct the fires of supporting elements to harass advancing enemy forces. If given permission to withdraw, the platoon moves by bounds, maintaining visual

contact, and continuing to adjust supporting fires. Under some circumstances small enemy patrols may be permitted to infiltrate the security so that the movement of the larger enemy forces may be observed. When this is done, necessary precaution must be taken to insure that the infiltrators do not join with other infiltrated forces and become a threat to the main body.

52. Platoon in Rear Area Security as Part of a Larger Force (STANAG No. 2079)

a. General. A rear area security force protects rear area units, installations, and routes of communication from attack by enemy airborne and air-landed forces, irregular forces, and infiltrators. When the platoon performs a rear area security mission as part of a larger force, it may perform security, reconnaissance, offensive, defensive, or delaying missions.

b. Routes of Communication The larger force may be given the mission of securing a supply route or escorting trains of a larger unit along a designated route. In the performance of this type of mission, the platoon may be required to—

(1) Patrol the assigned route.
(2) Screen a sector of the route by establishing a series of observation posts.
(3) Act as a reserve or as part of the reserve.
(4) Escort trains along the designated route.
(5) Follow or take a position in the trains column.

c. Rear Area Units and Installations. If the larger force is assigned the mission of securing a particular unit or installation, the platoon may be required to either screen or secure a sector of the area or perimeter or act as part of the reserve.

d. Antiairborne, Antiairmobile, Counterguerrilla Attacks. The larger force may be given the mission of protecting a rear area against an airborne, airmobile, or guerrilla attack. In the performance of this type of mission, the platoon may be required to man observation posts or listening posts and patrol likely drop zones or landing areas, or act as part of a central reserve.

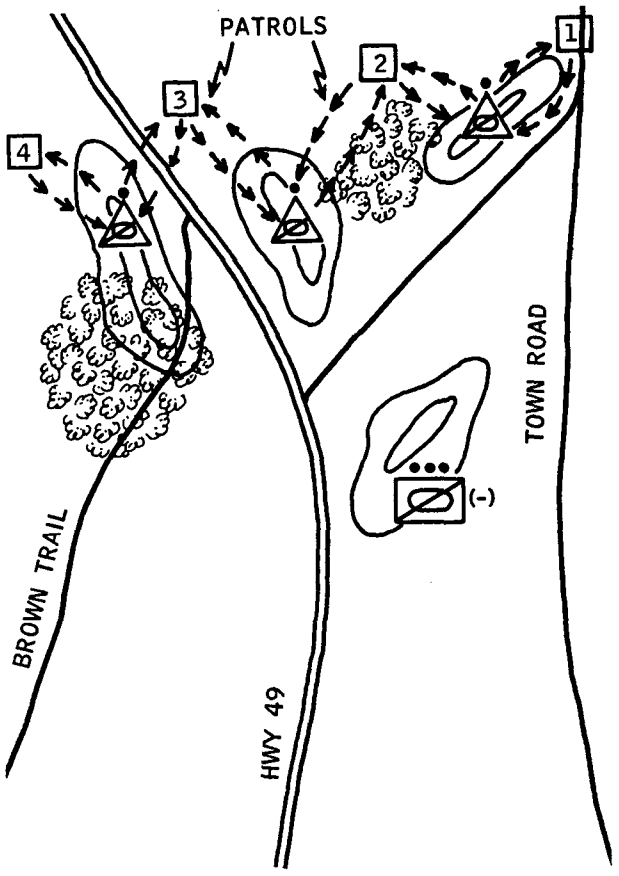


Figure 15. Armored cavalry platoon employed as a screening force.

Section V. DEFENSIVE OPERATIONS

53. General

a. This section covers the preparation and planning for defensive actions by the armored cavalry platoon.

b. The two general types of defense, mobile and area, are discussed in FM 17–1. Regardless of the type in which the armored cavalry platoon participates, the steps taken to organize a defensive position and the general conduct of the defense are the same. When the enemy possesses a mechanized force, the primary consideration in the defense is the antitank plan.

c. The armored cavalry platoon operating alone is limited in its ability to conduct defensive action; however, in the execution of some missions it may be required to defend an area for a limited time. Defense may be an assigned mission for the platoon or may be forced by enemy action.

d. The organization of a defensive position and the conduct of a defensive action by the armored cavalry platoon require the platoon leader to apply the following fundamentals (FM 17–1):

(1) Make maximum use of terrain.
(2) Provide security.
(3) Insure that elements of the platoon are mutually supporting.
(4) Organize the position in depth.
(5) Provide all-round defense.
(6) Insure that fires are coordinated.
(7) Continue to strengthen the position.
(8) Provide flexibility within the defense.
(9) Make maximum use of offensive action.

54. Employment of the Armored Cavalry Platoon in Defense

a. The armored cavalry platoon will normally participate in a defensive action as part of a larger force. The platoon may be required to defend alone when attacked by enemy forces, in securing a blocking position or roadblock, or when participating in operations conducted by a larger force on a broad front.

b. When the platoon participates in defense as part of its parent unit, it may be employed as part of the security force, part of a troop defensive position, or part of a reserve. The platoon leader must coordinate fires with adjacent units, assume lateral responsibilities as designated by higher headquarters, and coordinate his efforts with the troop commander in securing all-round defense for the troop.

55. Reconnaissance and Selection of Positions

a. When assigned a defensive mission, the platoon leader, accompanied by his section and squad leaders, should make a thorough reconnaissance of the area to be defended.

b. The platoon defensive position should control the area in which it is located; take maximum advantage of natural obstacles; have good fields of fire; afford good observation; offer cover and concealment; and have concealed routes to the rear. The terrain to the front should force the enemy to become canalized and offer a minimum number of covered approaches.

c. Detailed plans must be made for the fire of tanks, automatic weapons, mortars, and other available fire support agencies. Primary, alternate, and supplementary positions are selected for tank and crew-served weapons. The platoon leader assigns sectors of fire to each element of the platoon, and final protective fires to machineguns to insure that the entire platoon area of responsibility is covered.

56. Platoon Order for Defense

The platoon leader issues his order orally to the key noncommissioned officers of the platoon while at the position to be defended. This enables the platoon leader and section and squad leaders to become thoroughly familiar with the area and reduces the possibility of misunderstanding. The order should be issued in time to permit the section and squad leaders to reconnoiter the area to be defended.

57. Occupation and Preparation of Platoon Defensive Position

a. The platoon leader assigns specific sectors of responsibility to each element of the platoon. Local security to the front and flanks of the position is provided by establishing observation posts to give early warning of enemy approach. Listening posts are used at night and during periods of reduced visibility instead of observation posts. Patrols cover areas not otherwise under observation.

b. The platoon defensive position is organized around the tank section. The primary and alternate positions selected for the tank section cover the most likely avenue of enemy armor approach into the position. Supplementary positions are then prepared to cover other possible approaches into the flanks and rear. Time permitting, lanes of fire are cleared and vehicles are moved to the alternate and supplementary positions. Each tank crew provides its own local security; therefore, at least one member of the crew is required to be in the turret of the tank and alert at all times. At

night and during other periods of limited visibility, the tanks will normally be positioned closer together for better mutual defense and protection. A range card is prepared for each tank and crew-served weapon at each defensive position.

c. The rifle squad is located to provide maximum firepower to the front and flanks of the position and to protect the tanks from hand-carried antitank weapons or devices. The platoon leader designates primary, alternate, and supplementary positions for the crew-served weapons, and assigns the sectors of fire to be covered. The fire teams are placed so they can fire across the front and flanks of the platoon defensive position. If possible, the armored personnel carrier is employed in the squad area. The vehicular-mounted machinegun is used to increase the defensive firepower of the platoon when the carrier can be placed in a defilade position or the machinegun may be used on its ground mount. All troops dig in and make maximum use of cover and concealment. The rifle squad leader positions himself where he can best control actions of the squad. At least one man at each machinegun and automatic rifle position must be alert at all times. The organization of the squad position may change at night to provide better close-in defense and protection.

d. The scout section may provide security for the position or be employed as riflemen. When the scout section is employed to provide security for the platoon position, it will normally establish observation posts and conduct patrols. At times, the crew of one squad is sufficient to give adequate early warning of enemy approach while the remainder of the scout section is used to add strength or depth to the platoon defensive position. When scout elements are employed as riflemen, they should be employed by squad. Machineguns mounted on armored vehicles are used to increase the defensive firepower of the platoon when the vehicles can be placed in defilade.

e. The support squad provides close indirect-fire support for the platoon. Consistent with minimum range, it is located far enough to the rear so that it may fire within the defensive position. When firing, the support squad has only a limited capability of providing security. In some situations, the platoon leader may be forced to use scouts or other elements of the platoon to provide security for the support squad. At night and during periods of limited visibility it may be necessary to place the support squad within the platoon position for its security. When the platoon is occupying part of the troop sector, the mortars may be employed under troop control if the sector is narrow enough to provide complete coverage of the troop sector from a central location. When the mortar remains under platoon control, the platoon leader normally designates primary, alternate, and supplementary positions.

f. A typical platoon defensive position is shown in figure 16.

g. Vehicles of the platoon, not employed in a security mission or in the defense, should be located to the rear of the position in well concealed and defiladed positions.

h. The platoon is capable of preparing obstacles and installing minefields. The installation of mines and the establishment of obstacles must not detract from the mobility of the friendly forces; mines and demolitions emplaced and obstacles prepared must be removed prior to departure from the defensive position. Use of demolitions to destroy bridges, to fell trees, and crater roads should be considered by the platoon leader. Use of such demolitions must be coordinated with higher headquarters and be in consonance with the overall plan of defense. If authority is received from higher headquarters, the platoon leader may install protective minefields. Such minefields are covered by platoon direct-fire weapons. Smoke may be used to reduce effective enemy observation and confuse the enemy; however, its use must be closely coordinated with adjacent units to insure that use of smoke does not inhibit their plan of defense. The platoon should continue to strengthen the defensive position as time and materiel permit.

58. Conduct of Defense

a. Success of the platoon defense depends largely on the organization of the position and the effective use of the firepower available. The defense must be conducted aggressively, and the enemy should be engaged continuously from the time he is within effective range of

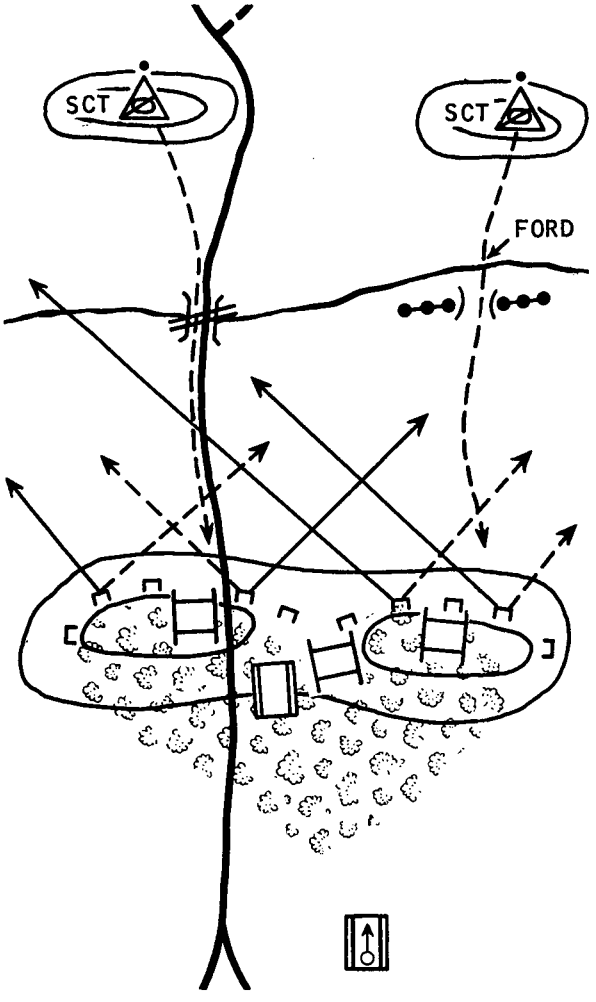


Figure 16. Armored cavalry platoon in defensive position.

the weapons. The platoon continues to defend its position until the enemy is repelled or the platoon is directed to move. The platoon leader may adjust his forces within the platoon position to counter an enemy threat.

b. Defensive fires of the platoon are coordinated to insure maximum effective fire during both daylight and darkness. Tanks, in mutually supporting positions, cover the probable avenues of armor approach. Interlocking bands of machinegun fire should cover the entire platoon sector. The support squad and grenadiers place fires into areas that cannot be reached by other weapons of the platoon—particularly covered areas in which the enemy might assemble and advance—and are prepared to fire within the defensive position.

c. In defensive situations, the platoon provides its own local security. The scouts will usually provide security to the front and flanks, and the support squad to the rear.

59. Platoon Blocking Positions and Roadblocks

a. Blocking Positions. A blocking position is organized to deny the enemy access to a given area or to prevent further advance of the enemy in a given direction. The platoon may be given a mission to establish a blocking position, or it may do so on the platoon leader's initiative in carrying out another mission. A blocking position may consist of a roadblock, or it may consist of a platoon defensive position that covers a likely avenue of enemy approach.

b. Roadblocks. Where the movement of vehicles is largely restricted to roads, roadblocks are especially important to the platoon in carrying out many of its assigned missions. Before establishing a roadblock, the platoon leader should consider all available means to obstruct, delay, and canalize enemy movement. Natural obstacles, mines, demolitions, barbed wire, and logs are commonly used. Boobytraps may be used in conjunction with these means. In addition, the element of surprise and the ability of the platoon to cover the obstacles by fire must be considered. The roadblock usually incorporates obstacles covered by fire; however, if time or the lack of obstacle material prevents the platoon from physically placing an obstacle in the road, it establishes the roadblock by fire alone. Having selected the point or area along a road where the roadblock will be established, the platoon leader must select positions for each element of the platoon and allot tasks for preparing the position and creating an effective obstacle. In establishing the roadblock, scouts will normally provide security to the flanks and assist in covering possible bypass routes that the enemy may attempt to use in avoiding the roadblock. The tank section is positioned to cover the roadblock and the approaches to it. The rifle squad will normally construct the obstacle and then provide close-in protection for the tanks. The support squad will be positioned to cover by fire designated points along the route to the roadblock, possible bypass routes, and to seal off escape routes from the ambush area. Figure 17 illustrates a typical platoon roadblock.

60. Combat Support for Platoon in Defense

a. In the conduct of a defensive mission, the armored cavalry platoon may receive support from artillery, engineers, Army aviation, and elements of the air cavalry troop.

b. An artillery forward observer will normally be available at troop level to assist in planning, requesting, and adjusting artillery fire for elements of the troop. The platoon leader will normally request artillery fire through the troop commander or forward observer.

c. Engineer support may be available to the platoon. Engineer support for the platoon is made available by request to troop headquarters.

d. Army aircraft or elements of the air cavalry troop should be used to assist in locating enemy forces and to maintain visual contact with the enemy force. This support is obtained by request to troop headquarters.

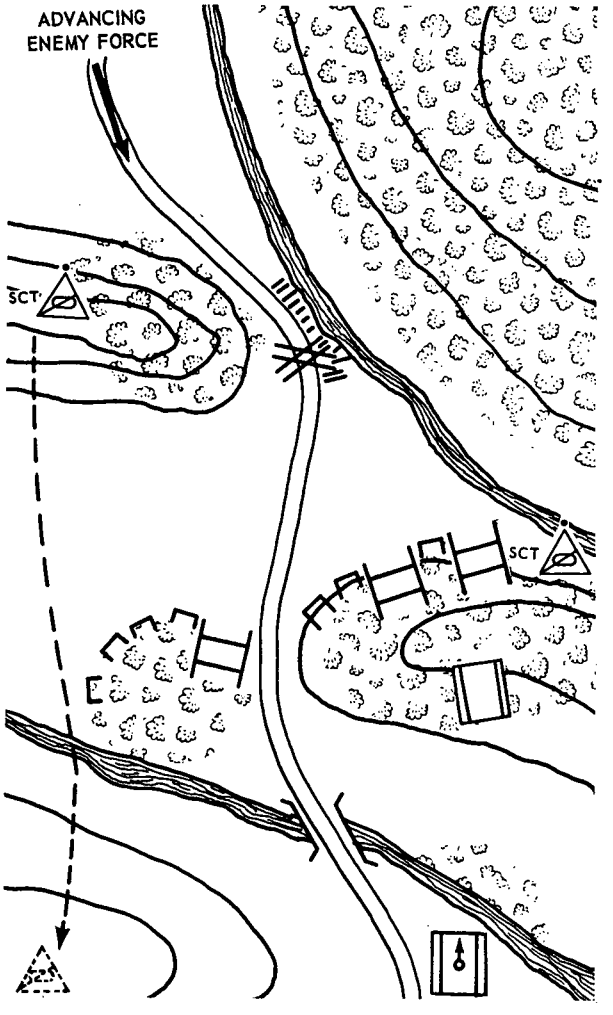


Figure 17. Armored cavalry platoon roadblock.

Section VI. DELAYING ACTION

61. General

a. A delaying action is a retrograde operation in which space is traded for time and maximum punishment is inflicted on the enemy by the unit without becoming decisively engaged. The armored cavalry platoon may be required

to conduct delaying action as part of its parent unit or as an independent force.

b. Situations under which the platoon may be required to conduct a delaying action are as follows:

(1) When the troop is conducting delaying action.

(2) When the platoon encounters an advancing superior enemy force during a reconnaissance or security mission.

c. The platoon can most effectively delay by occupying successive positions along a single route. This route is normally designated as the route of withdrawal.

d. FM 17–1 contains a complete discussion of basic considerations, planning, and conduct of a delaying action.

62. Reconnaissance and Selection of Platoon Delaying Positions

a. The platoon leader makes a map reconnaissance, and, if possible, reconnoiters along his route of withdrawal to select platoon delaying positions. He selects intermediate delaying positions on all suitable terrain between troop delaying positions, and reports these locations to the troop commander. The platoon is disposed to cover the main avenue of enemy approach into the delaying position, but plans must also be made to cover other likely avenues of approach. The most important factors to consider in selecting delaying positions are:

(1) Avenues of enemy approach.

(2) Key terrain that dominates the avenues of enemy approach.

(3) Obstacles across the front and flanks.

(4) Cover and concealment.

(5) Observation and fields of fire.

(6) Routes for withdrawal and lateral movement.

b. The platoon leader makes a personal reconnaissance of the initial delaying position. This position is designated by higher headquarters. Once the initial position has been organized, the platoon sergeant and others designated by the platoon leader are sent to reconnoiter the next delaying position. The platoon sergeant normally uses the platoon leader's command vehicle, with its driver and one or more men from the rifle squad, to assist him in the reconnaissance and organization of successive delaying positions. As the platoon sergeant moves along the platoon route of withdrawal, he plots artillery and mortar concentrations on his map. Radio contact is maintained with the platoon leader. When the platoon arrives at its next delaying position, it is guided into position by the platoon sergeant. He then briefs the leaders on their fields of fire and routes of withdrawal. As soon as practical thereafter, the platoon sergeant withdraws to the next succeeding position and repeats the procedure described above.

63. Coordination and Control of Platoon in Delaying Action

The platoon leader must insure that coordination is continuous with adjacent units and with other units to his rear. This may be accomplished by radio or by rendezvous at designated contact points. Coordination is maintained by using scouts and other means of communication. Control of all elements of the platoon in a delaying action is essential and is assured by the close, personal supervision of the platoon leader.

64. Platoon Organization and Employment on the Delaying Position

a. Organization. Each platoon position is organized around the tank section. Tanks are placed on terrain features that dominate likely avenues of enemy approach, permit long range fires, and facilitate covered withdrawal to the next delaying position. The organization of each delaying position is similar to that of the platoon defensive position (fig. 18). Basic factors that the platoon leader must consider in occupying a delaying position include:

(1) Primary, alternate, and supplementary positions.

(2) Preparation of range cards.

(3) All-round security.

(4) Coordination with other units.

(5) Plans for integrating all available fires.

(6) Plans for employment of natural and manmade obstacles.

b. Employment.

(1) *Scouts.* The scout section is employed to the front and flanks to provide early

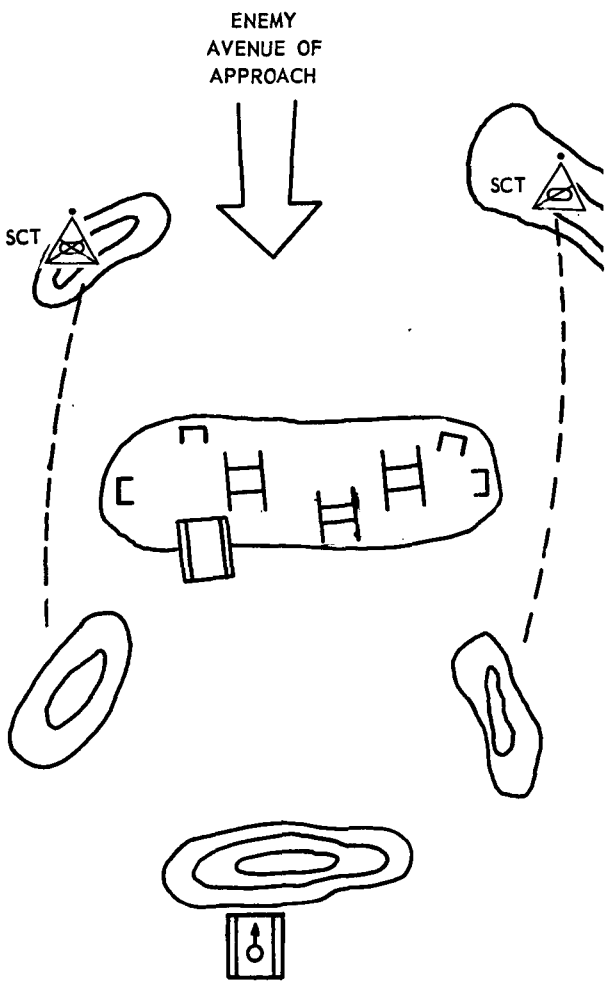


Figure 18. Armored cavalry platoon in delaying position.

warning of enemy approach and to adjust long range supporting fires.

(2) *Tanks.* The tank section provides long range direct fire and antitank defense for the platoon. The section is employed as a unit, with its tanks positioned to be mutually supporting.

(3) *Rifle squad.* The rifle squad is positioned to provide close-in protection for the tanks against dismounted enemy patrols or tank-killer teams and to cover obstacles with fire. The squad must be employed to insure that each tank is supported. Personnel normally should be positioned far enough from the tanks to avoid being affected by enemy fire directed at the tanks. The personnel carrier should be placed in defilade to support the platoon with its caliber .50 machinegun fire. Automatic weapons are normally placed on the flanks. When employed in this manner, one fire team does not have a radio; therefore, the squad leader must establish a means of communication to control the entire squad.

(4) *Support squad.* The support squad furnishes indirect-fire support. Consistent with the minimum range, it is positioned far enough to the rear so that it may fire within the delaying position and provide continuous fire support during withdrawal of other elements of the platoon.

(5) *Platoon headquarters.* The platoon leader may control the platoon from a tank or from his command vehicle. He normally uses one of the tanks and positions himself where he can best control the platoon.

65. Platoon Preparation for Delaying Action

The platoon leader keeps the troop commander informed of the specific position occupied by the platoon. He insures that each squad and section make maximum use of available time and materiel to improve and strengthen the position occupied by the platoon. Tanks are positioned in hull defilade, fires are coordinated, and fields of fire are cleared for all weapons. Individual foxholes and automatic weapon emplacements are prepared and improved. All positions are camouflaged. Range cards are prepared for tank weapons and automatic weapons. Obstacles are constructed and covered by fire. The position and planned fires are coordinated with adjacent units. Covered routes to the platoon route of withdrawal are selected and reconnoitered for each vehicle.

66. Conduct of Platoon Delaying Action

In a delaying action, successive positions are occupied long enough to cause the enemy to halt, develop the situation, and begin their maneuver for the attack. The enemy is engaged at the maximum effective range of platoon weapons and supporting fires. Normally indirect fire weapons engage the enemy first. The platoon leader must avoid decisive engagement

during the withdrawal. The platoon leader must keep the troop commander informed of the platoon situation to insure receipt of orders for the platoon withdrawal before it becomes decisively engaged. Contact with the enemy should be maintained throughout the action. Elements of the platoon conduct the delaying action as follows:

a. Scout Section. As the enemy approaches the platoon's delaying position, the scout section withdraws by squads to the flanks. They maintain contact with the enemy, continue to adjust supporting fires, and report any attempt by the enemy to bypass or envelop the platoon position. The scout squad leaders must keep the platoon leader informed of all enemy activity observed and the location of their squads.

b. Tank Section. Tanks engage the enemy at the maximum effective range of their weapons and continue to fire until ordered to cease fire. To deceive the enemy as to the tank strength at the delay position, and to avoid heavy volumes of enemy fire, tanks may be shifted to alternate positions.

c. Rifle Squad. The rifle squad will engage dismounted infantry and tank-killer teams that attack the position. They will be particularly alert to enemy attempts to envelop the position.

d. Support Squad. The support squad may be the first element of the platoon to engage the enemy. They will provide continuous fire support for the platoon during the defense of the delay position.

67. Platoon Withdrawal to Next Delaying Position

The platoon holds each delaying position until forced to withdraw by enemy action or to conform to the withdrawal of adjacent friendly units. In either case, the authority to withdraw rests with the troop commander. To preclude decisive engagement, the platoon leader must keep the troop commander informed as the situation develops so that the troop commander has detailed knowledge of the situation in sufficient time to make a proper decision. He will hold the position at all costs if permission to withdraw is not granted. The platoon may withdraw from the delaying position as a unit, or by squads and sections. In either case, continuous contact is maintained with the enemy and the withdrawal is accomplished as follows:

a. Platoon Leader. The platoon leader remains with the last element to withdraw.

b. Tank Section. In daylight, to make best use of its destructive firepower, the tank section is normally the last element of the platoon to withdraw from the position. The tanks withdraw without exposing themselves to enemy fire, keeping their main armament toward the enemy. At night, in heavy woods, or when observation is otherwise restricted, the tank section may withdraw under cover of the rifle squad.

c. Rifle Squad. When the terrain provides good observation, the rifle squad normally withdraws before the tank section. The squad leader must establish a means of informing his fire teams when to return to the carrier. At night or when visibility is limited, the rifle squad may remain on the delaying position until after the tank section has withdrawn.

d. Support Squad. The support squad will normally withdraw on order, after maximum assistance has been given to other elements of the platoon in delaying the enemy. The support squad should be in position to fire at the time the other elements of the platoon begin to disengage and begin movement to the next delaying position. The squad should be displaced to the rear when its fires are no longer required to assist the withdrawal of the tanks and rifle squad.

e. Scout Section. Scout squad leaders control the withdrawal of their squads and coordinate this movement with the withdrawal of other elements of the platoon. The scouts withdraw independently on the flanks of the platoon, maintain contact with the enemy, continue to adjust supporting fires, and report enemy location, disposition, composition, and direction and speed of movement (fig. 19).

68. Ambush by Platoon in Delaying Action

a. An ambush is a tactical maneuver to entrap an enemy force and destroy it. Troops participating in an ambush wait in a concealed position for an opportune time to attack an unsuspecting enemy force.

b. The frequency with which an armored cavalry platoon can employ an ambush is limited by the terrain and enemy action. The platoon must be capable of destroying the enemy force that it intends to ambush; otherwise the platoon may become engaged so decisively that it is unable to withdraw. An ambush prepared by a platoon should be organized so that the leading vehicle and the last vehicle of an enemy column are engaged simultaneously. If possible, fire should be placed on all vehicles in the enemy column to preclude employment of their weapons against the platoon (fig. 20).

c. In an ambush, elements of the platoon are positioned to deliver maximum firepower on the enemy force. Tanks are positioned to deliver effective direct fire on all vehicles in the ambush. The rifle squad is positioned to prevent the escape of dismounted enemy troops. The scout section may be placed to provide security or where it can add to the firepower of the ambush. This section may be used also to help seal off the ambush. The support squad delivers indirect fire on the ambushed force. It is also prepared to fire on routes of escape or reinforcements.

69. Combat Support for Platoon in Delaying Action

Combat support for the armored cavalry platoon in a delaying action, as in a defense, may be provided by artillery, engineers, Army aviation, or elements of the air cavalry troop.

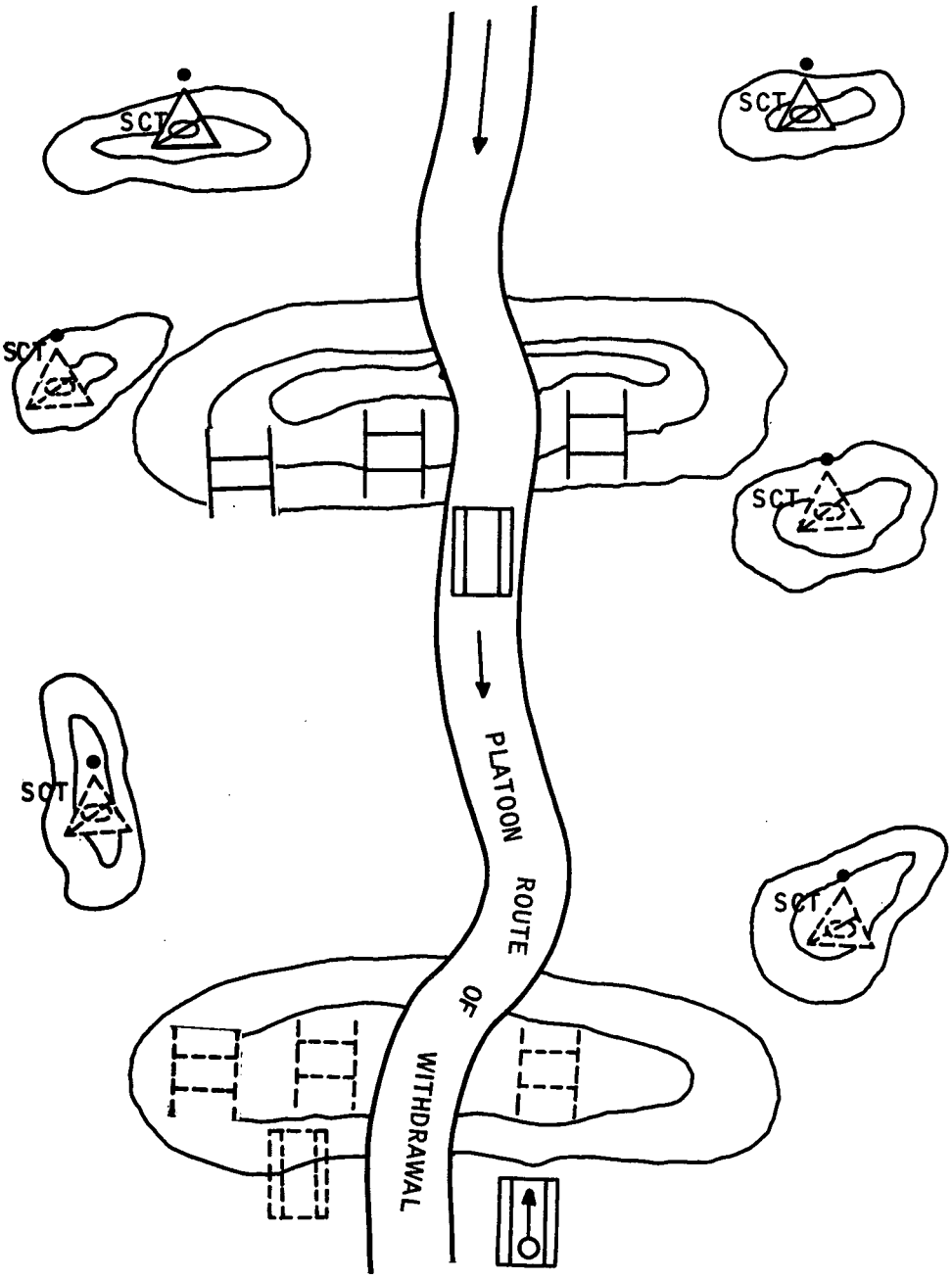


Figure 19. Armored cavalry platoon in withdrawal to next delaying position.

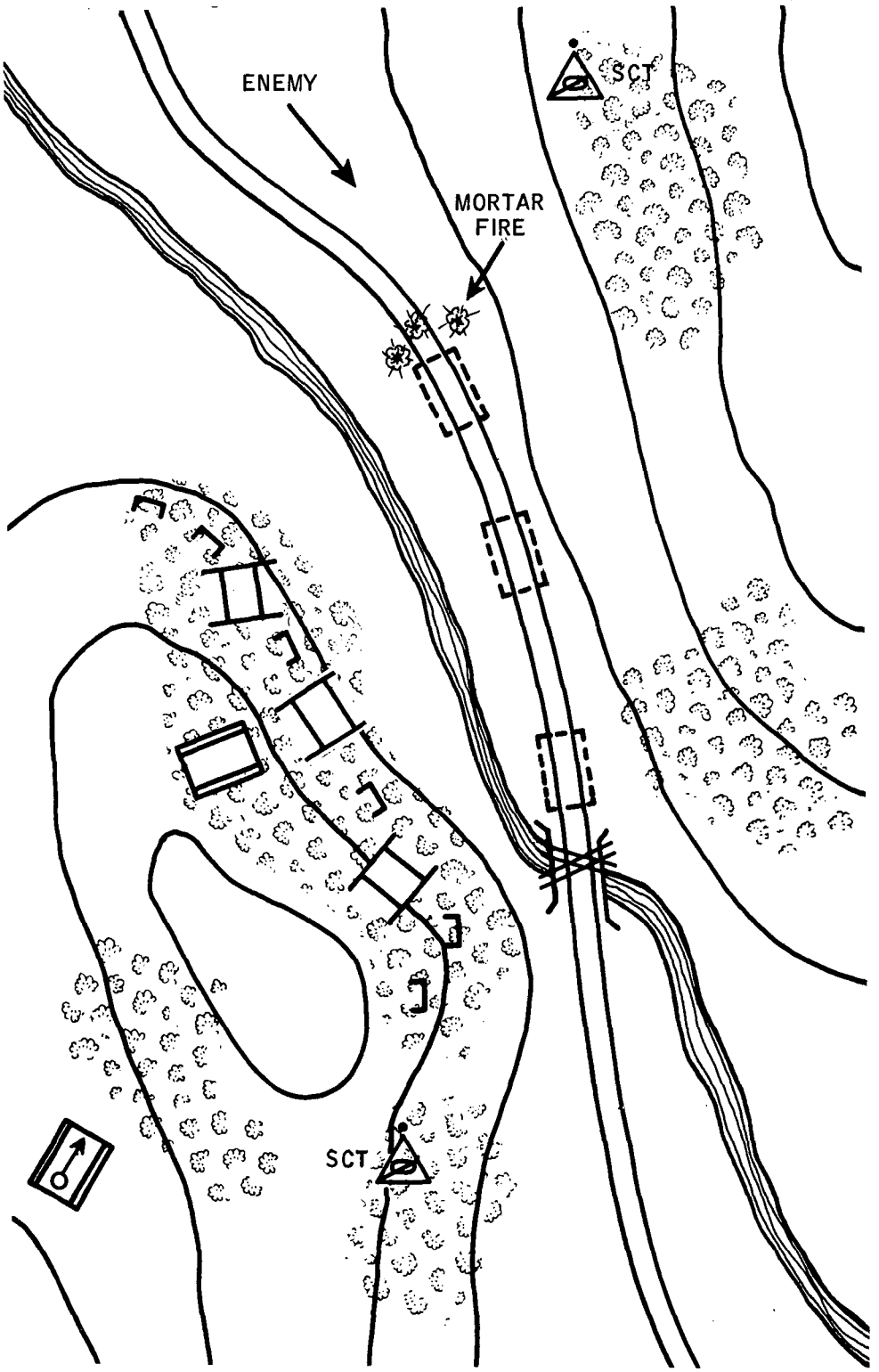


Figure 20. Organization of armored cavalry platoon ambush in close terrain.

CHAPTER 5

EMPLOYMENT OF THE ARMORED CAVALRY TROOP

Section I. GENERAL

70. General

The armored cavalry troop is organized, trained, and equipped to perform reconnaissance and provide security for the unit to which assigned or attached and to engage in offensive, defensive, or delaying action as an economy of force unit. The armored cavalry troop normally operates under control of the parent squadron, or it may be attached to a brigade or the support command.

71. Organization for Combat

a. The armored cavalry troop commander is responsible for the organization for combat and employment of the platoons, operations of the troop command post, and control of troop trains. To determine the best organization of the combat force available to accomplish an assigned mission, the troop commander considers the mission, enemy, terrain and weather, and troops available (METT). The troop commander normally employs the armored cavalry platoons as organized. In some situations he may reinforce one platoon with elements of another or form provisional platoons. The troop commander may group the support squads under troop control whenever the situation permits them to support the entire troop from one location.

b. Figure 21 illustrates several typical task organizations that can be formed by the organic elements of the armored cavalry troop.

72. Combat Support

a. The armored cavalry troop normally operates without attachments; however, an Army aircraft should be provided to facilitate command and to conduct air reconnaissance. For a particular mission, tanks or mechanized infantry may be attached. Elements of the air cavalry troop may support or be attached but are normally under operational control of the armored cavalry troop in whose zone or area they are operating. Artillery and engineers may be placed in support or attached. If a tank or infantry unit is attached to the troop, it is usually employed intact. Tactical air may also be available to support troop operations.

b. Elements of the air cavalry troop are normally placed under operational control of the troop for a particular mission. Usually the air cavalry element will consist of an aero-scout section, or, on occasion, a platoon team, consisting of an aero-scout section and an aero-rifle and aero-weapons squad. When air cavalry elements are attached they will normally be employed as a unit under troop control. Air cavalry elements should be employed in close coordination with ground elements to extend and complement the troop effort by:

(1) Screening the front and flanks.
(2) Reconnoitering lateral roads, dominating terrain, and areas inaccessible to surface vehicles.
(3) Locating bypass routes around enemy positions and obstacles.
(4) Establishing and maintaining contact with adjacent units.
(5) Assisting in command and control.
(6) Performing communication relay.
(7) Locating favorable routes of attack and protecting their flank when the troop is forced to attack to accomplish its mission.
(8) Engaging in offensive, defensive, and delaying action.
(9) Establishing contact with the enemy.

c. Artillery support is usually provided by the artillery unit supporting the parent squad-

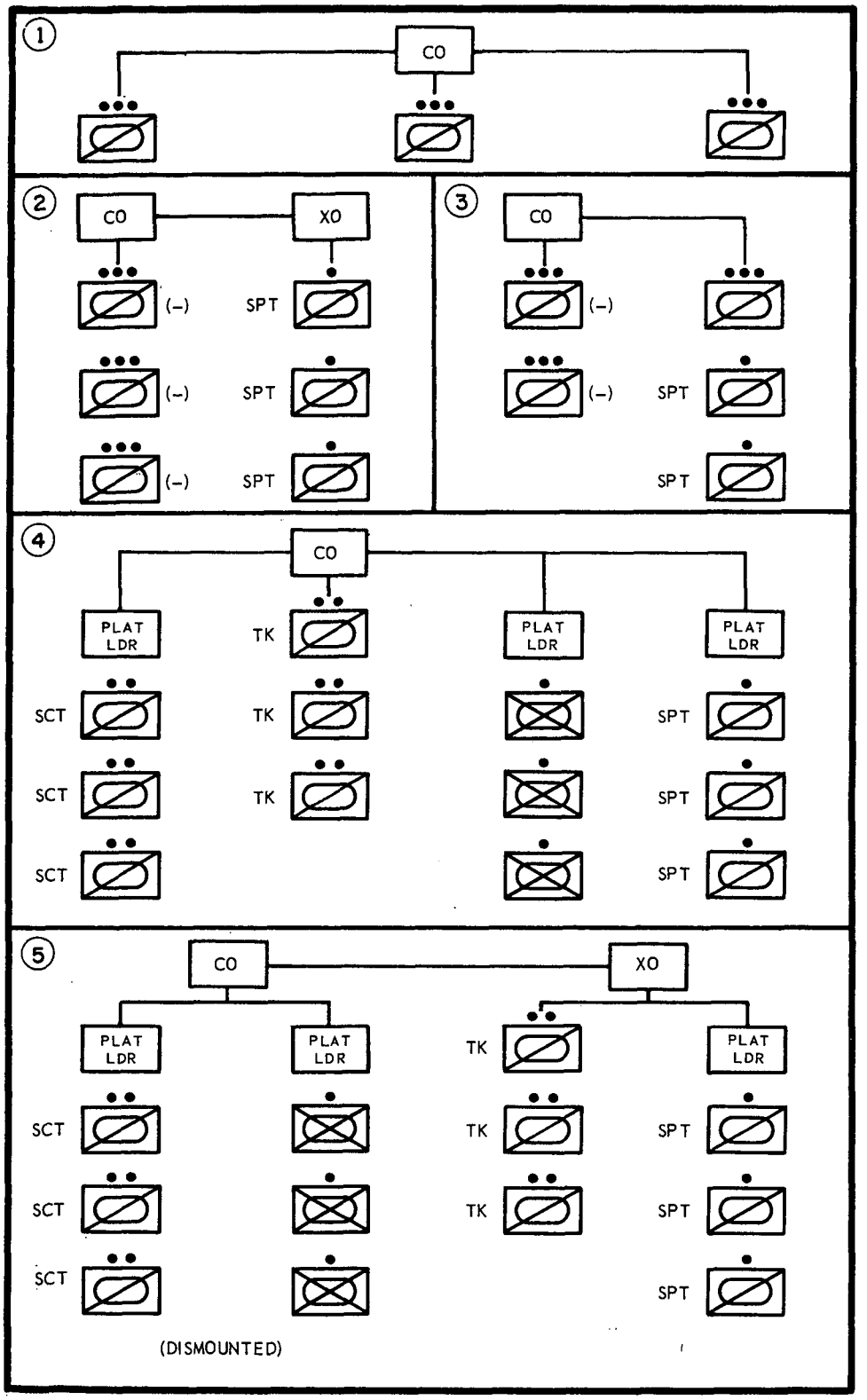


Figure 21. Five methods of organizing the armored cavalry troop for combat.

ron or the major divisional unit to which the troop may be attached. The armored cavalry troop will have an artillery forward observer if artillery is in direct support of or attached to, the parent unit. When a forward observer is available, requests for artillery fires are processed through him. When an artillery forward observer is not available, the troop will request artillery fires through the next higher headquarters and adjust artillery fires with assigned individuals.

d. Engineers may be attached to the armored cavalry troop when the situation so dictates. Engineer reconnaissance parties may be employed with the troop to collect information on roads, bridges, and obstacles.

e. Army aviation support may be made available from the division aviation battalion or the brigade aviation section. Army aviation support will come from the brigade aviation section when the troop is attached to a brigade. An Army aircraft should be allotted to the troop commander to facilitate observation, reconnaissance, and control. Army aircraft may be available to airlift troops and equipment of the scout section, rifle squad, and support squad.

f. Tactical air support may be available to the troop during tactical operations. When it is available, a forward air controller from squadron will be available to control tactical air strikes in support of troop operations.

73. Employment of the Ground Surveillance Section

a. In the armored cavalry troop, the short range ground radar section may operate as a section under troop control; the section may be attached to a platoon; one team may operate under troop control and one team may be attached to a platoon; or a team may be attached to each of two platoons. An analysis of the factors of METT will dictate the method of employment and location of radar sets. The location of radar sets should be coordinated with other ground radar equipment and in accordance with the squadron surveillance plan. FM 17–1 contains detailed data on the short range ground radar.

b. The radar normally should be located in or near the position of the platoon with which it is working. If the mission or terrain conditions require a location for the radar that is not near the platoon, it may be necessary to assign scouts or riflemen the mission of providing for its security.

c. Missions assigned to the short range ground radar derive from the troop surveillance requirements. It is used to monitor or search a specified area. The specific mission assigned should include the type of radar surveillance to be conducted, an operating schedule, duration of mission, area to be covered, and reporting procedures to be used.

d. The primary requirement for effective employment of the radar is that it be positioned for line-of-sight operation. It must be oriented in azimuth and its location plotted precisely on the map to enable the operator to locate targets on the ground accurately. During daylight, radar may be employed to supplement visual observation or to monitor a particular dangerous avenue of approach. Their greatest value is during periods of limited visibility.

e. In offensive operations, the radar may be used to assist in providing flank security or to search beyond the line of contact. It should be positioned well forward during the attack to allow searching of the objective before and during the assault. Once the objective is reached, the radar may be used to maintain surveillance on likely avenues of enemy approach and thus assist in early warning against a possible counterattack.

f. In defensive and retrograde operations, the short range ground radar may be used to monitor the main enemy avenue of approach and to search critical areas and gaps between blocking positions.

74. Employment of Troop Headquarters

a. General. During combat operations the troop headquarters normally is organized into the troop command post and troop trains. The troop command post contains the personnel and equipment required for control of the troop. The trains include the organic or attached personnel and equipment necessary for logistical support of the troop. FM 17–1 contains a detailed discussion of trains and logistical support.

b. Command Post.

(1) *Troop commander.* When the troop is committed, the troop commander normally controls the unit from his command vehicle or an Army aircraft. He may be accompanied by an artillery forward observer. The broad front usually covered by the troop requires that the troop commander position himself centrally or on terrain that is favorable for communication, observation, and control.

(2) *Command post operations.* The troop command post is organized around the armored personnel carrier organic to the troop headquarters section, and its operation is supervised by the troop executive officer, who is assisted by the troop first sergeant. Other vehicles found with the CP may include the executive officer's vehicle, the attached medical evacuation vehicle, and the liaison vehicle. The executive officer normally remains in or near the CP to be continually aware of the situation and ready to assist the troop commander with troop operations.

(3) *Location.* The CP follows the combat elements of the troop by bounds during offensive operations. During defensive or retrograde operations, the command post vehicle should be located to the rear of the combat elements. When not moving, it is located in a position facilitating communications (app. II) with the troop commander, front line platoons, and the squadron command post or other unit command post to which the troop is attached. The position selected should provide cover and concealment.

(4) *Reports to higher headquarters.* The troop CP, supervised by the executive officer, forwards all situation, operation, and administrative reports to higher headquarters.

c. Troop Trains. Troop trains consist of the headquarters section, minus personnel and equipment operating with the command post, maintenance section, and other attached logistical elements. Troop trains may operate as a unit or be formed into troop combat trains and troop field trains. Combat trains, under control of the executive officer or first sergeant, are located in the vicinity of the troop command post, and consist of those elements that accompany the troop to provide immediate logistical support during combat operations. These normally include the medical aid-evacuation team, elements of the maintenance section, and attached squadron supply vehicles as required. Other organic or attached administrative and logistical elements constitute the troop field trains and are located with squadron trains or the trains of the unit to which attached. For a detailed discussion on the composition and employment of the troop trains, refer to FM 17–1.

75. Command and Liaison

a. The commander of an armored cavalry troop exercises and commands his unit through the executive officers, first sergeant, and platoon leaders. His instructions or directions are transmitted as troop orders. Control means used by the troop commander are contained in FM 17–1.

b. Liaison personnel are provided in the troop headquarters section. Normally, this liaison party is dispatched to the next higher headquarters where it conducts its operations. When detached from the parent squadron and a requirement exists for liaison with a flank unit as well as with higher headquarters, a liaison officer from the squadron headquarters should be attached to the troop for this purpose. For duties of liaison personnel, refer to FM 17–1.

Section II. RECONNAISSANCE OPERATIONS

76. General

a. Reconnaissance is one of the primary missions performed by the armored cavalry troop. The troop may conduct assigned reconnaissance missions as part of the squadron, or independently when the troop is attached to another unit. Within the area to be reconnoitered, platoons are assigned zones, routes, or areas, and are

prepared to engage in combat as required and within their capabilities, to accomplish the mission.

b. The information obtained by reconnaissance is used by commanders at all echelons in formulating their plans for future operations. Therefore, information must be timely, accurate, and reported promptly. FM 17–1 contains detailed coverage of the types of reconnaissance, missions, fundamentals of reconnaissance, and additional considerations appropriate to special reconnaissance operations.

77. Reconnaissance Frontages

There is no established frontage for an armored cavalry troop to reconnoiter in executing a reconnaissance mission. The width, visibility, terrain, road net, anticipated enemy contact, the nature of information sought, and time available are some of the factors that influence the frontage assigned to the troop. Wider frontages may be assigned to the troop when air cavalry elements are available. The frontage to be covered by the troop normally is designated by the headquarters directing the reconnaissance operation.

78. Conduct of Reconnaissance Operations

a. The armored cavalry troop must make maximum use of its communications, firepower, and mobility to conduct reconnaissance operations. Scouts are employed to accomplish a mission requiring stealth or infiltration. In the conduct of reconnaissance missions, collecting information is the primary task and must not be jeopardized by unnecessary combat with the enemy. In many situations the troop will be required to fight to obtain the desired information. Whenever possible, the troop should avoid combat and bypass enemy resistance to accomplish the assigned mission. When required to bypass an enemy force, the troop commander must report to the next higher commander the complete enemy situation and his decision to bypass the enemy. When the troop must bypass and it is necessary for the troop to maintain contact with the enemy force, scouts or Army aircraft may be used for this purpose.

b. The troop formation must provide for adequate coverage of the assigned route, zone, or area. If less than three platoons are required, the remainder of the troop may be employed as a reserve to provide depth to the formation, provide flank security, and in general, to support the forward elements of the troop. The reserve also may be committed to find a bypass around an enemy position or expedite the operation by reconnoitering key terrain features.

c. Figures 22–24 depict typical armored cavalry troop reconnaissance formations.

79. Route Reconnaissance

a. When enemy action is imminent, route reconnaissance missions are usually assigned on the basis of one major route per troop. In an area where little enemy action is anticipated, the armored cavalry troop may be assigned as many as three routes to reconnoiter. In some situations the troop may reconnoiter more than three routes; such employment will require more time for completion of reconnaissance missions and may subject the troop to defeat in detail. For the definition of route reconnaissance, refer to paragraph 3.

b. The troop normally retains platoon integrity in conducting a route reconnaissance mission. Route reconnaissance by armored cavalry platoons is discussed in paragraph 19. If the troop is conducting a route reconnaissance along a single route, it usually advances in column of platoons (fig. 25).

c. Elements of the air cavalry troop may be employed to support the troop as discussed in paragraph 72.

d. Army aircraft from the aviation battalion or the brigade aviation section employed to support the troop in route reconnaissance missions will normally—

(1) Be allocated on the basis of one or more Army aircraft per troop.
(2) Operate to the front and flanks of the troop.
(3) Be used for observation and assist in control. Army aircraft used in this manner extend the range of observation to the front and flanks.

80. Zone Reconnaissance

a. For the definition of zone reconnaissance, refer to paragraph 3. It is more detailed and time consuming than route reconnaissance.

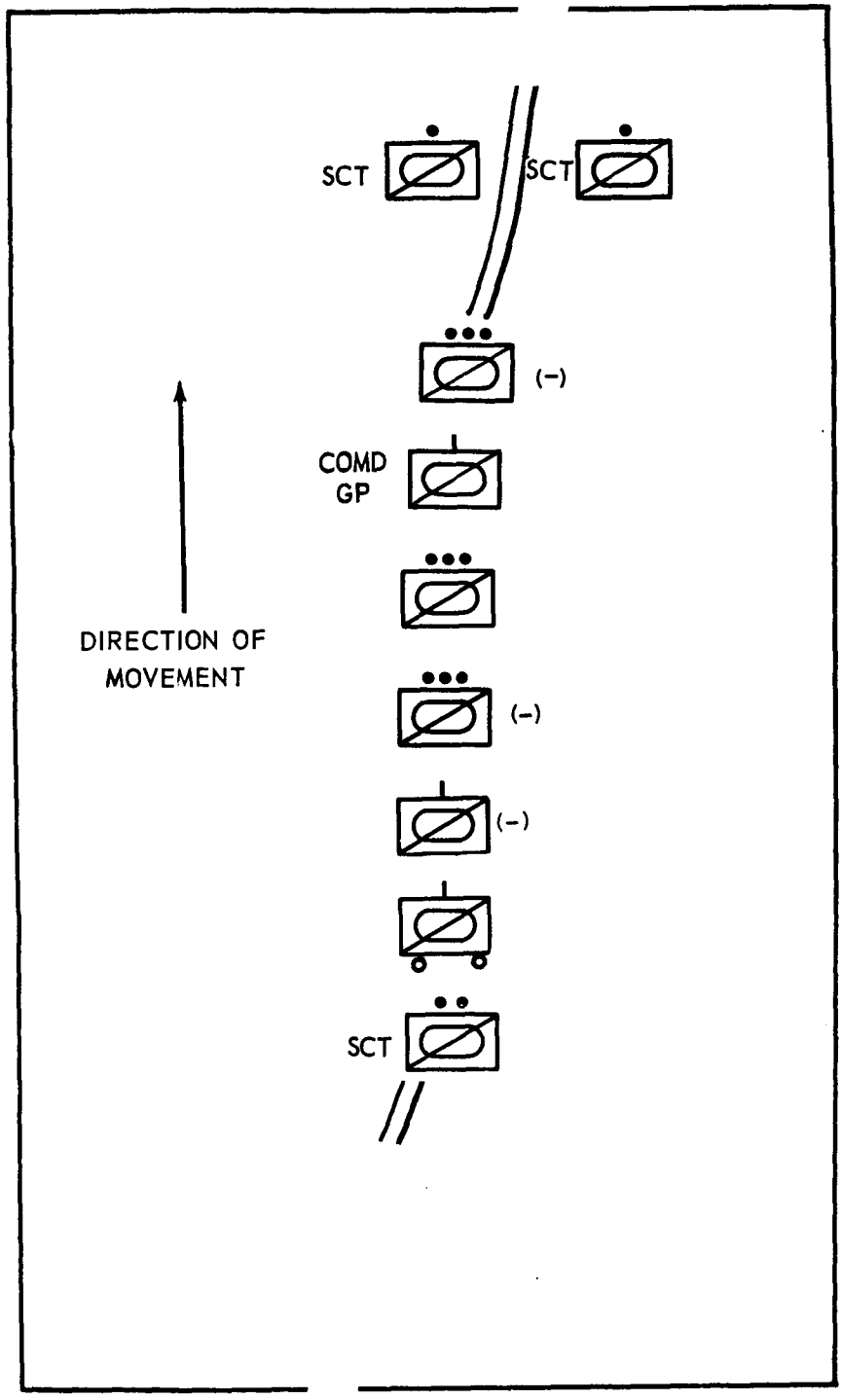


Figure 22. Armored cavalry troop conducting reconnaissance in column formation.

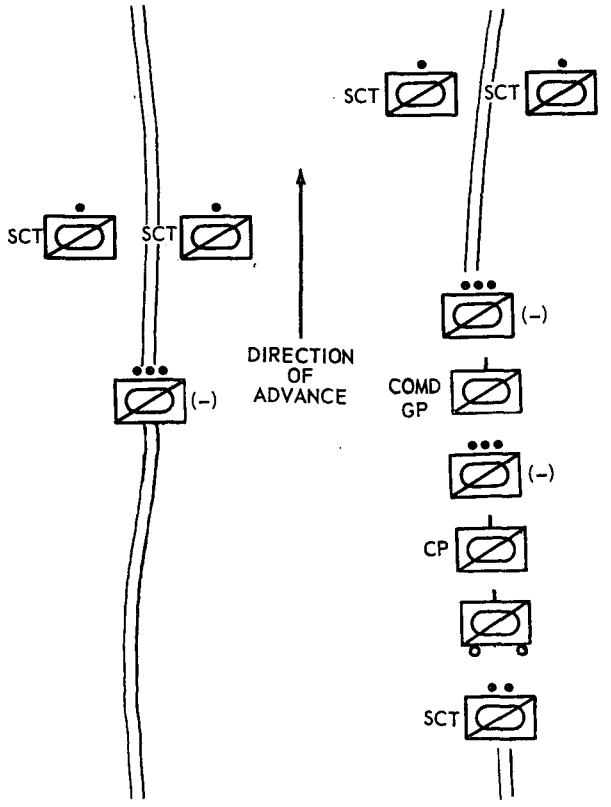


Figure 23. Armored cavalry troop conducting reconnaissance on two axes.

When conducting zone reconnaissance, without supporting Army aircraft, the troop commander assigns portions of the troop zone to each platoon. When Army aircraft are available, he may assign each platoon a route and specific locations to reconnoiter. He may employ supporting Army aircraft to reconnoiter the area between these routes. This technique facilitates rapid accomplishment of the mission. Platoon zones are established by boundaries. Boundaries should be defined by easily recognizable terrain features such as roads, streams, and ridge or tree lines.

b. The number of platoons employed depends on the situation and time available and is directly related to the width of the zone, number of routes, terrain, capabilities of the enemy, and availability of other friendly ground and air units. The troop command post and combat trains usually advance by bounds on the best routes available near the center of the troop zone (figs. 26 and 27).

c. Elements of the air cavalry troop may be employed to support the troop as discussed in paragraph 72.

d. For typical troop formations during zone reconnaissance on multiple routes, see figures 25 and 26.

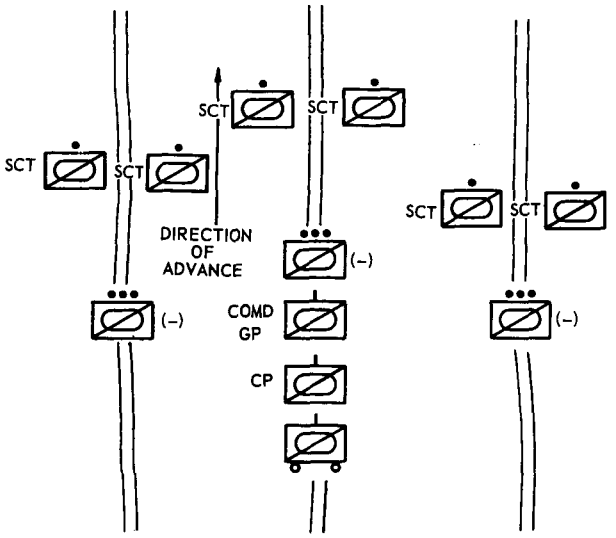


Figure 24. Armored cavalry troop conducting reconnaissance on three axes.

81. Area Reconnaissance

a. In the conduct of this mission, the troop may be required to reconnoiter areas such as a town, woods, or crossing sites along a river. For the definition of area reconnaissance, refer to paragraph 3.

b. The armored cavalry troop moves to the assigned area by the most direct route and performs area reconnaissance in the same manner as in zone reconnaissance. During movement to the area, enemy forces encountered by the troop are reported and bypassed unless ordered otherwise. The troop uses a formation that will permit rapid, secure movement. This formation is usually the same as that used for a route reconnaissance, with either scout or tanks leading.

c. The troop commander plans the reconnaissance in detail to insure that the area is systematically covered, particularly roads and trails, key terrain, and suspected enemy locations. If the area restricts vehicular movement, dismounted patrols from the scout section and rifle squad will normally reconnoiter the area (fig. 28).

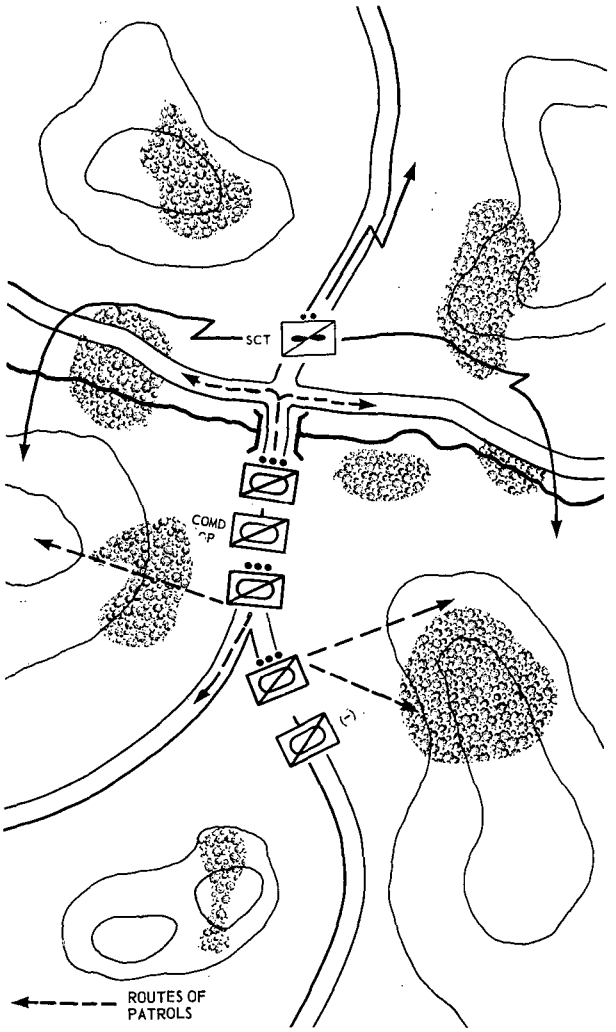


Figure 25. Route reconnaissance by the armored cavalry troop with aero-scout section.

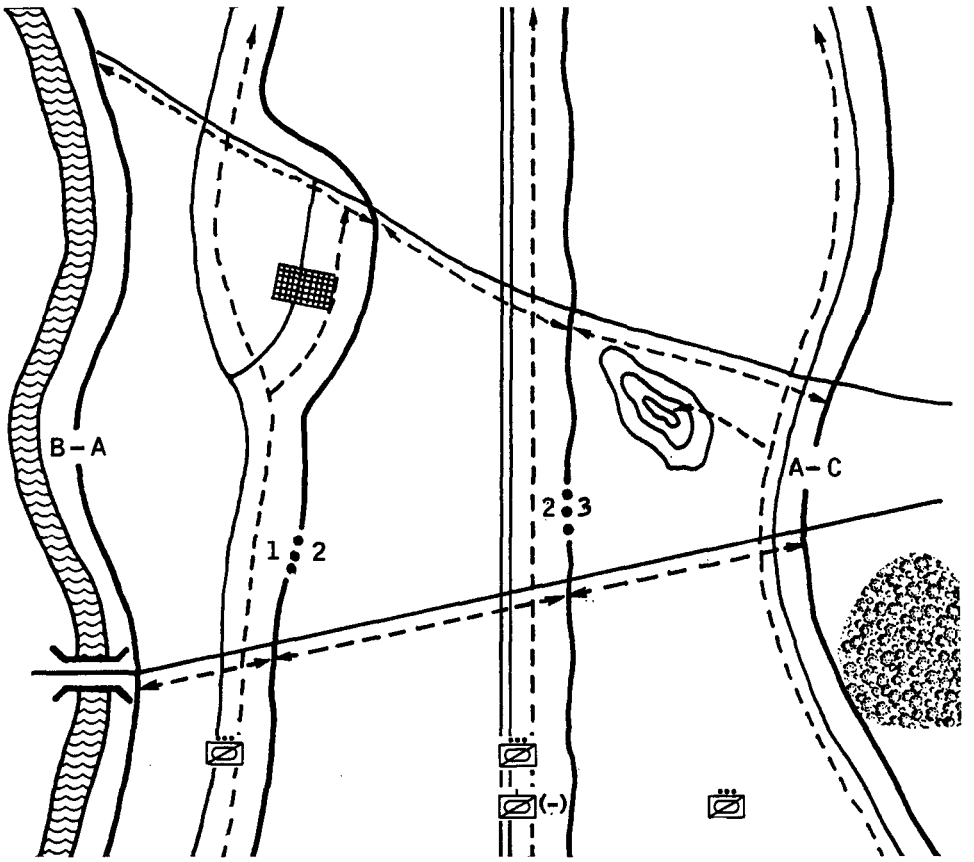


Figure 26. Zone reconnaissance by the armored cavalry troop.

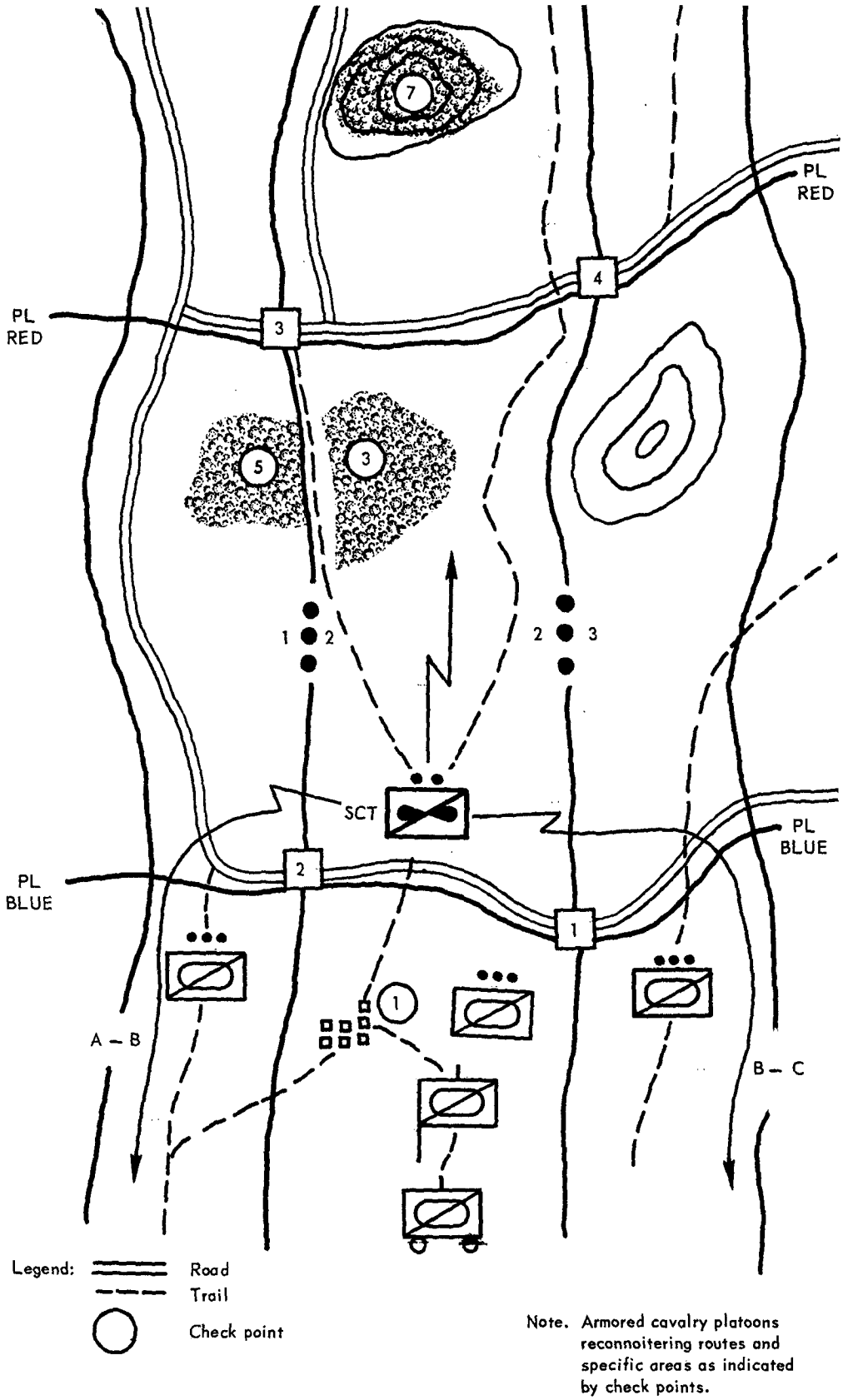


Figure 27. Zone reconnaissance by the armored cavalry troop with aero-scout section.

Section III. OFFENSIVE OPERATIONS

82. General

a. The armored cavalry troop engages in offensive action when necessary to facilitate the accomplishment of its normal reconnaissance and security mission. It may be employed in the attack as part of the armored cavalry squadron. It may assist the attack of a larger force by attacking to accomplish its primary mission of reconnaissance or security; it seldom will attack as part of the larger force to seize a portion of the force objective. The troop may attack without benefit of additional support, although reinforcements may be available from or through the unit to which the troop is assigned or attached. The troop may find it necessary to attack to reduce enemy positions that threaten the accomplishment of its mission; or it may be ordered to attack and destroy enemy forces that threaten the main body.

b. During the advance, the troop frequently must attack to reduce enemy positions that are encountered.

(1) When the troop is in a single column formation (fig. 22) and light opposition is encountered, the leading platoon will deploy and develop the situation while the remaining platoons are deploying for the attack. Normally the three platoons, less the support squads, will be committed to the attack. The support squads and other indirect supporting fires will normally provide a base of fire.

(2) When the troop is in a double column formation (fig. 23) and must attack to reduce an enemy position on either route, the platoon that is not engaged will normally be used to reinforce the attack of either one of the two committed platoons.

(3) When the troop is disposed along three routes (fig. 24) and must attack along any one of these routes, elements of the troop not in contact or heavily engaged with the enemy may be maneuvered to reinforce or support the attack on any one of three routes.

(4) When necessary, the entire troop will be concentrated and committed to the attack. The troop may attack as organized, or like elements may be massed to form provisional platoons (tank, infantry, and scout platoons with the mortars in battery). The troop must have an established SOP and all members must be completely

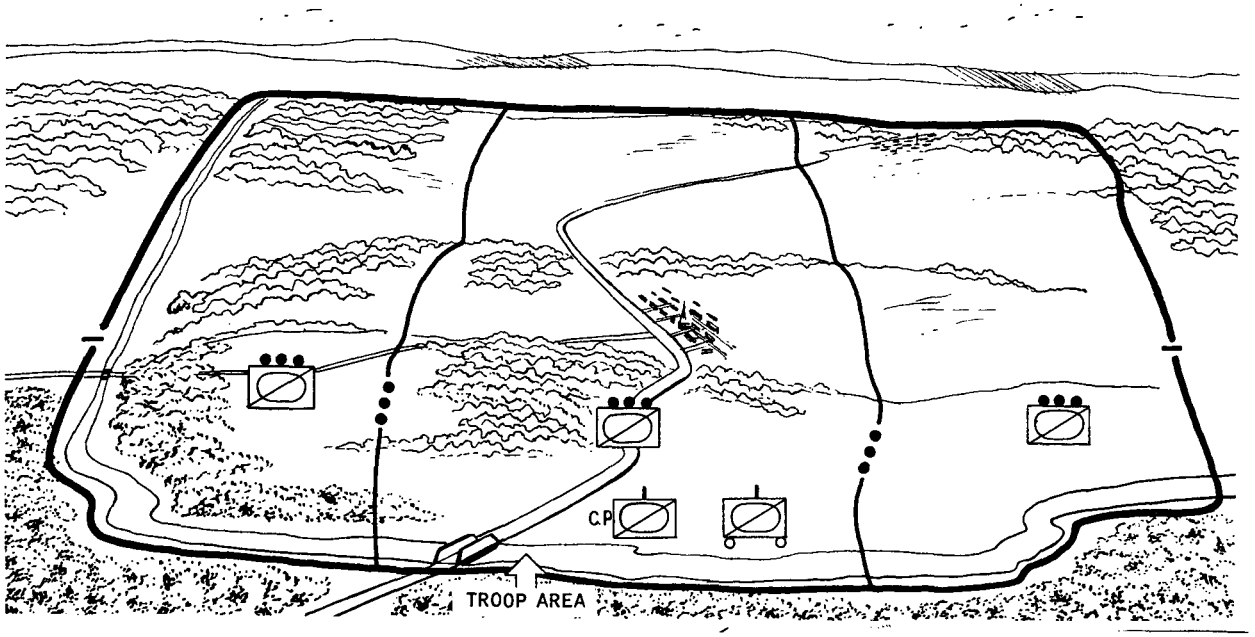


Figure 28. Area reconnaissance by the armored cavalry troop.

familiar with the techniques of rapidly organizing for combat in this manner.

c. For a discussion of the purposes of the offense, fundamentals of attack, techniques of employing tanks and mechanized infantry, control measures, passage of lines, night attacks and other offensive operations requiring additional considerations, refer to FM 17–1.

83. Preparation for the Attack

a. The troop commander uses all available time to prepare the troop for the attack. Normally he will receive a warning order from the higher commander. He then immediately alerts the troop by issuing a warning order and the troop begins preparation for the attack. The armored cavalry troop usually completes preparation for the attack in an assembly area. The troop fuels, performs maintenance, replenishes supplies, and completes other necessary actions before launching the attack.

b. While the troop is in an assembly area preparing for the attack, the troop commander usually joins his commander, or the commander of the unit to which attached, to receive the detailed operation order. He takes with him those personnel needed to assist in planning the attack. During the absence of the troop commander, the executive officer remains with the troop and, assisted by platoon leaders and key noncommissioned officers, makes certain that the troop is readied for combat. After he has received the order, the troop commander begins troop leading procedure including his estimate of the situation, coordinates with adjacent and supporting units, prepares a tentative plan, makes a personal reconnaissance, completes his plan of attack, and issues his order to the troop. He then checks the readiness of the troop to conduct the attack.

c. When the troop is involved in a meeting engagement and required to attack directly from march column, it attacks without benefit of the foregoing preparation. The troop commander makes a rapid estimate of the situation, arrives at a course of action, issues necessary fragmentary orders, and executes the attack. For further discussion of troop leading procedures, see FM 17–1.

84. Reconnaissance Before the Attack

a. Before the armored cavalry troop is committed to an attack, the commander makes a map reconnaissance, then a personal ground or air reconnaissance of the area of operations. If time does not permit a personal reconnaissance, the commander must rely on a detailed map reconnaissance in planning the attack.

b. The troop commander arranges to have the platoon leaders and supporting unit commanders accompany him or come forward to meet him at a specified time and place. The troop commander normally completes his own reconnaissance before meeting with his platoon leaders. If available, an artillery forward observer accompanies the troop commander on the reconnaissance and assists in planning the use of supporting fires.

c. During his reconnaissance, the troop commander determines:

(1) Positions for supporting weapons in the troop base of fire.
(2) The avenue of approach for the maneuvering force to the objective.
(3) When necessary, positions for tanks employed in a supporting role.
(4) Location of obstacles likely to hinder the advance.
(5) Location of an attack position when required.
(6) Control measures.
(7) Location of line of departure.

d. Elements of the air cavalry troop, when available, may be employed to develop the enemy situation and to determine the flanks of and weak points in enemy defensive positions. Care must be taken to insure that these actions do not unnecessarily disclose the intent or plan of the troop.

e. Army aircraft, when available, should be used by the troop commander in his reconnaissance. This will facilitate the reconnaissance and the information acquired will supplement that gained through ground reconnaissance.

f. The troop commander should allow time for platoon leaders to make a ground reconnaissance of the area of operations following issuance of the troop order for the attack.

85. Estimate of the Situation

a. The estimate of the situation by the troop commander is a continuous examination of all factors that affect the accomplishment of the mission. The commander uses the basic form for the estimate as a mental checklist to insure that he considers all pertinent factors before arriving at his decision as to which course of action to follow.

b. In making this estimate, the troop commander should consider the mission, enemy situation, terrain and weather, and troops available as each pertains to the particular situation. For detailed discussion and commanders' estimate of the situation checklist, see FM 17–1.

86. Plan of Attack

a. The plan of attack is designed to insure teamwork and maximum coordination within the attacking forces throughout the operation (fig. 29). The plan must be simple but must cover all essential details. It includes the details of the *who, what, when, where,* and possibly the *how* and *why* of troop actions in carrying out the assigned mission.

b. The troop plan of attack consists of the scheme of maneuver and the plan of fire support.

(1) The scheme of maneuver includes the composition of the maneuvering force, the approach route it will follow to the objective, and its method of advance.

(2) The plan of fire support includes the location and composition of the base of fire, targets to be fired on, and signals for lifting or shifting the fires.

c. The plan of attack will include provisions for security during the attack, for consolidation of the position, for reorganization after the attack, and for resumption of the advance, if appropriate.

87. Formation for the Attack

The armored cavalry troop may attack in either of the two basic combat formations, column or line, or in a variation thereof (fig. 30). A detailed discussion of combat formations is contained in FM 17–1.

88. Maneuvering Force

a. The troop may comprise all or part of the maneuvering force during an attack conducted by a larger unit. When required to execute an independent attack, the troop will provide elements for both the maneuvering force and the base of fire.

b. When possible, tanks and mounted rifle squads should be employed in the maneuvering force as tank-infantry forces.

c. Scout elements may accompany the maneuvering force to provide flank security and to assist in movement of the force by selecting covered or concealed routes. Scout elements mounted in armored vehicles may also join other elements in closing with the enemy, adding their vehicular mounted weapons to the firepower of the maneuvering force.

d. If the terrain or obstacles prohibit the use of vehicles, the maneuvering force will consist of dismounted rifle squads and possibly troops from the scout sections. When scouts are so employed, they should be formed as dismounted rifle squads.

e. The troop commander may employ one of several combinations of the platoon elements to constitute the maneuvering force when executing an independent attack:

(1) Three tank-infantry forces consisting of three tanks and one rifle squad each.

(2) Two provisional tank platoons, one with five tanks, the other with four.

(3) A provisional rifle platoon of three rifle squads.

f. Provisional groupings of tanks, rifle, and scout elements are commanded by the platoon leaders, other key persons designated by the troop commander, or as covered in the unit SOP.

89. Base of Fire

a. The base of fire for the armored cavalry troop during an attack may consist of supporting artillery, air cavalry units, or tactical air in addition to organic firepower. The nucleus of the base of fire for the troop is provided by the three organic mortars. They are grouped under troop control whenever they can effec-

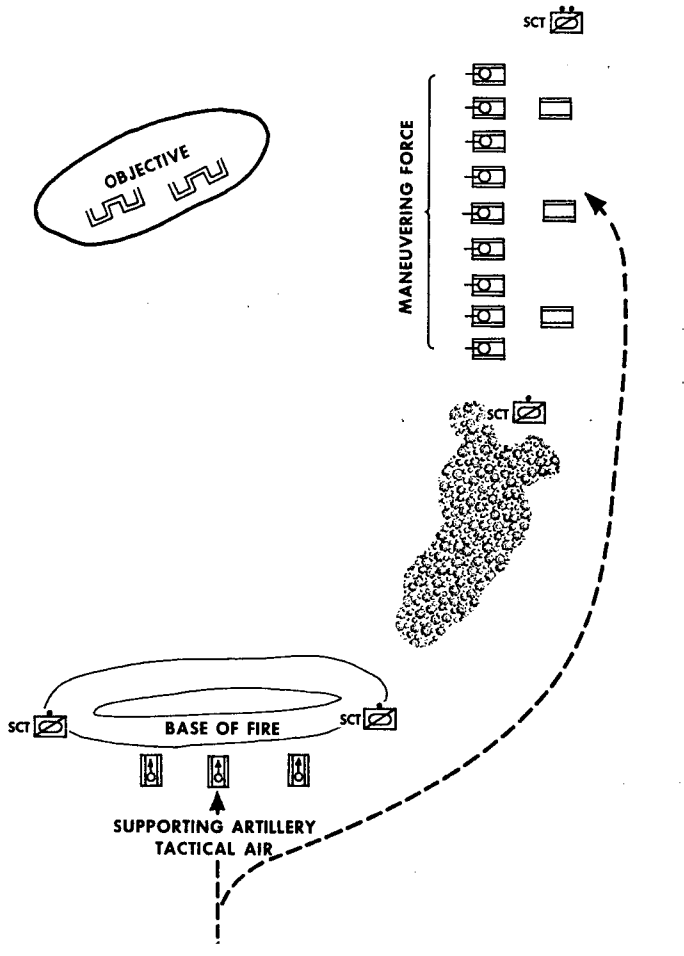


Figure 29. Armored cavalry troop in a mounted attack.

tively support the troop attack. Scout elements may be used to assist the base of fire to furnish automatic weapons firepower or to provide security. Tanks may be used to assist the base of fire only when the maneuvering force is required to attack dismounted because the terrain, obstacles, or enemy antitank weapons restrict or stop the movement of tanks.

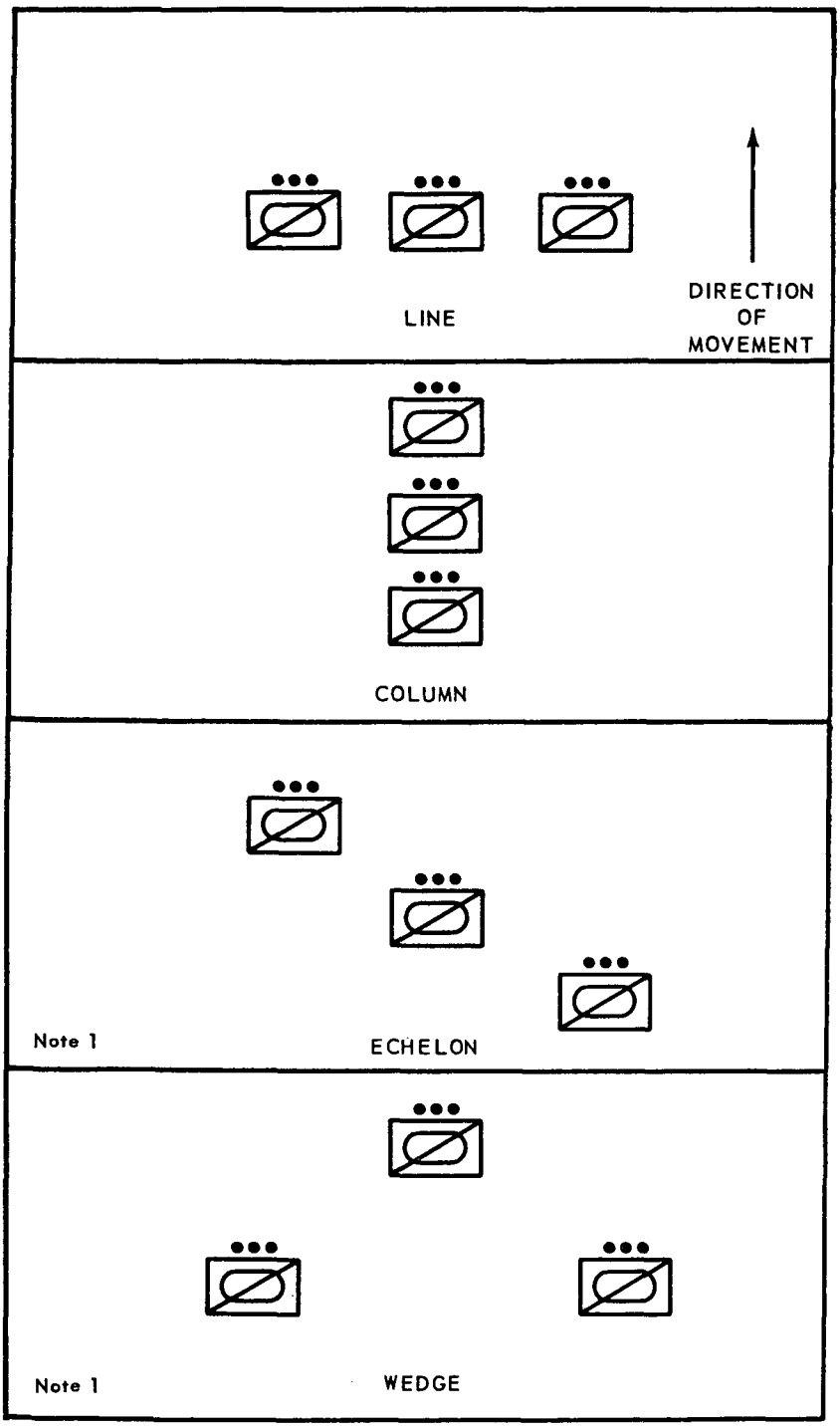
b. The troop commander usually designates the executive officer or a platoon leader to control that part of the base of fire provided by organic elements of the troop.

90. Operation Order

The troop order for the attack is usually issued orally by the troop commander to his assembled key subordinates. It should be brief, clear, and complete. To insure completeness, the commander should follow the established form for an operation order. It will normally be issued from a vantage point overlooking the area of operations, thus precluding the possibility of misunderstanding by the recipients. If the situation or time precludes issuing the order at a terrain vantage point, the troop commander may issue the order in the assembly area or at any other convenient location.

91. Supervision of Preparation for Attack

Supervision by the troop commander, platoon leaders, and noncommissioned officers is a continuing process. All officers and noncommissioned officers must actively supervise the actions of their subordinates to insure that their units are fully prepared for the operation. Detailed attention must be given to such mat-



Note 1. Variations of line and column formation.

Figure 30. Armored cavalry troop in offensive formations.

ters as supply, maintenance, communication, and dissemination of information contained in the plan of attack.

92. Movement from Assembly Area to Attack Position

a. Movement from the assembly area to the attack position, when used, is made as a tactical march. The troop order of march should be planned to simplify movement into the attack position. When the troop commander is on reconnaissance or otherwise not available, the executive officer will move the troop to the attack position.

b. The troop may march as part of a larger unit or independently. In either instance, it will provide its own security on the march and in the attack position.

93. Attack Position

When an attack position is used, it is occupied for a minimum time. Every effort is made to move rapidly through the attack position in the specified attack formation and cross the line of departure without halting.

94. Conduct of the Attack

During the attack, unforeseen circumstances may require the troop commander to change his plan. He must exploit favorable developments without hesitation and must overcome obstacles as quickly as possible. In event committed elements cannot be shifted to take advantage of a changing situation, the next most effective methods are to use uncommitted parts of the troop or to shift the supporting fires.

95. Conduct of Maneuvering Force

The maneuvering force must close on the objective in the shortest possible time. This force should be committed over terrain that is favorable for rapid movement toward the objective. Available cover and concealment should be used to gain surprise and to reduce vulnerability. The maneuvering force attempts to reach the objective by continuous movement; however, when the situation requires, fire and movement are executed by elements of the maneuvering force. Aggressive action is the keynote to successful attack.

96. Conduct of Base of Fire

a. The base of fire is prepared to furnish continuous fire support to the maneuvering force from the beginning and throughout the attack. Initially, fire is directed on the objective and other enemy-held areas that can retard the advance of the maneuvering force. As the maneuvering force approaches the objective, and supporting fires are masked, they are lifted or shifted. If the assaulting force consists of tanks and mounted infantry, the base of fire may continue to place overhead fire on the objective until just before the rifle element dismounts.

b. Elements in the base of fire prepare to displace forward as the maneuvering force moves onto the objective. Forward movement of the base of fire will be on order of the troop commander. It is important that all elements of the base of fire do not displace at one time. Mortars should be displaced in such a manner that fire support is always available immediately.

97. Actions of Troop Commander During Attack

a. During the attack, the troop commander locates himself where he can best influence and control his troop. He normally will accompany the maneuvering force, placing himself where decisive action is likely to develop, normally in the vicinity of the lead elements. In a mounted attack he will ride in one of the vehicles of the maneuvering force. If the scouts are not a part of the maneuvering force, he should not ride in the ACRC as its distinguishing configuration will make it a prime target. He should avoid placing himself so that he may become so involved with the actions of a subordinate element that he cannot influence the action of the remainder of his troop. Effective use of visual signals is used to aid in maintaining control.

b. During an exploitation or other rapidly moving offensive operations, the troop commander should be located near the head of the column, or immediately behind the lead platoons.

c. Throughout the attack, the troop commander must keep squadron or other higher headquarters informed of the situation.

98. Conduct of the Assault

a. General. The desired goal in the assault is to bring the maximum firepower and shock effect of tanks, rifle elements, and artillery to bear upon the enemy simultaneously to destroy him as rapidly as possible with the fewest casualties, personnel or vehicular, to friendly forces. The commander must achieve this complex goal by forceful and decisive action coupled with judgment in employing the combined arms team. The assault of a defended position by tanks and riflemen in cooperation with artillery may take two forms:

(1) *Tanks and dismounted mechanized infantry assault in coordination.* Regardless of the method of attack, the assault is conducted as a coordinated effort. As the tank and mechanized infantry forces approach the objective, heavy supporting fires are placed on the enemy position. The tanks and armored personnel carriers maintain their rate of advance and increase the volume of fire by saturating the objective with machinegun fire. If the battlefield environment precludes overrunning the objective in carriers, the mechanized infantry stop at the closest tactically feasible position short of the objective and dismount. When the tanks and dismounted infantry reach a predesignated position, or upon signal, supporting fires are lifted or shifted to the flanks or rear of the objective to prevent escape of the enemy or to break up counterattack formations. The fires of tank and infantry weapons replace indirect supporting fires on the objective. Infantry close with and destroy the enemy in close combat and protect the tanks from individual antitank weapons and tank killer teams. Whenever possible, the machineguns of the armored personnel carriers are used to support the assault from the dismount area until their fires are masked by advancing riflemen. If dismounted the riflemen use assault fire to close with the enemy. The shock effect of assaulting tanks and infantry is multiplied by rapid movement and a heavy volume of fire, including the use of hand grenades. During this time the tanks continue to saturate the objective with machinegun fire, destroying enemy positions and weapons with the main tank gun. As the units arrive at the far edge of the objective, fire is directed on the enemy dispositions beyond the objective area. As soon as the objective is seized, the tanks and infantry are moved to positions dominating avenues of enemy approach and prepare to repel counterattacks or to continue the attack. Further actions to consolidate the position are carried out.

(2) *Tank support by fire only.* Terrain or obstacles may make it impossible for tracked vehicles to join in the assault. In this situation mechanized infantry (dismounted) will conduct the assault just as any other infantry unit. Tanks will be used to support by fire with full consideration given to the long range and rapid rate of fire of the tank weapons and the precision and control with which these fires can be delivered. As soon as the obstacle can be overcome, tanks will rejoin the infantry.

b. Coordination and Cooperation in the Assault. The tank-infantry grouping is employed by the commander in a manner that takes maximum advantage of the best characteristics of both elements. Maximum destructive effect on the enemy is obtained only with careful coordination and complete cooperation among the individuals of the tank, rifle, and scout squads and their leaders, and between platoons and troops. *Lack of such coordination may lead to one or more of the following undesirable situations:*

(1) *Undue separation between tanks and infantry in the assault.* This condition may permit the enemy to man his weapons, destroy supporting dismounted riflemen, and attack unsupported tanks at extremely close ranges.

(2) *Armored personnel carriers interspersed with or preceding tanks in the assault.* Such action exposes the ar-

mored personnel carrier to fires it was not designed to withstand. An enemy gunner may or may not distinguish between two types of tracked vehicles at this time. Further, rifle squads mounted in carriers have little power to counterattack.

(3) *Cruising the objective.* Unless tank commanders and armored personnel carrier commanders or drivers are given specific directions as to their mission upon completing the assault, vehicles may be exposed needlessly to enemy fire because of confusion and the resulting unnecessary, uncovered movement on the position.

(4) *Armored personnel carriers left in exposed positions.* The vehicle commander must insure that the driver places the vehicle in a protected or defilade position immediately after the squad dismounts to avoid needless loss from antitank or other fires.

c. Rejoining of Armored Personnel Carriers and Squads on the Position. Once a dismounted assault has cleared the position, it will be necessary to bring armored personnel carriers forward to rejoin their units. Any of the following techniques may be used, but they must be coordinated with vehicle drivers before the rifle squad dismounts.

(1) *Radio.* All armored personnel carriers are provided with vehicular radios that net with the sets carried for dismounted use. If this technique is used, the driver must constantly monitor the radio.

(2) *Messenger.* A dismounted messenger may be sent to the position occupied by the armored personnel carriers to guide them to their respective units. For its success this method depends on a route clear of the enemy. This is the slowest method.

(3) *Pyrotechnic devices.* A pyrotechnic signal may be fired to indicate to vehicle drivers the time to move and the approximate location of the unit. This technique is dependent for success on constant scanning of an area by the driver, visibility, availability of pyrotechnics to which this meaning may be assigned, and possession of the signal device by the unit.

(4) *Vehicles follow dismounted personnel.* Under limited visibility and when effective enemy antitank fire are unlikely, armored personnel carriers may follow the dismounted rifle squad, keeping the last man in sight. This technique has the advantage of keeping the armored personnel carrier close to its unit with little time lost in remounting, but may result in its loss if the unit becomes involved in a fire fight.

99. Actions on Position

a. Immediately upon taking the objective, the troop deploys to repel a counterattack. Adjustments are made to fit the situation. Mortars and other organic weapons in the base of fire displace forward by echelon and cover possible avenues of enemy approach to the front or flanks of the objective by fire. Ground and air scouts should be used to provide security to the front and flanks and to maintain visual contact with the enemy. Supporting artillery and tactical air are used to reinforce the position against hostile counterattacks.

b. The troop may be required to remain on or in the vicinity of the position and defend it or to continue the attack. If the troop is required to remain on the position or continue the attack, time permitting, vehicles are supplied without delay and placed in defilade positions. Logistical support is provided by the troop trains.

c. After the troop is deployed to repel a counterattack, reconnaissance is begun for a continuation of the attack. At the same time, reorganization takes place. Casualties are evacuated and troops are redistributed as necessary. The unit situation, strength, and vehicle and ammunition status are reported. Prisoners are interrogated briefly for immediate tactical information and sent to PW collecting points as quickly as possible.

100. Continuation of Attack

The armored cavalry troop commander should have a complete picture of the plan of

the next higher commander. He makes a continuous estimate of the situation. If the plan calls for a continuation of the attack, the troop is deployed on the position to facilitate resumption of the advance. If this procedure is followed, only brief oral orders will be required to continue the attack.

101. Employment of Air Cavalry Elements

Air cavalry elements, if available, may be employed to protect the flanks of the troop maneuver force and to harass the enemy's rear. As the attack progresses they maintain visual contact with the withdrawing enemy force and provide early warning of impending enemy counterattack or approach of reinforcements.

102. Use of Army Aircraft in Troop Attack

Scouts, dismounted rifle squads, and support squads may be transported by air vehicles during an attack. For a detailed discussion of airmobile operations see FM 57–35.

Section IV. SECURITY OPERATIONS

103. General

a. The size of the security force will be determined by an analysis of the factors of METT. The armored cavalry troop is well suited for use as a security force because of its mobility, firepower, and extensive and flexible means of communication. The troop may be employed on security missions alone or as part of a larger force. FM 17–1 covers the principles of security operations and the fundamentals of employment for each type of security action. For the definition of security, refer to paragraph 3.

b. Security missions performed by the troop include advance guard, flank guard, rear guard, screening mission, and acting as part of a general outpost, covering force and rear area security force.

104. Advance Guard

a. General. The armored cavalry troop may be employed as an advance guard or as part of an advance guard for the parent squadron or for the unit to which attached. Air cavalry elements or Army aircraft can render assistance to the advance guard by extending the range of reconnaissance and providing security, and should be made available to support the troop. The troop, when acting as the advance guard for the squadron, should march far enough in advance of the main body to insure that the main body has the time and space necessary to react to an enemy threat. For definition of advance guard refer to paragraph 3.

b. Formation for Advance Guard Mission. The troop may advance on multiple routes or in column. When moving in column, the following platoons are prepared to support the leading platoon in any action necessary to accomplish the mission. These platoons will usually be employed as organized; however, their tanks and rifle squads may be grouped in provisional units under one platoon leader to provide an attacking force for the troop. The scout sections of these two platoons may be grouped under the third platoon to provide flank security. The three support squads are normally employed under troop control and provide mortar fire support to all elements of the troop (fig. 31). When moving on multiple routes a platoon is assigned to each route. In addition to the advance guard mission the flank platoons may be required to provide flank security. If the routes are within range the three support squads may be employed under troop control to provide mortar fire support to all platoons.

c. Conduct of Advance Guard.

(1) Once enemy forces are encountered, the troop commander takes prompt and aggressive action to develop the situation and, within his capability, employs offensive action to defeat the enemy. His actions will vary according to the situation as developed by the leading platoon. Actions taken by the troop commander include these four steps:

(*a*) Deploy the troop and report initial contact.

(*b*) Develop the situation.

(*c*) Choose a course of action.

(*d*) Report the enemy situation and course of action taken to next higher headquarters.

(2) When the situation requires the main body to attack, the troop may provide security, support by fire, or join in the attack.

105. Flank Guard

a. The armored cavalry troop may execute a flank guard mission alone or as part of a larger force. When participating in a flank guard operation as part of the squadron, the troop may be assigned an advance or rear guard mission, or required to attack alone or as part of the squadron to seize or occupy blocking positions.

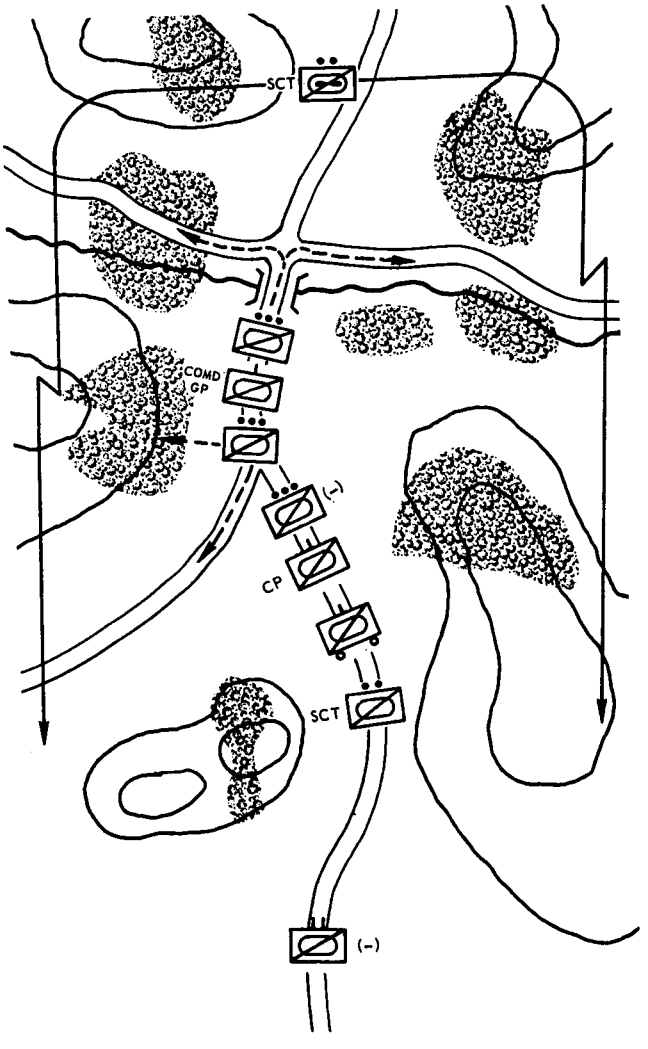


Figure 31. Typical formation for the armored cavalry troop employed as advance guard.

It may perform a screening mission when the squadron is overextended. For the definition of flank guard, refer to paragraph 3.

b. When the troop is to perform a flank guard mission as an independent force, the troop commander plans the mission in the following sequence:

(1) Initially, he makes a map reconnaissance of the area of operations and selects the most likely avenues of enemy approach. He selects a series of blocking positions on the flank that generally parallel the main body's axis of advance. These blocking positions should be located on defensible terrain that dominates likely avenues of enemy approach. The blocking positions should be at sufficient distance from the flank of the main body to permit timely warning of enemy approach and to provide the main body with sufficient time and maneuver space to react to an enemy threat. The blocking positions should be located in such a manner as to deny the enemy ground observation and direct fire on the main body. These positions should be within supporting range of the artillery of the main body. If the flank guard force encounters a superior enemy force, the positions should be far enough apart to provide sufficient terrain for the conduct of a delaying action toward the main body. However, the distance between the axis of advance or flank of the main body and the line of blocking positions should not be so great that one armored cavalry platoon cannot secure this frontage.

(2) The troop commander normally selects the troop route of advance unless a route of advance has been prescribed by higher headquarters. During a penetration, the larger unit commander normally designates a specific route for the troop. The route selected should be far enough from the axis of advance of the main body to prevent the troop from interfering with the maneuver of the main body, but with-

in the capability of one platoon to secure the area between the main body, and the troop route of advance. The route should be interior to, and permit rapid access to, the line of blocking positions (fig. 32). If a suitable route does not exist, the troop may be required to operate cross country.

(3) The troop commander next develops a scheme of maneuver that will enable the troop to seize and hold selected blocking positions and secure the area between the leading task force of the main body and the troop route of advance. The scheme of maneuver includes provisions for seizing the blocking positions either by individual platoon actions or by a coordinated troop effort. The troop commander must also decide the strength required to hold the blocking positions that have been seized.

(4) Contact points must be easily identifiable, they should be located forward of the line of blocking positions and generally between the individual blocking positions. Contact points delineate the area of responsibility for the platoon holding each position, and indicate that the platoon is responsible for the position and the area between the contact points on each flank. The platoon is required to make physical contact with adjacent units at the contact point.

(5) The troop commander selects a formation that will permit rapid employment against enemy resistance. The formation must provide for maximum flexibility to meet any change in the solution. The column formation provides the best control and maximum flexibility. The troop provides its own security. Normally, each platoon is required to provide security for its exposed flank. Scouts are used to provide security for the platoons and to extend reconnaissance.

(6) Employment of Army aircraft and elements of the air cavalry troop, if available, are included in the troop plan of operation.

c. During the conduct of a flank guard operation, the troop moves parallel to the axis of advance of the main body. It regulates its movement on the main body. The area of responsibility for the flank guard of an advancing force starts at the rear of the leading battalion (TF) and ends at the rear of the combat elements of the main body (exclusive of the rear guard), or as otherwise specified. The lead platoon provides the advance guard for the troop, secures the area between the main body and the troop route of advance, and maintains contact with the rear of the leading battalion task force of the main body. If the leading platoon is not able to accomplish its three-fold mission, the troop commander either employs

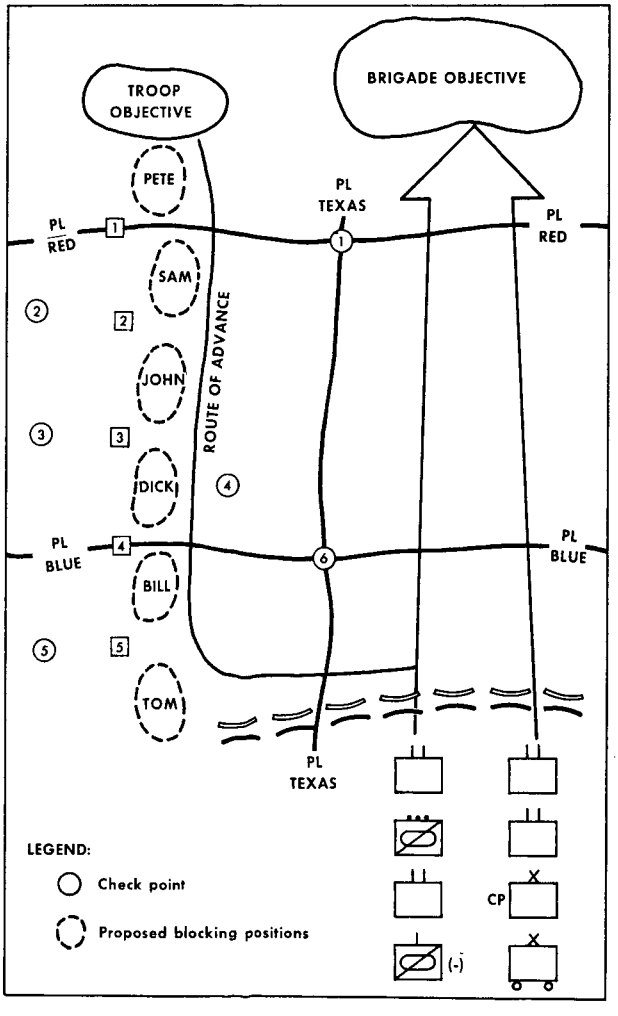


Figure 32. Planning for the employment of the armored cavalry troop as a flank guard.

an additional platoon or reinforces the leading platoon to the extent necessary to insure that the task is performed properly (fig. 36). If available, Army aircraft may assist in this mission. The remainder of the troop marches in column, prepared to secure blocking positions on order. The decision to occupy these positions and the method of movement that the troop may employ will depend on the speed with which the main body is advancing and the enemy situation on the exposed flank. If the troop becomes overextended, the troop commander should ask for permission to screen all or part of the area or to be relieved of responsibility for the rear part of the rear. When the main body is stationary, the troop occupies blocking positions covering the likely avenues of enemy approach. When the blocking positions are being occupied, the troop CP and combat trains are located far enough from the blocking positions to preclude their frequent displacement should the flank guard be required to conduct a delaying action. There are three basic methods of movement that the troop may employ to furnish the required flank protection.

(1) *Alternate bounds.* This method may be used when the element being secured is advancing slowly and strong enemy resistance is anticipated against the flank guard. When all subordinate units have been employed and the main body's advance requires the securing of additional positions to the front, the rear unit is moved forward from its previously occupied blocking position to a new one to the front (fig. 33).

(2) *Successive bounds.* This method is used when the movement of the main body is characterized by frequent short halts. Each subordinate unit occupies designated blocking positions. When forward movement is resumed, subordinate units retain their relative position in the flank guard formation as they move forward to occupy successive blocking positions (fig. 34).

(3) *Continuous marching.* This method is used when the main body is advancing rapidly at a constant rate and the enemy resistance to the flank is very light. The flank guard uses a column formation and moves without halting, adjusting its rate of advance to the movement of the main body (fig. 35).

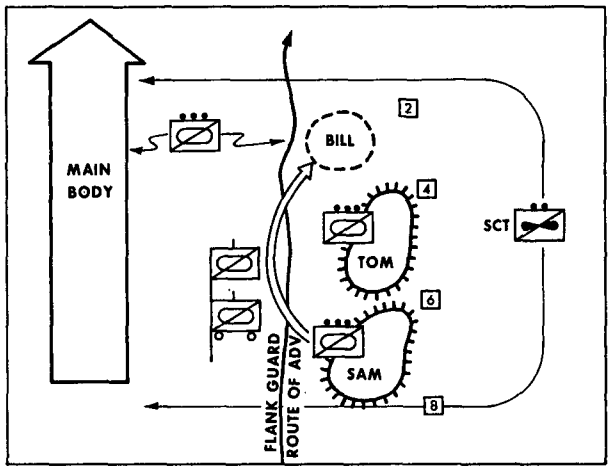


Figure 33. Armored cavalry troop as flank guard using alternate bounds.

d. The troop operating as a flank guard for a defensive force occupies a series of blocking positions on the flank of the main body. The blocking positions are located on key terrain that dominates likely avenues of enemy approach into the sector. The troop is normally given a sector of responsibility that is defined by specific terrain features, contact points, and boundaries. In accomplishing the mission, the troop employs defensive tactics. If forced from its positions, it employs delaying action techniques, providing time and space for the main body to react to the threat.

e. Operations of the troop as flank guard for a unit performing a retrograde movement are similar to those of a troop performing as flank guard for an advancing force. The major difference is that in the retrograde movement the area of responsibility is from the front of the last unit (which may be the rear guard) to the front of the first unit in the formation.

106. Rear Guard

a. The rear guard follows the main body at a distance prescribed by the main body commander and usually moves on the same route. It is prepared to intercept and engage enemy forces that attempt to attack the rear of the main body. If attacked by superior forces, the

rear guard employs delaying action in accomplishing its mission. It must not permit itself to be driven into the main body. For the definition of rear guard, refer to paragraph 3.

b. When planning a rear guard operation the troop commander considers the following:

(1) *Terrain.* The troop commander should analyze the terrain in the area of operations. He selects a series of delaying positions along the prescribed route of advance or withdrawal. Depending on the terrain and existing road net, the troop may be required to withdraw on more than one route.

(2) *Organization of the rear guard.* The troop commander must determine the number of platoons to be employed in the initial delaying position. If the situation permits, he may position one platoon in depth. He assigns a troop route of withdrawal and designates the control measures necessary to insure effective control. Measures normally employed by the troop commander include delay positions, phase lines, check points, contact points, and route of withdrawal.

(3) *Security.* The troop commander plans for flank security and reconnaissance to the front and flanks of occupied delaying positions. Active measures must be taken to insure that the enemy does not bypass the rear guard and attack the rear of the main body. Plans may include assignment of a mission to one or more platoons to reconnoiter a given area to the front or flanks of a position. Normally, however, platoons are assigned the additional mission of protecting the flanks and extending reconnaissance to the platoon or platoons on the delaying position. The reconnaissance mission to the front and flanks is normally accomplished by scout elements operating under platoon control. Army aircraft can augment the effort of the platoons by extending observation to the front and flanks. The organic short range ground radar set may be used to augment security to the front or flanks. Elements of the air cavalry troop may be employed to maintain contact with the main body, and to prevent the enemy from bypassing the rear guard and attacking the rear of the main body. In addition, air cavalry elements may establish an air screen to the front of the rear guard to provide timely warning of enemy approach.

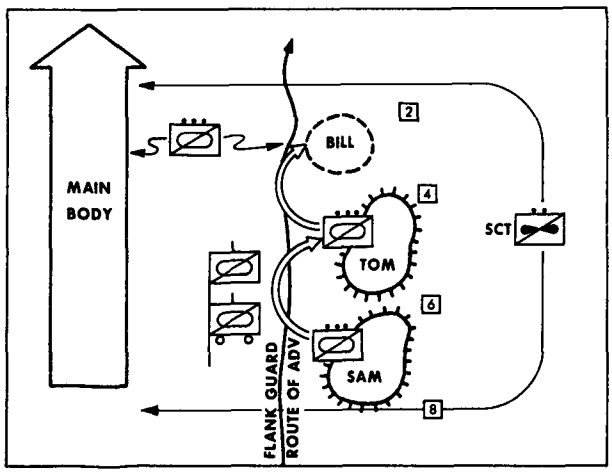


Figure 34. Armored cavalry troop as flank guard using successive bounds.

(4) *Supporting elements.* Frequently, engineers are attached to or placed in support of the rear guard. The troop commander, together with the engineer unit leader, makes plans to construct obstacles to delay the enemy. When artillery support is available, the troop commander, in coordination with the artillery forward observer, develops the fire support plan for the operation. The fire support plan includes planned artillery fires, organic mortar fires, tactical air, aerial fire support, and the fires of organic weapons.

(5) *Plans and actions of the main body.* It is essential that liaison be maintained with the main body to regulate the rate of withdrawal of the rear guard. In addition, the rear guard commander must be thoroughly familiar with the plan of the main body and have continuous communication

with the main body commander so that both commanders are informed of any situations that affect withdrawal of the rear guard. A liaison agent, preferably the troop liaison sergeant, may be designated to accompany the main body to effect this liaison. Another solution is to have the necessary information relayed by the troop command post that may move close behind the main body.

(6) *Delaying positions.* Plans must include reconnaissance of delaying positions. The troop executive officer and such others that can be spared are used for this purpose.

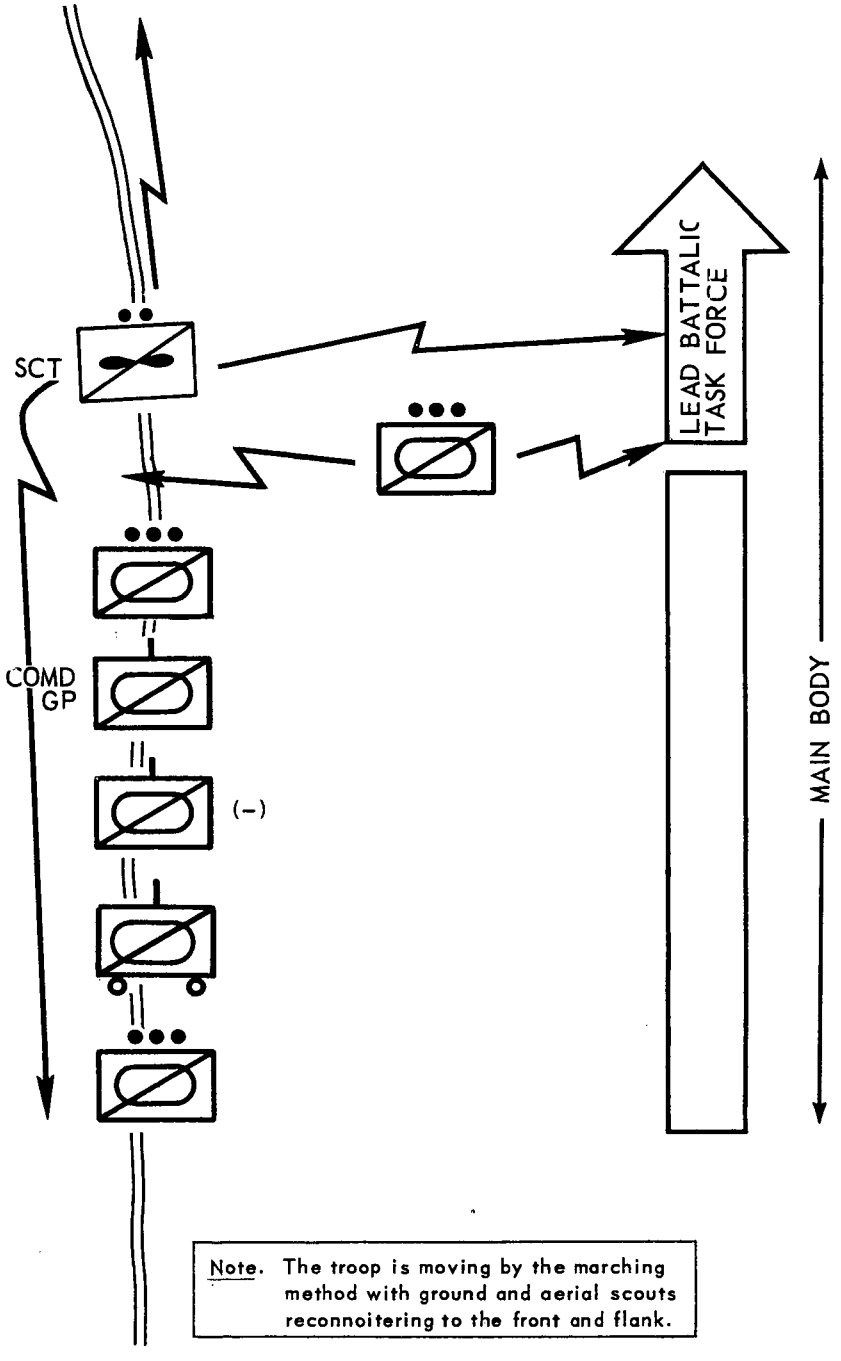


Figure 35. Armored cavalry troop as flank guard using continuous marching.

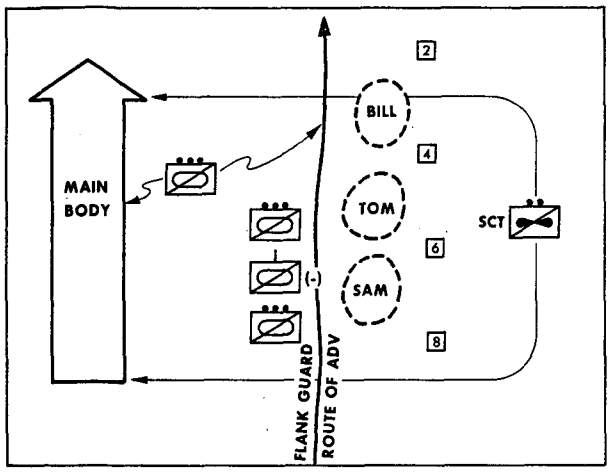


Figure 36. Armored cavalry troop employed as a flank guard, with one platoon maintaining contact with main body.

(7) *Command post and trains.* The troop commander must plan the movement and locations of the troop command post vehicle and trains. Disposition of elements of the troop and the proximity of the main body will normally provide security for these elements.

c. The troop as rear guard follows the main body by bounds, occupying successive positions or following the main body by a prescribed time or distance interval. It occupies each position and remains there until the main body has cleared the next position. The distance between the rear guard and the main body should not permit the enemy to bypass the rear guard and attack the main body (fig. 37).

d. The rear guard engages all enemy forces that threaten the rear of the main body. It fights to insure that the enemy does not impede the movement of the main body. The rear guard normally fights a delaying action, trading space for time until the main body has moved beyond the range of effective enemy action. When contact with the enemy has been made, it is maintained until the enemy is no longer a serious threat to the main body or has moved out of the area of responsibility.

e. If the main body is moving rapidly and no contact is made with the enemy, the rear guard moves at a given rate of march behind the main body. It regulates its speed to stay the prescribed distance behind the main body.

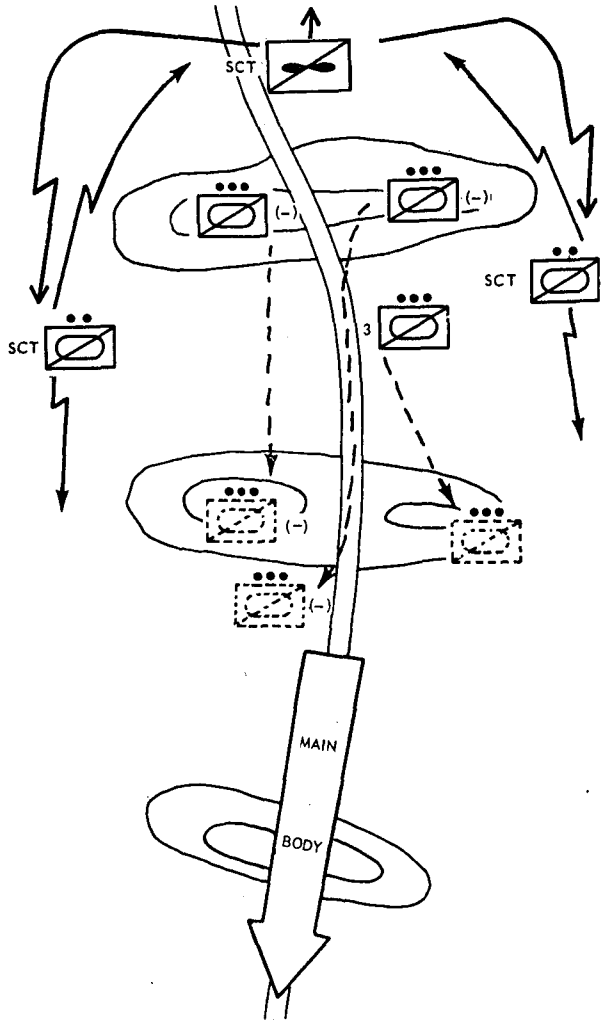


Figure 37. Conduct of rear guard action by the armored cavalry troop.

107. Covering Force

a. The covering force engages in any type of action necessary for the successful accomplishment of its mission. When participating as part of an advance covering force, the troop normally conducts a route or zone reconnaissance. When employed as part of a rear covering force, the troop normally conducts a delaying action. When participating in a flank covering force mission, the techniques employed are similar to a flank guard operation. The flank covering force operates at a greater distance from the main body. The covering force must not become decisively engaged, bypassed, or enveloped. For the definition of covering force, refer to paragraph 3.

b. The armored cavalry troop normally operates as part of the covering force when the main body is advancing to contact, engaged in mobile or area defense, or is conducting a retrograde movement.

c. When the troop is employed as part of a covering force for an advancing unit, it performs reconnaissance within its assigned zone to locate enemy forces. When contact with the enemy is made, the troop attacks and destroys or disperses the enemy within its capability. An enemy force may be bypassed if stated in the mission or on order of the squadron commander. The troop must adopt a formation that provides for rapid employment against enemy resistance.

d. The armored cavalry troop may be employed as part of a covering force for a unit conducting a retrograde operation. The higher commander directing the covering force action will designate the general area in which it is to conduct its operations. Instructions will also include a general line in front of which the enemy is to be held, and the time required to accomplish the mission. The time element is normally expressed in hours or days. In executing a covering force mission as part of a larger force, the troop is assigned a zone and accomplishes its mission by delaying action.

108. Screening Force

a. A screening mission is characterized by the employment of relatively few forces over a wide area. The mission is accomplished by establishing observation posts, and patrolling when necessary, to cover all approaches into the area. The higher commander specifies the general trace of the screen, the units to be screened, and the responsibility for the area between the screening force and the screened units. The mission of a screening force is to provide early warning of enemy approach and to maintain contact with the enemy. Forces disposed on a screening mission cannot be expected to offer significant resistance to the enemy. Screening forces will fight to protect themselves and to destroy small unit patrols (figs. 38 and 39). For the definition of screening force, refer to paragraph 3.

b. Scout elements and rifle squads establish observation posts and conduct patrols across the troop sector. The tank sections and support squads are retained in positions behind the screening force to destroy enemy patrols and assist in their withdrawal.

c. The troop commander plans a screening mission as follows:

(1) Upon receipt of a screening mission, the troop commander makes a map reconnaissance. The enemy situation, the width of the sector assigned the troop and the amount of travel involved often preclude the troop commander from making a ground reconnaissance of the entire area. If Army aircraft are available, he may make an air reconnaissance.

(2) Based on his reconnaissance, the troop commander selects the general location of observation posts and designates contact points between and forward of the observation posts. He makes tentative plans for the employment of each platoon. In selecting the general locations of OP's to cover likely avenues of enemy approach, he should consider the factors discussed in paragraph 51. Normally, tanks are not positioned in the vicinity of the observation posts. The troop command post is located well to the rear for security and on high ground that provides good communication.

(3) Phase lines and check points are used to control movement in the event the screen is forced to withdraw. Contact points are established forward of and generally between the observation posts.

(4) When supporting artillery fires are available, the troop commander coordinates their use with the artillery forward observer. The plan of fire support includes harassing fires on the enemy at defiles or other confining terrain features, and protective fires for observation posts and patrols. Elements of the air cavalry troop may be employed to establish an air screen beyond the ground OP's to reconnoiter primary avenues of enemy approach, to maintain contact with the main

body, or both. Army aircraft may be used to extend observation to the front and flanks, to make periodic flights over sensitive areas, and to transport patrols. Electronic surveillance devices are employed to increase the effectiveness of the screen during periods of poor visibility.

(5) When the troop is operating as part of a larger force, the troop commander coordinates with adjacent units to insure that the area between the two units is covered adequately by observation.

d. The observation post or patrol that observes an enemy force reports its location and progress. The observation post or patrol reporting the enemy usually remains hidden so as not to disclose its location. Uncommitted elements of the troop and supporting fires are employed to destroy the enemy patrol or drive it from the platoon or troop sector.

e. When any enemy force, posing a threat to the main body, approaches the position, it is reported by the fastest means available. Every effort is made to obtain the strength, composition, disposition, and direction of movement of the enemy force. Once contact has been

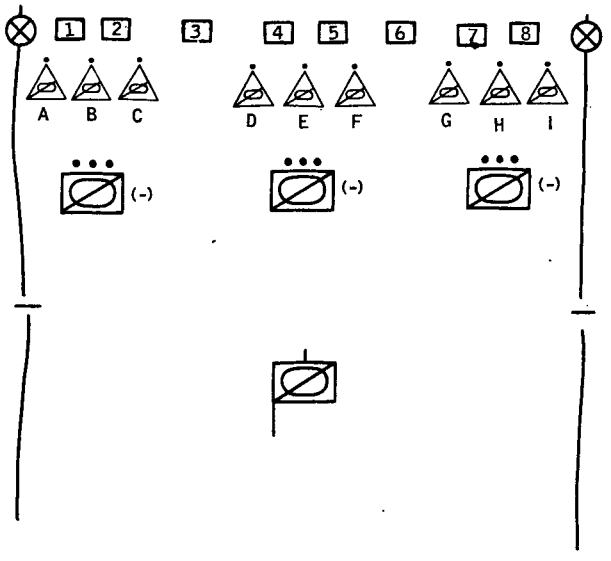


Figure 38. Armored cavalry troop deployed on a stationary screening mission.

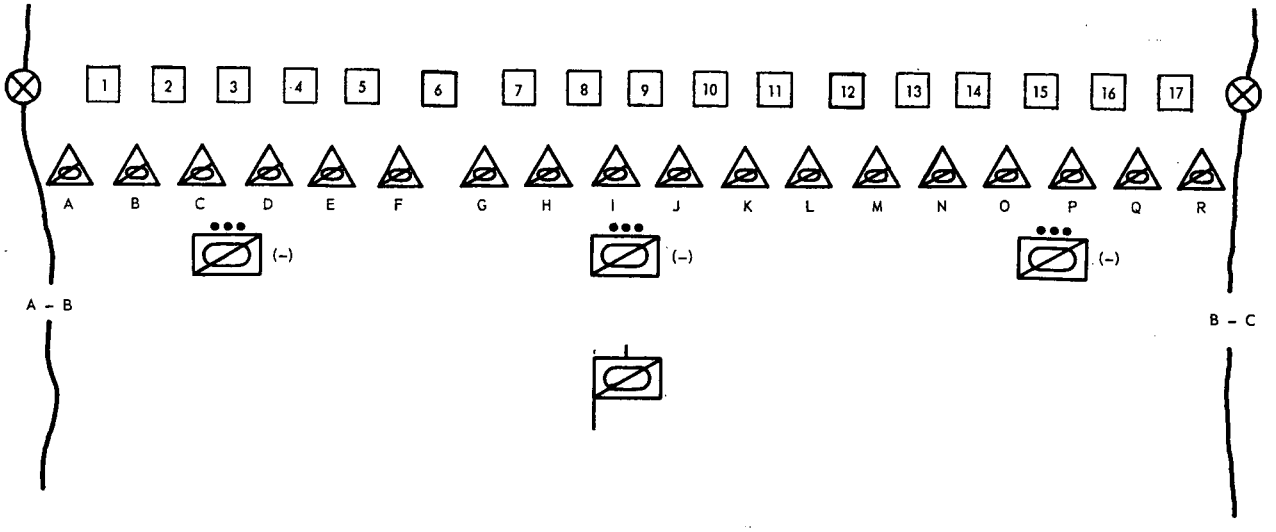


Figure 39. Armored cavalry troop conducting stationary screen over maximum frontage for short periods with good visibility.

made, one or more observation posts may be assigned the mission of maintaining visual contact with the enemy. The remainder of the troop may reinforce the observation posts, with certain elements designated by the troop commander to move with the enemy and to report changes in the situation. When required, the entire troop may be ordered to withdraw to a new line of observation posts. All available fire support is used to harass and impede the progress of the enemy. When contact has been gained with the enemy, it is maintained until the enemy moves out of the troop sector of responsibility. Enemy movement that may affect another unit is reported promptly to higher headquarters.

109. Rear Area Security Force (STANAG 2079)

a. General. The armored cavalry troop will normally perform rear area security as part of a larger force. The troop commander must carefully coordinate the efforts of the troop with those of other combat elements in the area. He must also avoid stereotype operation of patrols, observation posts, and listening posts as regards time, areas, and patrol routes. For the definition of rear area security, refer to paragraph 3.

b. Securing Lines of Communication. The techniques employed to guard lines of communication vary with the terrain, the road net, the length of the lines of communication, and the type of enemy activity expected. The following techniques form the basis for plans to secure lines of communication.

(1) If the lines of communication to be secured extend only a short distance, platoons may be assigned areas of responsibility. Small security forces consisting primarily of scouts are placed on dominating terrain features overlooking avenues of enemy approach. The troop commander maintains as large a reserve as possible to counter any enemy threat that develops in the troop area of responsibility.

(2) If the lines of communication are long and must be guarded over a great distance, larger areas of responsibility are assigned to the platoons. Every effort is made to insure that both flanks of the route are covered by a series of observation posts. These posts have the mission of giving warning of enemy approach. The remainder of the troop patrols the line of communication and provides escorts for vehicles moving through the area.

(3) In employing either of the techniques discussed above, the troop commander may organize provisional platoons of scouts, tanks, and riflemen to best accomplish the assigned mission. The scout elements are best used to man observation posts and for patrols. They may be augmented by riflemen. The remainder of the troop is held in reserve to escort convoys and to counter enemy threats.

c. Security Against Airborne, Airmobile, and Guerrilla Attack.

(1) When protecting a rear area against enemy airborne, airmobile, or guerrilla forces, the commander deploys his troop to best counter the enemy threat. He usually accomplishes this by establishing observation posts that provide a good view of likely drop zones, landing areas, and areas where guerrilla forces may assemble, and by patrolling the entire area. The remainder of the troop is retained in a central location, from which it is prepared to move rapidly to any part of the troop area. FM 31–15 contains additional information on operations against irregular forces.

(2) Upon being assigned a mission to defend an area against airborne, airmobile, or guerrilla attack, the troop commander reconnoiters his area and selects likely drop zones for airborne forces, landing areas for airmobile forces, and potential assembly areas for guerrilla forces. From this he determines where to establish observation posts, routes for patrols, and suitable assembly areas for the troop reserve (fig. 40).

(3) The bulk of the tank strength, available riflemen, and the support squads form the centrally located reserve. Patrols are conducted and observation

posts established primarily by scout elements. Riflemen may supplement the scouts as required.

(4) The key to success against airborne or air landed forces is rapid deployment and the placing of maximum fires on the airborne or airmobile forces during the early phases of the landing. Consequently, movement to attack enemy forces is of such paramount importance that piecemeal commitment may be required.

(5) Counterguerrilla tacts include defensive actions to prevent or minimize the effects of guerrilla actions, and offensive actions directed at destruction of guerrilla forces. Specific actions taken against guerrilla forces should be to detect them early, take them under fire, and attack rapidly to destroy them. A detailed discussion is found in paragraphs 312 through 315.

(6) The troop may be required to seize and secure an attack position and a line of departure when the main rear area security force is committed.

d. Elements of the air cavalry troop, if available, may be employed to perform periodic aerial surveillance of the area and reconnoiter likely landing areas for airborne and airmobile forces. The capability of air cavalry units to move at relatively high speed without regard to terrain obstacles should be used to the maximum to rapidly locate and engage enemy forces.

110. Protecting an Installation

The armored cavalry troop may be required to protect an installation in the rear areas, such as a supply installation or an element of the nuclear weapons delivery system. The troop is deployed generally the same as for all-round defense (fig. 41). The troop commander provides early warning of enemy approach by establishing an OP system around the installation, by continuous patrolling, and when Army aircraft are available, by aerial surveillance. Short range ground radar sets of the ground surveillance section are used to improve security. The troop commander should maintain a tank-heavy reserve close to the protected installation. Mortars may be grouped under troop control to provide fire support.

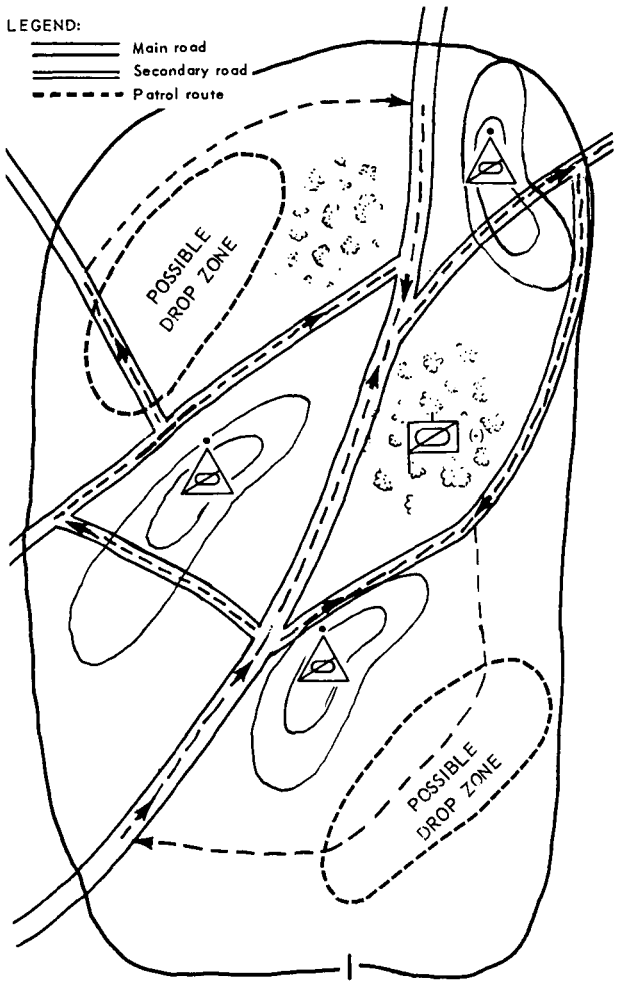


Figure 40. Armored cavalry troop deployed for defense against an airborne threat.

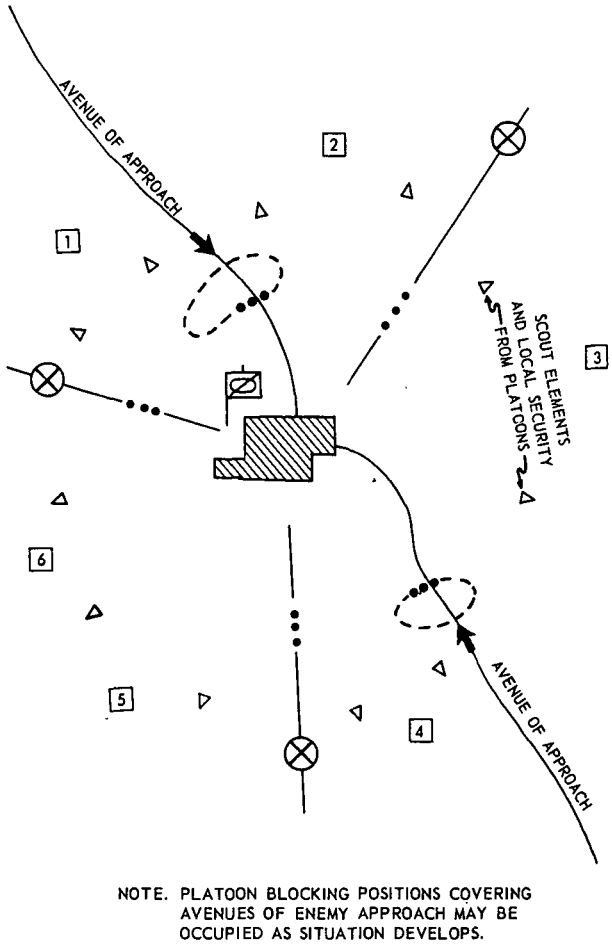


Figure 41. Armored cavalry troop protecting an installation.

Section V. DEFENSIVE OPERATIONS

111. General

a. The armored cavalry troop may be required to engage in defensive action in the performance of normal reconnaissance and security missions. In an economy of force mission, the troop may be required also to defend a specific area, terrain feature, or installation.

b. The troop is most effectively employed in the defense when it is assigned reconnaissance or security missions for a larger unit. For basic considerations, types, and conduct of defensive actions, see FM 17–1.

112. Employment of Armored Cavalry Troop in Defense

a. The armored cavalry troop may be employed in defensive operations either alone or as part of a larger force. When part of a larger force in a defensive action, the troop may participate in the mobile defense or area defense. The mobile defense is the type normally adopted by the armored and mechanized divisions, while the area defense is the type more frequently employed by the infantry division.

b. In the mobile or area defense, the troop is best employed when given a security force mission.

113. Organization of the Ground for Defense

When the enemy possesses a modern mechanized force, the primary consideration in the defense is the antitank plan. Measures for increasing the effectiveness of defensive fires and permitting maneuver by elements of the troop take precedence over other actions in organizing an area for defense. The defensive position is organized to permit delivery of maximum fires on the enemy, impeding and canalizing his advance and reducing the effects of his fires, and to force him to mass, thereby providing a lucrative nuclear target.

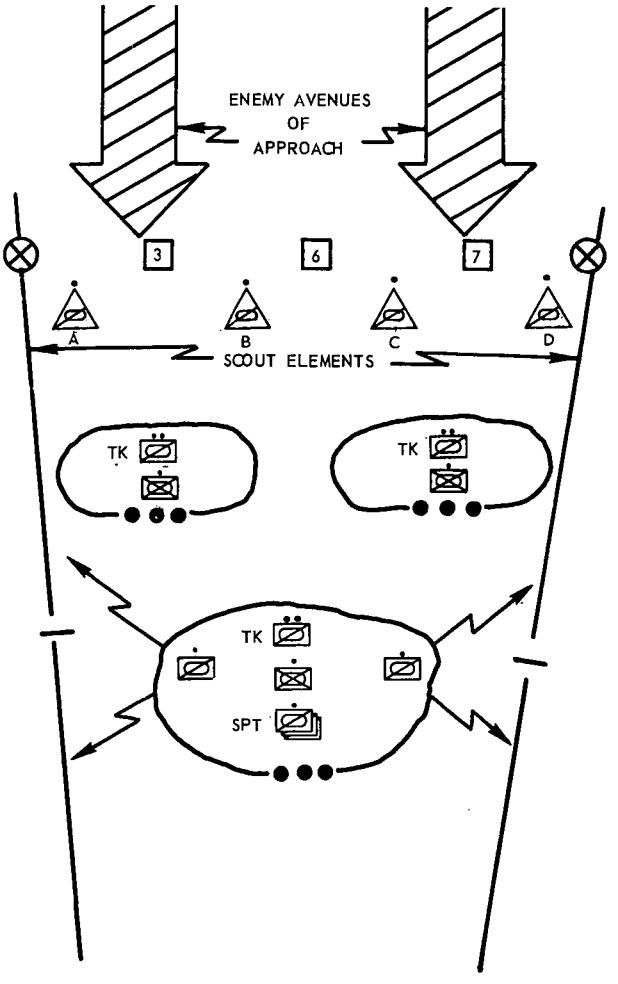
114. Reconnaissance and Selection of Position

Assignment of a defensive position to the armored cavalry troop is normally the responsibility of the squadron or the supported unit commander. The troop commander reconnoiters his assigned area to find the likely enemy avenues of approach into the troop sector. In selecting a position, the troop commander analyzes the terrain with particular emphasis on key terrain features, observation and fields of fire, cover and concealment, obstacles, accessibility of positions, and communication.

115. Occupation of the Defensive Position

a. Based on the results of his reconnaissance and estimate of the situation, the troop commander locates his platoons to cover avenues of approach into his area of responsibility. The nucleus of each platoon defensive position is the tank section and rifle squad. If there are two enemy avenues of approach into the troop sector, the troop commander may employ two platoons forward to block the avenues of approach and position the third platoon in depth. The troop commander may employ the mortars and scouts from each platoon directly under troop control. When possible, mortars are massed to support the actions of all elements of the troop. Scout sections operating under troop control may be used to provide local security by manning observation posts and by conducting patrols in the troop area (fig. 42). On occasion, the troop commander may elect to organize a provisional tank platoon, rifle platoon, and scout platoon, with the support squads employed under troop control. In this situation, the tank platoon will be employed to cover the most likely avenue of enemy armor approach, and the infantry platoon disposed to provide protection for the tanks and cover avenues of enemy infantry approach. Tanks are seldom employed alone. The tanks and rifle squads are employed as a team. Scout elements are used to establish observation posts and to patrol the areas between platoons or between the troop and adjacent units. The short range radar sets are employed to cover the most likely avenues of enemy approach into the defensive position.

b. When the organization for combat is complete, the defensive position is occupied. The platoons immediately prepare the ground for defense. Fields of fire are cleared, tanks are placed in hull defilade, and emplacements are



NOTES. 1. SCOUTS MAY BE ORGANIZED INTO A PROVISIONAL PLATOON.
2. MORTARS MAY REMAIN UNDER PLATOON CONTROL OR BE MASSED UNDER TROOP CONTROL.

Figure 42. Schematic diagram of the armored cavalry troop in defense.

dug for crew-served weapons. The firepower of machineguns on the armored personnel carriers is usually integrated into the all-round defense of the troop. Armored personnel carriers should be employed in or near the areas of the rifle squads they transport. Normally, the carriers will be placed in defilade to the rear of the position; as the situation develops, they will be moved to previously selected alternate and supplementary positions as required. When scout elements man observation posts, their armored vehicles accompany them and are placed in position to provide protection for the OP. Plans are made to integrate their machineguns into the all-round defense of the troop when they withdraw from the OP. When employed within the defensive position of the troop, their armored vehicles are positioned the same as armored personnel carriers.

116. Strengthening the Defensive Position

a. Strengthening of the defensive position is continued as long as it is occupied. The rifle squads and scout sections perform necessary pioneer work to improve the position.

b. Full advantage must be taken of natural obstacles. Tactical wire, mines, and other obstacles are placed to break up the enemy attack and hold him in areas covered by defensive fires. Obstacles should be inconspicuous from ground and air observation, and they are covered by direct fire to prevent their removal or neutralization by the enemy.

(1) Wire entanglements, trip flares, noise makers, and antipersonnel mines (as authorized) are employed to provide warning and to delay and prevent an assault. The distance from the unit to the wire entanglement should permit day and night observation. It should be beyond effective hand grenade range.

(2) Use of antitank mines is coordinated with the use of other obstacles and antitank weapons. Antitank mines are laid forward of the defensive position to connect or extend other obstacles and to canalize enemy armor into areas where antitank fire is most effective. Antipersonnel mines are normally used in conjunction with antitank obstacles and minefields to prevent ease of removal or breaching. When barrages of artillery and mortar fire are planned, the mines are usually located at the near edge of the barrage.

c. Obstacles must not be created where they will hamper the mobility of friendly forces or limit the employment of the reserves. Their use must be consistent with the overall plan of defense. Engineers normally provide technical supervision in establishing minefields and other obstacles. Because members of the armored cavalry troop must accomplish much of the pioneer work, they must be trained accordingly.

d. Dummy works, in accordance with the overall plan of defense, may be used to mislead the enemy and disperse his fire. To be effective, dummy positions must be realistic. They should be located near occupied positions, yet not so close that fire intended for the dummy position strikes troops. For further deception and increased effectiveness, dummy positions may be manned lightly during the preliminary phase of the defensive action while the enemy is attempting to determine the extent and strength of the position by air and ground reconnaissance. Examples of deceptive techniques that may be employed include:

(1) Installing dummy minefields (as authorized), including boobytraps and live mines, to inflict casualties and to force the enemy to make a cautious and thorough search of the area.

(2) Spreading canvas strips, straw, foliage, or similar material to cover sections of the road leading into the defensive position. This camouflage may be used to conceal defensive works or installations, and as a deception measure.

(3) Concealing antitank mines in felled trees or other debris blocking a road. (When a tank is stopped within such an obstacle, the obstacle is improved.)

117. Mobile Defense

a. General. The armored cavalry troop may be employed as part of any element of the mobile defense—the security force, fixing force, or the reserve.

b. Security Force.

(1) In the mobile defense, the troop normally participates as part of a squadron performing a covering force mission. It is usually assigned a sector of the initial squadron position. The troop conducts this type of mission generally as explained for the delaying action, in paragraphs 120 through 122.

(2) If the troop is assigned a flank security or rear area security mission in the mobile defense, it conducts the mission as described in paragraphs 105 and 109.

c. Fixing Force. When the armored cavalry troop is employed as part of a fixing force, the higher commander will designate the general trace along the forward edge of the battle area by a dashed line intersecting coordinating points that have been fixed along the lateral boundaries in the zone to be occupied by the troop. The higher commander may designate certain blocking positions that the troop is to prepare or occupy. As soon as possible, the troop commander initiates a reconnaissance of his area and develops his plans of defense. Platoons are positioned to provide long range fires and mutual support (fig. 43). The troop is organized for combat based on the factors of METT. No reserve is held at troop level, although, if the situation permits, one platoon should be positioned in depth. The position is organized for all-round defense. The plan of fire support is developed, range cards are prepared for all tank and automatic weapons, and overlays showing the organization of the troop sector are prepared and submitted to the squadron commander. The troop command post vehicles and combat trains are positioned to the rear.

d. Reserve. The armored cavalry troop may be employed as a part of the reserve. The preparation and conduct of the operations of the reserve are similar to those of normal offensive action (FM 17–1). When participating as part of the reserve, the armored cavalry troop is best suited for reconnaissance and security missions.

118. Area Defense

a. General. In area defense, the troop may be employed in one or more echelons of the defense: security force, forces in the forward defensive area, or reserve. The troop is most effective when it is assigned missions in which it can use its mobility and extensive means of communication to the maximum. These capabilities include—

(1) Participating as part of a covering force or general outpost for a larger unit.

(2) Acting as the combat outpost for a brigade.

(3) Acting as part of the reserve for a larger unit.

b. Combat Outpost. The armored cavalry troop may be required to furnish the combat outpost for its parent squadron, for a battalion task force, or a brigade. The troop commander assigns outpost sectors to the platoons. The combat outpost is normally located far enough in front of the forward edge of the battle area to deny the enemy ground observation into the battle area. Once the platoons have organized their respective positions, the troop commander coordinates their dispositions, making necessary adjustments.

(1) When an artillery forward observer is working with the troop, the troop commander arranges with him for supporting artillery fires. If no forward observer is available, the troop commander arranges artillery support through squadron headquarters. Mortar concentrations are prepared to cover possible avenues of enemy approach, with particular emphasis being placed on areas that cannot be adequately covered with flat-trajectory weapons.

(2) Scouts maintain contact between the outposts. The combat outpost withdraws only on order, unless authority has been delegated to the troop commander, and uses previously reconnoitered routes of withdrawal that provide maximum cover and concealment. Routes are selected that will assist in deceiving the enemy as to the true location of the forward edge of the battle area. Several plans for withdrawal are made and the troop is pre-

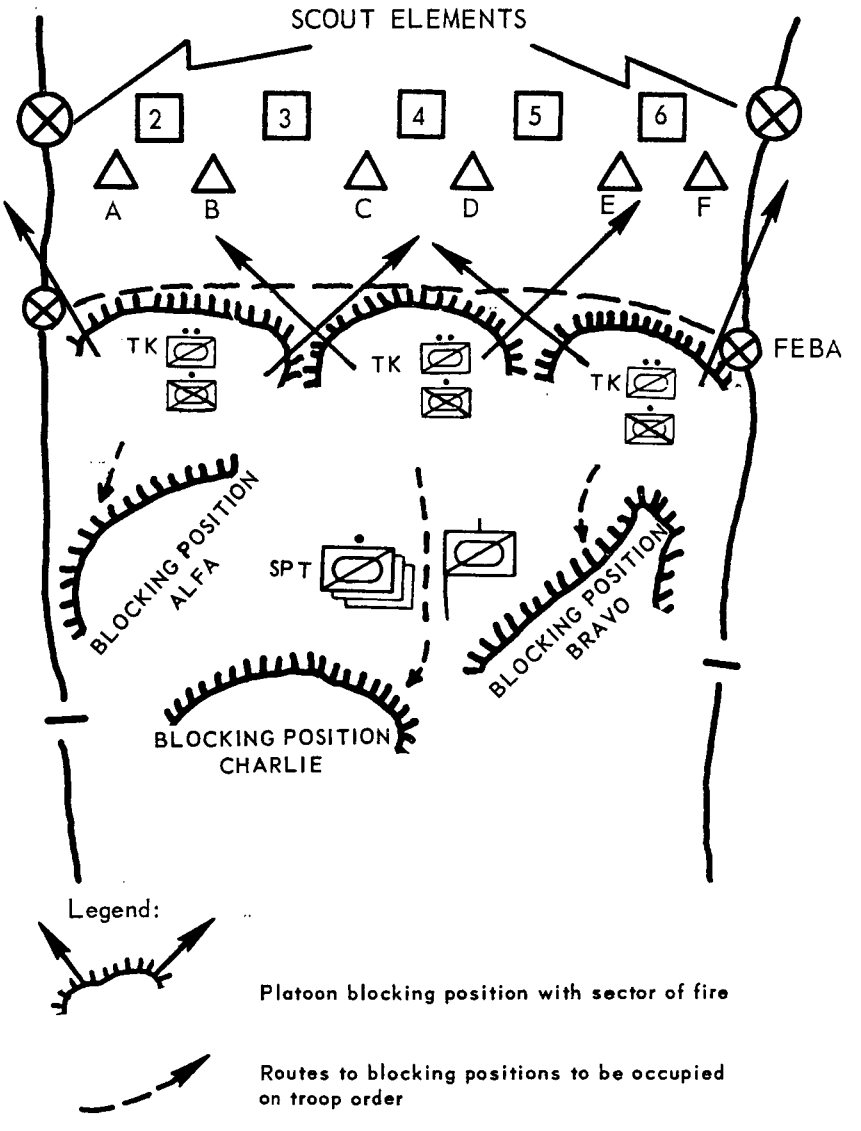


Figure 43. Armored cavalry troop occupying a fixing force position.

pared for any change in the situation. Forces in the battle area are notified when all elements of the combat outpost have cleared the forward edge of the battle area.

c. Armored Cavalry Troop as Part of Forces in the Forward Defensive Area. The troop is not normally employed independently to hold a part of the forward edge of the battle area; however, it may be assigned such a sector when the squadron is performing an economy of force mission. When assigned this mission, the troop should be given a sector consistent with its capability to fight a defensive action.

d. Armored Cavalry Troop as Part of Reserve in Area Defense.

(1) The armored cavalry troop may be employed as part of the reserve in the area defense. The troop is best suited

to perform reconnaissance and security missions for the reserve.

(2) The troop commander studies the plans for employment of the reserve, reconnoiters the area, and prepares necessary plans. He may organize the troop to concentrate tank-infantry strength or employ the troop without any change in organization. Platoon and section leaders reconnoiter routes to, and areas of, planned operations.

119. Armored Cavalry Troop Perimeter Defense

When operating independently, the troop must provide for its own perimeter defense (fig. 44). The troop commander deploys his platoons to cover likely enemy avenues of approach and establishes local security. The troop commander should insure that platoon leaders employ tanks to cover the most likely avenues of enemy armor approach, and riflemen to provide close-in protection for tanks and to cover likely avenues of enemy infantry approach. The troop employs normal defensive tactics. If the situation permits, a reserve should be maintained and positioned that can quickly move to any part of the defensive system. The defensive posture of the troop should provide sufficient maneuver space for the troop reserve. For security, the CP and trains should be placed in the center of the area or in the vicinity of one of the platoons.

Section VI. RETROGRADE OPERATIONS

120. Delaying Action

a. The armored cavalry troop may be required to conduct a delaying action to accomplish an assigned mission. The troop may conduct this action as a separate unit or as part of a larger force. For the definition of delaying action, refer to paragraph 61. A detailed discussion of the characteristics of delaying positions and the principles of the preparation for and conduct of the delaying action, are contained in FM 17–1 and FM 17–15.

b. Higher headquarters normally assigns the troop a zone in which to conduct delay, the general area of the initial delay position and successive delay positions and the length of time the enemy is to be delayed forward of each position. As soon as possible, the troop commander reconnoiters the designated delaying positions. He normally selects intermediate delaying positions between those selected by higher headquarters and reports these locations. Successive delaying positions are spaced far enough apart to force the enemy to deploy to attack each position and reorganize after each attack (fig. 45).

c. The troop commander deploys his platoons to cover likely avenues of enemy approach. The width of the assigned sector and the number of avenues of approach into the area determine the distribution of forces to be employed. When operating within a wide sector containing several routes of approach, the troop commander positions one platoon to block each avenue of approach. The troop commander may organize provisional platoons, however, the normal method is to employ the platoons intact. Whenever it is possible to support the entire troop from one firing position, the support squads are massed under troop control. The troop normally will not designate a reserve. When the width of the troop sector permits, a platoon is positioned in depth. This platoon is used to block enemy penetrations, to reinforce elements of the delaying position, or to cover the withdrawal of forward elements. The initial organization of force should be considered flexible. Changes in organization for combat or distribution of forces should take place whenever required by the tactical situation.

d. The organization of a delaying position is similar to the organization of a defensive position. Most of the firepower of the troop is oriented toward the enemy; however, adequate flank and rear security must be provided. Tanks are located to block likely avenues of enemy armor approach and to deliver long range direct fire. Rifle elements are placed where they can protect tanks and cover avenues of enemy infantry approach. If possible, the fires of machineguns should interlock. The troop commander should prepare contingency plans for

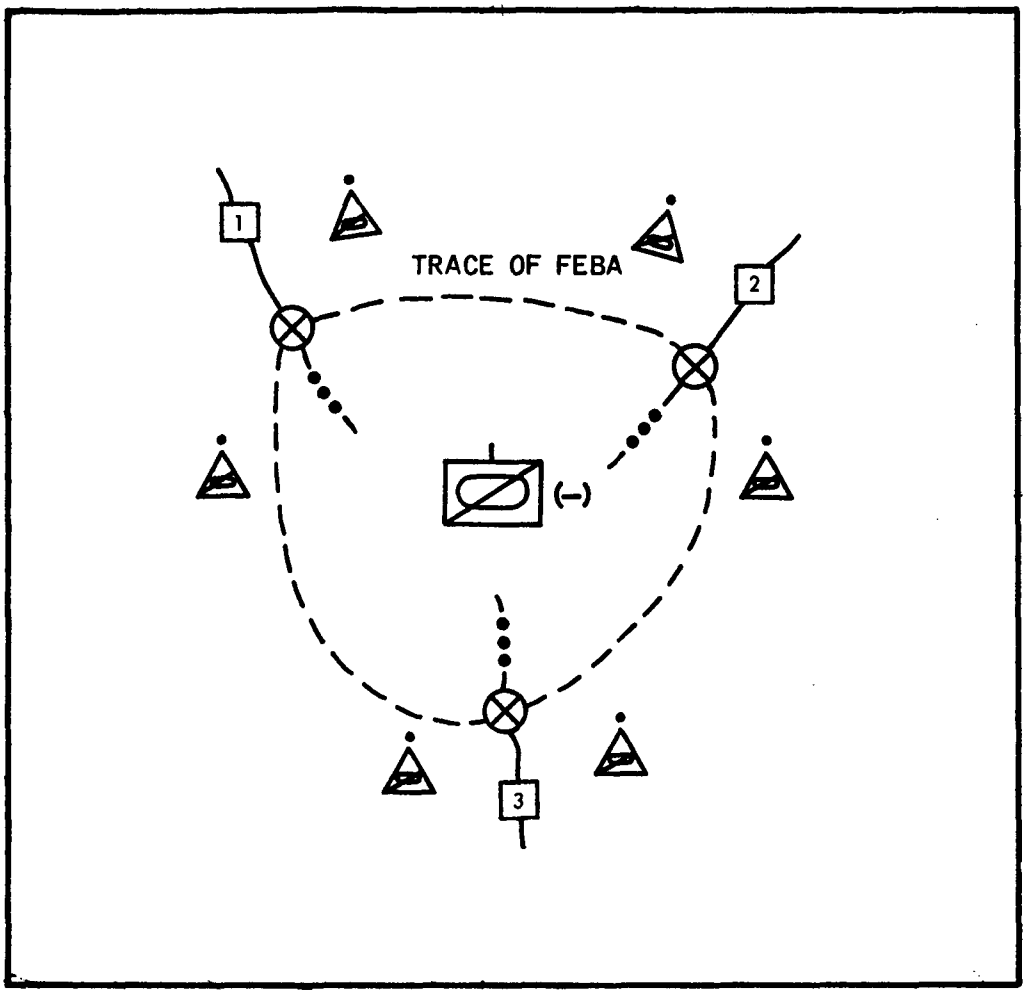


Figure 44. Perimeter defense by the armored cavalry troop.

being reinforced on the delaying position by the squadron reserve.

e. The fire support plan should provide for normal defensive fires, fires in support of a counterattack, and fires to cover the withdrawal. Defensive fires should concentrate on breaking up advancing enemy formations at long range. Details of the fire support plan must be disseminated to all persons in the troop. FM 17–1 contains additional information.

f. The delaying action is accomplished in the following manner:

(1) Scout elements of the troop operate well forward of the initial position to give early warning of enemy approach. As the enemy approaches, scouts withdraw to the flanks of the delaying position. They maintain contact with the enemy, adjust supporting fires, and report any attempt by the enemy to bypass or envelop the position. As the enemy approaches the position, the scouts withdraw to the flanks. (See more on armored cavalry platoon delaying actions in chapter 4.) Scout elements providing observation to the flanks do not withdraw in any set order. They keep the enemy under constant observation and move by bounds, using routes of withdrawal other than those used by other elements of the troop.

(2) Long range fires are brought to bear on the approaching enemy force as far forward of the delaying position as

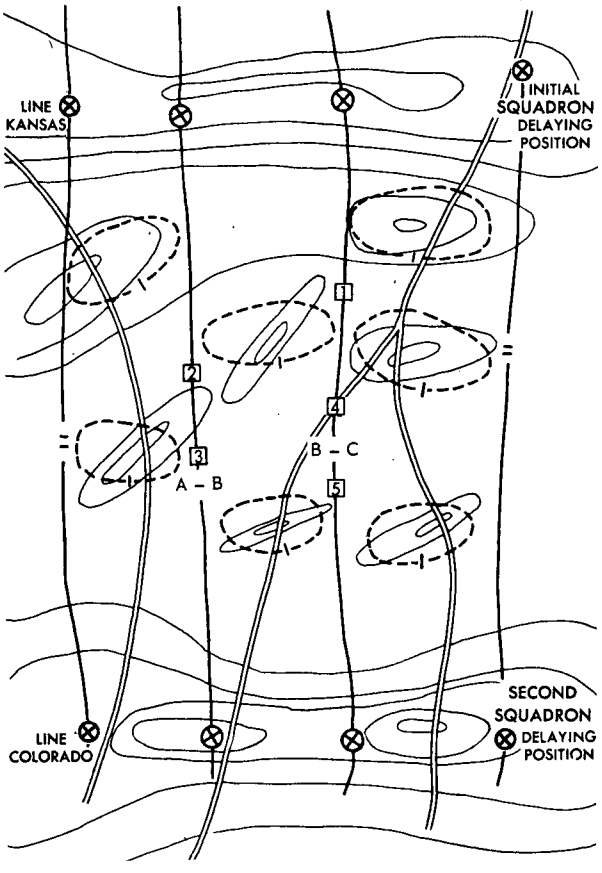


Figure 45. Armored cavalry troop intermediate delaying positions between squadron delaying positions.

possible. This is usually accomplished by artillery and mortar fire. Tactical air and air cavalry units engage enemy forces before they come within range of supporting artillery fires. Within the delaying force, tanks open fire on the enemy at maximum effective range. Other weapons in the position are brought to bear as soon as the enemy is within their effective range. Observation posts on the flanks of the position remain concealed and do not fire on the enemy unless forced to do so by enemy action. Maximum delay is obtained on each delaying position; however, the delaying force will normally be withdrawn from a position before becoming decisively engaged. The delaying force withdraws to successive delaying positions. This technique must be used to achieve continuous delay.

(3) The troop commander must maintain close contact with his platoons. He attempts to locate himself with the platoon that is engaged in the most critical action; however, he must not become so engaged in a platoon action that he cannot control the entire troop. The troop will not withdraw until authorized to do so by the higher commander. Unengaged platoons may be employed to assist or disengage heavily engaged platoons. The troop commander bases his decision to withdraw elements of the delay force on his knowledge of the situation and reports or recommendations of subordinate commanders or platoon leaders. He normally remains on the delaying position until the last platoon withdraws. The ground surveillance section should be emplaced to cover likely avenues of enemy approach and should remain in position as long as possible.

g. Successive troop delaying positions are organized and occupied in a manner similar to the initial delaying positions (fig. 46). Before arrival of the troop, the next delaying position is reconnoitered and platoon positions are organized by the platoon sergeants in coordination with the executive officer. The position is strengthened as much as time and materiel permit. Obstacles are created and routes are improved. When required, supplies, ammunition and barrier material are stockpiled on the position.

h. Artillery fire support is normally available to the armored cavalry troop conducting a delaying action. Supporting artillery will initially provide long range fires on advancing formations and continue to fire on the enemy as he advances toward the delaying forces. Artillery fires will also be used to support counterattacks by the reserve and to cover the withdrawal of delaying forces from one position to the next. If artillery is in direct support, a forward observer will work with the troop, otherwise fires will be requested through command channels and will be adjusted by persons in the troop capable of observing the target. Engineers assist in the delay by destroying bridges, blocking roads, and erecting barriers. They also maintain routes of withdrawal for friendly forces.

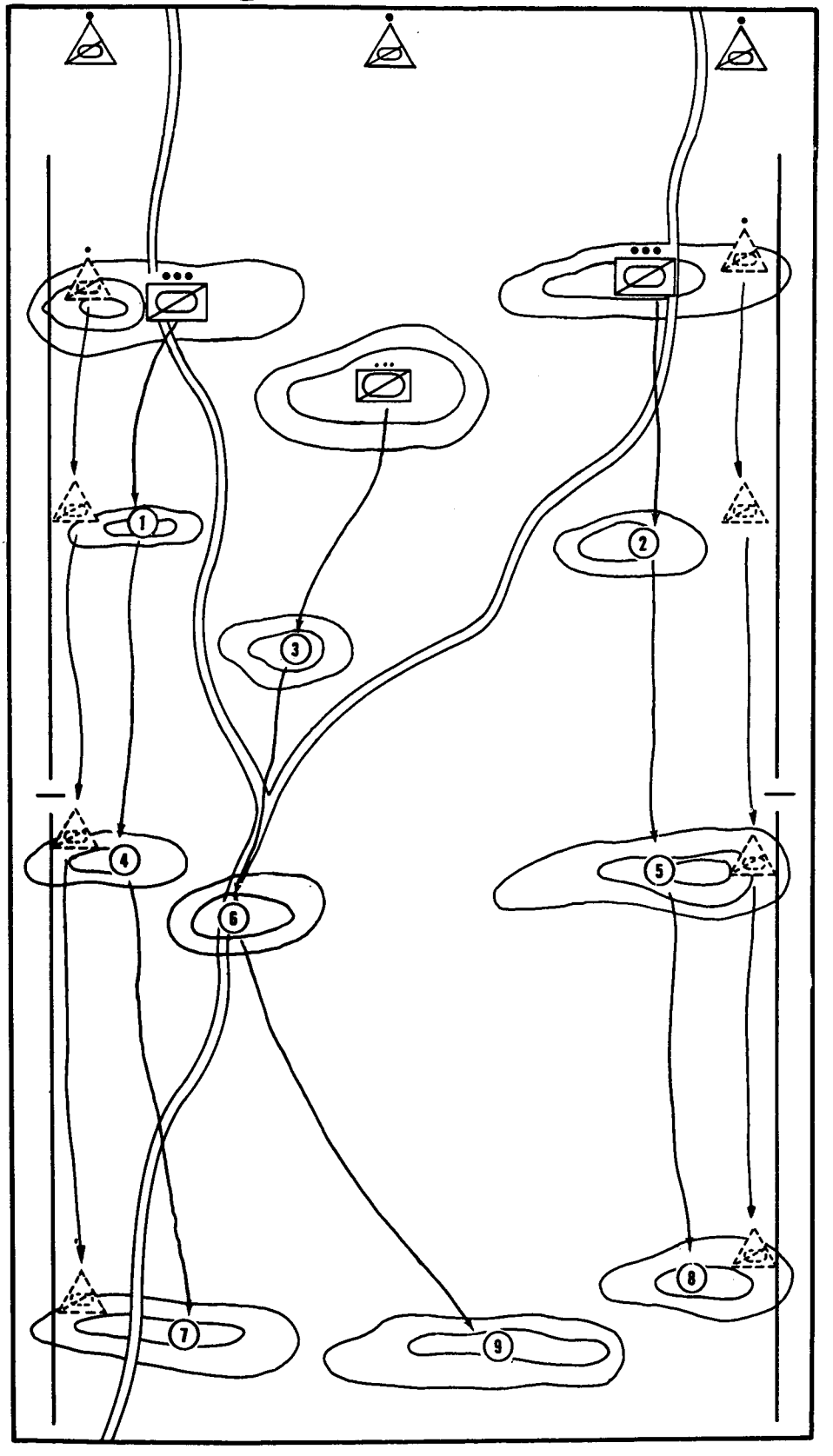


Figure 46. Armored cavalry troop conducting a delaying action with all platoons on line. Platoons delay on successive positions. Scout elements provide security on the flanks.

The engineers will normally be controlled at squadron or higher level. Coordination is necessary so that obstacles constructed by the engineers are covered by fire and in no way impede the planned withdrawal of delaying forces or the commitment of the counterattacking force. Tactical air, when available, assists in the conduct of the delaying action by disrupting and harassing advancing enemy formations. Army aviation provides aircraft for air reconnaissance, artillery and mortar observer liaison, and relaying information. If the situation warrants, Army aircraft may be used to transport elements of the troop or to carry critical items of supply. Elements of the air cavalry troop, when available, provide early warning of enemy approach, harass and delay the enemy force within their capability, and provide flank security.

121. Withdrawal

a. A withdrawal is a maneuver whereby a a force disengages from an enemy force in accordance with the will of the commander. The armored cavalry troop may be required to conduct a withdrawal to reach a position from which it can begin other action. Generally it is accomplished in two phases: a *disengagement* from action, followed by the *formation of march columns* for continued movement away from the enemy. A troop may be required to withdraw alone or as part of a larger force. If conducting an independent withdrawal, the troop must provide for its own security and take action to insure a successful disengagement. One platoon may act as the security force for the remainder of the troop during a withdrawal. If conducting a withdrawal as part of a larger force, the troop may withdraw under cover of security elements provided by another unit, or it may act as the security force or reserve for the larger unit. The troop can make a successful withdrawal either in daylight or at night. If withdrawal is to be made at night, the decision should be made sufficiently in advance to permit planning, coordination, and a daylight reconnaissance of routes of withdrawal.

b. The commander of a troop executing a withdrawal must designate—

(1) *Location of the new position or assembly area.* The new position or assembly area should be behind the line of contact and should be designated early enough to permit reconnaissance of the area.

(2) *Provisions for preparation and occupation of the new position.* These provisions should include necessary defensive measures, disposition of the troop trains and command post, and guides for units moving into the area.

(3) *Routes of withdrawal.* The troop may be assigned a route of withdrawal by the higher headquarters. When the troop is operating on a broad front, it is desirable that each platoon be given a separate route of withdrawal. The commander must exercise strict control over movement during the withdrawal. If the withdrawal includes a movement through a defensive position occupied by another unit, close coordination is required. The troop commander will designate a representative, normally the executive officer, to coordinate with the unit through which the troop will withdraw. Coordination and control measures must be disseminated to all platoons. Plans should include provision for guides from the unit being withdrawn through liaison and communication, and recognition signals.

(4) *A security force.* The troop commander may designate one platoon as a rear guard. If the troop is withdrawing as part of a larger unit, it may be assigned the mission of providing the security force.

(5) *A time schedule.* Higher headquarters designates the time of withdrawal for the troop. Based on this time, a schedule must be prepared for the entire operation. The time of withdrawal of the security force must allow the main body to completely break contact with the enemy.

(6) *Priority of withdrawal.* Troop trains and the command post vehicle should be designated as the first elements to withdraw. They are followed by those elements that will allow for an orderly withdrawal of the troop and still

maintain unit integrity. The mortars, if operating under troop control, should be withdrawn early so that they are in position to provide indirect fire support for other elements when they begin to withdraw. The security force will be the last element to withdraw.

c. In a daylight or involuntary withdrawal, the troop commander normally employs about one-third of his unit as a security force. The security force protects the withdrawal of the troop main body and withdraws on order of the troop commander. To disengage from the enemy, the security force moves to a position at the rear of the troop. The remainder of the troop executes a delaying action through the security force, breaks contact with the enemy force, forms into march columns and continues its rearward movement under cover of the security force (fig. 47). A limited-objective counterattack by the security force may be necessary to disengage the troop. Once the main body has withdrawn, the security force employs fire and movement (rearward) until it passes through friendly forces or disengages from the enemy.

d. In a daylight withdrawal, the troop may be designated as all or part of the reserve for a larger unit. When employed in this manner, the troop may be—

(1) Employed as a counterattacking force to permit withdrawal of a unit that is heavily engaged. Such a counterattack is a limited-objective attack.

(2) Employed as a security force to occupy a position from which it can protect by fire the withdrawal of units in contact with the enemy.

(3) The first element to move to the rear when it is not required to assist other units in disengaging from the enemy. When the troop is given a security force mission for a larger force, it organizes for combat and conducts its actions in essentially the same manner as the security force in the mobile defense. A troop in contact with the enemy and not required to provide its own security, disengages from action in a manner similar to that of a unit conducting a withdrawal in a delaying action.

e. A night or voluntary withdrawal reduces the effectiveness of enemy air attacks and ground fire. It is easier to deceive the enemy at night; however, control is more difficult and movement is slower. Security detachments are left in contact with the enemy when the situation requires that security be provided for the other withdrawing elements of the troop. Security detachments left in contact may consist of an armored cavalry platoon or elements of

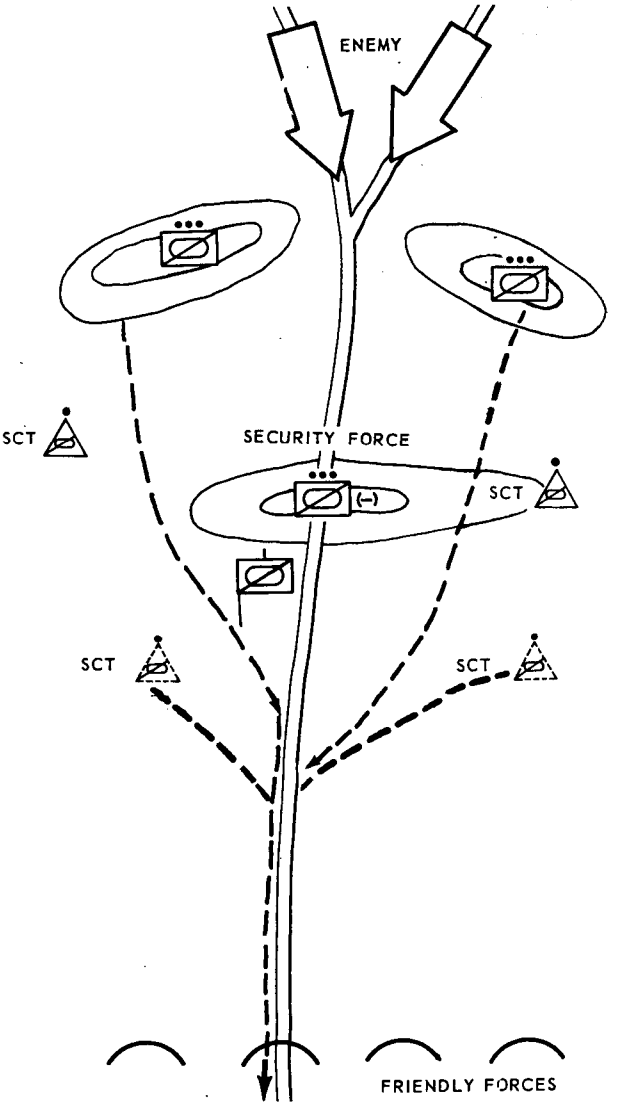


Figure 47. The armored cavalry troop initiating a withdrawal. The bulk of the troop withdraws through the security force, forms into march columns, and continues movement to the rear.

each of the three platoons. If a provisional security detachment is left in contact, the troop commander may designate the executive officer or a platoon leader to command it. Coordination must be achieved within the security detachment, between this detachment and the withdrawing element, and with adjacent units. Matters of command and control must be clearly specified. A security detachment left in contact should use whatever deceptive measures are available to create the impression that a much larger force is remaining in position. Such deceptive measures include those actions normally associated with operations in a fully manned position, such as digging in and moving equipment about. Normal communications traffic is maintained and the same pattern of supporting fires is employed to add to the deception.

f. Units withdraw at night in generally the same manner as in daylight. All platoons, minus their security, move simultaneously if possible. Formations are closer and movements are made with greater emphasis on secrecy and security than during daylight withdrawals. Conditions may permit a unit to withdraw so rapidly that the enemy cannot interfere with the movement. If a commander is certain that this is possible, he may execute a night withdrawal without the use of security. However, each platoon is responsible for maintaing its own security during this type of move.

122. Retirement

a. A retirement is an orderly withdrawal of troops according to their own plan and without pressure by the enemy. It may be made following a withdrawal from action or when no actual contact with the enemy has been made. The armored cavalry troop usually executes a retirement as part of a larger force (fig. 48).

b. The armored cavalry troop, as part of the squadron or another larger force, is best suited to be employed as a security force during a retirement. Appropriate security force mission include employment as part of a covering force or as a flank or rear guard for the main body executing the retirement.

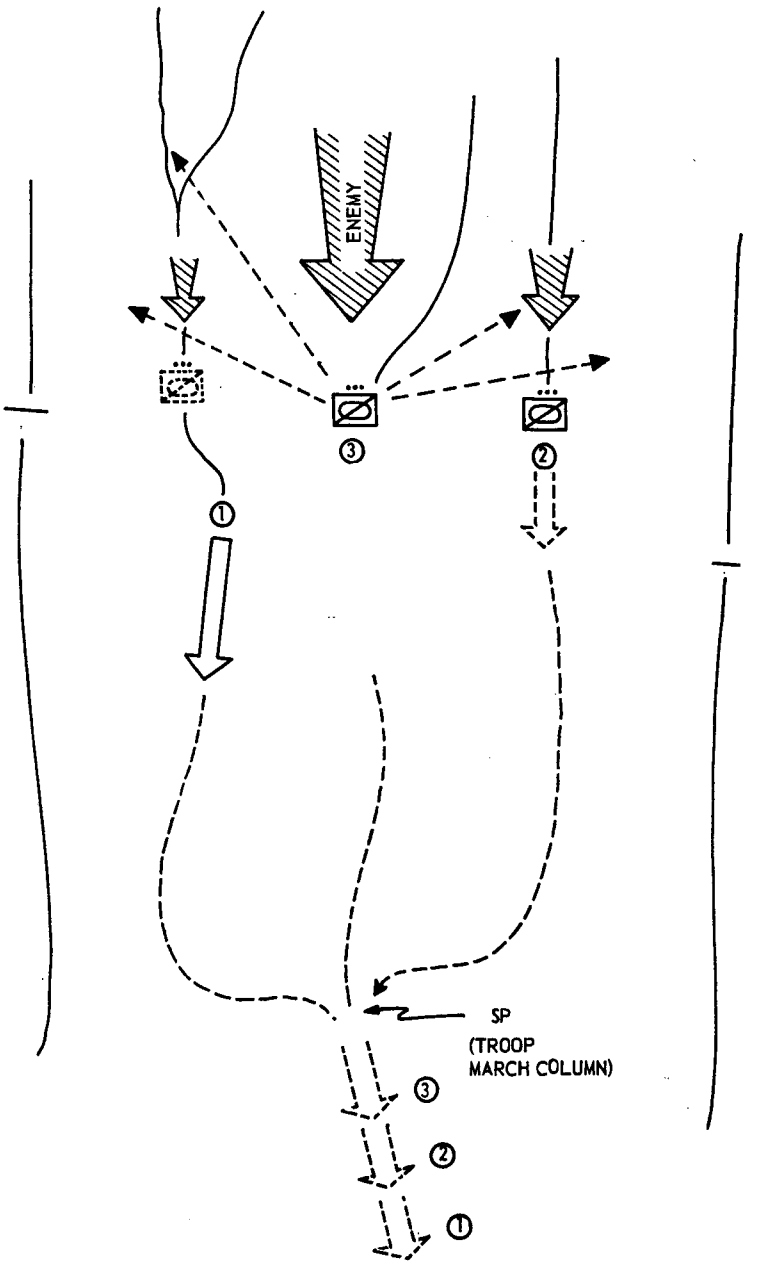


Figure 48. Armored cavalry troop conducting a retirement.

PART THREE
AIR CAVALRY TROOP
CHAPTER 6
GENERAL

Section I. GENERAL

123. Scope

Part Three contains a discussion of the organization, tactics, and techniques applicable to the training and employment of the air cavalry troop organic to divisional armored cavalry squadrons. The troop will normally be employed as a part of the armored cavalry squadron. The doctrine contained herein is also applicable to the troop when attached to or placed in support of brigades or other major units.

124. Missions and Capabilities

The air cavalry troop is designed to extend by air means the reconnaissance and security capabilities of the armored cavalry squadron, or the unit to which attached, and to engage in offensive, defensive, or delaying actions within its capability to seize and dominate lightly defended areas or terrain features. The air cavalry troop has the capability to—

a. Perform aerial and ground reconnaissance and provide security for the unit to which assigned or attached.

b. Engage in offensive, defensive, and delaying actions.

c. Provide armed air escort for airmobile operations.

d. Seize and dominate lightly defended areas or terrain features.

e. Conduct chemical agent detection and radiological monitoring and survey operations, nuclear target acquisition, and nuclear damage assessment.

Section II. ORGANIZATION

125. Organization

a. General. The troop is organized with a troop headquarters, an operations section, an aero-scout platoon, aero-rifle platoon, aero-weapons section, and a service platoon (fig. 49).

b. Troop Headquarters. Troop headquarters contains the troop commander, one warrant officer (helicopter pilot), the first sergeant, a crew chief, and a troop clerk (fig. 50). One utility helicopter is provided to transport the troop commander and it may be used to perform aeromedical evacuation. A ¼-ton truck is provided for necessary command surface transportation. The warrant officer pilots the helicopter and the crew chief may also act as observer and armorer. FM voice radio is the normal means of communication with other elements of the troop. An internal wire net may be established within assembly areas if conditions permit. The utility helicopter is armed with a quad machinegun weapons system.

c. Operations Section. The operations section consists of a flight operations officer, one warrant officer (helicopter pilot), an aviation operations sergeant, communications chief, aviation operations specialist, helicopter crew

chief, and two radio operators (fig. 50). The section includes the personnel and equipment to exercise control over combat operations of the troop, and through which communications may be provided between the troop and supported units. The operations section will frequently accompany the combat elements of the troop into the forward area of the combat zone by operating from a utility helicopter. The operations section is the center of activity within the troop and the successful accomplishment of missions is dependent upon planning and coordination provided by section personnel. The utility helicopter is armed with a quad machinegun weapons system.

d. Aero-Scout Platoon. The aero-scout platoon consists of a platoon headquarters, equipped with one light observation helicopter, two light aero-scout sections, each equipped with four light observation helicopters; and a heavy aero-scout section, equipped with four utility helicopters (fig. 51). The light observation helicopters are armed with twin machinegun weapons systems and the utility helicopters are armed with antitank guided missile systems. The platoon accomplishes normal scout-type reconnaissance missions using aerial means. Minimum formations will normally be teams consisting of two helicopters operating as a team.

(1) The platoon leader is responsible for the training, discipline, control, and tactical employment of his platoon and for the maintenance and efficient operation of its helicopters.

(2) The section leader is responsible for the discipline, training, control, and conduct of the crews in his section. He also serves as leader of the first team of the section.

(3) The team leader has essentially the same responsibility for his team as the section leader has for his section.

e. Aero-Rifle Platoon.

(1) The aero-rifle platoon consists of a platoon headquarters and four inte-

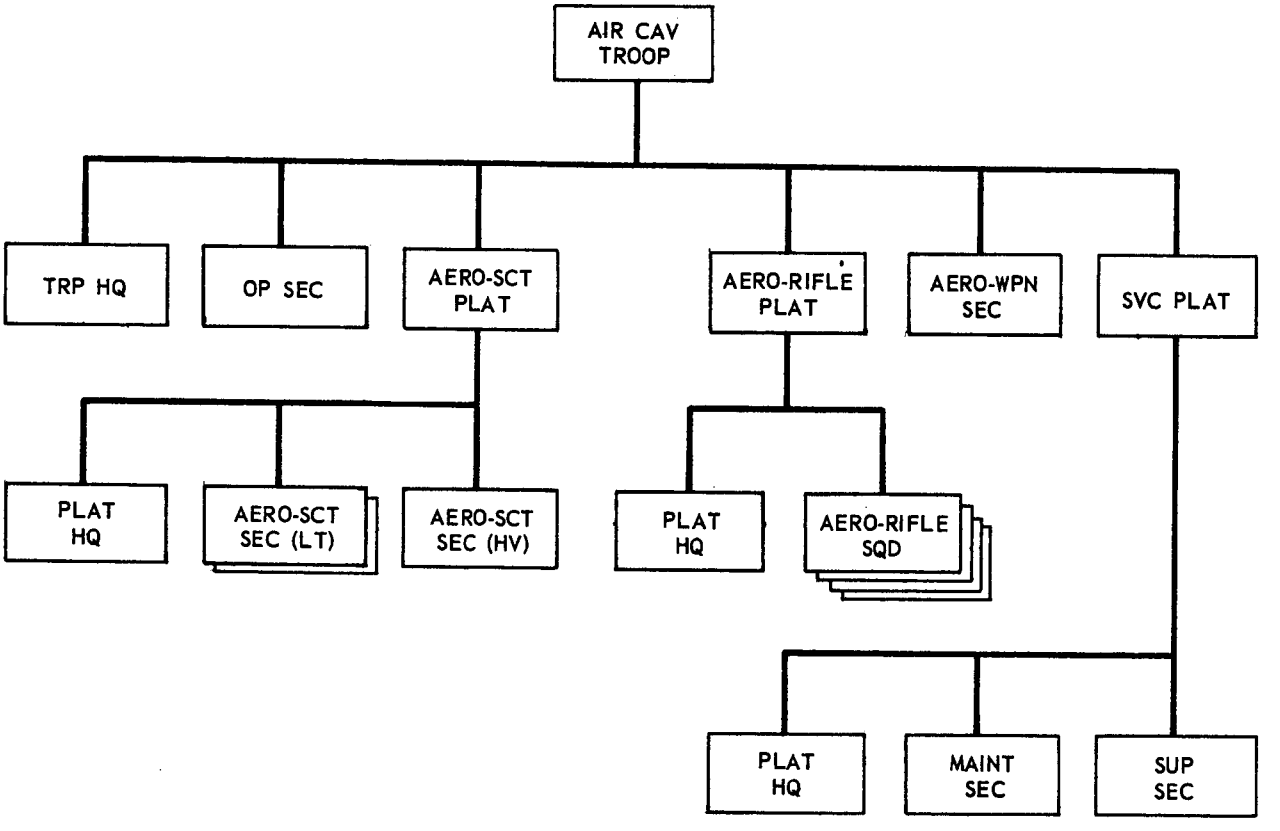


Figure 49. Organization, air cavalry troop.

TROOP HQ

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Armorer) P
7.62 MG Quad

AN/VRC-47

1 Capt (Trp Cmdr) P
1 E-8 (1Sgt) R
1 E-4 (Tpp Clk) (Dvr) P, M-79

FLIGHT OPERATIONS SECTION

AN/VRC-47

1 Lt (Op Off) P
1 E-4 (Rad Op/Dvr) R

AN/VRC-47
AN/GRR-5
AN/GRC-19
AN/VRC-24

1 E-5 (Avn Op Sp) R
1 E-5 (Comm C) R
1 E-4 (Rad Op/Dvr) R

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-7 (Avn Op Sgt) R
1 E-5 (Crew C/Armorer) P
7.62 MG Quad

Figure 50. Manning chart, troop headquarters, air cavalry troop.

grated aero-rifle squads (fig. 52). Each squad has a squad leader, one rifleman designated as a machinegunner and two fire teams, each consisting of a team leader, grenadier, automatic rifleman, and rifleman. Each squad and the platoon headquarters elements are mounted in utility helicopters. Each helicopter is equipped with a quad machinegun weapons system for suppressive firepower. Lift capability of the helicopter allows transport of the entire squad under average conditions of temperature, altitude, and flight duration. The helicopters are capable of mounting and firing rockets from a detachable pod.

(2) The platoon leader is responsible for the discipline, control, training, and tactical employment of the platoon and for maintenance of assigned helicopters. A warrant officer aviator acts as pilot or copilot for the platoon headquarters helicopter.

f. Aero-Weapons Section. The aero-weapons section consists of a section commander and three helicopter pilots, each mounted in a utility helicopter equipped with rockets (fig. 53). The section provides close area fire support for elements of the troop or squadron. The section may be employed intact or as part of platoon task organizations.

(1) The section leader, in addition to being the aviator for one of the helicopters, is responsible for the discipline, control, training, and tactical employment of the section and for maintenance of helicopters.

(2) The crew chief on each helicopter will function as mechanic, observer and gunner.

g. Service Platoon. The platoon includes a headquarters, maintenance section, and supply section (fig. 54). The service platoon provides the necessary mechanics and equipment to supervise and accomplish the troop's maintenance, including limited organizational helicopter maintenance and certain supply functions.

(1) *Platoon headquarters.* Platoon headquarters provides the command and control element for the platoon. The platoon commander coordinates all supply and maintenance support activities of the troop.

(2) *Maintenance section.* The maintenance section performs maintenance on air and ground vehicles, armament, and avionic equipment for the troop. The maintenance section is equipped to provide forward emergency repair service to elements of the troop by both helicopter and ground vehicle means.

(*a*) The assistant maintenance officer is the section leader. He devises and recommends maintenance procedures and policies and supervises the maintenance effort. He pilots the helicopter organic to the maintenance section.

(*b*) The technical inspector is responsible for inspecting maintenance performed on all helicopters.

(*c*) The helicopter mechanics perform limited second-echelon maintenance on the helicopters.

(*d*) The wheeled vehicle mechanics perform second-echelon maintenance on ground vehicles in the troop.

(*e*) The radio mechanic and aviation electronic equipment mechanic perform maintenance on the helicopters and ground-type radios in the troop.

(*f*) The missile system repairman and the armorers perform maintenance on the troop's machineguns, antitank guided missiles (ATGM), rockets, and individual weapons.

(3) *Supply section.* The supply section contains adequate men and equipment to receive, issue, store, and maintain troop supplies required. This includes general troop supply, helicopter repair parts, POL, ammunition, and other items of supply peculiar to the air cavalry troop.

(*a*) The helicopter pilot functions as the unit supply officer and, in addition, pilots the utility helicopter assigned

AERO-SCOUT PLATOON

PLATOON HQ

AN/ARC-54
AN/ARR-49
AN/PRC-25
AN/URC-10

1 Lt (Plat Ldr/Army Aviator) P
1 WO (Army Aviator) P
1 E-5 (Crew C/Armorer) P
Kit, MG, XM-1

AERO-SCOUT SECTION (LT)

AN/PRC-25
AN/ARC-54
AN/ARR-49
AN/URC-10

1 Lt (Sec Ldr) P
1 E-5 (Crew C/Recon Sgt) P
Kit, MG, XM-1

AN/ARC-54
AN/ARR-49
AN/URC-10

1 Lt (Team Ldr) P
1 E-5 (Crew C/Recon Sgt) P
Kit, MG, XM-1

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Recon Sgt) P
Kit, MG, XM-1

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Recon Sgt) P
Kit, MG, XM-1

AERO-SCOUT SECTION (LT)

(Same as above)

AERO-SCOUT SECTION (HV)

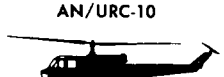
AN/PRC-25
AN/ARC-54
AN/ARR-49
AN/URC-10

1 Lt (Sec Ldr) P
1 E-5 (Crew C/Recon Sgt) P
Kit, ATGM, SS11

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Recon Sgt) P
Kit, ATGM, SS11

AN/ARC-54
AN/ARR-49
AN/URC-10



1 Lt (Team Ldr) P
1 E-5 (Crew C/Recon Sgt) P
Kit, ATGM, SS11

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Recon Sgt) P
Kit, ATGM, SS11

Figure 51. Manning chart, aero-scout platoon.

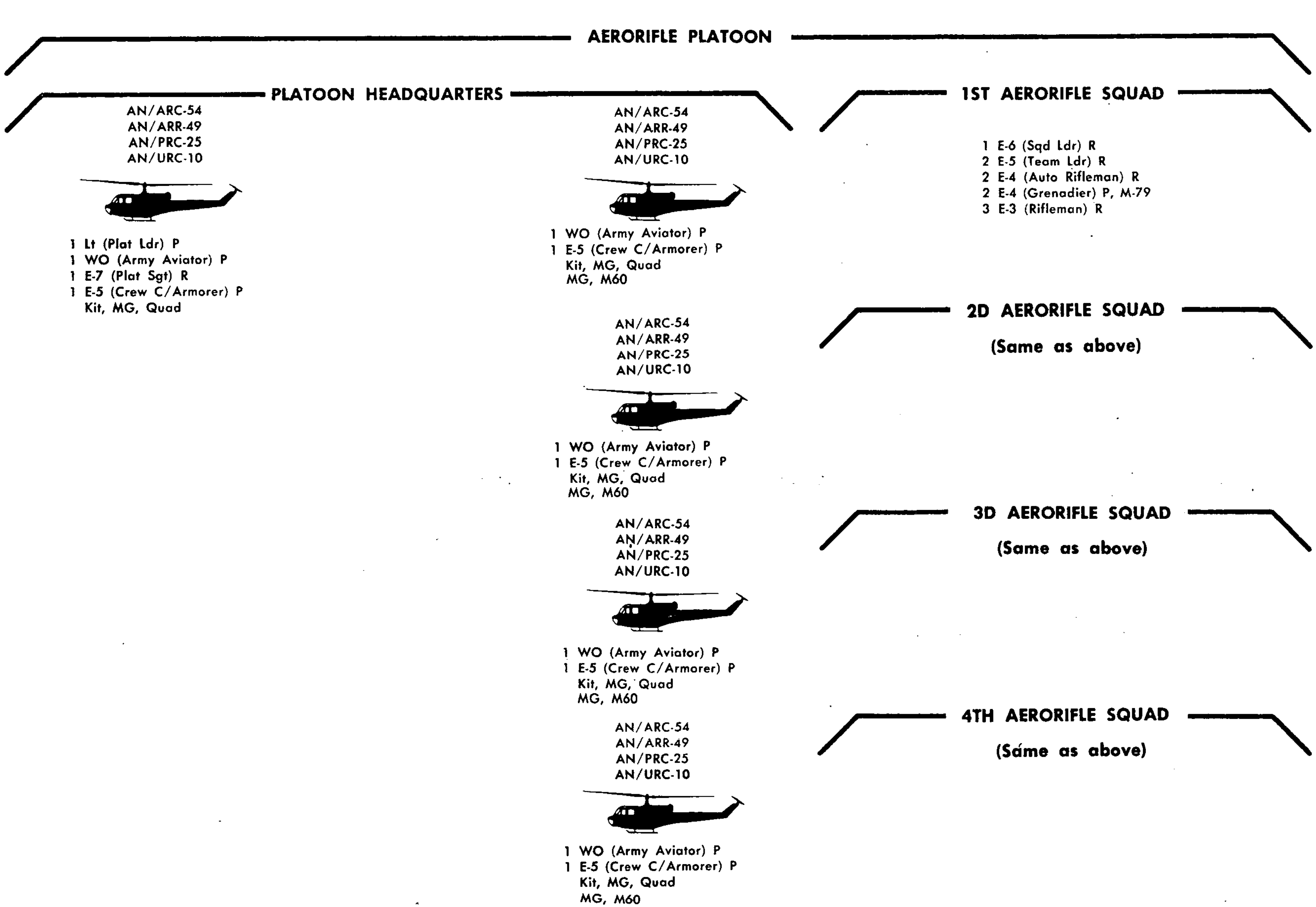


Figure 52. Manning chart, aero-rifle platoon.

AERO-WEAPONS SECTION

AN/ARC-54
AN/ARR-49
AN/URC-10

1 Lt (Sec Ldr) P
1 E-5 (Crew C/Obsr/Armorer) P
Kit, Rocket, 2.75

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Obsr/Armorer) P
Kit, Rocket, 2.75

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Obsr/Armorer) P
Kit, Rocket, 2.75

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Army Aviator) P
1 E-5 (Crew C/Obsr/Armorer) P
Kit, Rocket, 2.75

Figure 53. Manning chart, aero-weapons section.

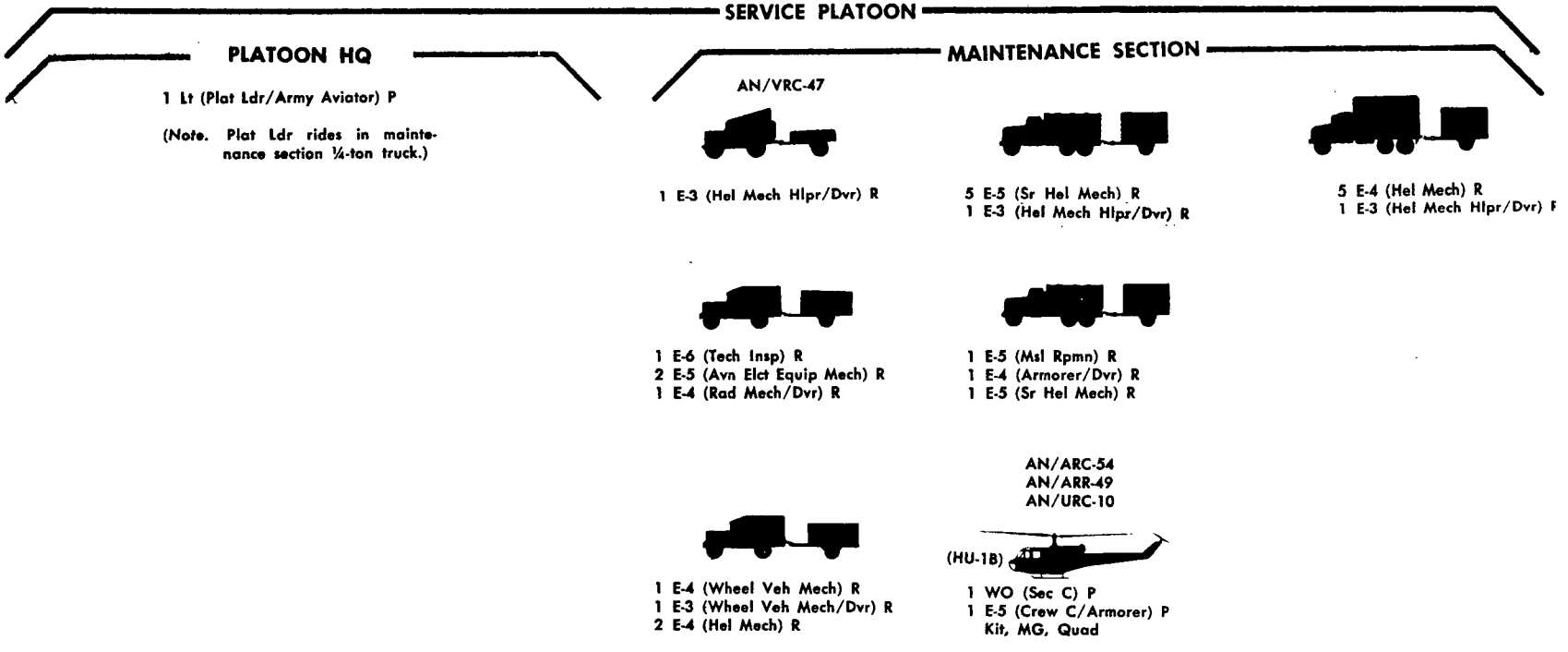


Figure 54. Manning chart, service platoon.

SUPPLY SECTION

AN/ARC-54
AN/ARR-49
AN/URC-10

1 WO (Sup Off/Army Aviator) P
1 E-5 (Crew C/Armorer) P
Kit, MG, Quad

2½-Ton

1 E-6 (Sup Sgt) R
1 E-3 (Afld Svc Crmn) R
1 E-3 (Sup Clk) R

5-Ton

1 E-4 (Ammo Stor Sp) R
1 E-3 (Ammo Stor Sp Hlpr/Dvr) R

(2)

2 E-3 (Petrl Disp Sp/Dvr) R

2½-Ton

1 E-4 (Trans Parts Sp) R
1 E-3 (Afld Svc Crmn/Dvr) R

5-Ton

1 E-4 (Ammo Stor Sp) R
1 E-2 (Ammo Stor Sp Hlpr/Dvr) R

(2)

2 E-3 (Petrl Disp Sp/Dvr) R

2½-Ton

1 E-3 (Afld Svc Crmn/Dvr) R

Figure 54—Continued.

this section. He is responsible for the computation and maintenance of appropriate usage factors and stock levels of supply.

(*b*) The supply sergeant supervises the activities of supply personnel. He coordinates the supply activities of the section with other elements of the troop.

(*c*) The transportation parts specialist operates the troop aviation supply. He requisitions, stores, and issues helicopter parts and equipment and maintains necessary forms and records.

(*d*) The supply clerk assists the supply sergeant, maintains records, receives, stocks, and issues supplies.

(*e*) The ammunition storage specialists and helpers receive, stock, and issue all types of ammunition the unit will use. They also assist in the rearming of helicopters. The ammunition storage helpers are also heavy truck drivers.

(*f*) The petroleum dispensing specialists and airfield service crewmen drive the gasoline tank trucks and provide POL servicing for helicopters. Fueling is normally accomplished in a forward area at a rendezvous between tank trucks and helicopters.

(*g*) The airfield service crewmen assist in operation of the troop heliport, refueling of helicopters, and installation and operation of lighting equipment. They also drive the cargo vehicles of the supply section.

(4) The utility helicopters in the maintenance section and in the supply section are equipped with quad machine-gun weapons systems.

Section III. EMPLOYMENT OF ARMY AIRCRAFT

126. General

Helicopters assigned to the air cavalry troop are combat vehicles used to accomplish the troop mission. The training of helicopter crews to the proficiency necessary to enable them to operate with the troop over varied terrain and under conditions of marginal weather and limited visibility, is the responsibility of the troop commander. Frequent missions can be expected under conditions of marginal weather.

127. Nap-of-the-Earth Operations

a. Nap-of-the-earth operations are those in which participating Army aircraft are flown as close to the earth's surface as vegetation and obstacles permit. Over wooded terrain or other vegetation the aircraft is flown close to the tree tops or foliage to gain maximum concealment from enemy fire and observation, and to exploit surprise to the fullest. The tactic of flying nap-of-the-earth and employing pop-ups and dismounts as the situation and terrain warrant is superior to flying at tree top level or straight nap-of-the-earth.

b. Advantages of low altitude operations are that detection and engagement of helicopters by hostile high performance aircraft are difficult, and enemy air defenses are less effective at low altitudes. However, navigation at such low altitudes is more difficult, observation is restricted, and air vehicle malfunctions more dangerous.

c. The emergency procedure requiring constant stress is autorotation, the process by which a helicopter is safely landed in the event of mechanical failure. The technique of autorotating to a predetermined spot from nap-of-the-earth altitude and at high speeds requires practice and skill. Flare autorotation is the most effective method for this. In flare autorotation from nap-of-the-earth altitude, loss of forward speed of the helicopter is normally mandatory. In some instances, it will be necessary to dissipate all forward speed and descend vertically into whatever area is available. This may mean descent into the top of a tree, a steep incline, dense vegetation, or water. When vegetation or other obstructions are present, care must be used during execution of the flare autorotation to prevent the tail rotor of the helicopter from striking an obstacle or the ground.

128. Low-Level Navigation

a. Pilotage is the primary means of navigation for helicopters assigned to the air cavalry troop. It is mandatory that aviators and observers be highly proficient in map reading and terrain appreciation. All movement will be continuously related to a tactical map or an air photograph (fig. 55). Aeronautical charts are not suitable for nap-of-the-earth navigation. Detailed planning must be accomplished before any mission. Specific emphasis should be placed on routes to be used, protection afforded by terrain, avoiding built-up areas, areas occupied by the enemy, obstacles, and the flying techniques to be used.

b. Regardless of the terrain over which the air cavalry troop will operate, some protection in the form of cover and concealment can usually be found. But if the aviator is to take full advantage of the terrain, he must be well versed in the tactical advantages to be derived from surprise, vegetation, and terrain forms. Study of maps and photos should be directed toward a specific area. It should be conducted in a manner that will enable the aviator and observer to visualize the area of operations for the duration of the mission with hasty, continuous map reference. Helicopters should be flown as low as the terrain and vegetation permit. Care must be used to avoid becoming "skylined" and to avoid large open areas with little or no cover or concealment. If the flight path follows a river or valley, the helicopter should be flown on the enemy side of the river or valley to reduce the time that the enemy can detect, identify, and engage the helicopter. Whenever possible, the flight paths should be made with the sun to the rear of the helicopter. The blinding effect of the sun on the enemy and the aviator's avoidance of the same effect materially assist in accomplishing the mission.

129. Low-Visibility Operations

Operations of the troop, as with most units, are hindered by low visibility during bad weather or darkness. As with other units, the overall efficiency of the air cavalry troop to operate at its optimum performance diminishes under conditions of reduced visibility. However, this does not occur to such a degree as to prohibit operation of helicopters during such periods. Operations may be even more restricted in range at night.

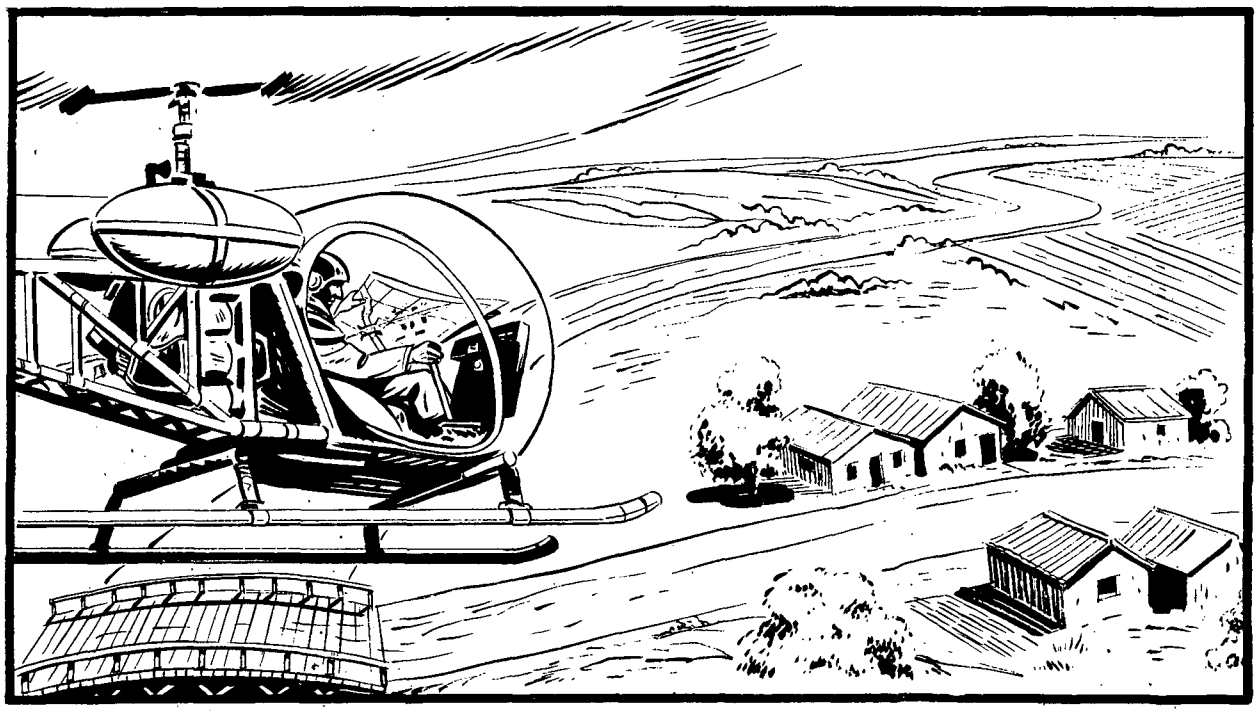


Figure 55. Pilotage is the primary method of navigation.

a. Low visibility during daylight hours can complicate operations in many ways as navigation over unfamiliar terrain becomes more difficult, the speed of the helicopter may have to be reduced to avoid obstacles, and observation of enemy activity becomes restricted. Operations require more detailed planning, with particular emphasis on flight routes, altitudes, and formations. Control is more difficult due to limited visibility between helicopters. Thus, it is more important than ever that each aviator and observer thoroughly understand every aspect of the mission. Nevertheless, in the execution of a well-planned operation, periods of low visibility provide the troop excellent concealment. The helicopters are concealed by the weather from enemy observation, and active enemy countermeasures are reduced.

b. Night operations by the troop will habitually be required in support of ground operations. All flight difficulties encountered during low-visibility daylight operations apply to low-visibility night operations as well. Planning must be in detail. Terminal guidance performed by pathfinder trained personnel of the unit may be required. During night operations, illumination of the enemy area will often be required. Targets may be illuminated by pyrotechnics delivered from aircraft, mortars, or artillery weapons. Use of pyrotechnics must be coordinated with other units participating in the operation. Indiscriminate use of pyrotechnics can cause loss of surprise and premature exposure of the unit participating in the operation. The key to a successful night operation is the aviator's ability to develop and maintain good night vision. In order that objects may be defined at night, effective use must be made of night vision techniques. Some form of artificial illumination may be encountered during night operations. This illumination may vary from tracers fired from the aviator's own helicopter to flares used to illuminate the hostile target area. Regardless of the intensity of the light encountered, it may produce varying effects on the aviator's night vision. Precautions must be taken to avoid a total loss of night vision or the aviator's reacting to erroneous impulses created by the effects of night illumination. Even though night operations are normally flown at a higher altitude than are daylight operations, the aviator must constantly be aware of his position in relation to terrain and obstacles and control his helicopter accordingly.

c. For a detailed discussion of flight technical data, see appendix III.

Section IV. AIR MARCHES AND ASSEMBLY AREAS

130. Air Marches

a. Training in air march techniques is of utmost importance for the air cavalry troop. A vital factor in the successful operation of this unit is orderly, efficient, and prompt movement.

b. The commander's objective in conducting an air march is to move from one location to another, arriving at the appointed time with all troops and equipment in the best possible condition and ready for combat. This requires thorough planning and aggressive leadership, as well as constant supervision during the movement.

131. Types of March Columns

The troop normally will use one of three types of march columns: open, close, or infiltrating.

a. The open column is a formation in which normal distances between helicopters are increased to achieve greater dispersion. This type of column is particularly applicable to tactical moves that must be made without air cover during daylight or when time is so important that lack of secrecy and the possibility of some losses from air attack must be accepted. The distance between helicopters will be prescribed by the commander and will be adequate to prevent two or more helicopters from being hit by a single artillery airburst. The open column formation provides the best possible compromise between the conflicting requirements of short time length and wide dispersion of helicopters in the column.

b. The close column formation is one in which helicopters are closed up to minimum safe flying distance. This formation is used

when a large volume of traffic must be moved over a short distance in a minimum of time. It is particularly applicable to moves where there is little or no danger from air or ground attack. Normally, close column is not justified except when the troop has air cover or other security from hostile air attack, or during periods of low visibility. This formation does not provide dispersion against enemy attack, and traffic bottlenecks are likely to occur at critical or terminal points.

c. The infiltrating column is a formation in which helicopters are dispatched at irregular intervals. This formation may be used when sufficient time is available and the maximum of secrecy, deception, and dispersion is desired as a means of passive protection from air and ground observation and attack. With the extended distance between helicopters, control is extremely difficult and routes must be planned carefully in advance.

132. Warning Orders for Marches

The warning order, issued before the detailed march order, is essential for alerting the troops and allowing them time to prepare for the air march. Whenever possible, the warning order should include the time of departure, air route, destination and necessary instructions to the advance party.

133. Planning the March

Careful and adequate planning is necessary for a successful march. Planning includes:

a. Routes.

b. Route reconnaissance.

c. Advance parties (terminal guidance personnel when required).

d. Landing sites and zones.

e. Air control points.

f. Formation for the march.

g. Designation of start points and release points for units.

h. Rate of march.

i. March distances.

j. Fuel and endurance of the type of helicopters used.

k. Phase lines or other control measures.

l. Security.

m. Refueling points and methods of supply.

n. Disposition of ground echelon.

o. Coordination with ground units to be flown over, including air defense units.

p. Maintenance requirements to support the march.

134. Routes of March

In friendly zones, the air cavalry troop may have an air route of march designated by a higher commander; however, in other instances a zone of advance may be given. The troop commander, by map reconnaissance, selects his primary and alternate routes. In the case of large airmobile operations, higher headquarters may give the troop an air route priority for its march, and the commander must exercise close supervision so that this priority is adhered to.

135. Route Reconnaissance

The troop may perform air route reconnaissance for a larger command. This reconnaissance may be conducted for either ground marches or airmobile operations. After receiving the warning order for a movement, the troop commander obtains all available information concerning the route of march from higher headquarters, from a map reconnaissance, and from an aerial reconnaissance. The troop may undertakes reconnaissance of the following:

a. Ground Routes.

(1) Roads, including type, condition, width, and grades, and data on roadblocks.

(2) Bridges, including estimated capacity, width, overhead clearance, location, and bypasses.

(3) Fords, including location, estimated depth of water, speed of current, and conditions of banks and approaches.

(4) Terrain features dominating the route.

(5) Any other information of use to the commander.

b. Air Routes.

(1) Minimum en route altitudes.

(2) Hazards to flight, including exact locations.

(3) Navigational aids, including the locations and means of identification.
(4) Landing sites for refueling, assembly areas, etc.
(5) Flak areas and bypasses.
(6) Any other information of use to the commander.

136. Formation for the March

The march formation is governed primarily by the factors of METT. Ground elements of the administrative and maintenance sections move overland, using march techniques outlined in FM 17–1. The platoon commander of the service platoon will normally supervise movement of the troop's ground element. In certain situations these sections may be left in the squadron trains area. The air elements of the troop use tactical flight formations. For tactical air formations, refer to figures 56 through 62.

137. Start Point

When the air cavalry troop is marching as part of an airmobile force, the start point (SP) for the larger unit is designated by the higher commander. The troop commander establishes an IP short of the IP of the larger unit and sets a time for the troop to reach the point and clear it. The troop SP is the point at which platoons or other elements of the troop form a column or march unit and it must be far enough from the assembly area to permit the column to become airborne and gain the proper airspeed and altitude by the time it reaches it. Each platoon or other element must be traveling at the prescribed airspeed and with the prescribed time interval and distances when it reaches this point. The SP should be easily identified from the air.

138. Rate of March

a. Rates of march for the air cavalry troop, based on mixed columns of observation and utility helicopters during day or night marches, will vary from zero mph to the cruising speed of the slowest helicopter, depending on the factors of METT. If required by the situation, two separate columns of Army aircraft may be formed so that the slower Army aircraft will not limit the speed of the faster Army aircraft.

b. Factors to be considered in determining the exact rate of march are:
(1) The tactical mission.
(2) Enemy capabilities that dictate nap-of-the-earth flying procedures.
(3) Condition of helicopters.
(4) Aviator and crew fatigue.
(5) State of training and degree of experience of aviator's and units.
(6) Weather conditions that affect visibility.
(7) Light conditions that affect visibility.

139. March Orders

The march order for the air cavalry troop is issued after plans for the march have been completed. If the troop is marching as part of a larger unit, the order is based on, and issued after the receipt of, the march order of the higher headquarters. This order must be complete and cover all problems that might arise during the movement. The order includes all of the following items not covered in unit standing operating procedures:

a. Destination.
b. Route.
c. Rate of march (may be SOP).
d. Order of march.
e. Location of start point.
f. Time of passing the start point.
g. Security measures (may be SOP).
h. Scheduled halts.
i. Distances between helicopters and march units.
j. Communication.
k. Location of the command group during the march.
l. Air traffic control measures.
m. Location of the release point.
n. Time the unit is to clear the release point and any other critical air points along the air route.
o. Air strip maps, if needed (fig. 63).

140. Control and Supervision of Air Marches

a. Control of the air cavalry troop on the march requires a high degree of training and discipline. Radio is the primary means of con-

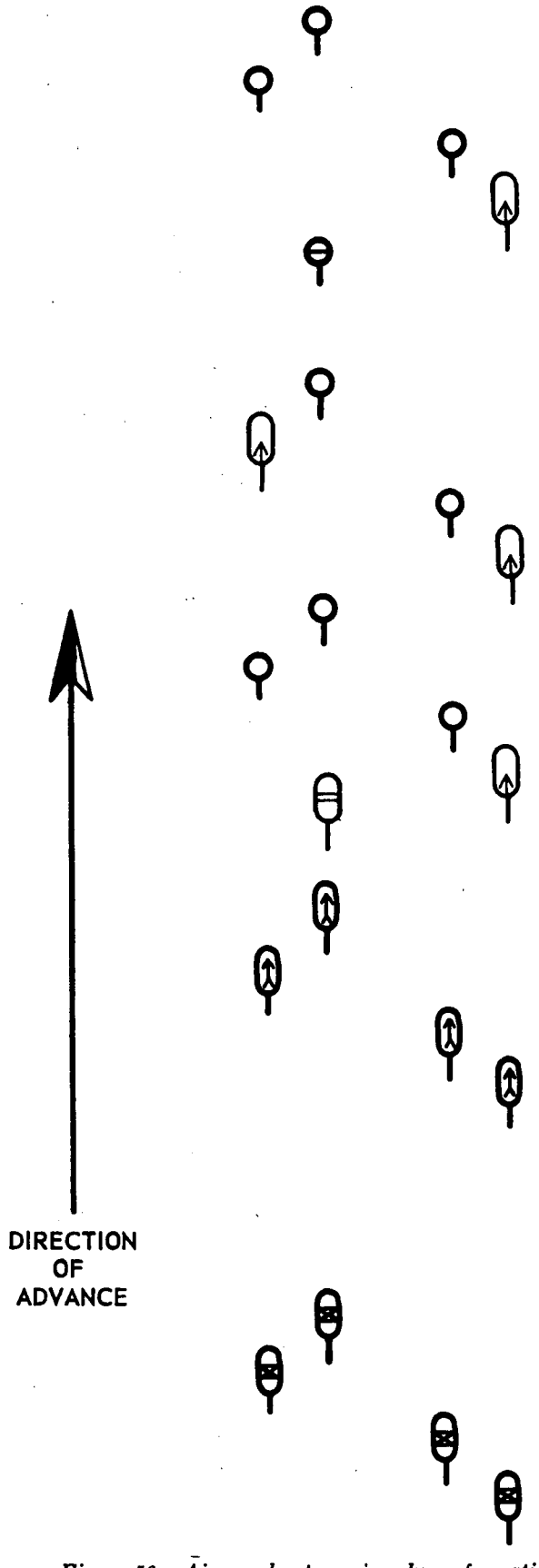


Figure 56. Air cavalry troop in column formation.

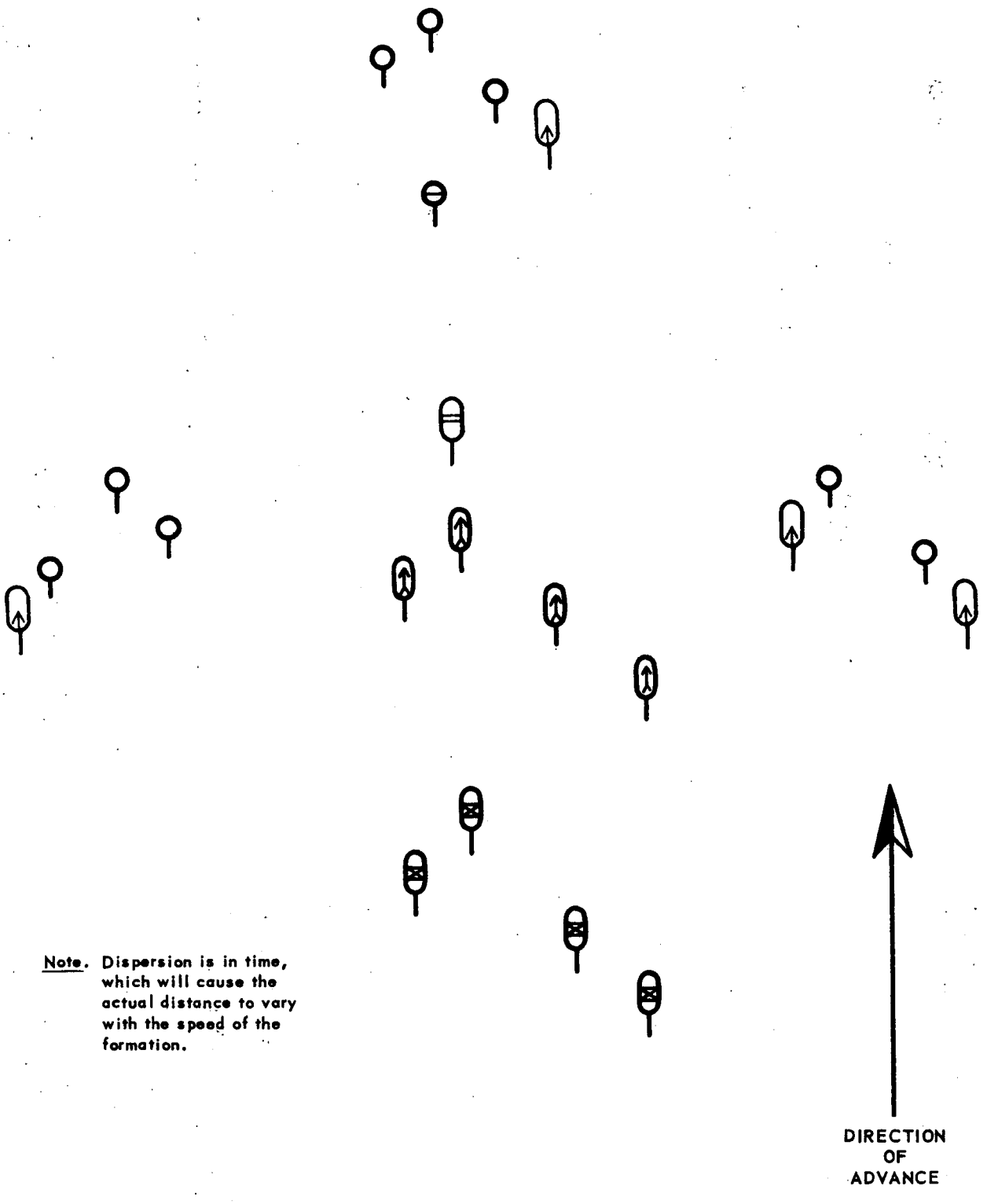


Figure 57. Air cavalry troop in wedge formation.

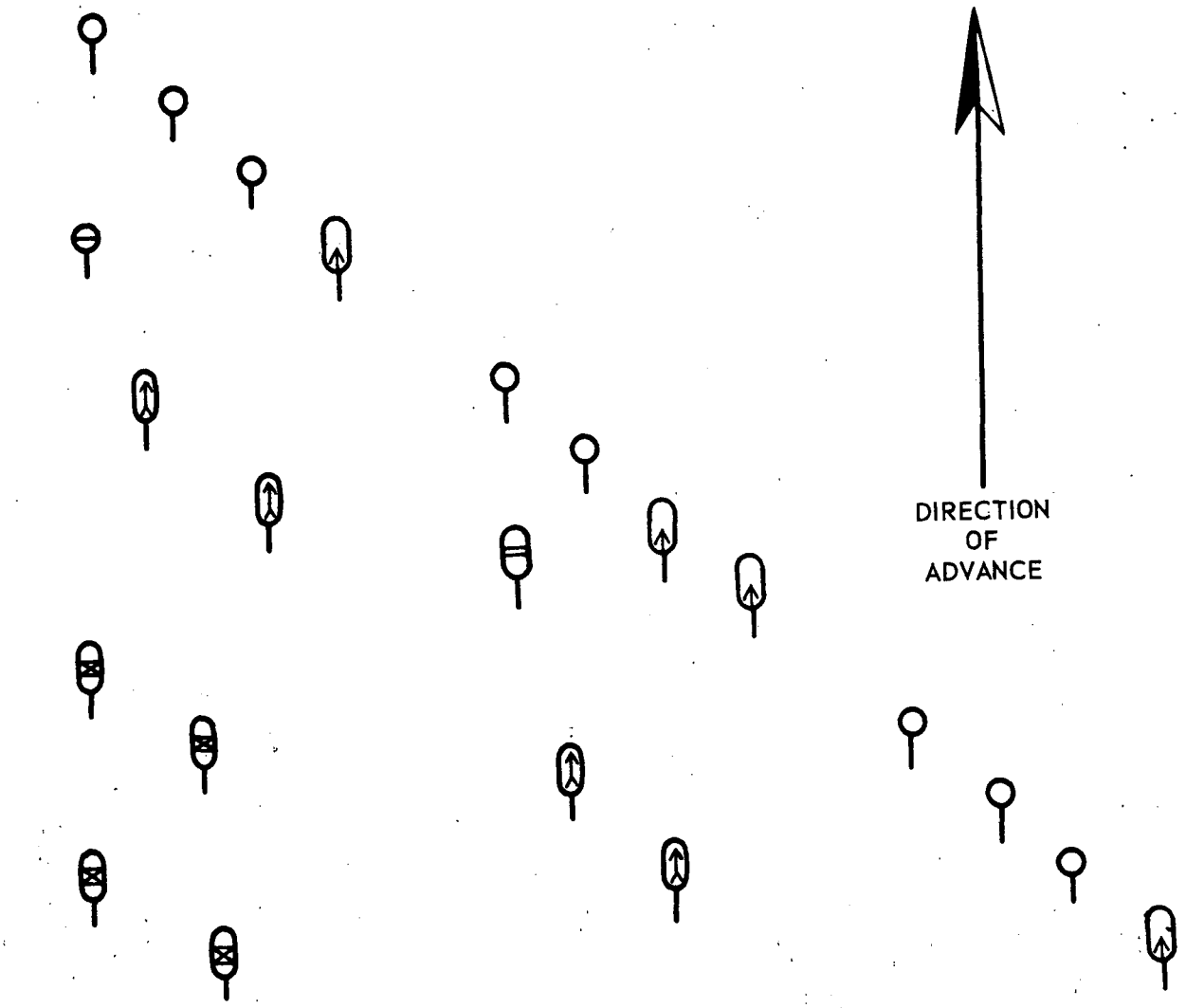


Figure 58. Air cavalry troop in echelon formation.

trol on the march. Factors affecting the use of radio are security, tactical requirements, terrain, weather conditions, and electronic warfare.

b. The troop commander and the platoon leaders must supervise movement of the troop on a march closely. Commanders check the presence of all helicopters in the column; their distances and speed; and general conduct of the troop. Corrections, where necessary, are made immediately. Supervision of the air march column is the responsibility of the troop commander and all subordinate commanders.

141. Night Air Marches

a. The air cavalry troop must be trained to conduct night marches under various conditions. Constant practice offers the most valuable training and some of this practice must be over unfamiliar terrain.

b. Because darkness increases the difficulty of control, all movement should be preplanned. The planning and execution of the plans must be thoroughly coordinated, including route reconnaissance, control points, and marking of landing zones and sites.

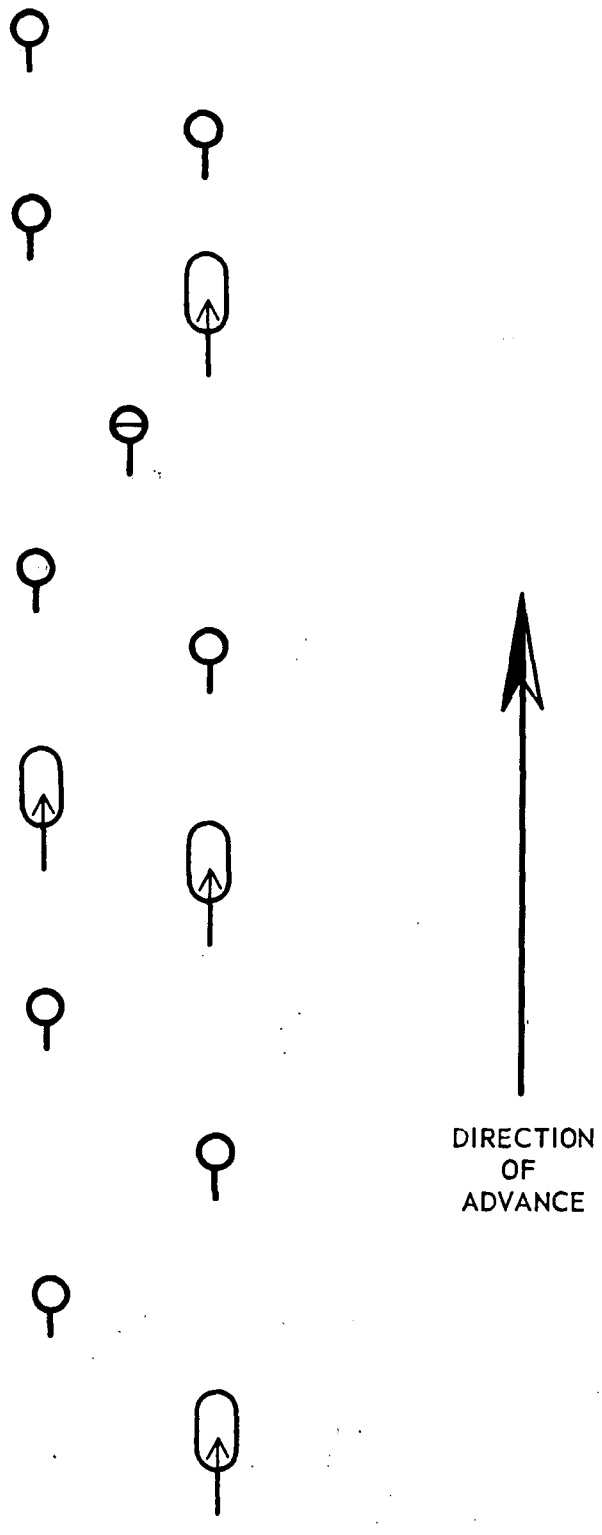


Figure 59. Aero-scout platoon in column formation.

142. Security on the March

a. On the march, the troop gains a large measure of security against attack from enemy air and ground forces by employing advance, flank, and rear guards. The strength and composition of these detachments, which vary according to the terrain, mission, and tactical situation, are specified in march orders. Security is enhanced also by the fleeting target afforded by the helicopter when proper use is made of its speed and maneuverability in relation to its nearness to the terrain (nap-of-the-earth flying).

b. Security measures against air attack must be taken by the troop during the march and at the halt. Helicopter crews will be constantly on the alert for other aircraft, friendly or enemy. Proper distances between helicopters must be maintained during the march and at the halt. Commanders must guard against the tendency to close up.

143. Assembly Areas

a. The air cavalry troop may occupy an assembly area for the following reasons:

(1) Combat organization for a mission, including issuance of order.

(2) Refueling, maintenance, and supply.

(3) Regrouping after an attack or a movement.

b. In the assembly area, the air cavalry troop normally will service, inspect, and repair helicopters; supply and feed troops; and issue orders preparatory to a coming operation.

c. The assembly area, when used in preparation for an attack, should be as close in time to the enemy position as terrain and enemy activity will permit, provided maneuver space and surprise are not sacrificed. This distance will vary. Preparations for a forthcoming operation are completed in the assembly area.

144. Characteristics of the Assembly Area

a. Desirable characteristics of an assembly area for an air cavalry troop includes—

(1) Concealment from air and ground observation.

(2) Cover from direct fire.

(3) Hardstand.

(4) Good landing zones and sites.

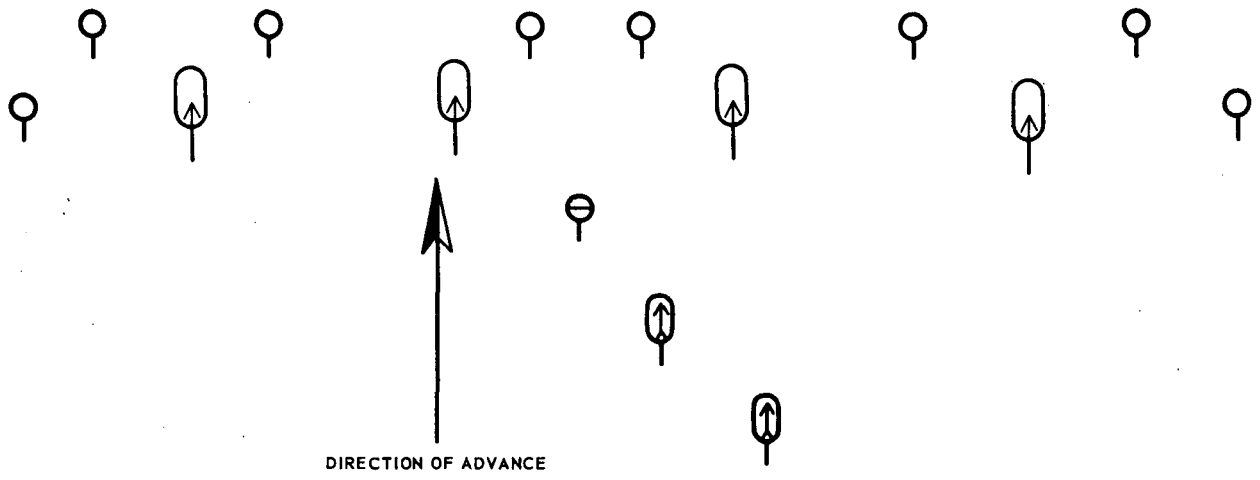


Figure 60. Aero-scout platoon and elements of the aero-weapons section as a team in line formation.

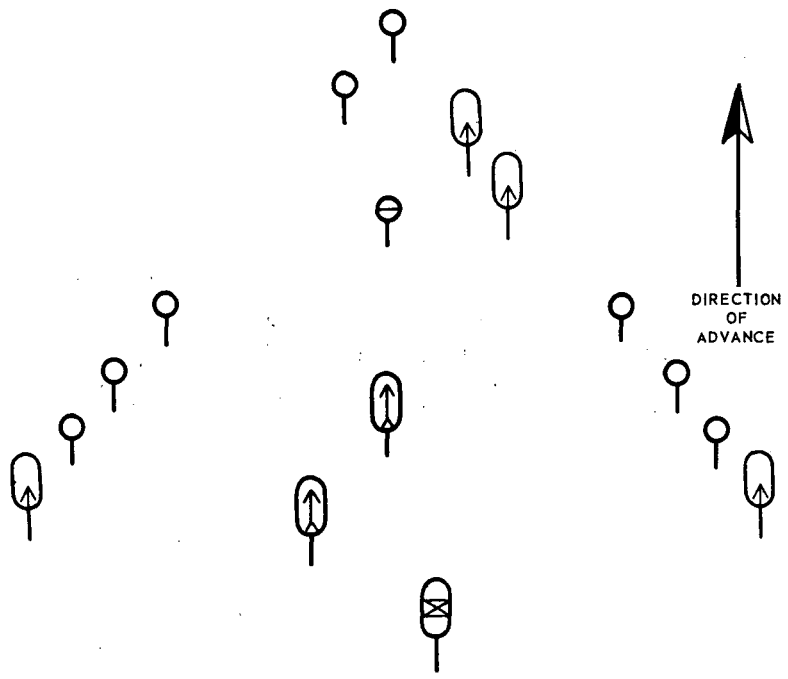


Figure 61. Aero-scout platoon, aero-rifle squad, and elements of the aero-weapons section as a team in wedge formation.

(5) Ample space for dispersion of helicopters, troops, and equipment.

(6) Protection afforded by natural terrain obstacles against enemy mechanized attack.

b. It is desirable that adequate overhead concealment be provided. If the troop is to remain in the assembly area for any length of time, helicopters must be camouflaged.

145. Dispositions in the Assembly Area

Elements of the air cavalry troop are disposed within the assembly area so that—

a. The troop headquarters and service platoon elements are encircled and protected by the combat elements.

b. All units are able to move into and out of the area without passing over other parts of the area.

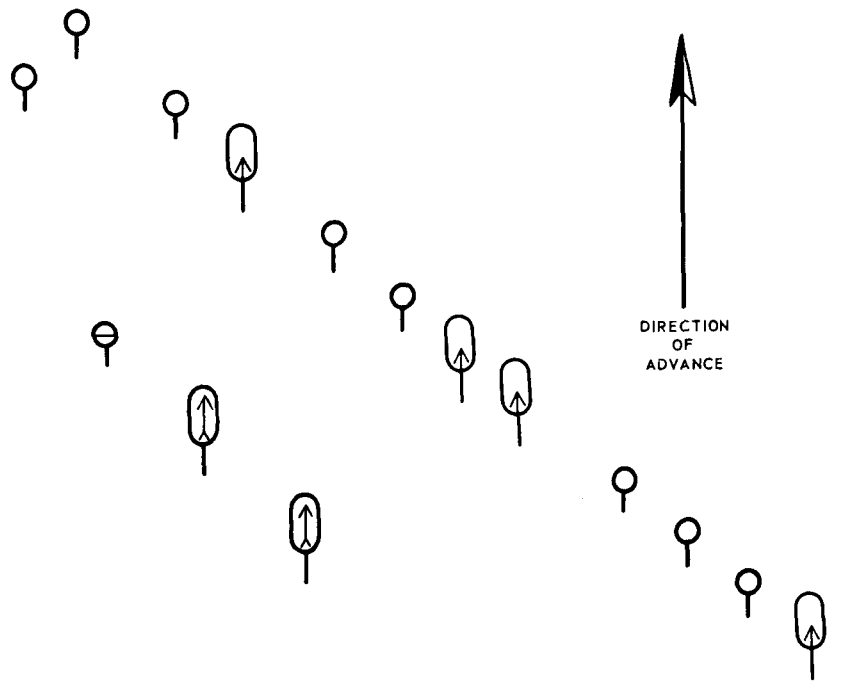


Figure 62. Aero-scout platoon and elements of the aero-weapons section as a team in echelon formation.

c. Service elements are easily accessible to all other elements.

d. Circulation within the area is reduced to a minimum.

e. Platoons or other elements can readily move out in the anticipated order of march.

f. Adequate room for dispersal is available.

146. Communication in the Assembly Area

a. Higher headquarters may order listening silence during the time the troop is in an assembly area. Each platoon sends a messenger to the troop command post; these messengers will be the primary means of communication during the period unless wire communication is available. A liaison officer or agent should be sent to higher headquarters if one is not already there.

b. Final plans for communication during the coming operations are made while the troop is in the assembly area. If necessary, changes of radio frequencies are made to provide adequate communication between the troop and attached, supporting, and adjacent units.

147. Security in the Assembly Area

a. Security in an assembly area is obtained by concealment, use of natural obstacles, local security measures, reconnaissance, and establishment of an outpost system that covers all key terrain features and likely avenues of hostile approach. All-round security is established.

b. The degree of organization of the outpost system depends on whether contact with the enemy has been established or is imminent. Outposts are given adequate strength to enable them to achieve their missions. The basic consideration is that the unit must not be surprised. The fact that the air cavalry troop may be in an area in rear of friendly troops does not relieve the commander of his responsibility to protect his command.

c. The outpost system may consist of a series of strongpoints, composed of aero-rifle elements, located on key terrain features and likely avenues of enemy approach. Each strongpoint sets up observation posts; at night, these observation posts become listening posts. Communication is by radio or messenger.

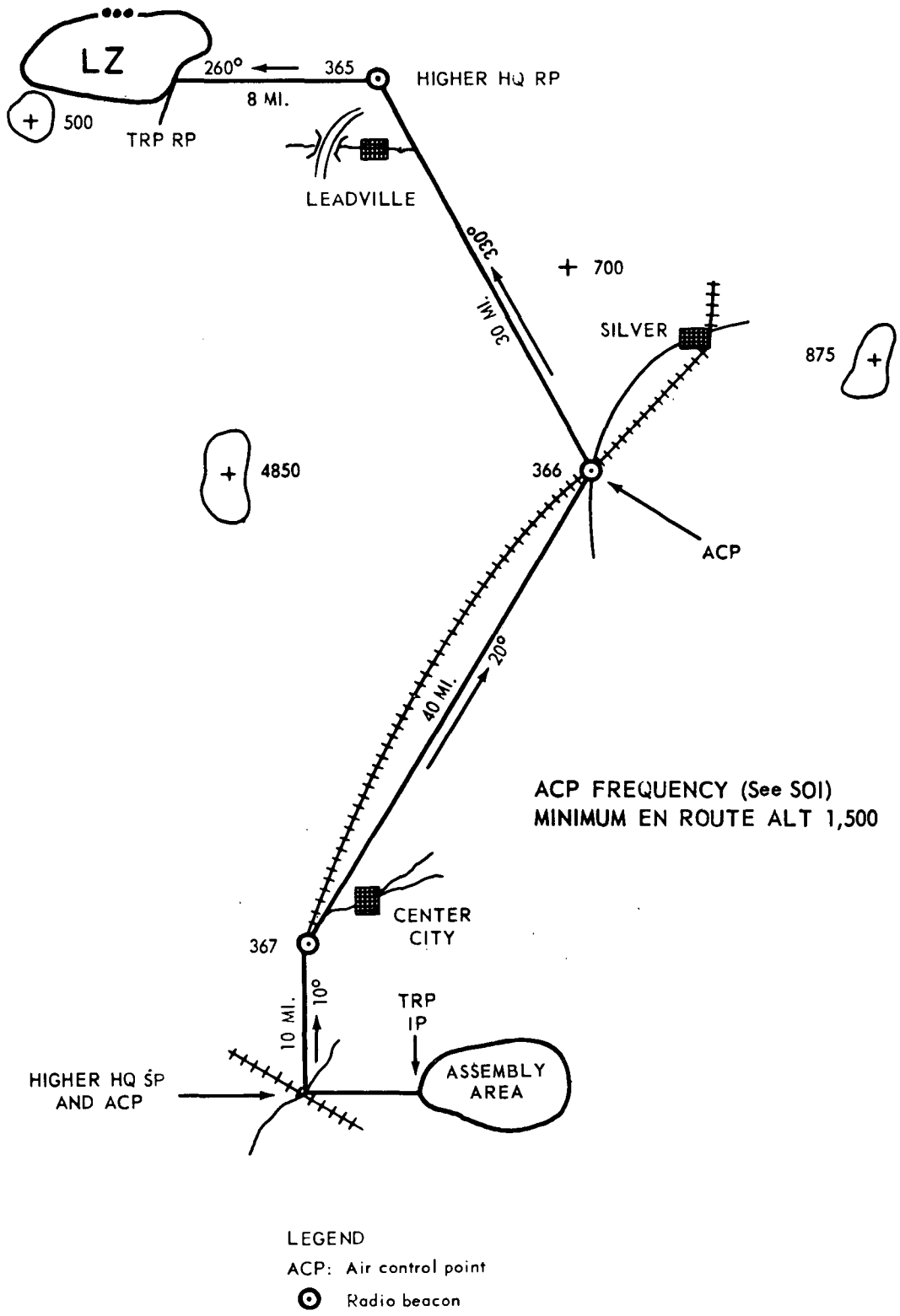


Figure 63. Air cavalry troop air strip map (administrative flight).

CHAPTER 7

EMPLOYMENT OF THE AIR CAVALRY TROOP

Section I. GENERAL

148. Employment, General

a. Successful employment of the air cavalry troop is predicated upon effective use of its unique characteristics and capabilities and an understanding of its limitations. The air cavalry troop may be employed on various types of tactical missions; however, its primary purpose is to *extend* the reconnaissance and security capabilities of the squadron. The troop should be employed in close conjunction with ground armored cavalry units so that the capabilities of ground and air elements will complement each other. When required, it is capable of being used on independent missions.

b. The air cavalry troop is a combat force with combat elements mounted completely in organic helicopters. The unit combines the characteristics of tactical three-dimensional mobility and destructive air firepower. The troop operates largely in the ground environment (nap-of-the-earth), which is the air space extending from the ground to a few feet above, but generally below, the level of the surrounding terrain formations. This provides a relatively high degree of protection from enemy ground and air action. Helicopters are armed with antipersonnel, antimateriel, area and point fire weapons capable of destruction and suppression of enemy forces.

c. The troop is organized and equipped to operate as a unit or with one or more teams composed of aero-scout, aero-weapons, and aero-rifle elements. The capabilities and characteristics of these elements are designed to complement each other. The flexibility of the organization permits rapid organization of platoon teams specifically tailored to accomplish the mission. When a mission does not require total troop effort, only those elements that are essential to successful accomplishment of the mission are committed.

d. The air cavalry troop will operate from one or more assembly areas for the purposes of organizing for combat; refueling, maintenance, and supply; and regrouping after an attack or movement. The combat elements during attack operations will operate from assembly areas that will be located well forward in the combat zone, as close to the enemy positions as terrain and enemy activity will permit. The air cavalry troop service elements, during periods of combat, may operate from the vicinity of the squadron trains area to accomplish maintenance of vehicles and helicopter supply and support activities. A high degree of air and ground mobility in the service platoon permits maintenance and supply operations as far forward in the area of operations thereby avoiding lengthy disengagement by combat elements.

e. The problem of air traffic regulation and identification of helicopters is of particular importance. The air cavalry troop can tolerate only the minimum air traffic control measures if the troop is to accomplish assigned missions. The use of airspace in the troop area of operations will require coordination with friendly ground elements, air defense units, and other agencies using airspace in the area of operations. However, the use of nap-of-the-earth flight techniques will minimize the degree of coordination required.

149. Fundamentals of Employment

Employment of the air cavalry troop is based on the following principles and fundamentals:

a. Surprise. The success of combat operations by air cavalry troops will depend to a major degree on the element of surprise at-

tained. This surprise is achieved by using speed, maneuverability, and its capability of crossing terrain obstacles to strike the enemy at an unexpected time and from an unexpected direction. Surprise can be achieved by well-executed movements at low altitude, by using available cover and concealment, speed, aggressiveness, and deception.

b. Fire and Movement. Air cavalry units use the technique of fire and movement to destroy the enemy and for self-protection. Organic weapons, as well as those of ground elements, must be used to the maximum to provide suppressive fires to protect the movement of helicopters and reduce their exposure to ground fire. Using their speed and maneuverability, air cavalry elements strive to move into unexpected and advantageous positions from which they can be employed to disrupt, disorganize, and destroy the enemy. The psychological effect of the concentrated fire of rapidly advancing armed helicopters should be recognized and exploited.

c. Teamwork. Air cavalry units are organized and equipped to operate normally as units or as teams composed of aero-scout, aero-weapons, and aero-rifle helicopters. The capabilities and characteristics of these elements are designed to complement each other. The flexibility in the organization of the troop permits rapid organization of platoon teams specifically tailored to complete the mission. Teamwork between air and ground reconnaissance elements is essential to exploit fully the capabilities of each. Air cavalry should normally be employed in elements of two helicopters for their mutual security.

d. Economy of Employment. Elements of the air cavalry troop will be employed to insure a maximum flying capability when required. Helicopters not engaged in flying missions are maintained in the highest state of operational readiness commensurate with the situation.

150. Factors Affecting Employment

a. General. As with any combat unit, employment of the air cavalry troop should be based on the factors of METT. FM 17–1 contains a detailed explanation of METT.

b. Mission. The assigned mission is the primary consideration in the employment of these units. To that end, the mission affects the organization, combat formations, and scheme of maneuver.

c. Enemy Situation. In reconnaissance missions, the troop is normally oriented on the enemy, and in security missions it is oriented on the location and movement of the friendly element being secured. Employment of the unit in reconnaissance missions is predicated on gaining information of the area of operations, finding the enemy forces, conducting surveillance of enemy dispositions, reporting the nature of the enemy located, acquiring targets, and engaging the enemy within its means. Depending, in part, on the enemy situation (known or unknown), air cavalry units may be used independently or in support of armored cavalry units. Consideration of the enemy situation will frequently dictate the specific mission to be assigned, security or reconnaissance, or a combination thereof. Enemy capabilities, including nuclear potential, will affect the employment of these units.

d. Terrain and Weather. Terrain has a lesser effect on these units than on ground forces. The air movement capability of these units negates the effects of terrain obstacles that impede the movement of ground elements of the squadron. The primary terrain consideration for air cavalry units is evaluation and use of air movement routes for nap-of-earth flying techniques. Landing sites are also a consideration. Weather is a controlling factor in employment as high winds, icing conditions, and periods of low visibility may restrict use of these units. However, air activities must be planned to follow up quickly and to exploit these adverse weather conditions. Periods of darkness present problems in flight and observation techniques and delivery of aerial fire. Light observation helicopters are not instrumented and therefore problems arise in navigation when there is no visible horizon. Aerial observation and accurate delivery of fire is impossible unless some type of illumination is provided or the enemy's light discipline is poor. This does not imply that air cavalry units cannot be employed effectively at night.

e. Troops Available. The assignment of missions and the planned employment of air cavalry units is dependent on the personnel avail-

able, particularly aviators. To insure sustained operations, consideration must be given to such items as previous and contemplated employment of the unit, status of equipment and troops, and adequacy of logistics to support the mission.

151. Organization for Combat

Organization of the air cavalry troop for combat is characterized by flexibility, and is such that small tailored teams may be formed and used according to the mission. In combat, the flexibility of the troop will permit variations in the force organization to meet changing situations. Organization for combat is not rigid; forces actually required for the mission are tailored for the job. Elements of the troop may perform independent missions, or elements may be cross-attached to provide several balanced air teams. The troop may be reinforced by attachment of air elements from other sources, or it may provide reinforcement or support for ground cavalry units (fig. 64).

152. Fire Support

a. Added fire support may be made available to the air cavalry troop by artillery, mortars, ground armored cavalry forces, or tactical air. Fires provided by these elements must be planned and coordinated with planned troop employment. Mortars and artillery, including nuclear fires, will provide the bulk of the fire support for the troop. These fires, as well as fires provided by other units, may be required for suppression, counterbattery, or destruction of targets beyond the capability of organic air weapons.

b. An artillery forward observer will be available to the troop when artillery is in direct support or attached to the armored cavalry squadron. Requests for artillery fires are processed through the troop commander or the forward observer if available.

c. All Army aviators are trained and qualified to adjust artillery fires and may be used to adjust fires on targets of opportunity if this does not interfere with the primary mission.

Section II. RECONNAISSANCE OPERATIONS

153. General

a. Reconnaissance is the directed effort in the field to collect information of the enemy and the area of operations by ground and air means. Reconnaissance is one of the primary missions performed by the air cavalry troop. The troop may conduct assigned reconnaissance missions as part of the squadron, or it may have the mission of providing direct support to armored cavalry troops, or elements of the troop may be attached to or placed under operational control of the ground troops. Operational control is preferred as it does not burden the ground commander with the logistical support required by the air elements. The troop will engage in offensive action as required to accomplish the mission.

b. The troop will normally be employed in close coordination with armored cavalry troops to extend the reconnaissance effort of the squadron.

c. Highly mobile air cavalry units are especially adaptable to reconnaissance as an extension of the ground reconnaissance effort.

d. The troop performs its reconnaissance mission by using air teams to obtain the desired information. Generally, within the assigned route, zone, or area, the air teams are assigned subzones, axes of advance, or areas of responsibility.

e. The troop may use aerial cameras to facilitate the accomplishment of reconnaissance missions.

154. Reconnaissance Frontages

a. There is no set distance for the front to be covered by air cavalry troops in performing reconnaissance missions. The frontage is determined by the performance characteristics of the organic helicopters, the visibility, terrain, enemy situation, and the time available to acquire desired information. The most outstanding characteristic of the unit is the ability to perform reconnaissance within zones containing limited or no ground routes and over obstacles that would preclude use of any other type of reconnaissance means. The troop can perform reconnaissance within the squadron

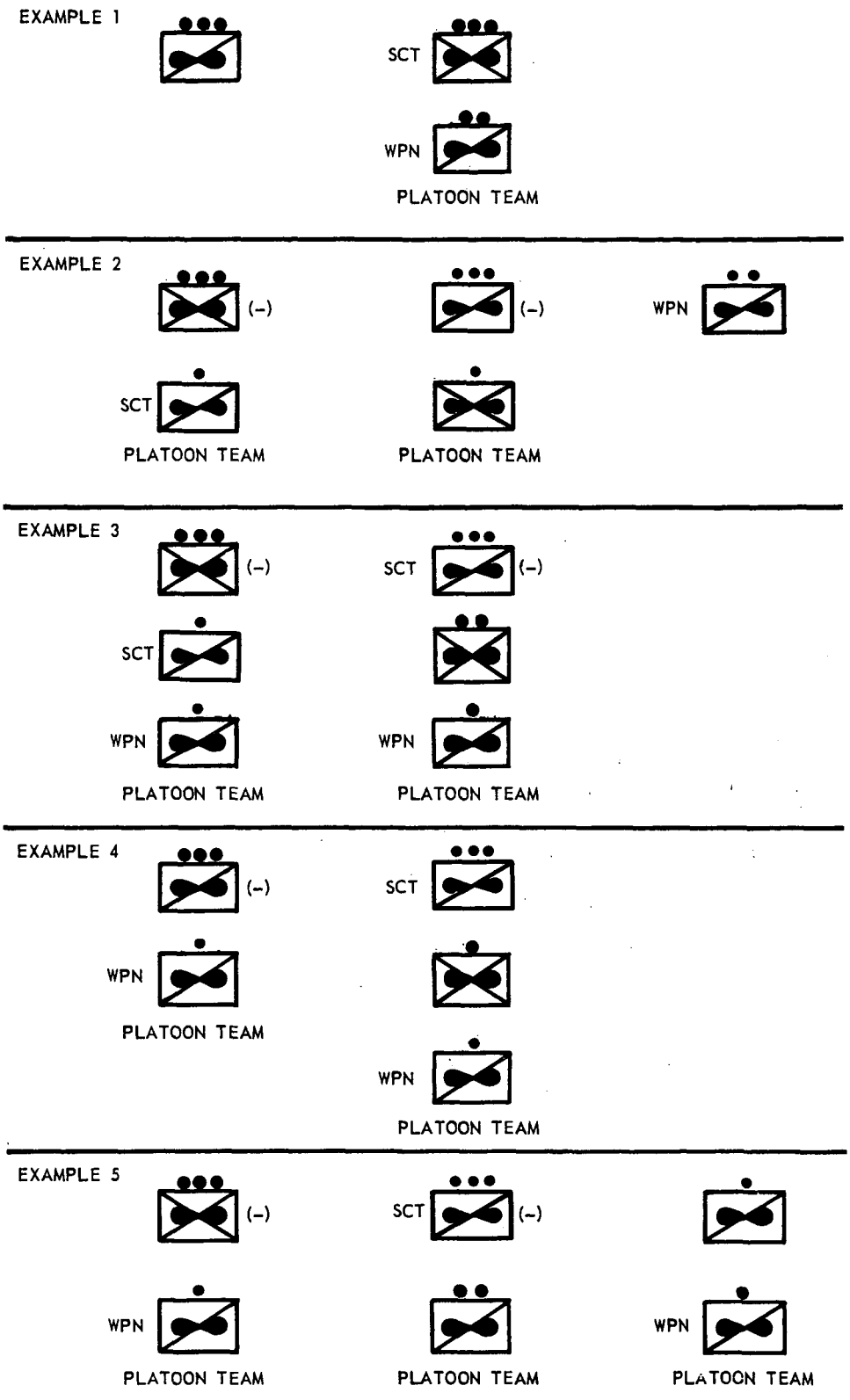


Figure 64. Type organizations for combat, air cavalry troop.

zone with little regard to the road net or topography. The frontage to be covered by the air cavalry troop is normally designated by the higher headquarters under which it is operating. Due to the speed and cross-country mobility of air cavalry units, they are able to reconnoiter large areas quickly.

b. Aero-scout elements can reconnoiter most effectively in open or cleared areas. These reconnaissance capabilities decrease directly in proportion to the degree of increase in natural or manmade concealment on the surface. Aero-scouts can cover wide frontages to considerable depth in open terrain. Figures 65 through 72 depict the techniques employed by aero-scouts during reconnaissance operations in conjunction with ground cavalry units.

c. Aero-rifle elements are used to best advantage in the dismounted role to reconnoiter specific locations that cannot be reconnoitered effectively from the air by the aero-scouts. In the dismounted role, aero-rifle elements have a capability similar to that of conventional rifle elements of comparable size, with the advantage of being delivered to and removed from reconnaissance missions rapidly at considerable distances. When not engaged actively on a reconnaissance mission, the platoon will be centrally located on the ground and ready for rapid employment to perform a specific reconnaissance mission.

d. The aero-weapons section is normally held in a central location. The section must be prepared to support the actions of the aero-scout or aero-rifle elements rapidly.

159. Route Reconnaissance

a. Route reconnaissance is the directed effort to obtain information of the route, obstacles, and enemy along a specific route and the terrain adjacent to the route, which, if occupied by the enemy, would affect movement along the route. The air cavalry troop may perform route reconnaissance as an independent force or in conjunction with armored cavalry troops, or elements of the troop may be attached to or placed under operational control of an armored cavalry troop.

b. The troop is less suited for detailed route reconnaissance than for other reconnaissance missions. Although the troop is capable of conducting a route reconnaissance independently, it can best perform this mission in close conjunction with ground elements of the squadron. Route information should be confirmed by ground cavalry units.

c. Route reconnaissance may be executed by the aero-scout platoon operating alone or in conjunction with other elements of the troop, or the route reconnaissance may be made by the entire troop. Generally, a map reconnaissance of the route to be reconnoitered, together with a consideration of the factors of METT, will dictate the organization of the force to execute the mission. Elements of the aero-scout platoon habitually lead the formation. The air formation is determined by the factors of METT. The formation commander is located behind the aero-scout element. He is normally followed by the aero-weapons and the aero-rifle elements, in that order, when they are in the formation (fig. 73).

d. During a route reconnaissance, the leading aero-scout section reconnoiters the main route in column formation. As dominating terrain features on the flanks or lateral routes require closer examination, the successive aero-scout sections leave the formation, reconnoiter the designated terrain features or route, and return to their place in column. Meanwhile, the remainder of the troop continues the reconnaissance along the designated route. The aero-weapons section and the aero-rifle platoon are prepared to support the aero-scout platoon.

e. When the aero-rifle platoon is committed to a ground reconnaissance mission, the platoon operating either as part of a larger force or independently, moves as close to its objective as the situation permits and dismounts the aero-riflemen. From that point, the riflemen employ normal dismounted ground reconnaissance techniques. Upon completion of the ground reconnaissance, the riflemen and their helicopters rendezvous and return to the air formation or the assembly area and prepare for further employment.

f. Throughout the route reconnaissance, the aero-weapons section is prepared to provide air fire support. It may be employed to deliver suppressive fires on ground enemy forces or assist the aero-scout elements or the dismounted aero-

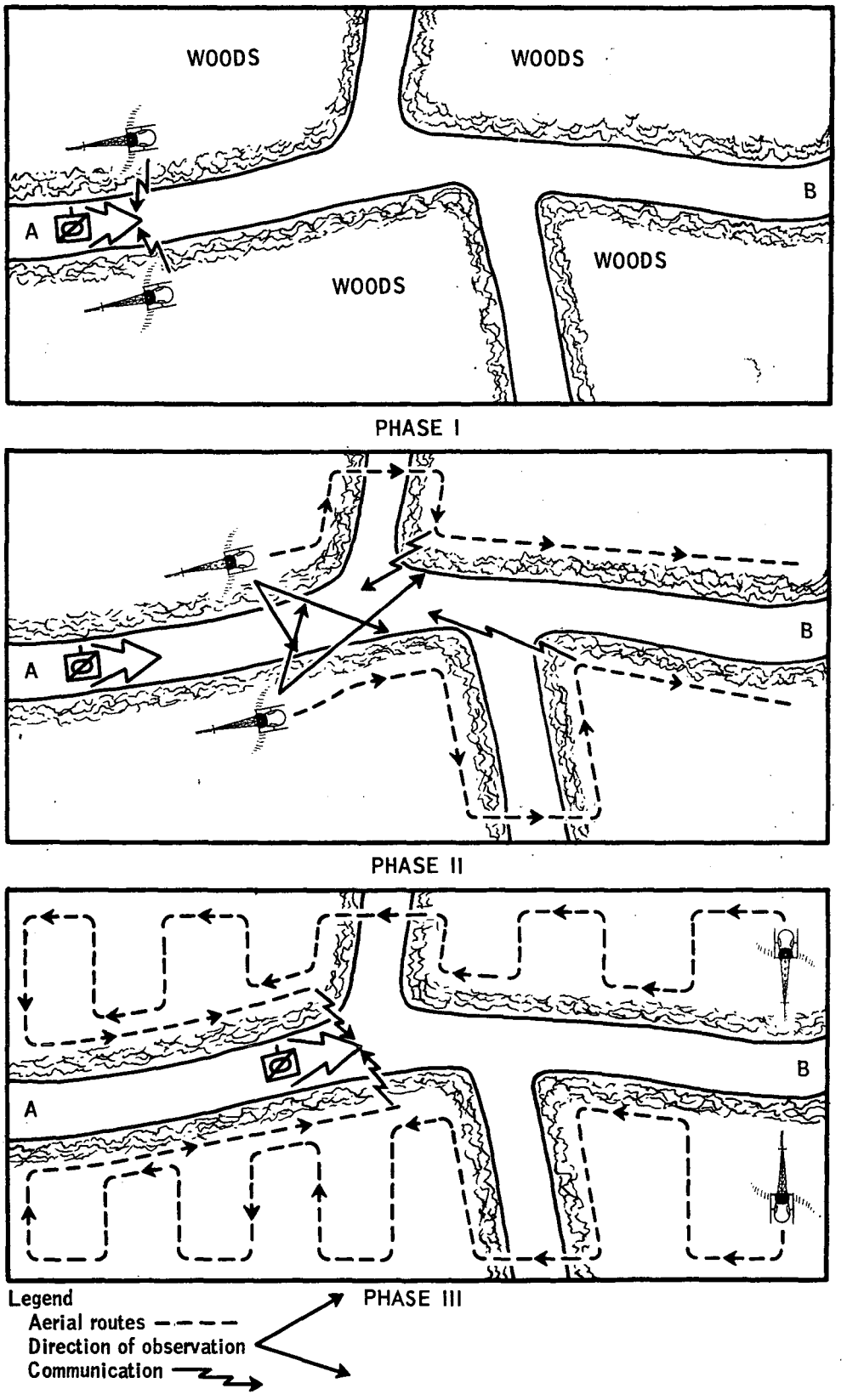


Figure 65. Aero-scouts reconnoitering a route through a wooded area.

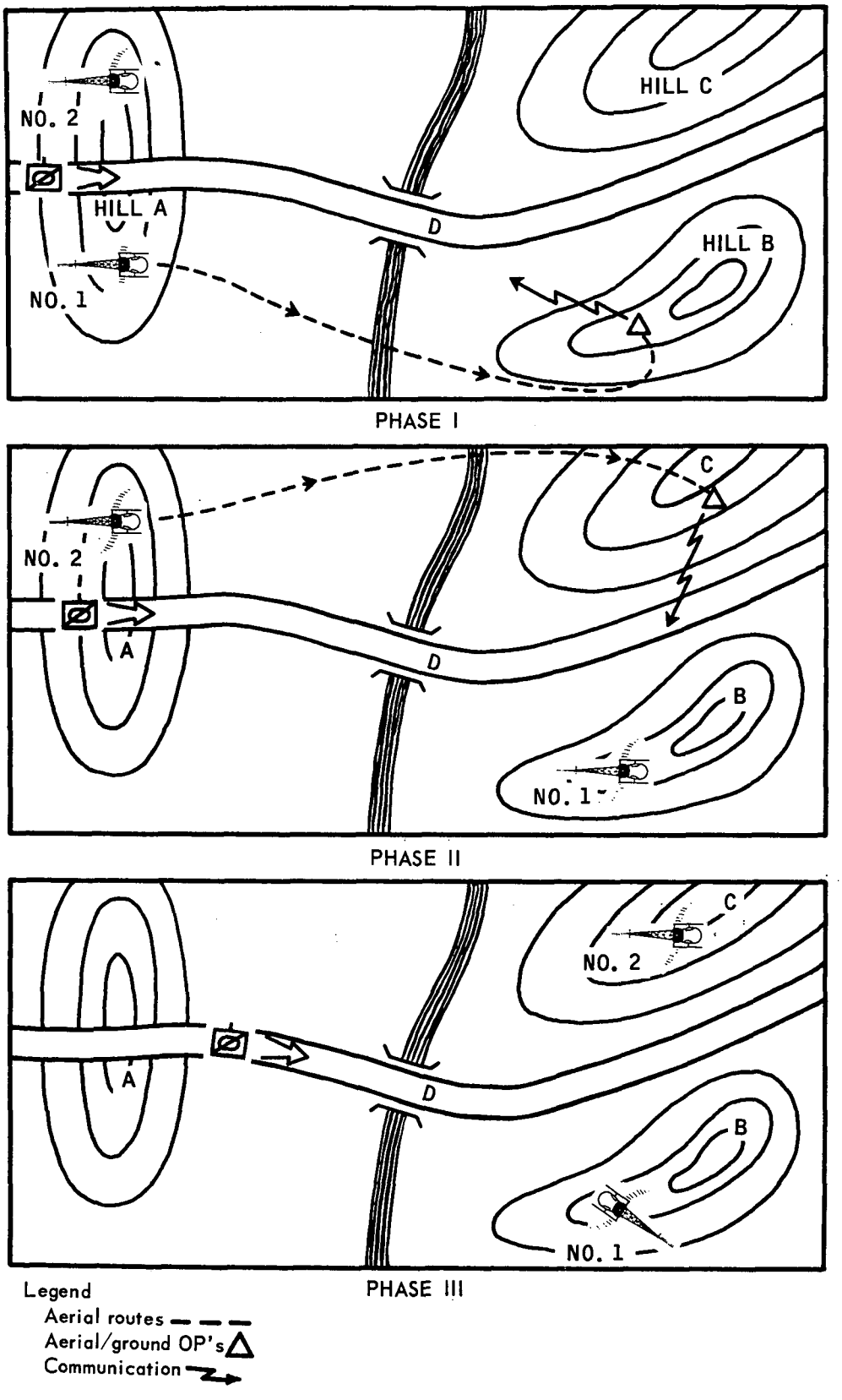


Figure 66. Aero-scouts reconnoitering a bridge.

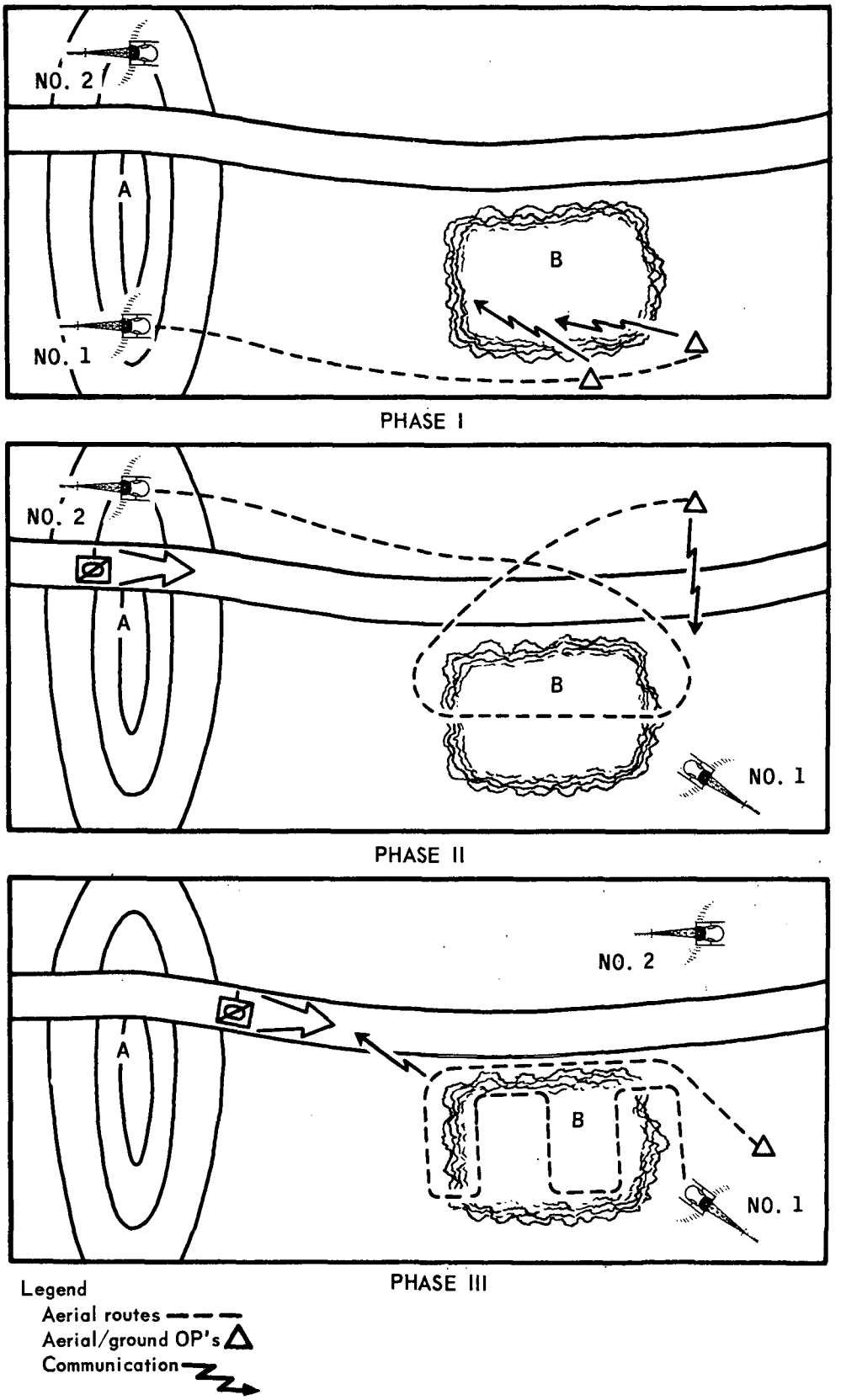
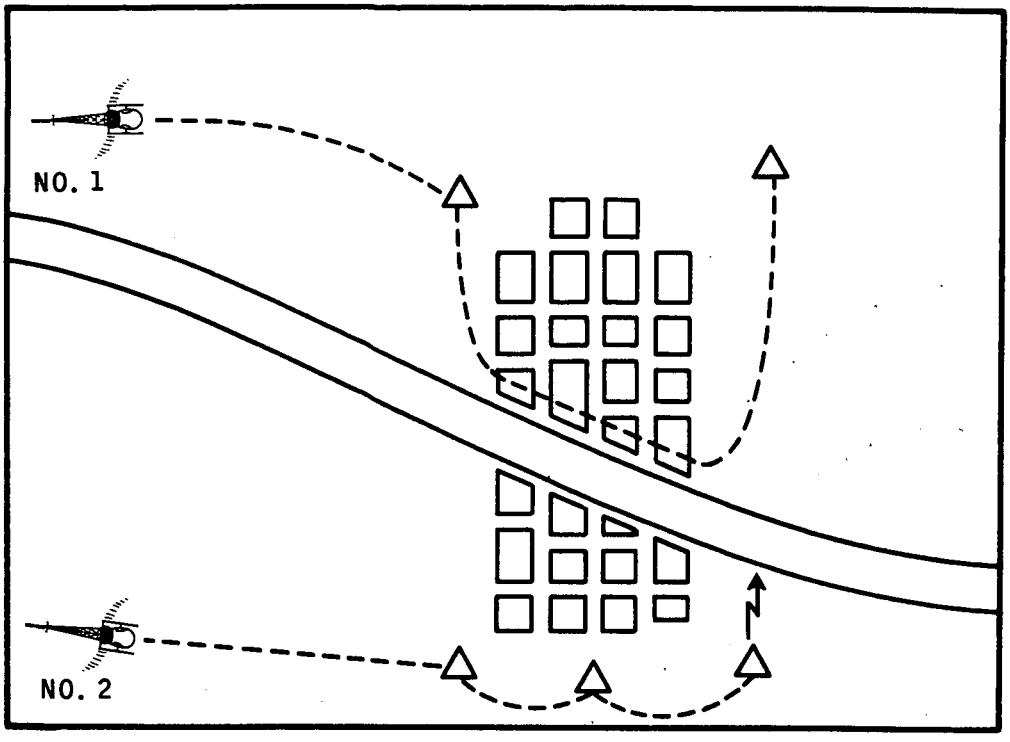
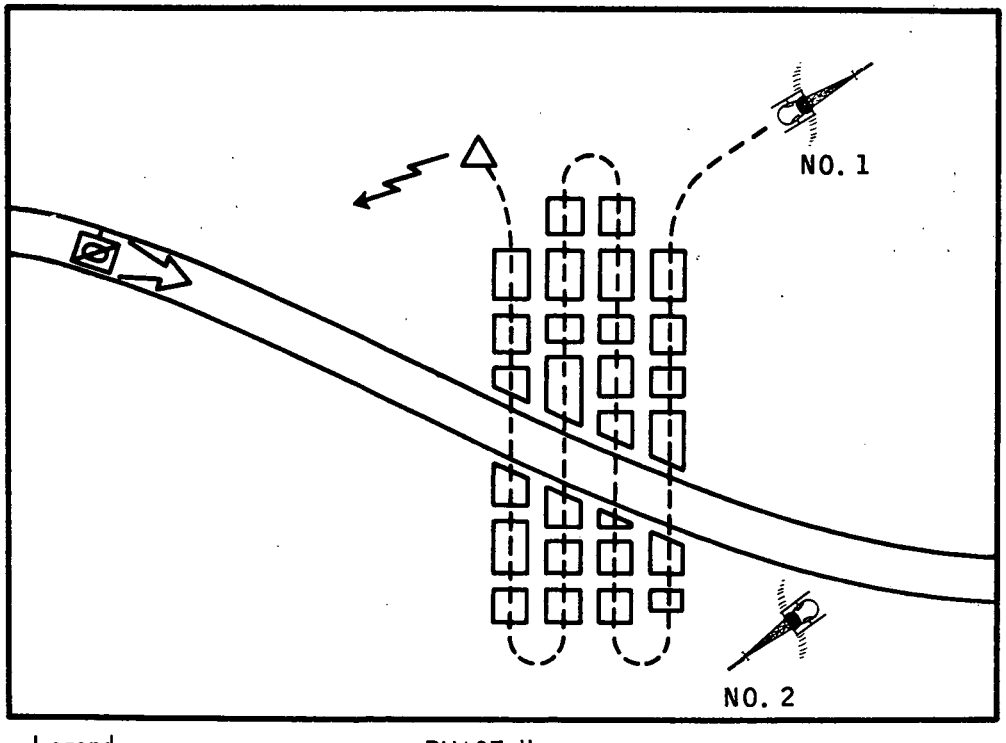


Figure 67. Aero-scouts reconnoitering a wooded area.



PHASE I



PHASE II

Legend
Aerial routes
Aerial/ground OP's
Communication

Figure 68. Aero-scouts reconnoitering a town.

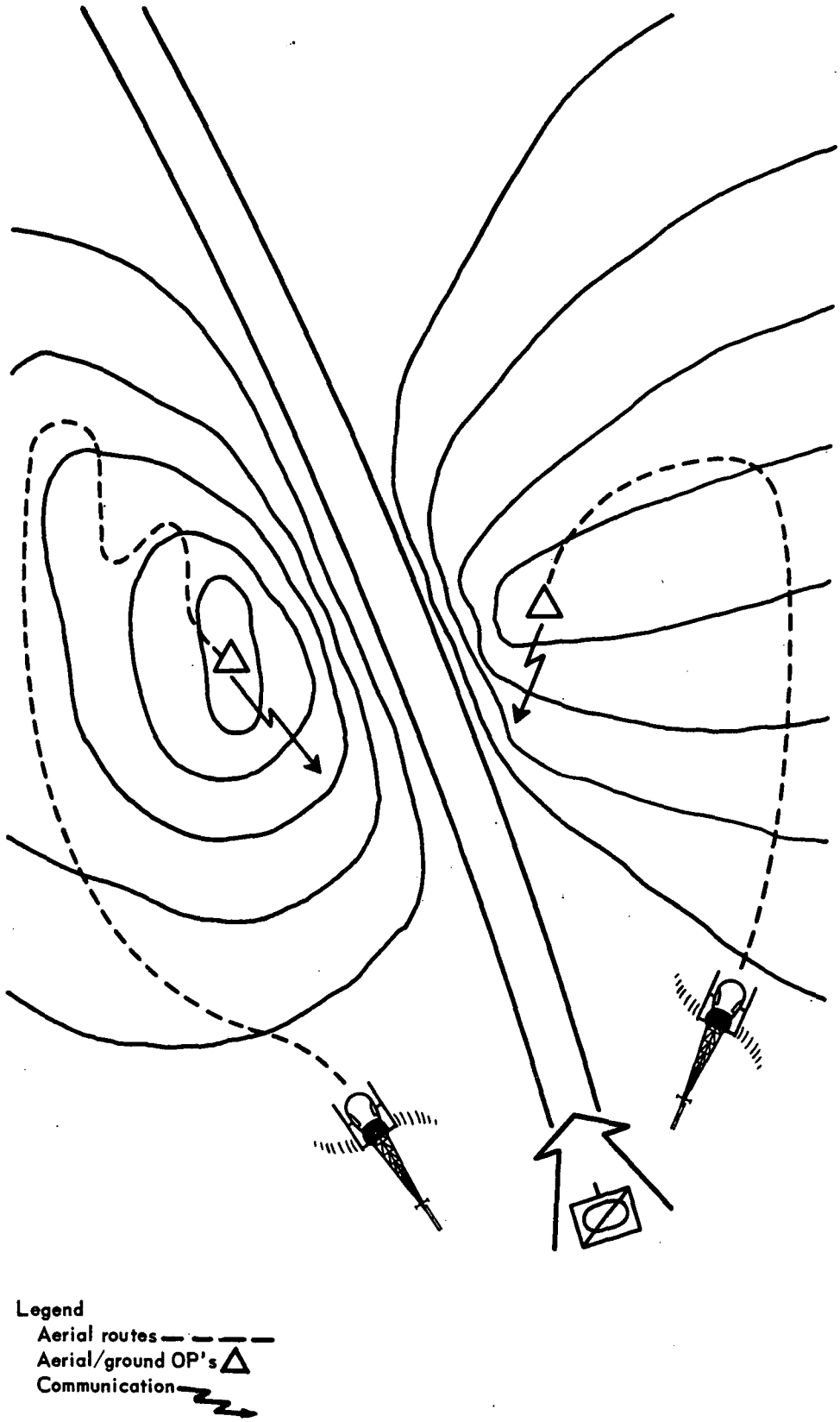


Figure 69. Aero-scouts reconnoitering a defile.

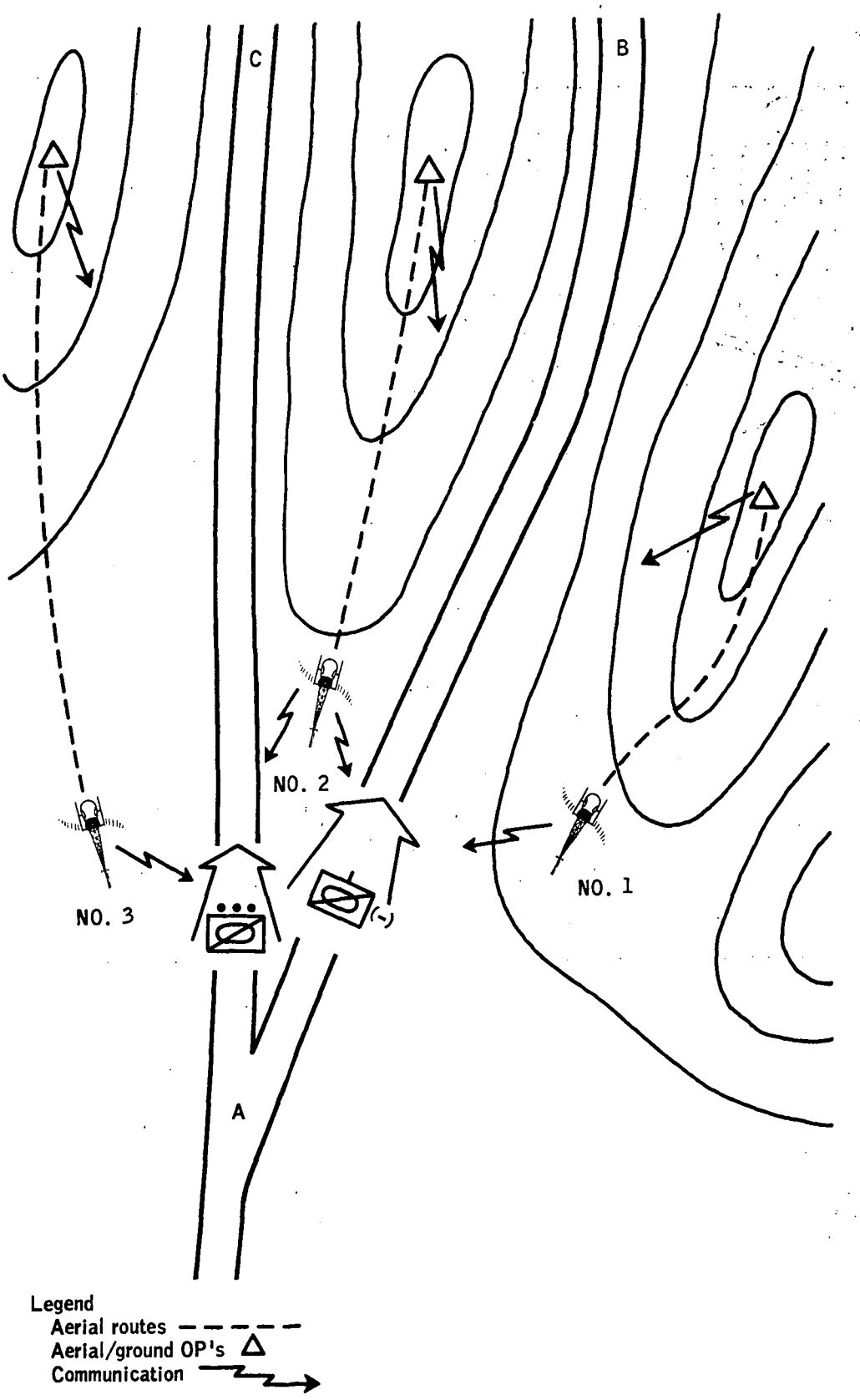


Figure 70. Aero-scouts reconnoitering parallel corridors on multiple routes.

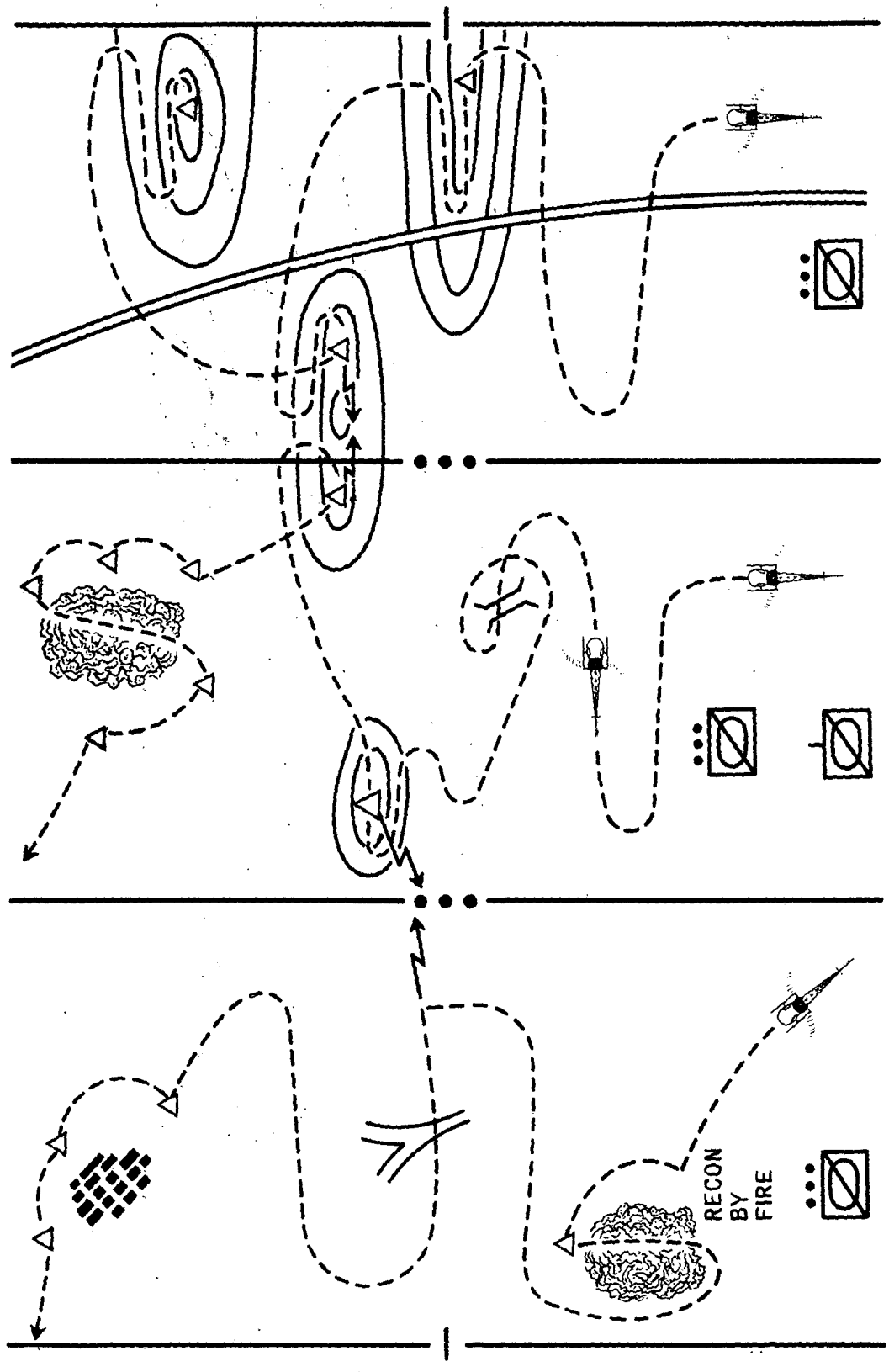


Figure 71. Aero-scouts on a zone reconnaissance with extensive frontage.

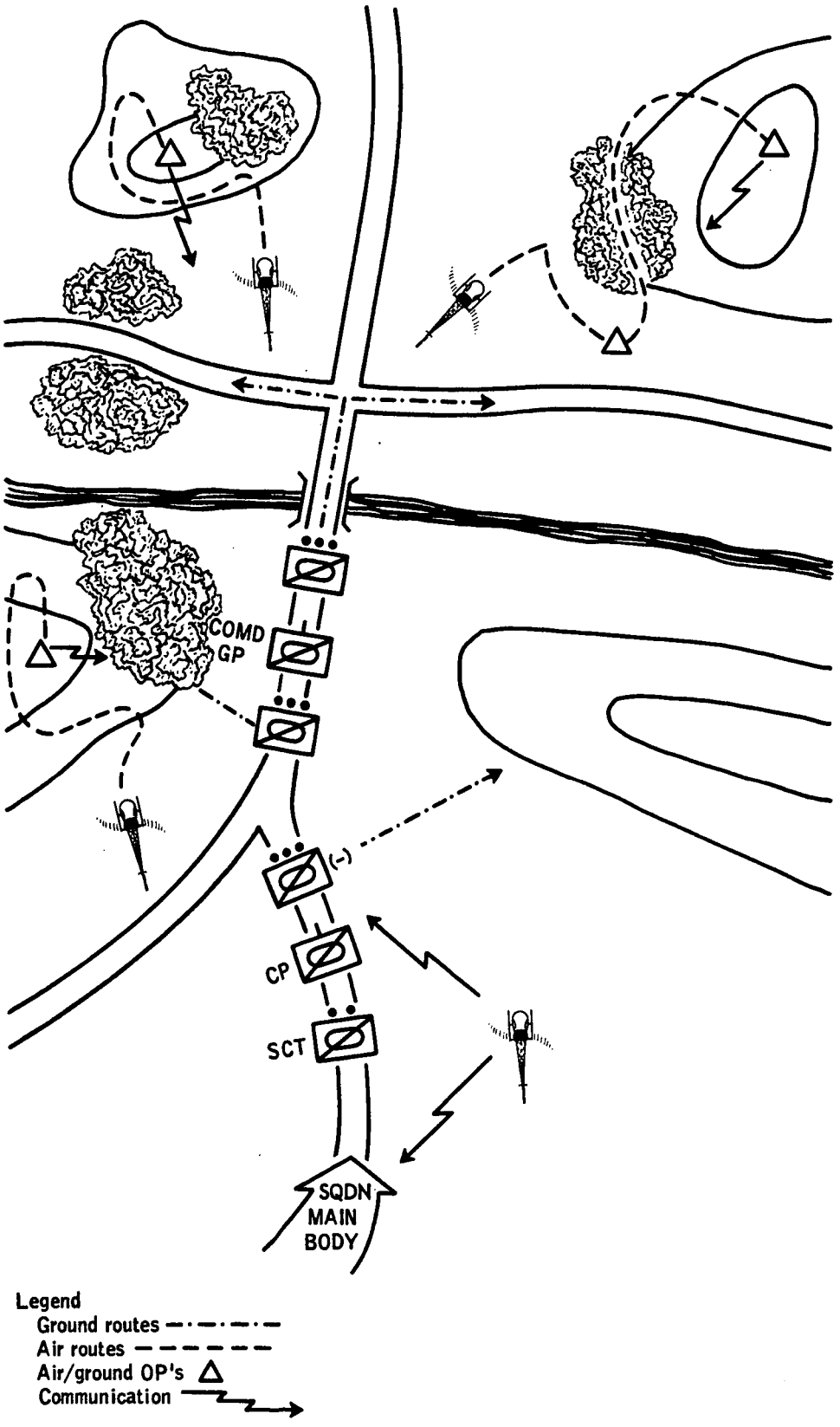


Figure 72. Aero-scouts as part of an advance guard.

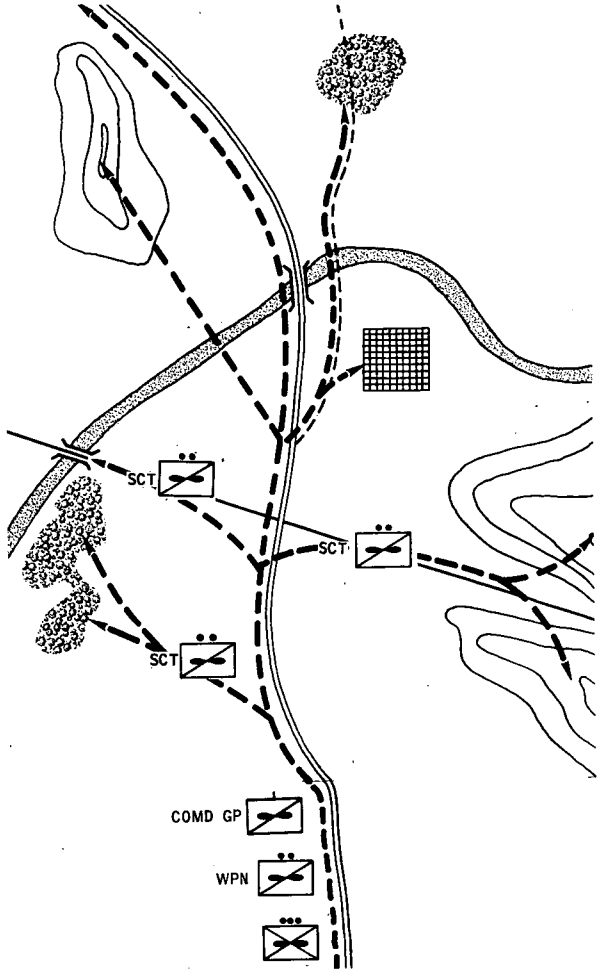


Figure 73. Air cavalry troop conducting route reconnaissance.

riflemen. It will habitually protect the landing and takeoff operations of the aero-rifle platoon.

g. When more than one route is to be reconnoitered, the air cavalry troop may be organized into several teams composed of aero-scout, aero-weapons and aero-rifle elements. Generally, not more than three such teams should be formed (fig. 64).

h. The air element conducting route reconnaissance in conjunction with ground reconnaissance elements assumes the character of an air screening force. The route and its dominating terrain features are reconnoitered from the air as thoroughly as possible. The progress of the air cavalry element is coordinated with the advance of the armored cavalry units. The air cavalry unit maintains close contact, liaison, and free exchange of information with the ground troops. In addition to its reconnaissance function, the air cavalry unit provides the ground reconnaissance unit with early warning of enemy forces.

156. Zone Reconnaissance

a. Zone reconnaissance is the directed effort to obtain detailed information of all routes, terrain, and enemy forces within a zone defined by boundaries. It is more thorough and time consuming than any other type. This type of reconnaissance mission can be readily conducted by the air cavalry troop (fig. 74).

b. When the enemy's location is in doubt or when it is desired to determine the most suitable of several available routes, a zone reconnaissance may be assigned. Factors that determine the width of the zone are surface concealment, terrain features within the zone, time available to accomplish the mission, visibility, and anticipated enemy action. In some situations, the zone reconnaissance may be executed by the aero-scout platoon operating as discussed in paragraph 155.

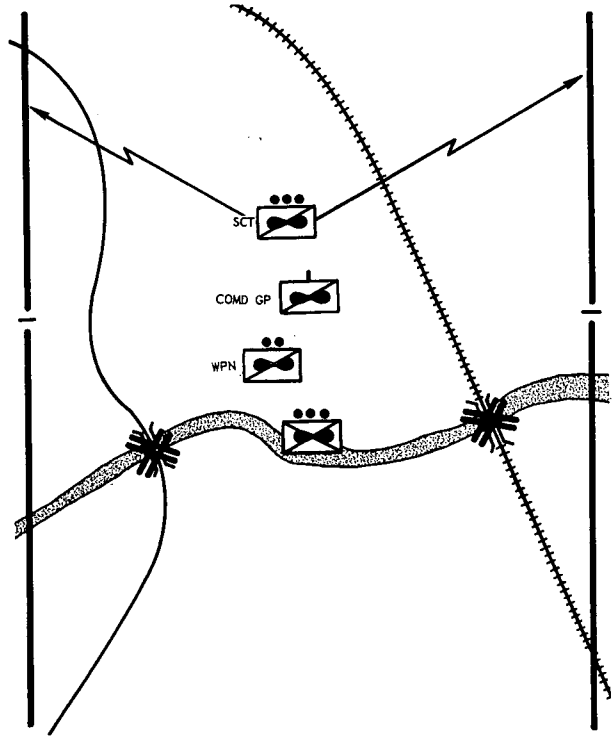


Figure 74. Air cavalry troop conducting zone reconnaissance in column formation.

c. Zone reconnaissance may be conducted by the troop as a whole, or the troop may be organized into teams and the zone subdivided to give each team a zone (fig. 75). Team organization will normally include elements from the aero-scout platoon, aero-weapons section, and aero-rifle platoon. Reconnaissance of a large zone may be conducted in a series of air sweeps or, when the zone is narrow, the unit may adopt the techniques used in route reconnaissance. Route information should be confirmed by ground units. The roles of the aero-scout and aero-rifle platoons and the aero-weapons section remain the same as for route reconnaissance.

d. In zone reconnaissance, use of the aero-rifle platoon in a dismounted role will be more frequent to insure thorough coverage of areas not readily reconnoitered from the air. The rapidity with which the zone reconnaissance can be made will be affected by the speed with which the aero-rifle platoon can accomplish its dismounted missions.

e. Formations and techniques of searching the zone will vary according to the size, shape, and nature of the zone, as well as time available and factors of METT. In a large zone of rectangular shape, parallel sweeps of the air formation between boundaries will be normal. The aero-rifle platoon (element) will be dismounted as necessary to insure thorough search of specific terrain features. The sweep may be made by the troop (team) in column, line, or other appropriate formation. In a narrow zone, line formation of the troop (team) may be used to complete the reconnaissance in a single sweep between boundaries.

f. The air cavalry troop may be assigned a zone reconnaissance mission across the squadron zone. Under these conditions, the troop is required to operate far enough in advance of the ground forces to permit the latter freedom of action. Thus, the troop, in effect, executes a security and warning mission and extends the ground reconnaissance effort. Its speed of advance is regulated by the progress of the ground reconnaissance forces. Reliable communication and close coordination between the air and ground reconnaissance elements are essential.

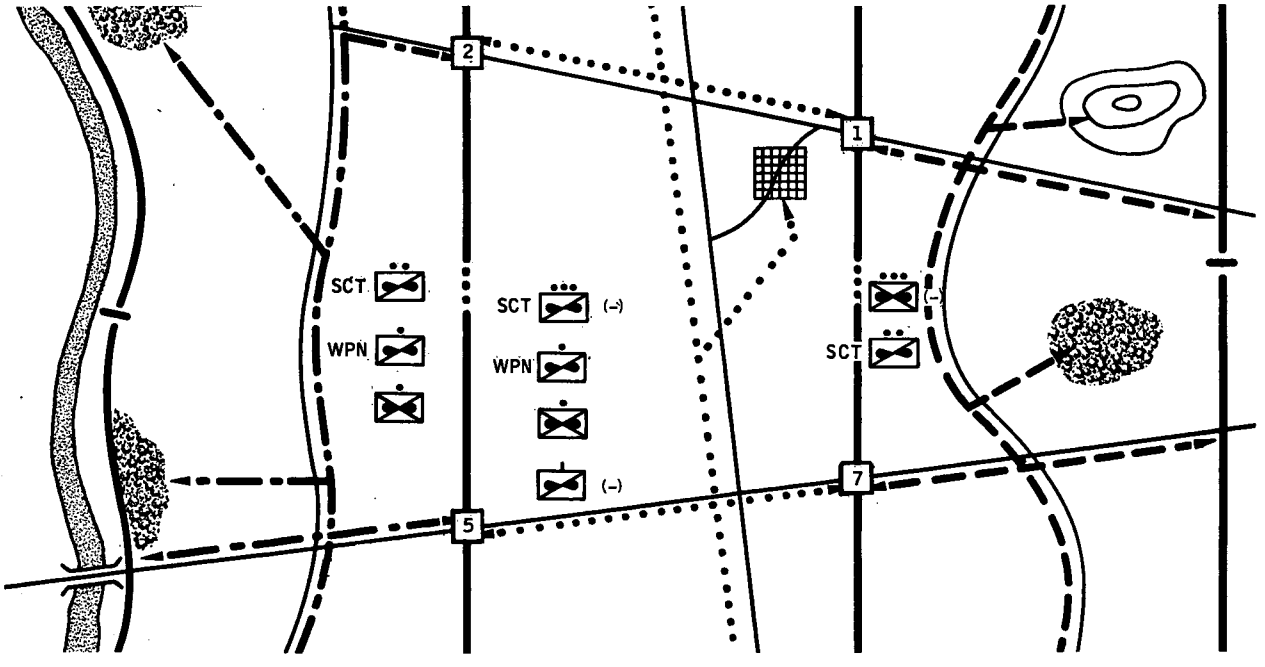


Figure 75. Air cavalry troop conducting zone reconnaissance with platoon teams.

157. Area Reconnaissance

a. Area reconnaissance is the directed effort to obtain detailed information of all routes, terrain, and enemy forces within a specific and clearly defined area.

b. Area reconnaissance by the air cavalry troop may be a specific mission or it may be performed as part of a route or zone reconnaissance mission. Area reconnaissance is performed using zone reconnaissance techniques. Area reconnaissance is performed with the troop or its elements in accordance with the factors of METT. Normally, area reconnaissance will require the employment of at least aero-scout and aero-rifle elements. The aero-weapons element may be included as required. An aerial reconnaissance will be made of the designated locality first. The aero-rifle element is then landed to conduct a detailed ground reconnaissance of areas not adequately reconnoitered from the air. The aero-scout platoon and aero-weapons section support ground reconnaissance by the aero-rifle platoon (fig. 76).

c. Detailed ground reconnaissance of specific areas or suspected targets deep in enemy territory may be performed by air-delivered patrols from the aero-scout or aero-rifle platoon. Patrols used in this manner achieve their mission by stealth, without air protection by other elements of the troop. Normally, the helicopter will not remain with the rifle element but will return to pick up the patrol according to prearranged plans. Adequate communication between the patrols and troop headquarters must be maintained by establishing either forward base radio stations or air radio relay. The patrols may remain in enemy territory for extended periods but their movements must be coordinated carefully with higher headquarters to avoid casualties from friendly fires.

d. Depending on the nature of the area, dismounted reconnaissance may not always be required. In open terrain where ground concealment is lacking, reconnaissance may be limited to air activity only. Some dismounted area reconnaissance is usually necessary, particularly with respect to reconnaissance objectives such as towns, river crossing sites, bridges, and wooded areas. When ground reconnaissance forces are working with the air unit, dismounted reconnaissance of specific locations should be performed by ground troops. In such a situation, elements of the air cavalry troop will provide air reconnaissance and early warning for the armored cavalry troop.

158. Conduct of Reconnaissance

a. In the execution of reconnaissance missions, i.e., route, zone, and area reconnaissance, the air cavalry troop may be:

(1) Used as an air extension of the armored cavalry squadron's ground reconnaissance capability operating under squadron control.

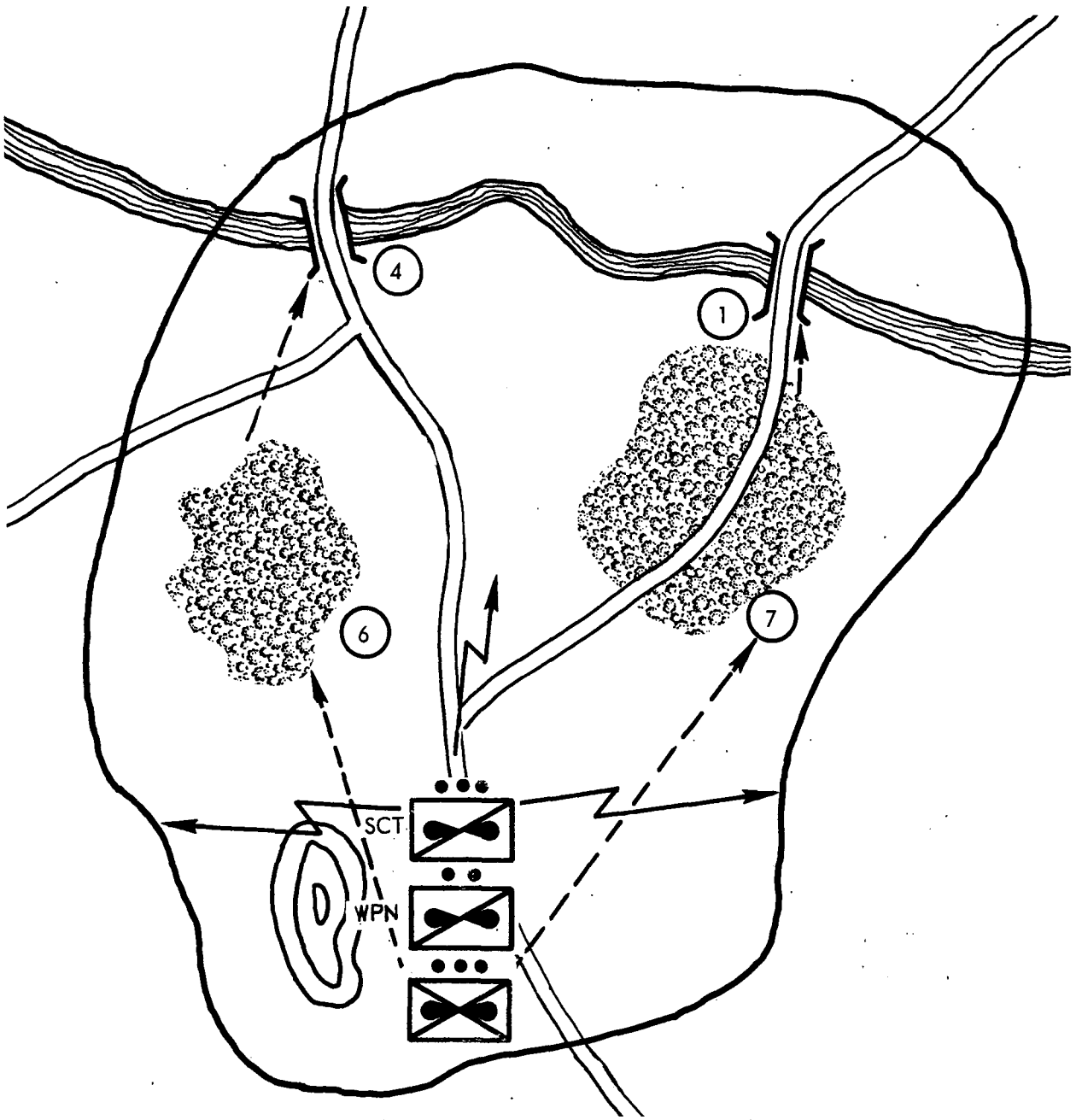
(2) Attached to or placed under operational control of an armored cavalry troop. (Attaching is usually not desirable (para 72).)

(3) Used as teams of aero-scout, aero-weapons, and aero-rifle elements acting under troop control or attached to armored cavalry troops.

b. Reconnaissance missions must be executed boldly and aggressively, making full use of the troop's mobility and firepower. Maximum use should be made of the capability for rapid, deceptive movement to confuse the enemy as to the exact mission and information sought. Normally, when terrain and surface concealment is sparse, the aero-scout platoon will execute the air reconnaissance mission within the troop zone of responsibility. The aero-rifle platoon and aero-weapons section will advance behind the aero-scout elements from positions that will allow them to move quickly to support the scout elements, should enemy forces be encountered that cannot be bypassed or are of a size and type that, if bypassed, would affect the completion of the mission.

c. Flight altitudes for reconnaissance will be determined by the mission, terrain, weather conditions, light level natural or manmade surface concealment, security desired, location and disposition of the enemy, enemy countermeasures, and obstacles to flight (app. III).

d. The troop will attack, when necessary, in performing the reconnaissance mission. Before committing his unit to an attack, the commander must be relatively certain of success. Care must be taken not to commit the unit to an attack in which losses might be so great as to prevent further completion of the reconnaissance mission.



Note. Aero-scout platoon reconnoitering entire area, aero-rifle squads reconnoitered specified locations indicated by check points and aero-weapons section centrally located to support aero-scout and aero-rifle platoons.

Figure 76. Air cavalry troop conducting area reconnaissance.

159. Reconnaissance by Fire

a. During reconnaissance by fire, troops must continually observe the positions being reconnoitered so they can locate any enemy movement or return fire. Reconnaissance by fire is used when time is critical. It is made at the loss of achieving further surprise, but it tends to lessen the probability of moving over a well-concealed enemy position without being aware of its presence.

b. If the enemy returns the fire, the unit proceeds to develop the situation. If the fire is not returned, the unit continues on its mission; however, caution should be exercised because reconnaissance by fire may fail to draw the fire of seasoned enemy troops.

160. Control

a. The commander controls and coordinates the advance of his subordinate units primarily by radio. The commander should place himself in a central location, where he can maintain contact and control all elements. He must be prepared, however, to move rapidly to any part of his zone of responsibility to supervise a critical action.

b. To assist in control, the troop commander may designate phase lines, control points, contact points, and a series of reconnaissance objectives. Platoons or other elements report, but do not stop, on reaching or crossing phase lines or control points. (For a discussion of control measures, see FM 17–1.)

161. Instructions

a. A reconnaissance mission is assigned to the troop as a unit. When more than one mission is assigned, a priority should be given. The troop commander then allots tasks to the platoons or air teams. Operations are coordinated by the troop operations section.

b. Reconnaissance instructions must be specific. Instructions to the platoons or other elements must be complete and must include:

(1) Available information of the enemy and friendly troops in the area of operations.
(2) Plans of the higher commander, when appropriate.
(3) Specific information desired.
(4) Zone, area, route, or axis of advance.
(5) When, where, and how information is to be reported.
(6) Time of departure.
(7) Phase lines, control points, reconnaissance objectives, and, when desirable, the times they are to be reached.
(8) Time mission is to be completed.
(9) Action after the mission is completed.

c. The troop commander issues instructions orally to his platoon and team leaders. Unless the immediate situation makes it impracticable to do so, platoon and team leaders should be assembled to receive the order. After the reconnaissance has started, necessary additional instructions are transmitted by radio, or by the troop commander in person.

162. Transmitting Information

Rapid transmission of information is essential to the success of any reconnaissance mission. For principles involved see paragraph 31.

163. Target Acquisition

Target acquisition is implicit in any mission of the air cavalry troop. Like reconnaissance, target acquisition is a continuing process. Lucrative targets are either engaged or promptly reported for engagement by other forces. Targets are reported by detailed description as to size, composition, direction of movement and exact location. The importance of early target acquisition is magnified in nuclear warfare. Because of the characteristics of delivery systems and the effects of nuclear weapons, targets must be located, identified, and engaged as soon as possible. Air cavalry units are well suited for nuclear target acquisition. They will frequently be the first to discover, identify, and contribute to the development of nuclear targets. The mobility and long range capability of the air cavalry troop enables it to meet the demands of early nuclear target acquisition.

164. Chemical Agent Detection and Radiological Monitoring and Survey Operations

Elements of the air cavalry troop are capable of performing chemical agent detection and radiological monitoring and survey operations. Air and ground monitoring is performed in conjunction with other missions. Generally,

the objective of air monitoring is to determine the presence or absence of significant levels of chemical or radiological contamination. The air cavalry troop can effect rapid air survey of the radiation hazard near a nuclear explosion. As radiological surveys are specific missions that normally divert a part of the unit from the normal reconnaissance and security missions, they are conducted only when essential information cannot be obtained by monitoring or by other agencies. Direct damage assessment of either friendly or enemy nuclear weapons can also be performed by elements of the air cavalry troop. The troop may be the most readily available means to complete the first survey.

Section III. OFFENSIVE OPERATIONS

165. General

a. The air cavalry troop normally attacks in conjunction with other elements of the squadron to accomplish assigned reconnaissance and security missions. The troop may attack when the mission requires the destruction of enemy encountered, when it is necessary to reduce an enemy position to continue the mission, or when the mission is to seize a particular objective. It may attack with or without reinforcements, when used on an independent mission.

b. Normally, the troop engages in offensive action as a unit. The aero-scout platoon may be employed as an air security force to provide reconnaissance and security for the attack or as an element of the base of fire. The aero-weapons section usually provides an air base of fire. The aero-rifle platoon normally is employed dismounted as the maneuvering force to close with and destroy the enemy. However, this mission must be compatible with the offensive capabilities of a dismounted rifle platoon.

c. Employment of the air cavalry troop as an attacking force to seize an objective in a planned offensive role is rare. The organization and equipment of the troop are of such a nature that the unit should not be unnecessarily exposed to loss. Its capabilities for sustained offensive action are limited.

166. Preparation for the Attack

a. The commander's preparation for the attack consists of issuing a warning order, beginning an estimate of the situation, coordinating with other units, making a tentative plan, making a personal reconnaissance, completing the plan, and issuing his oral order. At all times he must actively supervise the execution of orders. For a detailed discussion of troop leading procedures, refer to FM 17–1.

b. In organizing for combat, the air cavalry troop may use its elements as organized or by cross-attaching with each other to form platoon teams. When the team composition has been announced by the troop commander, the leaders to which they are attached coordinate their actions. At this time they make all necessary arrangements concerning communication, liaison, reconnaissance, and other appropriate matters of mutual interest.

c. Coordination with other units is accomplished during the reconnaissance. If the attack is to be made over or in conjunction with friendly units, the troop commander or his representative contacts the commanders of those units and accomplishes essential coordination. This coordination includes the location of leading elements and the use of recognition signals, supporting fires, and fire control measures. Linkup by ground troops is coordinated if the operation requires. This is often the case in limited objective operations, as the air cavalry troop is not organized for sustained defensive operations.

d. All individuals of the troop must receive a detailed briefing.

e. Before the troop is committed to an attack, the commander normally makes a personal air reconnaissance. He arranges to have his subordinate leaders accompany him or to come forward to meet him at a specified time and place. After the commander issues his attack order, the subordinate leaders make as detailed a reconnaissance as time permits. If time, security, or visability do not permit, leaders make a detailed map study.

f. Commanders seek the following information during their reconnaissance:

(1) Definite and possible locations of enemy positions.

(2) Definite and possible locations of enemy air defense weapons or other obstacles to flight, and routes for bypassing them.
(3) Defiladed or concealed flight routes to the objective.
(4) Overall condition of the terrain.
(5) Enemy activities that might reveal enemy plans, such as strengthening defensive positions, withdrawing trains, or concentrating reserves.
(6) Positions of friendly units.
(7) Good fields of fire from air and ground positions.
(8) Location and extent of natural obstacles that the commander may use to his advantage.
(9) Key terrain features to assist in control.

g. The plan of attack is designed to insure maximum coordination within the attacking forces throughout the operation. The plan must be simple but must cover all essential details. It should include the location and composition of the base of fire, targets to be fired upon, and signals for lifting or shifting the fires of the base of fire. It should include the composition of the maneuvering force, the avenue of approach it will follow to the objective, the formation to be used, and if required, its method of advance. It should include provisions for security during the attack, for consolidation of the objective, for reorganization after the attack, and for resumption of the advance.

h. Fire support is normally provided by the aero-weapons section. This fire may be augmented by one or more sections of the aero-scout platoon. Artillery or mortar support from ground units is also used if the objective is within supporting distance. When supporting fires are provided, coordination is required to insure that helicopters avoid trajectories of high-angle fires. When the distance to the objective is too great for artillery support, tactical air support, if available, may be used to soften up the objective area before the assault.

167. Conduct of Attack

a. The air cavalry troop attacks by fire and movement. Air-to-ground fires neutralize, disorganize, and destroy the enemy weapons and troops they can reach. Movement brings the firepower into new and more advantageous positions from which it can complete the destruction of enemy forces.

b. Unless otherwise planned, fire and movement begin immediately with the first definite hostile contact. The troop commander normally places himself where he can best control those elements of the troop that are making the main effort in the attack. He maintains close communication with the other elements. Radio is the primary means of communication, but supplemental control means such as pyrotechnic signals should be provided for.

c. The mission of the air base of fire element is to force the enemy to seek cover, neutralize his weapons, and soften him up for assault by the maneuvering force. The air base of fire may contain all or parts of the aero-weapons section and aero-scout platoon. Elements of the aero-rifle platoon are seldom used in this role. Aero-scout elements may assist the air base of fire. They have the advantage of being able to move rapidly in and out of position over terrain that would be difficult or impossible for ground units to use. When used to assist the air base of fire, scout elements may locate and mark by fire the targets for the aero-weapons section to engage.

d. The aero-rifle platoon will make the assault if this action is required. When terrain and the situation permit, the aero-rifle platoon will normally approach an enemy position from the flanks or rear. It moves by covered or concealed air routes to the aero-rifle dismount point. Elements of the aero-scout platoon or aero-weapons section should cover the landing of the aero-rifle platoon; from there the aero-rifle platoon normally makes a final dismounted assault on the objective. Elements of the aero-scout platoon or aero-weapons section, assist by sealing off the objective with air fire, protecting the flanks and rear of the ground assault force, and firing on targets of opportunity beyond the capability of the aero-rifle platoon.

e. On a prearranged order, all air base-of-fire weapons begin fire on the objective. This fire is distributed over the entire objective. As the aero-rifle platoon arrives at the objective or masks supporting fires, the base of fire lifts or shifts its fire beyond or to the flanks of the objective. This is controlled by radio, observa-

tion, or prearranged pyrotechnic signals. Helicopters in the base of fire may shift from one position to another whenever necessary to obtain better fields of fire or to escape enemy fire. This is done by using air gunnery techniques outlined in appendix III.

f. Fire from elements of the aero-rifle platoon should strike the objective before supporting fires lift. The moment that the base of fire lifts or shifts, the aero-rifle platoon should move directly into the assault of the objective.

g. The troop reorganizes after the attack either to continue the advance or to defend or dominate the position taken. Security to the front, flanks, and rear is established immediately. Aero-scout elements provide security at greater distances. This security includes maintaining visual contact with any forces that may have been driven from the objective. Casualties are given first aid and emergency evacuation by troop helicopters, if necessary. Persons are designated to replace key individuals who are wounded and evacuated. Ammunition is redistributed and helicopter armament systems are checked and reloaded. Prisoners of war are handled according to unit SOP; they may be evacuated by helicopter in many situations. The commander makes his report on the action as soon as possible after the objective has been taken. The report includes the results of the attack, casualties sustained, prisoners taken, equipment losses, logistical requirements, and immediate plans for subsequent action.

Section IV. SECURITY OPERATIONS

168. Security Operations

a. Security, as applied to armored and air cavalry, includes all measures taken by a command to protect itself from observation or surprise. When performing security missions, the air cavalry troop must give the main body adequate and timely warning of hostile approach. Within the capabilities of the troop, it engages the enemy to defeat or delay him. A security force must orient its maneuver on the main body being protected. There is no set distance at which the air cavalry troop operates from the main body. The distance will vary with the factors of METT. The troop should be far enough from the squadron to provide time and space for the squadron to react to an enemy threat.

b. Security is a mission that will frequently be assigned to the air cavalry troop. The security mission will be accomplished by offensive or defensive action, delay, or a combination thereof. The air cavalry troop will normally perform security missions as part of and in conjunction with the parent squadron. It may perform security missions for other elements of the division.

c. The air cavalry troop will often be required to operate over broad frontages in the performance of security missions. The troop commander must expect broad frontages and consequent dispersion of his forces. He must take full advantage of his unit's mobility and radio communication to overcome the disadvantages of dispersion. The troop can be assembled quickly for a given mission, then rapidly redeploy as the situation requires.

169. Advance Guard

a. An advance guard is a security force, primarily offensive in nature, that operates to the front of a moving force to insure its uninterrupted advance and to protect it from enemy surprise attack by defeating, destroying, or delaying the enemy within its capabilities (fig. 77). For a detailed discussion, see FM 17–1.

b. In an advance guard mission, the air cavalry troop will normally act as the air extension of the armored cavalry squadron. The troop will not normally perform an advance guard mission as an independent unit. When performing this mission, the air cavalry troop will normally regulate its movement on the forward progress of the ground elements of the advance guard. The troop will normally precede the ground armored cavalry force far enough to provide the commander sufficient time and space to react to an enemy threat to the front or flanks. Formations adopted will be governed by the factors of METT. When the main body is in column formation, the air ad-

vance guard formation will usually consist of deployed aero-scout sections, reinforced as necessary with aero-weapons and aero-rifle elements, providing observation to the front and flanks. When the main body is advancing on a broad front (e.g., in multiple columns), it may be necessary to deploy the aero-scout section in line or wedge, with the remaining air cavalry elements deployed to provide rapid support at any point of enemy contact.

c. Throughout the advance guard operation the troop combines its advance guard mission with a reconnaissance mission. The troop reconnoiters the terrain along the route of advance continuously and regularly reports all information, either positive or negative, to the ground forces.

d. Contact with the enemy is reported promptly. The aero-scout elements determine the size, strength, and disposition of the enemy force, and within its capabilities, the troop takes the necessary action to reduce the enemy element or force it to withdraw. The combined firepower of the aero-scout platoon and the aero-weapons section are used offensively to neutralize the enemy force. Within its capabilities, the aero-rifle platoon may be dismounted to engage the enemy force. The troop should not become so engaged, however, as to risk destruction. When the enemy force is of such a size and disposition that the troop cannot successfully engage it, the situation is reported to the advance guard commander. The troop then may be directed to avoid the enemy forces and continue its mission, bypassing the located resistance. Usually, the troop will be required to maintain surveillance of the enemy with a part of its force until relieved by other elements. When the enemy dispositions are of such extent that they cannot be bypassed, the air cavalry troop reports and develops the situation within its capabilities, reconnoiters the enemy force as thoroughly as possible, and maintains contact and surveillance until relieved by other elements of the squadron. Between the time that first contact is made and the time it is relieved of its mission, the troop uses observation, air fires, and dismounted infantry action to develop the situation. Close coordination with the ground element of the advance guard is maintained. Within its capabilities, the troop initiates offensive action, including dismounted infantry attacks, reconnaissance by fire and fire suppression measures, to prevent enemy interference with the ground units preparations for attack. As the leading ground elements arrive to assist the troop, elements of the air cavalry troop are then employed to provide security to the flanks and rear of the attacking force.

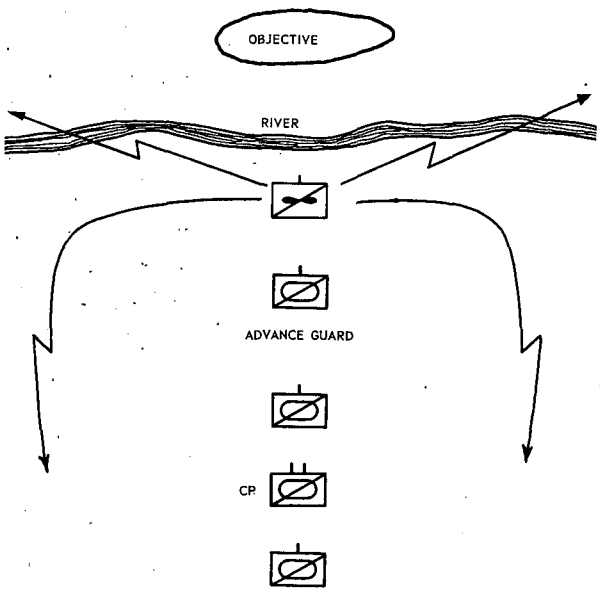


Figure 77. Air cavalry troop as part of an advance guard.

e. When the advance to contact is prolonged, logistical support is obtained through mobile forward supply and maintenance elements or by phasing Army aircraft back to the trains area. Air operations must be planned to provide opportunities for fueling, supply of ammunition, and necessary maintenance.

170. Flank Guard

a. A flank guard is a security force that operates to the flank of a moving or stationary force to protect it from enemy ground observation, direct fire, and surprise attack by defeating, destroying, or delaying the enemy within its capabilities.

b. The air cavalry troop will normally perform flank guard missions as a part of its parent armored cavalry squadron (fig. 78). Thus employed, the troop primarily conducts air reconnaissance and surveillance operations, by establishing an air screen, as an extension of

the squadron's ground capabilities. Within its capabilities, the troop will assist in accomplishing the flank security mission by engaging in offensive, defensive, or delaying actions, as appropriate.

c. In a moving situation, the initial disposition of the air cavalry troop may be relatively narrow and require only a part of the troop to be airborne. As the operation of the squadron becomes more extended, the air dispositions extend accordingly by lateral displacement of elements initially employed or by using additional air elements. If the movement of the squadron is slow, aero-rifle elements may be dismounted to man observation posts or listening posts on key terrain features. When the main body is moving rapidly, air elements may displace parallel to the movement of the squadron by alternate or successive bounds.

d. In performing a flank guard mission, the air cavalry troop will normally be employed to establish an air screen beyond the line of squadron blocking positions; to provide air elements for the squadron advance guard; to screen the area between the main body and the squadron route of advance, and to maintain contact with the rear battalion task force of the main body. Normally, the air reconnaissance and security operations of the troop will not extend beyond the line of the air screen. In some situations, elements of the troop may be used to reconnoiter avenues of enemy approach out to the operational range of assigned helicopters. Ground dispositions of the squadron should not control the actions of the troop too closely; however, all actions of the air cavalry troop must be coordinated closely and in concert with the ground elements to facilitate the accomplishment of the squadron mission. When contact is established with an enemy force, the air cavalry troop will engage the enemy within its capabilities to harass and delay his advance. Contact will be maintained with the enemy force as it approaches the squadron blocking positions and the squadron commander must be kept abreast of the situation.

e. In a slow-moving or static situation, the troop may use a combination of dismounted and air action. Elements of the aero-rifle platoon may be dismounted to man observation posts along primary avenues of enemy approach. Concurrently, aero-scouts conduct aid patrolling forward of and between the dismounted OP's. The aero-weapons section remains centrally located and prepared to support the aero-scout or aero-rifle platoon.

171. Rear Guard

a. A rear guard is a security force that operates to the rear of an advancing or withdrawing force to protect it from enemy surprise attack or annoyance by defeating, destroying, or delaying the enemy within its capabilities.

b. The air cavalry troop will normally perform rear guard action as a part of the parent squadron. The troop will seldom perform a rear guard mission as an independent troop.

c. Rear guard action may be conducted as a series of delaying actions. The rear guard follows the main body at a prescribed distance or time interval and generally along the same axis as the main body. According to the situation, movement may be continuous, regulated on the main body, or by bounds, occupying key terrain positions to block possible enemy attacks.

d. The air cavalry troop will normally be under command of the rear guard commander. Use of the troop is based on continuous communication with the squadron commander.

e. The troop performs continuous reconnaissance and surveillance to the rear and flanks, reporting all information promptly. Contact with enemy forces is reported immediately and air elements reconnoiter and attack to delay or destroy the enemy force. When the enemy force is of such a size and composition that the air cavalry troop cannot engage it without risking destruction, the troop reports the situation to the rear guard commander and maintains surveillance over the enemy.

f. Techniques of employment correspond to those used in advance and flank guard operations. The air cavalry troop functions as an extension of the ground force reconnaissance, surveillance, and combat capability. It provides early warning of enemy approach. The air troop extends its operations to the distances that insure adequate reaction time and maneuver space for the main body commander to meet the enemy threat.

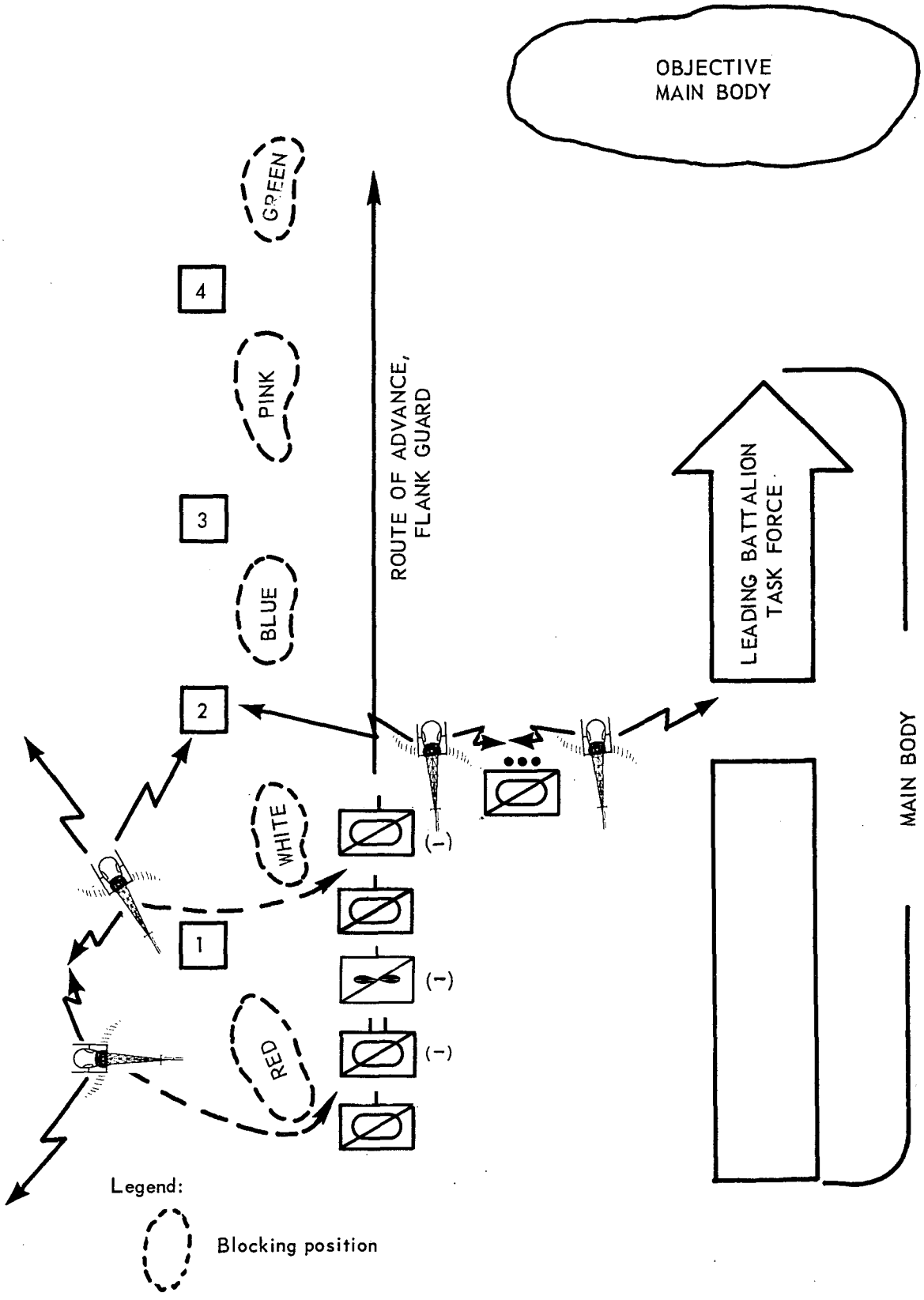


Figure 78. Air cavalry troop as part of the armored cavalry squadron in a flank guard security mission.

g. When participating in a rear guard mission in conjunction with ground forces, the aero-rifle platoon will not usually be required to conduct dismounted action. When the air cavalry troop is performing a rear guard action as an independent force, the aero-rifle platoon may be used to occupy ground positions designed to provide delay consistent with the platoon's capabilities. The platoon is air-landed on or close to the initial delaying position, and its helicopters occupy the nearest available covered parking positions. The landing is made under cover provided by the aero-scout platoon and aero-weapons section. While the rifle elements occupy their positions, the aero-scout platoon and aero-weapons section extend the area of reconnaissance coverage to the flanks and rear. As the main body increases its distance away from the rear guard, the aero-rifle element is relifted under cover of elements of the aero-scout platoon and aero-weapons section, and is moved to the next delaying position. When the progress of the main body is rapid, and the enemy is not threatening direct interference, an air screen to the rear and flanks of the main body may provide adequate rear guard security. In such a situation, elements of the aero-scout platoon conduct the air screen while the aero-rifle platoon and aero-weapons section remain centrally located to provide rapid support at any point of enemy contact.

h. In a withdrawal from action, the air cavalry troop is normally employed in conjunction with ground elements of the squadron. Specific actions of the troop involve offensive tactics, reconnaissance and surveillance, and delaying action. Because of the difficulties of recognizing friendly forces, detailed coordination resulting in usable control procedures and recognition signals must be completed before using the troop in night withdrawals. The air cavalry troop may take part in the withdrawal as an element of the security force protecting the retrograde movement of the main body. When acting as part of the security force, the air troop conducts its operation in the same manner as in the rear guard action.

172. Screening Force

a. The air cavalry troop may be appropriately and effectively used as a screening force by conducting surveillance over an extended frontage to the front, flank, or rear of a moving or stationary force to provide early warning by observing, reporting, and maintaining visual contact with all enemy forces encountered. The air cavalry troop will perform screening missions more often than any other mission. A screening mission is assigned to the air cavalry troop when security is desired on an extremely wide front and limited forces are available to fulfill the mission. The air cavalry troop covers this extended front by aero-scout patrols, aero-rifle patrols, or a combination of both supported by elements of the aero-weapons section. The screening force deployed over such a wide area, normally observes and reports enemy activity and may be required to engage small enemy patrols within its capability. Unless otherwise ordered, elements of the screen will report and maintain visual contact with the enemy force until the squadron commander takes action to halt the enemy threat.

b. When the air cavalry troop is assigned a screening mission, the aero-scout elements will normally establish the airmobile patrols of the screen. In a slow-moving or static situation, or when surface concealment limits air reconnaissance, aero-rifle elements may be used to establish ground observation posts. Elements of the aero-weapons section are attached to the aero-scout elements when the assigned frontage is too wide to permit timely use from a central location.

c. When ground employment is required, elements of the aero-rifle platoon are transported to selected locations in their organic helicopters. When available cover and concealment are adequate and the enemy situation permits, the platoon helicopters may remain nearby. If this is not possible, the helicopters return to the troop assembly area and remain on call for pickup of the rifle elements. These positions should be organized in not less than squad strength with adequate communication to the platoon CP. Positions will be on commanding or key terrain features covering likely avenues of enemy approach. The mission of each observation post or listening post is to maintain surveillance over an assigned avenue of enemy approach and report all information

as obtained. Small listening posts may be advanced from the observation posts at night. When not engaged in self-defense, rifle elements of the screen will engage small enemy patrols. Maximum use will be made of stealth and concealment. Limited patrol operations may be conducted from observation posts; these operations include reconnaissance patrols and patrols to maintain contact with adjacent observation posts. Air contact between widely separated observation posts should be maintained.

173. Covering Force

a. A covering force is a highly mobile, tactically self-contained security force that operates at a considerable distance to the front, flank, or rear of a moving or stationary force with the mission of achieving early development of the situation, defeating hostile forces if possible, and deceiving, delaying, and disorganizing enemy forces until the main force can prepare for action. The air cavalry troop will normally perform a screening mission when the squadron is performing a covering force mission. It may be used on the flanks, to the front, or to the rear of the squadron. The squadron commander will specify the area of operations or the units to be covered by the covering force (fig. 79).

b. The air cavalry troop will rarely be used alone as a covering force. It will normally operate as part of the armored cavalry squadon on such missions.

c. The troop will normally perform air reconnaissance and security missions for the squadron during covering force or general outpost operations. The troop will accomplish this mission by establishing an air screen and ground OP's beyond the squadron covering force or general outpost positions to provide early warning of enemy approach. The air screen consists of aero-scout patrols and aero-rifle observation posts as a warning system, with the aero-weapons section and the remaining aero-rifle elements centrally located to the rear. When forced to withdraw, the troop delays the enemy within its capability and protects the flanks of the squadron, avoiding decisive engagement with the enemy. Every effort is made to deceive the enemy as to location of the squadron blocking positions.

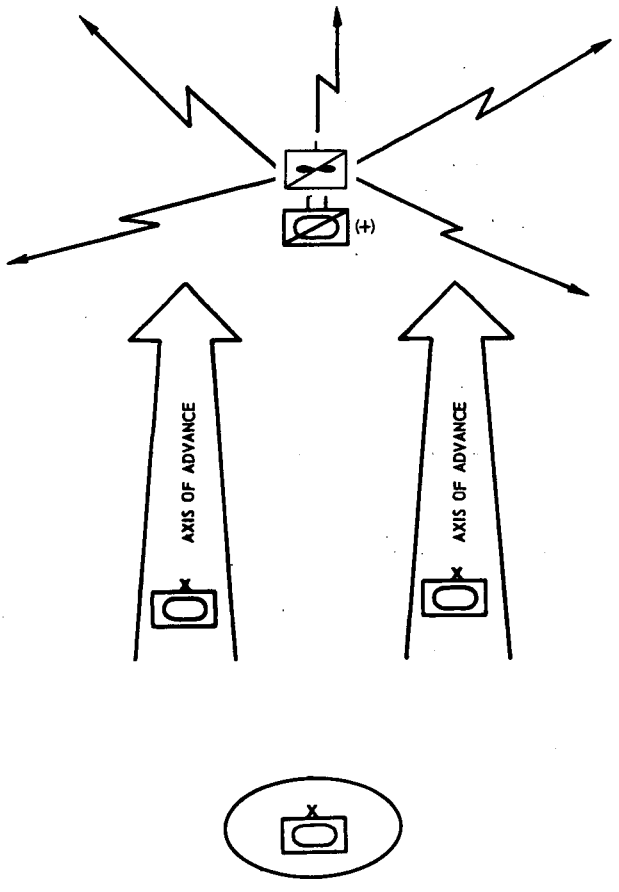


Figure 79. Air cavalry troop as part of a covering force.

d. The air cavalry troop may be appropriately and effectively used as part of a covering force in a movement to contact. In such a situation, the troop will normally function under control of the armored cavalry squadron. The troop will normally reconnoiter to the front and flanks, employing zone reconnaissance techniques. It seeks out the enemy force and destroys the enemy within its capabilities. When superior forces are encountered, the troop develops the situation to determine the composition and disposition of the enemy force, and prepares to assist the squadron during its attack. The troop will normally be employed as a unit in the formation best suited to provide thorough reconnaissance of the area through which the friendly forces are advancing. In seeking out the enemy positions, the aero-scout elements are supported by the aero-weapons section and aero-rifle platoon.

Small enemy forces are destroyed or routed by fire. The aero-rifle elements may be dismounted to conduct limited offensive operations on the ground or to secure bridges or defiles to assist the uninterrupted advance of the ground elements. When aero-rifle elements are thus used, they are relieved as soon as possible by the advancing ground cavalry elements, relifted, and resume position in the troop formation.

174. Providing Security Between Units

a. When a gap exists between major units, it may be covered by a security force. When covering a gap, the security force maintains contact with the major units on each flank. To maintain contact and secure the gap, it is necessary for the security force to engage in the same general tactical posture as the units on each flank, that is, attack, defend, or delay. Normally, the air cavalry troop accomplishes this mission using air reconnaissance and security techniques.

b. The air cavalry troop may operate alone when covering a gap. In conducting this mission, the troop may use a combination of air and ground action (fig. 80). The aero-rifle platoon may be dismounted to occupy a strongpoint in a defensive situation or it may be used as a ground reconnaissance force in close terrain where concealment is plentiful. Air reconnaissance and contact with adjacent forces is achieved by the remainder of the troop. In a moving situation, the aero-rifle platoon will either be airborne, or centrally located on the ground and employed as the situation dictates.

c. Conduct of operations by the troop in filling a gap will, in a moving situation, correspond to zone reconnaissance operations. In a static situation, the operations will correspond to those in a flank security or a screening mission.

175. Rear Area Security (STANAG 2079)

a. The objective of rear area security is to prevent serious enemy interference with operations in rear areas. Plans are prepared to neutralize or destroy enemy forces such as saboteurs, infiltrators, bypassed units, irregular forces, airmobile, or airborne forces that gain entrance into rear areas. Rear area security in general provides for—

(1) Local security of installations and units.
(2) Relief or attacked installations and units.
(3) Route patrolling and convoy escort.
(4) Surveillance of possible bases of operations for irregular forces and infiltrators.
(5) Denial of possible drop and landing zones.
(6) Finding, fixing, and destroying enemy forces operating in rear areas.

b. The troop normally conducts rear area security missions in accordance with the squadron rear area security plan. This plan will normally consist of a series of checkpoints, observation posts, and patrols designed to detect enemy activities and fix the enemy until highly mobile ground armored cavalry forces can be employed to destroy him (fig. 81). Because of its speed of maneuver and flexibility, the air cavalry troop is well suited to participate in rear security missions as a part of the armored cavalry squadron.

c. The air cavalry troop has a limited capability for providing rear area security independently. The aero-rifle platoon may be dismounted to provide the forces for securing key installations with a limited defense capability. A greater coverage can be obtained by establishing a series of small observation posts throughout the area as information-gathering activities and a warning system. The rear area security plan must provide for defense against vertical envelopment, partisan activities, including sabotage, and protection of lines of communication and supply. The aero-scout platoon is used to maintain air observation over the part of the area that is not covered adequately by ground observation posts or other defense elements. The aero-weapons section is centrally located to provide immediate support to any part of the troop sector.

d. Normally, the air cavalry troop will be employed in a rear area security mission as part of the squadron. In this situation the troop will provide air surveillance of the rear area in extension of the ground capability.

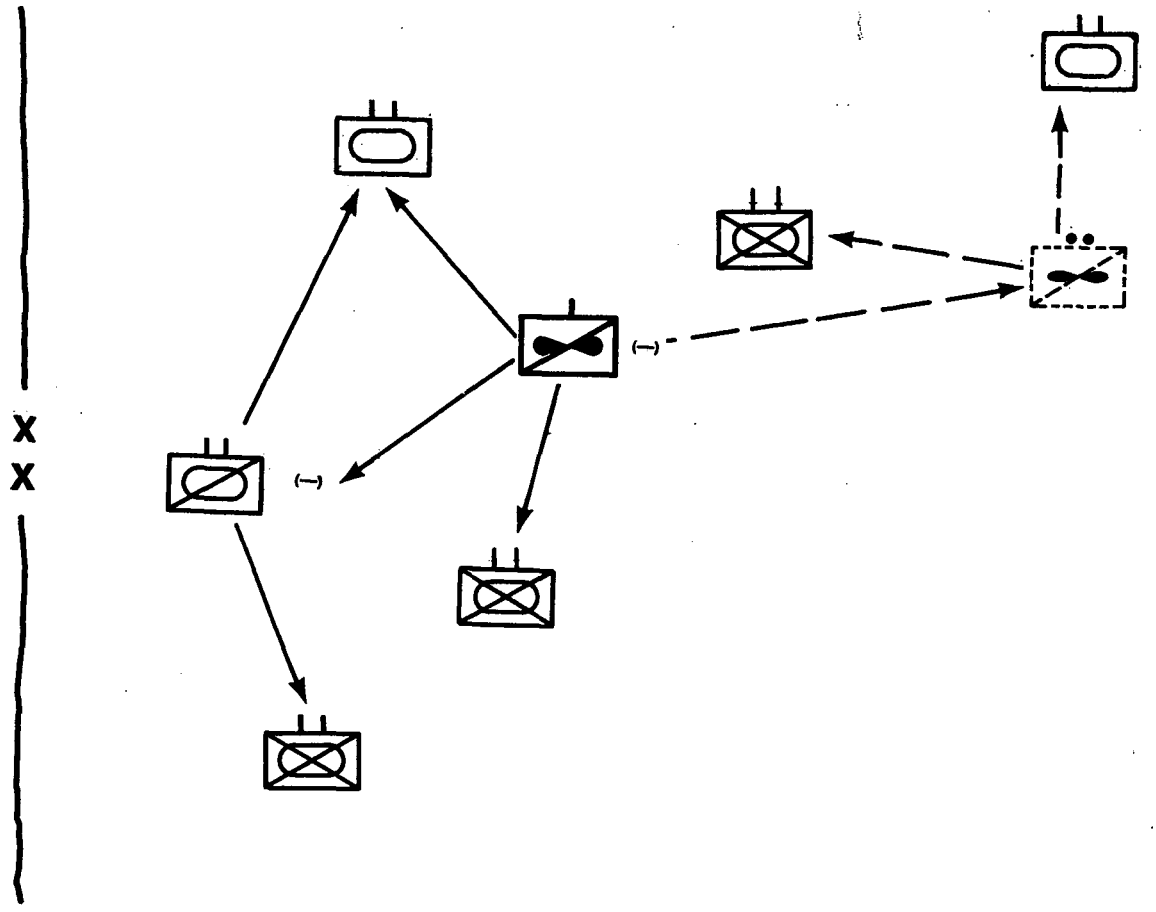


Figure 80. Air cavalry troop filling a gap.

e. The weapons systems and limited size of enemy forces normally encountered in rear areas will permit helicopters to assume a greater offensive role in a rear area security mission. Flights at higher altitude will permit more effective surveillance of the entire area, with periodic close inspection of suspected enemy activity. Nap-of-the-earth flight techniques will be required only when an enemy force is encountered.

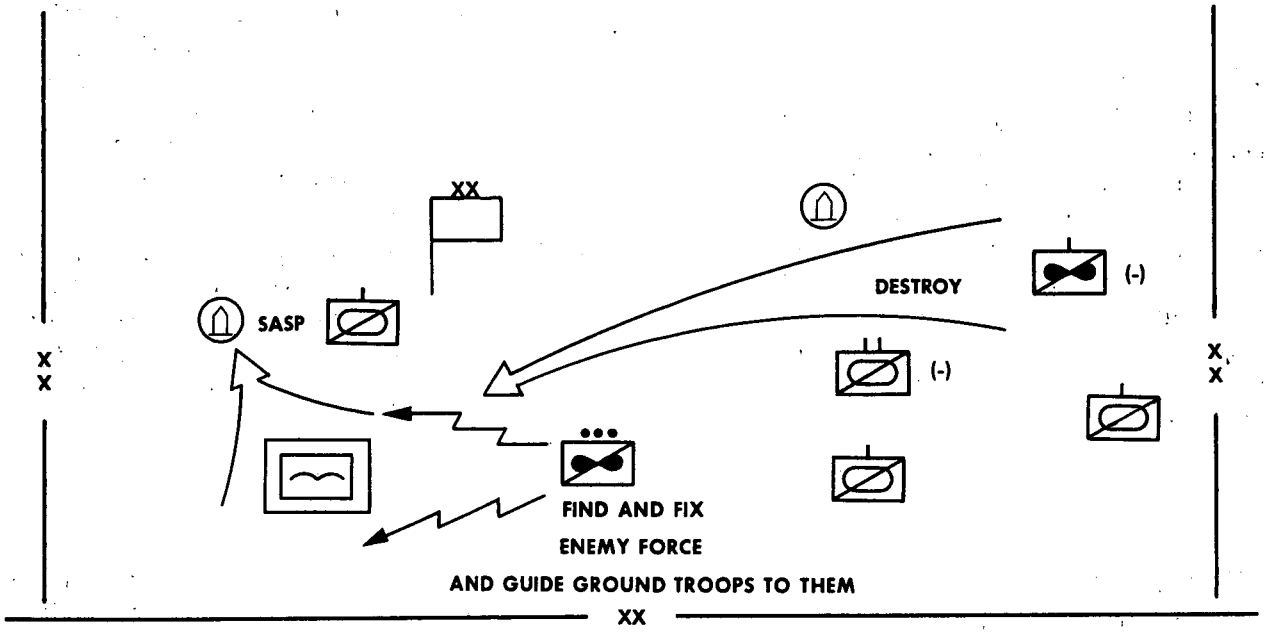


Figure 81. Air cavalry troop as part of a rear area security force.

Section V. DEFENSIVE OPERATIONS

176. General

The air cavalry troop may be forced to engage in defensive actions to perform its reconnaissance and security missions; however, when the troop is operating alone, its defensive capability is limited. In other than reconnaissance and security missions, the troop will normally take part in defensive action as part of a larger force.

177. Types of Defense

a. Preparation for either mobile or area defense requires the same detailed reconnaissance, selection, organization, coordination, and planning that precedes offensive action. In addition, when preparing for the defense, it must be remembered that the enemy has the initiative and that alternate plans must be prepared to meet all conceivable contingencies.

b. Reconnaissance for the defense should be as complete as time and the situation will allow. It should include a study of the terrain from the enemy's viewpoint. The commander evaluates the terrain in his assigned sector or area of operation in terms of the basic considerations contained in FM 17–1.

c. The techniques of conducting reconnaissance, offensive, and security operations, as discussed in paragraphs 153 through 175, are applicable to the employment of the air cavalry troop in both mobile and area defense missions.

178. Mobile Defense

a. Mobile defense is a defensive action that makes maximum use of air and ground mobile combat power. Mobile defense is an active defense that employs offensive and delaying action as well as defensive measures. Techniques of conducting a mobile defense are outlined in FM 17–1.

b. The air cavalry troop is employed in the mobile defense as part of the parent armored cavalry squadron. In this capacity the troop extends the capabilities of the parent unit by performing reconnaissance and security missions. Specifically, the troop is best employed to:

(1) Extend initially the range of operations of the security forces.

(2) Provide security between fixing forces.

(3) Provide security for the reserve.

179. Area Defense

a. The air cavalry troop will normally be employed as part of the armored cavalry squadron during an area defense. The troop may be used as part of the covering force or general outpost, or it may be used as an airmobile counterattacking force. It should not be assigned a sector within the battle position because of the limited ground-holding capability of one rifle platoon suitable for this type of employment.

b. The troop may act as a security force for the squadron during covering force operations or when the squadron is part of the general outpost. The speed and cross-country mobility of the unit make it well suited for this type of action. The air cavalry troop is capable of covering large sectors more rapidly than ground reconnaissance units.

c. The air cavalry troop may be used as an independent airmobile reserve but will normally act as a reconnaissance and security force for the squadron. While in reserve, it may have the additional responsibility for rear area security.

Section VI. DELAYING ACTION

180. General

a. The air cavalry troop may be required to conduct a delaying action to accomplish other assigned missions. The troop will normally conduct this action as a part of the squadron. Usually, the troop will perform reconnaissance and security missions to support the squadron delaying action.

b. When the troop commander is assigned a delay mission or it becomes apparent that he must fight a delaying action, he makes a map reconnaissance of designated positions and selects successive positions that his troop will occupy as it withdraws. This map reconnaissance should be supplemented by air reconnaissance when the situation permits. In selecting delay positions, the troop commander considers the same factors used in selecting defensive positions. Selection of delaying positions, preparation of positions, and conduct of delaying action are outlined in FM 17–1.

181. Organization of Delaying Position

a. The delaying position is organized as a defensive position. Units are located within the delaying position to insure successful withdrawal. If the assigned sector can be covered adequately by a part of the unit, the commander may hold the remainder of his force in reserve.

b. The aero-rifle platoon is located on the most dominating ground to cover the main avenue of enemy approach. The platoon is capable of occupying only a position normally occupied by an infantry platoon. It is the ground nucleus of the delaying position. The aero-scout platoon performs air security to the front and flanks of the position. The aero-weapons section provides air fire support and antitank protection.

c. Each squad of the aero-rifle platoon should have a concealed route by which it can move to its waiting helicopters for withdrawal to the next delay position. Where possible, all helicopters should have defilade flight routes for the withdrawal.

d. Hastily prepared obstacles are improvised to slow the enemy's advance. These obstacles may be covered by fires from the aero-weapons section.

e. The delaying position may be organized as an ambush in either close or open country, where vehicular movement is restricted, observation is limited, and fields of fire are short, although it must be expected that the enemy will approach such an ambush site cautiously and on the alert.

182. Conduct of a Delaying Action

a. Delay at each position is accomplished by forcing the enemy to deploy and attack. To do this, the troop opens fire on the enemy at maximum range. It avoids decisive combat. Each position is held long enough to force the enemy to deploy at attack. The troop is withdrawn in time to prevent unacceptable losses

and to insure that the troop does not become engaged decisively. Frequent air harassing attacks by the aero-scout platoon and aero-weapons section will be conducted to slow the enemy's advance.

b. The aero-scout platoon provides security to the front and flanks of the position. It gives early warning of the approach of enemy forces and adjusts long range supporting fires. Because of its air mobility it may engage the rear and flanks of the enemy force in a series of hit-and-run harassing attacks as he approaches the main position. As the enemy continues his approach, the aero-scout platoon will withdraw to the flanks of the aero-rifle positions and continue to fire.

c. The aero-rifle platoon, occupying the dominating terrain astride the enemy's axis of advance, opens fire on the enemy at long range with all available ground weapons. On order, the platoon assembles at waiting helicopters and withdraws to the next delay position.

d. The aero-weapons section is the commander's air base of fire. He will use it when and where it can best influence the action. Normally, squads of the section will be located initially in defilade some distance to the rear of the delaying position; however, they are available for rapid air employment to support the aero-scout or aero-rifle platoons.

183. Withdrawal From a Delaying Position

a. Withdrawal from a delaying position is rapid, but is conducted in an orderly manner. Elements withdraw on the troop commander's order.

b. The aero-rifle platoon is usually the first element to withdraw. It moves back rapidly to its waiting helicopters and is airlifted to the next delay position.

c. The aero-weapons section, less any attachments to the aero-scout platoon, is next to withdraw. The aero-weapons section may be used to deliver air fires on the enemy column between delaying positions.

d. The aero-scout platoon will normally be the last to withdraw. The aero-scouts maintain contact with the enemy during the withdrawal of the remainder of the troop. A part of the aero-scout platoon, reinforced with elements of the aero-weapons section, may provide continuous delay and maintain contact with the enemy between delaying positions, making hit-and-run attacks on the enemy's rear and flanks.

184. Employment in Delay as Part of a Larger Force

a. When used as part of a larger force, the air cavalry troop will normally perform reconnaissance and security missions for the squadron during squadron delaying actions (fig. 82). Operating as a unit, the troop will maintain contact with the enemy forces, continuously reporting enemy dispositions and progress to the squadron commander. The aero-scout platoon will maintain surveillance, and, within their capabilities, will deliver fire on targets of opportunity. The aero-weapons section will provide the major source of firepower for the troop. Antitank guided missiles and rockets will be used against armored vehicles; machinegun fire will be used against dismounted troops. Care will be taken to guard against losses that will reduce the reconnaissance and security capability. Employment of ground forces in the delaying action will not ordinarily require dismounted employment of the aero-rifle platoon. The aero-rifle platoon will accompany the other elements of the troop in a delaying action role, prepared for employment as the situation requires. When acting as part of the squadron delaying ground force in contact with the enemy, the air cavalry troop may be used to deliver air fires on forward enemy elements, maintain air surveillance over the enemy front and flanks, and execute offensive actions against small isolated units. During withdrawal, organization for combat and flying formations are influenced by the factors of METT. In the conduct of reconnaissance and surveillance missions on a broad front, formations will be dispersed. On a narrow front, dispersal between helicopters, together with the use of only a part of the troop organized in teams, will permit adequate reconnaissance and contact to be maintained on a continuing basis by rotating teams. Air formations should avoid concentrations of helicopters and should include maximum use of cover and concealment.

b. When used in a delaying action as part of the squadron, the air cavalry troop pays

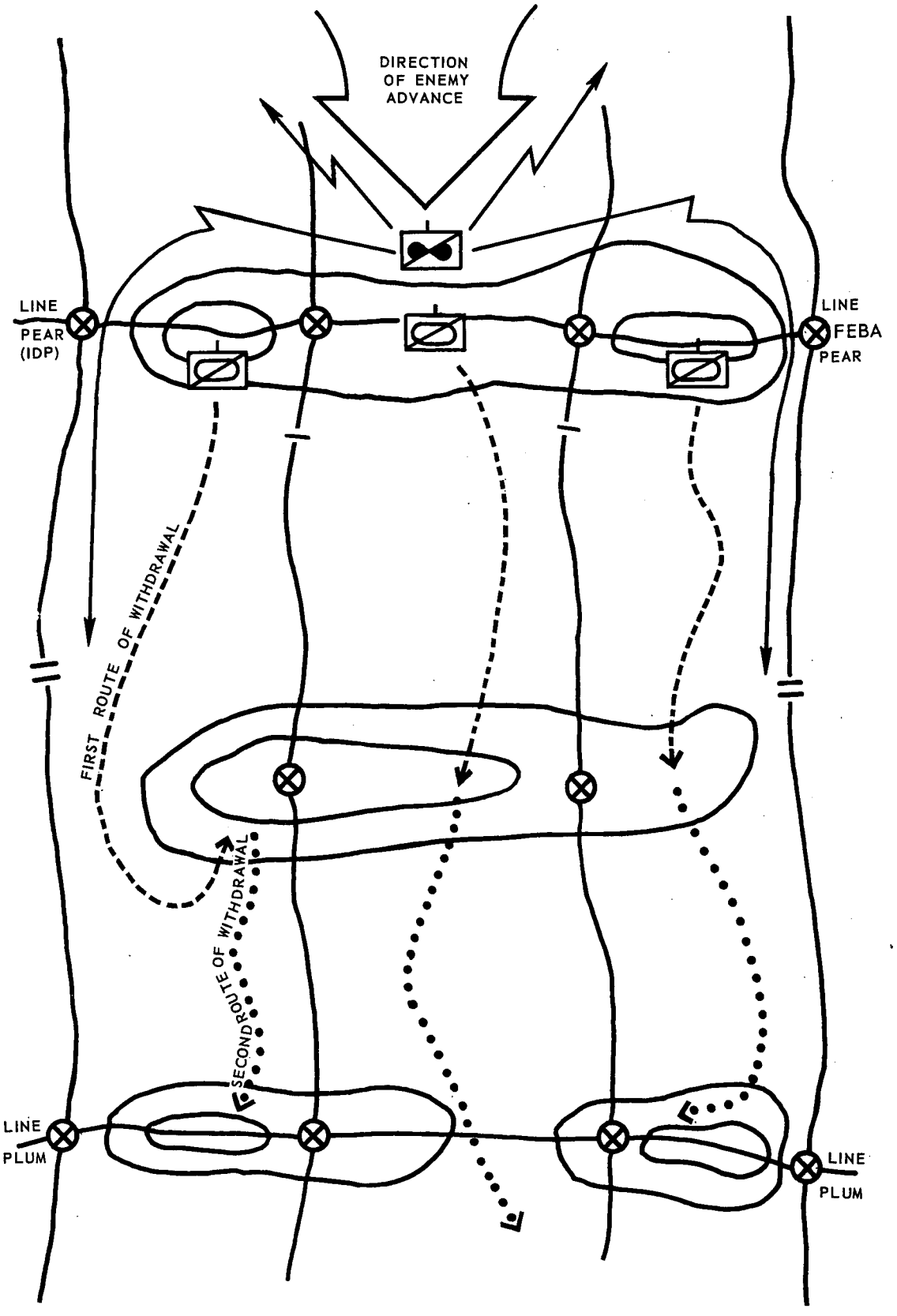


Figure 82. Air cavalry troop as part of the squadron delaying force.

particular attention to the flanks. Small enemy reconnaissance and security elements are destroyed and enemy attempts to envelop the delaying positions are reported promptly.

c. The air cavalry troop is particularly well suited to patrol routes to the rear and provide security to its parent unit from vertical envelopment. This mission can be performed in a manner similar to the conduct of rear area security missions.

185. Coordination and Control During Withdrawal

a. Close control in a delaying action is essential. It is exercised by the troop commander through close personal supervision and by radio. To exercise maximum control and to execute maximum delay, the troop commander must locate himself where he can best influence the action. When the troop is delaying along two or more axes, the troop commander should be at the most critical point.

b. Close coordination and reliable communications with the ground elements of the delaying force are essential. As the covering echelon of the ground delaying force withdraws, the air cavalry troop extends its maximum effort to immobilize the enemy forces. Use of the troop may permit the ground forces to break contact so long as air contact with the enemy is maintained. The troop must insure continued surveillance until ground forces can or are ready to regain contact.

Section VII. AIR ESCORT OPERATIONS

186. Armed Air Escort

a. Armed air escorts provide security to Army aircraft engaged in airmobile operations and to ground vehicles when air-to-ground suppressive fires are required. Detailed planning and coordination are essential. Warning orders are issued well in advance to allow adequate planning time. Map reconnaissance and the commander's reconnaissance over proposed routes are carefully conducted to insure selection of a route that offers minimum interference by enemy forces. Nap-of-the-earth flight technique is employed as necessary. Covered and concealed air routes are selected. Recommendations concerning march SP's and RP's and technical aspects of the movement such as air speeds, air control points, and formation are coordinated by the escort and airmobile force commanders. If the move is administrative, the armed air escort may be concerned primarily with security during the move and air cover during the airlanding phase. Such an operation will be in the nature of providing advance, flank, and rear guard security.

b. In the airmobile operation where the escorted forces are to be landed in an active combat zone, the escort function may include, in addition to security en route, a requirement to airland its rifle element and to provide air cover and ground security during the airlanding phase. In this situation, the aero-scout platoon reconnoiters to the flanks and rear, as well as the front, to provide aerial surveillance for the airmobile operations. The aero-rifle platoon alone, or as part of a larger force is landed and dismounted, and, according to a prearranged plan, secures the landing area on the ground. The aero-weapons section provides air cover during landing of the aero-rifle platoon and assists the aero-scout platoon and aero-rifle platoon by firing on targets of opportunity. Once the escorted force has been landed and is prepared to assume its primary mission, or once the cargo has been discharged in a logistical operation, the aero-rifle platoon returns to the troop formation. En route, formations will be as required by the factors of METT. Normally, the aero-scout platoon will lead, followed by the aero-weapons and the aero-rifle platoon, in that order. When the airmobile force is of such a size that flank security at extended distances is required, elements of the aero-scout platoon may be given flank security missions and the aero-weapons section will lead the air formation. The troop formation should normally be led by elements of the aero-scout platoon.

c. In a situation involving the use of airborne or airmobile troops or cargo, similar to the operations described above, the air cavalry troop, in whole or in part, may properly be

given the task of a pathfinder unit. Such a task is assigned the troop when regularly constituted pathfinder teams are not available and the task implies an airborne or airmobile operation of reasonably small size or limited operational distances and areas. When secrecy of the operation is not a major consideration, the air cavalry troop may precede the main airmobile force. The aero-rifle element is landed and completes the pathfinder functions of preparing the landing sites, installing navigational aids, designating assembly or cargo discharge points, and providing local security within its capabilities. The aero-scout platoon and aero-weapons section support the pathfinder effort by air reconnaissance and fire.

PART FOUR
ARMORED CAVALRY SQUADRON

CHAPTER 8
GENERAL

Section I. GENERAL

187. Purpose and Scope

Part Four is a guide for the employment of the armored cavalry squadron of the armored, mechanized, and infantry divisions.

It covers organization and employment of the divisional armored cavalry squadron in offensive, defensive, retrograde, reconnaissance, and security operations. The airborne division armored cavalry squadron is discussed in part five, and the armored cavalry squadron of the armored cavalry regiment is discussed in FM 17–95.

188. Missions and Capabilities

a. The armored cavalry squadron performs three types of missions: reconnaissance, security, and economy of force. The squadron is organized, equipped, and trained to engage in offensive and defensive combat or in retrograde operations in the execution of these missions. All divisional squadrons perform the same types of missions regardless of whether the squadron is organic to the armored, mechanized, or infantry division.

b. The armored cavalry squadron has the following capabilities:

(1) Conducting reconnaissance over broad fronts and to extended depths.

(2) Collecting and reporting information of intelligence value, including information of nuclear targets and nuclear damage assessment, employing ground and air observation and electronic ground surveillance means.

(3) Protecting or screening the flank or flanks of the division.

(4) Providing security or maintaining contact between elements of the division or between the division and an adjacent unit.

(5) When reinforced, acting as a division covering force in offensive and retrograde operations, and as a divisional general outpost in defensive operations.

(6) Conducting chemical agent detection and radiological monitoring and survey operations.

(7) Performing area damage control operations and providing forces for rear area security.

(8) Exploiting the success of other units and effects of mass destruction weapons.

(9) Providing armed air escort for airmobile operations.

(10) When suitably reinforced, conducting extended semi-independent operations.

189. Combat Service Support

The tactical success of the armored cavalry squadron requires adequate and continuous combat service support. In this support prior logistical planning is essential. Supply, medical evacuation, transportation, and maintenance must be adequate and timely. The procedures for all aspects of combat service support, the logistical elements available to the commander, and the employment of the squadron trains are covered in detail in FM 17–1, FM 54–2, and FM 12–11.

Section II. ORGANIZATION

190. General

The armored division cavalry squadron consists of a headquarters and headquarters troop, three armored cavalry troops, and an air cavalry troop (fig. 83). Organization of the armored cavalry troop and the air cavalry troop is covered in chapters 3 and 6, respectively.

191. Headquarters and Headquarters Troop

a. The headquarters and headquarters troop of the armored cavalry squadron consists of squadron headquarters and the squadron headquarters troop. The squadron headquarters contains the squadron commander and his staff. Headquarters troop contains a troop headquarters, squadron headquarters section, squadron communication platoon, squadron support platoon, squadron maintenance platoon, squadron medical platoon, and a squadron ground surveillance section. An air control team is provided by augmentation (fig. 84).

b. The mission of the headquarters and headquarters troop is to provide command, administration, communication, supply, medical, transportation, and maintenance support for the squadron.

192. Squadron Headquarters

The squadron headquarters contains the individuals necessary to command, control, train, and employ the squadron. These are the squadron commander, executive officer, personnel staff officer (S1), intelligence officer (S2), operations and training (S3), S3 air, logistics officer (S4), communication officer, motor officer, surgeon, and sergeant major. For duties and responsibilities of the squadron commander and his staff, refer to FM 17–1.

193. Troop Headquarters

a. General. The troop headquarters, headquarters and headquarters troop, is organized to provide combat service support for the troop and for squadron headquarters. It consists of a troop headquarters and a maintenance section.

b. Troop Headquarters. This includes the troop commander, executive officer, first sergeant, supply sergeant, troop clerk, and a driver. The troop commander is responsible for the organization, security, and movement of the squadron command post.

c. Maintenance Section. The maintenance section is commanded by the automotive maintenance technician who is the troop motor officer. This section includes the motor sergeant, mechanics and drivers, and the troop armorer. It has the function of keeping all headqaurters troop vehicles and armament operating at maximum efficiency.

194. Squadron Headquarters Section

a. Squadron headquarters section provides the bulk of the enlisted men for the staff sections and part of the vehicles needed for com-

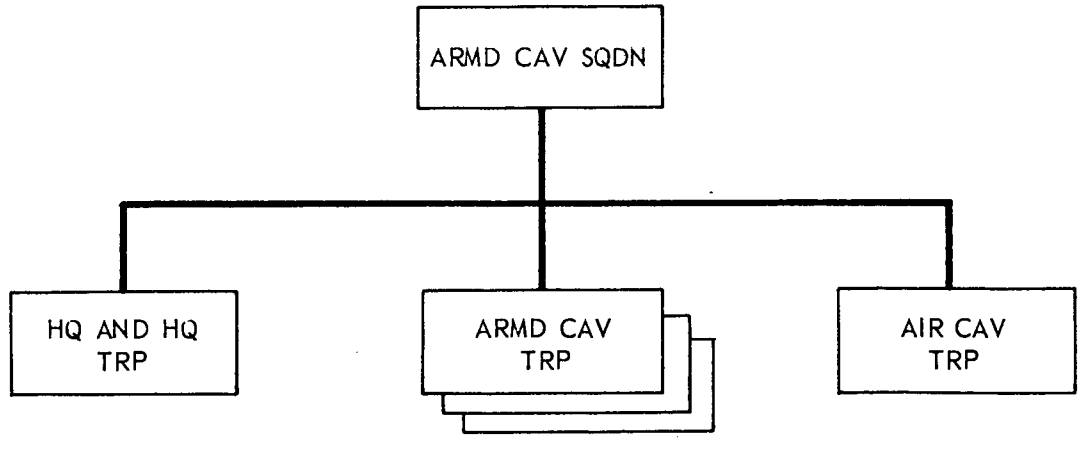


Figure 83. Organization chart, armored cavalry squadron, armored, mechanized, and infantry divisions.

mand and control of the squadron. Headquarters section includes three liaison officers, an intelligence sergeant and assistant, an operations sergeant and assistants, a personnel staff NCO, a chemical NCO, radioteletype team chiefs, radioteletype and intermediate speed radio operators, clerk typists, a mail delivery clerk, drivers for the section vehicles, and two commanders for the armored command and reconnaissance carriers. Transportation includes four light tracked command post carriers, two armored command and reconnaissance carriers, and necessary general purpose vehicles.

b. Two armored command and reconnaissance carriers are provided for use by the squadron commander, operations officer, artillery liaison officer, forward air controller (when one is present), or other staff members as required. When not otherwise used, these vehicles may be employed for security of the command post.

195. Squadron Communication Platoon

The squadron communication platoon, commanded by the squadron communication officer, contains sufficient men, equipment and organic transport to provide for the installation and maintenance of the squadron communication system. A radar mechanic is provided for maintenance of radar equipment. The communication chief supervises the activities of the platoon message center, wire, maintenance and messenger personnel. The message center clerks operate the platoon cryptographic equipment. The platoon is transported in a carrier command post light tracked and wheel vehicles.

196. Squadron Support Platoon

a. General. The support platoon is organized into a platoon headquarters, a transportation section, a mess section, and a supply section. It has the men, vehicles, and equipment to provide the transportation, mess, and supply support required by the squadron to sustain itself for limited periods of combat. Details of its operation are included in FM 17–1.

b. Platoon Headquarters. Platoon headquarters consists of a platoon leader and intermediate speed radio operators, one of which is also a light truck driver. The platoon leader controls the squadron field trains. He has radio communication with the transportation section leader and the squadron S4, using the squadron logistical net FM or, in emergencies, the squadron command net.

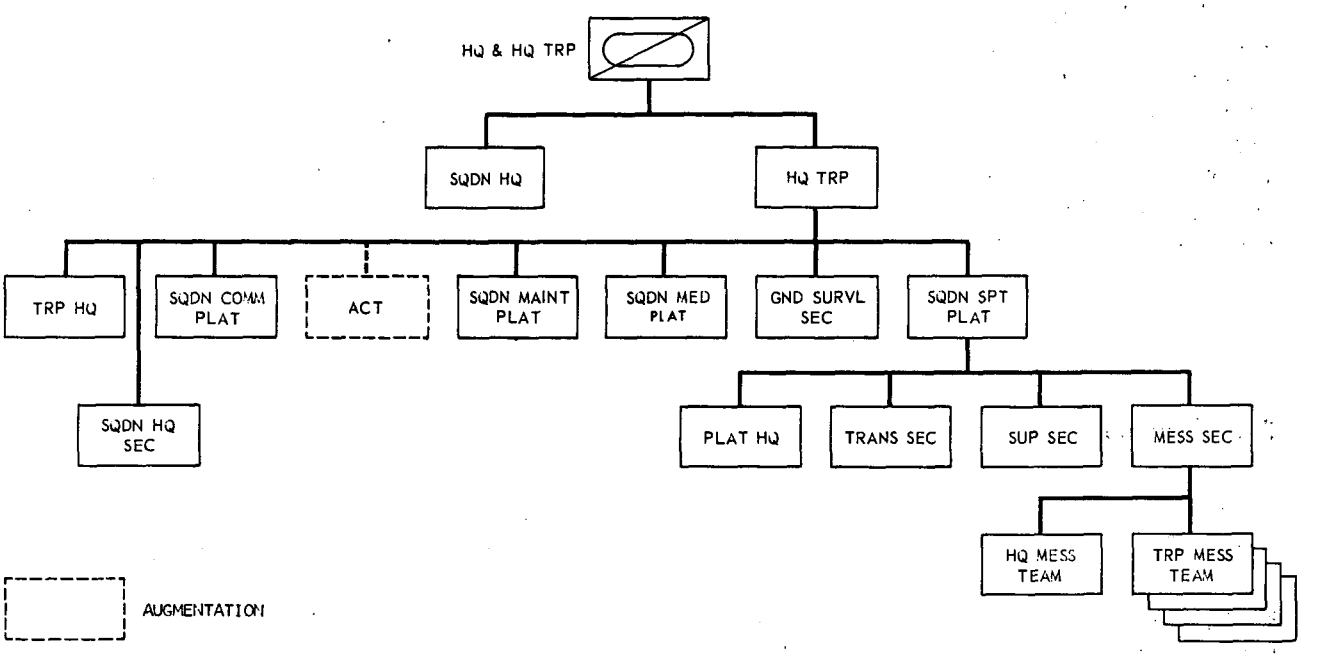


Figure 84. Organizational chart, headquarters and headquarters troop, armored cavalry squadron.

c. Transportation Section. The transportation section is organized and equipped with the men and trucks necessary to transport that part of the squadron basic load of class V and prescribed load of class III that is carried in the squadron trains, and all other supplies from division distributing points to troops of the squadron. The section leader has radio communication with the support platoon leader and the squadron S4 on the squadron logistical net. He will normally command the squadron combat trains.

d. Supply Section. The supply section operates under the direct supervision of the platoon leader. The section is responsible for receiving and consolidating supply requests from the troops, preparing all requisitions, and procuring and issuing supplies in the squadron.

e. Mess Section. The mess section operates under direct supervision of the platoon leader. The section is organized into five troop mess teams to provide troop messes when required.

197. Squadron Maintenance Platoon

a. The squadron maintenance platoon provides the personnel and equipment to perform organizational maintenance, to recover and evacuate disabled ground vehicles, and to supply repair parts for all maintained equipment except signal and medical.

b. The platoon is commanded by the squadron motor officer who is assigned to squadron headquarters. He is assisted by a warrant officer, automotive maintenance technician. He has FM radio communication with the squadron S4 and the troop maintenance sections over the squadron logistical net or, in emergency, over the squadron command net. Details of operation of the maintenance platoon are contained in FM 54–2 and FM 17–1.

198. Squadron Medical Platoon

a. The medical platoon provides unit medical service and medical support for the squadron. The platoon is organized into a platoon headquarters, an aid station section, an aidman section, and an evacuation section. It establishes and operates the aid station and provides medical aid-evacuation teams and armored ambulance service to the troops for emergency medical treatment and evacuation of casualties to the aid station. It assists in technical instruction in first aid, field sanitation, and related subjects, and carries out technical inspections of a medical and sanitation nature. Details of its operation are contained in FM 17–1.

b. The normal allocation of medical section support to each troop in the armored division cavalry squadron consists of one medical aid-evacuation team composed of an ambulance, with driver, and one aidman per platoon.

199. Ground Surveillance Section

The ground surveillance section contains a section sergeant, a team leader, two senior radar operators, and four radar operators. The section is organized to provide two teams: one team commanded by the section sergeant, the other by the team leader. Two radar operators drive the two armored personnel carriers in the section. The section mission is to provide the squadron with medium range ground radar surveillance. The section will normally operate under the staff supervision of the squadron S2. For details of the section equipment and employment, refer to FM 17–1.

Section III. COMBAT SUPPORT

200. General

a. The material covered in this section is applicable to all divisional armored cavalry squadrons.

b. The armored cavalry squadron may operate without attachments; however, combat support may be provided by artillery, engineers, Army aircraft and tactical air. Tanks and mechanized infantry may be attached to the squadron for a particular mission.

201. Artillery Support

When the squadron is operating beyond the range of the artillery units supporting the command, artillery may be attached to the squadron. When direct support artillery is available, the squadron commander and artillery repre-

sentative must coordinate the supporting artillery fires closely with the squadron plan of operation.

202. Tank and Infantry Support

a. Although tank and infantry are not considered combat support units, they are combat elements which will provide operational assistance to the armored cavalry squadron.

b. When a mechanized infantry unit is attached to the squadron it should be kept intact. On occasion elements may be attached to the armored cavalry troops. The attached unit is employed in an infantry role in support of the squadron mission.

c. When a tank unit is attached to the squadron, it is preferable to employ it as a unit under control of the squadron commander; however, when required, tanks may be attached to armored cavalry troops.

d. If both tanks and mechanized infantry are attached at the same time, they should be employed as a tank-infantry team.

203. Engineer Support

Engineers may be attached to the squadron to perform demolition functions; assist in the crossing, clearing, and installation of obstacles; assist in the crossing of inland waterways; make technical reconnaissance, and perform road maintenance to facilitate movement of the squadron. Engineers may be employed under squadron or troop control.

204. Army Aviation Support

Army aviation support is provided by the division aviation battalion or the brigade aviation section. Aviation staff assistance and advice are provided the squadron commander by the air cavalry troop commander. Army aircraft from the aviation battalion or brigade aviation section are used by the squadron commander, the staff, and troop commanders for observation, reconnaissance, and control. Army aircraft are available to the squadron commander from the airmobile company of the aviation battalion and are used to transport scouts and riflemen for reconnaissance or security missions and to move supplies.

205. Tactical Air Support

When tactical air support is available, the Air Force provides a forward air controller. The forward air controller advises the squadron commander in matters pertaining to the employment of tactical air, and controls air strikes flown in support of the squadron. Close liaison should be maintained between the forward air controller and the artillery liaison officer. The forward air controller should remain with the squadron command post or command group until a target is selected; he then moves to a point where he can observe and direct the air strike. He may operate from a vehicle provided by squadron headquarters, in the vehicle provided him by the squadron forward air control team, or in an Army aircraft. Communication equipment to control air strikes is available in the squadron forward air control team.

Section IV. ORGANIZATION FOR COMBAT

206. General

The armored cavalry squadron commander is responsible for the organization for combat of his squadron. To determine the best organization for combat to accomplish an assigned mission, the squadron commander considers the factors of METT. The essential elements for combined arms operations are present in the squadron.

207. Organization for Combat

a. The squadron commander normally employs the armored cavalry troops and the air cavalry troop directly under squadron control without change in troop organization. When available, helicopters will be attached to the armored cavalry troops to facilitate command and control. When required, surveillance devices may be used to augment the capabilities of the troop.

b. Certain situations may require a temporary reorganization of one or more armored cavalry troops and the air cavalry troop to accomplish a specific mission. The squadron commander shifts the elements of the troops to form teams of appropriate size and of proper ratio of tanks, riflemen, scouts, mortars, and air elements to best accomplish the mission.

Section V. EMPLOYMENT, HEADQUARTERS AND HEADQUARTERS TROOP

208. General

The headquarters and headquarters troop is organized identically the same in squadrons organic to armored, mechanized, and infantry divisions. The organization of the squadron headquarters and headquarters troop permits flexibility in its organization for combat. It provides control and coordination of, and combat service support to, armored cavalry troops. During combat operations, squadron headquarters usually operates in two echelons, the command post and squadron trains. Composition of the command post and trains will vary with the situation.

209. Squadron Command Post

a. The squadron command post contains the personnel and facilities to control combat and administrative operations of the squadron. The command post maintains communication with higher, adjacent, supporting, and subordinate units. It receives and forwards intelligence information and situation reports; makes plans for current and future operations; provides for liaison with higher and adjacent units, and controls liaison individuals from supporting and lower units. The command post usually includes the squadron commander, the staff, and such liaison personnel as are necessary. During offensive operations the command post moves with the combat elements of the squadron and thereby gains a large degree of security. In defensive or retrograde operations, the command post is usually located well to the rear so as not to interfere with combat operations.

b. The squadron commander and his command group operate from the location that permits best control of combat operations.*

210. Command Post Organization

a. The headquarters troop commander is responsible for the organization, security, and movement of the command post under the staff supervision of the squadron S1.

b. The plan for internal arrangement of the squadron command post must provide for communication, efficient functioning, security, and access to the available road net (fig. 85). In the organization of a command post, the following should be practiced so far as terrain and tactical conditions permit:

(1) The command post should be located to provide maximum communication capability.

(2) Sections should be located within the perimeter of security.

(3) The message center should be located near the entrance.

(4) The operations and intelligence sections should be centrally located and operate from joint facilities.

(5) When the commander and executive officer are at the command post they should be located near the operations and intelligence sections.

(6) Liaison personnel should be readily accessible.

(7) A suitable landing site should be available (location should not disclose the squadron CP to the enemy).

c. During combat operations, the squadron command post normally remains mobile and operates entirely from vehicles. The command post is located to facilitate continuous communication, both with the troops and with higher headquarters. The extensive capability of the squadron communication system enables the command post to operate efficiently on the move or to displace by echelon.

211. Squadron Trains

Squadron trains consist primarily of elements of the squadron that provide logistical support. The organization, location, and employment of the squadron trains depend upon the mission, time and space factors, and the tactical situation. For a detailed discussion of methods of operations, see FM's 17–1 and 54–2.

212. Command, Control, and Coordination

a. The squadron commander controls and coordinates operations of the squadron through the command post and command group.

* A command group is a command and control facility, consisting of the commander and selected staff officers, signal means, and a security detachment. This group enables the commander to operate away from his command post to obtain personal knowledge of the situation, exercise leadership, and closely control the operation during critical periods.

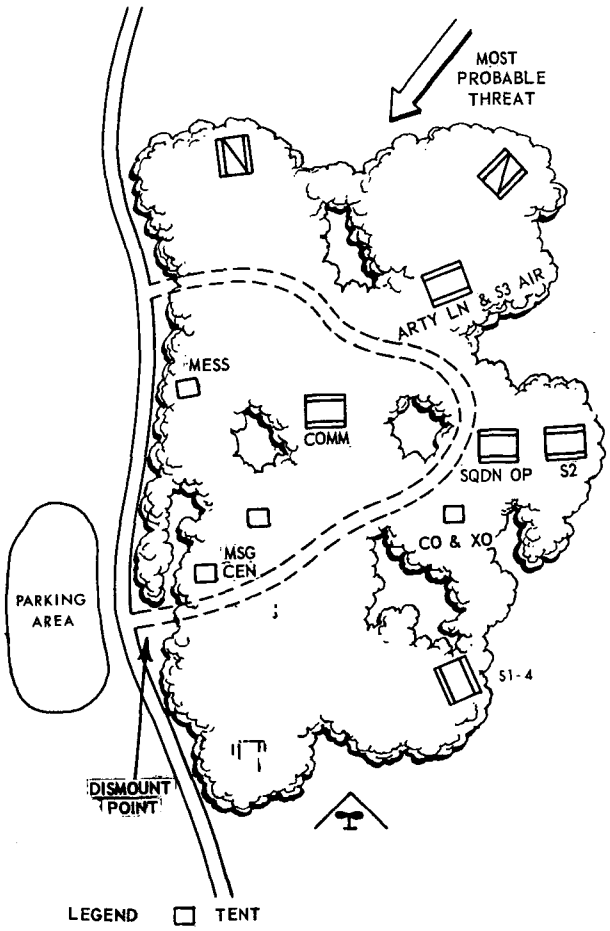


Figure 85. A method of arranging elements of the squadron command post.

b. In the operation of the armored cavalry squadron headquarters, it is essential that communication be maintained and that information be constantly exchanged between the command post and the command group when it is operating away from the command post. The command post must keep itself and higher headquarters informed of the squadron situation. To do this, the command post staff must be familiar with the decisions, locations, and actions of the squadron commander. On the other hand, the commander cannot satisfactorily command the squadron unless he is aware of the squadron situation as a whole and of current information from higher and adjacent headquarters. To insure a high degree of coordination, the executive officer relays orders and makes decisions as authorized by the commander. The commander, with the command group, must locate himself where he can be in constant communication with the command post and where he can best supervise the activities of the squadron. To insure prompt logistical support, close coordination and communication must be maintained between the command post and the squadron trains. This coordination is usually accomplished by the timely exchange of information between the S4, and the support platoon leader, who controls the field trains.

c. Command and control of the squadron is facilitated by the efficient use of liaison personnel. Liaison personnel are employed by the squadron executive officer to effect coordination, exchange information, and aid in unity of effort. The armored cavalry squadron maintains liaison with higher and adjacent headquarters. Liaison officers spend most of their time at the headquarters to which they are sent, maintaining communication with their parent unit. In addition, the liaison officer operating at the higher headquarters operates in the squadron command net AM. Thus, the liaison officer at higher headquarters is able to receive information directly from the armored cavalry troops or from the squadron operations section and passes it immediately to the next higher headquarters. He also transmits information and instructions from the higher headquarters to the squadron.

213. Employment of Medium Range Ground Radar

The medium range ground radar equipment organic to the squadron may operate under squadron control or be attached to the troops. This equipment is used to perform ground surveillance and is capable of detecting and locating moving ground targets. FM 17–1 contains additional information on employment of this equipment.

CHAPTER 9
RECONNAISSANCE OPERATIONS

Section I. GENERAL

214. General

a. The divisional armored cavalry squadrons are the principal reconnaissance agencies for their parent divisions. The armored cavalry squadron accomplishes its reconnaissance missions by employing its troops alone or reinforced. Air cavalry is employed to extend the range and speed of reconnaissance operations conducted by the squadron. For the definition of reconnaissance, refer to paragraph 3.

b. The armored cavalry squadron is employed to collect information in the division area of influence. The squadron may be directed to determine the location, composition, and disposition of enemy troops, including the local reserves immediately in rear of the line of contact, and specified information of the area of operations.

215. Reconnaissance Frontages

a. There is no set distance for the width of front to be covered by the armored cavalry squadron in performing a reconnaissance mission. The information desired and the factors of METT affect the frontage assigned to the squadron.

b. The armored cavalry squadron can effectively reconnoiter three major avenues of approach by assigning one major avenue to each armored cavalry troop. This allocation normally permits the assignment of two or three secondary routes to each troop.

c. Employment of the air cavalry troop and other Army aircraft increases the speed and extends the range, width, and scope of the reconnaissance performed by the squadron. The number and type of Army aircraft attached to or placed in support of the squadron from the division aviation battalion or brigade aviation section depends on the priority of the squadron mission.

d. Organic ground surveillance equipment may be used to extend and augment the reconnaissance effort of the squadron, particularly during periods of limited visibility. Ground surveillance sections work in conjunction with other elements of the squadron.

216. Reconnaissance Missions

The squadron commander determines routes, zones, or areas to be reconnoitered by armored cavalry troops and the air cavalry troop. Responsibility must be fixed and duplication of effort avoided. Maximum freedom of action is allowed subordinate commanders in executing reconnaissance missions. *Instruction for reconnaissance operations should be specific so that each troop commander has an objective toward which he can direct the efforts of his troop.* Instructions should also specify what the unit is to do after completing the reconnaissance mission and the time that the mission is to be completed.

Section II. TYPES OF RECONNAISSANCE MISSIONS

217. Route Reconnaissance

a. The armored cavalry squadron, as a unit, is not normally assigned a route reconnaissance mission. Usually, the squadron will obtain the route information desired by the division as a covering force in the advance or when assigned the mission of reconnoitering in the division area, or by employing subordinate troops to reconnoiter specific routes, zones, or areas. When enemy action is imminent or anticipated,

reconnaissance missions are usually assigned on the basis of one major avenue of approach per troop. When enough Army aircraft are available from the aviation battalion or brigade aviation section, at least one should be employed with each troop conducting reconnaissance to facilitate command and control and to perform air reconnaissance. For the definition of route reconnaissance refer to paragraph 3.

b. In the execution of reconnaissance missions, the air cavalry troop may be employed to the front, flanks, or between ground cavalry troops. The air cavalry troop is employed to reduce the time required to conduct route reconnaissance. It is normally employed to check lateral roads and terrain adjacent to designated routes. When air cavalry elements are employed in this manner, ground elements move rapidly forward in column on specified routes and check those lateral routes or terrain features that cannot be reconnoitered adequately by air cavalry elements. All enemy information and locations of areas that cannot be reconnoitered by the air cavalry troop are promptly reported. Air cavalry elements maintain communication with leading armored cavalry elements and provide immediate warning of enemy dispositions. The shoulders of defiles are reconnoitered by air cavalry elements before armored cavalry elements move through the defile. The air cavalry troop can be assigned a route reconnaissance mission; however, information about the condition of the route should be confirmed by ground units.

218. Zone Reconnaissance

a. Zone reconnaissance is more thorough and time-consuming than route reconnaissance. Normally the squadron will obtain the information desired by the division using zone reconnaissance techniques while conducting *a covering force operation during the advance.* The squadron commander assigns troop zones and designates the boundaries for each troop. Boundaries are designated along easily recognizable terrain features, such as roads, streams, and ridgelines. Troops must reconnoiter all routes and terrain within their established boundaries. The number of troops to be employed depends on the information desired and the factors of METT. For the definition of zone reconnaissance, refer to paragraph 3.

b. The squadron can most expeditiously conduct this operation by combining the efforts of both air and ground elements. The capabilities of ground and air cavalry units are optimized when they operate in conjunction with each other. Elements of the air cavalry troop are normally placed under the operational control of each armored cavalry troop in the conduct of zone reconnaissance missions (fig. 86). In some situations, it may be advisable to employ the air cavalry troop as an entity, providing its operations are in close concert with the ground troops (fig. 87). The armored cavalry troop with an air cavalry element conducts zone reconnaissance operations as discussed in paragraphs 76 through 81. The air cavalry troop conducts zone reconnaissance for the squadron as discussed in paragraphs 153 through 164.

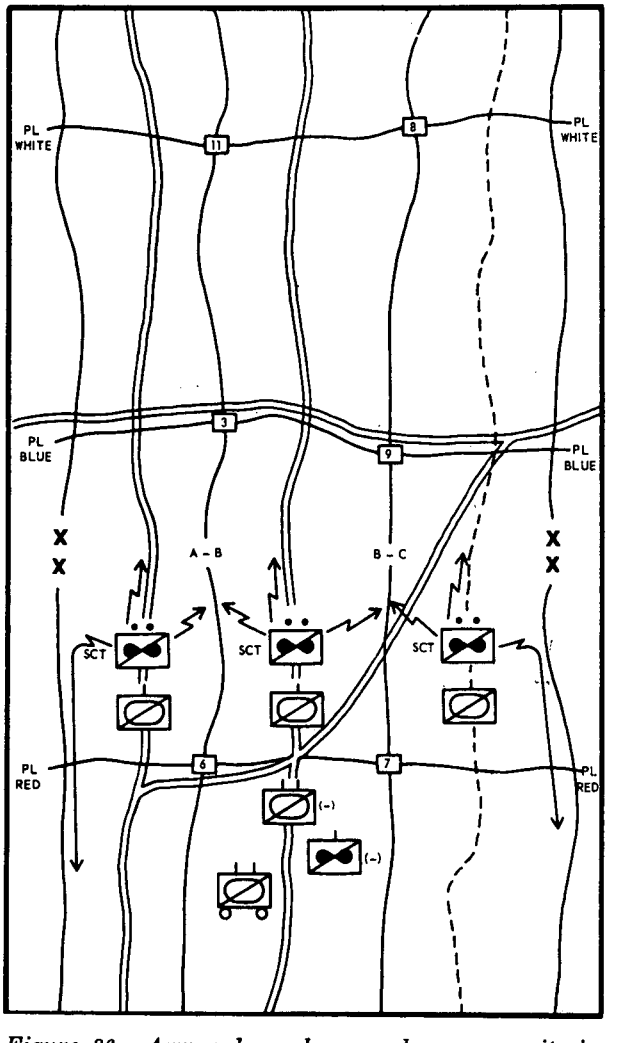


Figure 86. Armored cavalry squadron reconnoitering in zone with aero-scout section under operational control of each armored cavalry troop.

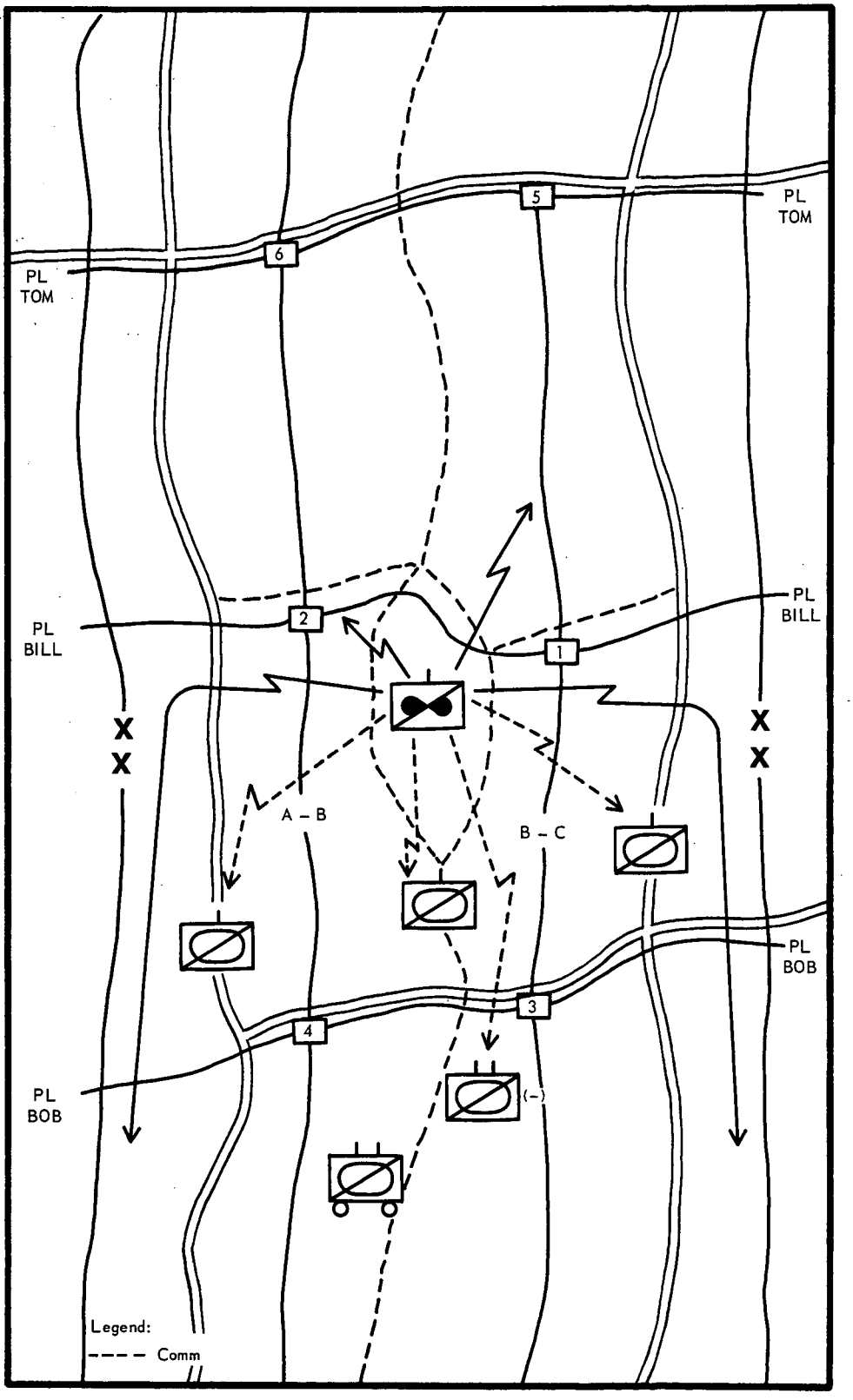


Figure 87. Armored cavalry squadron reconnoitering in zone with air cavalry troop conducting zone reconnaissance and troops reconnoitering routes and specified areas within assigned zones.

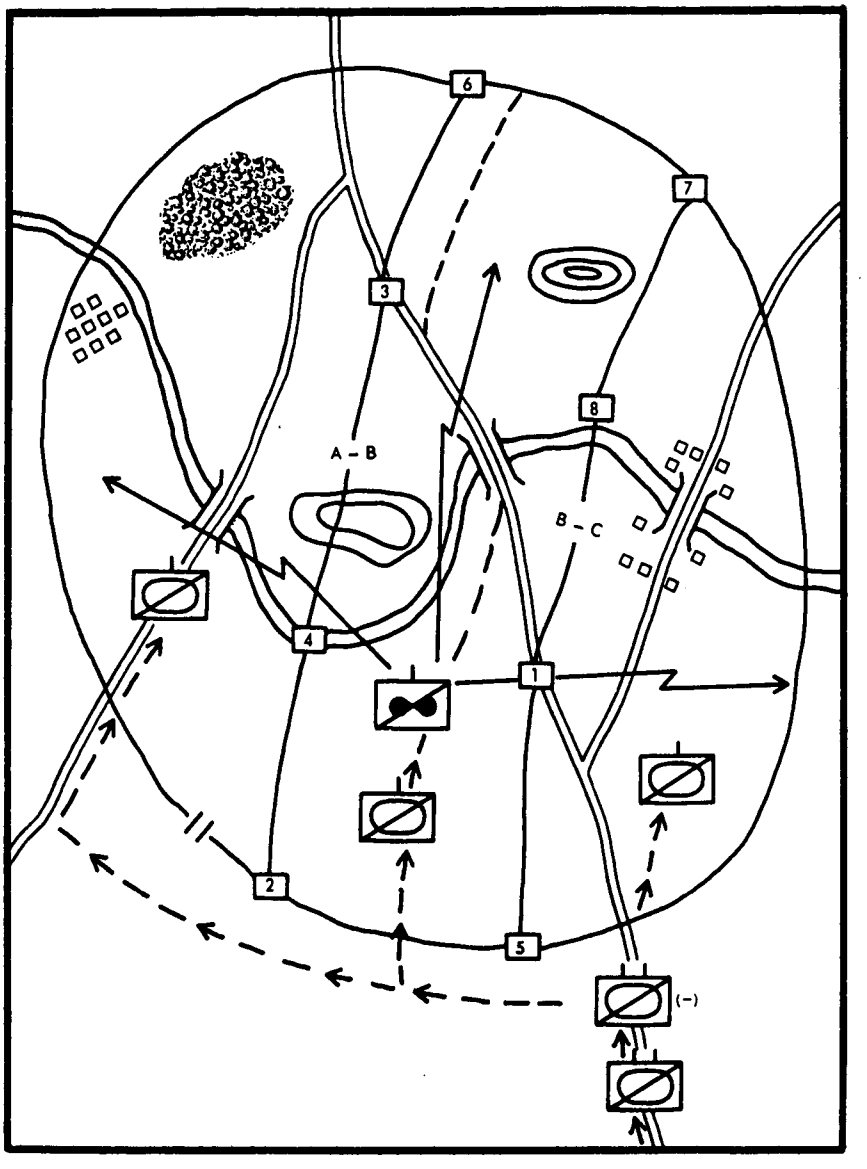


Figure 88. Armored cavalry squadron conducting area reconnaissance. Air cavalry troop reconnoitering the entire area and the armored cavalry troops reconnoitering in zone.

c. The squadron command post and trains advance by bounds on the routes available in or near the center of the squadron zone.

219. Area Reconnaissance

When the squadron is assigned an area reconnaissance mission, it moves to the area over a designated route or routes and performs the area reconnaissance mission using zone reconnaissance techniques. Troop areas of responsibility are defined by boundaries within the area (fig. 88). The squadron can most expeditiously conduct area reconnaissance by combining the effort of both air and ground elements. Elements of the air cavalry troop may be placed under operational control of ground troops or the troop may be employed under squadron control. The air cavalry troop may reconnoiter march routes for the squadron to facilitate movement to the designated area. After arriving in the area the troop will assist the squadron, using the zone reconnaissance technique. Information about the condition of routes should be confirmed by ground elements (fig. 89). For the definition of area reconnaissance, refer to paragraph 3.

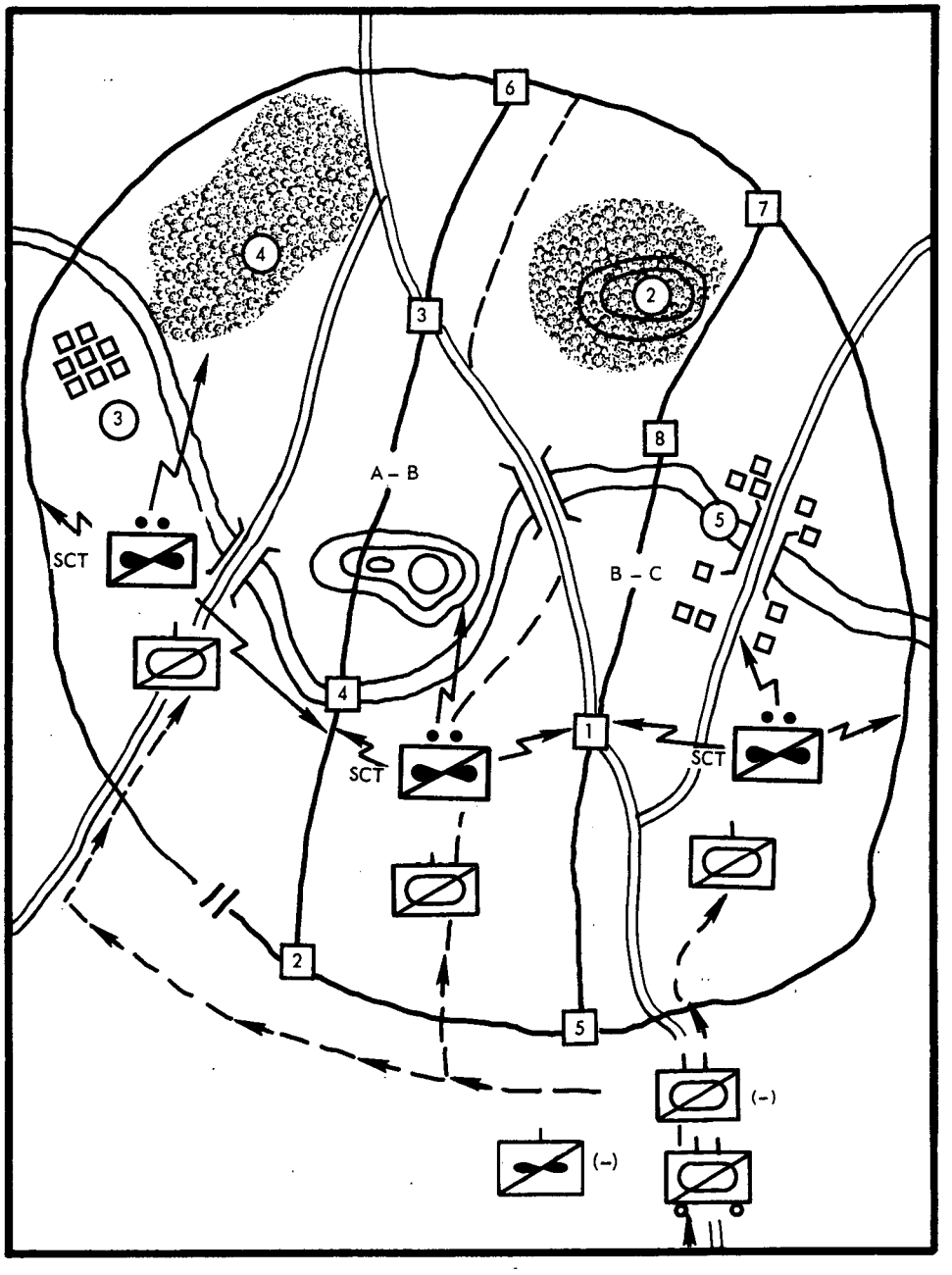


Figure 89. Armored cavalry squadron conducting area reconnaissance. Aero-scout sections, under operational control of each armored cavalry troop, reconnoiter in zone and the armored cavalry troops reconnoiter routes and specific locations as indicated by checkpoints.

Section III. CONDUCT OF RECONNAISSANCE OPERATIONS

220. General

a. Reconnaissance is executed aggressively, making full use of the squadron's ground and air mobility. The squadron commander coordinates and directs the efforts of the armored cavalry troops and the air cavalry troop. When contact is made, each element of the squadron develops the situation to determine the strength, composition, and disposition of the enemy. When the resistance cannot be overcome by

a platoon or troop attack, the squadron commander may commit additional forces, or he may order the unit to disengage and bypass the enemy to continue the reconnaissance mission.

b. Reconnaissance missions assigned to the squadron will normally require the commitment of all troops. If a part of the squadron is uncommitted, it is designated as a reserve.

221. Control During Reconnaissance Operations

a. The squadron commander controls and coordinates operations of his troops from a position affording communication with all troops. He is prepared to move rapidly to any portion of the squadron area to supervise and direct action by any element of the squadron. The squadron commander usually operates with a command group containing necessary personnel and control facilities.

b. Control measures are used only to the extent necessary for coordinating the efforts of elements of the squadron and preventing interference among troops. Maximum freedom of action is granted to the troop commanders. FM 17–1 contains a discussion of control measures.

222. Reconnaissance Orders and Instructions

a. Instructions may be issued to the squadron commander orally or in written operation orders. Priorities are established when more than one mission is assigned.

b. Instructions by the squadron commander are issued orally, by an overlay-type operation order, or by a combination of both. When possible, troop commanders are assembled to receive an order initiating a new action. This insures complete understanding and coordination of measures pertaining to fire support and movement during the operation. Objectives, routes, zones, or areas are assigned by the squadron commander. After the operation is under way, fragmentary orders are usually issued by radio. Other means frequently used to deliver instructions include messengers, Army aircraft and members of the squadron staff.

223. Transmitting Information by Elements of the Squadron

a. Prompt transmission of accurate information is essential to the success of any reconnaissance mission. The use of a standing operating procedure (SOP) facilitates transmis-

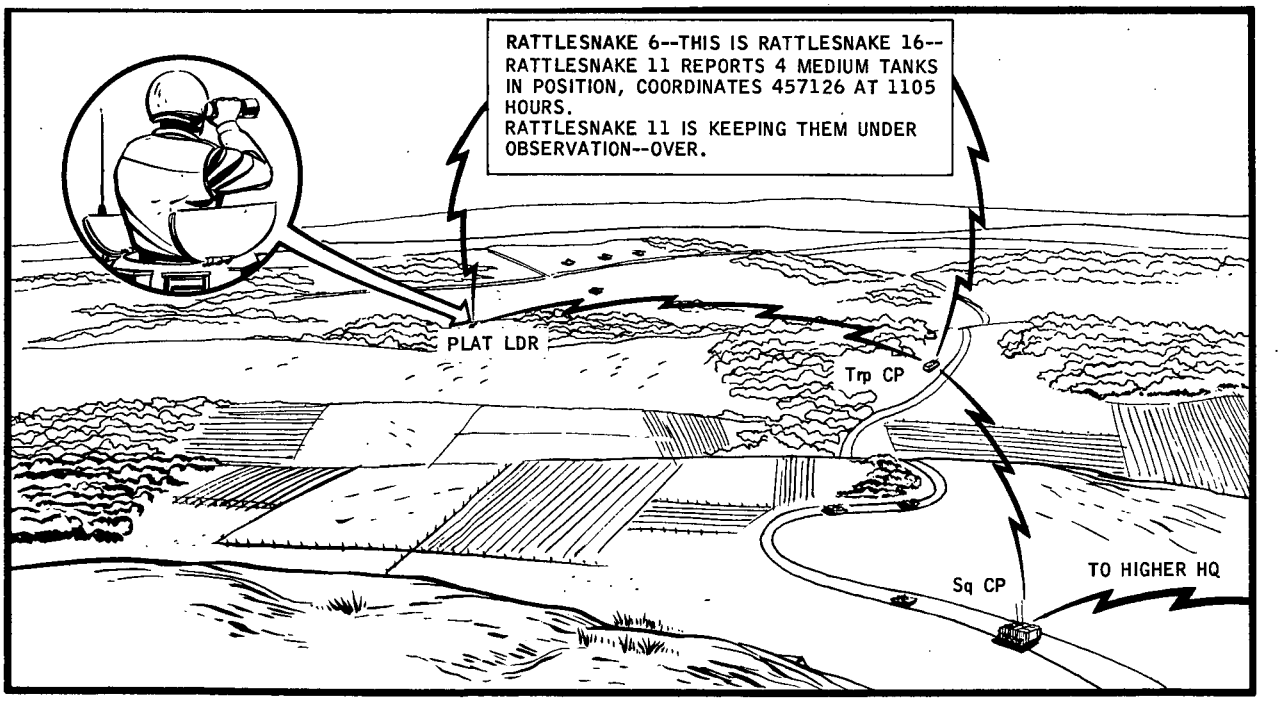


Figure 90. Information must be rapidly relayed to higher headquarters.

sion of important information. Information of first contact with the enemy and terrain information vital to a higher headquarters is transmitted at once (fig. 90).

b. The squadron staff insures that all information, both positive and negative, of the enemy and terrain is reported to higher headquarters, disseminated to appropriate elements in the squadron, and used in planning squadron operations. Information is reported over the intelligence net. If the information is of particular significance, it may be reported over the command net.

c. Supporting Army aircraft from the aviation battalion or the brigade aviation section may be used to facilitate transmission of information, for radio relay, or to transport messengers, liaison officers, or other individuals.

CHAPTER 10

OFFENSIVE OPERATIONS

Section I. GENERAL

224. General

The armored cavalry squadron is capable of conducting offensive operations as an economy force. It engages in offensive action most frequently to accomplish an assigned reconnaissance or security mission. Attacks by the squadron may be a series of individual troop actions, or the squadron may conduct a coordinated attack. The squadron normally operates directly under division control; however, it may be attached, in whole or in part, to a major subordinate command.

225. Employment of Armored Cavalry Squadron in Offensive Operations

In offensive operations conducted by either the armored, mechanized, infantry, or airborne division, the armored cavalry squadron is normally assigned a security mission (flank guard, rear guard, covering force, or screening force).

a. Penetration. In the penetration, the armored cavalry squadron is normally employed to provide flank security for the force making the penetration and for maintaining contact with the forces on the flanks. As the force making the penetration advances, the squadron will provide flank security, patrol lines of communication, seize and hold terrain features, or be committed as an independent combat force.

b. Envelopment and Turning Movements. In conducting an envelopment or turning movement, the division will usually have both flanks exposed. The armored cavalry squadron is normally assigned the mission of securing the more dangerous flank of the division.

226. Frontage

a. The frontage covered by the armored cavalry squadron in the attack is determined by the factors of METT. The frontage must be sufficient to allow for maneuver, yet not be so wide that elements of the squadron cannot be mutually supporting.

b. The squadron will normally operate over a broad front when performing as a covering force for a larger unit conducting an offensive operation or in open terrain. It will normally operate on a relatively narrow front to concentrate available combat power when required to attack a prepared enemy position, when operating in wooded areas and rough terrain, or when limited visibility prevails.

c. When adequate artillery and tactical air support are available, the frontage covered by the squadron may be greater.

227. Distribution of Forces

The squadron is normally divided into a maneuvering force and a base of fire. If sufficient forces are available after the requirements of the maneuvering force and base of fire are met, a reserve may be designated (figs. 91 and 92).

228. Maneuvering Force

a. The maneuvering force should consist primarily of tanks and infantry elements. The squadron commander must insure that the squadron maneuvering force has enough tank and infantry strength to provide the combat power required to accomplish the mission. Scouts of air cavalry elements are employed to provide flank security for the squadron.

b. The maneuvering force attacks to close with and destroy the enemy. Fire and movement in the maneuver force is employed as dictated by the situation. The maneuvering force is usually committed in a formation that

has both mass and depth. Every effort is made to employ the maneuvering force against an exposed flank of the enemy position. As the enemy position is reached and overrun, assault fires of all available weapons of the maneuvering force are intensified to compensate for the lifting or shifting of supporting fires.

c. Air cavalry elements maintain visual contact with enemy units and screen the front, flanks, and rear of the maneuvering force. They may also reconnoiter to the rear of enemy positions to provide warning of approaching enemy reinforcements. The aero-rifle platoon, supported by other elements of the troop, may be employed to block the approach of enemy reinforcements or to block the withdrawal of escaping enemy forces. The troop may bypass enemy positions to seize key terrain, such as bridges and defiles, to facilitate the squadron attack.

d. Ground surveillance radar is employed to assist in providing flank security and to search beyond the line of contact. Terrain permitting,

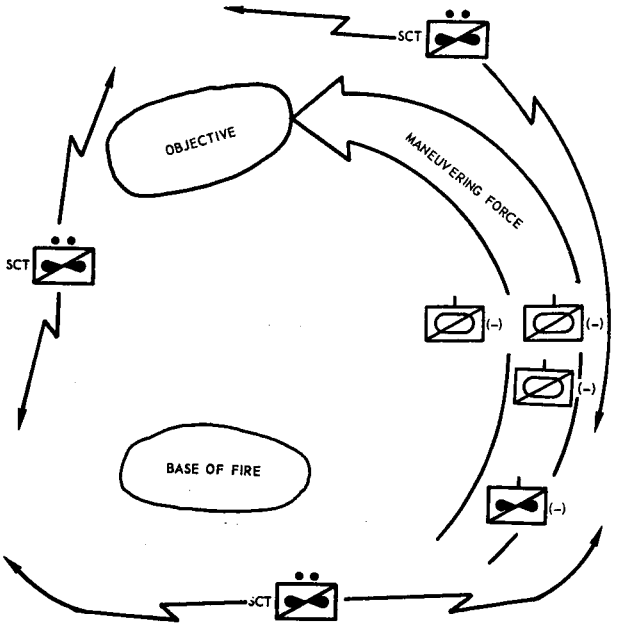


Figure 91. Distribution of forces, armored cavalry squadron in the attack.

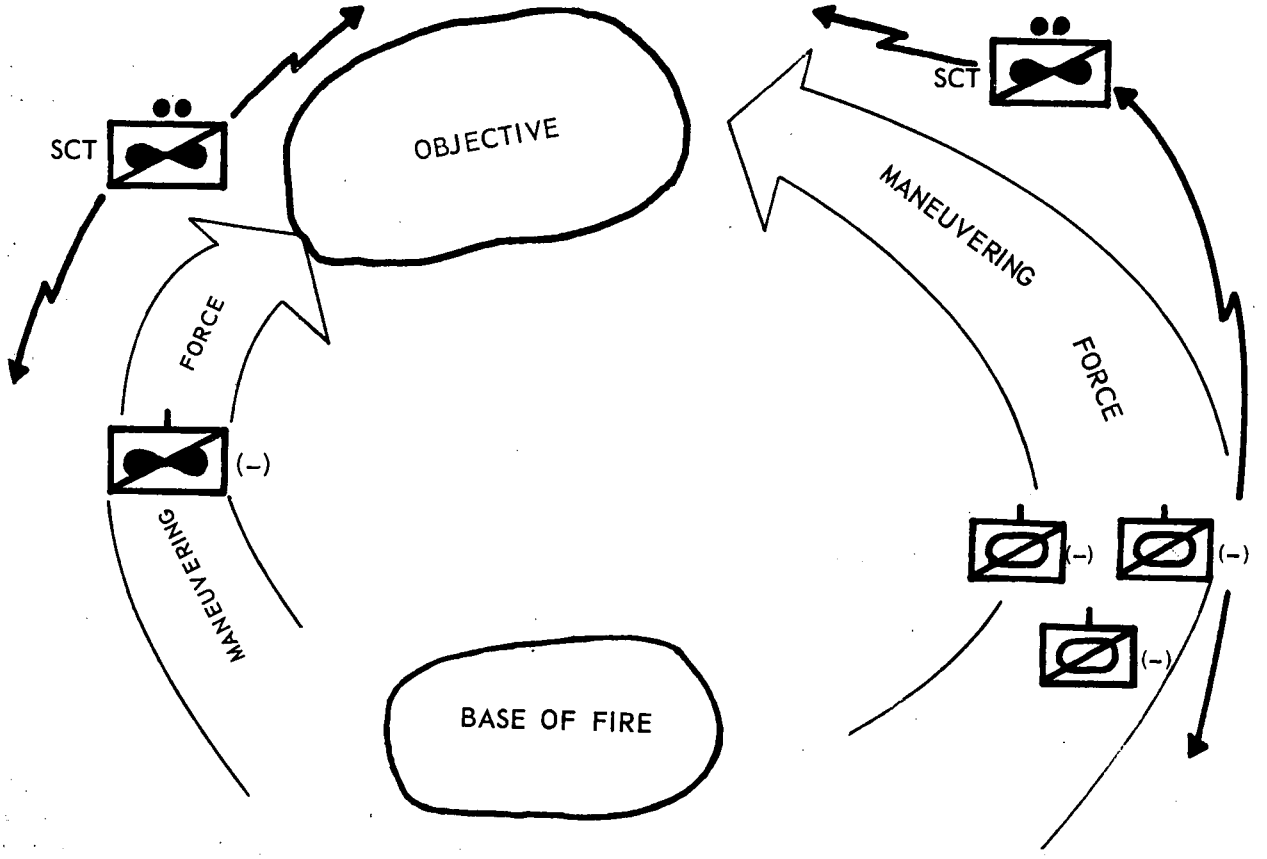


Figure 92. Distribution of forces, armored cavalry squadron in the attack.

the radar is positioned well forward to allow searching the objective before and during an attack to detect any movement by the enemy that might indicate reinforcement or a change in disposition. During the reorganization the radar may be used to assist in preventing a surprise counterattack by searching enemy avenues of approach.

229. Base of Fire

In a squadron attack the base of fire is provided by mortars, artillery and automatic weapons, and, when available, tactical air. Tanks may be placed with the base of fire if terrain does not permit their effective employment with the maneuvering force. Air cavalry elements may be employed to provide an air base of fire, particularly against the flank and rear of the enemy position.

230. Reserve

a. Combat forces should be held out as a reserve only after adequate forces have been allocated to the maneuvering force and the base of fire. The reserve, if designated, may be employed initially to reinforce the base of fire or to provide security. As the attack progresses, the reserve is used to exploit the success of the maneuvering force.

b. When enough forces are not available to constitute a reserve, the squadron commander must use other measures to influence the action, such as providing depth to his formation, maneuvering his supporting fires, and making full use of the unit's mobility.

Section II. PREPARATION FOR ATTACK

231. General

To accomplish offensive missions quickly and effectively, the armored cavalry squadron attacks with aggressiveness, speed, and violence. The conduct of such attacks requires thorough and deliberate planning. In planning for a squadron attack, the commander must consider the factors of METT. His plan must be practical and capable of rapid and forceful execution.

232. Plan of Attack

Upon receipt of the plan of attack, or operation order, from higher headquarters, the squadron commander begins to formulate his plan of attack. The plan of attack includes the scheme of maneuver and the plan of fire support. Troop leading procedures are outlined in FM 17–1.

233. Control Measures

To maintain control of his squadron during the attack, the squadron commander uses only those control measures that are necessary for success. For definitions and use of control measures, refer to FM 17–1.

Section III. CONDUCT OF ATTACK

234. General

a. Once the squadron attack is launched, it must be executed with aggressiveness and violence, using all available firepower. Under cover of the support provided by the base of fire, the maneuvering force closes rapidly with the enemy. From the moment this force is under enemy observation, its movement must be as rapid as terrain permits. Each subordinate commander must be impressed with the fact that troop and vehicle losses are often proportionate to the time required to close on the objective. When the assault is launched by the maneuvering force, fire is delivered continuously so that when supporting fires are shifted or lifted, the enemy is constantly under heavy fire until he is destroyed or captured. Aggressive leadership at all levels of command increases the chances of success.

b. The squadron commander places himself where he can best control and influence the actions of elements of the squadron. Most often he is with the maneuvering force; however, he should not become so involved with the actions of one element of his command that he is unable to control the entire squadron. During

the attack, he depends largely on radio communication to control the squadron, and, by remaining in a forward position and maintaining personal contact with his troop commander, he can control the action effectively. The S3, artillery liaison officer, and forward air controller usually accompany the squadron commander.

235. Conduct of Maneuvering Force

a. The maneuvering force directs its movement toward the enemy flank or rear, using all available cover and concealment, and moves aggressively for the objective. Fire and movement techniques may be employed by elements of the maneuvering force.

b. The maneuvering force assaults the objective in a deployed formation to close with and destroy the enemy.

236. Conduct of Base of Fire

a. All weapons in the base of fire begin firing on order at designated targets or areas. When the maneuvering force arrives on the objective or masks supporting fires, the base of fire lifts or shifts its fire to the rear or flank of the objective.

b. Direct-fire weapons in the base of fire, and other elements of the base of fire as reqiured, are prepared for immediate displacement forward to participate in the reorganization of the objective.

Section IV. CONSOLIDATION, REORGANIZATION AND CONTINUATION OF ATTACK

237. Actions on the Objective

a. General. The actual occupation of the objective is a critical stage of the attack. This is the stage during which control is most difficult and the time when an aggressive enemy delivers a carefully planned and coordinated counterattack, covered by all available supporting fires. When the squadron has assaulted and seized an assigned objective, it enters into activities called "actions on the position." These actions are *consolidation and reorganization.* In nuclear warfare, actual seizure of the objective may often be followed by either a continuation of the attack or a rapid move to dispersed locations from which the squadron can dominate the position, but avoid presenting a lucrative nuclear target. Such actions will be in accordance with plans made by a higher commander.

b. Consolidation. As soon as leading elements of the assaulting force reach the objective, the following actions are taken with the greatest possible speed to destroy remaining enemy resistance, prepare to move to dispersed locations, avoid presenting nuclear targets, or to continue the attack on order. These actions include:

(1) Establishing observation posts and outposts and dispatching patrols.
(2) Positioning elements of the squadron to continue the attack or to defend the area.
(3) Moving to dispersed locations to avoid presenting nuclear targets.
(4) Submitting requests for artillery and air support.
(5) Displacing the base of fire to support the continuation of the attack or the defense of the position.

c. Reorganization. Reorganization pertains to actions taken to restore maximum combat effectiveness of the unit and restore control. These actions include:

(1) Reporting of troops on their combat status, including disposition and status of personnel, equipment, and supplies.
(2) Redistributing men.
(3) Treating and evacuating casualties and prisoners of war.
(4) Supplying ammunition, fuel, and other supplies.
(5) Restoring communications.
(6) Maintaining equipment.

d. Security. During the reorganization and consolidation phase, the air cavalry troop may be employed to provide security to the front and flanks of the squadron to harass the enemy rear and flanks, to prevent him from regroup-

ing for a counterattack or organizing new defensive positions. The troop may perform air reconnaissance well to the front of the squadron to warn of approaching enemy reserves and, within its capability, harass and delay the advancing enemy.

238. Continuation of Attack

Unless otherwise directed, the armored cavalry squadron will continue the attack to prevent the enemy from reconstituting his defenses, to exploit initial success, or to execute its next mission. The squadron commander should be aware of the overall plan of the next higher commander and make a continuous estimate of the situation to insure that his actions are in consonance with that plan. The squadron commander adopts formations that will enable the unit to continue the attack rapidly. Troop commanders should require only brief oral orders to resume the advance.

Section V. EXPLOITATION AND PURSUIT

239. General

a. Exploitation is a phase of offensive action that usually follows a successful penetration, envelopment, or turning movement. During an exploitation by the division, the armored cavalry squadron will normally be employed on security missions. In some situations the squadron may be employed as an economy force.

b. Pursuit is a phase of the exploitation that has as its primary purpose the capture or destruction of retreating enemy forces. The squadron may be employed as a covering force to regain contact with the enemy or to protect the flank or rear of the division.

240. Armored Cavalry Squadron in an Economy of Force Role in Exploitation

a. When the zone of action assigned to the division is unusually wide and enemy resistance is weak and disorganized, the division commander may assign an axis of advance or zone for the armored cavalry squadron in the exploitation. The squadron's axis of advance or zone is normally on one flank of the division; however, the mission is primarily one of exploitation rather than flank security.

b. The squadron is usually assigned an axis of advance that will permit it to advance on a broad front. The command post should be located near the center of the column, with the command group located well forward. The squadron trains move toward the rear of the column, with protection as may be needed. Small enemy forces should be bypassed. The next higher commander should be kept informed of the situation, especially with respect to location and estimated strength of enemy forces that the squadron commander proposes to bypass. Depending on the mission and bypass routes available, an attack may be lanuched by the squadron or the enemy may be bypassed. The air cavalry troop will normally be employed to the front, flanks, and rear of the squadron to warn of enemy approach and to maintain contact with adjacent units. The air cavalry troops may also be employed to harass the rear and flanks of retreating enemy forces. In some situations, the troop may be employed to seize or destroy bridges to the rear of retreating enemy forces.

241. Armored Cavalry Squadron in Pursuit

a. Encircling Force. The mission of the encircling force is to get into the rear of the enemy and block his retreat. When the division is engaged in a pursuit operation, the armored cavalry squadron is best employed as a part of an encircling force. This mission is assigned when the bulk of the division has become engaged with the enemy and a light mobile force is needed to effect a rapid encirclement. The squadron in the encircling maneuver advances along routes paralleling the enemy's line of retreat to seize defiles, bridges, and other key terrain before the enemy force. The air cavalry troop may be employed to protect the front, flanks, and rear of the squadron and to reconnoiter routes of advance and bypasses for the squadron.

b. Direct-Pressure Force. The mission of the direct-pressure force is to attack continuously to prevent disengagement and subsequent reconstitution of enemy defenses and to inflict maximum casualties. As a direct-pres-

sure force, the squadron as a part of a larger force, advances along its assigned axis, usually employing multiple columns, to close with the retreating enemy quickly. Every effort is made to break through the enemy rear guard and engage the enemy main body. When the enemy has halted and established a defensive position, the squadron continues to maintain constant pressure by fire and by employing offensive tactics.

CHAPTER 11

SECURITY OPERATIONS

Section I. GENERAL

242. General

a. The purpose of security operations is to preserve secrecy and to gain and maintain freedom of action. Security is achieved by effectively providing for the detection of a threat; for enough time to react to the threat; and for the avoidance, neutralization, or destruction of the threat. The armored cavalry squadron accomplishes security missions by employing the armored and air cavalry troops alone or reinforced. The troops conduct offensive, defensive, or delaying actions as required to accomplish the mission. The air cavalry troop extends the range of squadron security operations. The activities of all elements operating under squadron control, ground and air, are interrelated. Information obtained through air reconnaissance is used to facilitate ground operations by the armored cavalry troops and vice versa. For the definition of security, refer to paragraph 3.

b. The squadron may be reinforced with additional tanks, mechanized infantry and combat support elements such as artillery, engineers and Army aircraft. Additionally, tactical air support may be available.

c. The squadron is designed to provide security for the division or major subordinate commands of the division. It may be employed as flank guard, rear guard, covering force, screening force, or as a rear area security force. When used as a covering force, the squadron should be reinforced with tanks, mechanized infantry, artillery, engineers, and Army aircraft.

243. Frontage for Security Operations

The armored cavalry squadron may be employed over broad frontages when engaged in security operations. The armored cavalry squadron commander must expect extended frontages and consequent dispersion of his forces. He should maximize the mobility and extensive and flexible communication to offset the disadvantages of dispersion.

244. Liaison in Security Operations

In performing security missions, the armored cavalry squadron should maintain close liaison with the main body and with adjacent units. The squadron commander will use his liaison officers in this function.

Section II. FLANK GUARD OPERATIONS

245. General

a. As a flank guard for the division, the squadron normally protects one flank. In some situations, an armored cavalry troop and elements of the air cavalry troop may be attached to the brigade with the less vulnerable flank to provide security. For the definition of flank guard, refer to paragraph 3.

b. The main body commander specifies the units to be protected or the zone of responsibility. Usually, the flank guard responsibility begins at the rear of the leading battalion task force and ends at the rear of the combat elements of the main body, exclusive of the rear guard, or as otherwise specified. When performing a mobile flank guard mission, the armored cavalry squadron operates along a

route of advance. The route of advance generally parallels the axis of the main body and provides rapid access to key terrain dominating likely avenues of enemy approach. When the main body halts, the squadron establishes blocking positions on key terrain to protect the flank. The leading troop acts as advance guard for the squadron; secures the area between the main body and the squadron route of advance; and maintains contact with the rear of the leading battalion task force of the main body. An aero-scout section is normally placed under operational control of a ground troop to facilitate this action.

c. There are special considerations in planning for a flank guard mission for a larger force that is executing a penetration or an attack out of bridgehead. The movement through the gap of the penetration by the force executing the penetration and the armored cavalry units providing the flank protection must be closely coordinated. The lead troop normally follows the leading battalion task force and the remainder of the squadron follows the leading brigade (fig. 93). The lead troop follows the leading (flank) battalion through the gap until the situation permits its movement to the flank. The troop acts as the advance guard for the squadron; continues to maintain contact with the rear of the leading battalion task force; and secures the area between the rear of the leading battalion task force and the squadron route of advance. When the remainder of the squadron moves through the gap it moves to the flank and is prepared to seize and occupy blocking positions. The initial phase of the operation will usually be a slow-moving operation. Therefore, the squadron normally employs the successive bound method of movement. As the main body's rate of advance increases, the squadron will then employ the alternate bound or marching method of movement. Initially, the squadron's area of responsibility is from the rear of the leading battalion task force to the shoulder of the penetration. When the last combat element of the division moves through the gap, the squadron's area of responsibility is normally changed to the rear of the last combat element (exclusive of the rear guard). After the leading troop has moved through the gap, elements of the air cavalry troop normally will be employed to screen the front and flanks of the troop. When the entire squadron reaches the squadron route of advance, elements of the air cavalry troop are normally placed under the operational control of the lead troop to assist in its three fold mission.

d. The squadron commander normally employs the air cavalry troop in screening operations beyond the line of blocking positions to provide early warning of enemy advance and permit selective occupation of blocking position. Elements of the troop will reconnoiter each succeeding blocking position forward of the lead ground troop to determine its accessibility to surface vehicles and for enemy forces. Aero-scouts will conduct a hasty reconnaissance of key terrain and primary avenues of enemy approach between the line of blocking positions and the line of air screen. The air screen will orient its movement on the squadron. It will be far enough from the squadron to provide the commander time and space to react to an enemy threat. The air screen will normally be conducted by aero-scouts. However, the aero-rifle squads may be used to occupy ground OP's along the line of air screen. The aero-weapons section and aero-rifle platoon (if not otherwise employed) will be located centrally to facilitate immediate employment to support the aero-scouts. When contact is established, aero-scouts and the aero-weapons section will harass and delay the enemy force to provide additional time for armored cavalry troops to occupy blocking positions. The aero-rifle platoon may occupy blocking positions to assist in delaying the enemy force.

246. Flank Guard Planning and Conduct

a. The commander plans a flank guard mission in the following sequence:

(1) Initially he makes a map reconnaissance of the area of operations and selects the most likely avenues of enemy approach. He selects a series of blocking positions on the flank that generally parallels the main body's axis of advance. These blocking positions should be located on defensible terrain that dominates likely avenues of enemy approach. The blocking positions should be far enough from the flank of the main body to permit

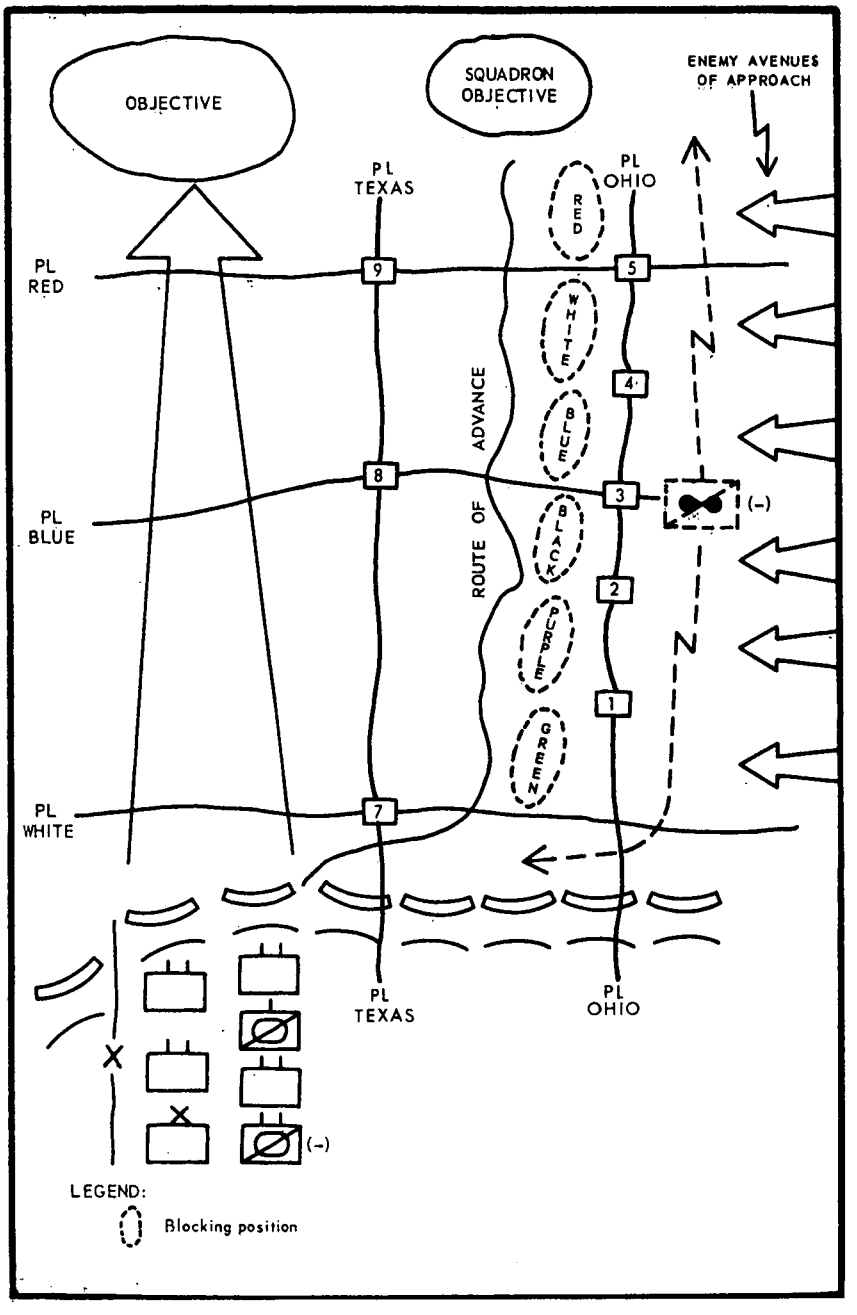


Figure 93. Planning for the employment of the armored cavalry squadron as a flank guard during a penetration.

timely warning of enemy approach and to provide the main body with sufficient time and maneuver space to react to an enemy threat. In the selection of a blocking position, special attention should be given to the terrain that dominates avenues of enemy approach.

(2) The commander normally selects the squadron route of advance unless a route of advance has been prescribed by higher headquarters. During a penetration, the larger unit commander normally designates a specific route for the squadron. The route selected should be far enough from the axis

of advance of the main body to prevent the squadron from interfering with the maneuver of the main body but within the capability of one troop to secure the area between the main body and the squadron route of advance. The route should be interior to, and permit rapid access to, the line of blocking positions (fig. 93). If a suitable route does not exist, the squadron may be required to operate cross-country.

(3) The squadron commander next develops a scheme of maneuver that will enable the squadron to seize and hold selected blocking positions and secure the area between the leading task force of the main body and the squadron route of advance. The scheme of maneuver includes provisions for seizing the blocking positions either by individual troop actions or by a coordinated squadron effort. The squadron commander must also decide the strength required to hold the blocking positions that have been seized.

(4) Contact points must be easily identifiable; they should be located forward of the line of blocking positions, and generally between blocking positions. Contact points delineate the area of responsibility for the troop holding each position. When a troop is ordered to occupy a blocking position, it is responsible for the position and the area between the contact points on each flank. The troop is required to make physical contact with adjacent units at the contact point.

(5) The squadron commander selects a formation that will permit rapid employment against enemy resistance. The formation must provide maximum flexibility to meet any change in the situation. The column formation provides the best control and maximum flexibility. The squadron provides its own security. Normally, each troop is required to provide security for its exposed flank. Air and ground scouts are used to provide security for the troops and to extend reconnaissance.

(6) Army aircraft from the aviation battalion should be placed in support of each ground troop. An artillery liaison officer and forward air controller should be available to assist the squadron commander.

(7) Combat trains normally accompany the squadron command post. Squadron field trains usually move with the trains of a brigade in the main body.

b. During a flank guard operation, the squadron moves parallel to the axis of advance of the main body. It regulates its movement on that of the main body. The lead troop provides the advance guard for the squadron, secures the area between the main body and the squadron route of advance, and maintains contact with the rear of the leading battalion task force of the main body. If the leading troop is not able to accomplish its three fold mission, the squadron commander either employs an additional troop or reinforces the leading troop to the extent necessary for such tasks. The remainder of the squadron marches in column, prepared to secure blocking positions on order. The decision to occupy these positions will depend on the speed with which the main body is advancing and the enemy situation on the exposed flank. The squadron command post should be centrally located. There are three basic methods of movement that the squadron may employ to furnish the required flank protection: alternate bounds, successive bounds, and continuous marching. The method selected depends on the rate of advance of the main body and the enemy situation. If the squadron becomes overextended, the squadron commander should ask for permission to cover part of the area by screening (observing and reporting) or to be relieved of responsibility for the rear part of the area or for additional forces. When the main body is stationary, the squadron occupies blocking positions dominating the likely avenues of enemy approach (fig. 94).

c. The squadron operating as a flank guard for a defensive force occupies a series of blocking positions on the flank of the main body. The blocking positions are located on key terrain that dominates likely avenues of enemy approach into the sector. The squadron is normally given a sector of responsibility that is

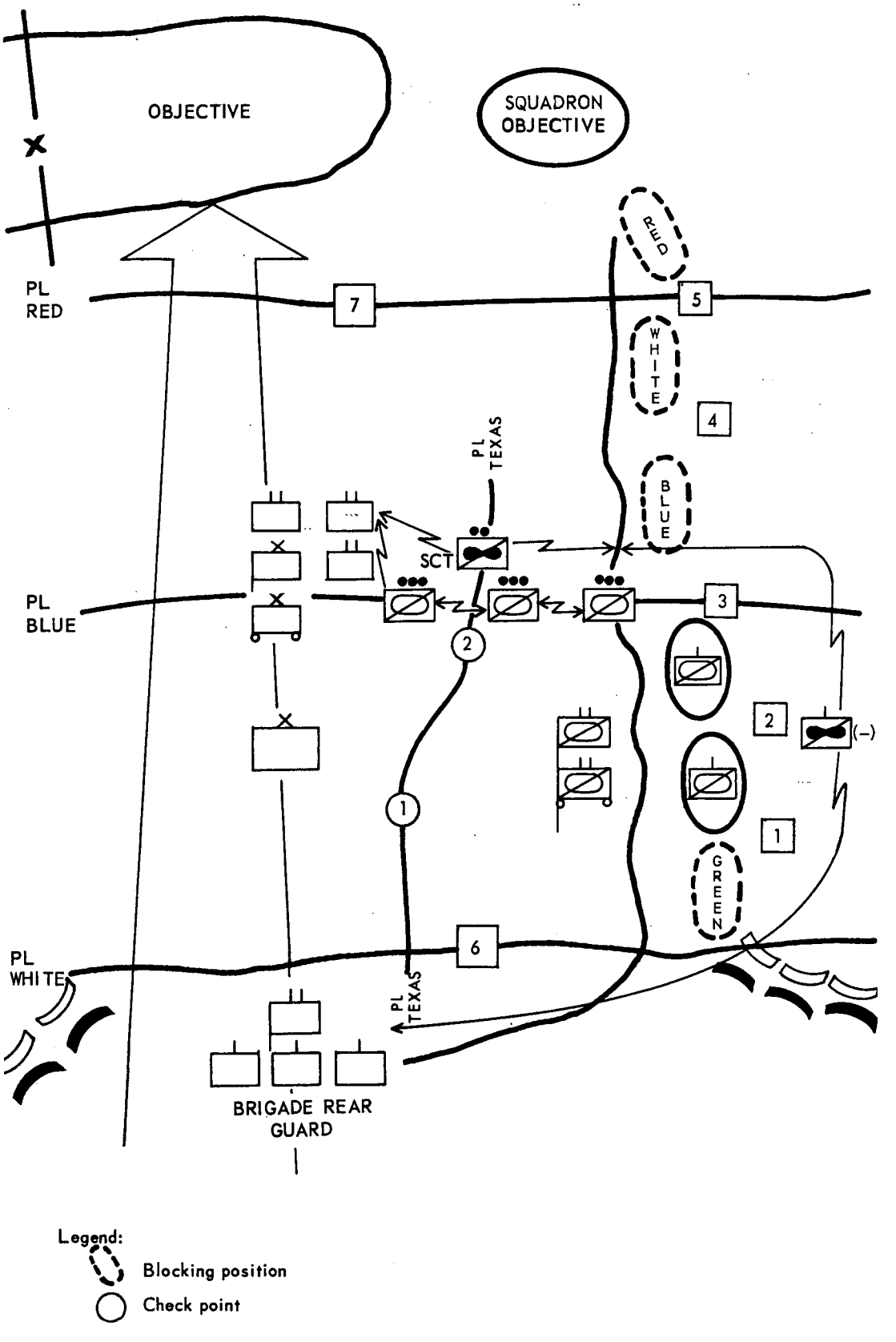


Figure 94. Armored cavalry squadron conducting a mobile flank guard mission after the division has cleared the gap of the penetration.

defined by specific terrain features. In accomplishing the mission, the squadron employs defensive tactics. If forced from its position, it employs delaying action techniques, providing time and space for the main body to react to the threat.

d. Operations of the squadron as flank guard for a unit performing a retrograde movement are similar to those of a squadron as flank guard for an advancing force. The major difference is that the area of responsibility is from the front of the last unit (which may be the rear guard) to the front of the first unit in the formation.

Section III. REAR GUARD OPERATIONS

247. General

a. During the advance, the rear guard defeats or delays hostile forces attacking the rear of the main body and protects the trains and collects stragglers. It follows the main body at a distance prescribed by the main body commander and usually moves on the axis of advance of the main body. During a withdrawal, the rear guard protects the disengagement of the main body. It employs delaying action tactics and withdraws by bounds, basing its rate of movement on that of the main body or moving in accordance with prearranged plans. For the definition of rear guard see paragraph 3.

b. The armored cavalry squadron may be employed as a rear guard for the division or a major subordinate element during an advance or withdrawal. It may be reinforced with tanks and engineer elements in addition to artillery support and Army aircraft. The squadron follows behind the main body and executes delaying actions if the main body is threatened. All routes to the flanks of the squadron are reconnoitered. The air cavalry troop is employed to screen the rear and flanks of the squadron to provide early warning of enemy advance or attempts to bypass the rear guard. Elements of their air cavalry troop may be used to maintain contact with the main body.

248. Rear Guard Planning and Conduct

a. Planning. The squadron commander selects positions along the route or routes of the main body from which the squadron can protect the main body against enemy action. He maintains contact with the rear of the main body.

b. Conduct. Movement of the rear guard is regulated on the movement of the main body. It may move according to time or distance intervals. The squadron is moved so that suitable delaying positions are between it and the rear of the main body. Formations are adopted that concentrate the bulk of the squadron in a central location. To accomplish this, a rear guard is designated for the squadron. Elements of the air cavalry troop will normally assist in providing a rear guard for the squadron. When the squadron rear guard is attacked, the squadron commander will employ the remainder of the squadron on previously selected delaying position or execute a counterattack. The squadron must not allow itself to be bypassed or driven in on the main body (fig. 95).

Section IV. GENERAL OUTPOST AND COVERING FORCE OPERATIONS

249. General

A general outpost or a covering force may operate to the front, flank, or rear of the main body beyond the local security elements. For the definition of a general outpost and a covering force refer to paragraph 3.

250. Planning and Conduct

a. General. The squadron may be employed as a covering force for the division in offensive, defensive, and retrograde operations or as the division general outpost in defensive operations. When so employed, it should be reinforced by tanks, mechanized infantry, engineers, artillery, and Army aircraft, and supported by tactical air.

b. Planning. When the squadron is conducting an advance covering force and is not in contact with the enemy, the squadron commander normally plans to advance on a broad

front to establish contact. Until contact is established, the squadron employs zone reconnaissance techniques. Elements of the air cavalry troop, under operational control of the armored cavalry troops, are employed to the front and flanks to provide early warning of enemy approach or positions and to obtain information of the area of operation. Armored cavalry troops are normally assigned a zone reconnaissance mission. The squadron commander should designate a reserve for employment to maintain the momentum of the advance or develop the situation. Planning includes employment of the squadron subsequent to contact and the withdrawal through the main body. Once contact with the enemy has been established, the squadron commander develops the situation and defeats, disorganizes, deceives, or delays the enemy. During this phase of the operation, the squadron may attack, defend, or conduct a delaying action. After this forward security mission has been accomplished, the squadron may be employed to provide rear area security, move to the flanks of the main body to provide security, or become part of the reserve.

c. Conduct. In executing a general outpost or covering force operation, the armored cavalry squadron moves aggressively to develop the situation and to insure that the enemy does not threaten or surprise the main body.

(1) During a movement to contact, small enemy forces may be bypassed by the covering force; however, the covering force commander must notify the main body commander. A small ground or air cavalry unit may be left to maintain contact with the enemy. The reserve, if constituted by the covering force commander, may be used to destroy small enemy forces that are bypassed by the leading elements of the covering force (figs. 96 and 97).

(2) After contact has been gained and the squadron is unable to advance farther or when the squadron is covering the division in a defensive operation, the squadron deceives the enemy as to the location of the main body and delays the enemy effort to advance. Ambushes may be employed effectively by the squadron to add to the delay of the enemy. The air cavalry troop will be used to provide early warning of enemy approach, to harass the flanks and rear of the enemy force, and to screen the flanks of the squadron.

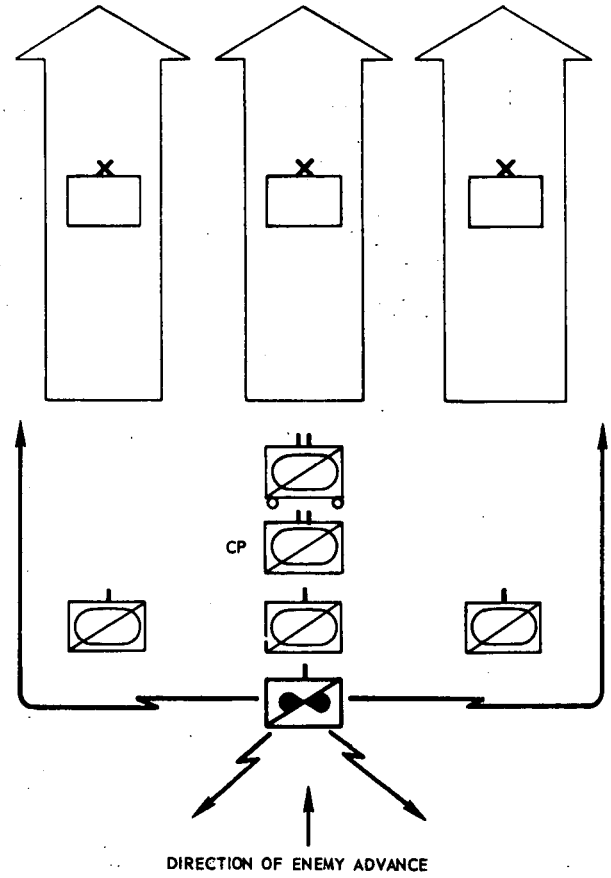


Figure 95. Armored cavalry squadron employed as rear guard with the air cavalry troop screening the rear and flanks.

Section V. SCREENING FORCE OPERATIONS

251. General

a. The mission is accomplished by establishing a series of observation posts and patrols capable of observing enemy approaches into a designated sector. Army aircraft augment the ground capability. For the definition of a screening force, refer to paragraph 3.

b. A screening force is not capable of offering strong resistance to the enemy. However, it protects itself and within its capability de-

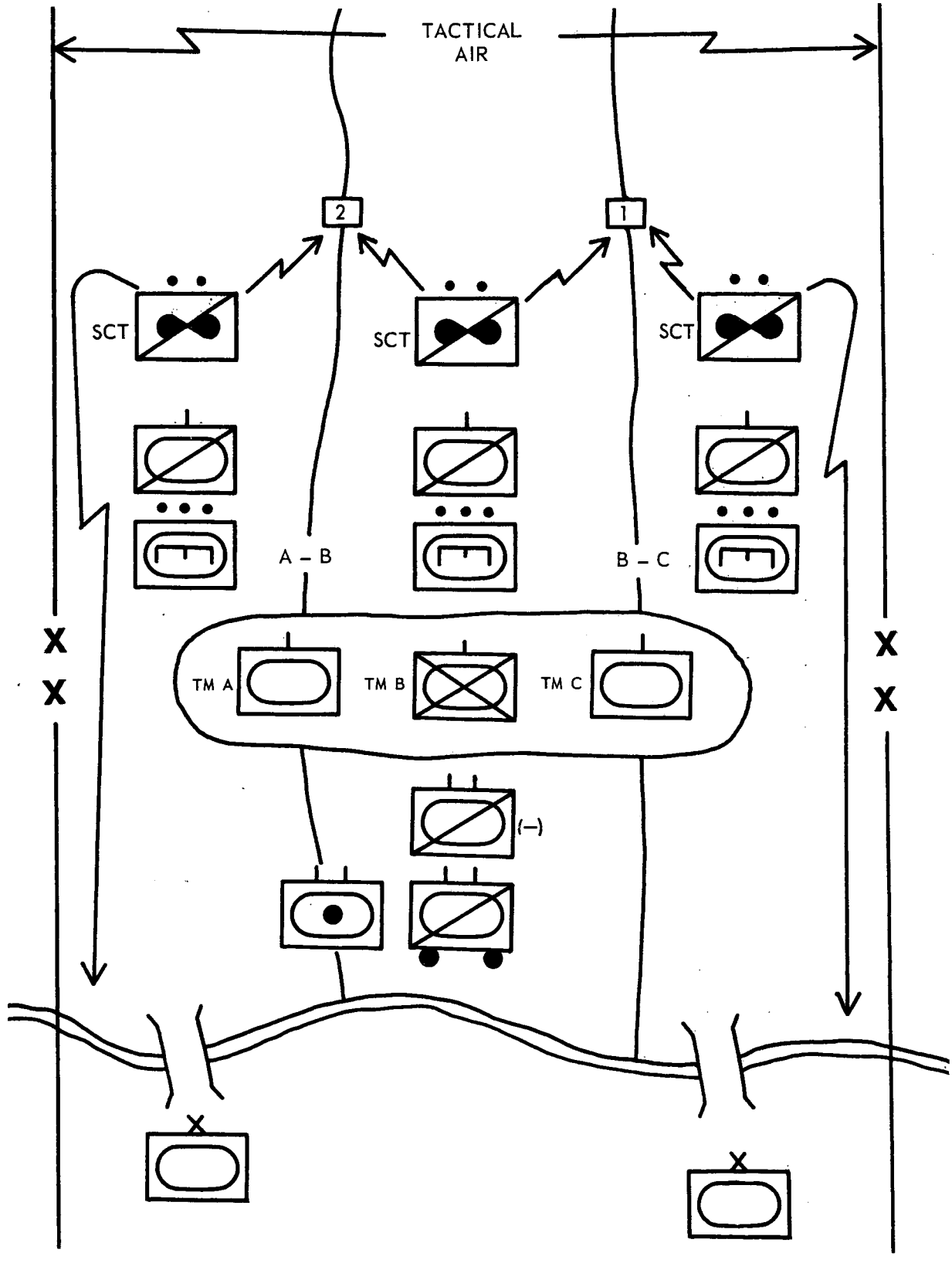


Figure 96. Armored cavalry squadron advancing in zone as covering force during a river crossing by the division.

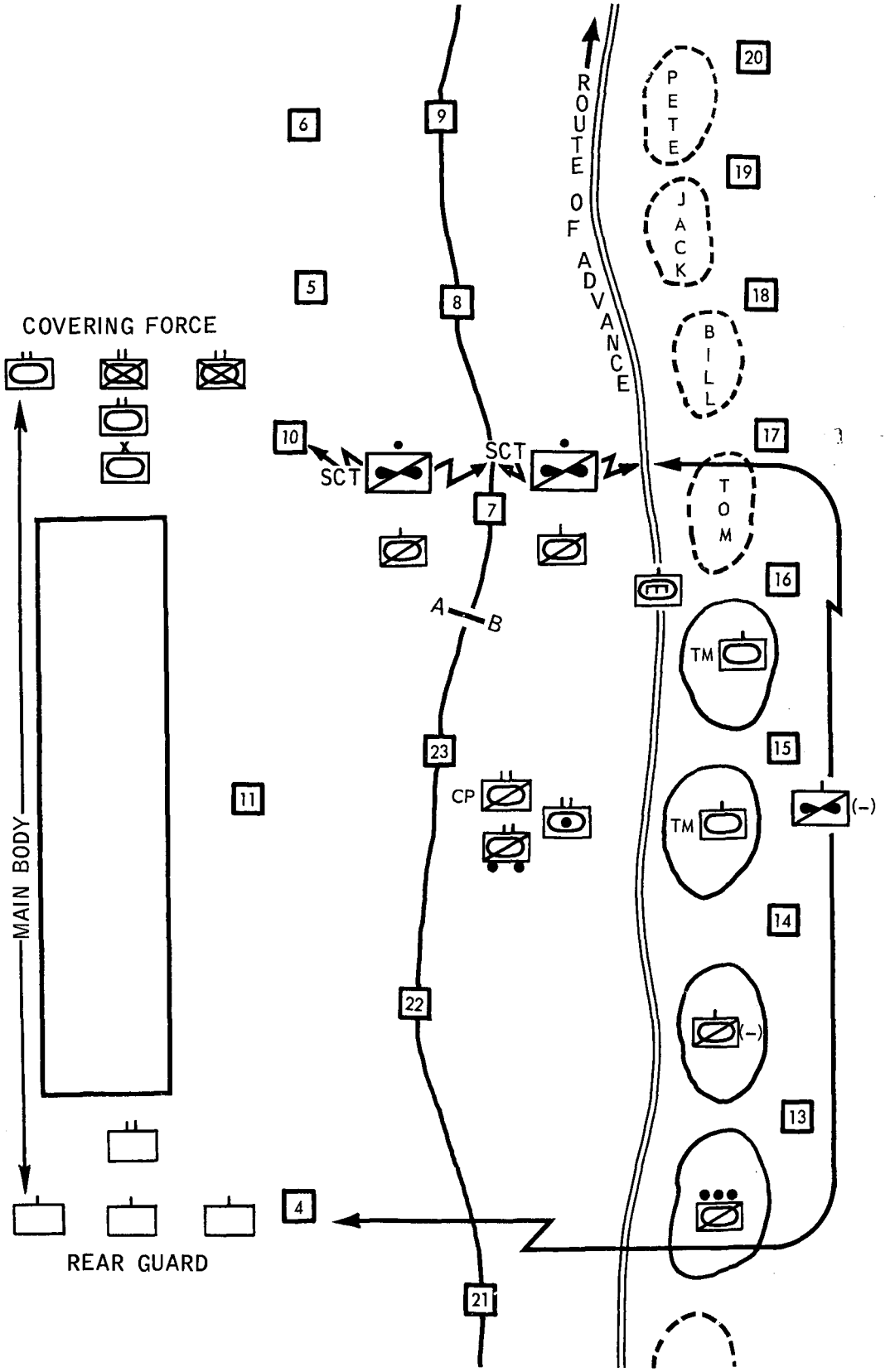


Figure 97. Armored cavalry squadron conducting mobile flank covering force operations, for the division with two armored cavalry troops, aero-scouts are forward. Attached company teams and an armored cavalry troop occupying blocking positions while air cavalry troop, minus screens to the flank and rear.

stroys or disperses small enemy elements that attempt to penetrate the screening position.

252. Squadron as Screening Force

a. General. The squadron may be used as a screening force when operations of the division have created extended flanks or when gaps between major subordinate elements exist that cannot be secured in force or that are not considered critical enough to require security in strength. Screening operations require use of mission-type orders and decentralized execution by troops and platoons.

b. Planning. The area to be screened is divided into troop zones by the squadron commander. The squadron zone is screened by establishing ground and aerial observation posts and patrols. A reserve is not normally maintained at squadron level due to the extended frontage involved and the resulting dispersion of troops. The air cavalry troop enables the squadron to screen larger areas. The air cavalry troop is ideally suited to extend the ground effort by performing air patrols between ground observation posts, maintaining contact with the main body, or providing an air screen to the front and flanks of the screening force. The troop may also be employed to extricate threatened or heavily engaged elements and destroy small enemy forces.

c. Conduct. When forced by enemy action, the squadron withdraws to successive lines of observation posts, preplanned and depicted as phase lines, while continuing to maintain contact with the enemy. Supporting fires or elements of the air cavalry troop may be employed to impede the enemy's advance. During periods of reduced visibility, the squadron and troop surveillance sections should be employed to cover the major avenues of enemy approach.

Section VI. REAR AREA SECURITY OPERATIONS (STANAG 2079)

253. General

When the squadron is engaged in rear area security operations, the coordination of operational plans with units and installations in the area of operations is essential. Communication and liaison must be maintained with these units and installations. For the definition of rear area security refer to paragraph 3.

254. Protecting Routes of Communication

a. The method employed to guard routes of communication will vary depending upon the factors of METT. Lines of communication may be protected by establishing a series of observation posts and mobile patrols throughout the area of responsibility. A centrally located mobile reserve is then employed according to the information received from the observation posts and patrols. If the area is too large to be protected in this manner, it will become necessary to increase the number of mobile patrols and to locate the reserve in small groups at various points throughout the area. The security force commander must retain control of all reserve groupings so that he can employ them singly or in mass.

b. Air or ground elements of the squadron may be required to patrol the main supply route and to escort convoys through threatened areas. The unit that is escorting a convoy usually holds its main strength in the forward part of the formation and establishes security to the front, flanks, and rear. The size of the escort will be determined to a large degree by the size of the convoy and the anticipated enemy threat. During periods of good visibility, air patrolling of the route will normally facilitate more rapid movement of convoys. This technique eliminates the requirement for tracked vehicles in the convoy escort.

255. Security Against Airborne, Airmobile, and Irregular Forces Attack

a. General. When protecting a rear area against enemy airborne, airmobile, and irregular forces attack, the squadron commander deploys his units by placing observation posts in the vicinity of likely drop zones, landing areas, or potential assembly areas, and by patrolling the area. Stereotype operations of OP's and patrols must be avoided as to time, direction, and location. Reserve elements are positioned so that they can move rapidly to attack any hostile force. The squadron headquarters monitors the division warning broadcast net for information on possible enemy airborne or airmobile activity.

b. Planning. The squadron commander reconnoiters his assigned area to determine likely drop zones, landing areas, or assembly areas. Sectors are then assigned to the armored cavalry troops. As large a squadron reserve is designated as is possible. It may be centrally located or dispersed throughout a large area. The area is covered by air and ground patrols or observation posts. The squadron commander makes plans to move elements of the squadron to any threatened part of the area. If the squadron is reinforced with tanks, mechanized infantry, and Army aircraft, the commander may use these elements to constitute a ground or airmobile reserve. Ground radar is used to cover critical avenues of enemy approach during periods of reduced visibility. Elements of the air cavalry troop may be employed to screen the periphery of the squadron area, reconnoiter likely avenues of enemy approach, provide air patrols between ground OP's, provide escort for supply columns, or provide a highly mobile reserve for rapid employment in the squadron area. Elements of the air cavalry troop will reconnoiter the area at irregular intervals as long as visibility permits (fig. 98).

c. Conduct. The key to success against airborne, airmobile, or irregular force attack is rapid deployment. Immediate reaction to an attack is of such paramount importance that units are frequently committed piecemeal and maximum fires are placed on enemy forces during early phases of the landing or other activity. Movement to reinforce any engaged element must be accomplished rapidly. Ground and air scouts execute continuous reconnaissance of the squadron area to insure adequate warning of enemy activity. Helicopters and the airmobile forces are most vulnerable during the approach and landing phase. All available means will be employed to inflict maximum damage to the enemy during this period. If the enemy is successful in landing, the air cavalry troop will harass the enemy to destroy, contain, or maintain contact until ground elements arrive. The squadron commander will be kept abreast of the situation as it develops. Aeroscouts may assist in guiding ground elements to the enemy force.

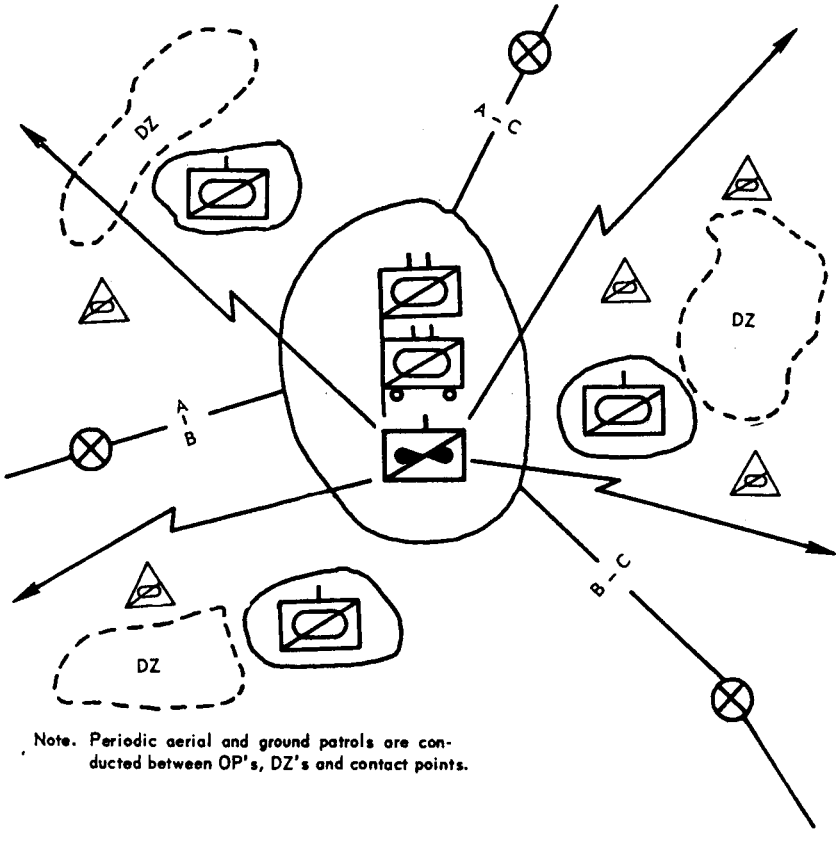


Figure 98. Armored cavalry squadron employed over large area as rear area security force for the division. Air cavalry troop reconnoiters entire area.

256. Protecting an Installation

When an armored cavalry squadron is assigned the mission of protecting an installation, the commander normally designates sectors for the armored cavalry troops, retaining at least one troop of the squadron as a reserve. The organization of the area and actions of the squadron are similar to those in all-round defense (fig. 99).

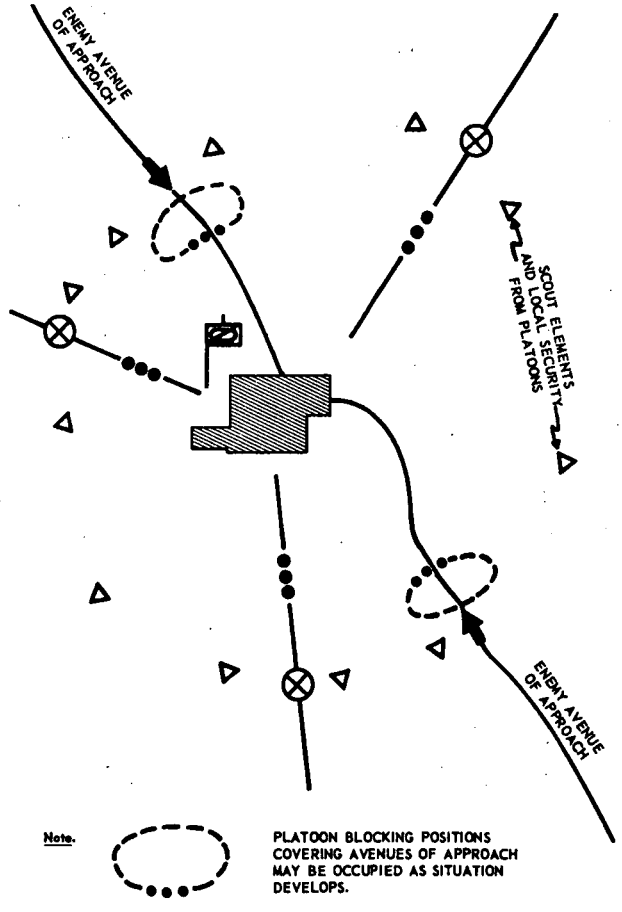


Figure 99. Armored cavalry troop protecting an installation as part of a squadron rear area security force.

CHAPTER 12

DEFENSIVE OPERATIONS

Section I. GENERAL

257. General

a. The armored cavalry squadron may be required to conduct defensive operations in performing reconnaissance, security, or economy of force missions.

b. The squadron may participate in either a mobile defense or area defense. In addition, when performing reconnaissance or security missions, the squadron may be forced to adopt an all-round defensive posture.

c. The armored cavalry squadron commander organizes and conducts the defense through application of the following basic considerations: (FM 17–1 contains a complete discussion.)

(1) Proper use of terrain.
(2) Security.
(3) Mutual support.
(4) Defense in depth.
(5) All-round defense.
(6) Flexibility.
(7) Maximum use of offensive action.
(8) Dispersion.
(9) Integration and coordination of defensive measures, including:
  (*a*) Fire planning.
  (*b*) Barrier planning.

d. When the enemy possesses a modern mechanized force, the primary consideration in the defense is the antitank plan.

258. Employment of Armored Cavalry Squadron in Defensive Operations

a. The armored cavalry squadron is best suited for employment on reconnaissance and security missions during defensive operations. The squadron is normally employed as part of a larger force. The squadron will rarely engage in an independent defensive operation, except in accomplishing a reconnaissance or security mission. In mobile defense, it may be employed as a security force or forward defense force. In area defense, it may be employed as a security force or occupy a sector of the forward defensive area.

b. When the squadron is employed as a security force, its withdrawal through the FEBA must be coordinated closely with the fixing forces or the forces in the forward defensive area. The squadron must effect coordination also with the corps covering force during its withdrawal.

c. The best use of the armored cavalry squadron in defensive actions is to provide reconnaissance and security for the larger force. The decision to use the squadron to organize blocking positions in the mobile defense or as part of the forces in the forward defensive area in area defense must receive careful consideration by the higher commander. Its employment in this manner should be considered an economy of force measure and should be undertaken only when this need is greater than reconnaissance or security requirements.

d. When halted, the armored cavalry squadron may adopt an all-round defensive posture.

259. Squadron as Division General Outpost in Defense

a. When performing a general outpost mission, the squadron is normally reinforced with tanks, mechanized infantry, artillery, and engineers. The general outpost seeks to destroy the enemy within its capability, employing all available supporting fires and its organic combat power (fig. 100).

b. Tactics employed by the squadron as a general outpost are basically the same as for a delaying action. The commander organizes his

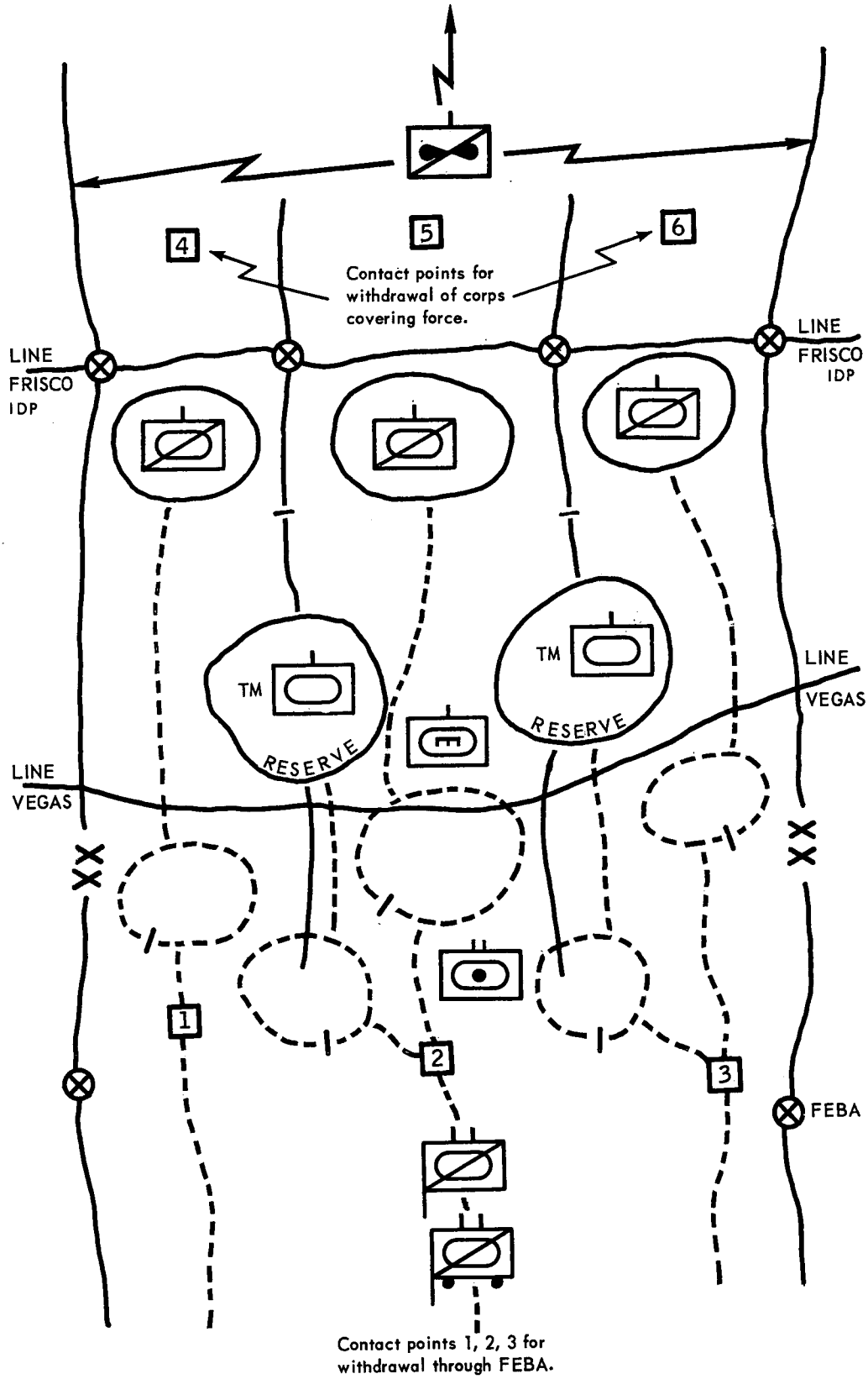


Figure 100. Armored cavalry squadron reinforced as a covering force in the defense. Armored cavalry troops and air cavalry troops screening forward of the GOP.

forces to operate on a wide front with little depth. Early development of the situation is essential and the division commander must receive information of the enemy by the most expeditious means available.

c. The air cavalry troop will greatly enhance the squadron capability to provide early warning of enemy approach. Ground surveillance radar should be used to cover major avenues of enemy approach.

d. For additional information on employing the squadron as a general outpost, see paragraphs 249 and 250.

260. Squadron as Flank Guard in Defense

a. In either an area or a mobile defense, the armored cavalry squadron may be assigned the mission of securing one flank of the division. In some situations a troop may be attached to the brigade with the less vulnerable flank of the division. The squadron, minus, is retained under division control and is employed on the most critical flank. For detailed discussion on planning and conduct of a flank guard, see paragraphs 245 and 246.

b. Flank security for forces engaged in either mobile or area defense is provided by the occupation of blocking positions located on key terrain to the flank of the main defensive positions. Blocking positions should be selected to cover the most likely avenues of enemy approach from the flanks. Intervals between the positions are covered by ground observation and air and dismounted patrols. Supporting fires should also be planned to cover these areas. The air cavalry troop may be employed to establish an air screen to the front and flanks of the blocking positions, to provide air patrols between blocking positions, and to maintain contact with the main body. Ground radar sets should be employed to supplement ground and air observation and surveillance, particularly during periods of limited visibility.

261. Economy of Force Role in the Defense

The squadron may be employed under division control to fill a gap between forces occupying dispersed defensive positions. One or more troops may be attached to a brigade occupying a defensive position for the purpose of filling a gap and maintaining contact with an adjacent unit.

262. Squadron Providing Rear Area Security in Defense

The armored cavalry squadron may be employed to provide rear area security for the division. The procedures outlined in paragraphs 253 through 256 cover the squadron in this type of operation.

263. Employment of Ground Radar Equipment

In defensive operations, the medium range ground radar set in the squadron headquarters and headquarters troop, and the short range ground radar sets in each troop are used to supplement the security efforts of the squadron. These devices are employed well forward where their effectiveness is not hindered by terrain or vegetation. They are used to monitor likely enemy avenues of approach, search key terrain, or maintain surveillance over gaps between friendly elements. During daylight, radar may be employed to supplement visual observation or to monitor a particularly dangerous avenue of approach. Their greatest value is during periods of limited visiiblity (FM 17–1).

264. Employment of Aerial Surveillance and Target Acquisition Platoon of the Division Aviation Battalion

When the aerial surveillance and target acquisition platoon of the division aviation battalion assists the armored cavalry squadron, it is used primarily on surveillance missions to detect enemy movement and to give early warning of enemy approach. During daylight hours, visual observation to the front and flanks is maintained. Enemy strengths, movements, and target locations are reported. Both day and night airphoto missions are conducted. The air radar is best employed during darkness or other periods of limited visibility.

265. Reconnaissance and Selection of Defensive Positions

The squadron commander makes as complete and detailed a reconnaissance of the area as the time and situation permit. This should include a map, ground, and air reconnaissance of the squadron sector. From these, the squadron commander determines the key terrain features and the likely enemy avenues of approach. He designates positions for the armored cavalry troops that cover likely enemy avenues of approach.

266. Organization and Preparation of Defensive Position

a. Troop blocking positions are usually organized to control key terrain features. The location of these positions depends on the importance of the terrain and the enemy approaches they dominate. Supplementary and alternate positions are selected and prepared by each troop to permit the squadron commander to withdraw his forces or shift them to other positions to prevent their capture or destruction, or to draw the enemy into an area suitable for counterattack or destruction by friendly nuclear fires. Forces occupying troop blocking positions should be mutually supporting. Any gaps between units should be covered by either ground or air observation, listening posts and patrolling.

b. The squadron commander indicates to his troop commanders a general trace of the FEBA, troop boundaries and other control measures as required, and those positions that are key to the squadron defense.

c. If the width of the sector and the terrain permit, the squadron commander disposes his force in the manner that will provide depth to the squadron sector. This is normally accomplished by placing one or more troops in depth.

d. The squadron commander must make provisions for security during the organization and preparation of the position. He may charge each troop with the responsibility for its own security, or he may assign this mission to one troop that will later be positioned in depth. The air cavalry troop will normally be employed to provide early warning of enemy approach from the front or flanks of the squadron, to protect areas between blocking positions, and to maintain contact with adjacent units.

e. The squadron headquarters will occupy the least vulnerable position within the defensive position, but must be located to facilitate control and support of all tactical units.

267. Strengthening the Position

Strengthening of a squadron defensive position includes the measures taken in preparing the position and counterattack routes. Obstacles, including mines, are located to divert or stop the enemy attack and to hold the enemy in areas covered by tank, artillery, mortar, and automatic weapons fire. The use of demolitions to destroy bridges, fell trees, and crater roads should be considered in strengthening the defensive position. Supplementary positions are prepared and strengthened to be occupied in the event of an enemy attack from another direction. Strengthening of the defensive position is continuous. FM 17–1 contains a detailed discussion of priority and preparation of defensive positions.

268. Fire Planning in Defense

a. The fire support plan provides for bringing the enemy under fire as early as possible, for increasing the fire as he nears the defensive positions, for breaking his assault, and for reducing penetrations of the defense position. Defensive fires must be planned carefully to insure that they will be effective during both daylight and darkness.

b. The squadron fire support plan includes detailed plans for coordination of artillery, mortars, tanks, automatic weapons, and tactical air. As soon as the squadron commander has selected troop positions, a fire support plan is prepared that includes long range fires, close defensive fires, final protective fires, and fires to support the attack by the reserve. The squadron commander requests artillery fires through the artillery liaison officer.

c. Fires should be planned on critical areas, such as likely avenues of approach, and on possible enemy assembly areas or attack positions, as well as on known and suspected enemy positions. A detailed discussion of fire support planning for defensive operations is contained in FM 6–20–2.

Section II. MOBILE DEFENSE

269. General

Elements of the mobile defense consist of the security force, forward defense, and reserve (FM 17–1). The armored cavalry squadron may participate as one or as part of any of these elements. The squadron is best suited for employment in the security force.

270. Squadron as General Outpost in Mobile Defense

a. When employed as a general outpost, the squadron will operate initially well to the front of the forward edge of the battle area. Once contact with the enemy force has been gained, it is maintained throughout the general outpost action. Maximum use is made of natural and artificial obstacles to impede the advance of hostile forces. For further discussion of general outpost operations in defense, refer to paragraph 275.

b. Upon completing the general outpost mission, the armored cavalry squadron may be assigned another reconnaissance or security mission. Under certain circumstances, the squadron may be directed to reinforce or occupy a strongpoint.

271. Squadron as Part of Forward Defense Force

In the mobile defense, the armored cavalry squadron may be required to organize and defend a blocking position as an economy force. This type mission is not normally assigned to the armored cavalry squadron when other resources are available. If the armored cavalry squadron is assigned this mission, the squadron commander will organize and prepare the position as discussed in paragraphs 266 through 268.

272. Squadron as Part of the Reserve

The armored cavalry squadron may be employed as part of the division reserve, usually after it has performed a general outpost mission and has withdrawn through the forward defense. The squadron may be used to perform reconnaissance and security missions for the division reserve. Operations of the reserve are similar to those of normal offensive operations. After the reserve has been committed, the armored cavalry squadron may be retained as the division reserve.

Section III. AREA DEFENSE

273. General

In the area defense, the armored cavalry squadron is most effective when assigned missions that optimize its mobility, firepower, and extensive communication system. These missions include—

(1) Security force on the general outpost.
(2) Providing security for division flank or within the division area.
(3) Acting as all or part of the reserve; however, its use as division reserve is not normal.
(4) Acting as part of the forward defense forces in an economy of force role.

274. Echelons of Defense

In area defense, the armored cavalry squadron may be employed in one or more of the echelons of defense: security force, forces in the forward defensive area, and reserve. The squadron is not normally employed with the forces in the forward defensive area except as an economy force. If employed in this role, the squadron should be assigned a sector in which the commander can best use its capabilities for defense. For details on organization of a defensive position, see paragraph 266 and FM 17–1.

275. Squadron as the General Outpost Force in Area Defense

a. The armored cavalry squadron should be reinforced by tanks, mechanized infantry, engineers, artillery, and Army aircraft. It is capable of being employed as all or part of the general outpost of a division engaged in area defense. The general outpost is controlled by the division commander or higher headquarters. The mission of the general outpost, similar to that of the covering force, is to give early warning of enemy approach, disorganize and delay his advance, and deceive him as to the exact location of the battle area and to destroy the enemy.

b. When assigned a general outpost mission, the squadron commander immediately initiates reconnaissance of the area, preferably a personal reconnaissance, supplemented by a map

or airphoto reconnaissance. He then formulates his plan, which includes security measures, disposition and frontages of subordinate units, selection of advantageous delaying positions between the initial general outpost line and the FEBA, organization and coordination of organic and supporting fires, and organization of the ground, including obstacles, means for deceiving and disorganizing the enemy, and the procedure for movement to successive positions to the rear.

c. Because of extended frontages inherent in this type of operation, intervals between units must be covered by patrolling, ground OP's, supporting fires, and elements of the air cavalry troop.

d. Squadron actions during a general outpost mission are essentially the same as for a delaying action. Unless required to delay the enemy for a specified time, the squadron begins its withdrawal to rearward positions as soon as it is apparent that a superior enemy force is deployed for attack and the general outpost is likely to become decisively engaged. The withdrawal is begun on order.

276. Squadron as Reserve in Area Defense

a. General. When the squadron is designated as the reserve, it may be employed to plan and execute counterattacks or to prepare positions to extend the depth of the battle area and to protect the rear of the higher command.

b. Location. The squadron should be positioned near a good road net that will permit rapid movement to any part of the battle area. It occupies a position that will add depth to the defensive system.

c. Counterattack Plans. When the squadron is employed in the reserve, it must be prepared to conduct counterattacks against enemy threats. Counterattacks are designed to destroy the enemy or restore the original positions by striking hostile forces in the flank or rear. Plans must be coordinated closely with adjacent units and with other forces in the forward defensive area to insure mutual support and to prevent firing into friendly positions. Each counterattack is designed to seize a specific objective. The counterattack plan normally includes an assembly area, attack position (if required), a line of departure, fire support plan, formation, direction of attack, objectives, actions on the objective, communication arrangements, rehearsals or briefing of troop commanders, and coordinating instructions. Commanders at all echelons should reconnoiter the routes to the assembly area and the area in which counterattacks are to take place and familiarize their troops with the details of the plan.

d. Conduct of Counterattacks. Counterattacks are offensive in nature and are conducted in the same manner as a coordinated attack (ch. 10 and FM 17–1).

Section IV. PERIMETER DEFENSE

277. General

The perimeter defense is a technique employed in the mobile and area defense. In this situation, units are deployed to meet an attack from any direction. The purposes of the perimeter defense are self-protection of the unit and retention of key terrain.

278. As Part of a Larger Force

When a larger force is employing a perimeter in the defense, the armored cavalry squadron may provide all or part of the security force, occupy a portion of the defensive perimeter, or participate as all or part of the reserve.

279. Squadron Employing the Perimeter Defense

The armored cavalry squadron normally operates at a relatively far distance from other elements of the division; and it must often employ the perimeter defense to protect itself while preparing for other actions (fig. 101). Usually the situation requiring establishment of a perimeter defense allows little time for detailed prior planning. Each troop on the perim-

eter is assigned a sector covering possible avenues of enemy approach. Troops organize the ground in as much detail as time permits. Planning and conduct of the defense follow the techniques previously discussed; however, emphasis must be placed on mutual support, counter-infiltration measures, and nuclear vulnerability.

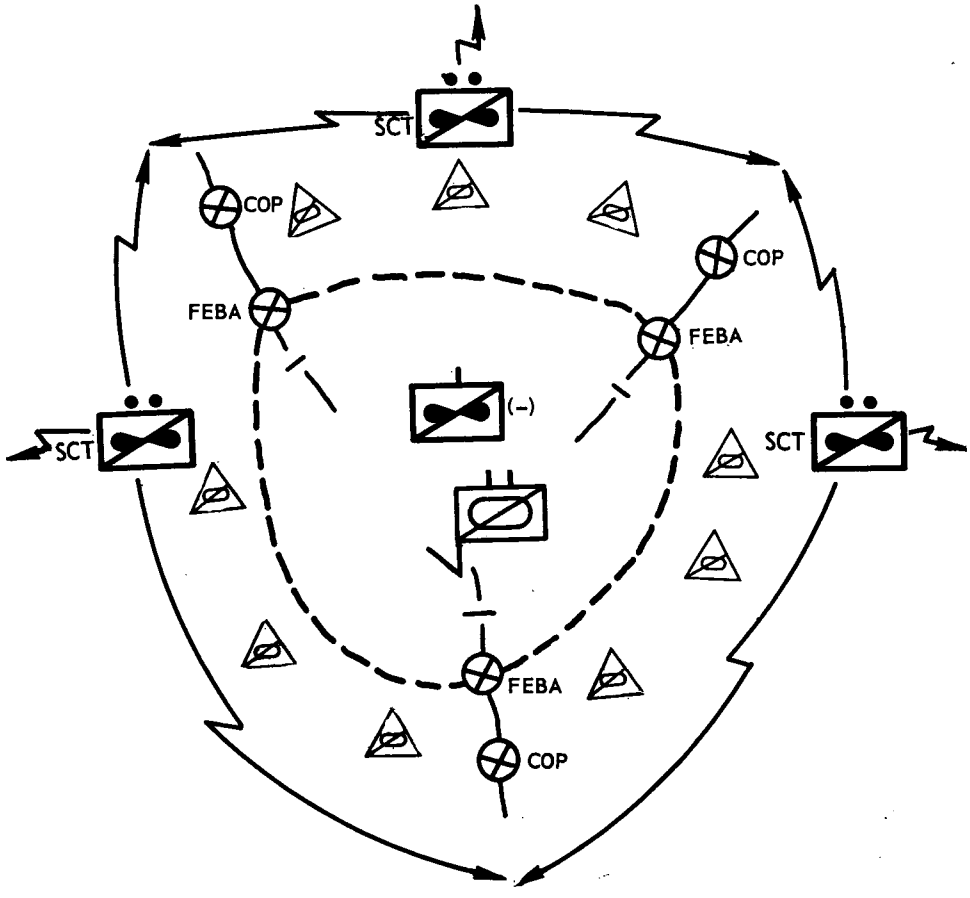


Figure 101. Armored cavalry squadron perimeter defense.

CHAPTER 13

RETROGRADE OPERATIONS

Section I. GENERAL

280. General

A retrograde operation is a planned movement of a command to the rear or away from the enemy. The armored cavalry squadron conducts retrograde operations when forced to do so by enemy action or voluntarily to obtain a tactical advantage. The armored cavalry squadron will normally conduct retrograde operations as a part of a larger force.

281. Types of Retrograde Operations

There are three types of retrograde operations: retirement, withdrawal, and delaying action. (FM 17–1 contains a detailed consideration of the types and purpose of retrograde operations.)

282. Control Measures

a. Control measures used in retrograde operations include phase lines, coordinating points, checkpoints, contact points, zones, routes, delay lines, and other measures associated with tactical marches (FM 17–1).

b. In selecting control measures, the commander should allow maximum freedom of action at the small unit level; however, missions and details of execution will be more detailed than in other operations.

Section II. DELAYING ACTION

283. General

a. The squadron, because of its mobility, is well suited for a delaying action mission. However, effectiveness is significantly increased by attachment of tanks, mechanized infantry, artillery, engineers, and Army aircraft. With such a mission, the squadron usually delays on successive positions. Delay on successive positions consists of organized resistance on an initial position and continuation of this resistance through successive delaying positions. (A discussion of the basic considerations is contained in FM 17–1.) Higher headquarters normally assigns the squadron an area for delay, the general trace of the initial delaying position, successive delay lines, the period of delay, contemplated future actions, and any limitations.

b. Delaying positions normally are not organized in great depth. They are strong in firepower, with the bulk of the force concentrated at likely avenues of enemy approach. An armored cavalry squadron conducting a delaying action is normally divided into two major echelons, the delaying force and a reserve. Troops normally do not designate reserves. The squadron commander influences the action by maneuver and supporting fires. Execution of a delaying action within assigned zones and between squadron delaying positions is decentralized to troop level. The troops normally select intermediate delaying positions between squadron delaying positions. These positions are reported to squadron. The squadron commander controls the action by assignment of troop zones and designation of squadron delaying positions.

284. Reconnaissance and Selection of Delaying Positions

Delaying positions may be designated by higher headquarters in which case intermediate delaying positions may be selected between

those specified. A reconnaissance to select delaying positions must be made as early as possible. Likely avenues of approach are located, and plans are made to deny their use to the enemy. In selecting delaying positions, the squadron commander considers the same factors as those considered in selection of any defensive position. He selects positions affording long range fields of fire with routes suitable for withdrawal and lateral movement, and establishes priorities thereon. Delaying positions are sought that incorporate the following:

a. A series of parallel ridges across the lines of hostile advance.

b. Unfordable streams, swamps, lakes, and other obstacles on the front and flanks.

c. Good observation and long range fields of fire.

d. Concealed or covered routes of withdrawal.

e. A road net or areas providing good cross-country trafficability.

285. Disposition of Forces for Delaying Action

a. The squadron commander assigns troop zones corresponding to the most likely avenues of approach available to the enemy through the squadron zone. Where possible, each avenue of approach and the terrain dominating the avenue are assigned to one troop. Each troop zone should include at least one good route of withdrawal.

b. The squadron reserve is located initially in an area from which it can block the enemy or move rapidly to reinforce the delaying forces at any threatened point, or from which it can rapidly execute a counterattack.

c. The squadron command post and combat trains are located well to the rear to avoid the necessity of frequent displacement and interference with actions of combat elements of the squadron. The command group, however, should remain well forward with the engaged elements and should be among the last to withdraw.

d. The squadron commander disposes his troops in such manner as to cover likely avenues of enemy approach into his zone. In a wide squadron zone with several good avenues of approach, all armored cavalry troops may be used on line. Whenever possible, one troop should be positioned to provide some depth. This troop differs from a reserve troop in that its primary function is to deepen the position by reinforcing the defenses of the forward troop.

286. Task Organization of an Armored Cavalry Squadron Conducting Delaying Action

Organization of the squadron for delaying action is based on the factors of METT. Troops of the squadron are normally employed intact.

287. Security in Delaying Action

a. General. During a delaying action, the enemy will make every effort to envelop and destroy the delaying force. The squadron commander must be particularly careful that the enemy does not turn his flank or surprise him in position. Continuous reconnaissance provides one of the best sources of security. Ground reconnaissance may be extended by ground radars. Close coordination between adjacent units is essential to avoid presenting an exposed flank to the enemy. Elements of the air cavalry troop may be employed to the front and flanks to provide early warning of enemy approach and to harass and delay his advance.

b. Security to the Front. If elements of the delaying force are not in contact with the enemy, action must be taken to prevent surprise of the delaying force and to provide early warning of enemy approach. Elements of the air cavalry troop will operate well to the front to provide early warning of enemy approach. Observation posts are established to the front of delaying positions during daylight. These are replaced by listening posts at night. Routes from the position to the observation posts are chosen very carefully to avoid detection by the enemy.

c. Security to the Flanks. Armored cavalry units on a delaying position must establish their own flank security by all-round observation, patrols, and contact with adjacent units. Detailed reconnaissance enables the delaying force to locate avenues of approach the enemy is likely to use in an effort to envelop the delaying force. Leading elements of any enemy force attempting to advance along such avenues must be blocked or ambushed. Elements of the air cavalry troop will reconnoiter the flanks and avenues of enemy approach into the flanks

to provide early warning of enemy approach. For additional details and discussion of control measures, combat support, employment of fires, and use of obstacles in the delaying action, see FM 17–1.

288. Organization of the Ground for Delaying Action

a. Planning considerations for the organization and occupation of a delay position are generally the same as for any defensive position. In planning for a delaying action, definite zones of responsibility are delineated. Boundaries may extend to the rear through the depth of the squadron zone and, as a minimum, must extend through the next rearward delaying position and forward to the limits of the effective range of supporting weapons or limits of observation.

b. When zones are assigned to subordinate units, each enemy avenue of approach is given in its entirety to a unit when possible. Boundaries are assigned so that terrain features that control fire and observation into a sector are assigned to the unit having responsibility for that sector. Coordinating points and contact points are designated for coordination and for continuity of the position.

c. Natural obstacles are exploited in organizing delaying positions. Artificial obstacles are also used to improve the position with the materials, time, and manpower available. Although important, obstacles alone must not be relied on to halt the enemy's progress. No terrain is impassable to a determined, resourceful, well-trained, and aggressive enemy. He will attempt to gain surprise by attacking over ground considered impassable. All obstacles, both natural and artificial, must be covered by fire to cause him maximum delay. In massing to overcome such defended obstacles, the enemy may present a profitable nuclear target.

289. Delay on Successive Positions

a. Delaying on successive positions is the type of delaying action most frequently conducted by the armored cavalry squadron. When this type of delaying action is used, all armored cavalry troops are normally committed on the squadron delaying positions.

b. Delay on successive positions envisages improvement and occupation of each natural delaying position. However, delay is inflicted not only on these successive squadron positions, but also between the positions on intermediate troop delaying positions. Terrain is never given up unnecessarily; instead, every opportunity to cause delay to the enemy is exploited, and minimum terrain is traded for maximum delay (FM 17–1 and FM 17–15).

c. The initial delaying position is organized and occupied by the armored cavalry troops. In some cases, the initial delaying position is occupied before contact is made with the advancing enemy. In such cases, elements of the air cavalry troop reconnoiter to the front to establish contact and, within their capabilities, delay the enemy advance toward the initial delaying position. Long range artillery and units in the initial delaying position take the enemy under fire at maximum range. This fire inflicts casualties on the enemy, causes his early deployment and requires him to take other time-consuming measures to close with the position.

d. Each position occupied by a troop is defended until the enemy threatens decisive engagement or envelopment. When maximum delay has been achieved and it becomes apparent that further occupation of the position will result in decisive engagement, withdrawal is initiated in accordance with prearranged plans on order of the higher commander. Each withdrawal is coordinated with adjacent units.

e. When the order to withdraw (para 291) is received, the affected unit displaces directly to the rear and occupies the next designated delaying position (fig. 102). The scouts maintain contact with the enemy between the first position and the next rearward delaying position. When the enemy is within range of the rear delaying positions, he is subjected to fire by elements occupying these positions. The commander employs all available firepower to hold the position as long as possible. When he is no longer able to hold the position without becoming decisively engaged, the withdrawal procedure is repeated.

290. Delay on Alternate Positions

a. When the squadron is operating on a narrow front, the squadron may elect to delay

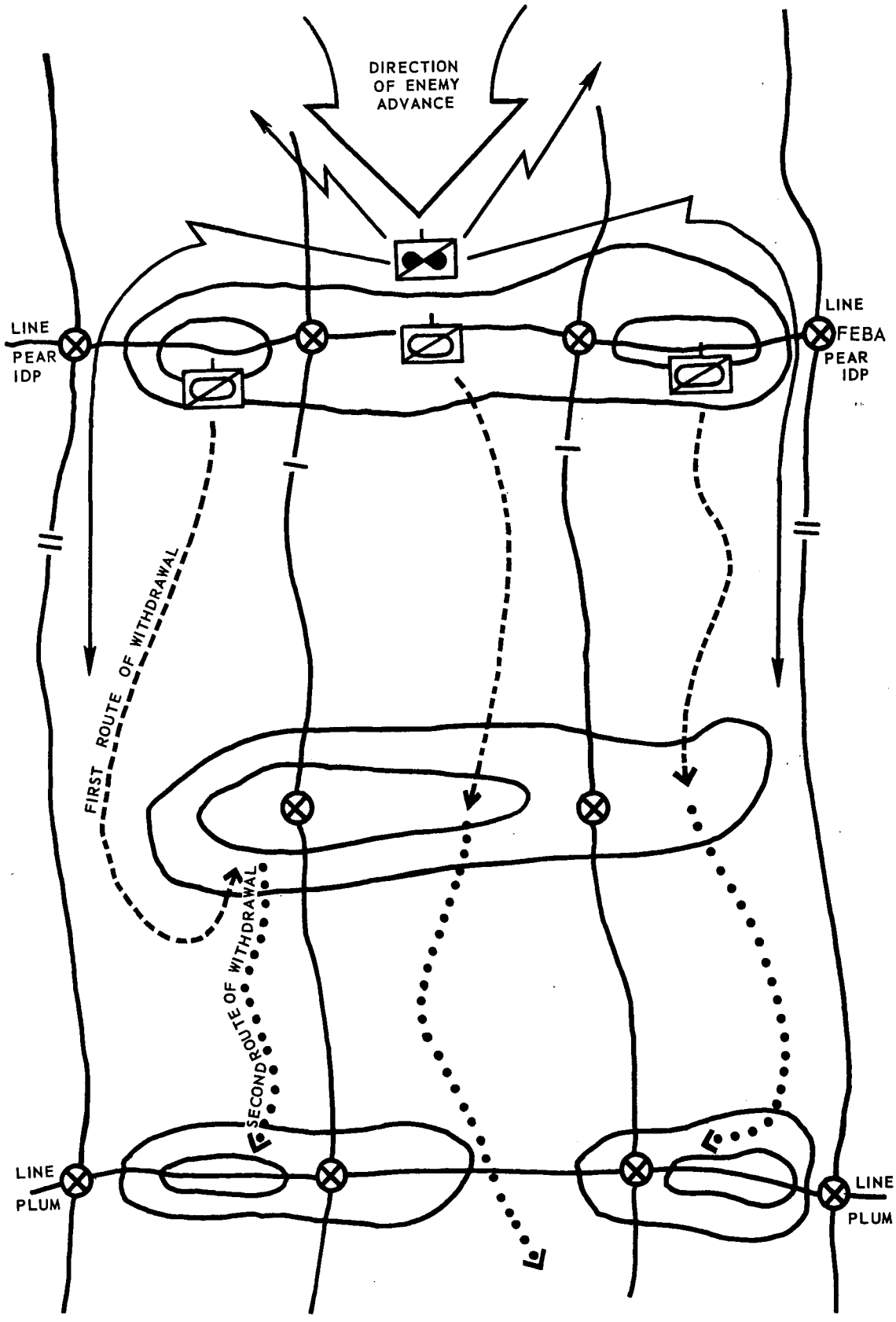


Figure 102. Armored cavalry squadron in delaying action—successive positions.

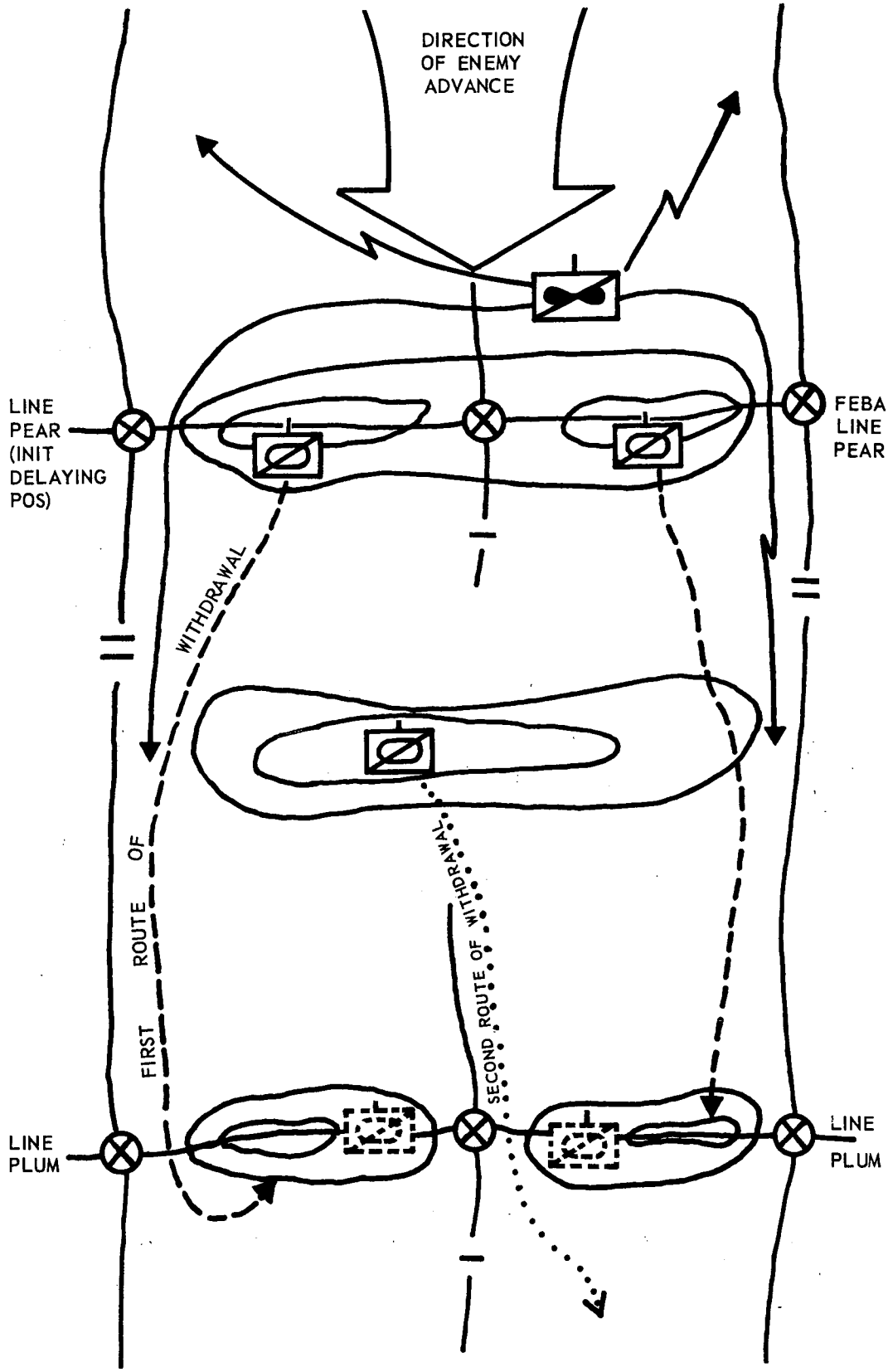


Figure 103. Armored cavalry squadron in delaying action—alternate positions.

on alternate positions. Employing this technique, the squadron is divided into two elements. The first element occupies the initial delaying position and engages the enemy. The second element occupies and improves the second delaying position.

b. Units occupying the initial delaying position delay the enemy by employing continuous delay techniques. They delay on the initial delaying position and between it and the second delaying position. When units arrive at the second delaying position, they withdraw through the units that prepared and are occupying that position. After withdrawing through the second delaying position, the units proceed to the third delaying position and begin preparing and occupying that position. Responsibility for delaying the enemy is assumed by the units on the second delaying position when the first element has withdrawn through their position. The delaying procedure is then repeated, with each element being alternately in contact and responsible for obtaining the required delay. When not in contact, each element is responsible for improving and occupying rearward positions and for providing overwatching fire for the withdrawal of the element that is in contact (fig. 103).

c. The squadron reserve, if organized, may be employed on the same type missions and in the same manner when delaying on alternate positions as when delaying on successive positions. It may also be used to assist in preparing positions.

d. Delay on alternate positions has the advantage of providing more time for the improvement of delaying positions and the performance of maintenance on equipment. It also provides troops with periods of relief from combat. However, this technique renders the squadron more vulnerable to nuclear attack because of troop density during the rearward passage of lines.

Section III. WITHDRAWAL

291. General

a. The purpose of a withdrawal is to preserve or regain freedom of action or to draw the enemy into an unfavorable situation.

b. A withdrawal is classified as either a daylight or a night withdrawal and it may be either forced or voluntary. In either case, contact is maintained with enemy forces to provide for security and deception and to prevent a rapid enemy advance. When the division is conducting a withdrawal, the armored cavalry squadron may be employed as a rear guard to provide security for the remainder of the division. An armored cavalry troop may be employed to protect the withdrawal of the squadron.

c. Orders for a withdrawal are prepared in detail and include:

(1) New location to be occupied and disposition of units within that location.
(2) Sectors or routes of withdrawal to be used by subordinate elements.
(3) Provision for security forces and other security measures.
(4) Combat deception measures.
(5) Time and priority of withdrawal by units.
(6) Traffic control measures.
(7) Provision for evacuation or destruction of excess supplies.
(8) Evacuation of casualties.

d. Plans for the withdrawal should be formulated and disseminated enough in advance to permit subordinate units to conduct a daylight reconnaissance of routes and asembly areas.

292. Night or Voluntary Withdrawal

a. Because of the advantages gained under cover of darkness, night withdrawals are preferred over daylight withdrawals. The night or voluntary withdrawal depends greatly on deception and secrecy. When these security measures are unsuccessful, nuclear attacks against enemy front line units can be used to facilitate the withdrawal. The withdrawal normally will begin shortly after dark. The hours of darkness are used to the maximum in moving to the rear, especially for the main body.

b. Armored cavalry troops in contact with the enemy designate part of their forces (approximately one-third) to remain in position and cover the withdrawal of the remainder of the squadron. These security detachments left in position seek to prevent the enemy from learning of the withdrawal. They delay and deceive the enemy and prevent interference with the withdrawal of the major elements of the command. These security detachments may remain in contact until the withdrawal is completed, or they may withdraw through another troop position established by squadron on or in front of the next delaying position. In either case, security detachments employ delaying action tactics as described in the following paragraphs.

c. Withdrawal of front line elements is executed on a broad front. Units move directly to the rear, form march columns, and proceed to the designated location. Tanks may be withdrawn by infiltration prior to the withdrawal of the main body if there is not a definite threat of enemy armor and their withdrawal will not nullify deceptive measures. Tanks that remain with the detachments left in contact withdraw with other elements of the detachments. Tanks with infrared equipment or searchlights may provide assistance to the detachments in the event of an enemy attack during the withdrawal. To facilitate the reorganization and assembly of units, squadron may designate troop assembly areas. Such areas, when used, are widely dispersed and are occupied for the minimum time.

d. When all elements of the squadron except security detachments have disengaged from the enemy and formed march columns, the withdrawal from action is considered completed. Further movement to the rear or away from the enemy is classified as a retirement. Retirements are conducted as described in paragraph 295 and in FM 17–1.

293. Daylight or Involuntary Withdrawal

a. The high degree of mobility of the armored cavalry squadron enables it to conduct successful daylight withdrawals. As daylight withdrawals are normally subject to enemy observation, success depends on speed, control, and effective employment of security forces.

b. The procedure followed in a daylight withdrawal is similar to that of a night withdrawal except that assembly areas are not required and tanks are withdrawn last. Each troop in contact with the enemy normally provides and controls its own security detachments. These detachments should be composed primarily of tanks to effect maximum delay and inflict casualties on the enemy and to minimize friendly losses. Close coordination and control between troop security forces is necessary. The security detachments cause continuous delay of the enemy by employing delaying action tactics.

c. Maximum use is made of all supporting fires, including nuclear weapons, to assist the squadron in breaking contact with the enemy and in supporting the security detachments. Smoke is used to screen movement and to reduce the accuracy of enemy fire.

d. Movement of the squadron is expedited. Assembly areas are not used; instead, troops move directly to the rear, form march columns, and continue without halting.

e. The squadron reserve, if organized, may be employed on the same type missions and in the same manner as in the delaying action. It may also be used to assist in preparation of positions.

Section IV. RETIREMENT

294. General

A retirement may be made following a withdrawal or when there is no actual contact with the enemy. When a withdrawal precedes the retirement, the retirement begins after the main forces have broken contact with the enemy and march columns have been formed (FM 17–1). For the definition of retirement refer to paragraph 122.

295. Conduct of the Retirement

a. In a retirement, the squadron is organized in a manner inverse to that employed in a movement to contact.

b. The squadron assigns definite routes and march objectives or rearward positions to each armored cavalry troop and the air cavalry troop. During the initial stage of the retirement, control may be decentralized to subordinate commanders. However, as the squadron increases the distance between itself and the enemy, the squadron commander resumes centralized control.

c. Security for the main body is provided by advance, flank and rear guard action and early warning will normally be provided by elements of the air cavalry troop. When the retirement is preceded by a withdrawal from action, an armored cavalry troop and elements of the air cavalry troop will provide a rear guard. The rear guard uses delaying action techniques to slow the advance of the enemy and prevent interference with the movement of the squadron. The squadron commander must be alert for attempts by the enemy to envelop his force. He employs elements of the air cavalry troop to obtain early information of such enemy attempts.

CHAPTER 14

SPECIAL OPERATIONS

Section I. GENERAL

296. General

This chapter is a guide for employment of armored cavalry units in special operations. It covers chemical and radiological monitoring and survey operations, area damage control operations, reconnaissance operations behind enemy lines, airmobile operations, and operations against irregular forces. Information on other types of special operations in which armored cavalry units may participate is covered in FM 17–1.

Section II. CHEMICAL AGENT DETECTION AND RADIOLOGICAL MONITORING AND SURVEY OPERATIONS

297. General

a. The armored cavalry squadron is one of the principal division level agencies that conducts chemical agent detection and radiological monitoring and survey. The air radiological monitoring and survey missions will be performed primarily by the air cavalry troop. This section discusses the conduct of these operations in general terms as applicable to armored cavalry units, and explains the terminology used to describe monitoring and survey.

b. Armored cavalry units are trained and equipped to perform chemical agent detection and radiological monitoring as a normal part of their routine activities. Survey missions will be assigned to these units as required by the situation. Helicopters of the air cavalry troop perform radiological monitoring and survey operations and should be used to facilitate the accomplishment of survey missions.

c. For additional information concerning chemical agent detection and radiological monitoring and survey operations, see FM 3–10, FM 3–12, FM 17–1, and FM 21–40.

298. Definitions

a. Radiological Monitoring: The detection and/or measurement of radioactive contamination on areas, structures, personnel, equipment and supplies.

b. Radiological Survey: The directed effort to determine the distribution and dose rates of radiation in an area.

c. Chemical Agent Detection: Actions taken to detect the presence, and give warning of toxic chemical agents by use of detector kits, detection paper, detection crayon, or alarm devices.

d. Survey Party: A survey party normally consists of a monitor and an assistant. The survey party may be mounted in a ground vehicle or Army aircraft, or dismounted as required by the type of contamination. The assistant may drive the vehicle, fly the aircraft, and operate the radio. A ground survey party may be augmented by additional persons for security or other reasons.

e. Control Party: A control party is a group of individuals that coordinates the efforts of two or more survey parties under its control and reports radiological data to the appropriate higher echelon.

f. Survey Team: A survey team consists of a control party and two or more survey parties.

299. Monitoring Operations

a. Chemical agent detection and radiological monitoring is a command responsibility performed by armored cavalry units. It is essentially a protective measure to detect and measure radiation, and to identify a chemical attack.

b. All armored cavalry and air cavalry units are equipped with radiac instruments and chemical agent detection and identification equipment. These instruments are used to perform radiological and chemical monitoring. A monitor and assistant monitor should be trained to operate the equipment authorized.

c. Monitoring activities may be conducted on a periodic or continuous basis using the ground or air method. While a unit is moving, it is normally advisable for designated persons to perform continuous monitoring to prevent movement into an area of dangerous contamination without warning. When the unit has occupied a position or an area, periodic monitoring may suffice.

d. The objective of monitoring by air is to determine the presence or absence of significant levels of radiological contamination and not to determine accurate ground dose rates unless the monitor is specifically directed to do so.

300. Survey Operations

a. When an armored cavalry unit is assigned a survey mission, the size, number and composition of the survey team is based on a consideration of the person available, equipment on hand, the size of the area to be surveyed, the road net in the area, and the specific information desired. Protection from radiation must be afforded to survey personnel. The cumulative dose of radiation acquired by a person must also be considered. No one must be permitted to exceed dosages specified by command guidance.

b. Ground survey missions are normally conducted by platoon-size units. Each armored cavalry platoon headquarters is capable of acting as a control party.

c. Survey by air is employed in areas that have radiological contamination or dose rates that would be unacceptably dangerous to ground survey parties, along lines of communication, over areas under consideration for relocation of units and installations when speed is important, and over areas of difficult accessibility to ground troops.

301. Reporting Data

a. Information obtained while conducting chemical and radiological monitoring operations should be forwarded through command channels.

b. Chemical and radiological data gathered during a survey operation is reported directly to the division chemical, biological, and radiological element (CBRE) or through command channels, depending on the type of survey being conducted.

c. When reporting radiological contamination data, the monitor will report his location by grid coordinates, the time the radiation reading is taken, and the dose rate in rad/hr. The format for monitoring reports is found in appendix III, FM 3–12.

Section III. AREA DAMAGE CONTROL (STANAG 2079)

302. General

a. Damage control operations consist of measures taken before, during, and after a mass-destruction attack or natural disaster to minimize the effects thereof. In forward areas these measures are directed primarily toward minimizing interference with combat operations and the loss of men and materiel.

b. Damage control activities are a command responsibility and the commander at each echelon is responsible for planning, training, and implementing area damage control measures.

c. Refer to FM 17–1 for additional information on area damage control operation.

303. Squadron Area Damage Control Operations

a. The armored cavalry squadron is well suited to perform area damage control operations. Frequently, the squadron, or a portion thereof, may be required to perform area damage control operations in the squadron area or in the area of another unit. If other assigned tasks do not interfere, subordinate elements of

the squadron, as organized, may be employed in performing area damage control operations. Frequently it may be necessary for the squadron to conduct area damage control operations in conjunction with combat missions. Under these circumstances, it may be necessary to organize and commit provisional area damage control units.

b. Organization of the squadron area damage control elements is usually prescribed in the squadron SOP. Type organizations that will be established are—

(1) *A control and assessment team (CAT).* This organization is the squadron command and control headquarters for conducting squadron area damage control activities.

(2) *Squadron rescue squad.* This squad will be established at squadron level. This squad will be assembled on order and attached to a control and assessment team for area damage control operations.

(3) *Troop rescue squad.* One of these squads will be established by each armored cavalry troop. This squad will be assembled on order and attached to a control and assessment team for area damage control operations.

304. Troop Area Damage Control Operations

a. The armored cavalry troop, or portions thereof, may be required to participate in area damage control operations. As stated in the squadron SOP, the troop is responsible for organizing and training individuals to perform area damage control functions. Elements of the troop, as organized or as a provisional unit, may perform these functions. A type unit employed is the troop rescue squad that normally operates under control of a designated noncommissioned officer.

b. The functions of area damage control elements furnished by the armored cavalry troop are to—

(1) Rescue and remove casualties from affected areas.
(2) Administer first aid.
(3) Evacuate vehicles and other major items of equipment from the affected area.
(4) Perform limited, hasty decontamination.
(5) Conduct radiological monitoring.

Section IV. RECONNAISSANCE BEHIND ENEMY LINES

305. General

a. On a battlefield characterized by dispersion of units and vaguely defined lines of contact, armored cavalry elements of squad, section, or platoon size must be prepared to operate behind enemy lines or intermingle with enemy forces. When these cavalry units are thus disposed as a result of deliberate planning or of being isolated by enemy action, they must capitalize on this opportunity to collect and report any information that cannot be obtained by other means.

b. This type of operation requires the utmost in aggressive and imaginative leadership by junior leaders and the ability of small armored cavalry units to operate independently.

c. These operations are not intended to compete with or replace the need for special forces or clandestine operators, but rather to exploit a valuable means of gathering information of immediate tactical value to the larger unit commander.

d. An understanding of the information contained in FM 21–75 on scouting and patrolling activities is essential to this type of operation.

306. Missions

Small armored cavalry elements operating behind enemy lines are particularly effective in accomplishing the following missions:

a. Location of targets for employment of air strikes, artillery, or nuclear fires.

b. Observation and control of air and artillery fires.

c. Damage assessment.

d. Radiological monitoring or survey.

e. Route and area reconnaissance.

f. Location and identification of enemy units and installations.

g. Surveillance over routes and enemy lines of communication.

307. Methods Employed to Get Behind Enemy Lines

Methods that may be employed by armored cavalry elements to get behind enemy lines include:

a. Foot or mounted elements infiltrating enemy units or areas.

b. Army air transport.

c. Elements left behind deliberately.

308. Employment Behind Enemy Lines

a. The armored cavalry platoon may be employed in reconnaissance operations behind enemy lines as a unit or by sections or squads. Scouts are normally employed in this type of mission, although other elements of the platoon may participate in platoon operations.

b. In most operations behind enemy lines, stealth and secrecy play an important role; consequently, vehicles may be of little or no value. Roads and populated areas should be avoided; trails and cross-country movement provide a degree of secrecy. Elements should move frequently to avoid detection by enemy communication detection devices and patrols. Such moves should be made during darkness and other periods of limited visibility.

c. Communication must be maintained so that timely reports can be transmitted to higher headquarters. Transmissions should be held to the minimum consistent with the mission. This will reduce chances of detection and the number of moves required. If organic radio equipment does not have sufficient range, special radio equipment or air relay stations must be used. The decision to employ vehicles on missions behind enemy lines will be influenced by the anticipated need for vehicular radios and mobility. Helicopters may be used to give a continuous or prearranged mobility capability to the ground element.

d. Operations of this type must be performed rapidly and efficiently. Following accomplishment of the mission, plans must be made for the immediate evacuation of the area.

e. Observation posts are normally established during daylight to observe the area designated. When required, patrols are used to supplement observation posts. At night, listening posts replace observation posts. Local security must be continual.

f. In a retrograde movement, when the bulk of the friendly forces have withdrawn from an area, selected armored cavalry elements may be left behind deliberately to gather information about the advancing enemy. The decision to leave small forces behind deliberately is normally made at division level or higher. Units isolated temporarily by enemy action may perform the same function as forces left behind deliberately.

309. Factors Affecting Employment

The factors of METT affect the employment of armored cavalry elements operating behind enemy lines. Important aspects of these factors include—

a. Time. The time available to accomplish the assigned mission.

b. Distance. The distance from the elements operating in the rear of enemy lines to friendly forces.

c. Movement. The means employed to get forces into the area and to evacuate them from the area.

d. Communication. The requirement for reliable communication equipment with sufficient range.

e. Attitude of Civilian Population. A friendly civilian population in the area will normally make the task less difficult than will a hostile population.

f. Logistical Support. The requirements for food, ammunition, and special equipment.

310. Planning for Operations Behind Enemy Lines

a. Operations behind enemy lines normally consist of three phases:

(1) Getting forces to the area.

(2) Operations in the area.

(3) Evacuation of forces from the area.

b. The plan for a mission must include the specific tasks to be accomplished, the method to be used in getting to the area (not necessary for stay-behind patrols), cover operations (deception), time allotted to accomplish the mission, communications arrangements, and plans for evacuating the unit from the area. Of the

above, the requirement for establishing and maintaining communications is the primary consideration.

c. Plans for employing Army aircraft must provide for enough aircraft to transport troops and equipment, a suitable loading area, suitable landing (unloading) zone in the area of operations, and flight routes that offer maximum concealment from enemy observation.

d. Detailed plans must be made for the recovery of elements operating behind enemy lines. If air recovery is planned, radio and visual signals may be used to contact the pickup Army aircraft. Landing sites that facilitate landing, loading, and security must be selected and troops and equipment must be ready for rapid loading and departure.

e. The squadron and troop SOP's should contain guidance for elements conducting reconnaissance operations behind enemy lines. They should establish procedures for loading Army aircraft, getting behind enemy lines, avoiding detection, maintaining communication, obtaining fire support, reporting, and accomplishing recovery.

Section V. AIRMOBILE OPERATIONS

311. General

a. Dismounted elements of the armored cavalry squadron may, in accomplishing any assigned mission, be transported by aircraft to the area of operations. Armored cavalry personnel should be well trained in terminal guidance procedures. Particularly well suited for transport by helicopters are the scout sections and rifle squads of the armored cavalry platoons. Additionally, the vehicles organic to the scout sections may be transported by aircraft to the area of operations. This capability enhances the ability of the scout sections, once landed in an area, to accomplish assigned missions.

b. In airmobile operations, aircraft are a means of transportation to armored cavalry units. Plans must include actions to be taken by troops once on the ground. Conduct of the ground phase of airmobile operations by armored cavalry units parallels that discussed previously in this manual.

c. Refer to FM 17–1 and FM 57–35 for additional information on airmobile operations.

Section VI. COUNTERINSURGENCY OPERATIONS

312. General

a. The doctrine for employment of armored cavalry in conventional offensive and defensive operations applies to counterinsurgency situations which are those military, paramilitary, political, economic, psychological, and civic action operations taken by a government to defeat a subversive insurgency. If the insurgency has escalated to include guerrilla operations, such counterinsurgency operations will include counterguerrilla operations. Specific tactics and techniques must be modified to fit the special requirements of the operational environment and the nature of the insurgent threat. Tactically, armored cavalry, in counterguerrilla operations, must take advantage of superior flexibility and mobility, particularly air mobility, to locate and eliminate an unusually elusive enemy.

b. The ultimate object against an insurgency is to eliminate the insurgency and prevent its resurgence. When the insurgency involves active guerrilla warfare, armored cavalry will normally conduct counterguerrilla operations. These operations may be conducted over vast areas and plans must insure the maximum use of armored cavalry mobility capability to control the action. This may entail the use of ground and air radio relay stations on a 24-hour basis.

c. Operations against guerrilla forces are planned according to these basic considerations:

(1) The majority of counterguerrilla operations consist of small unit actions.

(2) Counterguerrilla operations are generally offensive in nature and continuous once initiated.

(3) Counterguerrilla operations are designed to minimize the strength of the guerrillas and to exploit their weakness.

(4) The close relationship between the population and the guerrilla force may demand enforcement of stringent control measures, including relocation of entire settlements.

d. The following specific factors are considered in the commander's estimate:

(1) Motivation and loyalties of segments of the population, identification of hostile and friendly elements, vulnerability of friendly elements to coercion by terror tactics, and susceptibility to enemy and friendly propaganda.

(2) Existing policies and directives regarding status and treatment of population and guerrilla force members.

(3) Terrain and weather.

(4) Resources available to the insurgent force.

(5) Extent of the insurgency as a whole and specifically the guerrilla force operation.

(6) Size and composition of forces available for counterinsurgency operations.

(7) Communication facilities available to allow effective control of forces engaged in counterinsurgency operations.

313. Missions

Armored cavalry units are particularly suited to accomplish the following missions against guerrilla forces:

a. Installation and community security.

b. Establishments of roadblocks.

c. Search and seizure of areas.

d. Security of surface lines of communications.

e. Apprehension of insurgent force members.

f. Harassing and elimination of insurgent forces.

g. Area surveillance.

314. Tactical Operations

a. Offensive.

(1) *General.* There are five types of offensive actions peculiar to counterguerrilla operations — encirclement, raid, pursuit, ambush, and counterattack. With the exception of the ambush, these operations involve the movement of forces who must have greater mobility, greater firepower, and greater staying power than the guerrilla forces. This last is especially important; if required to move into the mountains or jungles in pursuit of guerrillas, troops must be capable of outstaying the rebels so as to destroy them when they try to infiltrate to other areas or come out for supplies. A more conventional use of armored cavalry is supporting infantry attacks against guerrillas. This role may become much more common during the latter stages of an insurrection.

(2) *Encirclement.* This most effective of all counterguerrilla operations must be accomplished with great speed, sufficient forces to close the area completely, and—especially when small forces are being used—with utmost secrecy. Surprise is essential; the least warning is enough to scatter the guerrilla forces. Normally only when a major supply base is threatened will guerrillas defend an area; and even then, if it becomes apparent they are outnumbered, they will attempt to infiltrate or attack to break out and escape. Since nearly all guerrilla groups are based in nearly inaccessible areas —coming out only for raids or ambushes—most encirclements must, by necessity, be accomplished by infantry which can march into the area or be airlifted. Even airlifted troops may not prove too successful since the noise of the helicopters serves to warn the enemy. The following pertain therefore to operations conducted in the more open areas or areas where some roads or trails permit limited vehicular movement.

(*a*) Armored cavalry possesses the mobility and speed to effect an encirclement; vehicular noise, however, may preclude surprise and necessitate dismounting part of the troops some

distance away, moving the vehicles into predesignated positions on signal after the dismounted troops are in position.

(*b*) The majority of operations of this nature which can be accomplished by armored cavalry will usually require only a troop, at most a squadron, and often only a platoon. Targets will seldom be large enough to warrant any large armored cavalry force, although there may often be cases where a larger, predominantly indigenous infantry, combined force will be used. The existing limited road net precludes parallel movement of mounted units, requiring elements to follow one another and thereby seriously hampering efforts at surprise. An armored cavalry squadron, stretched out along such roads, would be cumbersome, vulnerable, and slow.

(*c*) Provided landing areas are available, air cavalry and airmobile troops are especially potent in an encirclement since they are capable of very fast movement, can suddenly appear and interdict an area with accurate automatic weapons fire and land riflemen to flush insurgents out into killing zones. If the foliage is not too dense, armed helicopters can observe, pursue, and kill fleeing individuals. The noise of approaching helicopters is an unavoidable complication and partially detracts from the advantages of speed and surprise.

(3) *Raid.* The most important characteristics of a raid are secrecy and speed. Raids may be preplanned in detail, but often will be executed against an exposed temporary target in response to intelligence. Raiding elements must be able to move rapidly to an objective area, form, and attack simultaneously before the target disappears. Targets may be supply bases, guerrillas packing supplies, couriers meeting to exchange messages, small groups passing through an area, or a small group in hiding. The most common characterstics of all targets is that they will usually be in relatively inaccessible areas.

(*a*) Raids will usually be conducted by small, mobile elements since the target will seldom require a major force and especially since there will not be time to alert and organize a large effort.

(*b*) Armored cavalry platoons and air cavalry elements are especially suitable to this type of operation. Capable of moving at high speed and attacking promptly, and carrying sufficient riflemen to seek out hidden guerrillas and sufficient firepower to overcome any of the usual targets, these elements are better suited to this role than any other organization operating in the same terrain. The combination of sudden, simultaneous attack by ground armored troops and helicopter-borne riflemen landed under aerial suppressive fires will be successful over most guerrilla forces encountered and seriously disrupt insurgent operations.

(*c*) Major mounted raids may be conducted against known or suspected centers of guerrilla activity or supply bases when these bases are located in accessible areas. Since larger forces are used and they must usually move over extended distances, complete surprise can seldom be achieved, but some may be gained by rapidity of movement. Consequently, raiding forces of this nature require speed, heavy firepower, armor protection, and air support. While large guerrilla organizations can seldom be trapped or annihilated by a raiding force, large amounts of critical supplies and equipment may often be captured and the insurgents thrown off balance. An ideal force for such a raid is the armored cavalry squad-

ron alone, or if necessary, reinforced with infantry and artillery, and using its air cavalry troop for security along the route and for simultaneous attack on the objective.

(4) *Pursuit.* In every possible instance, fleeing guerrillas should be relentlessly pursued and killed or captured. Since dispersing guerrillas usually use preplanned routes of withdrawal, or, if pressed, simply scatter to rally later at a predesignated point, any pursuit must be undertaken immediately both on the ground and in the air. Numerous riflemen are necessary to conduct the ground pursuit; vehicles are ineffective against individuals running through brush or hiding. Air cavalry is particularly well suited to the pursuit role as long as such operations are conducted during daylight and in at least partially open terrain. Air cavalry elements can observe the movement of guerrilla forces, interdict them by fire, and land riflemen to seek out any enemy that attempts to hide. Because acclimation and familiarity with the terrain are necessary, any ground pursuit will normally be undertaken by indigenous forces. Great care must be exercised to avoid situations where pursuers become vulnerable to ambush; this is especially true when riflemen chase the enemy into deep brush or jungle.

(5) *Ambush.* During the early phases of insurgent warfare, small groups are constantly moving about the country, generally in the mountains or forests. Dismounted patrols capable of great staying power are particularly effective for ambushes under these circumstances. Even if such patrols seldom catch any enemy, their mere presence in the domain of the insurgents hampers and disrupts guerrilla movements and operations, chokes off supplies, and can eventually starve out the enemy. This role requires troops well versed in surveillance and forestcraft, tough and durable and patient. Indigenous infantry are best suited for this mission since they are used to the terrain and climate, but dismounted armored cavalry scout sections are also well organized and equipped for this mission. However, unless there are no other troops available for this role, scouts should not normally be used since their prolonged absence necessarily weakens their parent unit and reduces its effectiveness for other missions. Ambushes by large formations of troops are seldom effective, primarily because of the insurgents' superior intelligence network among the populace. It is very difficult to conceal large numbers of men or vehicles without being observed by a local native. Ambushes of this nature are of value usually only after a successful action that routs the guerrillas or drives the enemy force in a particular direction, permitting a friendly force to set up an impromptu ambush and trap the withdrawing guerrillas before they can be warned. Since insurgent tactics consistantly call for withdrawal into areas relatively inaccessible to vehicles, it is very doubtful if mounted armored cavalry could play a major role in ambushing guerrilla forces. Air cavalry can be successful in establishing impromptu ambushes with rifle squads, especially if the site can be approached circuitously to avoid warning the enemy.

(6) *Counterattack.* Counterattacks are normally conducted against a guerrilla ambush or raid by forces either under attack or from supporting elements. To be effective, the counterattacking force must be able to move swiftly to the battle area, assault the enemy in the face of a large volume of automatic weapons fire, and close with enemy forces to destroy them, drive them away from the battle area, disperse, and pursue them. As guerrilla ambushes and raids are necessarily carried out in the open populated areas or along usable routes of communica-

tions, counterattacking forces can usually expect access to the battle area. To successfully assault an enemy position, the attacker must secure a combat power advantage by proper application of firepower and maneuver. A mobile, indirect fire support capability should be available to the counterattacking force. Finally, this force must possess riflemen to pursue and close with the enemy, search the area for concealed enemy troops and dig them out of their hiding places with the bayonet. Of greatest importance, however, is minimum reaction time once the enemy is identified. A force is required that can speed to the attack site before the defenders succumb. Air cavalry and airmobile troops can fill this need; the air cavalry provides the suppressive and interdictory fires and the aerorifle squads and airmobile troops land and assault the guerrilla force, while the heavier armored forces speed to the scene. The aerial forces can then fix the enemy and the armored cavalry elements can destroy them. The air cavalry can also observe the action, interdict fleeing guerrillas and land riflemen to cut off and ambush escapees. All the required characteristics for a successful counterattack force are available in an augmented armored cavalry squadron. The most responsive use of attached helicopter transport would be to locate the helicopter unit centrally within the supported organization and to place with it the troops it would normally lift in emergency missions. Attached indigenous infantry best fill the requirement for such centrally located airmobile troops. Where response time is not critical, the helicopters can go to a designated armored cavalry unit, pick up dismounted cavalrymen, and lift them to their objective.

(7) *Supporting infantry operations in the field.* When terrain is impenetrable to ground vehicles, the restrictions to armored cavalry are obvious. When fighting is in relatively open terrain, especially during the most critical latter phases of the insurrection, armored cavalry can play a decisive role. Although at this time the guerrilla force can be expected to use certain antitank weapons such as rocket launchers and recoilless rifles, their antitank capability is limited and they are extremely vulnerable to armored attack. Armored cavalry can be used as a maneuvering element, as a direct and indirect fire support unit, or in any other role that will help the infantry complete their mission.

b. Offensive in Cities and Builtup Areas. There are two general types of builtup areas, villages and towns or cities. Villages usually consist of poorly fabricated huts clustered in a disorderly arrangement convenient to the local industry. The houses provide no cover to weapons crews, but are often used as insurgent supply caches especially for food and ammunition. This type area offers little resistance to an armored attack. On the other hand, there are many permanent structures in towns and cities —factories, major stores, warehouses, temples, schools, government facilities, etc. During the last phase of an insurrection, the insurgents must attempt to overthrow and seize governmental control and this necessitates attacks on the towns. Conversely, the insurgents may hold a town and government forces decide to attack it. Combat against insurgents in such builtup areas will be conducted in the same manner as against any hostile troops. This type of fighting is most easily accomplished by using a combination armor-infantry-air team such as the armored cavalry squadron.

c. Security Force in Cities and Villages. One of the first steps in counterinsurgency operations is to convince and show the people that the established government will and can protect them. The best persuasion is useless, however, if the insurgents can enter populated areas at will, assassinate officials, terrorize the people, and appropriate whatever supplies they need. It is necessary, therefore, to outpost villages with small powerful elements which can be promptly reinforced by highly mobile forces from the larger cities. If a village is known to

be sympathetic to the insurgents or perhaps wavering, a fairly strong force is required. An armored cavalry platoon reinforced with indigenous infantry is useful in this role, the vehicles are effective for moving quickly under fire to different parts of the village as required. The village defense is undertaken in the same way as the organization of a strong point, explained in detail in paragraphs 56 through 60. The effect of piecemealing units in this role must be carefully weighed. However, to place an armored cavalry platoon in all villages, or even just the larger ones would require far more units than could be expected to be available. Once a village is apparently pro-government, has organized a self-defense unit, and has participated in some actions against the insurgents (this last, especially, tends to bind villagers very closely to the government), the village can be outposted by an indigenous infantry element or left with only its own self-defense forces, permitting a better utilization of the regular forces. Armored cavalry units could remain in major towns, however, freeing indigenous troops for a more active counterinsurgency function. A particular advantage of using armored cavalry in this role is the availability of communications. The many radio sets organic to the armored cavalry platoon are ready to summon aid promptly and add to deterring attack. A new defensive technique for a village security force under attack is to organize a mobile striking force which, once the enemy begins its attack, breaks out of the builtup area under covering fire from a base element, moves rapidly into the concealment of the countryside, flanks the guerrilla position, and counterattacks. This technique, which is accomplished primarily by dismounted troops must be practiced until it is automatic.

d. Security of Routes of Communications. This mission involves keeping the roads, passable trails, and waterways open for traffic. Securing land routes requires constant surveillance to discover and eliminate mines, roadblocks, and ambushes. This mission is better accomplished by a combination of air and armored cavalry elements than any other type organization. Armored scout vehicles which are capable of employing their machineguns without exposing their personnel can be used to lead the ground element, followed by the rifle squad in its armored carrier, and finally an armored mortar carrier. The extensive use of herbicides to clear permanent wide swaths along roadsides will do much to eliminate ambushes since it deprives guerrillas of most of their concealment and exposes them much more readily to air observers. Guerrillas often use mines to block roads and trails in preparing ambushes. Waterways are normally assigned to the Navy; however, armored cavalry units may be given this type of mission. Armed helicopters can patrol a waterway, observing, reporting, and interdicting any enemy moving on or in the vicinity of the water route. The use of the swimming vehicles of armored cavalry units is limited in this type operation because of their slow water speed.

e. Ambush Survival. Units performing route security must not only have a high probability of surviving ambushes, but must also be able to destroy or disperse ambushing elements, inflicting great casualties on the guerrilla force at little or no loss to themselves. Since ambushes are a fundamental operation of insurgents, properly equipped armored cavalry units can use this method to turn the war of attrition back onto the insurgents. Actions are similar to standard route reconnaissance and passage through defile techniques; they employ the tactics specified for meeting engagements. They must, however, be practiced until they are automatic and must be executed with aggressiveness and violence.

f. Convoy Escort. This mission, like the preceding one, is particularly suitable for armored cavalry elements. Although major efforts may be directed to resupplying troops by air means to avoid the patent dangers of ground convoys, there will be many times when supplies are needed and aircraft are not available or are restricted by weather or simply cannot carry the load. Convoy escort therefore is a critical requirement and is a job that cannot be accomplished exclusively by aircraft. It is mandatory that escort elements be able to survive and destroy ambushes, inflicting greater casualties than those received. Normally, a platoon is sufficient for this purpose; but in the case of unusual insurgent activity, critical cargo or troop convoys, or extra long convoys, a troop or

more may be required. Long convoys will normally be broken up into march units, each with its own escort elements, and these units will be dispatched at irregular intervals. All units will remain in constant radio contact so that an attack on any part will permit prompt reinforcement. Escorts will usually be organized with armored elements at both ends of and occasionally within a march unit, but may be varied depending on existing conditions and the commander's experience. Air cavalry should be used to support the escort and serve as an advance guard and as column cover. It is imperative that good communications exist between air and ground elements. It should be noted that convoy escort duty is not necessarily limited to military convoys. Military units may often be called upon to provide protection for civilian transportation carrying goods from cities to outlying districts and vice versa. When the insurgent activities become so pronounced that they effectively curtail economic transactions, local governments are in imminent danger of collapse.

g. Reconnaissance and Surveillance.

(1) Reconnaissance, other than route reconnaissance discussed previously, will be restricted by terrain to primarily aerial and dismounted elements. Finding specific guerrilla bases or camps will be extremely difficult because of the lack of adequate intelligence. In the event information is available, however, reconnaissance should normally be made by aircraft since speed is essential. To avoid giving away operational intentions, reconnaissance aircraft should not hover over or appear to show unusual interest in any particular area. Periodic flights over suspected areas will not only accustom the enemy to such reconnaissance and tend to make him less wary when a specific objective is searched, but they will also permit continuous photographic coverage for comparative checks. Dense forests will preclude effective aerial reconnaissance in most instances, but every effort must be made to secure accurate information.

(2) Armored cavalry dismounted elements will not ordinarily conduct zone reconnaissance, but will often patrol selected areas. This area reconnaissance mission has a threefold purpose: it permits the troops to become thoroughly familiar with the trails and habitations in the local terrain; it threatens the guerrillas with the loss of supply caches and hidden cultivated food plots; and it forces the enemy to keep constantly on the move or to stay dispersed. Caution must govern the scheduling, size, and route of such patrols, however, since they are extremely vulnerable to ambush.

(3) Complex, sophisticated surveillance means are of little use in dense vegetation. Infrared or radar sensors cannot penetrate the dense forest canopy that conceals many guerrilla groups, and no means at all can differentiate between the unarmed insurgent and the loyal civilian. Photographic coverage may occasionaly reveal an area of unusual activity and can be useful in determining what trails are in constant use, but guerrillas are skilled in the art of camouflage and are rarely discovered by any surveillance means.

h. Air Troop Lift and Supply. Although these activities of the air cavalry troop are restricted generally to visual flight conditions, they are essential to an adequate overall counterguerrilla campaign. Supply drop techniques must be mastered since the drop areas will usually be quite small, and helicopters must be equipped with instrumentation to permit them to home in on drop or landing areas obscured by darkness or foliage. Medical evacuation—another role that can be performed by air cavalry in emergencies—is a critical factor in troop morale, especially for those dismounted elements operating in the jungle or deep forests where no vehicles can go.

i. Airmobile Operations. Counterguerrilla forces must be ready to respond immediately to any call for help and the fastest means available must be used. The knowledge that reinforcements and critical supplies can arrive within a matter of minutes not only raises the morale and stiffens the resistance of defending troops, but it also serves to deter guerrilla at-

tacks. Since aircraft engaged in discharging troops or cargo are particularly vulnerable to enemy fire, troops must be trained to unload and deploy rapidly, permitting the aircraft to take off promptly. As far as possible, aircraft should be stationed in the immediate proximity of the troops that they will habitually transport. This is necessary to minimize response time.

j. Air Cavalry Support of Airmobile Operations. Air cavalry supports airmobile operations by serving as escort and by supporting the actions on the objective.

(1) The purpose of air escort for the airmobile force is to insure the uninterrupted advance of the force by—

(*a*) Providing suppressive fires against enemy ground positions along the flight route.

(*b*) Guiding the airmobile force to the objective.

(*c*) Providing security to the front, flanks, and rear of the airmobile force.

(*d*) Performing pathfinder operations.

(*e*) Providing security and aerial fire support during landing of the airmobile force and during the attack and defense of the objective.

(2) When planning for an airmobile escort mission, the air cavalry troop commander must be familiar with the airmobile force commander's scheme of maneuver and fire support plan. He then follows the standard troop leading procedures. When the troop joins the airmobile force at the designated location, the troop commander will use a formation which provides security to the front, flanks, and rear of the airmobile force. The formation adopted and the distance between the air cavalry troop and the airmobile force will be determined by an analysis of the factors of METT. Elements of the troop must remain near enough to the airmobile force to engage ground enemy forces along the flight route.

(3) Based on the airmobile commander's plan, the troop may secure the landing area or provide security and air fire support during the landing of the airmobile force. If the troop mission is to secure the landing area, the aero scouts reconnoiter the landing area and the surrounding terrain and provide security for the aero rifle platoon. The aero rifle platoon lands and secures the landing area according to a prearranged plan. If the mission does not require the troop to secure the landing area for the airmobile force, the troop may be called upon to provide security and air-ground fire to support the airmobile force during its dismounted operations.

(4) After the airmobile force has landed, the air cavalry troop provides air-to-ground fires to support the ground attack and destroys enemy forces that attempt to escape.

315. Training

In addition to the areas discussed above, training for armored cavalry organizations designated for counterguerrilla operations should emphasize—

a. Tactics and techniques, to include supporting weapons, used by these units in both mounted and dismounted roles in anticipated operational environments; i.e., builtup areas, mountains, jungles, swamps, and deserts.

b. Deep patrol operations under primitive conditions and using only man-packed equipment and supplies. This will include survival techniques.

c. Immediate reaction to unexpected combat situations, especially ambushes. Great emphasis must be placed on drilling in predetermined plans in case of ambush or attack and these must be rehearsed until every single man responds instantly and reacts automatically without orders.

d. Operations with Army aviation, to include techniques of airmobile assault, landing and unloading techniques, use of aerial fire support and techniques of command control using aircraft.

e. Aerial supply to include drop zone marking and materiel recovery techniques.

f. Cross-country movement at night and under adverse weather conditions to include tracking and land navigation.

g. Police type search and seizure techniques, counterintelligence and interrogation measures.

h. Guard duty, police-type patrolling and control of civilians, to include operation of roadblocks and checkpoints, riot control and civil disturbances, to include employment of irritant chemical agents.

i. Convoy escort and security to include the use of air cavalry.

j. Advanced first aid.

k. Orientation on the nature of the motivations and objectives of the guerrilla forces and on the need for U.S. forces to engage in such operations.

PART FIVE
AIRBORNE DIVISION ARMORED CAVALRY SQUADRON

CHAPTER 15
GENERAL

Section I. GENERAL

316. General

a. Part Five is a guide to armor doctrine in the employment of the airborne division armored cavalry squadrons.

b. All divisional armored cavalry squadrons are capable of participating in airlanded operations. Therefore, unless otherwise indicated, the following guidance is applicable also to the employment of the infantry division armored cavalry squadron.

317. Missions and Capabilities

a. Mission. The mission of the airborne division cavalry squadron is to perform reconnaissance and provide security for the airborne division and to engage in offensive, defensive, and delaying action as an economy of force unit.

b. Capabilities.

(1) When equipped with the armored reconnaissance/airborne assault vehicle (AR/AAV), the squadron will have the same general capabilities as the armored cavalry squadron of the armored, infantry, and mechanized divisions (para 187–189). In considering these capabilities, it must be recognized that the airborne division armored cavalry squadron has only *two* armored cavalry troops as compared to three ground troops in other divisional squadrons.

(2) The capabilities referred to above are limited by the lack of full-track, armor-protected combat vehicles when the 106-mm recoilless rifle and wheeled vehicles are used in lieu of the AR/AAV.

Section II. ORGANIZATION

318. Organization

a. The airborne division armored cavalry squadron is organized generally the same as the armored, infantry and mechanized division armored cavalry squadrons (fig. 104). *Significant* differences are as follows:

(1) The squadron is organized with only two armored cavalry troops, as opposed to three in the other divisons.

(2) The squadron headquarters and armored cavalry troops are equipped with 106-mm recoilless rifles (or AR/AAV) instead of light-gun tanks.

(3) All armored personnel carriers have been replaced by appropriate wheeled vehicles.

b. The armored cavalry platoon and troop, the air cavalry troop, and the headquarters and headquarters troop are organized essentially the same as the corresponding troop discussed in chapters 3, 6, and 8, respectively. All sections and key persons have the same functions and responsibilities; therefore, a separate discussion is not included here.

Section III. COMBAT SUPPORT

319. General

The armored cavalry squadron may operate with or without attachments. Combat support may be provided by artillery, engineers, Army aircraft, and tactical air. Tanks and airborne infantry may be attached to the squadron for a specific mission. When the squadron is operating beyond the range of artillery units supporting the command, artillery may be attached to the squadron. When the squadron is providing the reconnaissance and security force beyond the combat outpost (COP), the squadron should receive priority of artillery and tactical air support. For detailed discussion of combat support, refer to paragraphs 200 through 205, and FM 17–1.

Section IV. ORGANIZATION FOR COMBAT

320. General

a. The squadron commander determines the best organization for combat after a careful analysis of the factors of METT. The availability and type of aircraft, distance to the objective area, and the number and proximity of available drop zones (DZ) and landing zones (LZ) will have direct impact on the commander's plan.

b. The squadron will normally be employed as a unit under division control. In some situations the squadron, or elements of the squadron, may be attached to a brigade for a specific operation.

c. The squadron commander normally employs the squadron without change in organization. The commander may temporarily reorganize one or more armored cavalry troops to form provisional platoons or troops for a specific mission. The air cavalry troop is normally employed intact; however, elements of the troop may be cross-attached with armored cavalry troops for a specific mission.

d. In organizing for combat to participate in an airborne assault, the squadron will normally be organized into assault, followup, and rear echelons. FM 57–10 and the unit SOP are further guides.

(1) The assault echelon is composed of forces required to accomplish the squadron reconnaissance and security missions. The assault echelon will include the squadron reserve and supporting or attached troops. The squadron assault echelon consists of the armored cavalry troops; the air cavalry troop; and necessary command and control, combat support, and logistical elements from the headquarters and headquarters troop.

(2) The followup echelon is the part of the squadron (less rear echelon) that is not brought into the objective area in the assault echelon. It will normally enter the objective area as soon as practicable by air or surface movement, or by a combination of these methods. Depending on the means of transportation used, the followup echelon will consist of additional vehicles and equipment of units in the assault echelon. This may include combat, combat support, and logistical support elements not required in the squadron assault echelon.

(3) The rear echelon is that part of the squadron that is left in the departure area to perform personnel and logistical functions not required in the objective area. It will include also those elements whose functions can be performed more efficiently in the departure area. Based on requirements for each operation, administrative and mess personnel and elements of the support platoon and maintenance platoon may be left in the marshaling area.

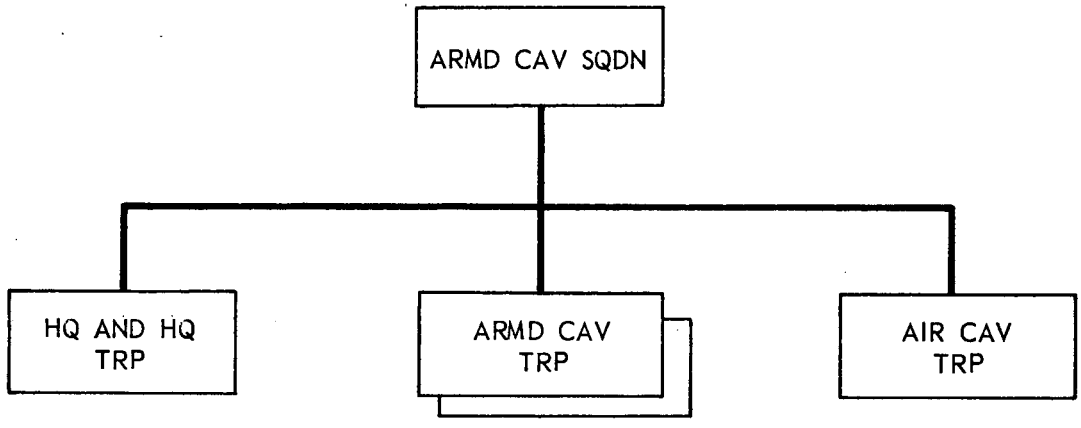


Figure 104. Organization, armored cavalry squadron, airborne division.

CHAPTER 16

AIRBORNE ASSAULT

Section I. GENERAL

321. General

a. This chapter contains guidance for employment of the airborne division armored cavalry squadron in the airborne assault and withdrawal by air.

b. The airborne division armored cavalry squadron is trained and equipped to enter the objective area by air transportation, to take part in either joint airborne operations or airmobile operations. All its equipment is air transportable in Air Force medium transport aricraft and, with the exception of organic aircraft, can be delivered by parachute. The air cavalry troop will fly directly to the objective area if it is within the operational range of its helicopters.

c. Airborne operations require detailed planning at all levels and close and continuous coordination with troop carrier units. To insure coordination, the squadron commander participates in planning the operation with the commander of the division or the force to which the squadron is attached. The plan of operation is developed using the backward planning sequence, beginning with the ground tactical plan, landing plan, air movement plan, and mashaling plan, in that order. Although planning follows this sequence, all plans are interrelated closely and often developed concurrently. The time available for preparing an airborne operation may vary from a few hours to several days. The plan of operation is discussed in greater detail in FM 57–10.

d. The squadron must maintain a maximum state of readiness to participate in airborne operations on short notice. The commander will insure that up-to-date SOP loading tables are available and conduct frequent readiness inspections and training exercises.

e. TM 57–210 contains an explanation of loading forms and procedures in use of Air Force transport aircraft. Airmobile operations using Army aircraft are discussed in FM 57–35.

Section II. PREPARATION FOR AIRBORNE ASSAULT

322. Division Plans and Orders

a. The squadron commander usually receives a warning order early in the planning phase to permit the squadron to prepare for the operation concurrently with the development of detailed plans. In addition to information normally included in a warning order for an attack, the warning order may contain special security measures, information of the number and types of aircraft allocated to the squadron, equipment to be delivered with the assault echelon, instructions on preparation of equipment for air delivery, and any required changes to SOP loading plans. The need for security may require that most of the information concerning the operation be withheld until the marshaling phase begins.

b. If the squadron is operating under division control, the division order gives the squadron its general mission, designates supporting and attached elements, and assigns specific routes and areas to be reconnoitered and secured or objectives to be seized. When the squadron or troops are attached to a brigade, the brigade will issue appropriate orders. Plans and orders the squadron will receive include, as applicable in varying situations:

(1) The squadron mission.
(2) Approximate time and duration of the operation.
(3) Necessary intelligence.
(4) The location of drop zones, landing zones, or landing sites for elements of the squadron.
(5) Fires available from other agencies, including nuclear fires.
(6) The plan for reorganization after landing, including the use of assembly aids, collection of stragglers, reporting, and security.
(7) Data on the air movement, including location of loading areas, allocation of aircraft, composition of air serials, and the time for loading, takeoff, and arrival at the objective area.
(8) Data on marshaling, which normally is issued as an annex to the administrative plan. If lengthy and detailed, these may be issued in a separate order.
(9) Plans for defense of the airhead after seizure of initial objectives.
(10) Plans for linkup with surface forces.
(11) Details of air-sea rescue.
(12) Details of time and place of arrival and employment of the followup echelon.
(13) Organization of, and instructions to, the rear echelon.
(14) Logistical information and instructions including recovery of supplies and special measures for air supply and evacuation.
(15) Signal communication instructions.
(16) Alternate plans for accomplishing the mission.
(17) Arrangements for postponing, canceling, or changing to alternate plans.
(18) Plans for subsequent operations.

c. For further guidance refer to FM 57–10.

323. Reconnaissance

If an air reconnaissance is not possible, the squadron commander's reconnaissance consists of a study of maps, terrain models, and air photographs of the objective area. Other information of the terrain and enemy may be available from higher headquarters. The following specific items of information are important in formulating a ground tactical plan and landing and reorganization plans:

a. Nature of landing zones, drop zones, and landing sites.

b. Presence of antiairborne obstacles.

c. Nature of assembly areas.

d. Location of key terrain held by the enemy in or near the squadron's area of operations.

324. Ground Tactical Plan

a. The ground tactical plan should be simple and sufficiently flexible to meet contingency situations. Alternate plans are prepared. The plan may include:

(1) Selection of objectives and routes of advance to the objective.
(2) Distribution of forces.
(3) Boundaries and task organization.
(4) Combat outpost (COP), if applicable.
(5) Scheme of maneuver.
(6) Drop and landing zones.
(7) Assembly.
(8) Regaining command.
(9) Timing of operation.

b. Techniques and tactics employed after delivery of the squadron in the objective area are similar to normal reconnaissance and security operations. However, modification of the ground tactical plan may result from the following factors peculiar to airborne or airlanded assault:

(1) The possibility of becoming engaged immediately upon landing and before assembly of units and parachute-delivered equipment.
(2) The squadron may be required to fight before mortar and artillery support is available.
(3) Greater separation of troops resulting in more exposed flanks.
(4) Limitations on available ammunition and other supplies.
(5) Loss of squadron combat power as the result of inaccurate air delivery or loss of aircraft.

c. The plan for employment of the squadron must capitalize on surprise achieved by the as-

sault landing. It must provide for rapid movement from the landing zone directly to assigned sectors or objectives. If the situation requires the squadron to use landing zones within the airhead, and the squadron is to be employed outside the airhead, the location of landing zones should facilitate movement to the squadron and troop objectives. When the enemy situation and terrain permit, drop zones should be outside the division airhead and immediately adjacent to the objective. Elements of the squadron will normally bypass light enemy resistance encountered en route to assigned sectors or objectives. Upon reaching assigned sectors, elements of the squadron will begin aggressive ground and air patrolling to provide early warning of enemy approach. Within their capabilities, the squadron will harass and delay the enemy and cause him to mass for possible employment of tactical air and nuclear weapons.

d. When the operation contains a defensive phase, the squadron will normally perform reconnaissance and security missions forward of the COP. The squadron will normally be extended over broad areas. The ground and air mobility of the squadron must be used to full advantage in conducting defensive or delaying actions. The air cavalry troop may be employed as a screen to the front of the squadron blocking positions to provide warning of enemy approach. Ground surveillance radar should be employed on primary avenues of enemy armor approach.

e. During reconnaissance and security missions forward of the COP, the squadron may be in position to link up with the ground link up force. The squadron commander must insure that all members of the squadron are familiar with linkup procedures. FM 7–20 and FM 17–1 outline detailed guidance and procedures.

325. Landing Plan

a. The landing plan is prepared to support the scheme of maneuver. The plan contains the sequence, time and place of arrival of troops, and materiel in the objective area. Drop zones or landing zones to be used by the squadron or its elements are normally specified by the higher command. The squadron commander should assist in selecting these locations to facilitate accomplishment of the ground plan. FM 57–10 and FM 57–35 contain details on discussion of the landing plan.

b. The squadron may employ organic pathfinder troops and equipment to aid in rapid assembly of the squadron. Use of these devices must be cleared with division.

326. Air Movement Plan

The air movement plan is based on and supports the landing plan and the ground plan. It consists of the flight route diagram (prepared by troop carrier or Army aviation), the air movement table (prepared jointly), the loading plan (prepared by the squadron), and similar documents prepared unilaterally or jointly, but all having to do with the air movement phase. Information on preparation of loading tables, flight manifest, and other related plans may be found in FM 57–10, FM 57–35, and TM 57–210.

327. Marshaling

Marshaling is the process embracing final preparation for combat, move to departure airfields, and load for takeoff. This phase of the operation begins when the squadron is sealed in the mashaling area and terminates upon takeoff. For contents and discussion of the mashaling plan, refer to FM 57–10 and FM 57–35.

328. Logistical Considerations

Sufficient supplies and equipment accompany the squadron into the objective area to meet requirements until they can be supplied by air or until division can supply them by ground means. Limited class III and V supplies may be drawn from division distribution points established in the airhead. For administrative planning and procedures, refer to FM 17–1 and FM 57–10.

Section III. CONDUCT OF ASSAULT PHASE

329. Landing

When the squadron is to be committed immediately after landing, the squadron, or parts thereof, may be delivered within or outside the division airhead in the method best suited for accomplishing the mission. Landing on or near the positions to be occupied is desirable when they are undefended; however, when they are defended, the problems of reorganization and control are increased. Similarly, strong consideration should be given to landing on a defended objective in that the elements of surprise and confusion of the enemy may outweigh the problems of reorganization and control.

330. Assembly and Reorganization

a. Assembly and reorganization during the initial assault are critical periods because of the vulnerability of the unit to enemy attack. These operations are executed with maximum speed and precision. When necessary, security is sacrificed for speed and control.

b. When the troops land directly on or immediately adjacent to their initial objectives, assembly areas are not normally used. In this type of assault, platoons and/or troops reorganize immediately and proceed to their objectives.

c. When an assembly area is designated individuals move directly to it. Movement is not halted to permit assembly of units on the drop zone or landing zone. This does not preclude attempts to assemble units while moving to the designated assembly area. In parachute operations, those designated to recover supplies and equipment do so immediately and move to the designated assembly area. Radios are put into operation without delay.

d. If elements of the squadron are engaged by the enemy on the drop zone or landing zone, individuals return fire immediately. Leaders assume control of groups of individuals, regardless of unit, and attempt to eliminate the enemy force by small unit action. Aggressiveness is necessary in regaining control of individuals and in attacking the enemy force.

e. Assembly aids are used as planned. If enemy action requires, aids are set up to direct individuals to an alternate assembly area. Guides near the entrance to the assembly area direct individuals to their respective unit areas. Security is posted as planned.

f. Communication is established with division and within the squadron. Subordinate leaders keep the commander informed of the status of their units during assembly and reorganization.

g. If elements of the squadron land in the wrong area, they are assembled under the senior officer or noncommissioned officer present. If possible, he immediately establishes communication with the appropriate commander and requests instructions. Lacking orders, the group directs its effort toward accomplishing the general mission. Individual stragglers join the nearest unit and then rejoin their own units when the situation permits.

331. Execution of Mission

Upon completing assembly and reorganization, elements of the squadron immediately move out on their assigned missions. When assigned the mission of reconnaissance and security beyond the COP, the squadron may engage in offensive, defensive, or delaying action. Blocking positions and observation posts are established and extensive patrolling is initiated. The air cavalry troop patrols major avenues of enemy approach aggressively with priority of effort to reported or suspected enemy armor locations.

332. Squadron Command Post

a. During the assault phase, the squadron command post will facilitate control and support of all elements of the squadron. The headquarters and headquarters troop may remain in the division airhead or occupy a position near a troop to take advantage of the protection afforded by the troop.

b. The squadron commander will position himself to facilitate control of the squadron. He may operate from his command vehicle, or, if available, from a helicopter.

333. Operations Following the Assault Phase

When the assault phase is followed by a defense of the airhead, the squadron will continue

to perform reconnaissance and security missions to provide early warning for the division. It may be employed to effect contact with advancing friendly forces or, if driven within the airhead by enemy action, it may be used to perform the following missions:

a. Occupy a sector of the airhead.

b. Provide all or part of the division reserve.

c. Secure the interior of the airhead against enemy airmobile, guerrilla, and infiltrated forces.

Section IV. WITHDRAWAL BY AIR

334. General

When the squadron is used on short-duration operations, plans will frequently entail a withdrawal by air. These plans are developed concurrently with other plans and include provisions for seizure of existing airfields or other areas to facilitate relift of the squadron. In addition, the squadron may conduct a withdrawal by air as the result of a change in plans or enemy action. For a detailed discussion of withdrawal by air, refer to FM 57–10.

Section V. PATHFINDER OPERATIONS

335. General

The armored cavalry squadron is capable of providing terminal guidance and pathfinder specialists for unilateral airmobile operations. Pathfinder equipment is organic to the squadron supply section, headquarters and headquarters troop. There is no formal pathfinder organization or team in the squadron. One or several members of the squadron will be trained for pathfinder operations and to maintain pathfinder equipment.

336. Capabilities and Limitations

a. Capabilities. The armored cavalry squadron has the capability to—

(1) Furnish aircraft guidance for Army aircraft including:

(*a*) Reconnoitering for, selecting, and operating air delivery or airlanding facilities.

(*b*) Provide ground-to-air voice radio communication.

(*c*) Provide aviators with limited information concerning the enemy, wind condition, field elevation, and other information as requested; and giving landing and takeoff instructions.

(2) Remove small obstacles or hazards to landing operations.

b. Limitations.

(1) Squadron pathfinders will perform Army aircraft guidance as a normal function in addition to their other combat, training, or administrative duties.

(2) Squadron pathfinders are not organized as TOE teams; however, they must be given enough individual and team pathfinder training to permit them to operate efficiently with other pathfinders on Army aircraft guidance missions. For training and employment of unit pathfinders, refer to FM 57–38.

CHAPTER 17

EMPLOYMENT OF THE AIRBORNE DIVISION ARMORED CAVALRY SQUADRON

337. General

a. Employment of the airborne division armored cavalry squadron is similar to that of other divisional squadrons. The primary difference is the method of introducing the squadron into the objective area. When the airborne assault phase is completed, the tactics and techniques employed by the squadron are identical to normal operations regardless of the type mission being performed. The squadron will normally be employed on reconnaissance and security missions in support of the division operation.

b. The air cavalry troop is well suited for reconnaissance and security operations during airborne landings. The unique capabilities of the troop will permit it to conduct long range armed aerial reconnaissance of avenues of enemy approach to provide early warning and time and space for both the squadron and division to react to an enemy threat. The antitank capability of the troop will be used to the maximum against enemy armor threats. When the airhead is within operational range of the air cavalry troop, the troop may be employed to secure the squadron drop zone by arriving just before the air delivery of the squadron.

338. Reconnaissance Operations

a. The squadron may be employed to conduct route, zone, or area reconnaissance in support of the division. These missions will be conducted during an airborne operation or when the division is committed in a straight infantry role. The planning and conduct of reconnaissance missions are discussed in chapters 4, 5, 7, and 9.

b. The squadron may conduct an area reconnaissance of part or all of the division airhead. A route or zone reconnaissance may be conducted out to blocking positions beyond the COP to determine the presence or absence of enemy forces and to gain information of the area of operations. Normally, a modified route and zone reconnaissance will be conducted out to the blocking positions. The primary purpose will be to detect the presence of enemy forces and, at the same time, use the road or roads to facilitate movement to the blocking positions and, if desired, to determine the suitability of the route for future division operations.

339. Offensive Operations

The squadron will conduct offensive action to accomplish assigned reconnaissance and security missions. In some situations, the squadron may be assigned assault objectives and the responsibility for a part of the forward defensive area. If required, offensive action will be employed to reach assigned blocking positions beyond the COP. When employed as a part of the division reserve, the squadron will conduct offensive action as required. Chapters 4, 5, 7, and 10 contain further guidance on offensive actions.

340. Security Operations

Security is one of the principal missions assigned to the squadron during airborne operations (fig. 105). Elements of the squadron will operate well beyond the COP to provide the division early warning of enemy approach and sufficient time and space to react to an enemy threat. The squadron will employ defensive, offensive, and delaying tactics as required to accomplish the security mission. Security will normally be provided around the entire periphery of the airhead. The squadron may also perform advance guard, covering force, or rear guard during breakout from the airhead, and interior security of the airhead against airmobile, guerrilla, or infiltrated forces. For guidance on planning and conducting security operations, refer to chapter 4, 5, 7, and 11.

341. Defensive Operations

The squadron will employ defensive tactics when assigned a defensive sector of the FEBA or to hold a blocking position beyond the COP. The squadron is least suited for a defensive role and can best be employed as a reconnaissance and security force during division defensive operations. Chapters 4, 5, 7, and 12, and FM 17–1 contain further guidance on defensive operations.

342. Retrograde Operations

The squadron will conduct retrograde operations as required to accomplish assigned missions. The squadron will conduct delaying action when providing security beyond the airhead line or when performing covering force or rear guard actions during breakout from the division airhead. The squadron may be required to conduct a delaying action when defending a part of the airhead line. Chapters 4, 5, 7, and 13 include further guidance on retrograde operations.

343. Special Operations

Refer to chapter 14.

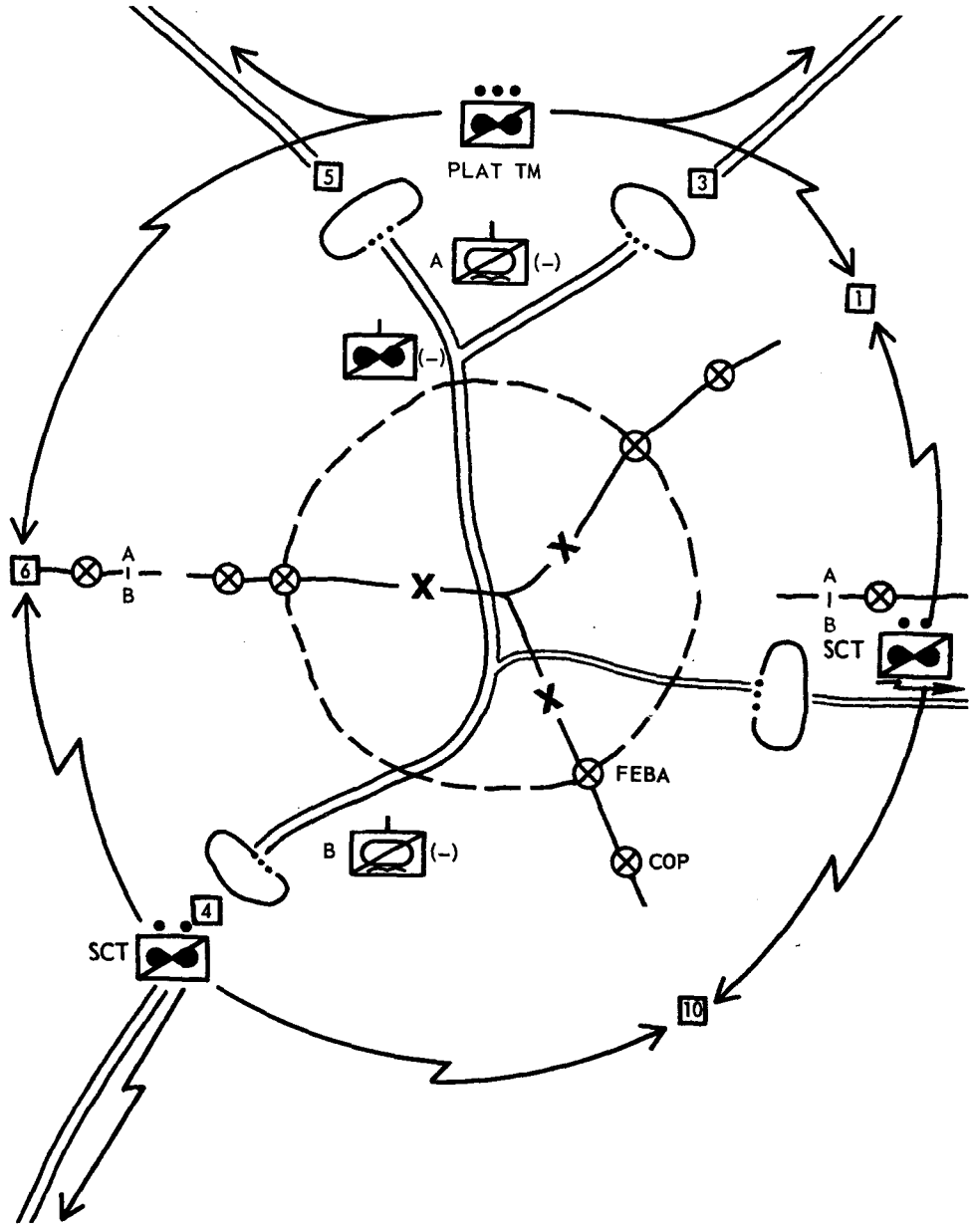


Figure 105. Airborne division armored cavalry squadron employed as a security force for a division airhead.

APPENDIX I

REFERENCES

FM 1–5	Army Aviation Organization and Equipment.
FM 1–10	Army Aviation Organizational Aircraft Maintenance and Supply.
FM 1–15	Aviation Battalion.
FM 1–60	Army Aviation Air Traffic Operations—Tactical.
FM 1–80	Aerial Observer Training.
FM 1–100	Army Aviation.
FM 3–5	Chemical, Biological, and Radiological (CRB) Operations.
FM 3–10	Chemical and Biological Weapons Employment.
FM 3–12	Operational Aspects of Radiological Defense.
FM 3–50	Chemical Smoke Generator Units and Smoke Operations.
FM 5–15	Field Fortifications.
FM 5–20	Camouflage, Basic Principles and Field Camouflage.
FM 5–25	Explosives and Demolitions.
FM 5–34	Engineer Field Data.
FM 5–36	Route Reconnaissance and Classification.
FM 5–135	Engineer Battalion, Armored, Mechanized, and Infantry Divisions.
FM 5–136	Engineer Battalion, Airborne Division.
FM 6–20–1	Field Artillery Tactics.
FM 6–20–2	Field Artillery Techniques.
FM 6–121	Field Artillery Target Acquisition.
FM 6–135	Adjustment of Artillery Fire by the Combat Soldier.
FM 7–11	Rifle Company, Infantry, Airborne Infantry, and Mechanized Infantry.
FM 7–15	Infantry, Airborne Infantry, and Mechanized Infantry Rifle Platoons and Squads.
FM 7–20	Infantry, Airborne Infantry, and Mechanized Infantry.
FM 7–30	Infantry, Airborne Infantry, and Mechanized Division Brigades.
FM 8–15	Division Medical Service, Infantry, Airborne, Mechanized and Armored Divisions.
FM 8–35	Transportation of the Sick and Wounded.
FM 8–55	Army Medical Service Planning Guide.
FM 9–1	Ordnance Service in the Field.
FM 9–5	Ordnance Ammunition Service.
FM 9–30	Maintenance Battalion, Division Support Command.
FM 10–8	Air Delivery of Supplies and Equipment in the Field.
FM 10–50	Supply and Transport Battalion, Division Support Command.
FM 10–63	Handling of Deceased Personnel in Theaters of Operations.
FM 11–50	Signal Battalion, Armored Infantry, and Infantry Mechanized Divisions.
FM 11–57	Signal Battalion, Airborne Division.
FM 12–11	Administration Company, Infantry, Airborne, Mechanized and Armored Divisions.
FM 14–8	Class A Agent Officers.
FM 17–1	Armor Operations.

FM 17–15	Tank Units, Platoon, Company, and Battalion.
FM 17–30	The Armored Division Brigade.
FM 17–80	Tanks, 76mm Gun, M41 and M41A1.
FM 17–95	The Armored Cavalry Regiment.
FM 19–2	Military Police Support in the Field Army.
FM 19–15	Civil Disturbances and Disasters.
FM 19–40	Enemy Prisoners of War and Civilian Internees.
FM 20–32	Land Mine Warfare.
FM 20–60	Battlefield Illumination.
FM 21–5	Military Training.
FM 21–6	Techniques of Military Instruction.
FM 21–10	Military Sanitation.
FM 21–11	First Aid for Soldiers.
FM 21–26	Map Reading.
FM 21–30	Military Symbols.
FM 21–40	Small Unit Procedures in Chemical, Biological, and Radiological (CBR) Operations.
FM 21–41	Soldier's Handbook for Chemical and Biological Operations and Nuclear Warfare.
FM 21–48	Chemical, Biological, and Radiological (CBR) and Nuclear Defense Training Exercises.
FM 21–50	Ranger Training.
FM 21–60	Visual Signals.
FM 21–75	Combat Training of the Individual Soldier and Patrolling.
FM 21–77	Evasion and Escape.
FM 21–150	Combatives.
FM 22–5	Drill and Ceremonies.
FM 22–100	Military Leadership.
FM 23–8	U.S. Rifle 7.62-mm, M14 and M14E2.
FM 23–30	Grenades and Pyrotechnics.
FM 23–35	Pistols and Revolvers.
FM 23–41	Submachine Guns, Caliber .45, M3 and M3A1.
FM 23–43	90mm Full-Tracked, Self-Propelled Gun, M56.
FM 23–65	Browning Machinegun, Caliber .50, HB, M2.
FM 23–67	Machinegun 7.62-mm, M60.
FM 23–71	Rifle Marksmanship.
FM 23–82	106mm Rifle, M40A1.
FM 23–92	4.2-Inch Mortar M30.
FM 24–18	Field Radio Techniques.
FM 26–5	Interior Guard.
FM 27–10	The Law of Land Warfare.
FM 30–5	Combat Intelligence.
FM 30–7	Combat Intelligence, Battle Group, Combat Command, and Smaller Units.
FM 30–10	Terrain Intelligence.
FM 30–28	Armed Forces Censorship.
FM 30–30	Aircraft Recognition Manual.
FM 30–101	Aggressor, The Maneuver Enemy.
FM 30–102	Handbook on Aggressor Military Forces.
FM 30–103	Aggressor Order of Battle.
FM 31–10	Barriers and Denial Operations.
FM 31–12	Army Forces in Amphibious Operations (The Army Landing Force).
FM 31–15	Operations Against Irregular Forces.

FM 31–16	Counterguerrilla Operations.
FM 31–18	Infantry Long Range Patrol Company.
FM 31–21	Special Forces Operations.
(S) FM 31–21A	Special Forces Operations (U).
FM 31–22	U.S. Army Counterinsurgency Forces.
(S) FM 31–22A	U.S. Army Counterinsurgency Forces (U).
FM 31–25	Desert Operations.
FM 31–30	Jungle Training and Operations.
(C) FM 31–40	Tactical Cover and Deception (U).
FM 31–50	Combat in Fortified and Built-up Areas.
FM 31–60	River Crossing Operations.
FM 31–70	Basic Cold Weather Manual.
FM 31–71	Northern Operations.
FM 31–72	Mountain Operations.
(CM) FM 32–5	Communications Security (U).
FM 44–1	U.S. Army Air Defense Employment.
FM 54–2	Division Logistics and the Support Command.
FM 57–10	Army Forces in Joint Airborne Operations.
FM 57–35	Airmobile Operations.
FM 57–38	Pathfinder Operations.
FM 61–100	The Division.
FM 100–5	Field Service Regulations—Operations.
FM 100–10	Field Service Regulations—Administration.
FM 101–5	Staff Officers Field Manual—Staff Organization and Procedures.
FM 101–10	Staff Officers Field Manual—Organization, Technical, and Logistical Data.
FM 101–31–1	Staff Officers Field Manual; Nuclear Weapons Employment.
(S) FM 101–31–2	Staff Officers Field Manual; Nuclear Weapons Employment (U).
FM 101–31–3	Staff Officers Field Manual; Nuclear Weapons Employment.
TC 1–20	SS–11/HU–1 Weapons System.
TC 1–21	Destruction and Immobilization of Army Aircraft and Associated Equipment.
TC 1–22	Rotary Wing Aircraft Gunnery: Armament Subsystem, Helicopter, 7.62mm, Machinegun (XM6 Series), Quad Gun.
TC 1–24	Rotary Wing Aircraft Gunnery: Armament Subsystem, Helicopter, 7.62mm Machinegun, Twin Gun (M2).
TC 1–25	Rotary Wing Aircraft Gunnery: Armament Subsystem (ARWS, XM3).
TC 3–13	Field Automatic VG-Agent Alarm.
(C) TC 17–7	Aerial Surveillance Platoon, Division and Armored Cavalry Regiment (U).
TM 3–220	Chemical, Biological, and Radiological (CBR) Decontamination.
TM 57–210	Air Movement of Troops and Equipment.
AR 220–10	Preparation for Oversea Movement of Units (POM).
AR 320–5	Dictionary of United States Army Terms.
AR 320–50	Authorized Abbreviations and Brevity Codes.
DA Pam 108–1	Index of Army Motion Pictures, Filmstrips, Slides, and Phono-Recordings.
DA Pam 310-Series	Military Publications Indexes.
JCS Pub 1	Dictionary of United States Military Terms for Joint Usage.

APPENDIX II

SIGNAL COMMUNICATIONS IN ARMORED CAVALRY UNITS

Section I. GENERAL

1. General

Communications is a function of command. Each armored cavalry unit commander is responsible for the establishment, operation, and maintenance, within his capabilities, of the communication system of his command. The communication systems of subordinate and supporting elements must be integrated into his unit communication system.

2. Communication Means

a. Radio is the primary means of communication in armored cavalry units. Supplemental means of communication include wire, messenger, visual, and sound. No one means of communication is completely reliable by itself; all means must be employed habitually to insure a reliable system. Instructions for the use of these means are contained in SSI's, SOI's (or extracts), and other pertinent signal directives.

b. The flexibility of radio communication affords the unit commander the facility to command and control subordinate elements, yet does not restrict these elements in their ability to maneuver. Radio communication is subject to interference from static, enemy jamming, terrain, and weather. The characteristics of assigned radio equipment must be considered in planning the communication support of any tactical operation. The most important characteristics of radio communication that may affect the tactical situation are the communication planning range of radio sets, the compatibility of tactical communication equipment, and the lack of radio transmission security.

c. Armored cavalry units employ primarily vehicular-mounted FM and AM radios. Portable FM radios are used for dismounted operations and to supplement mounted radios. FM radios provide the users with a personal means of voice communication with other operators on the same radio net. AM radios provide greater planning ranges to accommodate the dispersion inherent in armored cavalry operations. Certain AM radio equipment, in addition to having the voice and radiotelegraph (CW) capability, also are capable of radioteletype (RATT) operation. This RATT equipment, as well as furnishing extended communication planning ranges in comparison to FM radios, is well suited for the transmission of lengthy situation, logistical and administrative reports.

d. Where a high degree of reliability, under all conditions, is required, continuous wave (CW) transmissions are the principal means of communications. CW transmissions will be used extensively as a standby or backup capability for RATT and voice transmissions during periods of interference, jamming, and atmospheric disturbances; when terrain prohibits movement of stations; and for communications over extended distances. Commanders must realize the importance of the units' CW capability and the necessity for effective training to maintain and increase CW proficiency.

3. Communication Security

Communication security includes all measures taken to prevent or delay the enemy from gaining information from friendly communication systems. It includes physical security, cryptosecurity, and transmission security. Physical security is physically safeguarding communication equipment and documents and the distribution of classified critical items on a need-to-know basis. Cryptosecurity is the

strict application of technically sound cryptosystems and cryptooperating instructions. Transmission security includes all measures and practices used to protect transmission from interception and traffic analyses by the enemy. It is the responsibility of the unit commander to determine the maximum degree of communication security that he can employ consistent with his mission and the reaction time available to the enemy.

Section II. COMMUNICATION SYSTEMS, ARMORED CAVALRY SQUADRON, ARMORED MECHANIZED, AND INFANTRY DIVISIONS

4. Squadron Communication Platoon

a. The squadron communication platoon, commanded by the squadron communication officer, contains sufficient specialists and equipment to provide organic communication support to the squadron. The platoon is transported in a light tracked command post carrier and light trucks.

b. The squadron communication platoon provides organic communication support to the squadron and supervises and performs organizational maintenance on communications and other electronic equipment. The communication officer advises the squadron commander on communication techniques and on the use of communications. He also advises troop commanders on the employment of their communication specialists. The communication platoon provides the following services:

(1) Supervision of the operation of the squadron communication system.
(2) Installation, operation, and maintenance of the wire communication system within the squadron command post and, when required, to subordinate elements (troops, outposts, etc.).
(3) Operation of panel displays and message pickup facilities.
(4) Operation of the squadron message center and messenger service.
(5) Provisions of facilities for encrypting messages.
(6) Performance of organizational maintenance of squadron communication and other electronic equipment.
(7) Preparation, distribution, and supervision of SOI extracts.

c. Specialists to operate the radioteletype and CW radios of the squadron headquarters section are assigned to that section, although their communication specialist training is the responsibility of the communication platoon leader (squadron communication officer).

5. Type Radio Nets

a. Squadron Nets. The armored cavalry squadron operates FM and AM radio nets for communication with, and control of, the sections, platoons, troops, and assigned, attached, or supporting units of the squadron. The radio nets employed at squadron level are:

(1) Squadron command net FM.
(2) Squadron command net AM.
(3) Squadron intelligence net FM.
(4) Squadron administrative/logistical net FM.

b. Nets to Higher Headquarters. The armored cavalry squadron is authorized FM, AM, and radioteletype (RATT) radios for operation in division nets. The higher headquarters nets in which the FM, AM, and RATT equipment is employed are:

(1) Division CG/command net FM .
(2) Division RATT net number 1.
(3) Division RATT net number 2.
(4) Division air request net AM.
(5) Division warning broadcast net AM.

c. Special Purpose Nets.

(1) *Tactical air direction net UHF.* When a forward air controller is provided, he is equipped with a truck-mounted UHF, ground-to-air radio set which enables him to operate in the tactical air direction net. He directs air strikes in support of the squadron by using this net. Radio equipment is provided to squadron headquarters to monitor the spot reports in this net rendered by pilots flying tactical air missions for the division.
(2) *Other special purpose nets.* These may be established as required.

Figure 106. Type radio net diagram, armored cavalry squadron, armored, mechanized, and infantry divisions.
(Located in back of manual)

6. Type Wire Net

The armored cavalry squadron wire net is installed and operated by the squadron communication platoon. This net is installed whenever time and the tactical situation will permit. It is used primarily for internal communication in the squadron command post in defensive or stabilized operations, in assembly areas, and during periods of radio or listening silence. Wire lines may be installed to each organic troop and attached unit. Lateral wire lines are installed to adjacent units wherever possible to increase communication flexibility. Wires from supporting units are integrated into the squadron wire net. Wire communication to higher headquarters, when used, will normally be available through division area communications. Figure 107 shows a type wire net diagram and indicates the equipment used.

7. Other Means of Communication

a. Messenger. The organic communication platoon constitutes the messenger means of communications available in the armored cavalry squadron; however, dismounted troops may be used locally as messengers, and air messengers may be used if aircraft are available. Messenger service is also provided by higher headquarters and adjacent units.

b. Sound. Sound signals—whistles, horns, gunfire, etc.—with prearranged meanings are used as required for transmitting messages of warning.

c. Visual. Visual signals, such as panels, pyrotechnics, lights, flags, smoke, etc., are used as required to transmit short prearranged messages.

Section III. COMMUNICATION SYSTEM, ARMORED CAVALRY SQUADRON AIRBORNE DIVISION

8. General

The communication system of the airborne division armored cavalry squadron is very similar to that of the cavalry squadron of the other divisions. The exceptions are the result of differences in employment, missions, and in the table of organization and equipment. Because of similarities of the armored cavalry squadron communication systems, the contents of this section are limited to the points that differ from those discussed in the preceding section.

9. Squadron Communication Platoon

a. This platoon is transported entirely in light trucks.

b. Services provided by the platoon do not include operation of a radioteletype station since neither the radio nor the operators are authorized to the platoon.

c. Communication specialists assigned to the squadron headquarters section include only radioteletype team chiefs and operators, as no CW radio nets are employed.

10. Type Radio Nets
(fig. 108)

a. Squadron Nets. Because the dispersion of the armored cavalry squadron of the airborne division is generally around the airhead rather than along a division front or flank, there is no need to operate squadron AM nets. Only FM radios are used in squadron nets. When greater communication planning ranges are required, special FM antenna equipment is erected.

b. Nets to Higher Headquarters. The armored cavalry squadron, airborne division, operates stations in the following nets:

(1) Division CG/command net B (FM).
(2) Division RATT net number 1.
(3) Division RATT net number 2.
(4) Division warning net (AM).

The squadron does not operate a station in the division air request net (AM).

c. Special Purpose Nets. When a forward air controller is provided he is equipped with a truck-mounted UHF, ground-to-air AM radio for communication in the tactical air direction net.

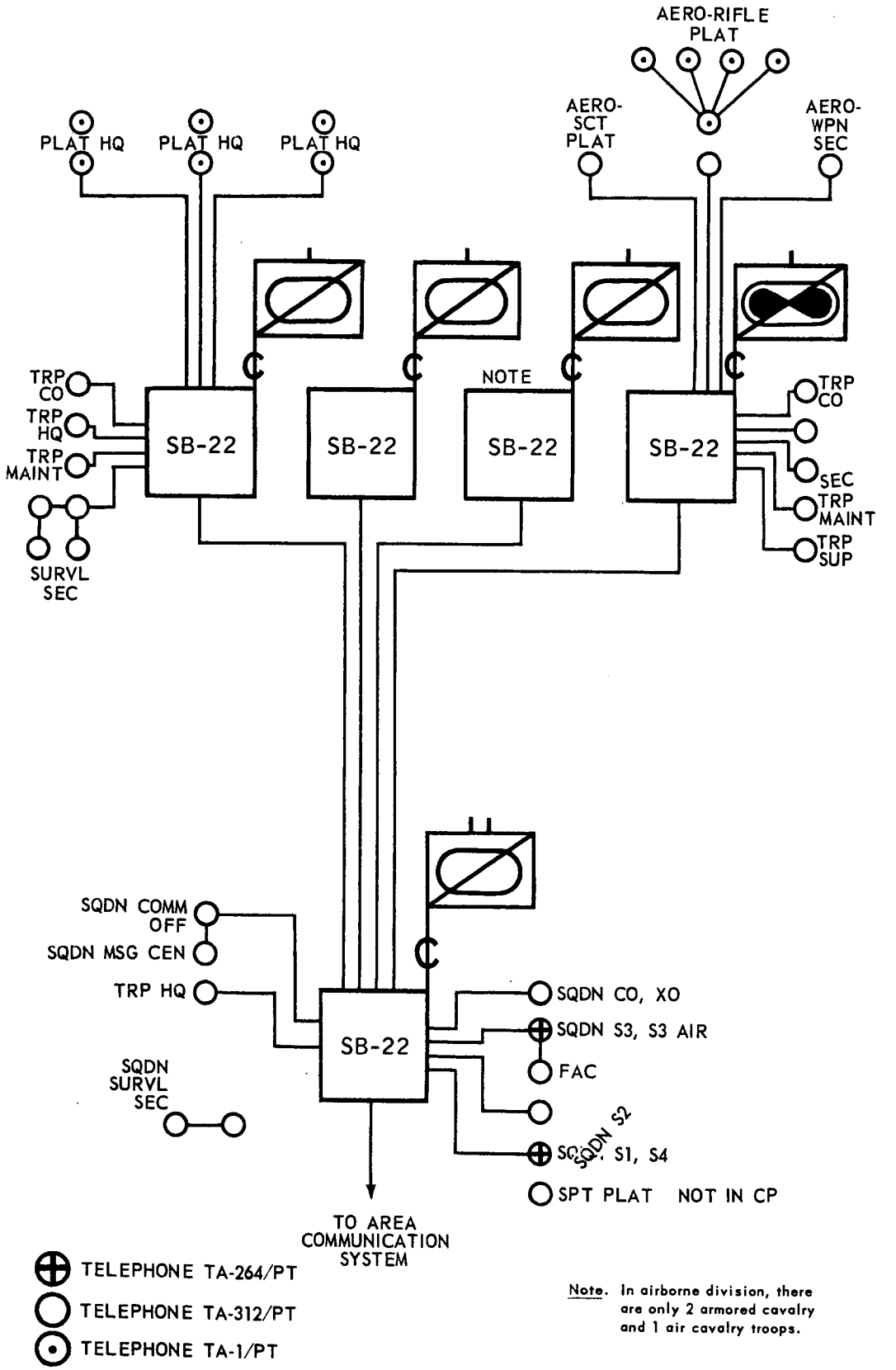


Figure 107. Type wire net diagram, armored cavalry squadron, armored, mechanized, infantry, and airborne divisions.

11. Visual Communication

In addition to the other uses of visual signals, they are employed extensively in the airborne division in connection with airborne operations.

Figure 108. Type radio net diagram, armored cavalry squadron, airborne division.
(Located in back of manual)

Section IV. COMMUNICATION SYSTEMS, ARMORED CAVALRY TROOP, ARMORED, MECHANIZED, AND INFANTRY DIVISIONS

12. Troop Communication Personnel

The armored cavalry troop is authorized a communication chief, radio mechanics, and intermediate speed radio operators to supervise and support the troop communication system.

13. Type Radio Nets
(fig. 109)

a. Troop Nets. The armored cavalry troop operates FM radio nets for communication with, and control of, elements of the troop. These nets are:

(1) *Troop command net FM.*
(2) *Platoon command net FM.* Each armored cavalry platoon operates a separate platoon command net.

b. Higher Headquarters Nets. The troop is also authorized FM and AM radios to operate in the nets of the armored cavalry squadron. The squadron nets in which these FM and AM radios are employed are:

(1) Squadron command net FM.
(2) Squadron command net AM.
(3) Squadron intelligence net FM.
(4) Squadron administrative/logistical net FM.

The squadron intelligence net may be entered by appropriate troop operators as required by receiving approval to leave their normal net.

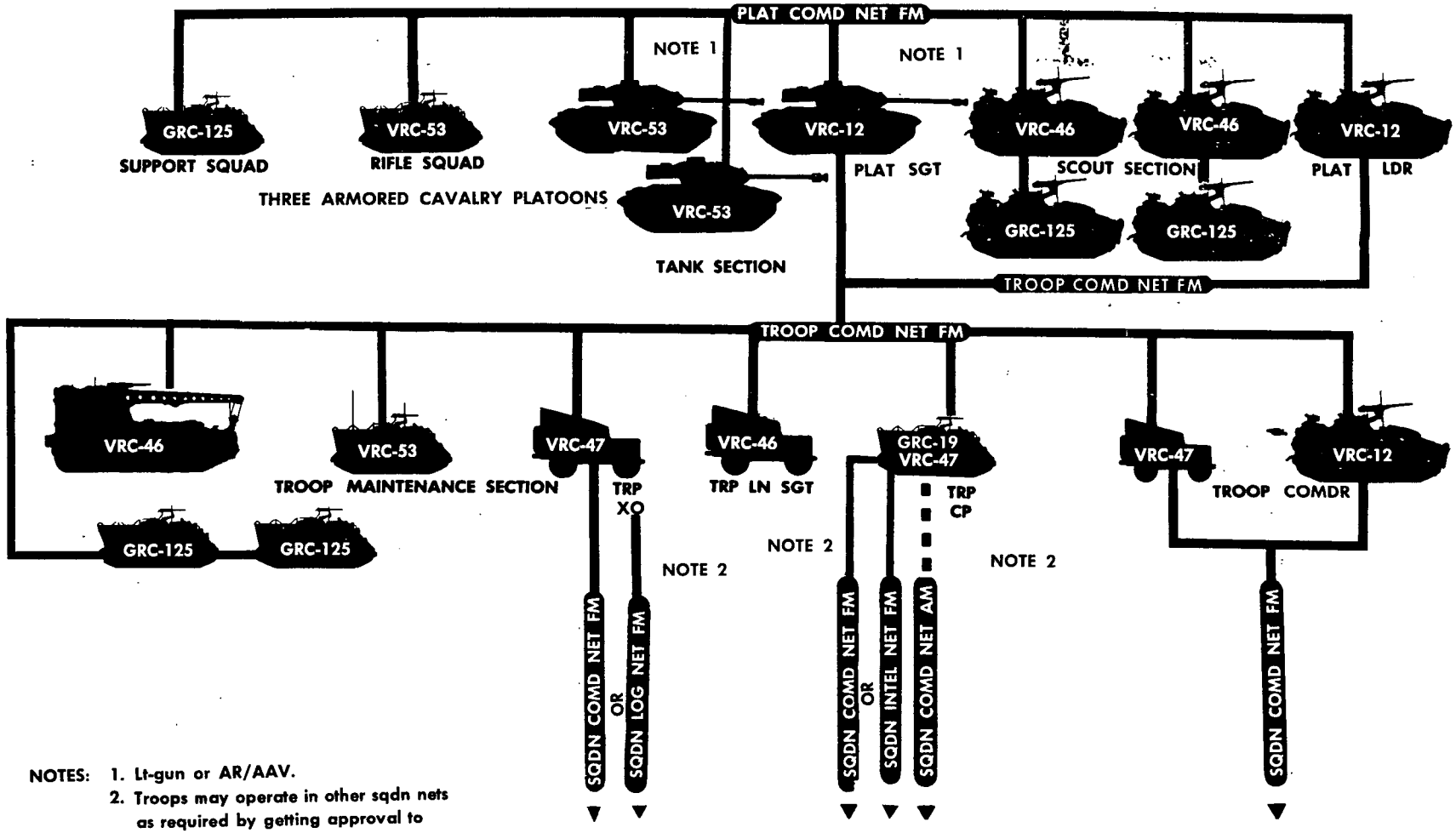
14. Type Wire Net

Because of the type of tactical missions assigned the armored cavalry troop, there is little opportunity to use wire. However, when time and the tactical situation permit, such as in an assembly area, or in a static situation, wire may be used to advantage. When used, the troop wire net is installed, maintained, and operated under supervision of troop communication specialists. Normally, the switchboard is installed in the troop command post. Figure 107 shows a typical armored cavalry troop wire net as part of the armored cavalry squadron wire net.

15. Other Means of Communication

a. Messenger. Although no messengers are authorized by the TOE, selected individuals are used as foot or motor messengers as required to accomplish the troop mission.

b. Sound and Visual. Prearranged sound and visual signals are employed principally for local warnings and control, respectively.



NOTES:
1. Lt-gun or AR/AAV.
2. Troops may operate in other sqdn nets as required by getting approval to leave primary net.

Figure 109. Type radio net diagram, armored cavalry troop, armored cavalry squadron, armored, mechanized, and infantry divisions.

Section V. COMMUNICATION SYSTEM, ARMORED CAVALRY TROOP, AIRBORNE DIVISION ARMORED CAVALRY SQUADRON

16. General

The communication system of the airborne division armored cavalry troop is identical to that of the armored cavalry troop of the other divisions with a few exceptions. These exceptions, as noted at squadron level, are the result of differences in employment, missions, and in the TOE.

17. Differences From Armored Cavalry Troops of Other Divisions (fig. 110)

a. There are no squadron AM nets operated by the airborne division armored cavalry squadron; therefore, neither the specialists nor the equipment for operation in such nets is authorized in the troops.

b. Because of the requirement that all equipment be capable of being airdropped, lighter vehicles are authorized in some cases than are found in the other divisions. This, in turn, causes some changes in radio equipment.

c. Visual communication is used extensively in connection with airborne operation.

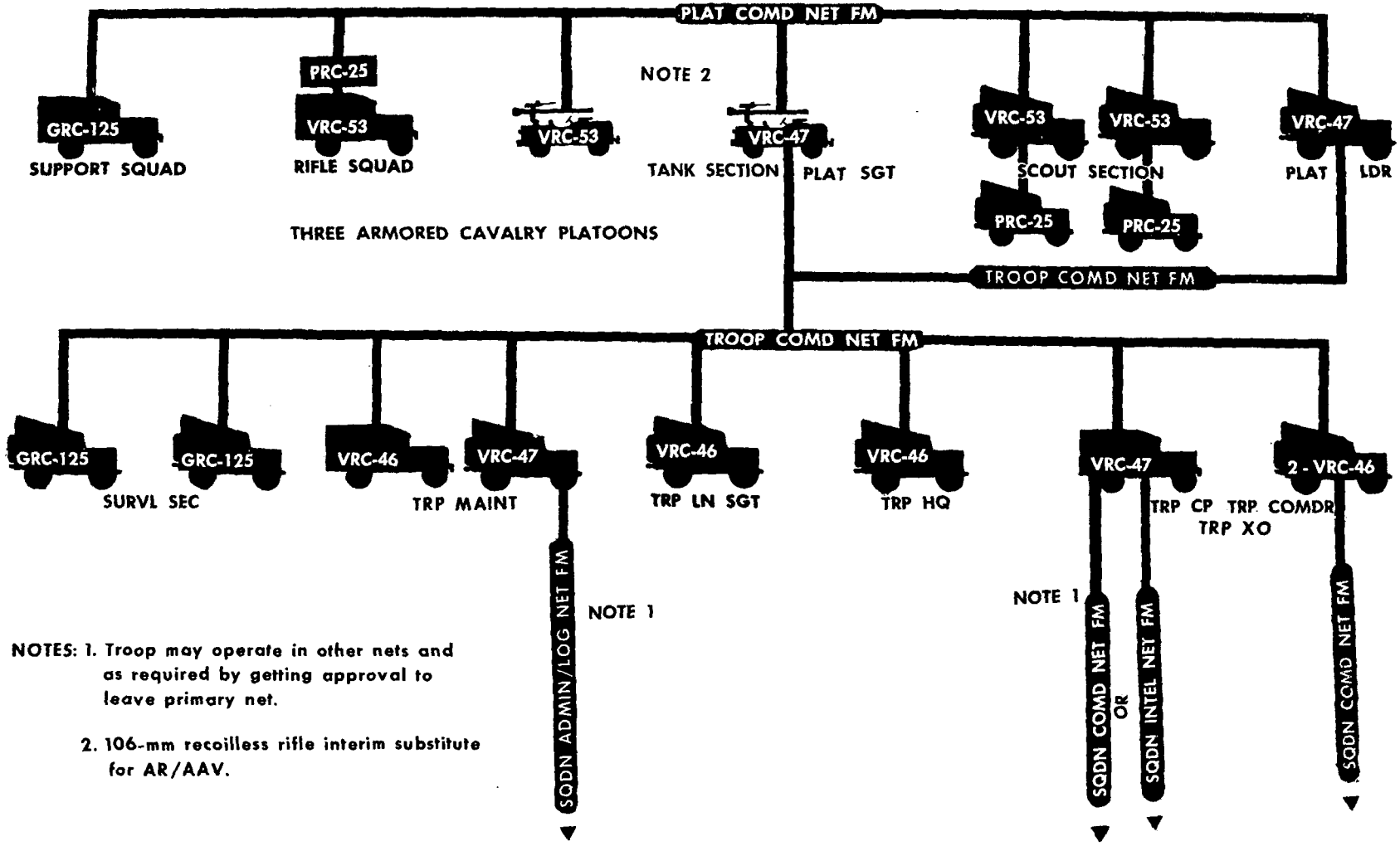


Figure 110. Type radio net diagram, armored cavalry troop, armored cavalry squadron, airborne division.

Section VI. COMMUNICATION SYSTEM, AIR CAVALRY TROOP, ARMORED, MECHANIZED, INFANTRY, AND AIRBORNE DIVISIONS

18. Troop Communication Personnel

The air cavalry troop is authorized a communication chief, radio mechanics for both air and ground communication equipment, and intermediate speed radio operators to supervise and support the troop communication system.

19. Type Radio Nets

(fig. 111)

a. Troop Nets. The air cavalry troop has organic ground and air FM radio equipment to furnish communication with, and control of, elements of the troop. The FM nets operated in the air cavalry troop are:

(1) Troop command net FM.
(2) Aero-scout platoon command net FM.
(3) Aero-rifle platoon command net FM.
(4) Aero-weapons section command net FM.

b. Higher Headquarters Nets. The troop also has organic ground and air FM and AM radio equipment to operate in higher headquarters nets. The nets to higher headquarters in which the air cavalry troop maintains stations are:

(1) Squadron command net FM.
(2) Squadron command net AM.
(3) Squadron administrative/logistical net FM.
(4) Division warning broadcast net AM.

c. Special Purpose Nets.

(1) *Air traffic regulation net UHF.* This net may be operated by division, corps, or army, and is used to coordinate air traffic with a specified area. Each helicopter is equipped with an AM UHF radio that the pilots use to contact the troop operations section or a higher headquarters flight operations center (FOC). The troop operations section is provided with a vehicular-mounted ground-to-air AM UHF radio for operation in this net.

Figure 111. Type radio net diagram, air cavalry troop, armored cavalry squadron, armored, mechanized, infantry, and airborne divisions.
(Located in back of manual)

(2) *Tactical air direction net UHF.* The same ground-to-air radio mentioned above may be used when required by forward air controller operators to contact and direct tactical air support aircraft.

d. Other Nets. Each helicopter, when placed in support of a different unit, is able to monitor the supported unit's command net through the aircraft auxiliary FM receiver.

20. Type Wire Net

Use of wire in the air cavalry troop generally is limited to that installed in the command post under supervision of the troop communication specialists and that laid by the aero-rifle platoon in dismounted operations. However, when time and tactical situation permit, the wire communication system may be expanded within the capability of the authorized equipment. Figure 107 shows a typical air cavalry troop wire net as part of the armored cavalry squadron net.

21. Other Means of Communication

a. Messenger. Although no messengers are authorized by the table of organization and equipment, selected men are used as foot, motor, or air messengers as required to accomplish the troop mission.

b. Sound and Visual. In addition to the application of sound and visual communication previously mentioned, the air cavalry troop uses visual signals rather extensively in connection with aircraft control.

Section VII. COMMUNICATION SYSTEM, ARMORED CAVALRY, RECONNAISSANCE, AND SCOUT PLATOONS, ARMORED, MECHANIZED, INFANTRY, AND AIRBORNE DIVISIONS

22. General

This section pertains to armored cavalry, reconnaissance, or scout platoons organic to the armored cavalry squadrons, the tank battalions, the mechanized infantry battalions, the infantry battalions, and the airborne battalions of the four types of divisions.

23. Specific

a. There are no communication specialists authorized the armored cavalry platoon.

b. The platoon operates a separate platoon command net FM in which all sections and squads participate.

c. The platoon leader and platoon sergeant also operate in the FM command net of the next higher headquarters, specifically:

(1) Troop command net FM, for those platoons organic to armored cavalry troops.

(2) Battalion command net FM, for reconnaissance and scout platoons organic to the headquarters and headquarters companies of tank battalions, mechanized infantry battalions, infantry battalions, and airborne battalions.

d. The small amount of wire equipment authorized allows the platoon a very limited use of wire. When it is used, the platoon normally has a telephone in the wire net of the next higher headquarters.

e. Messenger, sound, and visual means of communication are employed to the maximum.

f. Figures 109 and 110 show the type radio net diagram for armored cavalry platoons of the armored cavalry troop of the armored, mechanized, infantry, and airborne division cavalry squadrons. Figures 112, 113, 114 and 115 show the type radio net diagram for the reconnaissance and scout platoons of the tank, mechanized, and infantry battalions, the tank battalion of the airborne division, and the airborne infantry battalion.

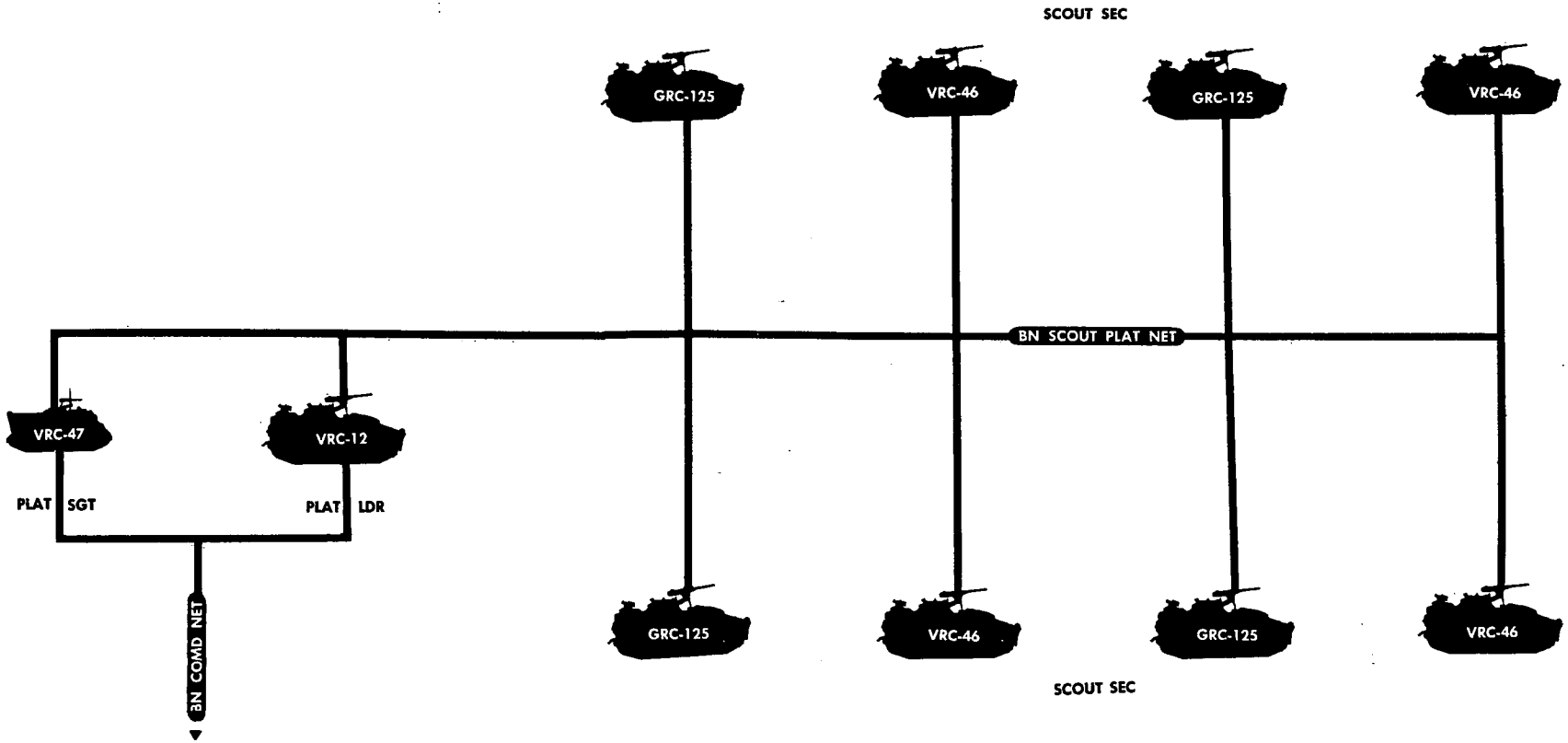


Figure 112. Type radio net diagrams, scout platoon, tank and mechanized battalions, armored, mechanized, and infantry divisions.

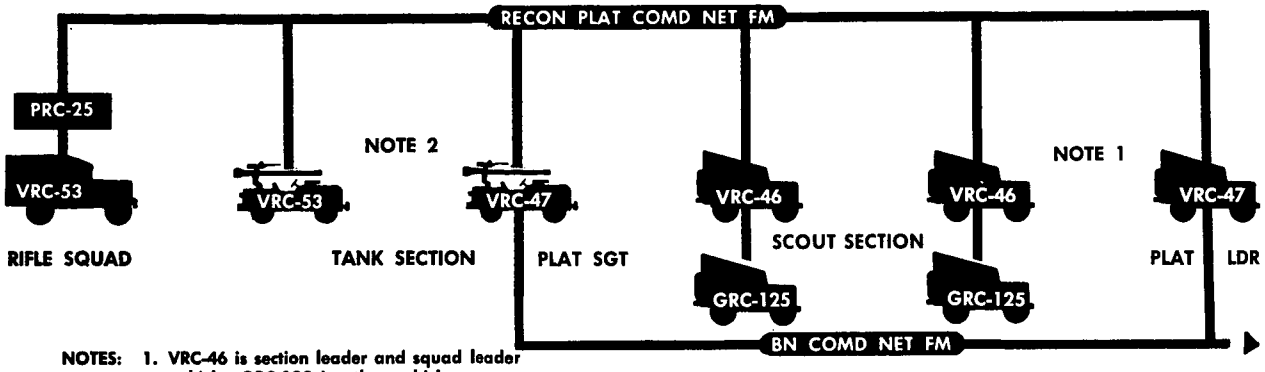


Figure 113. Type radio net diagram, reconnaissance platoon, infantry battalion.

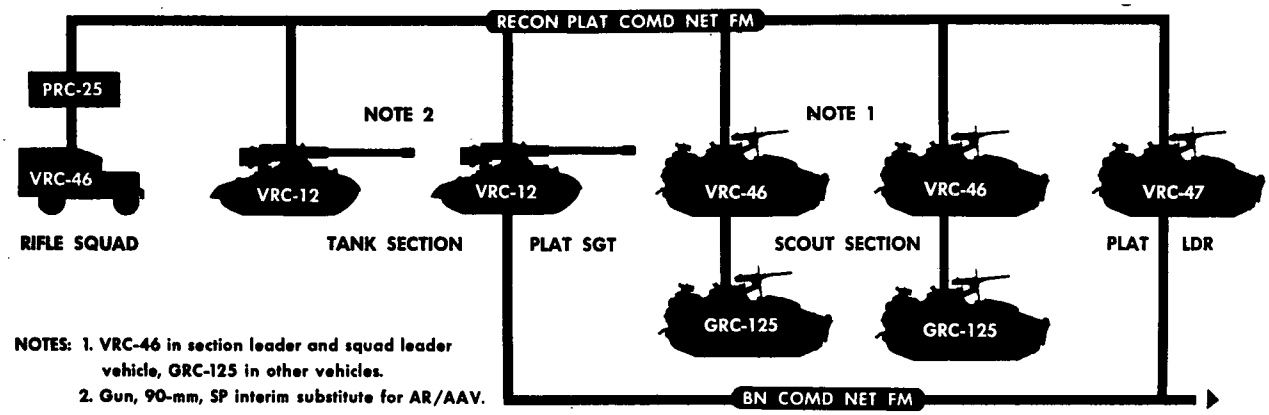
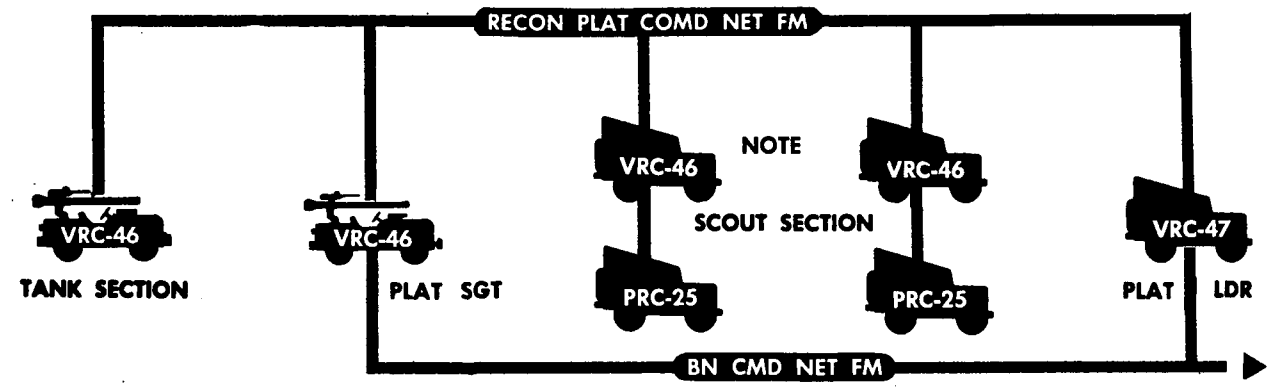


Figure 114. Type radio net diagram, reconnaissance platoon, tank battalion, airborne division.



NOTE: VRC-46 in section leader and squad leader vehicles PRC-25 in other vehicles.

Figure 115. Type radio net diagram, reconnaissance platoon, airborne infantry battalion.

APPENDIX III

EMPLOYMENT OF ARMY AIRCRAFT

1. General

Helicopters assigned to the air cavalry troop are combat vehicles used to accomplish the troop mission. Training of helicopter crews to the proficiency necessary to enable them to operate with the troop over varied terrain, and under conditions of marginal weather and limited visibility, is the responsibility of the troop commander (fig. 116).

2. Night Operations

Night operations by the troop will be habitually required in support of the armored cavalry squadron. All flight difficulties encountered during low visibility daylight operations apply to low-visibility night operations as well. Planning must be in minute detail. During night operations, illumination of the enemy area will often be required. Targets may be illuminated by pyrotechnics delivered from Army aircraft, helicopter mounted searchlights, mortars, or artillery weapons (fig. 117). Use of pyrotechnics must be coordinated with other units participating in the operation. Indiscriminate use of pyrotechnics can cause loss of surprise and premature exposure of unit participating in the operation. The key to a successful night operation is the aviator's ability to develop and maintain good night vision. So that objects may be defined at night, effective use must be made of night vision techniques. Some form of artificial allumination may be encountered during night operations. This illumination may vary from tracers fired from the aviator's own aircraft to flares used to illuminate the hostile target area. Regardless of the intensity of the light encountered, it may produce varying effects on the aviator's night vision. Precautions must be taken to avoid a total loss of night vision or the aviators' reacting to erroneous impulses created by the effects of night illumination. The use of red lensed goggles or glasses, closing one eye, or having the copilot keep his eyes closed or covered will reduce the probability of the loss of night vision by the helicopter crew. Even though night operations normally are flown at a higher altitude than are daylight operations, the aviator must be constantly aware of his position in relation to terrain and obstacles and control his helicopter accordingly. The AN/ARA–56 homing device and low/medium frequency nondirectional homing devices will often be employed as a navigational aid to guide helicopters to the troop landing sites. Pyrotechnics, low-powered lights, or luminous panels may be used to mark landing sites provided their use does not compromise the troop location. Helicopters should land as close to the dispersal or parking site as possible. No unnecessary hovering should occur. Color-coded flashlights may be used for marking individual landing and parking sites. In rough terrain or where obstacles such as trees exist, a glide angle indicator may be used as an approach aid to the landing site (fig. 118). This is a component of the basic heliport lighting set; however, only the glide angle indicator is compatible with the battlefield environment of the air cavalry troop. When it is not possible to land at platoon landing sites, the entire troop may land at a single site, using the glide angle indicator as an approach aid to avoid obstacles, and then hover to platoon dispersal or parking areas under guidance of ground crewmen.

3. Principles of Attacking Targets With Armed Helicopters

Armed helicopters attack ground targets with the primary objective of creating the greatest amount of destruction and disorganization in the shortest possible time. To attain this objective, the following principles are employed:

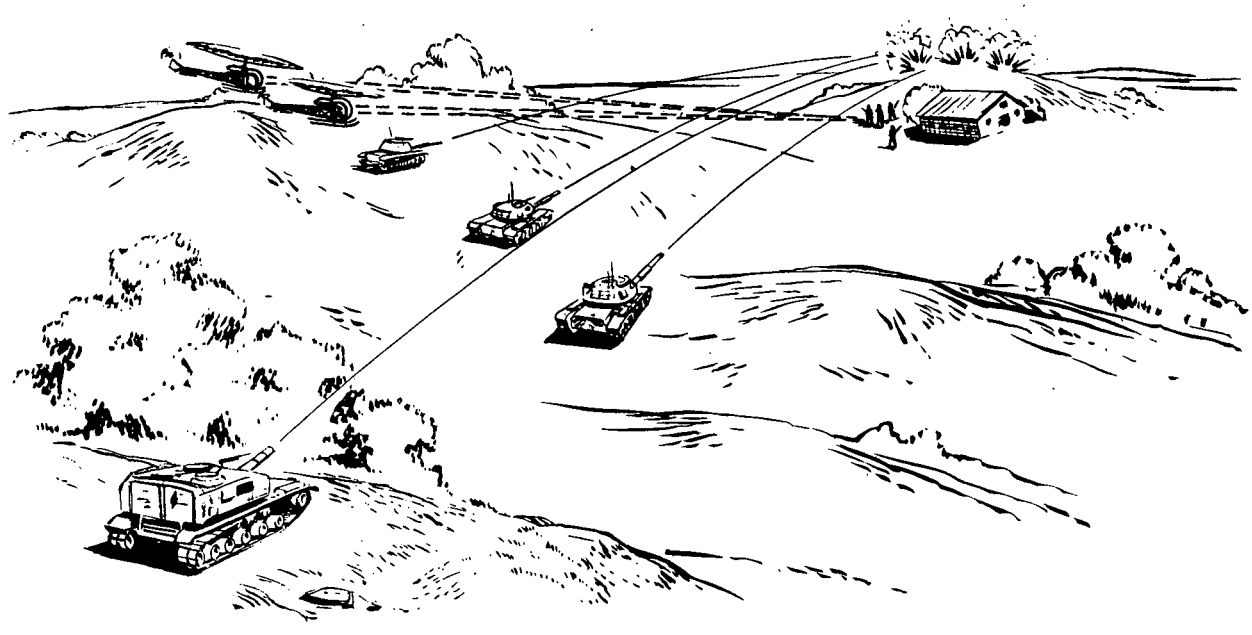


Figure 116. Helicopters assigned to the air cavalry troop are combat vehicles.

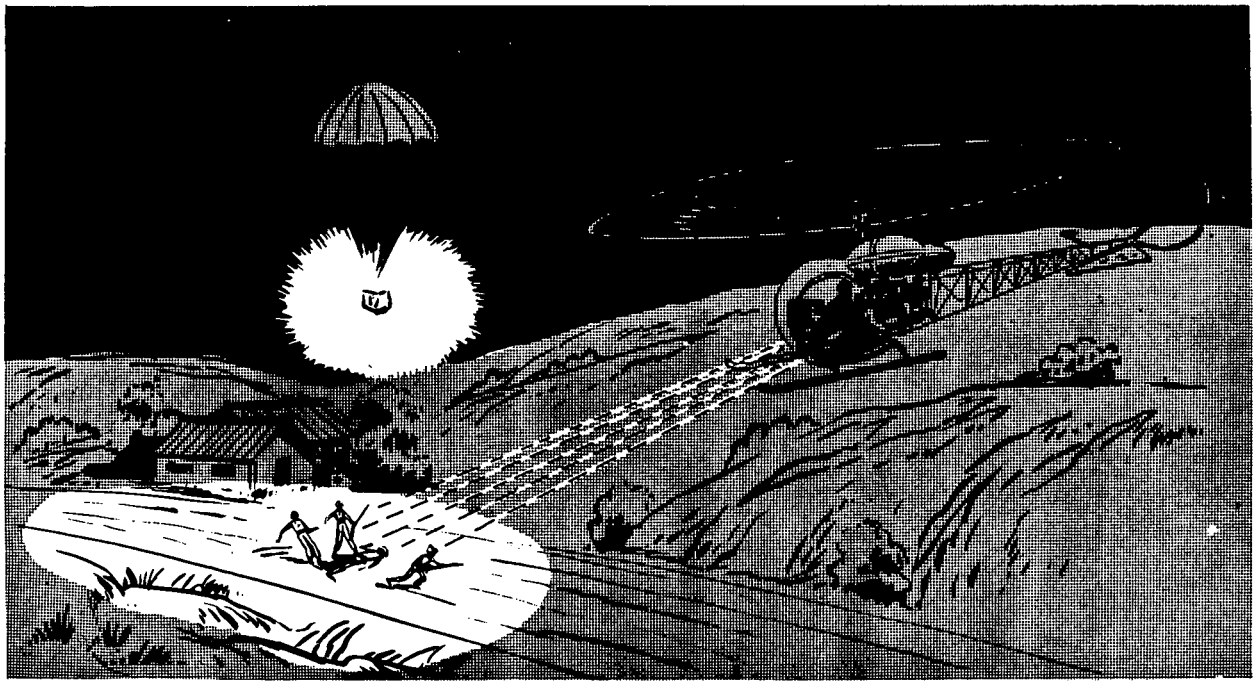


Figure 117. Night illumination by flare.

a. Surprise, based on careful planning and violent execution, is a prerequisite in the successful engagement of targets.

b. The attack is conducted with maximum speed, determined effort, and concentrated violence.

c. The greatest volume of effective fire during a minimum period of time is placed on the target during the engagement.

d. Precise timing of attack and disengagement is a tactical necessity to reduce effective enemy countermeasures.

4. Target Categories

Enemy targets engaged by armed helicopters include preselected targets and targets of opportunity. Because of the versatility of the helicopter, targets can be engaged from zero air speed (at a hover) up to the maximum speed of the aircraft. Automatic weapons fire is most effective on some targets, while others may require the effects of rockets or missiles. As a rule, each target category or type require different engagement techniques.

5. Techniques of Target Engagement

Engagement of targets can be planned on the basis of any number of helicopters, from a single helicopter team (two helicopters) up to and including all helicopters in the troop.

a. Teams may engage targets alone or with support from other elements of the troop. For example, a helicopter team on a reconnaissance mission, encountering a target of opportunity, may engage this target at once. The methods used will vary considerably from those in a multihelicopter attack. Even though a thorough and detailed plan of attack by a team is not possible, a hasty plan of attack must be formed. The following factors must be considered before any target is engaged:

(1) *Type of target.* (Is the helicopters weapon system effective against this target? Is the target stationary or moving?)

(2) *Size of target.* (Will an attack on this target be effective by one helicopter team and, if not, can support be obtained in sufficient time?)

(3) *Target location.*

(*a*) Military (in relation to other enemy or friendly troops).

(*b*) Geographical (pertaining to surrounding terrain, obstacles, and manmade objects).

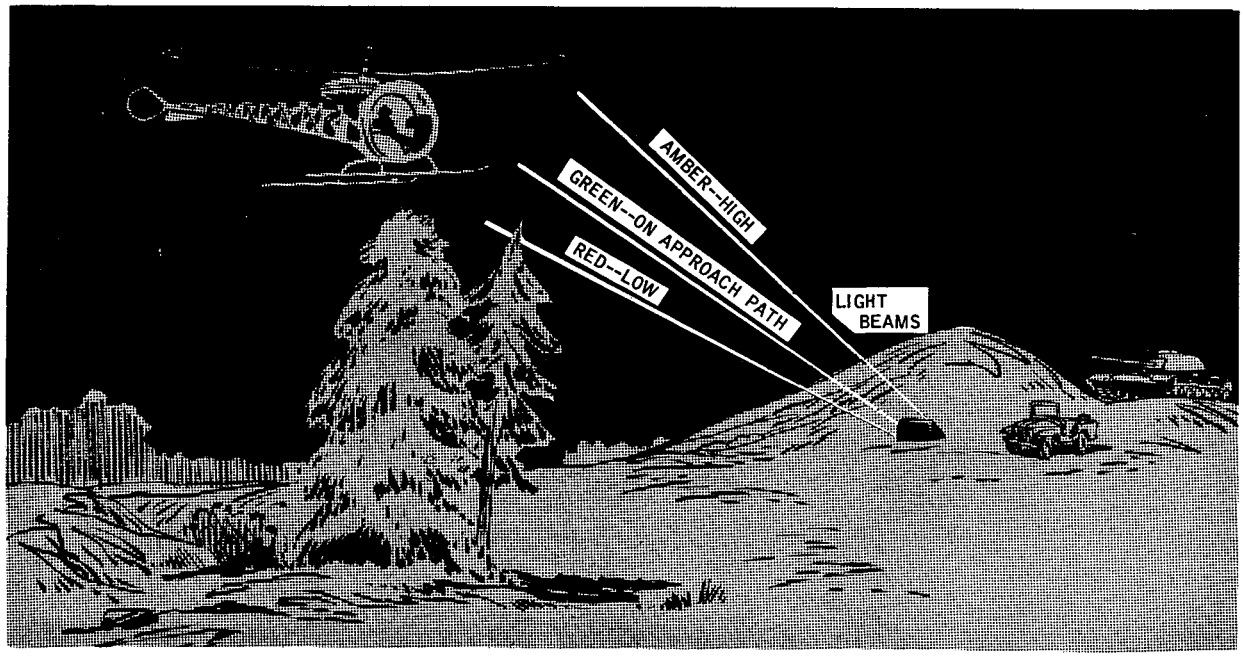


Figure 118. The glide angle indicator as a night approach aid.

(4) *Avenues of approach and disengagement.* To decrease the helicopter's vulnerability, avenues of approach and disengagement should offer the best possible cover and concealment including the establishment of primary and alternate routes.

(5) *Lack of support.* Lack of helicopter supporting fire and other covering fire limits time on target by one helicopter team.

b. Multiple helicopter attacks use the basic concepts of fire and movement. A base of fire may be provided by ground elements of the armored cavalry squadron, helicopters, indirect-fire support, or any combination of the above. In any situation employing fire and movement one or more helicopters fire; other helicopters move into a better position from which to continue the attack or to cover the movement of other elements. Multiple helicopter attacks provide a much greater striking force, but at the same time introduce additional planning and coordination problems.

(1) Two-way radio communication is the standard means of control between helicopters and between air elements and supported cavalry units. In the event of radio failure, alternate means of air/ground communication, such as panels and pyrotechnics, must be planned for; alternate plans in the event of communication failure between helicopters is provided for by unit SOP.

(2) Coordination between helicopter teams, sections, and platoons must be thorough. Factors to be considered are:

(*a*) Routes of approach and departure for different teams and sections.

(*b*) Deployment into tactical formations to engage the target.

(*c*) Methods of attack and time on target.

(*d*) The length of time target can be engaged. This time is extended with an increase in number of helicopters and the amount of firepower being delivered.

c. Coordination between all aviators is required to maintain fire on the target. Attack of a large target area by more than one team requires that each be cognizant of the progress being made by others. This requires continuous coordination by radio and close timing when attacking or withdrawing from the target. Without this timing and coordination, helicopter losses to enemy fire will increase.

d. Communication problems increase during an attack by the air cavalry troop. Coordination while more difficult, is of greater importance due to the speed of helicopters, the array of different weapons being used against the target, and the landing of troops on or near the objective. Proper timing and control prevents unnecessary congestion in the target area.

e. Helicopters firing different type weapons may be employed separately on the target; however, they can be used simultaneously in some situations. Even when used separately, the target must be kept under continuous fire to suppress enemy countermeasures and, where applicable, to better support the placement of airmobile troops in the objective area. This requires precision timing in the attack, withdrawal, and lifting, and shifting fires.

6. Methods of Attacking Targets

a. Running fire is delivered on a target while the helicopter is in forward flight. Nap-of-the-earth flying techniques, using available cover and concealment, are employed to the fullest. The target may be engaged frontally, from the rear, or from the flanks. The type of target and available routes for attack will usually determine the direction of the attack. If more than one pass is required, succeeding passes should be made from new directions to confuse the enemy as much as possible and lessen helicopter vulnerability. After loss of initial surprise, succeeding firing runs may increase the exposure and subsequent loss of the air vehicles to an unacceptable degree.

b. Firing from a hovering position is accomplished by hovering (bobbing) fire delivered from a covered or concealed position. This technique affords the helicopter added protection as it is exposed only while actually firing. Where terrain permits, the helicopter is moved laterally between bursts of fire so that it does not appear to the enemy twice in the same spot.

c. Firing from a stationary position is achieved by the helicopter on the ground. This method is rarely used. Vulnerability of the stationary helicopter increases so that cover, concealment, and well-planned return routes are mandatory. Surprise is of the utmost importance, and the ambush (fire and run) attack should be used whenever possible.

7. Machinegun Automatic Weapons System

a. The armament subsystem M2, mounted in the observation helicopter consists of two M60C (7.62mm) machineguns and the necessary ancillary equipment. The machineguns are mounted on aluminum supporting structures on each side of the helicopter. Arming, charging, placing the system on safe, elevating, and firing operations are remotely controlled by the aviator in the cockpit by use of controls and switches. For further details see TM 9–1005–247–12 and TC 1–24.

b. The flexible automatic weapons system mounted on the utility helicopter consists of quad machineguns, two mounted on each side of the fuselage. Fire control is provided for both the pilot and the copilot, independently controlled by either. Only the copilot is provided a sighting instrument. Inflight charging and placing the system on safe can be accomplished by either the pilot or copilot. For detailed discussion of squad machinegun M–6 series, refer to TC 1–22.

8. Rocket System

a. Rockets fired from helicopters are designed specifically for air launching. They are of the ballistic type, fired from pods mounted on the helicopter.

b. These rockets, equipped with HE warheads, are used to place fire on area targets. The rocket warheads are capable of destroying lightly armored vehicles and other protected targets, as well as providing suppressive fires in direct support of ground and airmobile operations.

c. This is a fixed system using the same basic principles as those for the fixed weapons system. Rockets may be fired in pairs or multiples of two (ripples) by the pilot or copilot (gunner/observer/navigator). This is a fixed weapons system and may be corrected in elevation and azimuth only by aiming the helicopter. Fire control characteristics are similar to those of the fixed automatic weapons systems.

d. Aiming and firing are achieved initially with the aid of a sight and firing a pair of target marking rockets. Further adjustment is made by moving the strike of the rockets to the target. This is accomplished by changing the attitude of the aircraft.

9. Missile Systems

a. Aircraft missiles are used primarily for the destruction of point targets such as armored vehicles, roadblocks, pillboxes, etc. Equipped with a suitable warhead, missiles may be used also against area targets.

b. The command guidance missile system trails out a wire attached to the helicopter. The wire is connected to the electrical system of the weapon and is controlled by the gunner who guides the flight of this missile with a hand control in the cockpit of the helicopter, using an optical aid. Movements of the hand control transmit electrical impulses to the missile, which make small corrections in the flight control surfaces on the missile. The missile is alined with the target by superimposing the missile flare on the target. While this missile is extremely accurate, it requires that a line-of-sight be maintained between the target and the helicopter until the target has been engaged. This requirement restricts the maneuvering of the helicopter during engagements.

10. Characteristics

Except for cases where a target is stationary, going directly away from, or coming directly toward the gunner, it cannot be hit by aiming directly at it. Correct deflection is obtained by using two types of fire control: *ring sights,* by means of which the gunner measures the deflection, and *computing sights,* which automatically calculate the deflection.

Note. Missiles with command guidance are excepted from the characteristics discussed above.

11. Instrumentation

The most important characteristic of air fire control instrumentation is that it provides the means to place air fire on targets quickly and with minimum adjustment. Two common types of air fire control instruments are the reflector ring sight and the reflex sight (with a collimated reticle).

a. The reflector ring sight uses a series of lenses that cause the eye to see concentric rings that appear to be off in space. The user can move his head in relation to the sight without disturbing target alinement.

b. The reflex sight is designed primarily for use in aircraft with flexible guns. It permits the gunner to aim within the limits of the traverse and elevation of the weapons system.

12. Measurement and Alinement

Fire control procedures employ the mil to determine lead and calculate range. A mil is the angle formed with the eye looking at an object 1 meter wide or high and 1,000 meters away. Most sights include two or more rings in the sight reticle. The inner ring may be spaced 50 mils from the center point of the sight, called the pipper, and the outer ring may be 100 mils from the center. Radiating lines may be included in the reticle to assist the aviator to aline the path of a moving target with the pipper, and to estimate range.

13. Target Range

a. To assist the gunner in estimating range, he should memorize the length, width, and height of the most likely targets encountered on the battlefield. These may be grouped for convenience under a common size: trucks, armored personnel carriers, and tanks; forward artillery weapons; shop and communication vans and mobile command posts; machinegun and mortar crews; etc.

b. The range at which target should be taken under fire is related directly to the range and lethality of weapons system used. Automatic weapons systems are calibrated (boresighted) to place an effective cone of fire on common targets at 400 meters. The distance of calibration may generally be used as a guide for the opening engagement of targets. The sight may be adjusted to accommodate the most usual type of targets to be encountered on the battlefield (fig. 119).

14. Egagement, Adjustment, and Disengagement

a. When placing fire on the target, the sight is used to aid the gunner in estimating ranges and rapidly adjusting fire on the target. To insure bringing fire to bear on the target with the minimum expenditure of rounds, fire is placed below the target and adjusted upwards or through it by visual observation of the cone of fire or strike of projectiles (fig. 120). Fire is maintained on the target for as long as necessary to neutralize or destroy it. When targets are attacked, a series of short bursts (2 to 3 seconds per burst) are employed. When long bursts are fired, care must be taken to prevent overheating of the gun barrels. The nature of the target and the time available for firing dictate which will be used. At times, a combination of both will produce the best results.

b. When firing rockets at a target, the gunner will normally fire a target marking rocket to adjust the rocket firing angle. This procedure, although not necessary for all rocket firings, will conserve the supply of rockets and insure the greatest destruction of the target with subsequent firings. Caution must be taken to avoid flying too close to the point of rocket impact.

c. The range at which the engagement of targets should be discontinued is equally as important as that for the opening engagement. Generally, disengagement is dictated by the target. As accuracy increases with a decrease in range, some targets may be fired upon at close ranges to insure destruction. In any event, disengagement of any targets should occur at a point that will insure that the aircraft does not overfly the target.

15. Effects of Velocity on Projectiles

a. The gunner must take into consideration the effects of velocity on small arms projectiles. This is more noticeable as the distance from the target increases. From figure 121 it can be seen that a projectile fired from the 7.62-mm machinegun, with zero elevation, will drop 16 meters at 1,000 meters in distance. Firing at targets 1,000 meters away at the same elevation as the weapons platform requires that the weapon be elevated 16.2 mils. The projectile reaches a height of 6 meters (19 feet) above the straight line connecting the weapon with the target. Firing at minus elevations reduces the maximum ordinate; hence a smaller sight angle is used. The conical effect of the rounds passing through the air changes from a generally circular pattern to an elliptical one (beaten zone) upon striking the ground. Firing

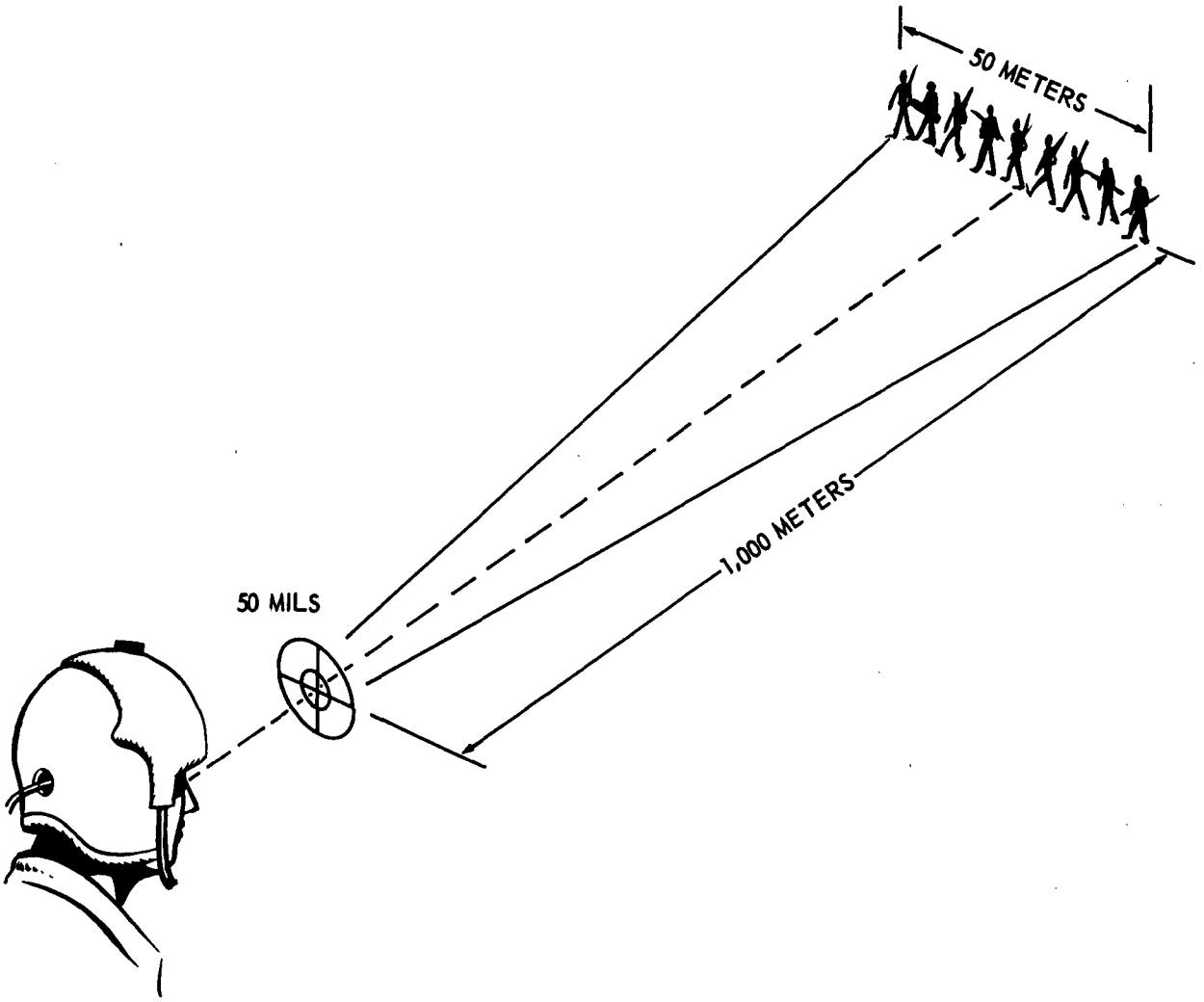


Figure 119. The sight reticle as a range finder.

tables for appropriate ammunition list dimensions not only for the beaten zone but for the ordinate as well. Trajectory charts can be obtained for any type of ammunition.

b. The effects of velocity on rockets is greater than for small arms projectiles. In addition, rockets are not as accurate as guns. Rockets provide their own propulsion, which may vary from 700 to 2,200 f.p.s. The firing of rockets from high speed helicopters increases the accuracy of the rocket, while rockets fired from a helicopter while it is at a hover or moving slowly through the air, reduces the accuracy of the rocket and requires more care and technique to get satisfactory results. Since rockets are fired at relatively larger angles in comparison to guns, more consideration must be given to the angle of sight. Figure 122 shows the larger sight angle required when firing rockets at 0° and at 20° angles, as opposed to rockets fired at a 50° dive angle. Allowances for wind and target motion is made in essentially the same manner as in any form of gunnery. Relative motion is compensated for by placing the

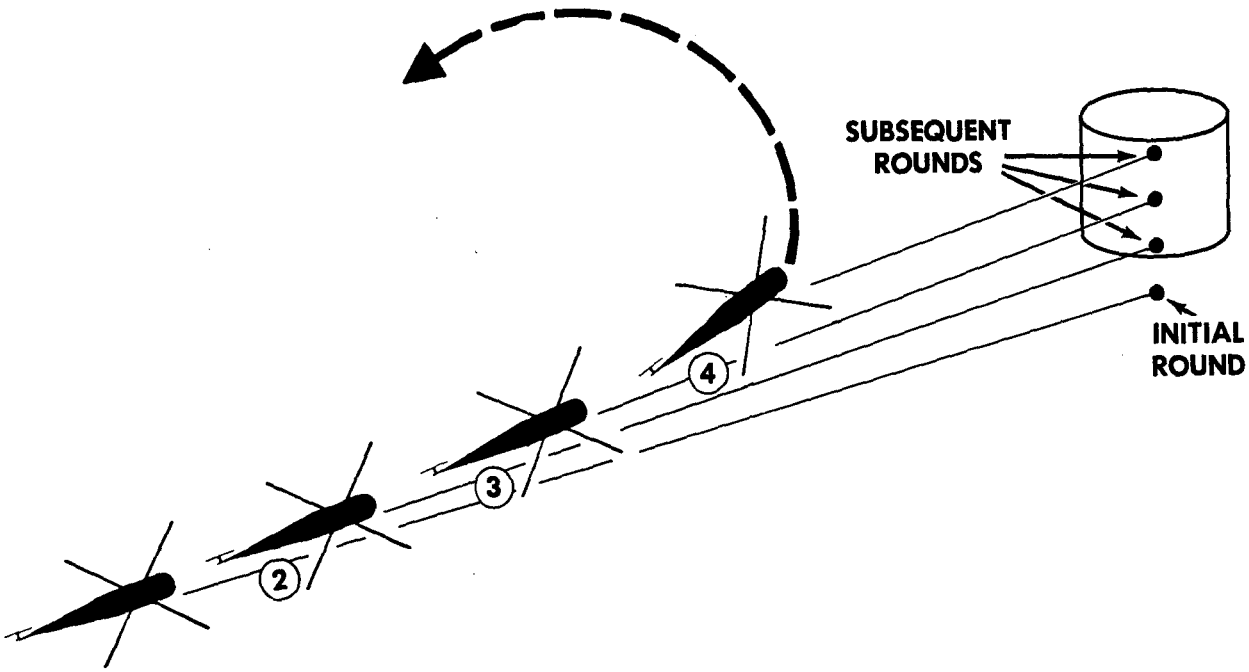


Figure 120. Fire adjustment.

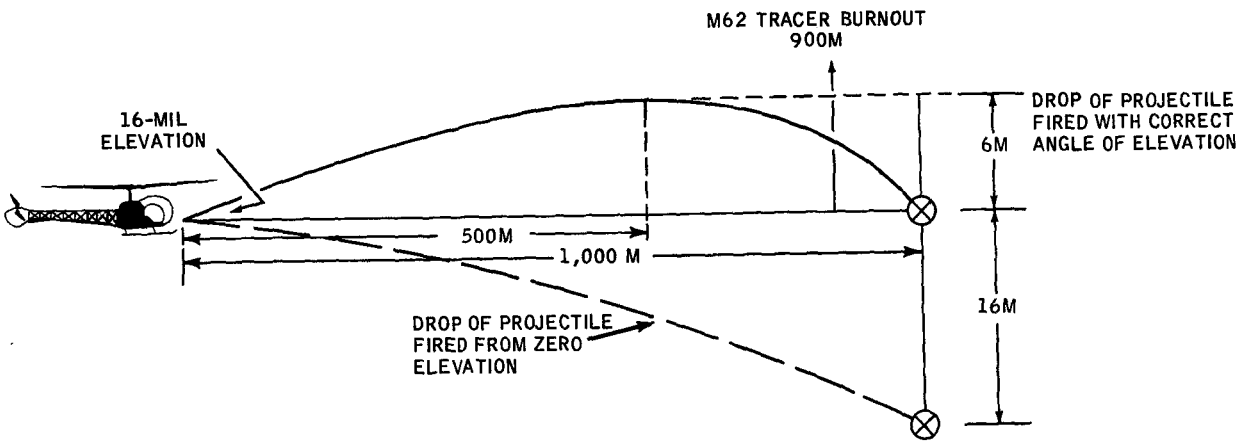


Figure 121. 7.62-mm machinegun fire.

point of aim the proper amount up the resultant vector of the two motions. The drift of the helicopter is imparted to the rocket. If possible, it is advantageous to make a rocket attack either upwind or downwind and thus eliminate the problem of compensating for lateral deflection.

16. Fire Distribution

a. The distribution of fire on point targets is in direct relation to the target and engagement time. Generally, fire should be placed on the most vulnerable area of the target.

b. The distribution of fire on area targets varies according to the casualties, damage, or degree of harassment desired and the weapons system used. The nature of the target often dictates the results that can be expected with a particular load of ammunition and weapons system. Generally, area targets may be taken under fire as illustrated in figures 123 through 129.

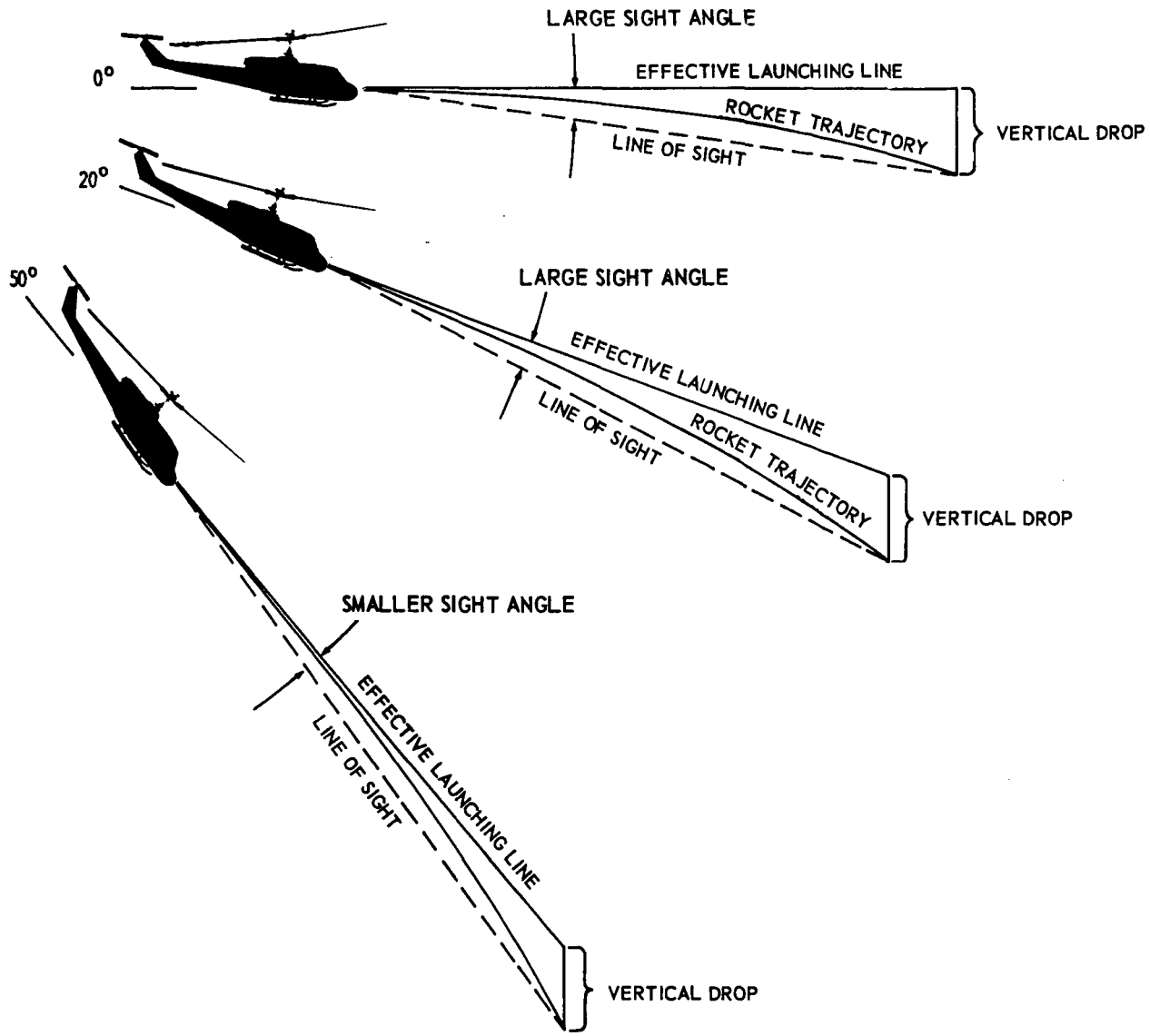


Figure 122. Dive (sight) angle in relation to vertical drop.

17. Observing and Reporting Information

The succeeding paragraphs cover background information essential to effective air observation and prescribes techniques to be used in reconnoitering from helicopters. The techniques of employing and observing from air platforms are important to aid in maximum battlefield life and continuity of the reconnaissance effort. This capability of the air cavalry troop of the armored cavalry squadron bridges a gap existing between ground elements of the squadron and the aerial surveillance and target acquisition platoon, division aviation battalion. Observation conducted from helicopters is not performed primarily from positions to the front of friendly troops. Helicopters located to the rear of the lead elements of the reconnaissance unit can extend the range of observation well to the front. The higher the platform, the farther the range observation. In this respect, the helicopter can be used for observation without becoming a lucrative target.

18. Map and Air Photograph Reading

a. A prerequisite to effective observation is proficiency in map and air photograph reading. The air observer must be able to distinguish objects on the ground and be able to place them on a map in relation to his own position and to transpose the observation into communicable terms of reference, such as required in spot reports.

b. Certain changes take place when the height of observation is changed. The observer is able to see more terrain from the higher altitude, but his sense of distance tends to be confused, and items that would normally attract his attention fade into the background.

c. Map reading training must develop skills in the following: map symbols, military symbols, scale, contours, grid systems, map orientation, map and airphoto reading, and correlation among the ground, maps, and airphotos. This is not to imply that a background knowledge of these subjects is sufficient. Observers must be proficient map and airphoto readers.

d. Training in recognizing and identifying military targets and locating them on maps should be stressed. Identification of military

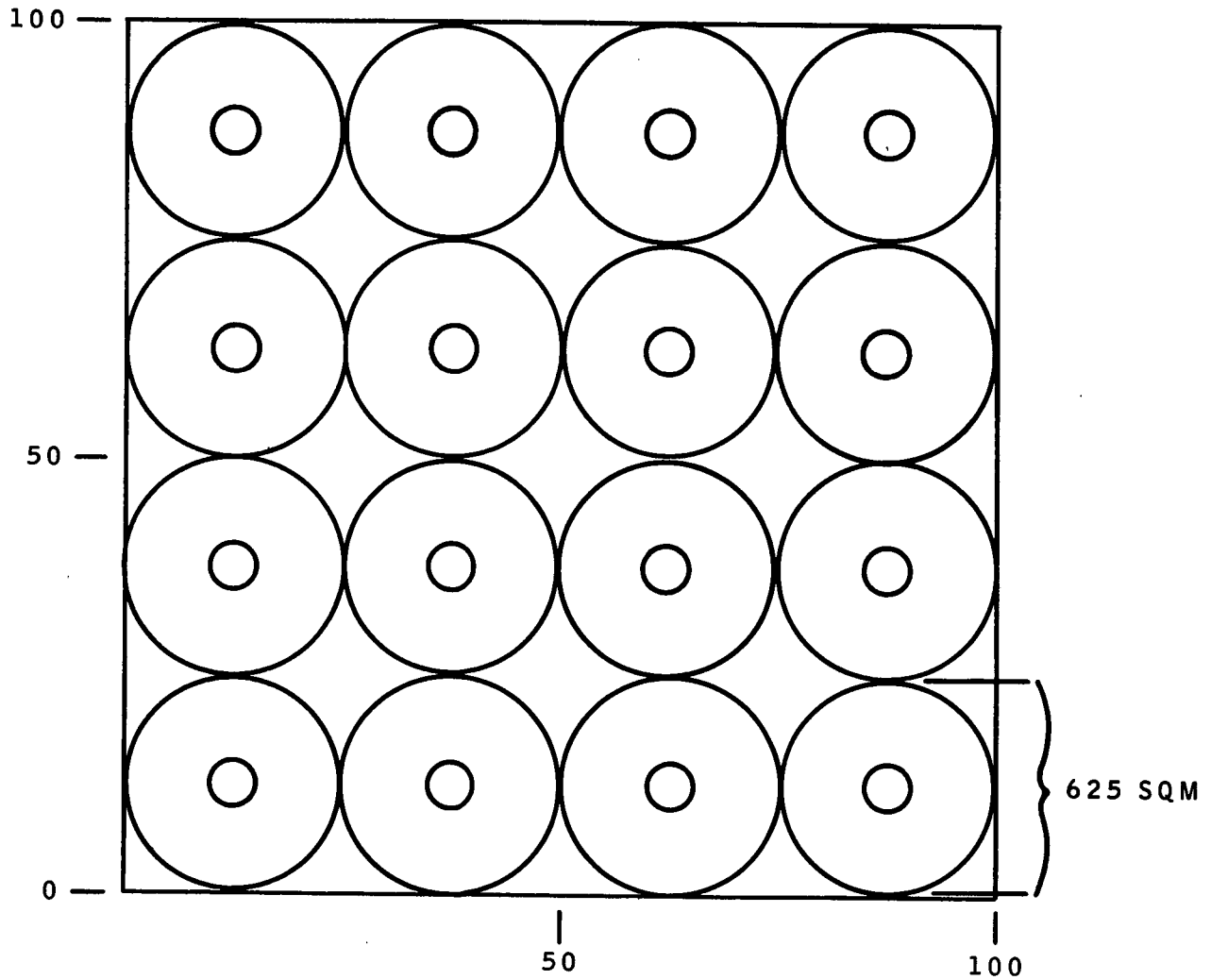


Figure 123. Distributing rocket fire on area target.

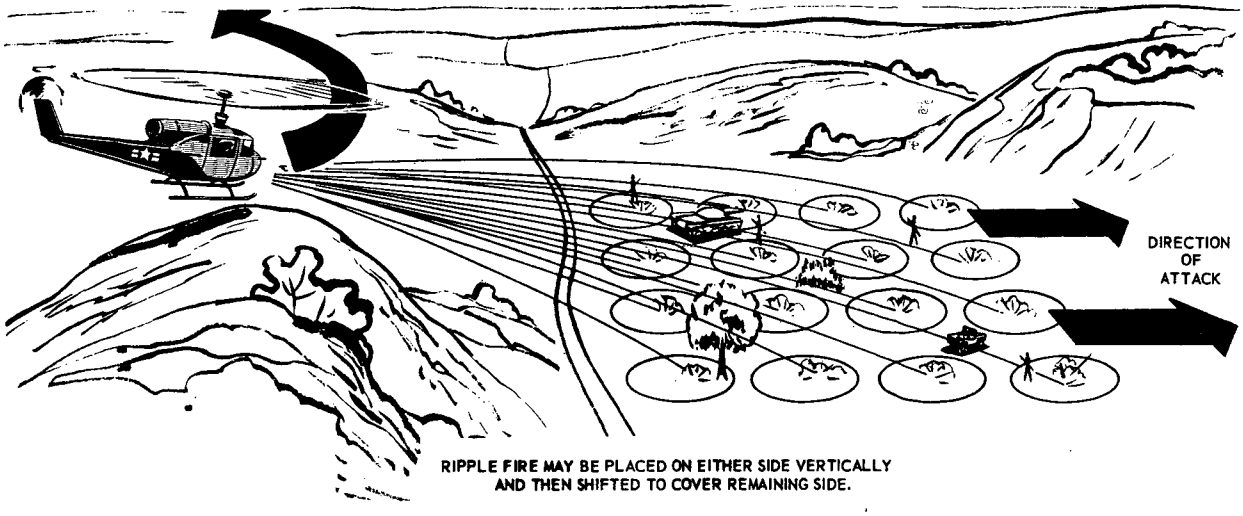


Figure 124. Tactical application of figure 123.

targets is aided by relating the targets to their *signature, silhouette* (shape), *size,* and *texture* (fig. 130).

19. Essentials of Aerial Observation

a. The observer is trained to recognize evidence of enemy activity, and to record and report information accurately. Indications of enemy activity are related closely to the techniques for identifying targets outlined above. They must be used together to portray as complete a picture of the area of operations as possible. Some indications of (or clues to) enemy activity are:

(1) *Dust.* Dust may indicate movement of vehicles or troops, or the firing of artillery, tanks, or rockets.

(2) *Smoke.* Smoke may indicate bivouac areas, messing areas, or weapons firing.

(3) *Incongruous objects.* Objects incompatible with terrain or background may indicate an installation or activity.

(4) *Tracks.* Tracks aid in locating vehicles, assembly areas, and gun positions, and bivouacs.

(5) *Other.* For detailed aerial observation techniques see FM 1–80.

b. The following common errors in observation may lessen the value of indications:

(1) Staring at one point or small area reduces the scope of vision, and may cause eyestrain.

(2) A disproportionate amount of time in searching obvious places for activity, such as roads and ridge lines, detracts from ability to see activity elsewhere.

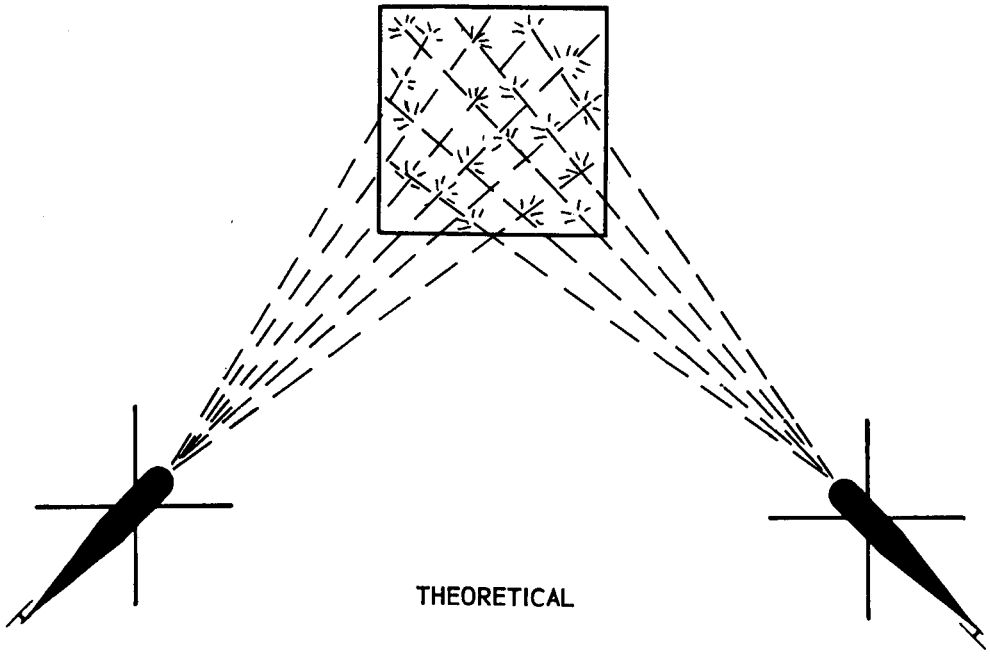
(3) Failure to identify the activity with a recognizable terrain feature makes relocation difficult.

20. Techniques of Aerial Observation

a. In performing reconnaissance missions from a helicopter, the observer continuously accomplishes the following:

(1) *Observer orientation.* The observer must at all times remain oriented on the ground and on his map. Ability to do this improves with practice and experience. The observer must orient himself and his map on clearly distinguishable terrain features. These terrain features will be retained as points of reference until they are no longer readily distinguishable, and then other features are used.

(2) *Terrain analysis.* The observer must continuously analyze the terrain. A hasty analysis can be obtained from a map or airphoto study. Such an analysis is essential to the observer's over-



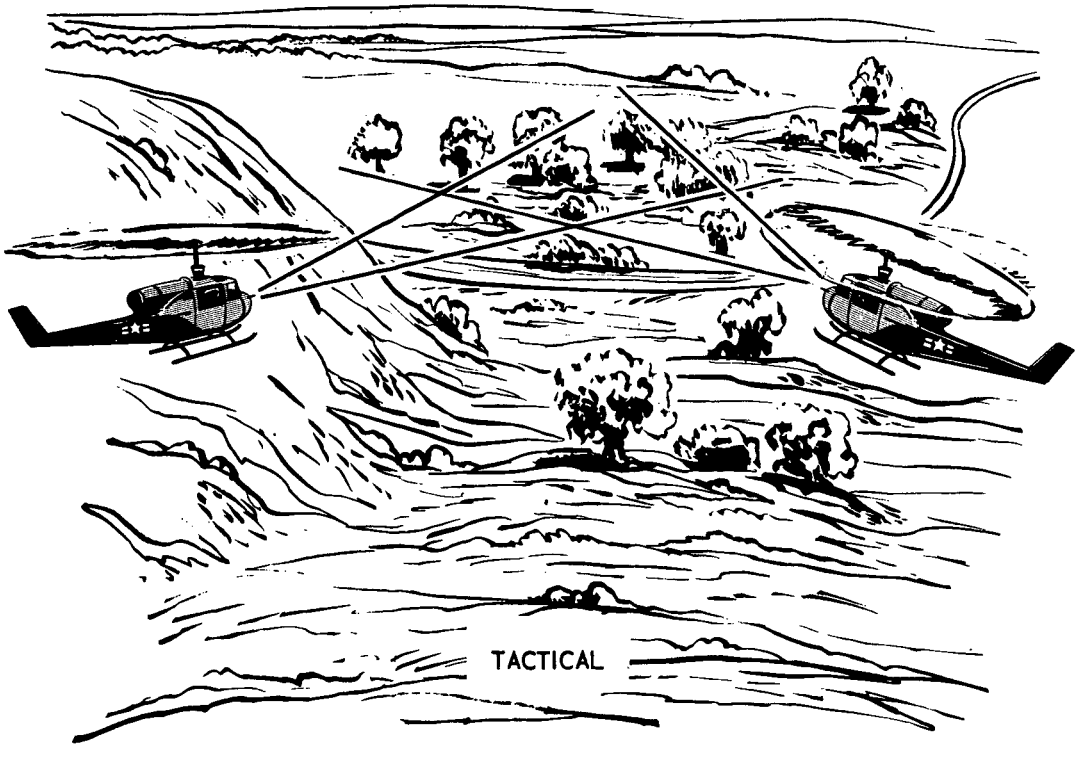


Figure 125. Rocket fire on area target by aero-weapons squad.

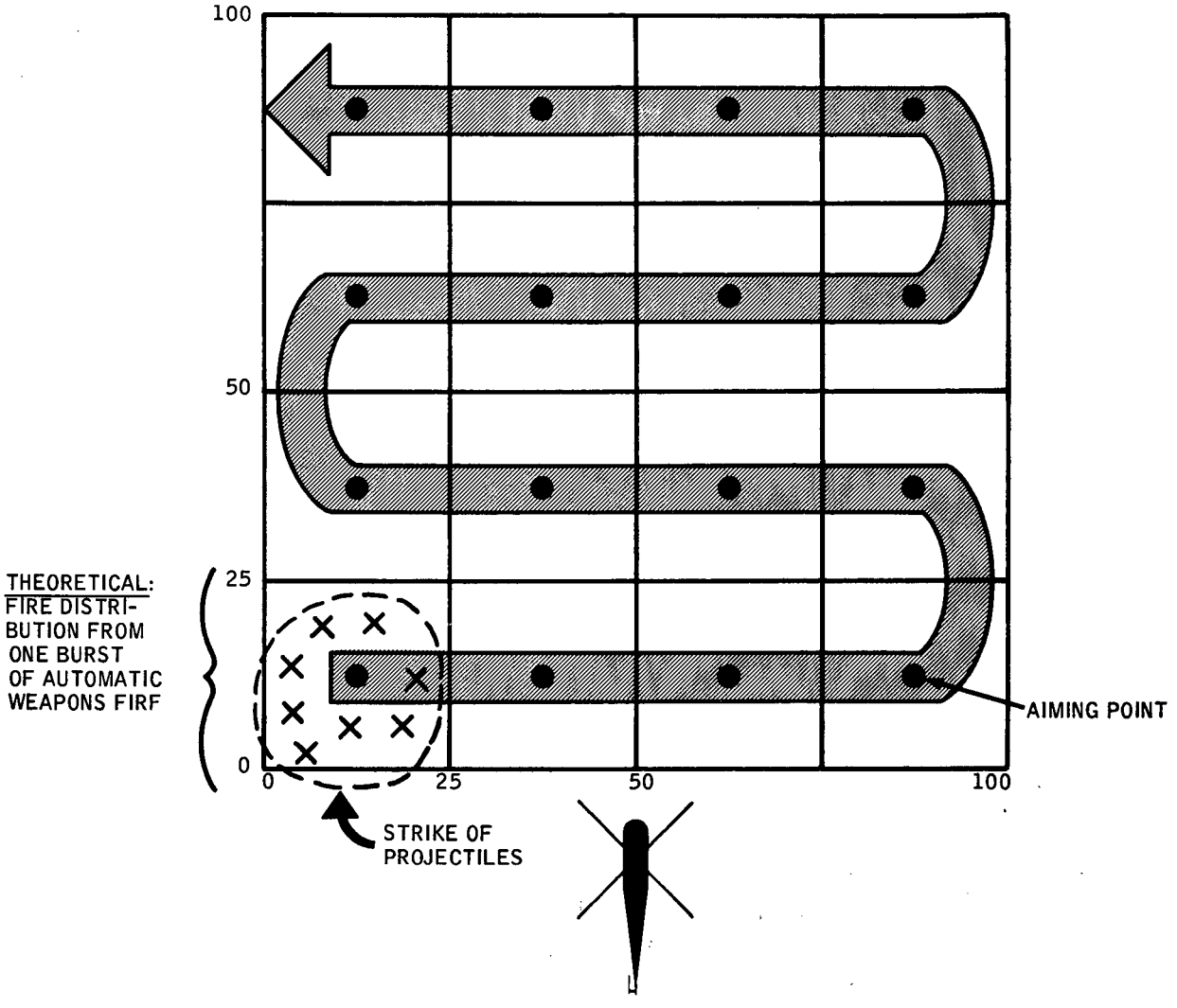


Figure 126. Distributing automatic weapons fire on area target.

all appreciation of the area of operations. When the observer is in the helicopter, he continues to analyze the terrain and determine critical terrain features, areas favorable to enemy activity, and terrain information that is of interest to the squadron. For example, when an aviator is flying over a hill into strange terrain, he may observe the terrain on the far side of the hill from several locations, evaluate the terrain, select terrain features for reference, and plan a route to cross the area. This constitutes a rapid system of continuous terrain evaluation.

(3) *Systematic area scanning.* The common errors in observation (para 19) can be minimized by systematically scanning the area. When a zone or area is being observed, it should be divided into subzones or subareas. Each of these subareas should be thoroughly searched before the observer moves on to another subarea. Figure 131 contains an example of a typical systematic search of an area.

(4) *Detailed study of specific objects.* During the process of systematic scanning, specific terrain features will warrant detailed study. To study the objects, the helicopter is flown at a low altitude to the vicinity of the terrain feature being observed. Depending upon the situation, the helicopter gains altitude to facilitate observation. The observer makes a detailed study, then directs the aviator to move, using low-level flying tech-

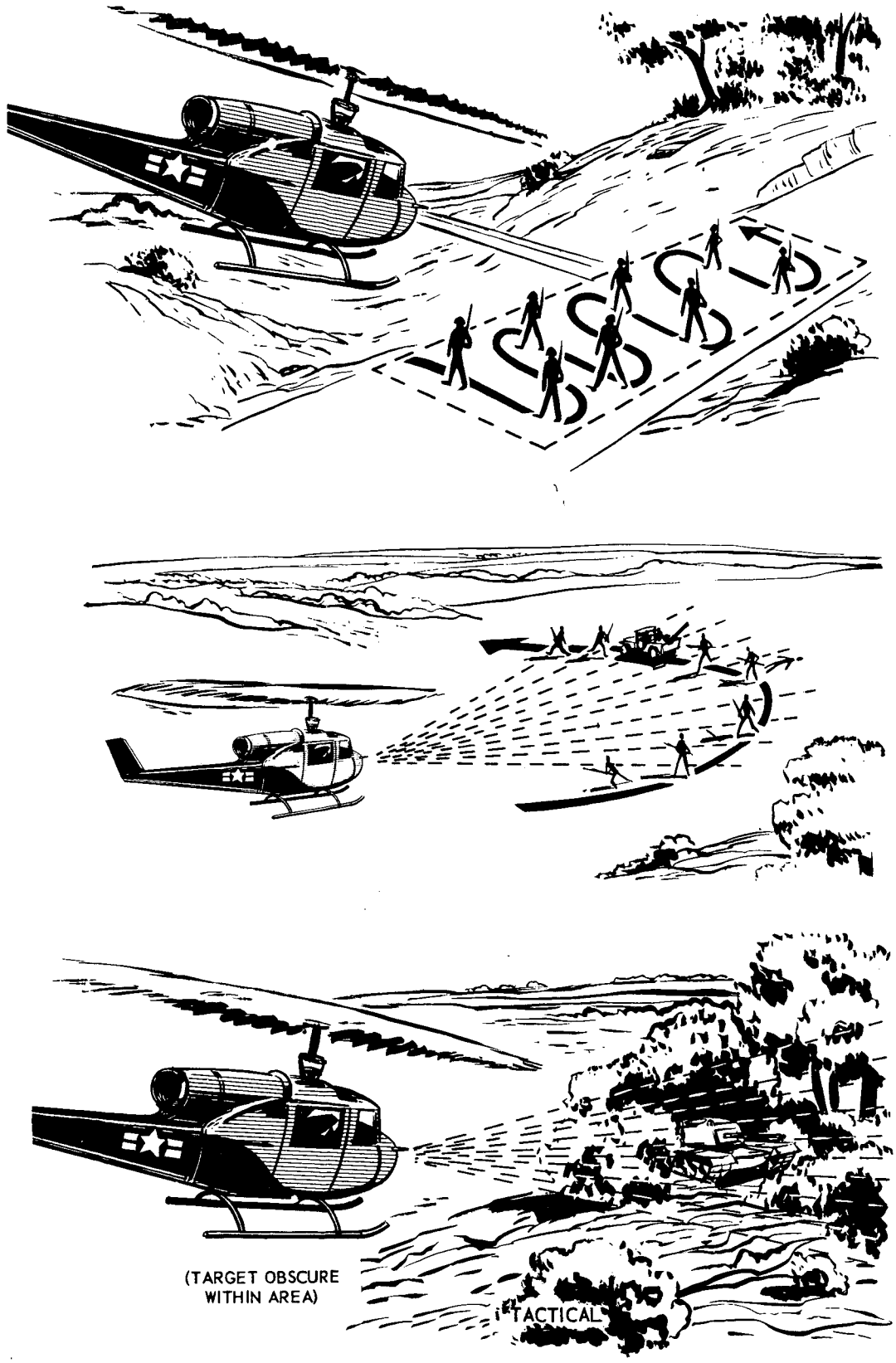


Figure 127. Tactical application of figure 126.

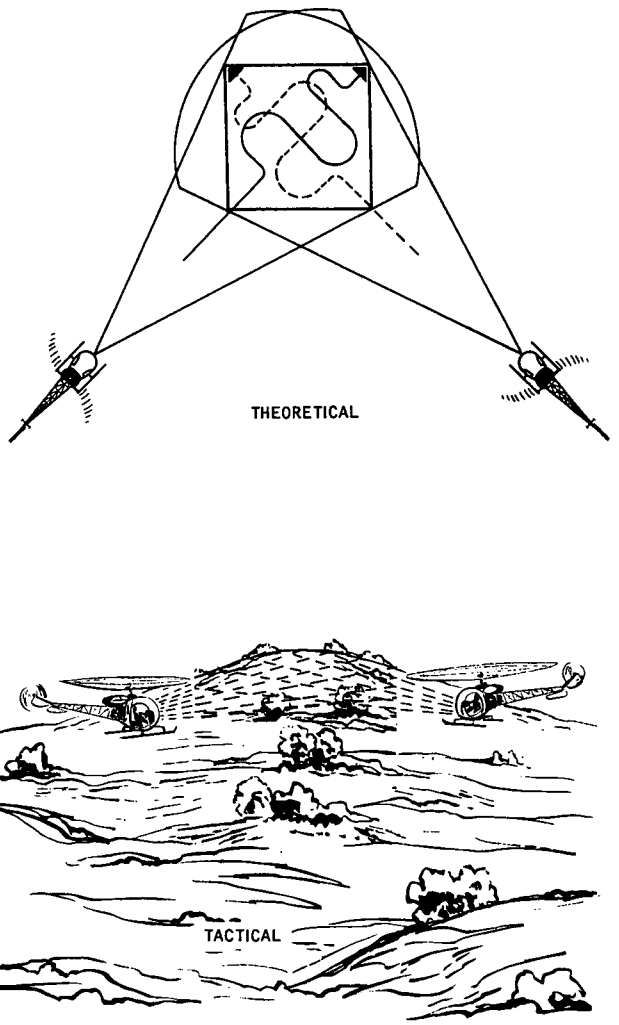


Figure 128. Automatic weapons fire on area target by an aero-scout team.

niques, to another location where he can gain another point of vantage. This process is continued until the observer is satisfied that he has obtained all of the information possible consistent with his mission.

(5) *Directing reconnaissance from higher altitude.* In some situations air and ground reconnaissance efforts can be controlled better from a higher altitude. The helicopter at the higher altitude is located at a point of vantage to direct other air vehicles and ground reconnaissance elements. At times the reconnaissance unit commander may place himself in the vehicle to command and control the operation.

b. While performing the above actions, the observer considers the following:

(1) *Altitude.* The helicopter, as an observation platform, affords certain advantages over ground observation. These advantages are gained by elevating the observation platform to the lowest altitude at which objects are readily identifiable. Figure 132 demonstrates the effect of altitude on observation. At ground level the observer sees only vertical views of the object. From an extremely high altitude he sees a plan view of the target. At altitudes between these two extremes the target is viewed in its three dimensions. This facilitates

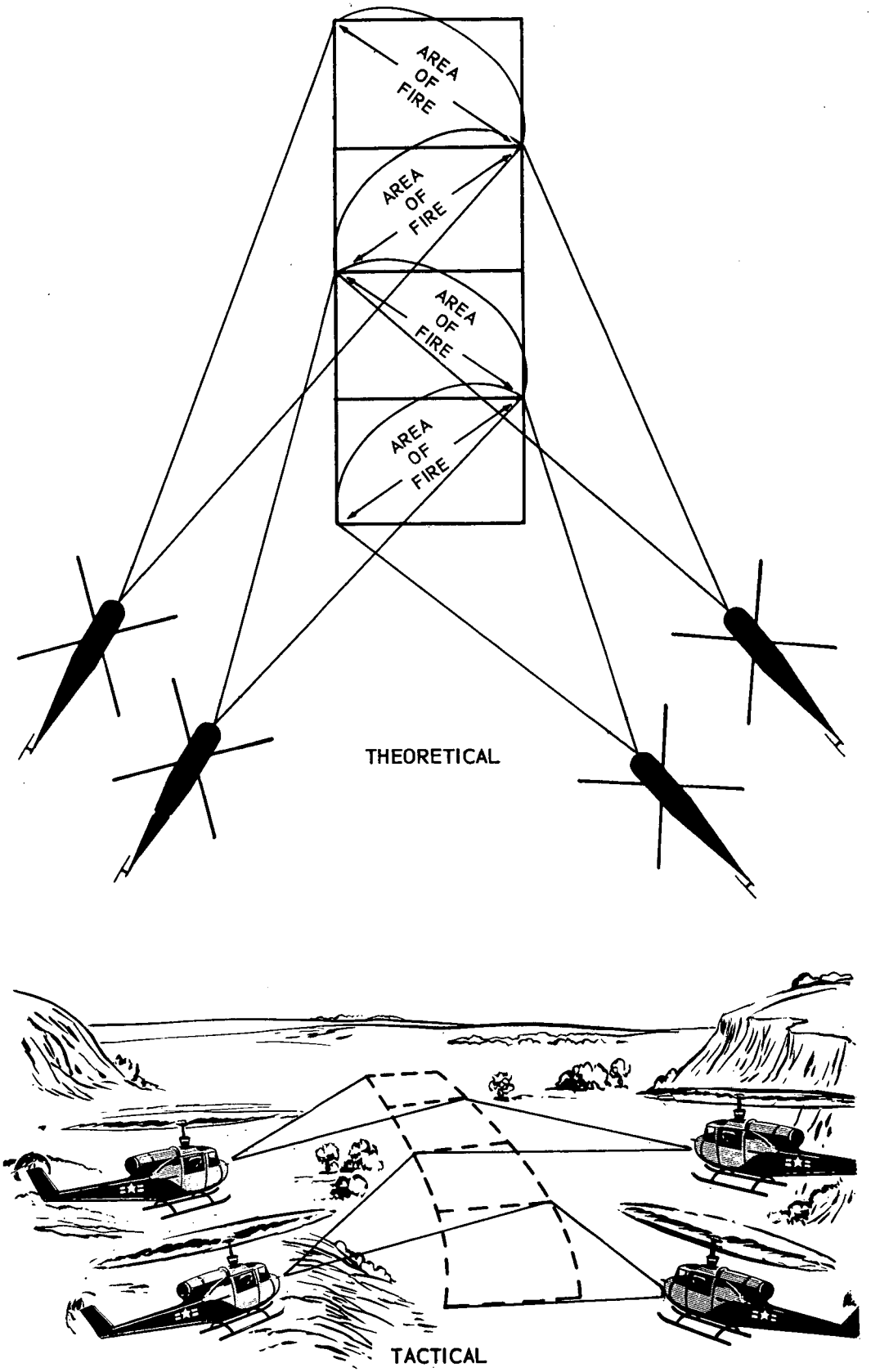


Figure 129. Automatic weapons or rocket fire on area target by the aero-weapons section.

identification. Hovering at high altitudes may present an unnecessary target and draw enemy fire. Therefore, observation should be conducted at the minimum altitude that will exploit the advantage of 3-dimensional viewing.

(2) *Direction of observation.* When observing a specific object or activity, the direction of flight is adjusted to obtain the best observing position. The best observing position will depend on the type of mission, the terrain, weather, speed of the helicopter and other factors. When observing an area or an activity, the observer should make his approach from different directions, and, as a passive defensive measure, must be careful not to repeat runs that traverse the same area. This is especially applicable against an enemy who uses camouflage effectively. The direction and altitude should then be changed until the observer is sure that he has obtained all available information.

(3) *Binoculars.* Binoculars can be used to enlarge a specific object. Care should be taken to avoid their overuse. Low-power binoculars should be used and observers trained not to brace themselves rigidly against the helicopter. If they are used continuously, the observer loses his sense of direction and his field of vision will be reduced.

21. Recording and Reporting Information

Procedure for recording information must be included in unit SOP. Such procedures, to be effective, should be simple, concise, and rapid. Maximum use will be made of spot reports. See figure 13 for an example of a spot report.

SIGNATURE

The dust cloud is the signature of these tanks.

SILHOUETTE (SHAPE)

Both are tracked vehicles, but they are identified by silhouette and shape.

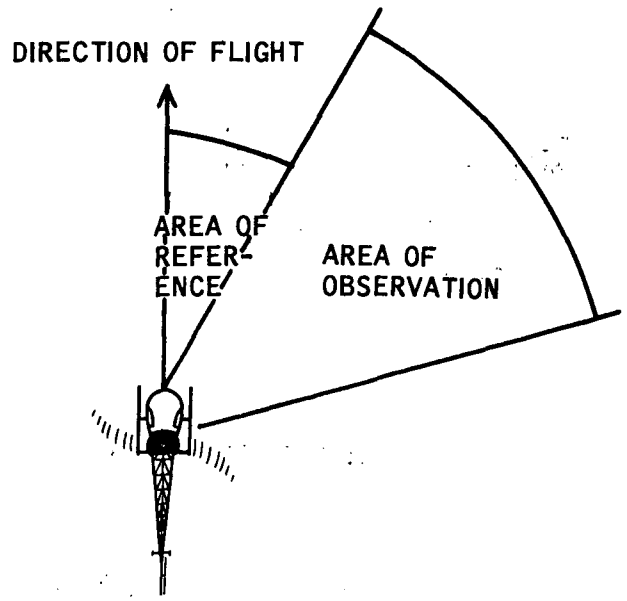
SIZE

Both trucks have the same shape but different size.

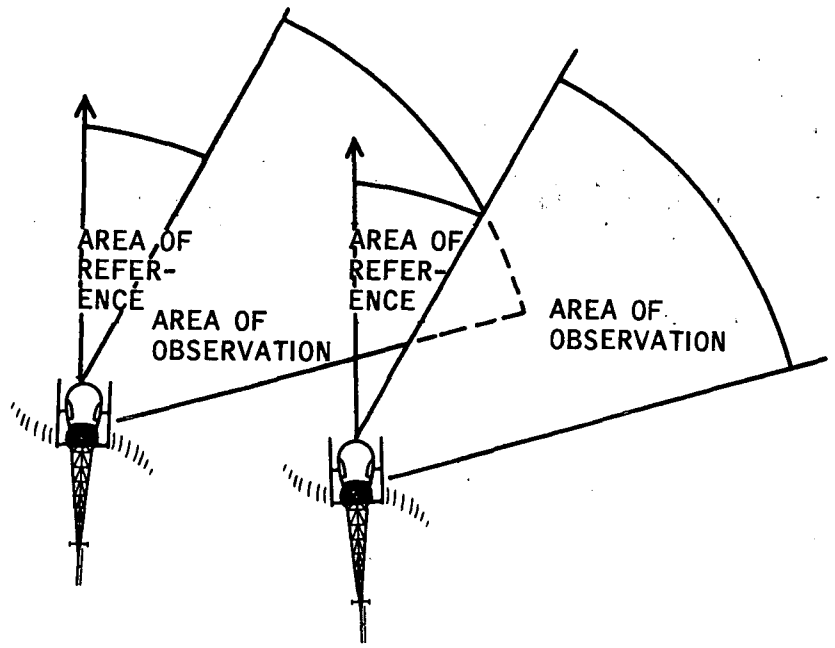
TEXTURE

The tank in the woods is identified by the difference in texture between the woods and the armor plate.

Figure 130. Identification of military targets.

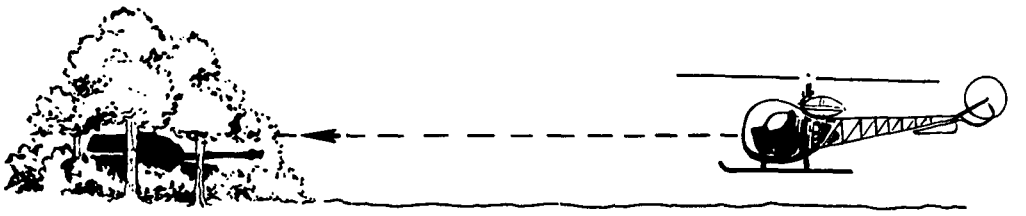


A. Single aerial vehicle. The observer selects progressive reference points within the area of reference. Thus he maintains a sense of orientation in relation to the direction of flight and his map. He scans the area of observation for likely enemy activity or specific data.

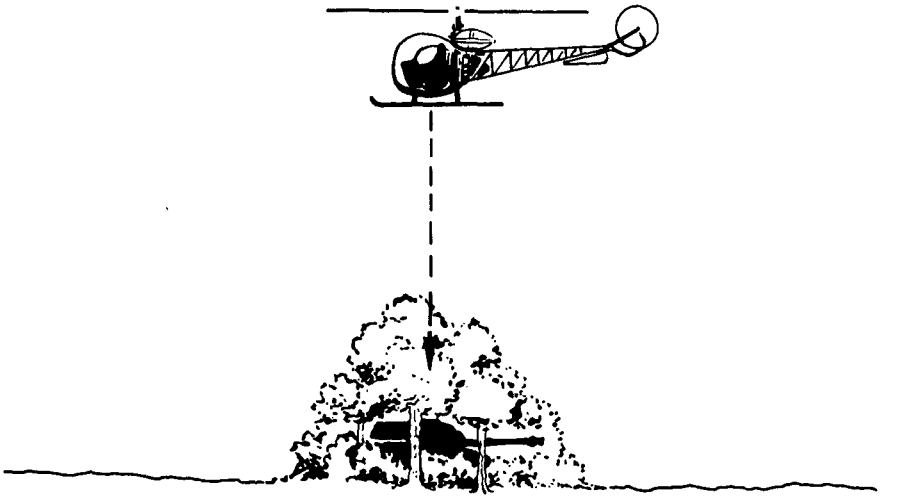


B. Aerial vehicle team. In many situations two aerial vehicles will be operating together. In this situation it is possible to overlap the areas of observation for more complete coverage.

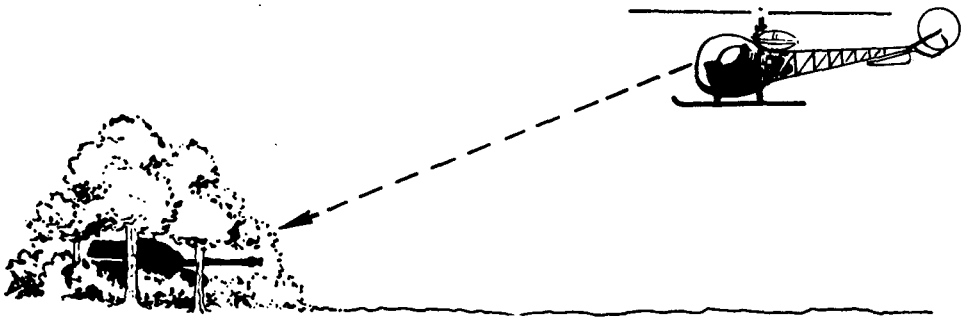
Figure 131. Systematic area scanning.



A. Observation of a target from too low a level presents only a vertical view, which is likely to be obstructed by camouflage.



B. Observation from too high an altitude presents only a plan view of the target and is subject to overhead camouflage.



C. Observation should be made from an altitude where all three dimensions of the target are apparent and where camouflage can be penetrated.

Note. The dashed lines in these sketches represent line of sight for observation only. These sketches are not to scale. Observation techniques must be consistent with the enemy situation.

Figure 132. Effect of altitude on aerial observation.

APPENDIX IV

EXAMPLES OF OPERATION ORDERS

Examples 1, 2, 3, and 4 are located in back of manual.

APPENDIX V

STANAG 2079
REAR AREA SECURITY AND REAR AREA DAMAGE CONTROL
DETAILS OF AGREEMENT

GENERAL

1. It is agreed that the NATO Armed Forces will establish a system providing for Rear Area Security and Rear Area Damage Control based on the principles and instructions contained in the succeeding pages and Annexes 'A' and 'B'.

SCOPE

2. This agreement is intended to provide for such planning as must be done by Field Armies, Communications Zones and/or Sections, and compatible commands, and units and installations within these commands. Whilst Rear Area Damage Control covered herein deals only with damage to military installations, it must be realized that damage to any civilian installation will have a repercussion on the military situation. It is emphasized that this agreement does not grant any additional powers to the NATO Forces with respect to civilian authorities and civilian responsibilities. Cooperation with national military and civilian officials is essential at all levels and will be accomplished through the national military authorities.

DEFINITIONS

3. The following definitions will be used in dealing with these subjects:

TERM	*DEFINITION*
Rear Area	For the purpose of this STANAG, Rear Area includes: a. The Land Communications Zone. b. The rear of the Land Combat Zone in which are located the bulk of the logistical installations, (Army Service Area).
Rear Area Security	The measures taken prior to, during and/or after an enemy airborne attack, sabotage action, infiltration, guerrilla action and/or initiation of psychological or propaganda warfare to minimize the effects thereof.
Rear Area Damage Control	The measures taken in military operations prior to, during and after a mass destruction attack or natural disaster, to minimize the immediate effects thereof.

GENERAL PRINCIPLES

4. The following general principles concerning the preparation, use and format of plans and orders are applicable to both Rear Area Security and to Rear Area Damage Control:

a. For the Field Army, Communications Zone, Sections of the Communications Zone, and comparable Commands, it is desirable that

responsibility for rear area security and for rear area damage control be combined in a single operation.

b. An effective system for rear area security, rear area damage control and administrative support must possess the following characteristics:
   (1) A definite fixing of geographic responsibilities for these activities.
   (2) A single commander responsible for all three functions in the same geographic area.
   (3) A control organization which prevents conflict and competition between agencies responsible for rear area security, rear area damage control, and administrative support and includes an operation centre (and alternate operations centre if required) for all three functions and the necessary communications.
   (4) Provision for prompt integration of transit or ledger units into plans.

c. The commander's plan for rear area security and for rear area damage control should be included in appropriate paragraphs of an Operations Order and/or appropriate annexes.

d. Close coordination of plans for rear area security and rear area damage control is necessary at all levels.

e. Full use should be made of automatic data processing equipment and other electronic and communications equipment to receive, collate and disseminate intelligence, radiological data including fall-out and other data, and to assist in the control of rear area security and rear area damage control operations.

REAR AREA SECURITY

5. In addition to the general principles outlined in paragraph 4, the following principles are applicable in the planning for rear area security:

a. The objective of rear area security planning is to prevent enemy interference by surface or airborne forces with administrative support operations and to destroy the hostile forces involved.

b. Rear area security depends upon—
   (1) Troops assigned the primary mission of rear area security (e.g. national territorial troops, combat troops).
   (2) Other combat troops located temporarily within the area.
   (3) Service troops assigned within the area.

c. All units are responsible for their local security, but, normally, service troops will not be allotted any security task other than that of their own installation.

d. Tasks of other than service troops may include, but are not necessarily limited to—
   (1) Relief and rescue of attacked installations and units.
   (2) Route patrolling and convoy protection.
   (3) Surveillance of possible redoubt areas of guerrillas or infiltrators.
   (4) Planning for defense of possible drop and landing zones.
   (5) Finding, fixing and destroying enemy forces operating in rear areas.

6. Annex 'A' outlines, in the Operation Order format, those items of basic information (*other* than that which would normally go into the order) that should be included in a typical rear area security operations plan or order. This is not to be construed as a complete order, nor is the information shown to be considered all of the possible additional information that might be required.

REAR AREA DAMAGE CONTROL

7. In addition to the general principles outlined in paragraph 4, the following principles are applicable in the planning for Rear Area Damage Control:

a. The army service area and communications zone contains lucrative targets for attack by mass destruction weapons. Detailed plans are therefore required to minimize the damage effects of such an attack.

b. Rear area damage control plans are prepared, based upon an assumed degree of damage, to ensure provisions of the means for minimizing personnel casualties and damage to the installations resulting from enemy action or natural disaster. They are based upon the existing command organization; the scope of the plans depending on the size of the area, location and size of installations and communication routes and facilities. Subordinate commanders will prepare detailed plans based upon the overall plan.

c. Rear Area damage control measures provide for, but are not necessarily limited to—

(1) Prior to an attack:

(a) Clear lines of authority and responsibility down to the lowest level.

(b) Adequate communications and warning systems to include fallout warning.

(c) Proper dispersion within and between installations continuously planned and executed.

(d) Preparation of necessary plans and SOP, to include reporting of information required for post-strike analysis.

(e) Organization, equipping, and training of all personnel in rear area damage control operations.

(f) Appropriate use of cover and concealment.

(g) Allocation, organization, and full utilization of available transportation net and equipment, to include alternate plans.

(h) Deception measures.

(2) During and after an attack:

(a) Rapid assessment of the damage and its immediate action on operations.

(b) Control of personnel and traffic either in coordination with the local civilian authorities or by the military when essential for continued military operations when the civilian police are inoperative.

(c) Fire prevention and fire fighting.

(d) First aid and evacuation of casualties.

(e) Protection against chemical, biological, and radiological hazards.

(f) Emergency supply of food, clothing and water.
(g) Explosive ordnance reconnaissance and disposal.
(h) Initiation of salvage operations.

d. Available service units will normally furnish personnel, equipment and specialized assistance to carry out rear area damage control measures. The number of labour and rescue squads each unit will furnish will be prescribed in the current rear area damage control plan.

e. Fallout from an atomic detonation poses a serious threat to the safety of personnel and the utilization of materiel and may be a limiting factor in the planning for and conduct of these operations (e.g., exposure time may be critical).

8. Annex 'B' outlines, in the Operation Order format, those items of basic information (*other* than that which would normally go into the order) that should be included in a typical rear area damage control plan or order. This is not to be construed as a complete order, nor is the information shown to be considered all of the possible additional information that might be required.

REAR AREA SECURITY

OPERATION ORDER HEADING

(Annex A)

1. *SITUATION*

In the discussion of enemy capabilities, the following should be emphasized in a rear area security order (this list is not in any way limiting nor exhaustive) :

Enemy atomic capability.
Other enemy capabilities to
—assault with airborne elements;
—mount a guerrilla attack;
—execute air or guided missile attacks;
—execute sabotage or subversive missions;
—employ psychological warfare;
—execute a combination of these.

2. *MISSION* (No special instructions)

3. *EXECUTION*

In addition to the normal information given in this paragraph, a clear definition of the command and control organization should be given, based on existing facilities. Under the sub-paragraph dealing with "Coordinating Instructions":

a. Reference should be made to existing applicable plans, i.e., Anti-Tank Plan, Anti-Airborne Plan, etc.

b. A requirement should be established for subordinate commanders to submit their plans.

c. Necessary coordination to be effected with adjacent commanders, territorial commanders, and civilian authorities (through the appropriate territorial commanders) should be specified.

4. *ADMINISTRATION AND LOGISTICS* (No special instructions)

5. *COMMAND AND SIGNAL* (See paragraph 4b, DETAILS OF AGREEMENT)

REAR AREA DAMAGE CONTROL OPERATION ORDER HEADING

(Annex B)

1. *SITUATION*

In the discussion of enemy capabilities, the following should be emphasized in a rear area damage control order (this list is not in any way limiting nor exhaustive):

Enemy capabilities to execute nuclear attacks and conventional Air strikes without warning.

Assumption that the enemy may render one or more of the command areas helpless.

In the discussion of friendly forces, state what probable assistance (non-specialized) might be expected from adjacent areas, troop units in the area, and civilian agencies. It is recommended that this be stated even when such information is negative.

2. *MISSION* (No special instructions)

3. *EXECUTION*

In sub-paragraph *a* (normally the concept of operations), state the general concept of organizing for rear area damage control, and the employment of troops, facilities and equipment to render assistance to a damaged area.

From sub-paragraph *b* onwards, by separate sub-paragraphs, annex and/or overlay, establish the organization by grouping of units, assignment of boundaries and specific tasks to each of the next subordinate headquarters concerned, to include but not limited to:

Responsibility, in order of priority, for the assumption of control of operations in the event one or more of the headquarters becomes inoperable.

Responsibility for providing troops, equipment and facilities to support operations of other sub-divisions and/or installations.

Indicate the number, allocation and type of control forces (e.g. light rescue, heavy rescue, labour, medical, traffic control, fire fighting, decontaminating) that will be trained, equipped and available.

In the final sub-paragraph (normally coordinating instructions), necessary coordination to be effected with adjacent commanders, territorial commanders, and civilian authorities (through the appropriate territorial commanders) should be specified.

4. *ADMINISTRATION AND LOGISTICS*

In the sub-paragraph dealing with materiel, include information on the location of supplies especially needed to support this type of operation.

In the sub-paragraph dealing with evacuation and hospitalization—

State the current policy pertaining to utilization of civilian medical facilities.

Designate collecting point and/or aid stations (with alternate locations provided for) to receive and classify casualties.

Provide for the extra load to be handled by hospital and evacuation facilities and state provisions required to augment local facilities for an emergency.

In the sub-paragraph dealing with personnel, include instructions for providing for mass burials.

In the sub-paragraph dealing with Civil Affairs/Military Government, it is essential that in occupied enemy territories with CAMG organizations, coordination be effected to ensure support for rear area damage control operations.

5. *COMMAND AND SIGNAL* (See paragraph 4b., DETAILS OF AGREEMENT).

APPENDIX VI

BATTLE DRILL

1. Purpose

The purpose of battle drill is to provide a series of preplanned maneuvers by which small armored cavalry units can be thoroughly trained and which serve to accelerate combat action, optimize teamwork, and reduce to a minimum the orders necessary to employ small units effectively under fire.

2. Training

a. Battle drill includes single-situation tactical exercises for squads, sections, and platoons. The purpose of battle drill training is to practice movements in combat formations, changes in formations, and actions in specific combat situations. Battle drill includes the movement toward and assault of specific objectives, and necessary defensive movements.

b. Battle drill training requires instruction and continuing practice in—

(1) Crew drill.
(2) Dismounted combat formations.
(3) Mounted combat formations.
(4) Arm and hand signals, flag signals, and other visual signals as may be prescribed by unit SOP.
(5) Mechanized infantry dismounted formations.
(6) Tank and mechanized infantry integrated formations.

3. Signals

a. Flag Signals. Flag kits containing red, green, and yellow flags are used for certain signals that are standardized in FM 21–60. Additional signals may be devised in which flags are used singly or in combination. When using flag signals the preparatory command consists of the display of flags; the command of execution is the withdrawal of flags from display.

b. Arm and Hand Signals. Arm and hand signals used in battle drill are prescribed in FM 21–60.

c. Other Signals. Other visual and sound signals used should be only those included in the unit SOP to avoid confusion.

4. Battle Drill

a. General. Armored cavalry units do not adapt to stylized combat formations as readily as tank and mechanized infantry units; however, battle drill for armored cavalry units is desirable for obtaining the objectives stated in paragraph 1.

b. Formations. Combat formations for the armored cavalry platoon are shown in figures 133 through 145. Similar formations for armored cavalry troops can be devised.

5. Missions

Battle drill for armored cavalry units is based on the following missions:

a. Reconnaissance. In accomplishment of reconnaissance missions, the Y formation and its variants are applicable (figs. 137–139).

b. Attack Without Delay. The platoon leader may launch an attack from any formation, four examples of which are described below. (In each example, the support squad goes into fire position, and the squad leader reports at once to the platoon leader for fire instructions.)

(1) *Command:* (PLATOON) ATTACK, TANKS AND RIFLES MOVE RIGHT (LEFT) (fig. 140).
(2) *Command:* (PLATOON) ATTACK, TANKS MOVE RIGHT (LEFT).
(3) *Command:* (PLATOON) ATTACK, RIFLES MOVE LEFT (RIGHT), TANKS COVER. In both (2) and (3) above, the two scout squads halt

and observe, and each scout squad leader requests instructions. The platoon leader may order these squads, together or individually, to either—

(*a*) Act as reconnaissance and guide for the maneuvering force.

(*b*) Join the base of fire.

(*c*) Protect an exposed flank by observation and fire.

(4) *Command:* (PLATOON) FRONTAL ATTACK, RIFLES (TANKS) UP, (RIFLES AND TANKS ABREAST). The T formation is taken and modified as required (figs. 141–143).

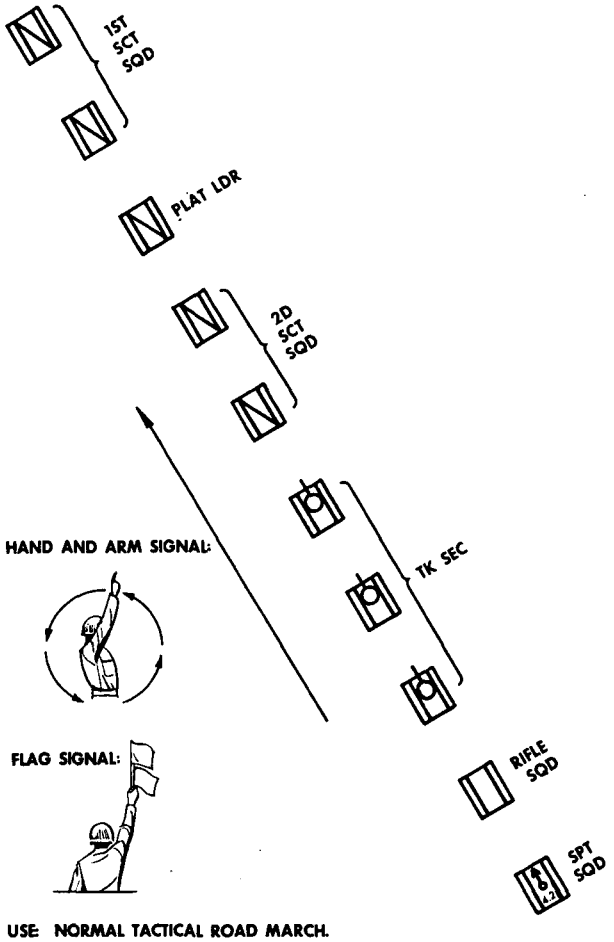


Figure 133. Armored cavalry platoon, normal column formation.

c. Hasty Defense.

(1) The command should be TEE FORMATION, DEFEND IN PLACE or TEE FORMATION, ON THAT HILL, DEFEND (fig. 144). After the initial formation is taken, the platoon leader makes adjustments as required. The support squad goes into position quickly.

(2) From column formation the command is DEFEND IN PLACE, ACTION LEFT (RIGHT). On this command—

(*a*) Tanks place immediate fire in the enemy direction.

(*b*) The rifle squad fights on foot, action left (right), and goes into fire position. Armored personnel carrier caliber .50 machinegun is manned by the driver after positioning the carrier in defilade.

(*c*) The support squad and scout squads go into fire position and immediately engage enemy targets.

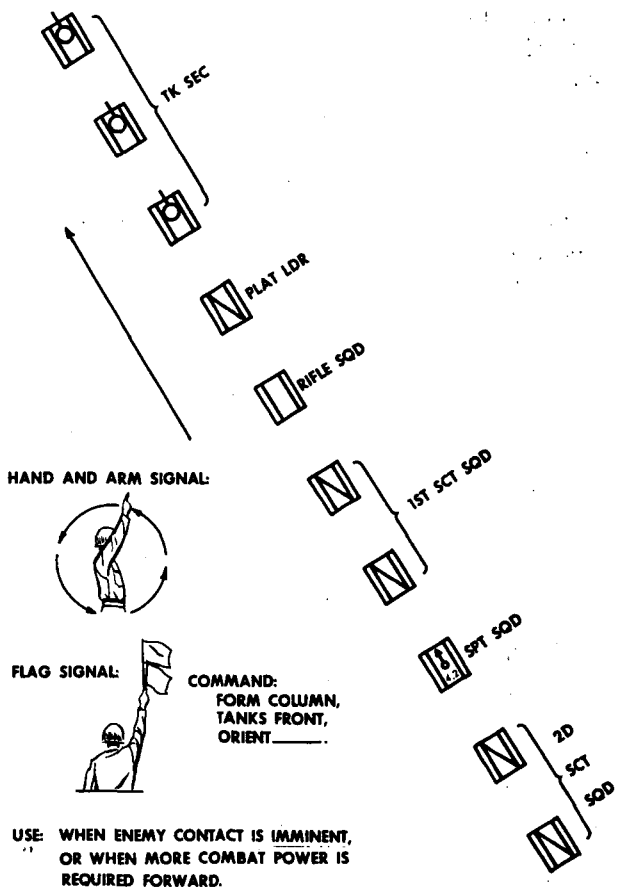


Figure 134. Armored cavalry platoon, column formation, TANKS UP.

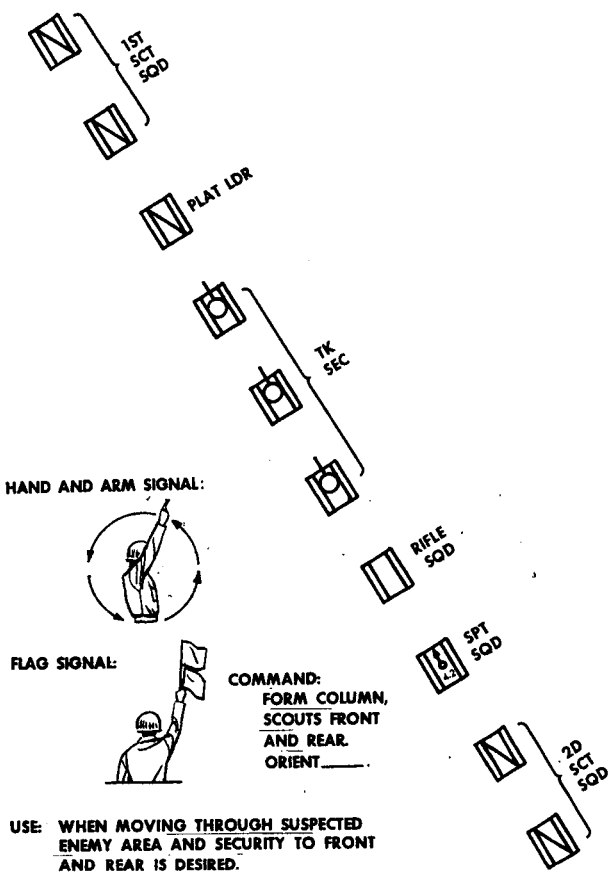


Figure 135. Armored cavalry platoon, column formation, SCOUTS FRONT and REAR.

d. Delay. Having occupied a delaying position, elements withdraw to the next selected position on the platoon leader's order. Conduct of a delaying action is discussed in paragraphs 61 through 69.

e. Securing a Critical Terrain Feature. Using a Y formation elements are placed on main routes of enemy approach. Initial dispositions are modified as required. The support squad registers on critical points along routes of approach. The rifle squad is positioned so that it can be moved to support either element.

f. Air Defense. Normally the following rules for engagement apply:

(1) Attack aircraft identified as hostile.
(2) Attack aircraft committing a hostile act.

Unless otherwise directed, hostile aircraft within range of the caliber .50 machinegun should be engaged. Surveillance, reconnaissance and liaison aircraft; troop carriers; helicopters; and drones are typical targets. If enemy aircraft are sighted, vehicles will take advantage of any nearby cover and, in any event, gain adequate distances and intervals. If attacked in the open, vehicles will keep moving, taking all evasive action possible, and engage the attacking aircraft.

g. Platoon Lager. The command should be PLATOON LAGER (fig. 145).

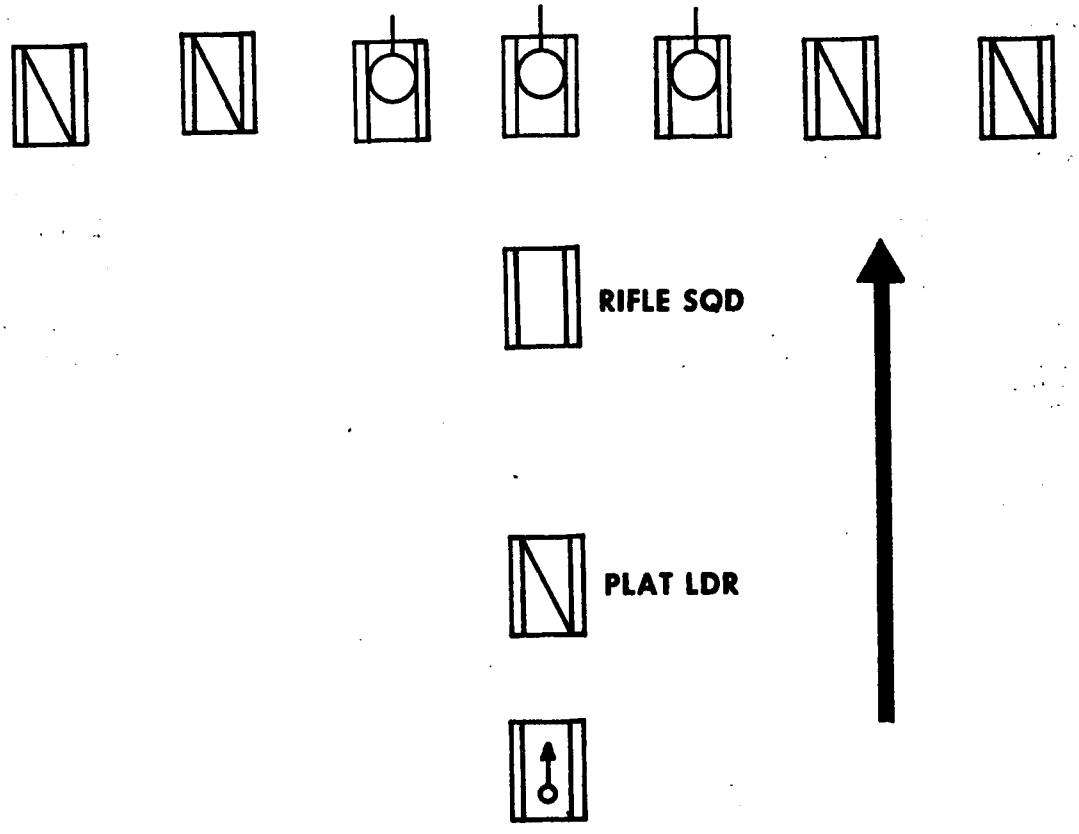


Figure 136. Armored cavalry platoon, T formation.

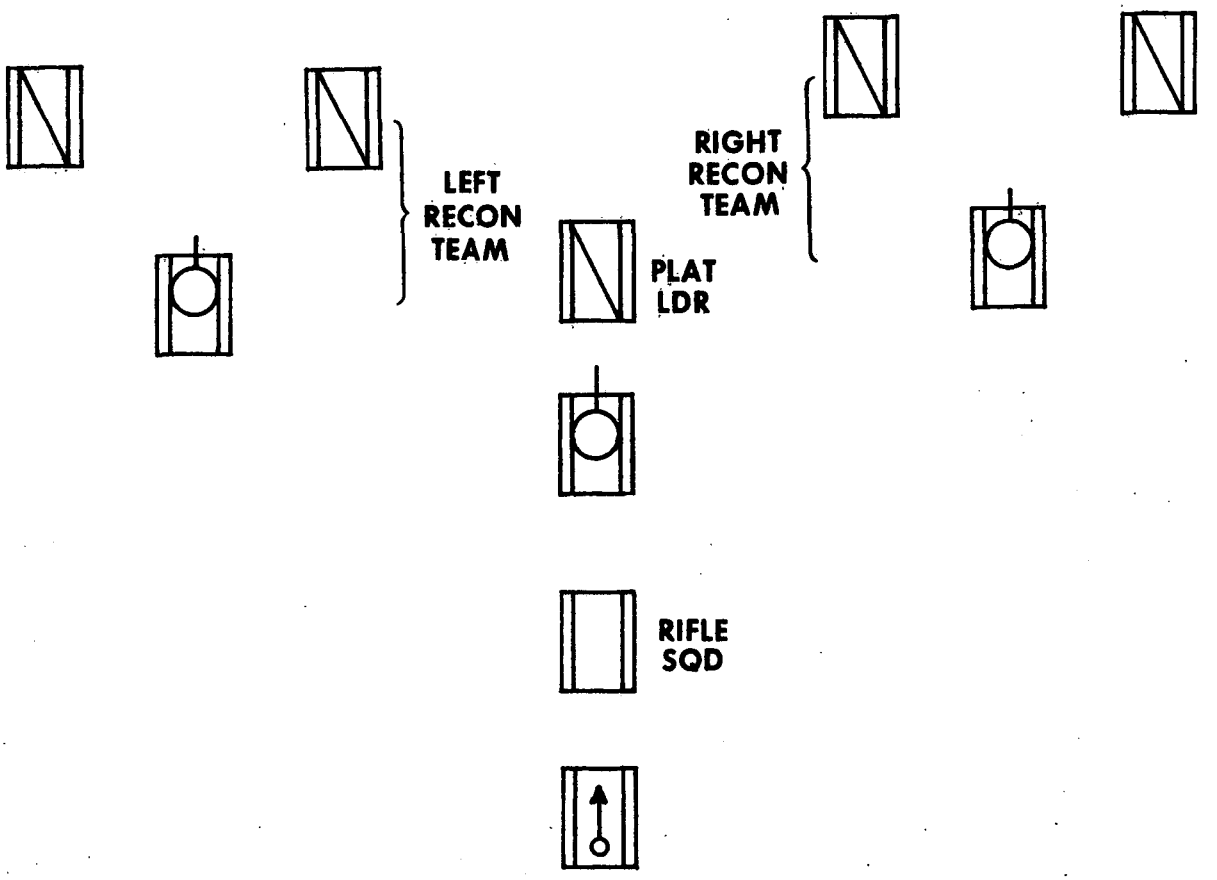


Figure 137. Armored cavalry platoon, Y formation.

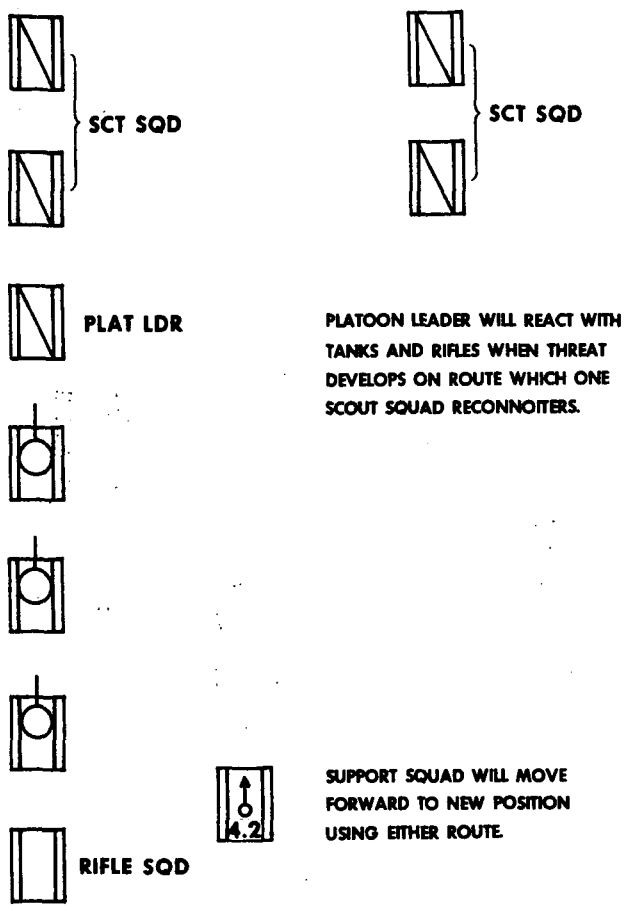


Figure 138. Armored cavalry platoon, variation of the Y formation for reconnaissance on two routes.

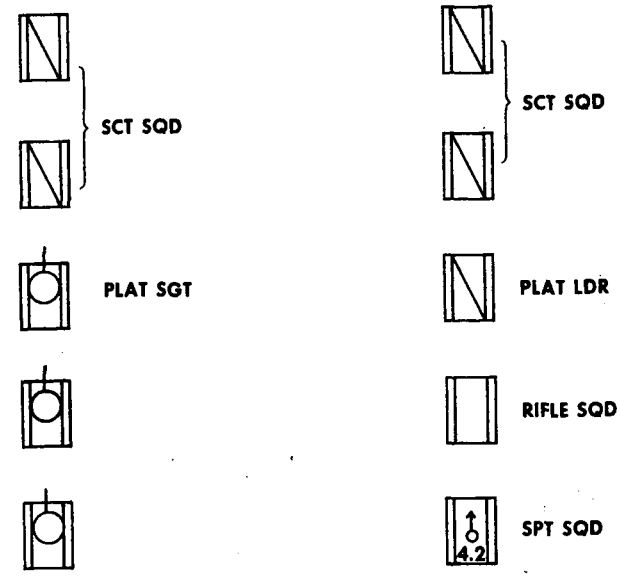


Figure 139. Armored cavalry platoon, variation of the Y formation for reconnaissance on two routes.

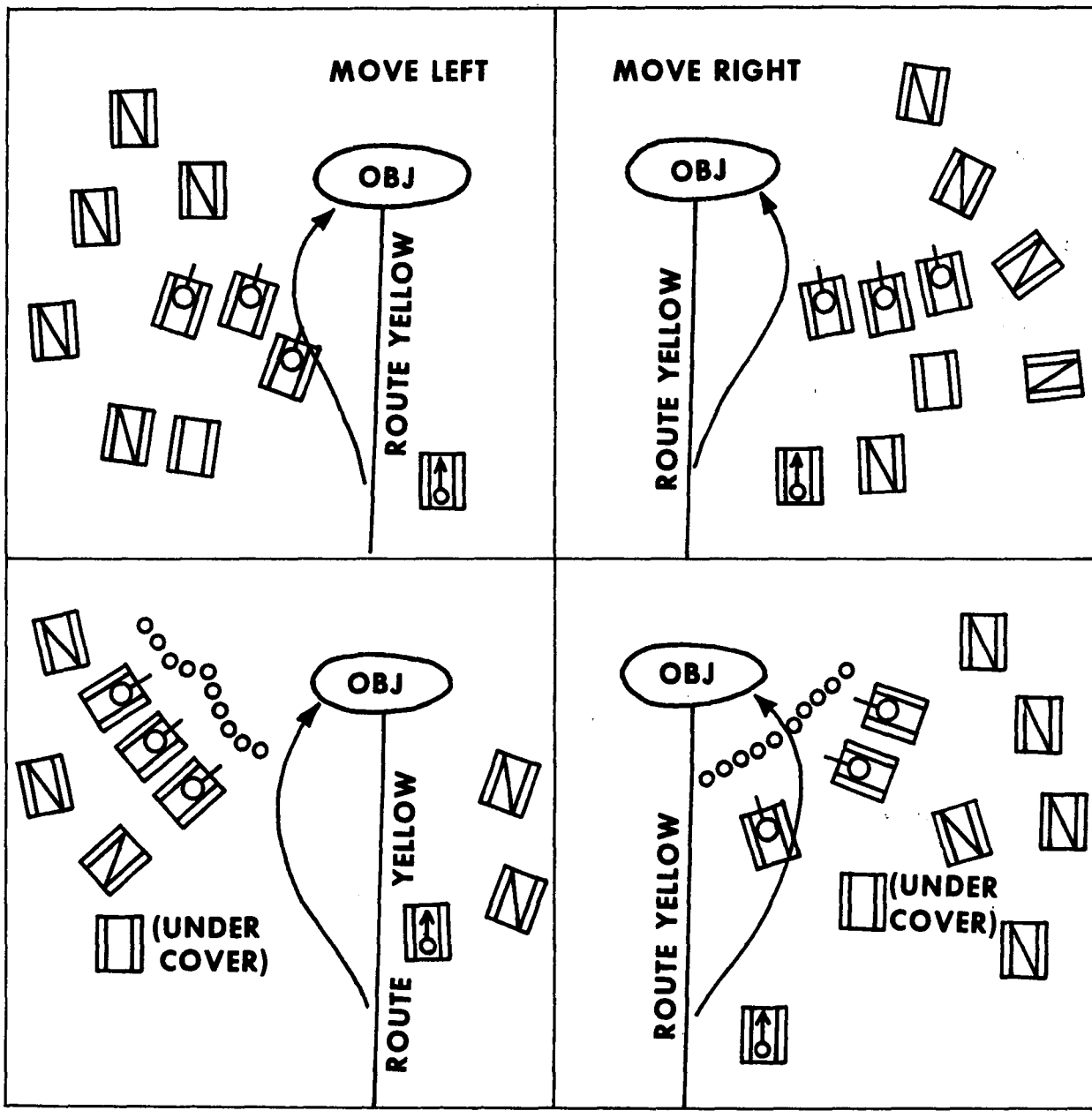


Figure 140. Armored cavalry platoon attack, TANKS AND RIFLES MOVES LEFT (RIGHT), mounted or dismounted.

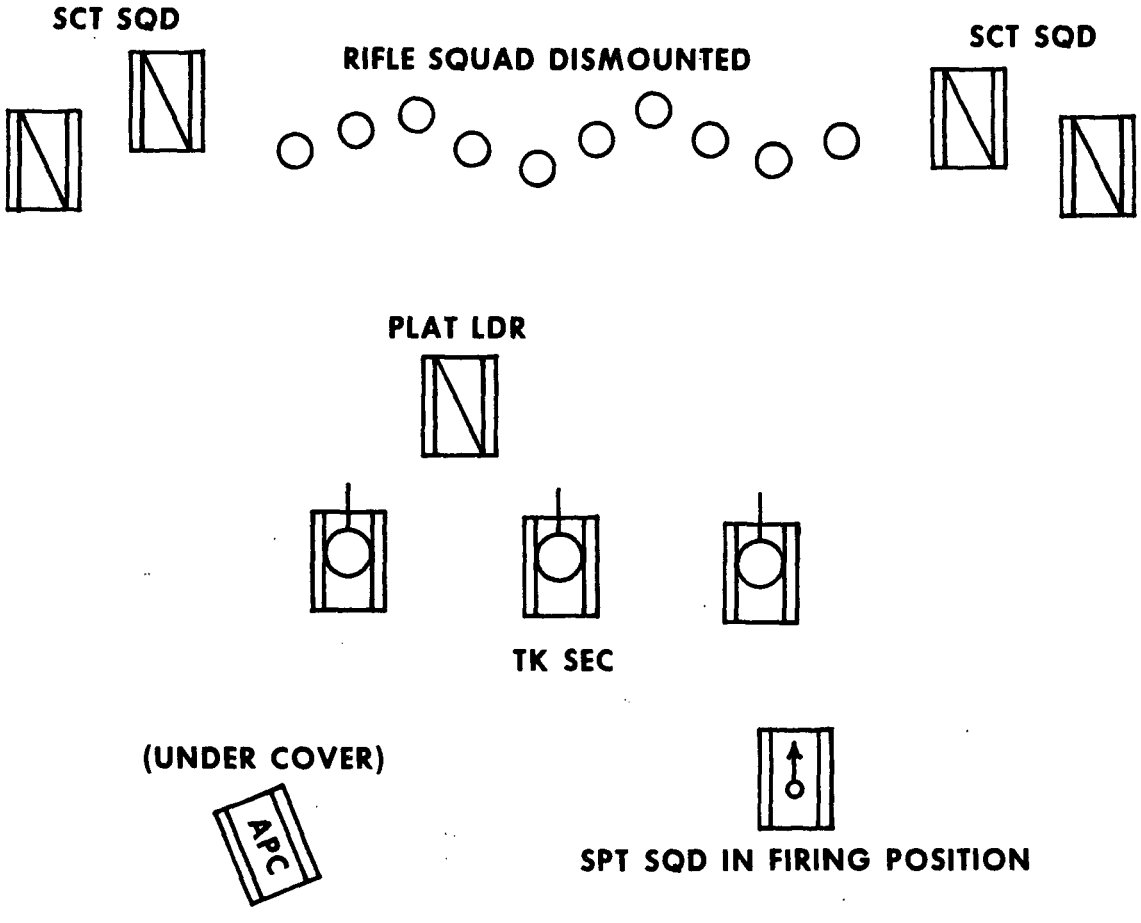


Figure 141. Armored cavalry platoon, FRONTAL ATTACK, RIFLES UP.

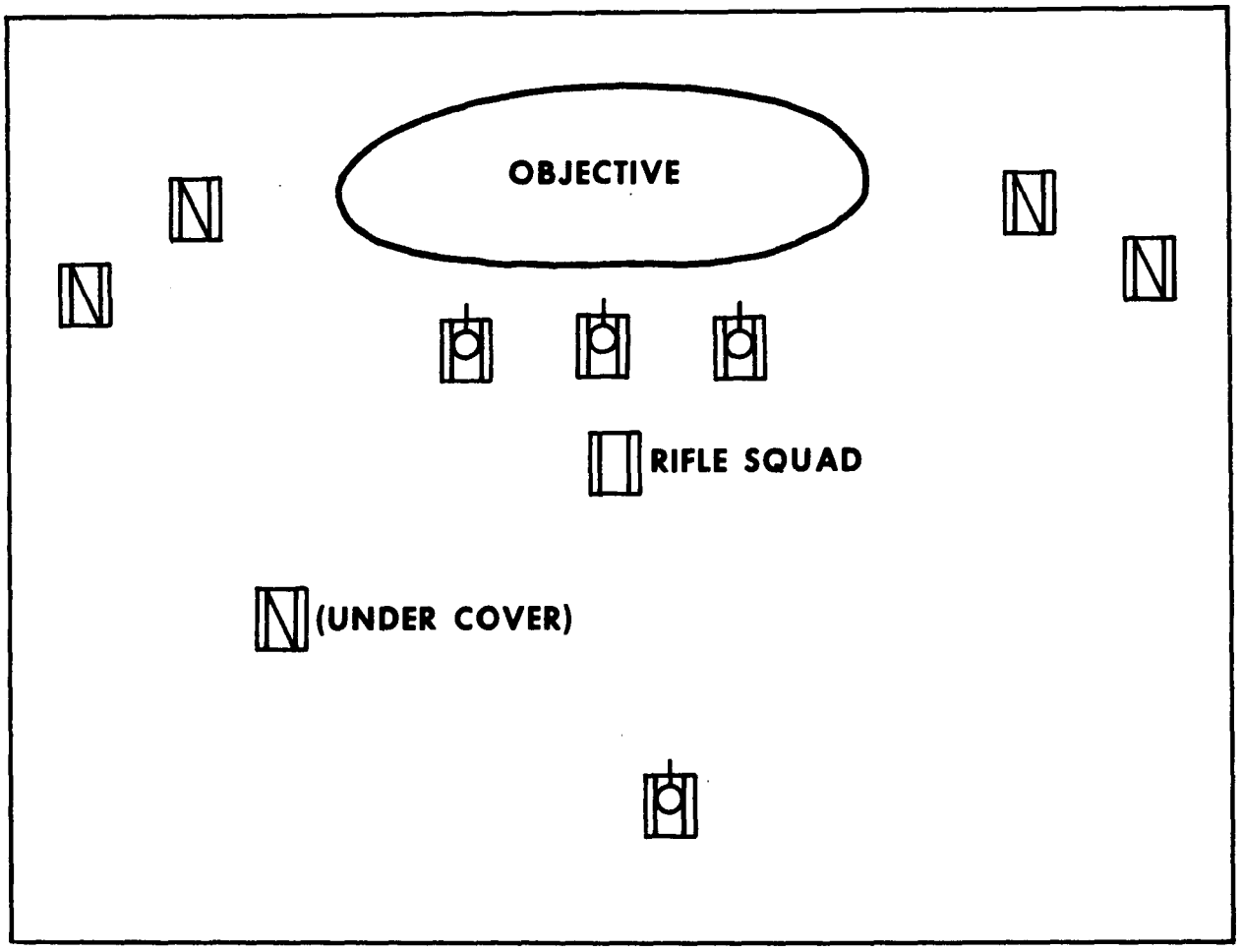


Figure 142. Armored cavalry platoon, FRONTAL ATTACK, TANKS UP.

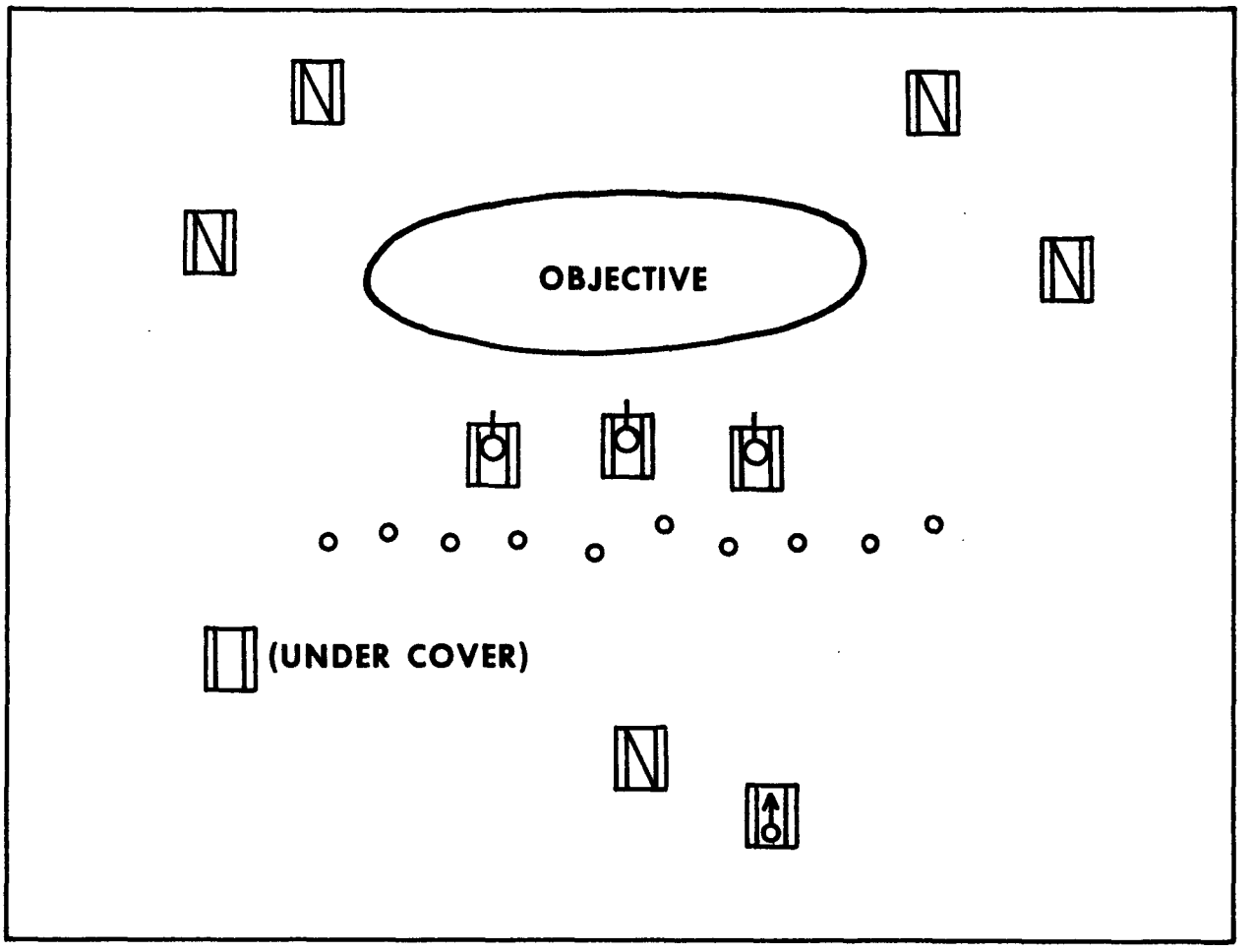


Figure 143. Armored cavalry platoon, FRONTAL ATTACK, RIFLES AND TANKS ABREAST.

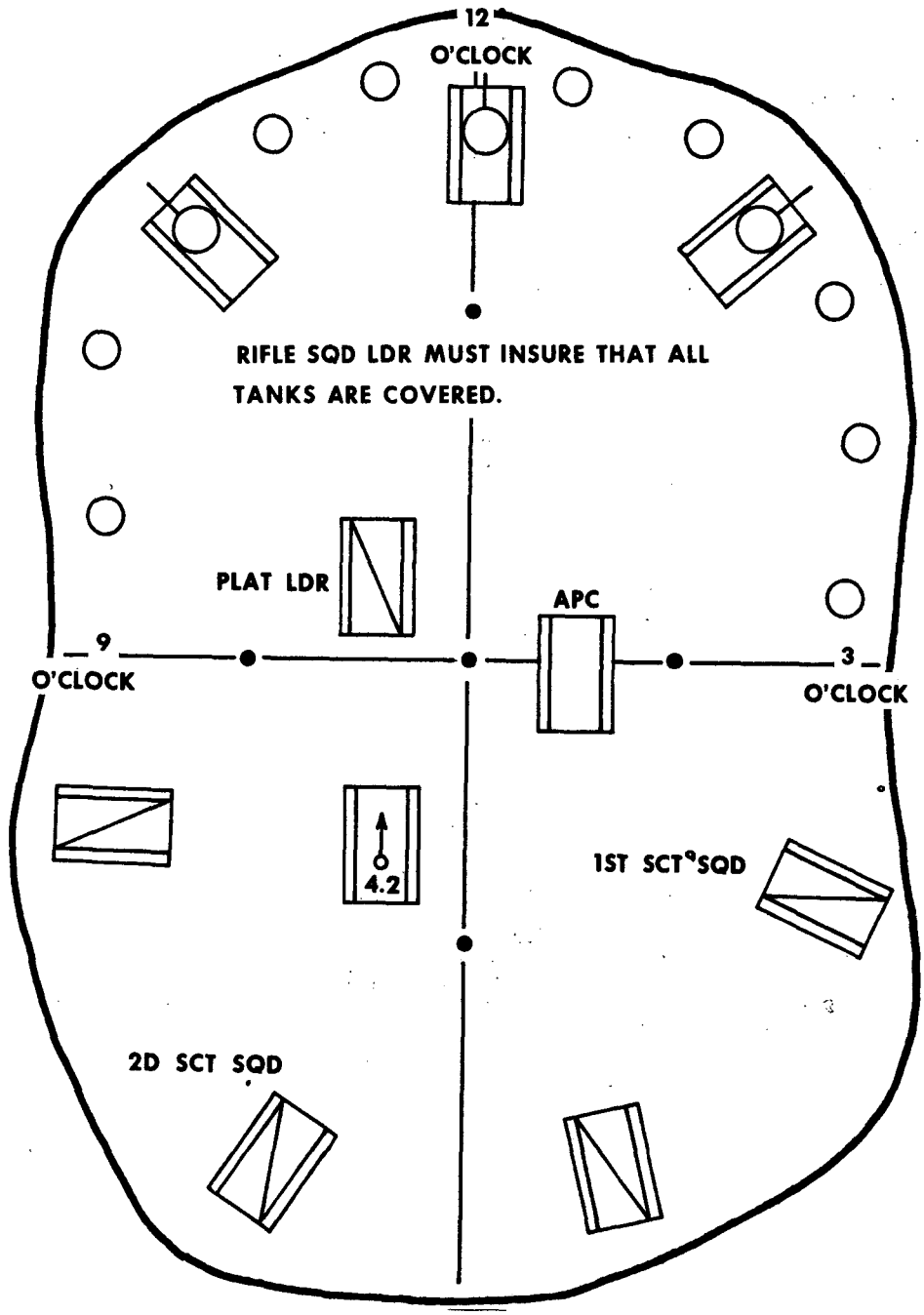


Figure 144. Armored cavalry platoon defense (one method).

Note.

Size depends on:

1. **Observation and fields of fire.**
2. **Enemy situation.**
3. **Night or day.**

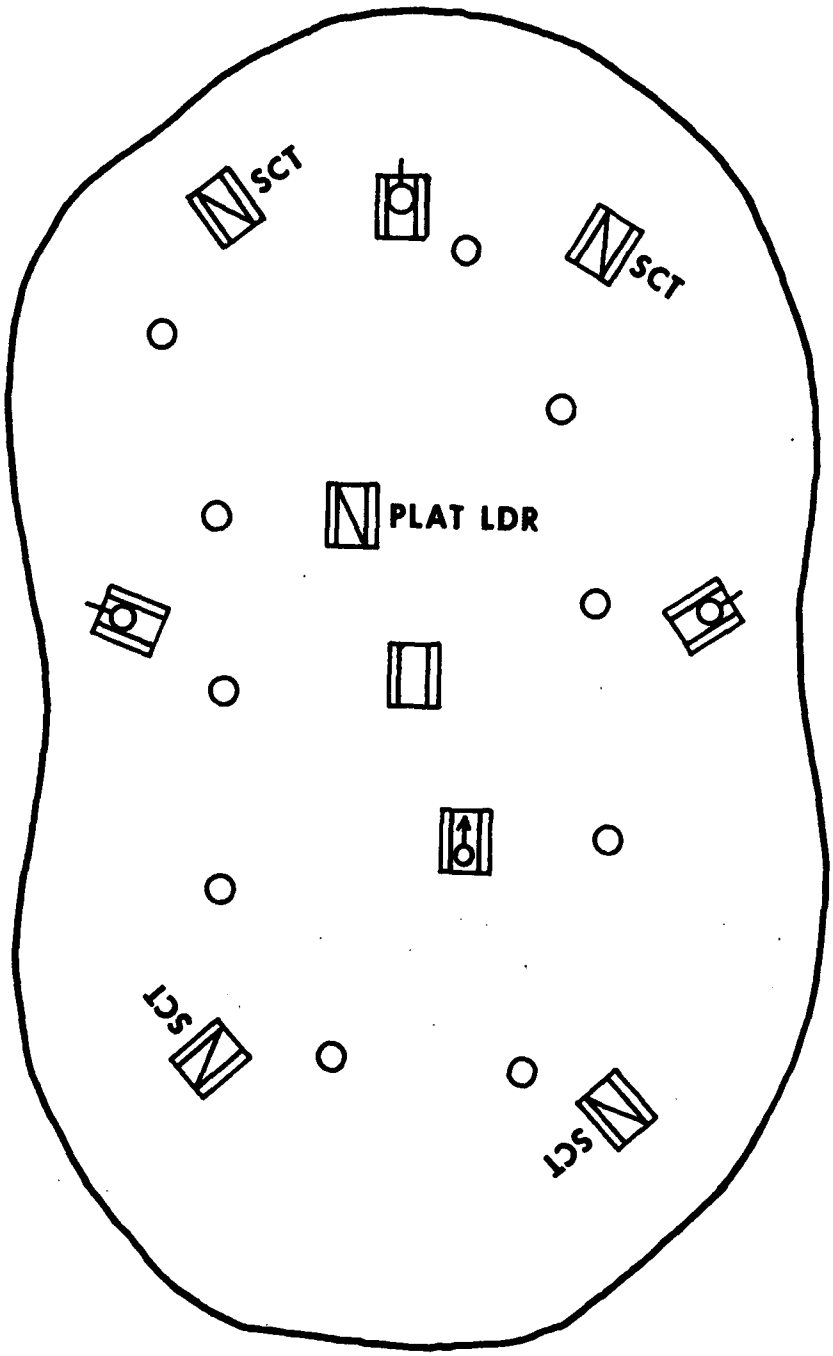


Figure 145. Armored cavalry platoon lager.

APPENDIX VII

ARMORED RECONNAISSANCE/AIRBORNE ASSAULT VEHICLE (AR/AAV)

1. General

a. The armored reconnaissance airborne assault vehicle (fig. 146) will provide armored cavalry and reconnaissance units with an armored reconnaissance and air-deliverable assault vehicle. It will replace the light gun tank and vehicular mounted antitank weapons now organic to armored cavalry and reconnaissance units.

b. The AR/AAV is operated by a four-man crew. Each crew-member has the same duties as those of a standard tank crew.

c. Armament includes a 152mm gun-launcher, a coaxial mounted 7.62mm machinegun, and a .50 caliber machinegun located above the commander's cupola. The gun launcher is capable of firing both conventional ammunition and an antitank guided missile. This antitank guided missile provides a significant increase in firepower and accuracy at extended ranges.

d. The AR/AAV can be transported in USAF aircraft and airlanded or parachuted into the battle area. When air-dropped, the parachutes will automatically disengage upon landing.

e. With flotation aids, which are an inherent part of the vehicle, the AR/AAV is capable of swimming inland waterways. In swimming operations it will travel about 6.5 kilometers per hour in still water. The manually operated surfboard and barrier system, required for water crossings, retracts for land operations.

2. Employment

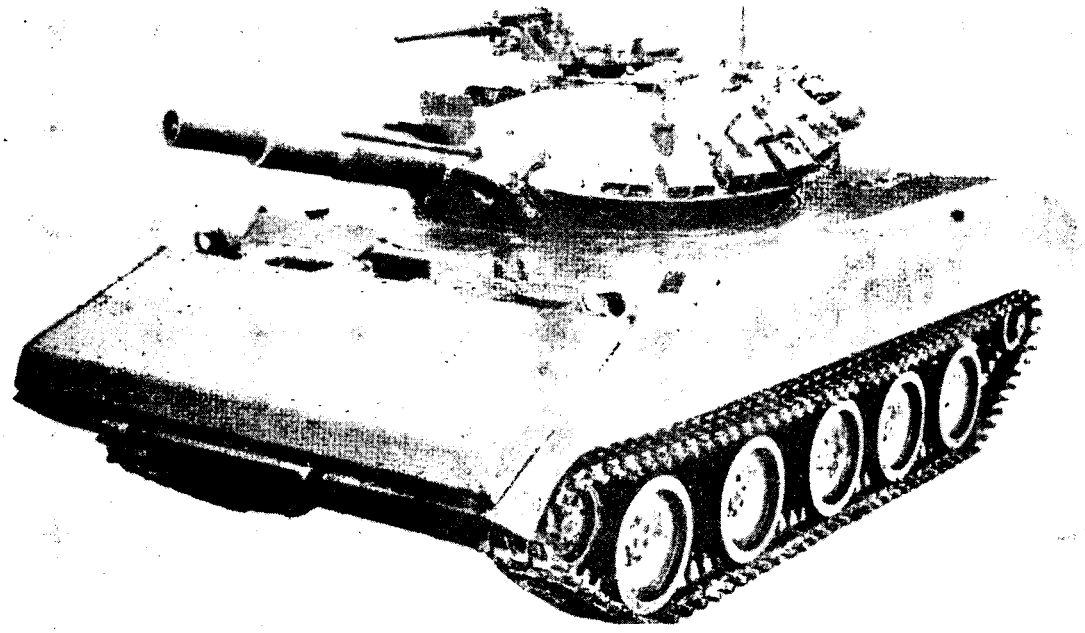
a. With the tank section equipped with the AR/AAV the following units will be capable of conducting inland water crossings since all vehicles will have an inherent swim capability:

(1) Armored cavalry platoons, armored cavalry squadrons, armored, mechanized and infantry divisions.

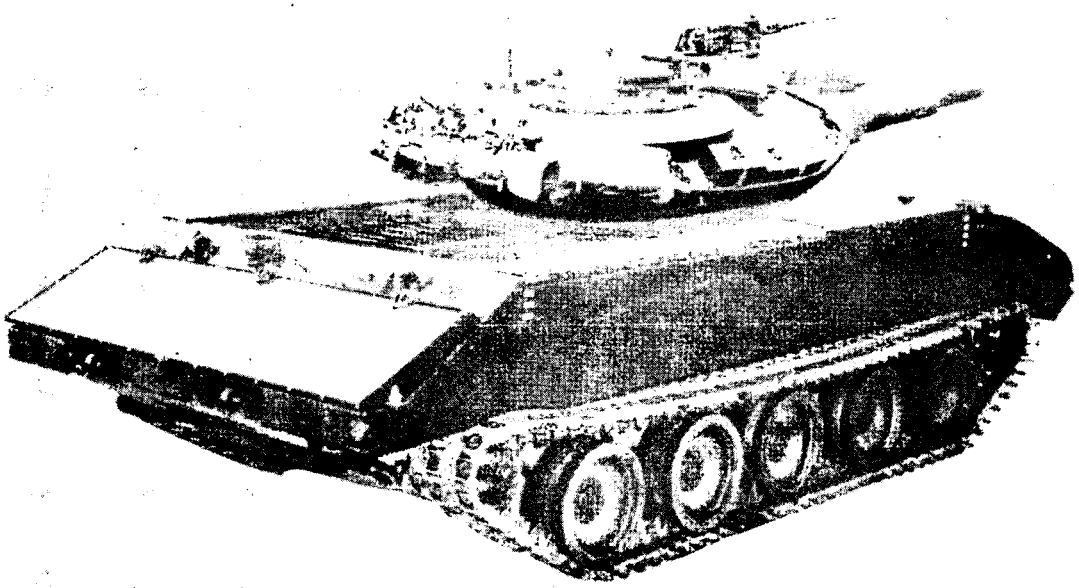
(2) Scout and tank sections, reconnaissance platoon, tank battalion, airborne division.

(3) Reconnaissance platoons, tank, and mechanized battalions.

b. Tactics for employment of armored cavalry and reconnaissance units will not change; however, commanders must consider the capability and limitations of the AR/AAV when the unit is committed. The extended range provided by the 152mm gun-launcher will permit engaging of targets at a range outside the capabilities of enemy antitank weapons. Tank sections will be capable of providing direct fire support to scouts and riflemen out to extended ranges. During operations requiring crossing of inland waters the tank section can now cross with the unit and provide continuous, direct fire support.



ARMORED RECONNAISSANCE / AIRBORNE ASSAULT VEHICLE, GENERAL SHERIDAN-LEFT FRONT VIEW.



ARMORED RECONNAISSANCE / AIRBORNE ASSAULT VEHICLE, GENERAL SHERIDAN-RIGHT REAR VIEW.

Figure 146. Armored reconnaissance/airborne assault vehicle.

INDEX

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

DCSPER (10)
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DCSLOG (10)
DCSOPS (10)
ACSFOR (10)
CORC (10)
CRD (5)
COA (5)
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TIG (5)
TJAG (5)
TPMG (3)
TSG (3)
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MP Bn (2)
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Engr Co (2)
FA Btry (2)
Med Co (2)
Ord Co (2)
QM Co (2)
Sig Co (2)
MP Co (3)
USAWC (5)
AFSC (5)
USMA (25)
Br Svc Sch (25) except USACSS (5)
PMS Sr Div Units (2)
PMS Mil Sch Div Units (2)
USACDCIAS (1)
USACDCCAG (5)
USACDCCSSG (5)
USACDCSWCAG (5)
USACDCNG (1)
USACDCCCISG (1)
MAAG (5)
Mil Msn (5)
Units org under fol TOE:
7–17 (2)
7–18 (2)
7–27 (2)
7–35 (5)
7–37 (2)
7–45 (5)
7–47 (2)
17–15 (5)
17–18 (2)
17–35 (5)
17–37 (2)
17–56 (35)
17–57 (25)
17–76 (35)
17–77 (25)
17–78 (25)
17–96 (35)
17–97 (25)
17–98 (25)
17–106 (35)

17–107 (25)
17–108 (25)
17–127 (25)
17–136 (35)
17–157 (2)
29–5 (5)
29–15 (5)
29–17 (2)
29–25 (5)
29–27 (2)
29–35 (5)
29–37 (2)
29–45 (5)
29–55 (5)
29–65 (5)
55–87 (2)
55–88 (2)
55–89 (2)
55–97 (2)
55–99 (2)

NG: State AG (3); units—same as Active Army except allowance is one copy to each unit.
USAR: Same as Active Army except allowance is one copy to each unit.
For explanation of abbreviations used, see AR 320–50.

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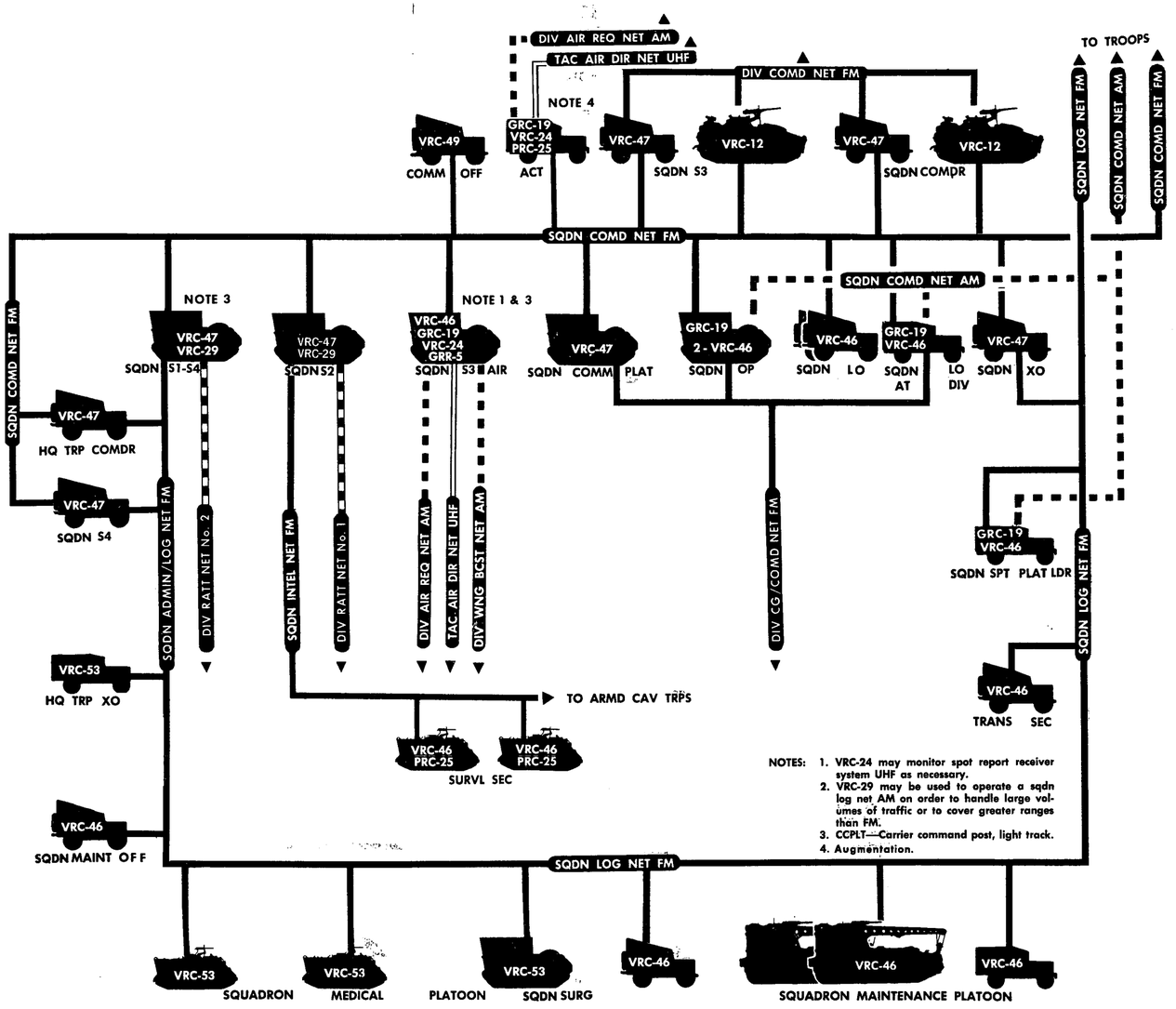


Figure 106. Type radio net diagram, armored cavalry squadron, armored, mechanized, and infantry divisions.

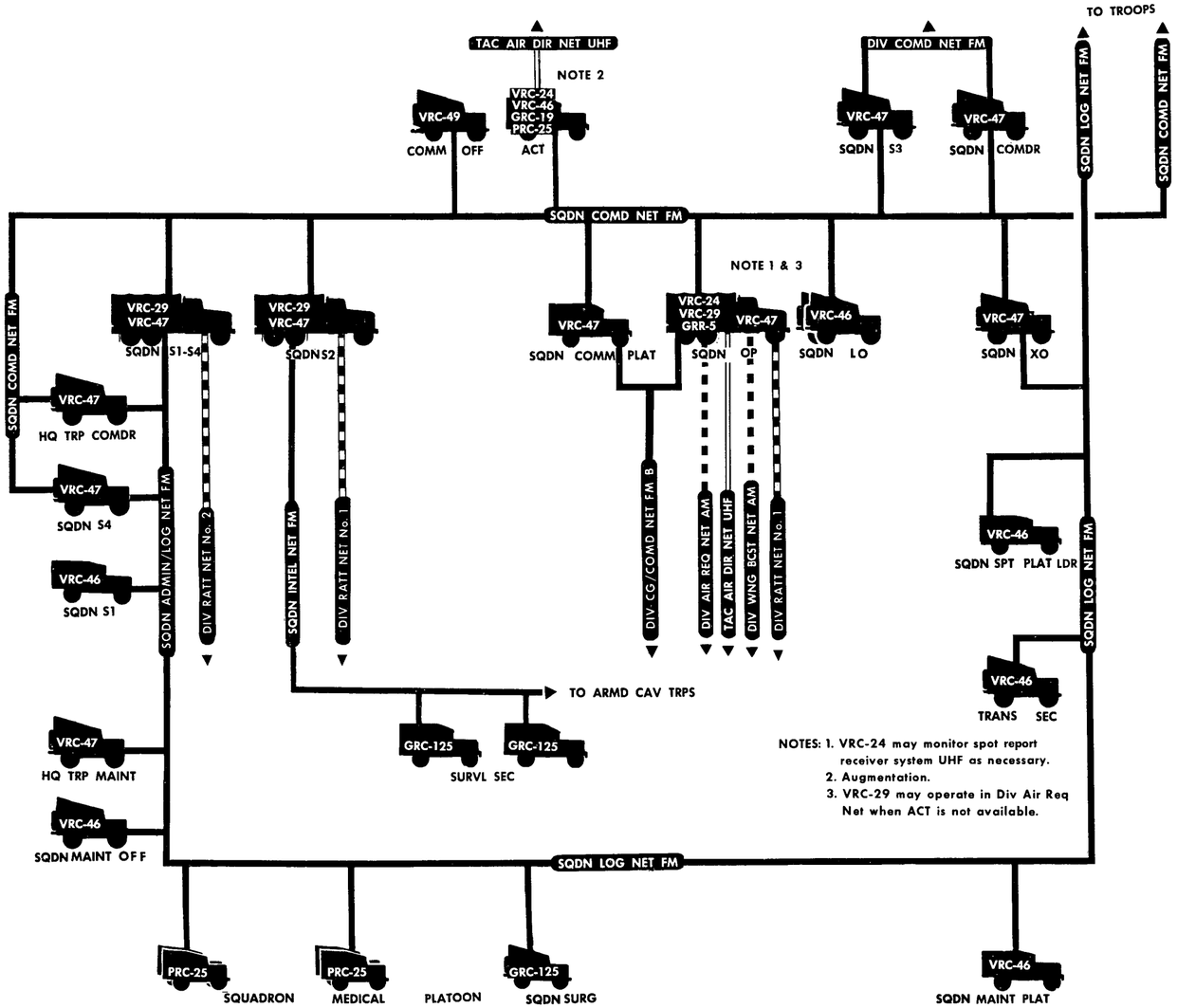


Figure 108. Type radio net diagram, armored cavalry squadron, airborne division.

Figure 108

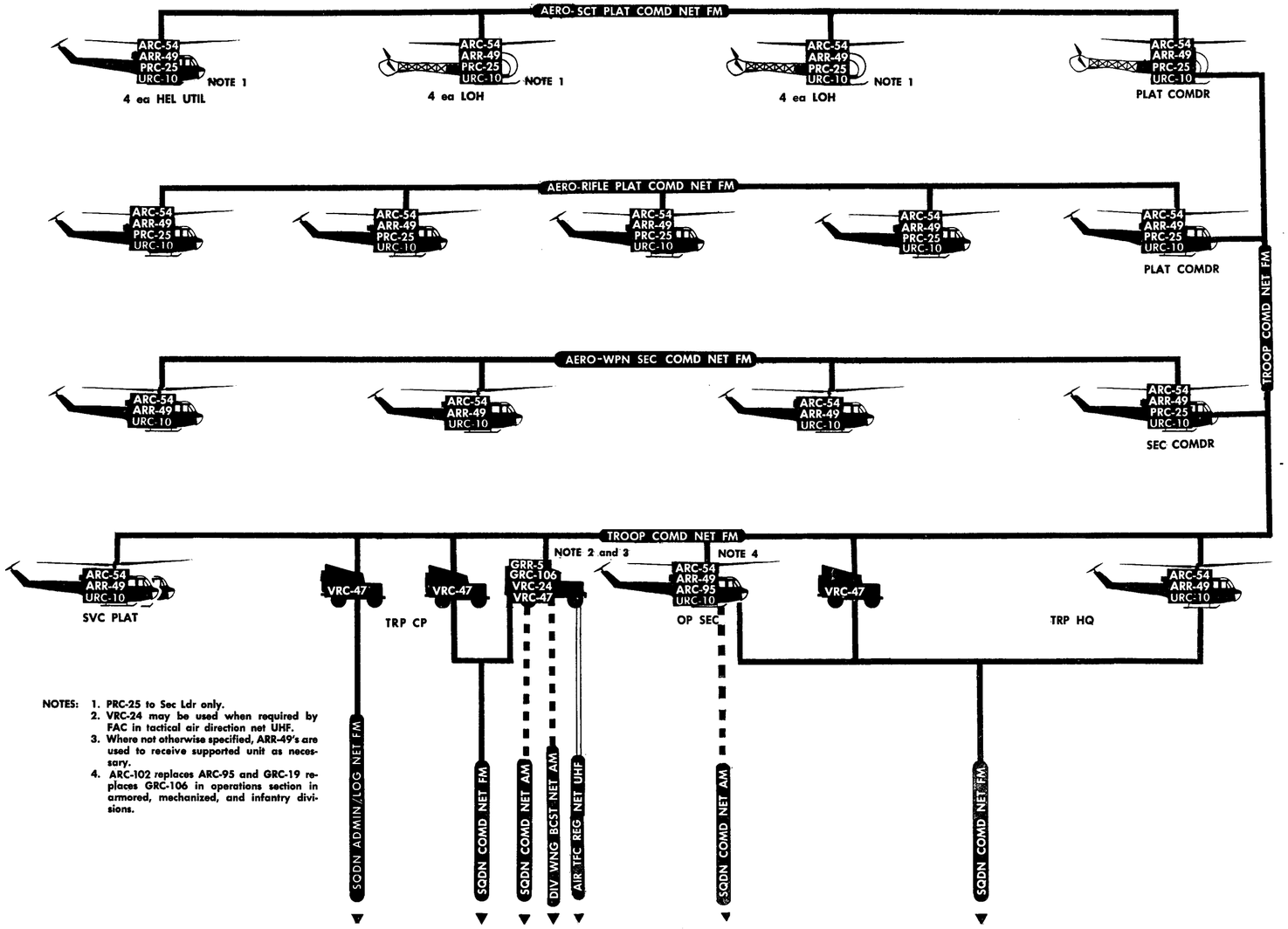
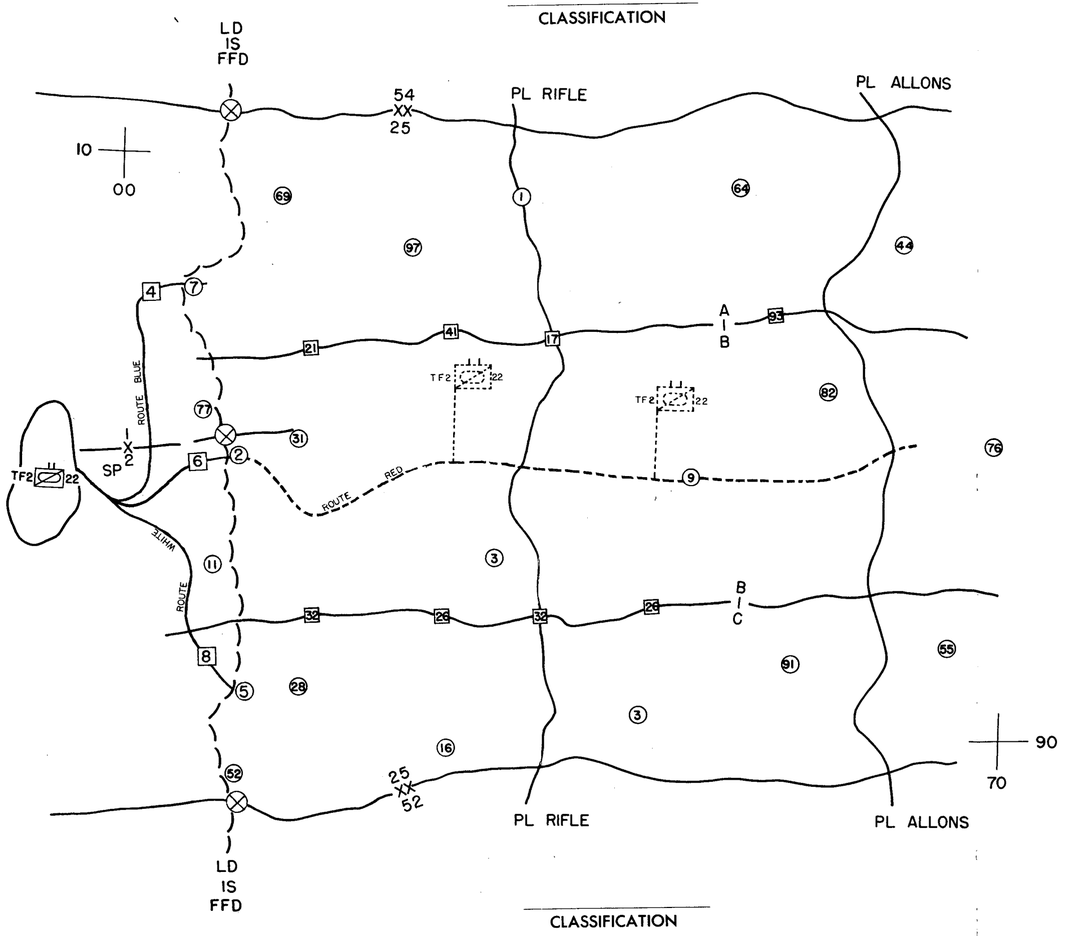


Figure 111. Type radio net diagram, air cavalry troop, armored cavalry squadron, armored, mechanized, infantry, and airborne divisions.



(No change from verbal orders except para. 3e)

Copy No. 3
TF 2/22 Cav
KALBENSTEINBERG (PV3448), GERMANY
221200 Oct 19__
KW 23

OPORD 33
Ref: Map, GERMANY, 1:100,000, NURNBERG, AMBERG, and REGENSBERG sheets.
Task org:

Trp A
A2/22 Cav
1D/25 Engr
1 AVLB, 3E/25 Engr
Sec, Aerosct Plat (OPCON)
1 LOH, B/25 Avn (OPCON)

Trp B
B2/22 Cav
2D/25 Engr
1 AVLB, 3E/25 Engr
Sec, Aerosct Plat (OPCON)
1 LOH, B/25 Avn (OPCON)

Trp C
C2/22 Cav
3D/25 Engr
1 AVLB, 3E/25 Engr
Sec, Aerosct Plat (OPCON)
1 LOH, B/25 Avn (OPCON)

Trp D
D2/22 Cav (-)

Sqdn Con
D/25 Engr (-)
3E/25 Engr (-)
1 UH, B/25 Avn (OPCON)

Tm E
A2/13 Armor (-1 plat)
1 plat, B2/94 Mech

Tm F
B2/94 Mech (-1 plat)
1 plat, A2/13 Armor

1. SITUATION
   a. En forces:
      (1) Elm en 22d Army cont withdrawal east.
      (2) Scattered small en units delay west of NAAB River.
   b. Friendly forces:
      25th Armd Div cont atk toward REGENSBERG at 231000 Oct 19__; 1st Bde on north, 2d Bde on south, 3d Bde fol 2d Bde.
   c. Atch and det: Task org eff 222400 Oct 19__.

2. MISSION
   TF 2/22 Cav recon in zone from FFD to PL ALLONS, commencing 230600 Oct 19__. Arr PL ALLONS NLT 232000 Oct 19__.

3. EXECUTION
   a. Concept of operations:
      (1) Maneuver: TF move by three routes to FFD. Recon in zone with Trp's A, B, and C abreast from north to south.
      (2) Fires: Annex A, Fire Spt Plan.
   b. Trp A: Move over Route BLUE to FFD. Make contact with TF 2/11 Armor at contact point 4 to coordinate passage of lines at check point 7.
   c. Trp B: Move over Route RED to FFD. Make contact with TF 2/14 Armor at contact point 6 to coordinate passage of lines at check point 2.
   d. Trp C: Move over Route WHITE to FFD. Make contact with TF 2/93 Med at contact point 8 to coordinate passage of lines at check point 5.
   e. Trp D (-): Follow cbt tns. Be prepared for immediate employment anywhere in sqdn zone.
   f. Tm E: Fol Trp C; be prepared to asst or assume msn of Trp B or C.
   g. Tm F: Fol Trp A; be prepared to asst or assume msn of Trp A or B.
   h. D/25 Engr (-): GS, fol Trp B.
   i. Gnd Survl Sec: GS, Annex B, Survl Plan.
   j. Coordinating instructions:
      (1) Cross SP at 230530 Oct 19__.
      (2) SP: PV347490.
      (3) Order of march: Trp A, Trp C, Tm F, Tm E, Trp B, Cmd Gp, CP, Cbt Tns, D/25 Engr.
      (4) EEI.
         (a) What is best route in each zone?
         (b) What is location, disposition, and composition of enemy in zone?
         (c) What is location and extent of minefields and obstacles in zone?
         (d) What is location of crossing sites over the JAGST River?

4. ADMINISTRATION AND LOGISTICS
   a. Cbt tns init loc PV295492; move on order.
   b. Fld tns loc 2d Bde tns (PV321483).
   c. LOH refuel Trp D tns.
   d. Axis sup and evac; Route RED.
   e. PW coll pt: vic sqdn cbt tns.

5. COMMAND AND SIGNAL
   a. Signal: SOI, index 1-12.
   b. Command: CP opens 230300 Oct 19__ vic PU410480.

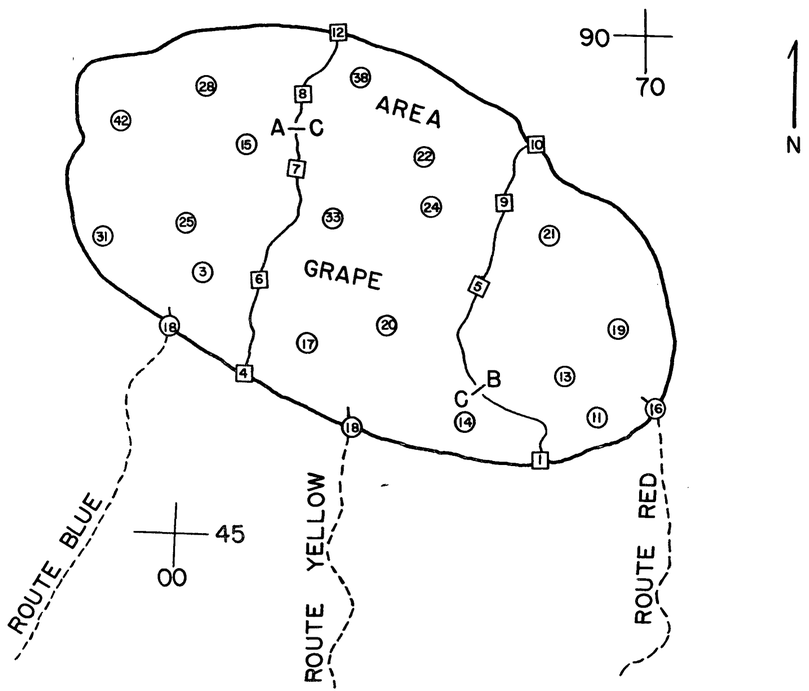
Acknowledge.

PIERCE
Lt Col

Annexes: A--Fire Spt Plan (to be issued)
B--Survl Plan (to be issued)
Distribution: A
OFFICIAL:

Hurt
HURT
S3

Example No. 2. Armored Cavalry Squadron Operation Order - Area Reconnaissance (Overlay Type)



(Classification)

Copy No. 3
2d Armd Cav Sqdn, 22d Cav
MUNICH (RU9026), GERMANY
102200 Oct 19__
SG 0201

OPORD 30
Reference: Map, GERMANY, 1:100,000, REGENSBURG, and KILHEIM sheets.
Task org:

Trp A
Trp A, 2/22 Cav
Plat, Co C, 25th Engr Bn
Sec, Aero Sct Plat, Trp D

Trp B
Trp B, 2/22 Cav
Plat, Co C, 25th Engr Bn
Sec, Aero Sct Plat, Trp D

Trp C
Trp C, 2/22 Cav
Plat, Co C, 25th Engr Bn
Sec, Aero Sct Plat, Trp D

Trp D
Trp D (Air Cav), 2/22 Cav (-)

Sqdn Con
Hq & Hq Trp, 2/22 Cav (-)
Co C, 25th Engr Bn (-)
1st Sec, AVLB Plat,
Co E, 25th Engr Bn (-)
Btry A (155-mm) (SP), 2/53 Arty
4 LOH, Co B (GS), 25th Avn Bn

1. SITUATION
   a. Enemy forces.
      (1) Reconnaissance elements of aggressor 111th Mechanized Rifle Division opposing 25th Armd Div.
      (2) Aggressor 21st Tank Div reported vic AMBERG, could reinforce 111th Mechanized Rifle Division.
   b. Friendly forces.
      (1) 25th Armd Div atk 120400 Oct 19__, to seize NURNBERG; 1st Bde on the W, 2d Bde on the E, 3d Bde in res.
      (2) 55th Mech Div follows and supports 25th Armd Div.
      (3) 201st Armd Cav protects corps E flank.
      (4) Ninth Tac Air Force spts Thirtieth US Army, priority to 1st Corps and 25th Armd Div.
   c. Attachments and detachments. Task org.
2. MISSION
   Sqdn conducts area reconnaissance of Area Grape commencing 110400 Oct 19__.

(Classification)

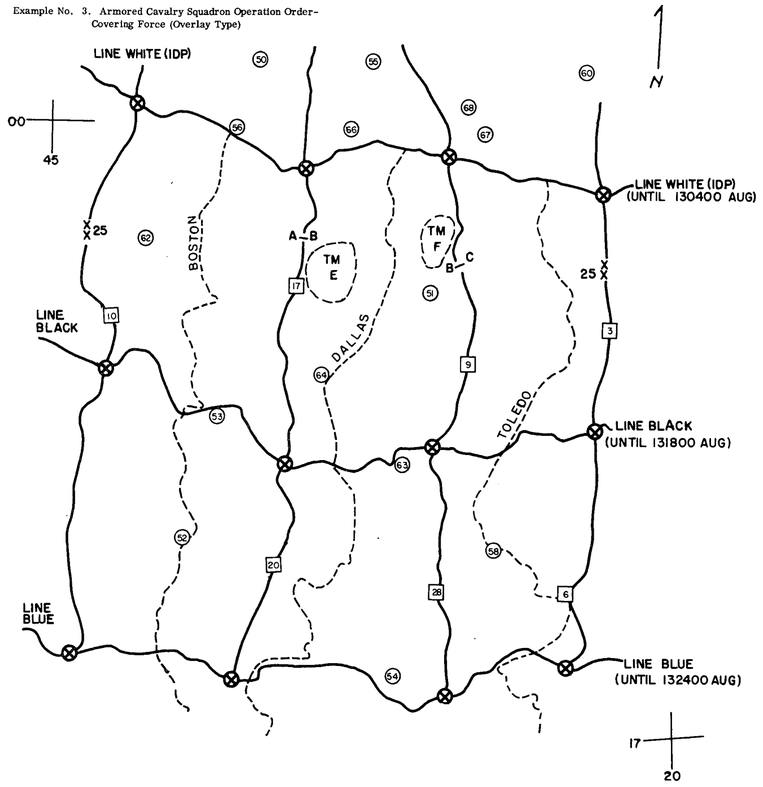
3. EXECUTION
   a. Concept of operation.
      (1) Maneuver. This operation will be conducted in 3 phases:
         (a) Sqdn moves along 3 routes to Area Grape.
         (b) Troops A, B, and C reconnoiter assigned zones in Area Grape.
      (2) Fire: Annex A, Fire Support Plan.
   b. Troop A:
   c. Troop B:
   d. Troop C:
   e. Troop D (-): Follow Trp C, be prepared to assist either Troop A, B, or C.
   f. Gnd Survl Section: Screen W (left) flank. Surveillance Plan, Annex B.
   g. Davy Crockett Section: Atch light team to Troop C, one heavy team each to Troop A and B.
   h. Co C, 25th Engr Bn (-): GS.
   i. Coordinating instructions:
      (1) Routes:
         (a) Blue: Troop A.
         (b) Yellow: Troop C, Troop D, Sqdn CP.
         (c) Red: Troop B.
      (2) Cross SP 110330 Oct 19__.
      (3) Report reaching Area Grape.
      (4) EEI: Report location of all enemy antitank obstacles and minefields.
4. ADMINISTRATION AND LOGISTICS
   a. Sqdn trains located initially at QV060002.
   b. Class V supply point located at QV059998.
   c. LOH refuel at Trp D (Air Cav) trains.
5. COMMAND AND SIGNAL
   a. Signal. Index 1-5, SOI and current SSI in effect.
   b. Command. CP opens 120300 Oct 19__, vicinity QV011023.

Acknowledge.

SPEED
Lt Col

Annexes: A--Fire Support Plan (omitted)
B--Sqdn Surveillance Plan (omitted)
Distribution: A
OFFICIAL:
/s/ Tuff
TUFF
S3

Example No. 3. Armored Cavalry Squadron Operation Order-Covering Force (Overlay Type)



(Classification)

Copy No. 3
2d Armd Cav Sqdn, 22d Cav
FREYSTADT (PV6952), GERMANY
110220 Oct 19__
SG0201

OPORD 19

Reference: Map, GERMANY, 1:100,000, NEUBURG, NURNBERG, INGOLSTADT, and AMBERG sheets.

Task org:

Trp A	Trp B	Trp C
Trp A, 2/22 Cav	Trp B, 2/22 Cav	Trp C, 2/22 Cav

Trp D	Tm E
Trp D (Air Cav), 2/22 Cav	Co A, 2/12 Armor (-1 Plat) 1 Plat, Co B, 2/92 Inf

Tm F	Sqdn Con
Co B, 2/92 Inf (-1 Plat) 1 Plat, Co A, 2/12 Armor	Hq & Hq Trp, 2/22 Cav 2/52 Arty, (105-mm) (SP) C/25 Engr Bn 4 LOH, Co B (GS), 25th Avn Bn

1. SITUATION
   a. Enemy forces. Leading elements of the 111th Mechanized Rifle Division and 21st Tank Division have reached the Naab River.
   b. Friendly forces.
      (1) 1st Corps conducts defense along line PV7985, PV8135, QV1021.
      (2) 25th Armd Division conducts mobile defense.
   c. Attachments and detachments. Task organization effective 112400 Aug 19__.
2. MISSION
   Squadron, as division covering force, defends line White in zone until 130400 Aug 19__, withdraws to the south, achieving maximum delay and holding enemy north of line Blue until 132400 Aug 19__. After withdrawal through FEBA move to assembly area vic QV278149, prepare to protect division right (E) flank on order.

(Classification)

3. EXECUTION
   a. Concept of operation.
      (1) Maneuver. Squadron conducts a delaying action in zone, employing Troops A, B, and C from west to east respectively along the IDP; Teams E and F squadron reserve.
      (2) Fires. Nuclear weapons on call for targets of opportunity.
   b. Troop A:
   c. Troop B:
   d. Troop C:
   e. Troop D: Screen squadron front forward of IDP.
   f. 2/52 Arty: GS. Annex A, Fire Spt Plan.
   g. Co C, 25th Engr Bn: Support preparation of barriers, priority, IDP and line BLACK. Annex B, Barrier Plan.
   h. Squadron res:
      (1) Tm E: Prepare to block, reinforce, or counterattack in the zones of Troops A and B.
      (2) Tm F: Prepare to block, reinforce, or counterattack in the zones of Troops B and C.
   i. Coordinating instructions.
      (1) All units occupy designated positions IDP prior to 120500 Aug 19__.
      (2) Recognition signals for friendly units withdrawing through FEBA.
         (a) Red smoke signal.
         (b) One-half of cerise panel on surface of vehicle facing toward FEBA.
      (3) Withdrawal through FEBA will be at points designated. All units establish contact and liaison at withdrawal points in assigned zones before withdrawal.
4. ADMINISTRATION AND LOGISTICS
   a. Trains: Initially loc vic QV055784. Move on order.
   b. Vehicle collecting pt: Initially loc vic QV023555. Move on order.
   c. LOH refuel at Trp D (Air Cav) trains.
5. COMMAND AND SIGNAL
   a. Signal. SOI, index 1-12.
   b. Command. CP opens 120400 Aug 19__, vic QV159345.

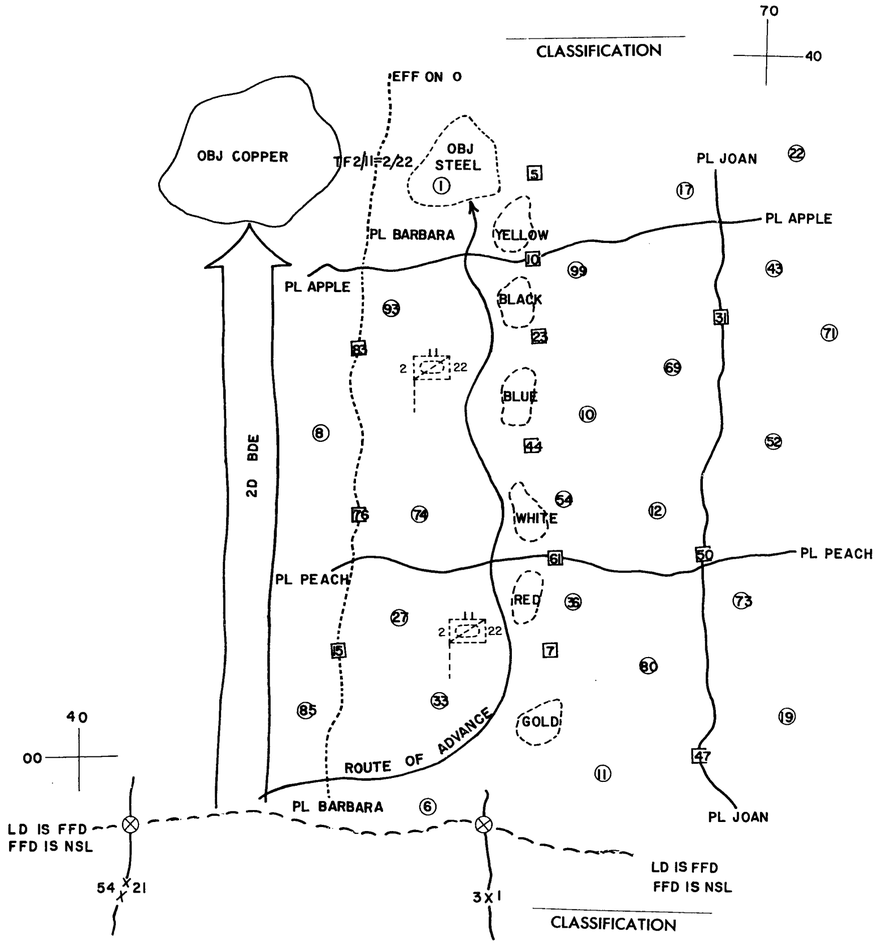
Acknowledge.

JONES
Lt Col

Annexes: A--Fire Support Plan (omitted)
B--Barrier Plan (omitted)

Distribution: A

OFFICIAL:
/s/ Smith
SMITH
S3



EXAMPLE No 4
ARMORED CAVALRY SQUADRON
FLANK GUARD ORDER--DIVISION

Note. When task organization is not complicated, show in paragraph 3.

(No change from verbal orders)

Copy No. 6
2/22 Cav
FRIESENHAUSEN (NB5897), GERMANY
140100 Jan 19__
XB 47

OPORD 4
Ref: Map, GERMANY, 1:100,000, FULDA and EISENACH sheets.

1. SITUATION
   a. En forces:
      (1) Elm unidentified en mtz div oppose 25th Armd Div.
      (2) En tk div loc vic MARKSUHL (NB8441); could reinforce elm opposing 25th Armd Div 2-1/2 hours after start of friendly movement.
   b. Friendly forces:
      (1) 25th Armd Div atk through 21st Inf Div 140530 Jan 19__, with 1st and 2d Bde abreast. 2d Bde on the right seizes obj COPPER; cont atk northeast on order.
      (2) Corps arty spts 25th Armd Div penetration with nuc fires.
   c. Atch and det:
      (1) 4 LOH 25 Avn
      (2) 1C/25 Engr.

2. MISSION
   2/22 Cav protect div east flank, 140530 Jan 19__; prep seize obj STEEL on order.

3. EXECUTION
   a. Concept of operation.
      (1) Maneuver. Conduct passage of lines followed by mov along sqdn route of adv. Occupy blocking pos as required to protect div flank.
      (2) Fires. Pri nonnuc fires, Trp A, nuc fires aval on call. Annex A, Fire Spt Plan.
   b. Trp A: Sqdn adv guard; maintain contact with leading TF, 2d Bde (TF 2/11 Armor); secure area between 2d Bde and sqdn route of adv. One sec, aerosct plat, OPCON.
   c. Trp B: Init follow 2d Bde; after penetration follow Trp A; assist Trp A and occupy blocking pos on order.
   d. Trp C: Follow cbt tns; occupy blocking pos on order.
   e. Trp D: Screen sqdn east flank. One sec, aerosct plat OPCON Trp A. After penetration, screen designated sector PL JOAN on order.
   f. 4 LOH, 25 Avn: Spt ea trp and sqdn CO with 1 LOH.
   g. 1C/25 Engr: Spt Trp A with one engr sqd. Plat (-) follow Trp B.
   h. Gnd Survl Sec: GS.
   i. Coordinating instructions: During penetration, Trp A follow TF 2/11 Armor and sqdn (-) (Trp B, CP, Cbt Tn's, Trp C), follow 2d Bde.

4. ADMINISTRATION AND LOGISTICS
   a. Cbt tn follow CP.
   b. Fld tn revert to 2d Bde tn effective 140400 Jan 19__; Loc vic NB565748.
   c. 4 LOH refuel Trp D cbt tns.
   d. Axis of sup and evac: Route of adv.
   e. Maint coll pts: NB609973; NB657123; NB656256; NB657374.
   f. PW coll pt: Cbt tns.

5. COMMAND AND SIGNAL
   a. Signal:
      (1) SOI, index 1-10.
      (2) Listening silence until 140530 Jan 19__.
   b. Command: CP opens 140300 Jan 19__, vic NB689891. Move on order. Cmd gp follow Trp B.

Acknowledge.

Anderson
ANDERSON
Lt Col

Annex A--Fire Spt Plan (to be issued)
Distribution: A
OFFICIAL:

BONSALL
S3