

FM 17 - 36

ARMORED CAVALRY

PLATOON, TROOP, AND DIVISIONAL ARMORED CAVALRY SQUADRON



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ARMORED CAVALRY PLATOON, TROOP, AND DIVISIONAL ARMORED CAVALRY SQUADRON

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PART ONE

GENERAL

CHAPTER 1

GENERAL

1-1 Purpose

This manual provides doctrinal guidance for employment of all armored cavalry platoons; all armored cavalry troops; the air cavalry troop of the divisional armored cavalry squadron; and the divisional armored cavalry squadron.

1-2. Scope

a. This manual covers basic doctrine on tactics, techniques of employment, organization, exercise of command, control, movements, and tactical operations.

b. The procedures described are intended as a guide and are not to be considered inflexible. Each combat situation must be resolved by interpretation and application of established doctrine.

c. Unless otherwise specified, the material in

this manual is applicable without modification to:

(1) General war, to include a consideration of the employment of nuclear and chemical munitions, and chemical and radiological agents.

(2) Limited war.

(3) Cold war, to include stability operations (Chapter 15).

d. This manual is in consonance with certain international standardization agreements (NATO Standardization Agreements (STANAG's)), SEATO Standardization Agreements (SEASTAG's), Quadripartite Standardization Agreements (QSTAG's), and Standardization of Certain Aspects of Operations and Logistics (SOLOG's)). Those applicable are listed below and are identified at the beginning of each appropriate chapter in the manual by type of agreement and number.

	NATO STANAG	SEATO SEASTAG	ABCA SOLOG	QSTAG
Patrol Reports by Army Forces	2003			
Standard Method of Rendering Enemy Bombing, Shelling, Mortaring and Toxic Reports	2008			
Operation Orders	2014			
Route Classification	2015			
Operational Situation Reports	2020	2020	16R	
Intelligence Reports	2022	2022	2R2	
Method of Describing Ground Locations, Areas, and Boundaries	2029			
Doctrine and Procedures in the Techniques of Land Minefield Laying and Recording	2036			
Rear Area Security and Rear Area Damage Control	2079			
Radiological Survey	2112	2112		
Aircraft Marshaling	3117			
Standard Procedure for Infantry/Armored Fighting Vehicle Target Indication	----	----	----	239

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

f. Users of this publication are encouraged to submit recommended changes and comments to improve the publication. Comments should be keyed to the specific page, paragraph, and line



ARMORED RECONNAISSANCE AIRBORNE ASSAULT VEHICLE ARAAV (M551) OR LIGHT TANK



ARMORED PERSONNEL CARRIER (M113)



ARMORED PERSONNEL CARRIER USED BY THE SUPPORT SQUADS (4.2)



ARMORED COMMAND AND RECONNAISSANCE CARRIER (M114)



CONTACT POINT



CHECK POINTS



COORDINATING POINTS



SENSORS

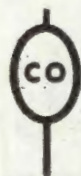


CARRIER, COMMAND POST (M577)

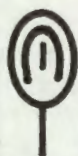


FIELD OF SENSORS

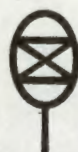
HELICOPTER SYMBOLS



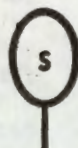
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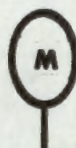
Aero
Weapons



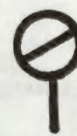
Aero
Rifle



Supply



Maintenance



Aero Scout

- Note:**
1. Commanders symbols have unit size symbol added
 2. Helicopter symbols used for clarity only
 3. Illustrations used herein are not intended to depict future design of vehicles or equipment.

Figure 1-1. Symbols used in manual.



M113 APC



M114 ACRV



M551 ARAAV



1/4-ton truck



GAMMA-GOAT, M561



2 1/2-ton truck with water trailer



5 ton truck wrecker

2 1/2-ton truck,
gasoline tank w/kit segregator

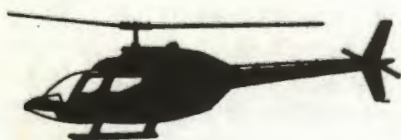
2 1/2-ton truck van shop w/cargo trailer



5-ton truck w/ammo trailer



recovery vehicle full track LT armor



helicopter, light observation (scout)

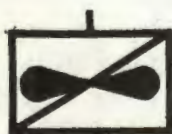


helicopter, utility



helicopter, attack

UNITS



Air Cavalry Troop

SCT



Aero Scout Unit



Aero Rifle Unit

WPN



Aero Weapons Unit

SVC

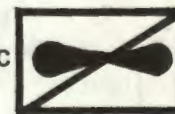


Figure 1-1.—Continued.

of the text in which the change is recommended. Reasons will be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commandant, US Armor School, Fort Knox, Kentucky 40121.

1-3. Missions of the Armored Cavalry Squadron

a. The divisional armored cavalry squadron is organized, equipped, and trained to—

(1) Perform reconnaissance.

(2) Provide security for the unit to which assigned or attached.

(3) Engage in offensive, defensive, or delaying actions. These missions are discussed in this manual as reconnaissance, security, and economy of force operations.

b. The majority of missions assigned to the armored cavalry squadron are of a reconnaissance and security nature. When troops of the squadron are assigned a security mission, they also perform continuous reconnaissance and surveillance. A reconnaissance mission provides a certain degree of security and often includes some surveillance. Conversely, a security mission provides information of the enemy and the area of operations.

c. A security force orients its location or movement on the friendly force being secured, whereas a unit conducting a reconnaissance mission orients its location or movement on the information objective, normally the enemy.

d. Surveillance is performed by the armored cavalry squadron as part of combat operations. The primary missions which integrate surveillance are reconnaissance and security missions. Surveillance, because of its application to both missions, is discussed separately throughout the manual.

e. Applicable definitions are provided below.

(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 through the use of visual and detection means.

(b) *Types of reconnaissance missions.*

1. *Route reconnaissance.* Route reconnaissance is conducted to obtain detailed information of a specific route. This information includes road and bridge data; obstacles; chemical or radiological contamination; enemy; and the adjacent terrain along the specified route which, if occupied by the enemy, would affect movement along the route, (See paragraph 3-8 and figure 3-2 for detailed information.)

2. *Zone reconnaissance.* Zone reconnaissance is the detailed search of an entire zone defined by boundaries. The reconnaissance unit enters the zone at one end and thoroughly reconnoiters everything between the boundaries. The reconnaissance unit must locate all enemy forces within the zone and provide detailed information to its next higher headquarters on all enemy, terrain, and routes within the zone.

3. *Specific reconnaissance.* Specific reconnaissance is conducted to obtain detailed

information of an exact location within a clearly defined area, i.e., towns, ridgelines, routes, crossing sites, and wooded areas. Specific reconnaissance may be conducted to reconnoiter areas suspected of containing enemy forces, or areas known to contain enemy forces. Areas that may be used by enemy forces, such as potential drop zones or landing zones, may also be specific reconnaissance objectives. Specific reconnaissance may also be conducted to confirm information obtained from other sources.

(c) *Fundamentals of reconnaissance.*

1. Orient on the location or movement of the enemy.

2. Report all information accurately and rapidly.

3. Avoid decisive engagement.

4. Maintain contact with the enemy.

5. Develop the situation.

(2) *Security definition, types, forces, and fundamentals.*

(a) *Security.* Security includes all measures taken by a command to protect itself from observation or surprise.

(b) *Security forces.* A security force may be a covering force, guard force, screening force, or a rear area security force, according to the degree of security required, and its location in relation to the force being secured. It may engage in offensive, defensive, or delaying actions as required to accomplish the mission.

(c) *Types of security forces.*

1. *Covering force.* A covering force is a mobile, tactically self-sufficient 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 covered force can adequately act to cope with the situation.

2. *Guard force.* A guard force is a security force that operates to the front, flank, or rear of a moving or stationary force to protect that force from enemy ground observation, direct fire, and surprise attack. It defeats, destroys, or delays enemy threats within its capabilities. A guard force is normally composed of units assigned or attached to the force being protected.

(a) *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 surprise attack by defeating or delaying the enemy within its capabilities.

(b) *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.

(c) *Rear guard*. A rear guard is a security force that operates to the rear of an advancing or withdrawing force to protect it from surprise attack or annoyance by defeating or delaying the enemy within its capabilities.

3. *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 positive knowledge of the activities and locations of enemy forces encountered.

4. *General outpost (GOP) force*. A GOP force, as it applies to armored and air cavalry units, is a mobile fully supported security force placed some distance from the protected force in a static or defensive posture to prevent observation and surprise of the protected force by defeating or delaying the enemy within its capabilities. (Normally, the GOP force is located closer to the protected force and is smaller than the covering force. It is used in static and defensive situations, and when required or available, both a covering force and a GOP force may be employed.)

5. *Rear area security force*. A rear area security force protects rear area units, installations, and routes of communication from attack by enemy airborne and air landed forces, guerrillas, infiltrators, and forces that have penetrated the forward areas.

(d) *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.

(3) *Surveillance definition, types, and fundamentals*.

(a) *Surveillance*. Surveillance involves the systematic and continuous observation of the battlefield to include selected areas, routes, or static locations such as crossroads, bridges, aircraft landing areas, or other specific type

installations. Factors influencing surveillance are visibility, terrain, natural or manmade concealment, enemy air defense capabilities (aerial surveillance), and types of surveillance equipment. Armored cavalry elements conducting surveillance as an inherent part of reconnaissance and security missions provide commanders with current information by maintaining a systematic watch over the assigned area for the purpose of detecting, locating, identifying, and reporting information of military value.

(b) *Types of surveillance*. A degree of surveillance is included in each combat operation. Types of surveillance included throughout the manual are:

1. *Visual*. Visual surveillance is accomplished by air cavalry or ground units as an included task in the conduct of reconnaissance and security missions.

2. *Electronic*. Electronic surveillance consists of ground radar, light intensification devices, infrared (IR) devices, radio monitoring equipment, and airborne radar, attended and unattended sensors.

3. *Photographic*. Photographic coverage by armored and air cavalry units performing surveillance missions is usually limited to hand-held or mounted cameras operated from organic aircraft.

(c) *Fundamentals of surveillance*.

1. Orient on assigned area.
2. Maintain continuous and systematic observation of the area.
3. Report all information of activity, or lack of activity, within the area accurately and rapidly.
4. Avoid engagement with the enemy except in self-defense.

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

(1) Economy of force implies appropriate allocation of the available means to perform secondary tasks to insure sufficient combat power at the point of decision. Armored cavalry and air cavalry units are organized and equipped to perform economy of force missions, thus permitting a commander to mass other forces elsewhere.

(2) In the economy of force role, armored cavalry 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 larger unit.

1-4. Characteristics of Armored Cavalry and Air Cavalry Units

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

b. Firepower. Armored cavalry and air cavalry units have mobile firepower in the form of antitank guided missiles, large caliber direct fire weapons, air-to-ground weapons, machineguns, mortars, and individual weapons. In addition, when required by the mission, direct support (DS) or attached artillery fire support is available. These capabilities permit the aggressive execution of all normal armored cavalry missions.

c. Mobility. Armored cavalry and air cavalry units are completely air or surface mobile in organic vehicles. The swimming capability of the armored reconnaissance airborne assault vehicle (ARAAV), the armored command and reconnaissance vehicle, the armored personnel carrier, and the armored mortar carrier provide armored cavalry 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 is achieved by aggressive, violent action conducted by armored

cavalry and air cavalry units. This characteristic is enhanced by mobility and firepower.

e. Protection. The armor protection allows greater freedom of movement in a combat environment.

f. Extensive and Flexible Communications. Although FM voice radio is the primary means employed between troop and squadron, AM radio (voice or CW) and telephone (wire or VHF communication) are also available. This capability enables a great volume of traffic to be handled and provides a means for maintaining communications on the move and over greater distances than is possible using only FM voice radio.

(1) Because of the extensive reliance on communications and noncommunications equipment, armored cavalry units are particularly lucrative targets for enemy electronic warfare (EW) operations, i.e., electronic warfare support measures (ESM), electronic countermeasures (ECM), and electronic counter-countermeasures (ECCM). (See FM 32-20 for details on EW, ESM, ECM, and ECCM.)

(2) Electronic surveillance equipment is likewise susceptible to jamming and deception. Personnel operating this equipment should be prepared to utilize electronic counter-countermeasures in the event of enemy ECM activity.

g. Flexibility. Cross-country and air mobility, extensive and flexible communications, and responsiveness to command permit armored cavalry and air cavalry units to operate over wide areas and at extended distances. These capabilities provide maximum flexibility to the commander in accomplishing rapidly changing and varied missions.

PART TWO

ARMORED CAVALRY TROOP

CHAPTER 2

GENERAL

Section I. GENERAL

2-1. Purpose and Scope

Part Two covers the organization, tactics, and techniques employed by the armored cavalry platoon and troop. Reconnaissance, security, surveillance, offensive, defensive, and retrograde operations are covered in separate chapters and sections. The armored cavalry platoons and troops of divisions, separate brigades, 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. The organizations of units of the armored cavalry regiment are discussed in FM 17-95.

2-2. 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, or delaying actions as an economy of force measure. 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 also performs the following specific functions.

- (1) Collects information including informa-

tion on potential nuclear targets and nuclear damage assessment, through the accomplishment of reconnaissance missions.

- (2) Provides flank security for a larger unit on one flank.

- (3) Acts as all or part of a security force between two larger units.

- (4) Acts as part of a divisional general outpost (GOP) or a corps covering force in defensive operations; acts as part of a division covering force in offensive and retrograde operations. (See paragraph 1-3 for definitions of GOP and covering force.)

- (5) Provides a screen for a larger unit.

- (6) Performs rear area security as an entire force or part of a larger force.

- (7) Conducts offensive, defensive, and retrograde operations in the accomplishment of reconnaissance and security missions or while accomplishing an economy of force mission.

- (8) Conducts chemical agent detection and radiological monitoring and survey operations.

- (9) Performs damage control operations as an entire force or 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

2-3. General

The armored cavalry troop consists of a troop headquarters and three armored cavalry platoons. The troop is organized and equipped to permit the conduct of operations discussed in this manual. Figure 2-1 shows the organization of the armored cavalry troop.

2-4. 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

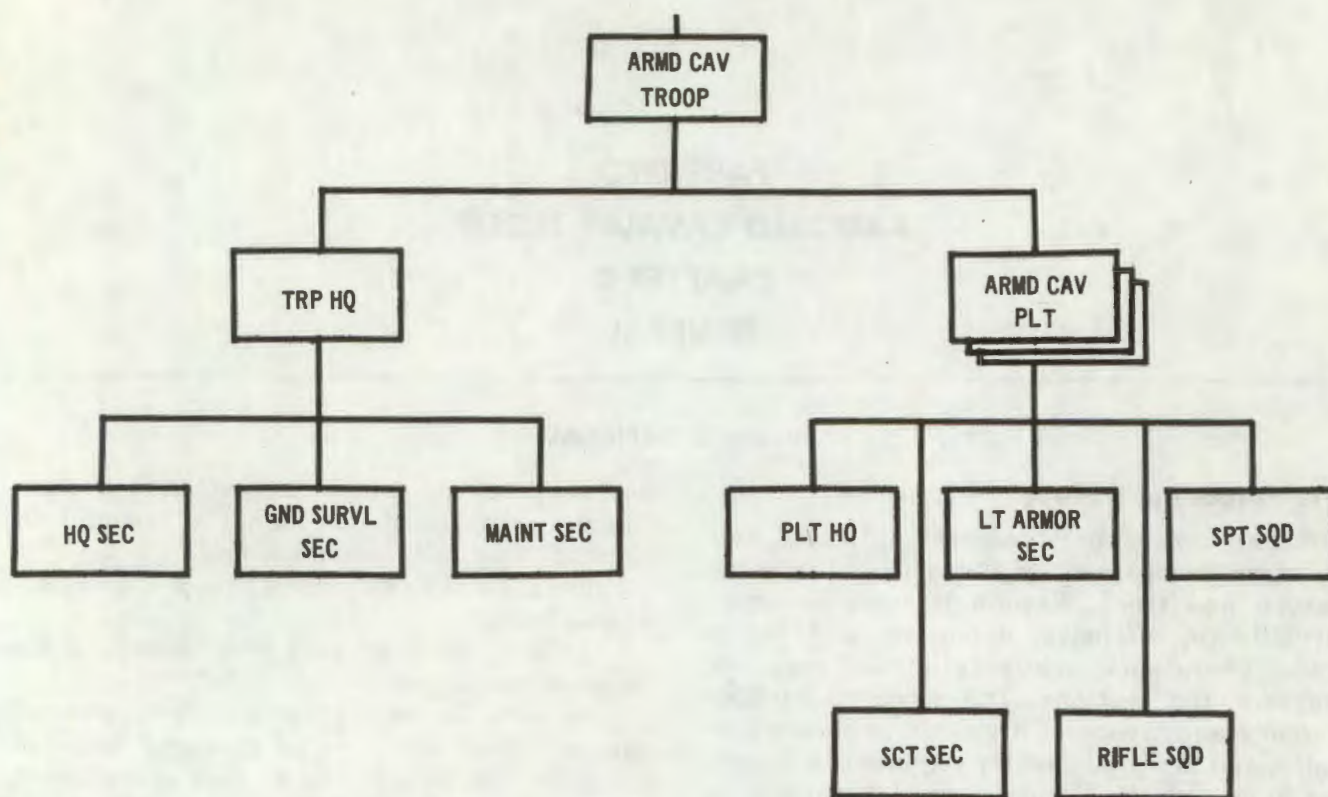


Figure 2-1. Organization, armored cavalry troop.

the operations and administrative center of the troop and is usually under the supervision of the executive officer. It establishes and maintains communications, consolidates and reports information, accomplishes liaison, and coordinates plans with higher headquarters and adjacent units. Combat service support 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, 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. A liaison sergeant and a liaison agent may be added by augmentation.

Note. There are minor differences between the headquarters section, armored cavalry troop described above and the headquarters section, armored cavalry troop of the armored cavalry squadron, armored cavalry regiment.

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

c. Maintenance Section. The maintenance section performs organizational maintenance on the vehicles, weapons, and radios of the troop. It also has a limited capability for vehicle recovery. The section is comprised of a motor sergeant, recovery personnel; track, turret, and radio mechanics; and an equipment records clerk. Equipment in the section includes a light armored recovery vehicle, an armored personnel carrier, a 2¹/₂-ton cargo truck, and a 1¹/₄-ton utility truck (fig. 2-2). Organizational maintenance operations are described in FM 29-2.

2-5. Armored Cavalry Platoon

The armored cavalry platoon consists of a platoon headquarters, scout section, light armor section, rifle squad, and a support squad (fig. 2-3). The armored cavalry platoon is the smallest combined arms element in the US Army. This permits employment in a wide variety of combat missions.

a. Platoon Headquarters. Platoon headquarters consists of the platoon leader and a scout driver. Combat mobility 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

TROOP HEADQUARTERS

HEADQUARTERS SECTION

AN/VRC-47
AN/GRC-39



1 CPT (COMDR) P
1 E-3 (DVR) R W/GRN LNH

AN/VRC-12



1 E-6 (VEH COMDR) P
1 E-4 (PERS CARR DVR) P, SMG

AN/VRC-46*



1 E-5 (LN SGT) R*
1 E-4 (LN AGENT) (DVR) R*

AN/VRC-47
AN/GRC-106



1 E-8 (1 SGT) R
1 E-6 (COMM CHIEF) R
1 E-4 (SR RAD OPER) R
1 E-3 (RAD OPER) R
1 E-4 (PERS CARR DVRL) P, SMG
1 E-5 (TRP CLK) R

NOTE: XO ASSIGNED HQ SEC LOCATED IN MAINTENANCE SEC.

HEADQUARTERS SECTION

AN/PPS-5
AN/GRC-160



1 E-6 (SEC LDR) R
1 E-5 (SR RADAR OP) R
1 E-4 (RADAR OP) (DVR)
R W/GRN LNH

AN/PPS-5
AN/GRC-160



1 E-5 (TM LDR) R
1 E-5 (SR RADAR OP) R
1 E-4 (RADAR OP) (DVR)
R W/GRN LNH

AN/VRC-47



1 LT (XO) R**
1 E-4 (FLD RAD MECH)
(DVR) R

MAINTENANCE SECTION

AN/VRC-64



1 E-5 (SR TR VEH MECH) R
1 E-4 (TR VEH MECH) R
1 E-3 (TRACK VEH MECH HELPER)
(PERS CARR DVR) R
1 E-4 (TURRET MECH) R
1 E-4 (EQUIP REPORTS CLK) R
W/GRN LNH
1 E-4 (PII CLK) R*

AN/VRC-46

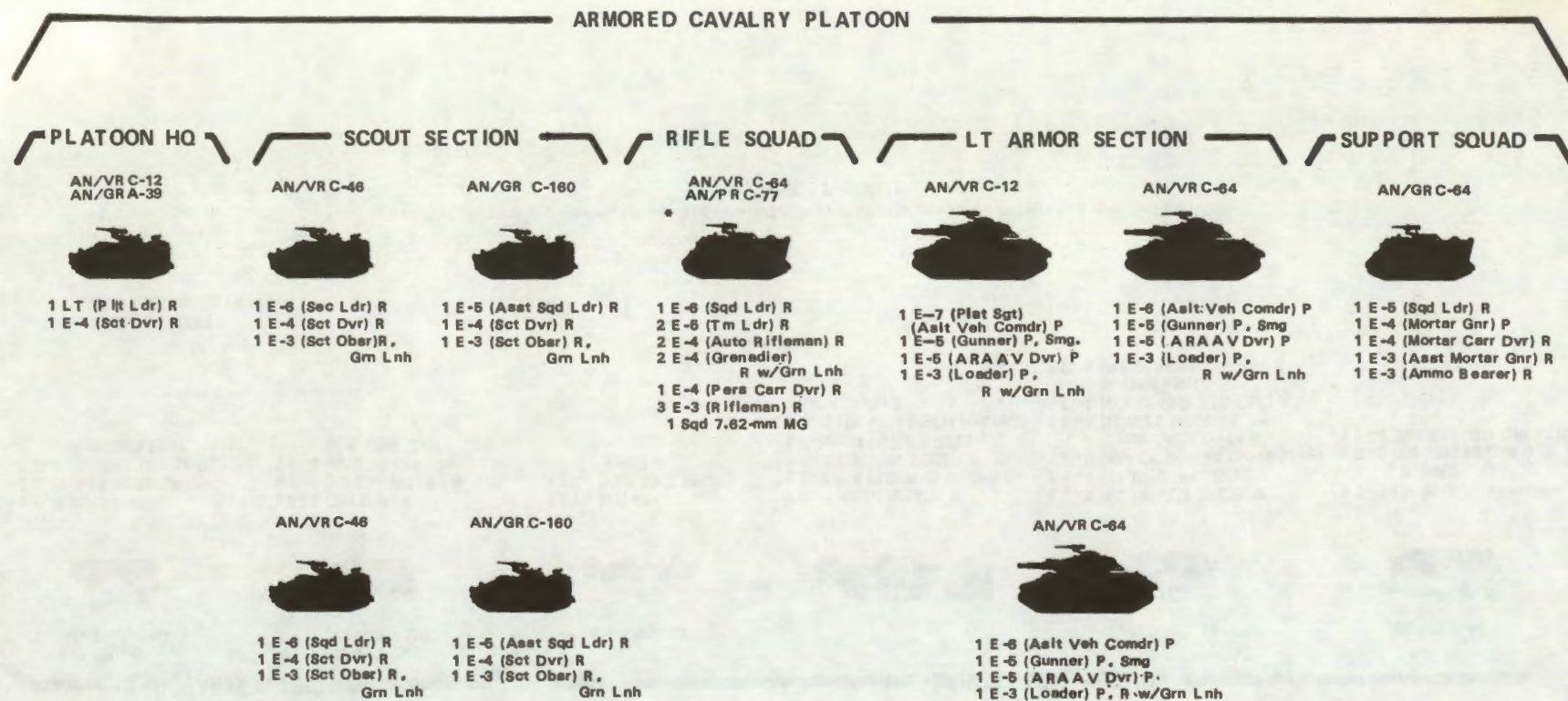


1 E-5 (SR RECOV VEH OP)
P, SMG
1 E-4 (TR VEH MECH) R
1 E-4 (RECOV VEH OPERATOR) P

* AUGMENTATION

** XO IS INCLUDED IN HQ SEC.

Figure 2-2. Manning chart, troop headquarters and maintenance sections, armored cavalry troop. (TOE 17-107H).



* PRT-4
PRR-8 } HELMET RADIO WORN
BY SQD LDR

Figure 2-3. Manning chart for armored cavalry platoon.

drivers. The section leader also commands the first squad. There are two armored command and reconnaissance carriers in each squad.

c. Light Armor Section. The section has three armored reconnaissance airborne assault vehicles (ARAAV). Each crew includes a vehicle commander, gunner, driver, and loader. The platoon sergeant commands one vehicle.

d. Rifle Squad. The rifle squad consists of a squad leader, two fire teams, a driver, and a rifleman designated as a machinegunner. This machinegunner shifts teams on order. Each team consists of a team leader, an automatic rifleman, a grenadier, and a rifleman. Combat mobility 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 weapons are mounted on an armored mortar carrier.

2-6. Duties of Key Personnel, Troop Headquarters

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

b. Executive Officer. The executive officer performs duties assigned to him by the troop commander. 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. He is normally assigned the additional duty of troop maintenance officer.

c. First Sergeant. The first sergeant is the senior noncommissioned officer in the troop. He assists the troop commander by performing assigned duties, including supervision of administration, supply, maintenance, and training activities. He makes recommendations to the troop commander on appointments, promotions, reductions, assignments, and disciplinary matters as they pertain to noncommissioned officers and enlisted men in the troop. He assists the executive officer and

represents him when the executive officer is absent from the command post.

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

e. Liaison Sergeant. (Augmentation). The liaison sergeant provides direct physical communication facilities between the troop command post and higher or adjacent headquarters. He keeps informed of the existing tactical situation and the plans of his unit and those 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 leads the maintenance section and advises the troop commander and executive officer on maintenance matters. He supervises all maintenance personnel and is responsible for their training. He exercises overall supervision of organizational maintenance to include procurement, issuance, and storage of repair parts and all troop maintenance records.

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. Ground Surveillance Section chief. The ground 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.

2-7. 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, aggressively, 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, control, combat readiness, and operations of his platoon. 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 chapter 3, 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 directs the light armor section. When the platoon leader uses the ARAAV, the platoon

sergeant may use the platoon leader's command and reconnaissance carrier. The platoon sergeant assists the platoon leader in maintaining discipline, in conducting training, and in maintaining control of the platoon. He assists in maintenance of equipment, supply, and other platoon administrative matters.

d. Section Leaders, Squad Leaders, and Tracked Vehicle Commanders. Section leaders, squad leaders, and tracked vehicle commanders are responsible to the platoon leader for the training, discipline, tactical employment, and control of their elements. They supervise the maintenance and operation of all organic vehicles and equipment. Each section or squad leader must be thoroughly familiar with the operational techniques of his own and other elements of the platoon. They also supervise first aid and evacuation of wounded personnel. These capabilities are essential for effective combined arms action within the platoon.

CHAPTER 3

EMPLOYMENT OF THE ARMORED CAVALRY PLATOON

(STANAG's 2003, 2008, 2015, and 2079)

Section I. TECHNIQUES OF EMPLOYMENT OF ELEMENTS OF THE ARMORED CAVALRY PLATOON

3-1. Purpose and Scope

a. The armored cavalry platoon is the basic tactical element of the armored cavalry troop. Its organization and equipment permit its employment in numerous roles. It is capable of performing reconnaissance, providing security, or executing offensive, defensive or retrograde missions in an economy of force role.

b. This section discusses the fundamental doctrine for the employment of the armored cavalry platoon. Separate paragraphs deal specifically with missions and techniques of elements of the platoon as they perform their portion of the platoon mission. Where appropriate, the discussion of techniques for each element makes reference to applicable literature. It discusses those techniques that differ from referenced literature by exception.

3-2. Employment of the Armored Cavalry Platoon

a. The armored cavalry platoon is the smallest organic combined arms team in the U.S. Army. The platoon is organized, equipped, and trained to operate as a team. It should be employed as a unit. *The platoon will fight* when necessary to accomplish its mission.

b. The armored cavalry platoon in the armored cavalry troop may be detached for independent missions for limited periods; however, for reasons such as command, control, combat support, and combat service support, it is not normal to employ it on independent missions.

c. Normal formations and battle drills are discussed in appendix D and later in this chapter.

3-3. Light Armor Section

a. *Mission.* The mission of the light armor section is to provide direct fires for the platoon in the accomplishment of its assigned mission.

It provides the primary fire and movement capability enabling the platoon to close with and destroy enemy forces, and provides the platoon with the combat power to conduct effective combat operations in the accomplishment of all normal platoon missions.

b. *Light Armor Section Employment.*

(1) The light armor section is employed to—

(a) Support the scout section by fire during reconnaissance operations.

(b) Give the platoon a long-range direct fire capability.

(c) Establish strongpoints when the platoon conducts security missions.

(d) Form the basis of the platoon maneuver force in the attack.

(e) Provide the firepower, mobility, and flexibility required to accomplish its mission.

(2) The light armor section, when equipped with the ARAAV, has improved mobility and long-range firepower. In order to gain greater cross-country mobility and agility with improved tactical and strategic mobility, the ARAAV is necessarily lighter and, consequently, has less armor protection than a tank. This is significant in that ARAAV crews must adhere more closely to the fundamental technique of using available terrain for protection than is usually practiced by tank elements. This is *not* a departure from present tank employment fundamentals; however, it is an area requiring more emphasis.

(3) The light armor section must be employed in conjunction with the other elements of the platoon because of the complementary nature of actions of all the platoon elements. The techniques used within the platoon are those discussed in FM 17-12, FM 17-15, and this chapter.

3-4. Scout Section

a. *Mission.* The mission of the scout section is

to collect and report information that supports the armored cavalry platoon or parent unit mission. The scout section accomplishes this mission by using stealth, infiltration, movement, observation, and special equipment to collect information which it then reports. In the performance of this mission, the scout section performs many roles, but they *all* are related to the stated mission. If required, the scout must also fight to gain information to accomplish his mission. The scout section is the eyes and ears of the platoon, and the section must insure that all information required by the platoon is acquired and is quickly and accurately reported. The location, mission, and tactical situation of the scout generally presents him with a variety of enemy targets. Those targets that he can destroy without degrading his primary mission must be rapidly engaged and destroyed. As a general rule, the scout should employ his weapons in order to:

- (1) Defend himself.
- (2) Destroy targets within his capability only when such engagement will not adversely affect mission accomplishment.
- (3) Conduct reconnaissance by fire.

b. Techniques of Employment of the Scout Section.

(1) The scout section mission is usually the same regardless of the platoon mission. The scout mission involves the collection and reporting of information and the destruction of targets that are within his capabilities. The mission may be to collect information that a road is clear of obstacles and enemy (platoon route reconnaissance mission), or that key terrain is trafficable but occupied by enemy forces which he cannot destroy (a platoon zone or specific reconnaissance mission), or that there is no sign of the enemy (when the platoon performs an advance guard mission). It may be information that the enemy is approaching the platoon with a heavy mechanized force or with a dismounted force (when the platoon is performing a guard, screen, or defense mission). In every case, *the scout collects and reports information* or acts as the platoon's eyes and ears and, by so doing, ultimately serves as the eyes and ears of a much larger force. In most instances, he engages targets that he can destroy. The procedures used involve the factors of:

- (a) *Movement* (to or through the area of interest, mounted and dismounted; with stealth and by infiltration, continuously and by bounds—successive and alternate).
- (b) *Observation* (of the area of interest,

visually and with special equipment) in order to collect information.

(c) *Communication of the results obtained* (by the best means available such as radio, wire, messenger, visual signals, or voice).

(d) *Target engagement* (either by use of indirect fire adjustment or his own primary weapon system).

(2) Factors (b) and (c) above are present in every mission. The first and last factors usually apply but are not absolute requirements. The succeeding subparagraphs discuss each factor involved and deal with techniques of movement, collection of information and reporting.

(3) Movement is usually necessary and the scouts play an important part in movement. They move dismounted, mounted, or using a combination of both. Dismounted movement is governed by FM 21-75 and is not discussed herein. Mounted movement is normal in armored cavalry. The scout moves usually in the vehicle provided, taking care to dismount when necessary to insure mission accomplishment. He moves continuously or by bounds. A detailed discussion of each method of movement is contained in paragraph 3-11. (See figures 3-7 through 3-9 for illustrations of movement by bounds.) Using these movement techniques, he traverses all terrain required to be reconnoitered, collecting and reporting all information as he progresses. He moves with stealth and infiltration where possible and bases his method of movement on the requirements of the platoon mission, the imminence of enemy contact, the terrain he must traverse, and the number of scouts available to perform the mission. The techniques of movement during reconnaissance by the armored cavalry platoon are discussed in paragraph 3-11. This discussion of scout movement applies to almost every movement by scouts since they must reconnoiter to some degree whatever the reason for the move.

(4) Observation is the means of collecting information. The scout or scout element uses all available facilities to do this. He observes the area of interest visually and aurally with mechanical aids such as binoculars and magnified weapon sights, with night vision aids and sights, and with electronic aids to determine information of the enemy and terrain. He accomplishes this collection without disclosure of his own location. He takes advantage of the cover and concealment provided by the terrain and adheres to signal security practices to minimize the possibility of disclosing either his activities or location.

(a) When the only way to collect the necessary information is by sacrificing surprise or

stealth, he may reconnoiter by fire. Reconnaissance by fire may be done with either indirect or direct fire weapons. The advantages and disadvantages of each method are listed in paragraph 3-12. When this is necessary, one scout element always observes the target area to detect enemy presence while the other element fires.

(b) The scout or scout element observes while moving and while at observation or listening posts.

(c) The scout or scout element must collect detailed or technical information on routes, bridges, defiles, and obstacles. Usually he must physically inspect and record rough measurements of the specific information objective. This is normally done on the spot, but the scout must insure that he is adequately covered by the remainder of his element or the platoon prior to performing this task. For details on collection of this type information, see paragraphs 3-14 and 3-15, FM 5-34, and FM 5-36.

(d) Various types of military dogs are available for employment with the scout sections. The dogs should be controlled by assigned handlers and employed in critical or suspected areas.

(5) *The mission is not accomplished until what is collected is reported.* Information, both positive and negative, must be reported, usually as soon as it becomes known. The fact that the enemy is not in one location may be as important as is his presence in another location. Procedures and facilities for the reporting of collected information are provided (app B and fig. 3-10). The scout must be aware of the importance of constant reporting of negative and positive information.

(6) Aggressive conduct of reconnaissance and security presents many targets to the scout that he can defeat. These targets are destroyed provided such engagement will not adversely affect mission accomplishment. For targets beyond his capability to defeat, the scout can request additional direct and indirect fires through the platoon leader. Scout elements will adjust fire when required. Indirect fire adjustment is discussed in FM 23-92 and FM 6-135.

3-5. Rifle Squad

a. Mission. The mission of the rifle squad is to close with and destroy the enemy in conjunction with the light armor section in offensive operations; to reinforce the scouts as required in the conduct of reconnaissance and security missions (primarily screens), and accomplishment of surveillance tasks; and to provide local

security to the platoon (primarily the light armor section) in static situations.

b. Techniques of Rifle Squad Employment.

(1) The basic techniques of employment, formations, and battle drill of the rifle squad are discussed in detail in FM 7-10. The differences in techniques that apply to the rifle squad of the armored cavalry platoon are set forth in this chapter and appendix D.

(2) By the nature of the platoon missions, the rifle squad must be employed primarily in the mechanized infantry role. The squad members may frequently be used to perform the scout role and to act as mortar or artillery forward observers or support squad members. Consequently, cross training and utilization of qualified rifle squad members in the related techniques within the platoon must be emphasized. Rifle squad members must be well trained in demolitions and mine detection techniques, as they are equipped and employed to accomplish these tasks for the platoon.

3-6. Support Squad

a. Mission. The mission of the support squad is to provide close indirect fire support to the platoon in the conduct of its mission. This fire support is provided on as nearly a continuous basis as practicable. On occasion, the support squad may be integrated into a provisional section or platoon in order to provide continuous, massed indirect fire support for the armored cavalry troop.

b. Techniques of Employment of the Support Squad.

(1) The mortar is normally employed within the armored cavalry platoon from its mounted mortar carrier. When necessary, the mortar is removed from the carrier and fired from the ground mount. Techniques of fire, for the mortar, are discussed in FM 23-92.

(2) The support squad is capable of going into action from the march in a very short time. Similarly the squad is prepared to go out of action, move to the next firing position as rapidly as practicable, and go into action again. This is an essential capability since the one mortar must provide as near continuous fire support to the platoon as possible. The squad provides its own fire direction and responds to firing requests from the platoon leader and the sections. The squad must be capable of accomplishing all its tasks without detailed supervision.

(3) During movement, the squad leader

must know his precise location, be prepared to receive a fire mission while marching, make a detailed map reconnaissance along his route of march (selecting likely firing positions), monitor and record on his map the location of the platoon elements, and insure that he maintains a distance at least equal to the minimum range of the mortar behind the most forward elements of the platoon (in the advance) or the main position (in the defense).

(4) The support squad may, because of the minimum range requirement, be located outside the primary platoon positions in static situations. It is normally required to provide its own local security. The platoon leader attempts to provide additional elements for security when his mission permits. The firing position must be selected with desirable firing criteria as the

first consideration and position security as a secondary (yet important) consideration. Security must be planned so that it can be accomplished without assistance.

(5) The support squad provides indirect fire in support of all platoon missions. The scouts often request fires for reconnaissance by fire since this employment permits the scouts to observe the results of the reconnaissance fires without exposing themselves to enemy return fires or disclosing their position to the enemy. All members of the platoon are trained to request and adjust fires in support of the platoon mission.

(6) The techniques of employment of the support squad in the platoon operations are discussed later in this chapter and in appendix D.

Section II. RECONNAISSANCE OPERATIONS

3-7. General

a. 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 to include trafficability and obstacles (natural, man-made, chemical, or radiological, etc.), and other aspects of the environment (including the attitudes, actions, condition, strength, and location of significant numbers of civilians) should be reported promptly.

b. Reconnaissance may be accomplished mounted, dismounted, or by combined mounted and dismounted action. Normally, the platoon combines mounted and dismounted action. Scout elements employ stealth, infiltration, movement, observation, and special equipment to obtain information. If required, the scout section fights to gain information in support of the mission. If target engagement is necessary, the platoon employs teamwork to defeat the enemy without degrading the primary mission. Positive and negative information is reported. (See figures 3-1 through 3-4 for armored cavalry platoon reconnaissance formations.)

3-8. Route Reconnaissance (STANAG 2015)

a. The armored cavalry platoon is organized and equipped to operate most effectively along a single route or an axis of advance containing only one primary route (fig. 3-2). However, the

platoon can reconnoiter more than one route, if required, by using the reconnaissance "Y" formation (fig. D-6, D-7).

b. The armored cavalry platoon may be directed to conduct route reconnaissance by itself or as part of the troop. In either case, the platoon is best employed on a single route. Route reconnaissance may be conducted forward of, on the flank of, or to the rear of friendly positions.

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 the route. The armored cavalry platoon operates as a unit, selecting the formation to accomplish the mission considering the enemy situation, control, security, firepower, and terrain. It takes necessary steps to insure constant local security. Scouts or ARAAV's may lead the formation (fig. 3-1, 3-3, and 3-4).

(1) Scouts mounted in tracked armored vehicles have less capability of moving by stealth than do dismounted scouts. The advantages of using the inherent armor protection and cross-country capability of these vehicles offset the limitation imposed by loss of stealth. Scouts normally lead the formation. When there is an enemy antitank threat, the light armor section and the rifle squad will normally lead the platoon.

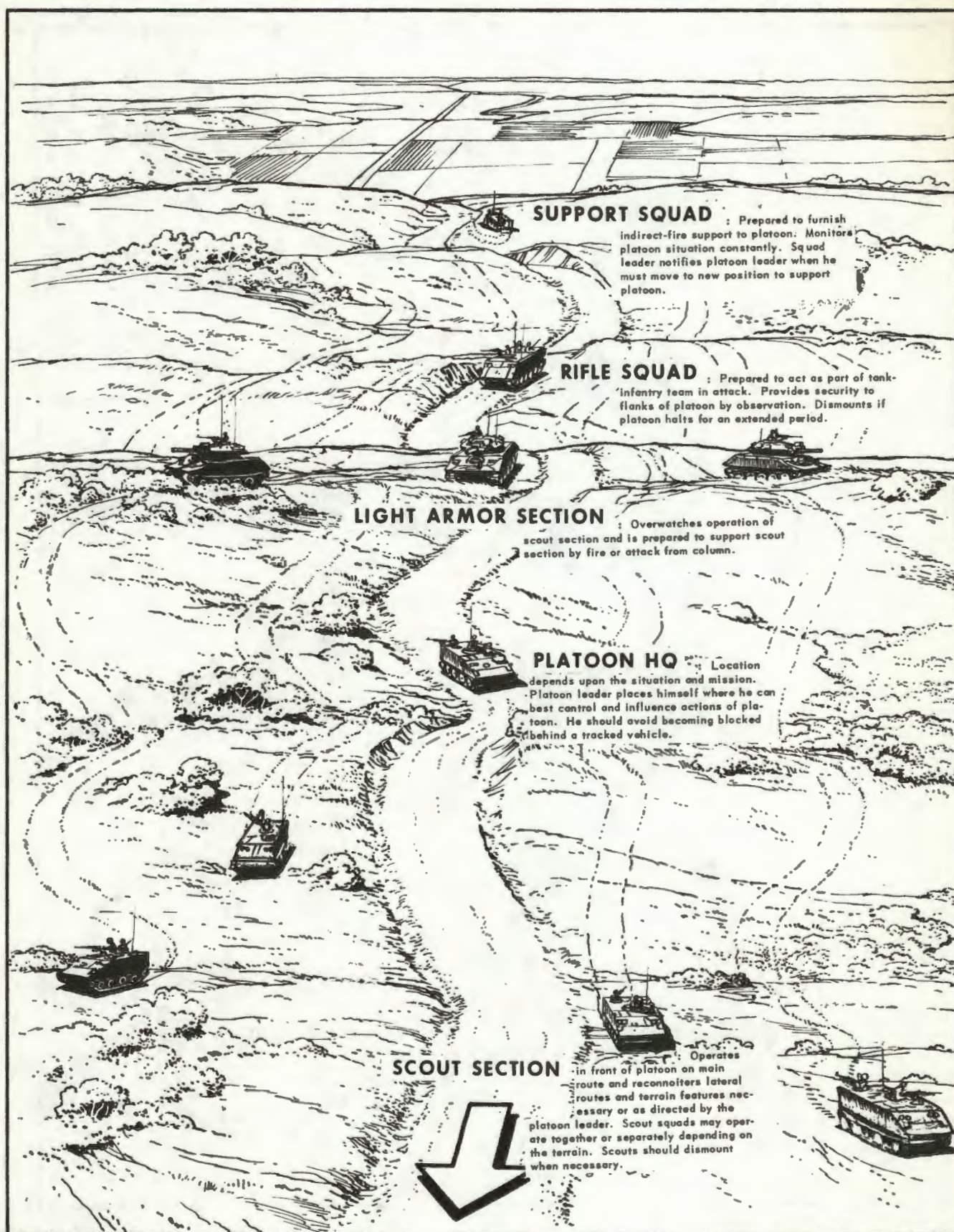


Figure 3-1. Armored cavalry platoon conducting reconnaissance; scout section leading.

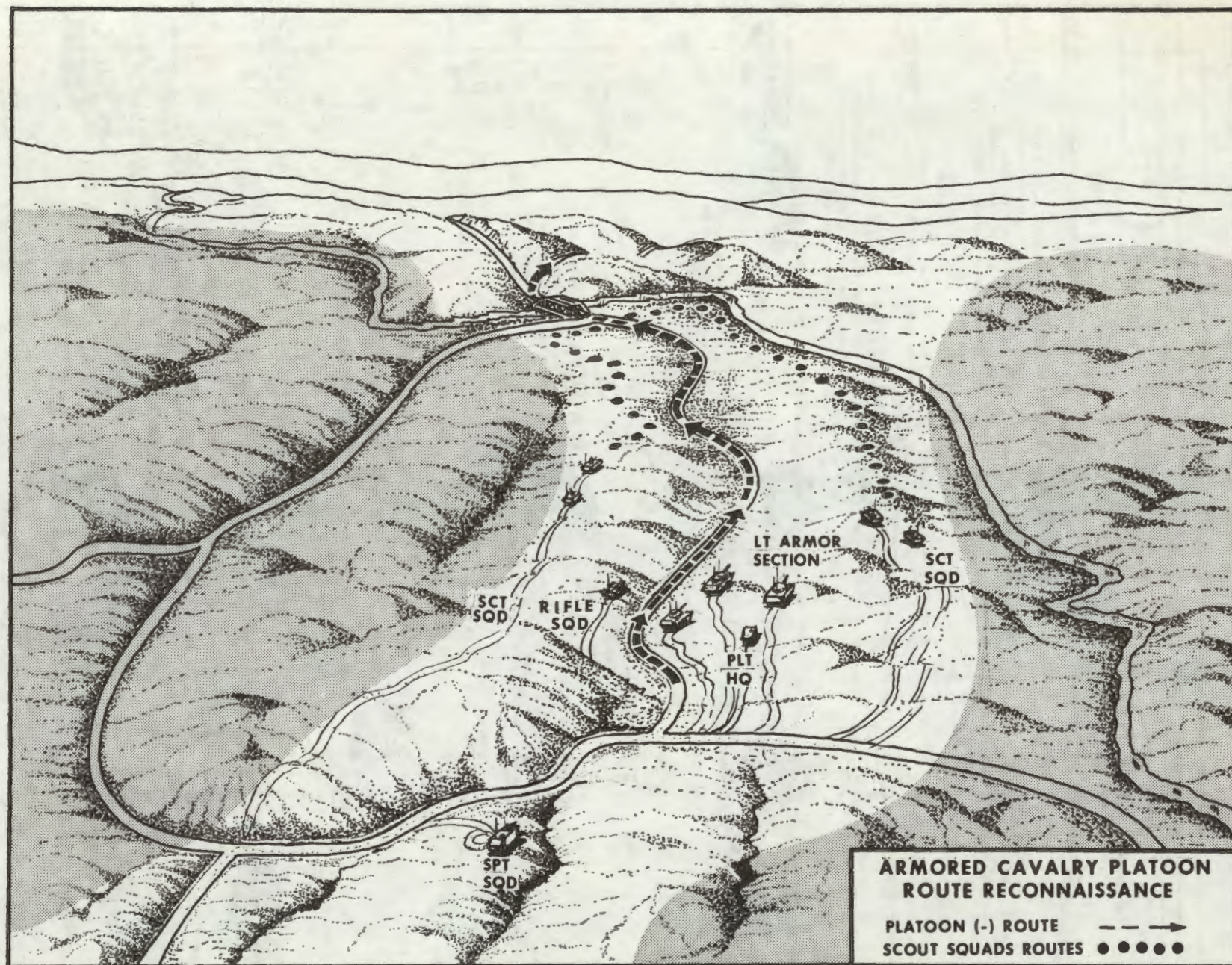


Figure 3-2. Armored cavalry platoon conducting route reconnaissance.

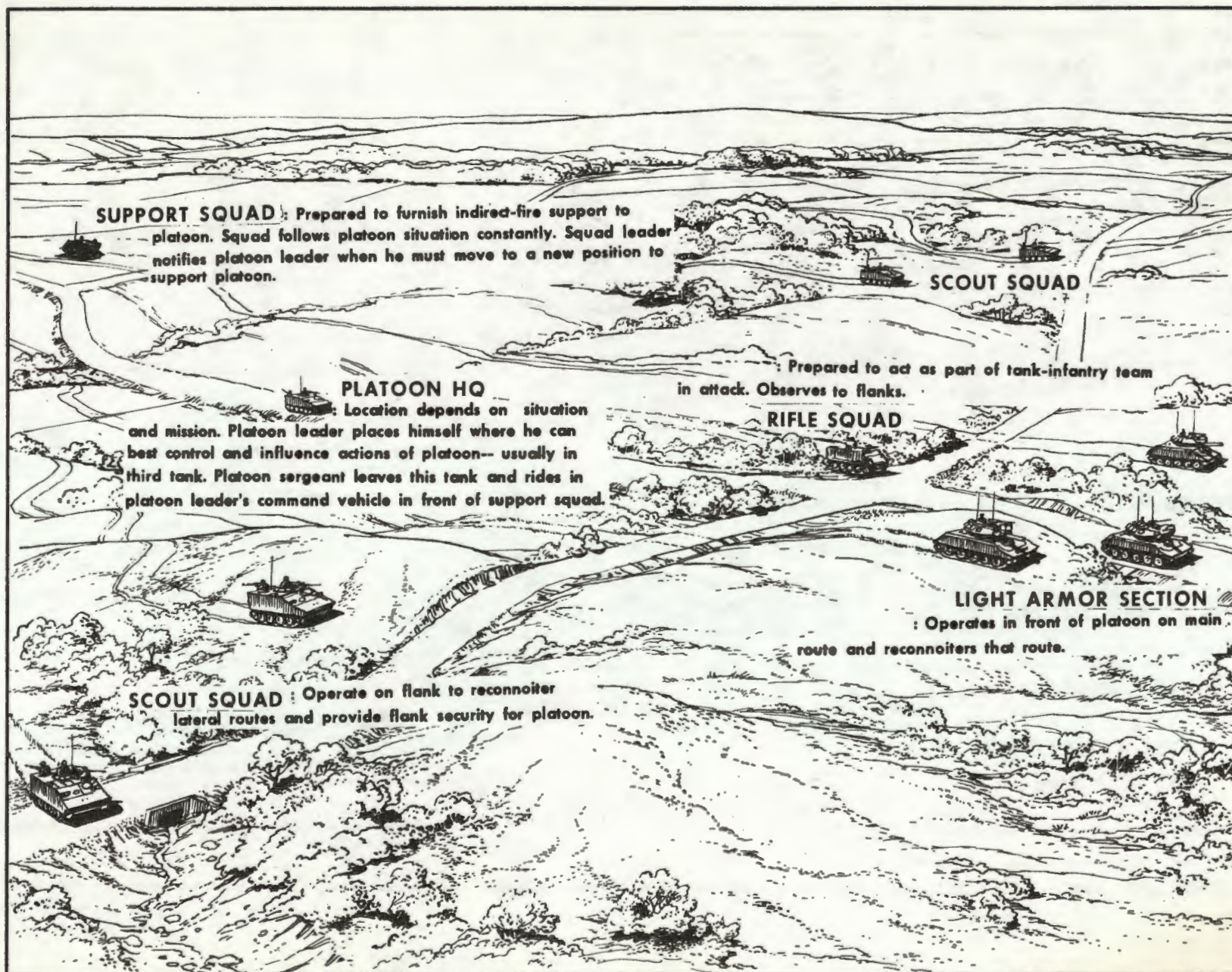


Figure 3-3. The armored cavalry platoon conducting reconnaissance, light armor section leading.

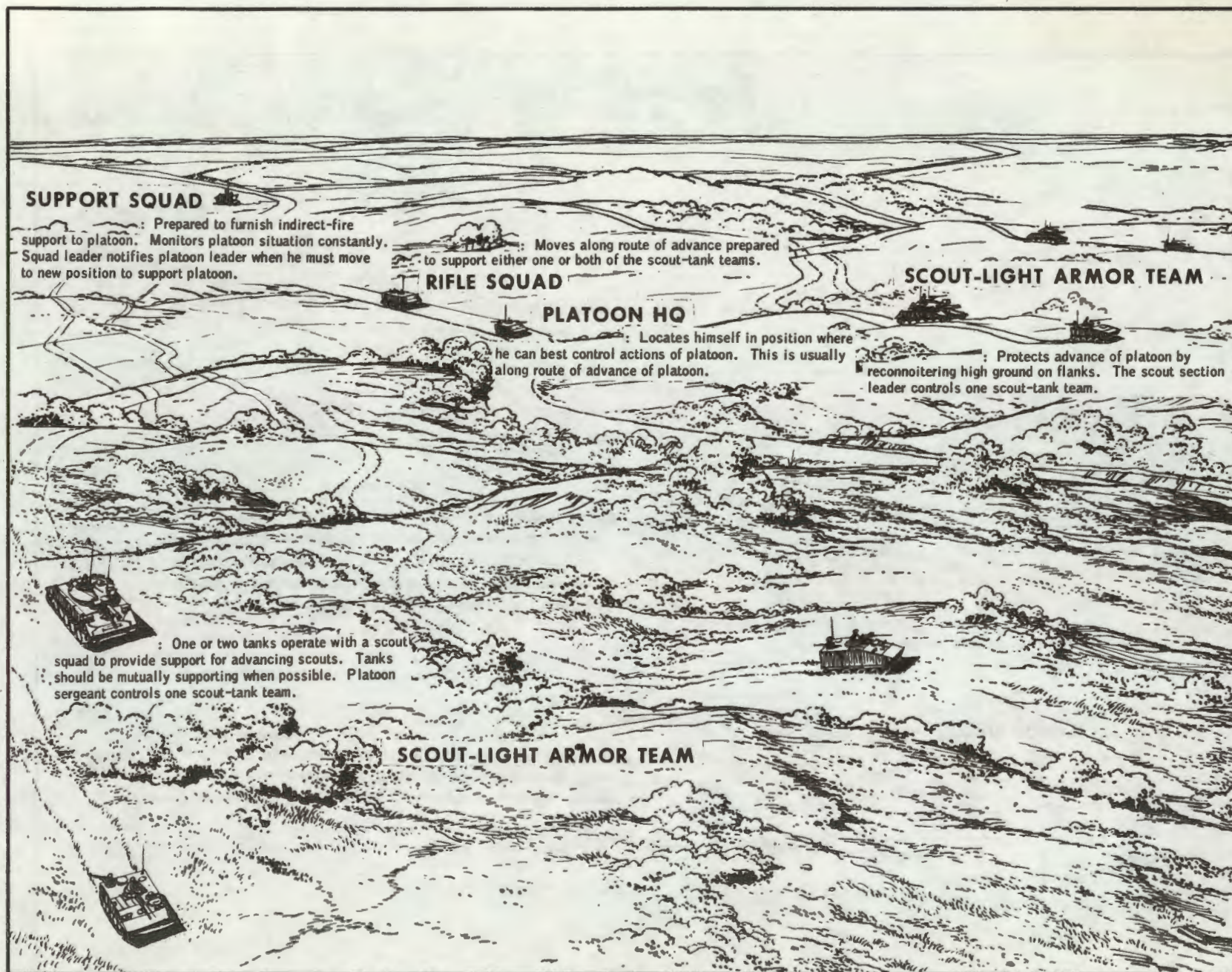


Figure 3-4. The armored cavalry platoon conducting reconnaissance, Y formation.

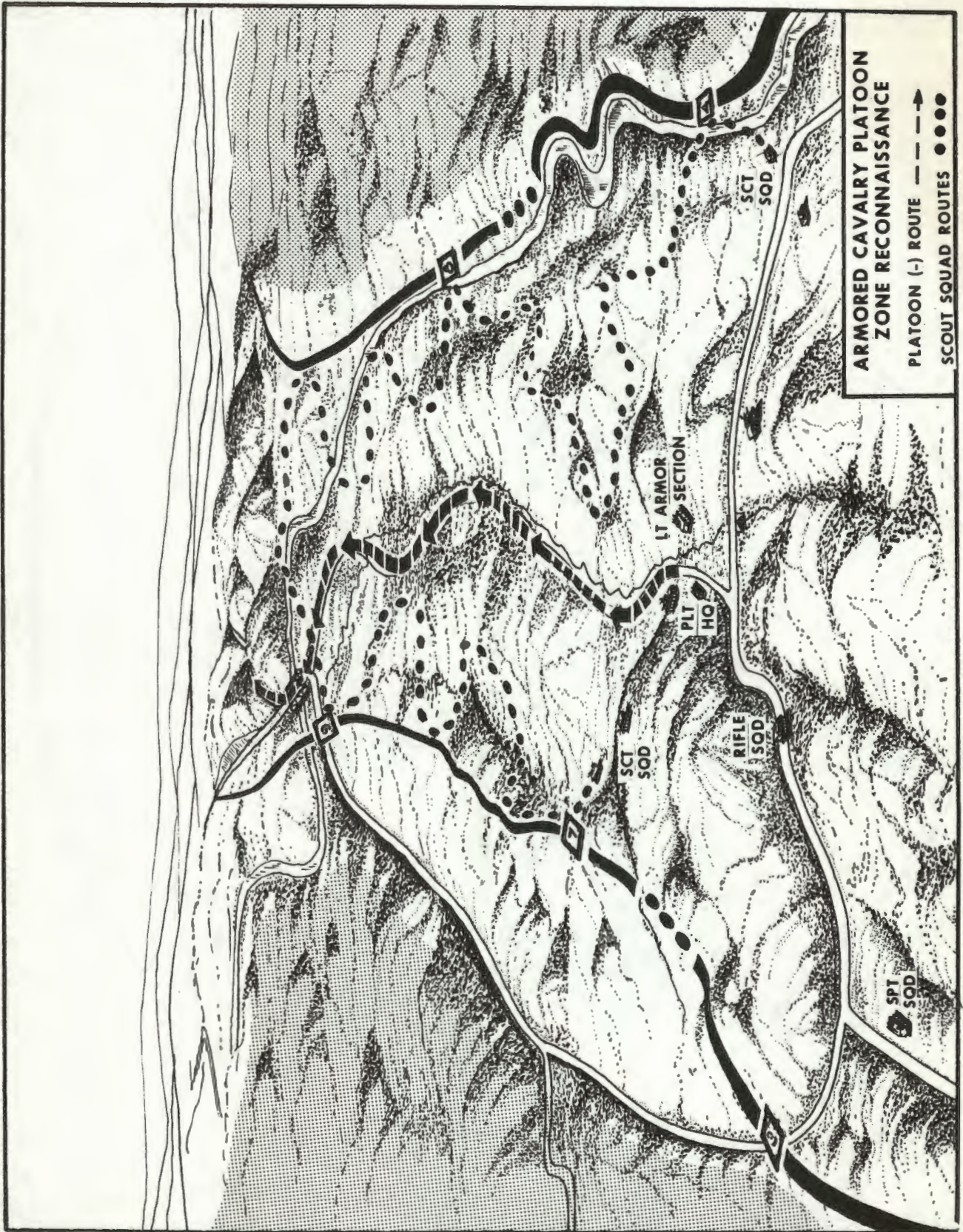
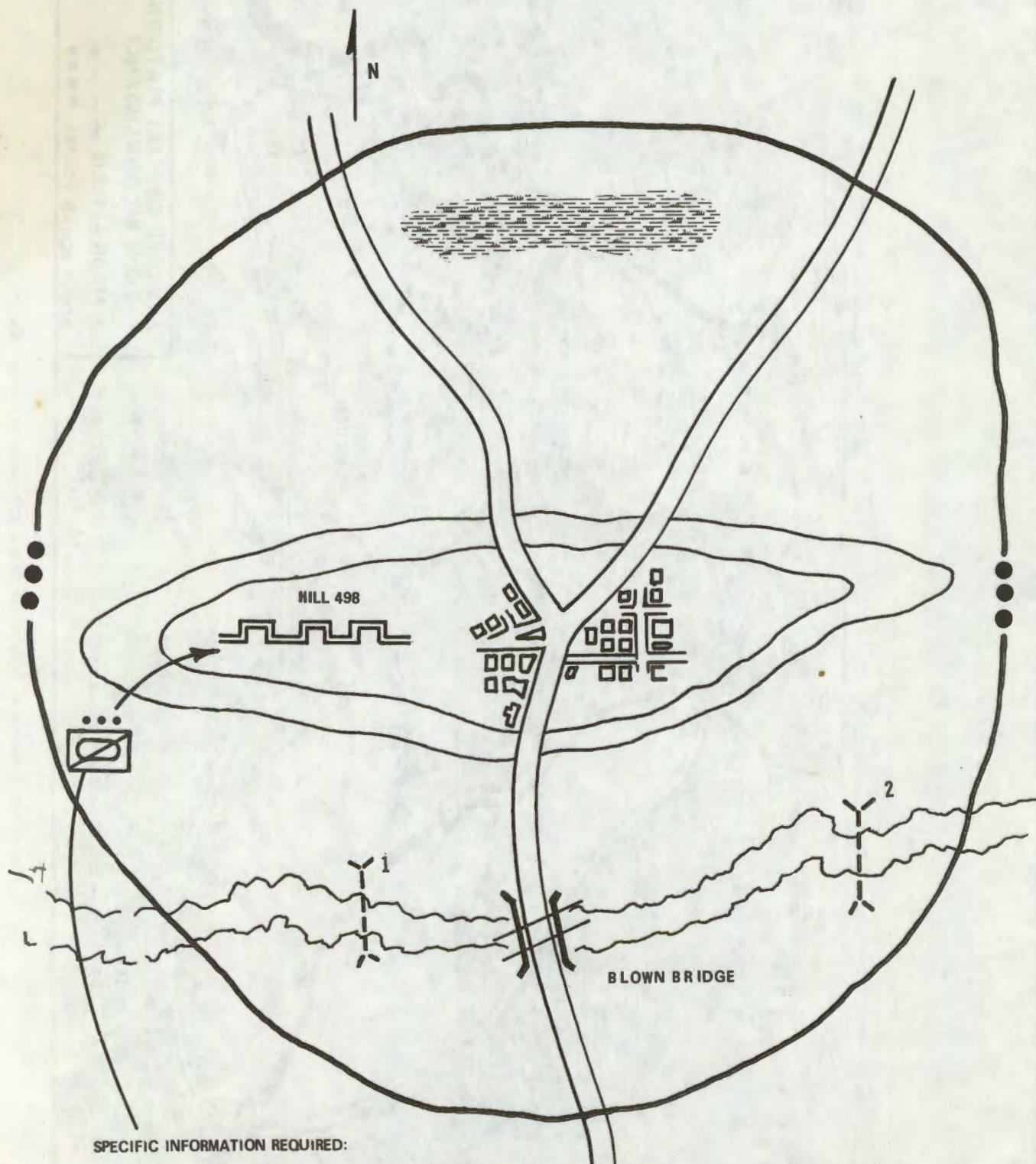


Figure 3-5. Armored cavalry platoon conducting zone reconnaissance.

(2) Scouts mounted in vehicles usually lead the formation when very little or no enemy action has been encountered, fields of fire or

terrain favor enemy ambush, and natural obstacles are prevalent. This tactic prevents the light armor section from becoming involuntar-



1. DETERMINE IF THERE ARE SUITABLE CROSSING SITES OVER THE RIVER AT LOCATIONS ONE AND TWO.
2. DOES THE ENEMY HAVE PREPARED DEFENSIVE POSITIONS ON HILL 498?
3. CAN TANKS CROSS THE SWAMP NORTH OF HILL 498?

Figure 3-6. Armored cavalry platoon conducting specific reconnaissance.

ily engaged and allows the ARAAV to be used as the platoon leader desires. The light armor section usually leads 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 all conditions that are likely to affect the movement of friendly elements, such as route and bridge conditions, location and condition of bypasses, fords, and obstacles, and information of the enemy or terrain.

f. Engineers should be placed in support of the armored cavalry platoon when their use facilitates the advance of the platoon and they can assist in collecting technical information. Engineers may assist the armored cavalry platoon by clearing mines, removing roadblocks, constructing hasty bridging, or constructing bypasses and performing route and bridge classification.

g. For action on contact with the enemy, refer to paragraph 3-13.

3-9. Zone Reconnaissance

a. Zone reconnaissance is usually the most extensive and time-consuming reconnaissance mission performed by the platoon. Platoon zones are assigned by the troop commander to coordinate movement, control fires, and fix responsibility. Within these platoon boundaries, the platoon is required to thoroughly search and report all information on enemy forces, roads and trails, and key terrain. Factors determining the width of the platoon zone are: Pattern of the road net, terrain features, anticipated enemy activity, type information desired, and time available for accomplishing the mission. Ideally, the platoon can most effectively perform zone reconnaissance within a zone containing only one primary route or axis of advance. The platoon operates as a unit, selecting the formation to accomplish the mission considering the enemy situation, control, security, firepower, and terrain. Normally, scouts reconnoiter roads, trails, and terrain features within

the zone. The remainder of the platoon reconnoiters and advances along the best route or axis of advance available. These elements must be prepared to take aggressive action to support the scout section anywhere in the zone (fig. 3-5).

b. For action on contact with the enemy, refer to paragraph 3-13.

3-10. Specific Reconnaissance

a. A platoon is assigned a specific reconnaissance mission when the commander desires specific information about certain locations or facilities within a defined area. The objective of this mission is to provide the commander with rapid and timely information concerning particular points of interest within a given area. To accomplish this mission, the platoon moves directly to the assigned area, reporting and bypassing enemy positions as necessary. Once in the assigned area the platoon goes directly to the places of interest, within the area, and answers the commander's specific information needs. There is no requirement for the platoon to clear the area or secure any portion of it, unless specifically ordered to do so.

b. In moving from the location where the mission was first assigned to the area to be reconnoitered, the platoon adopts a formation that permits rapid, aggressive, yet secure movement. This formation is usually the same as that used for a route reconnaissance, with either the ARAAV's or scouts leading (fig. 3-6).

c. For action on contact with the enemy, refer to paragraph 3-13.

3-11. 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. This mobility is exploited best by aggressive action. For march planning and execution, see FM 17-1.

b. When the situation is vague, or when time is critical, the platoon may advance in column at maximum speed consistent with the mission. Scout elements move to the front by bounds. The distance between vehicles varies with the terrain. The ARAAVs maintain observation over the area in which the scouts are operating. The purpose of 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

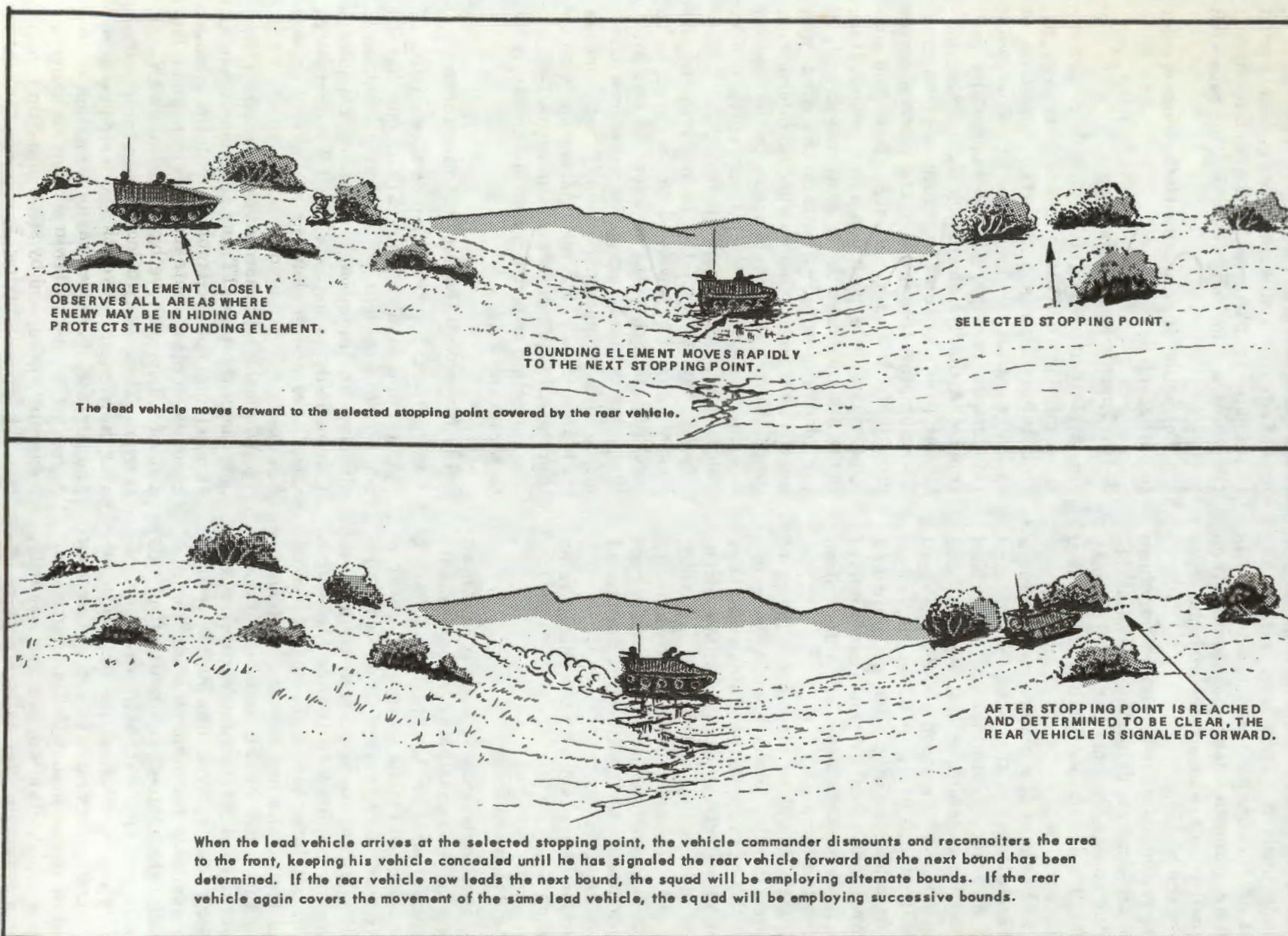


Figure 3-7. Scout squad moving by bounds.

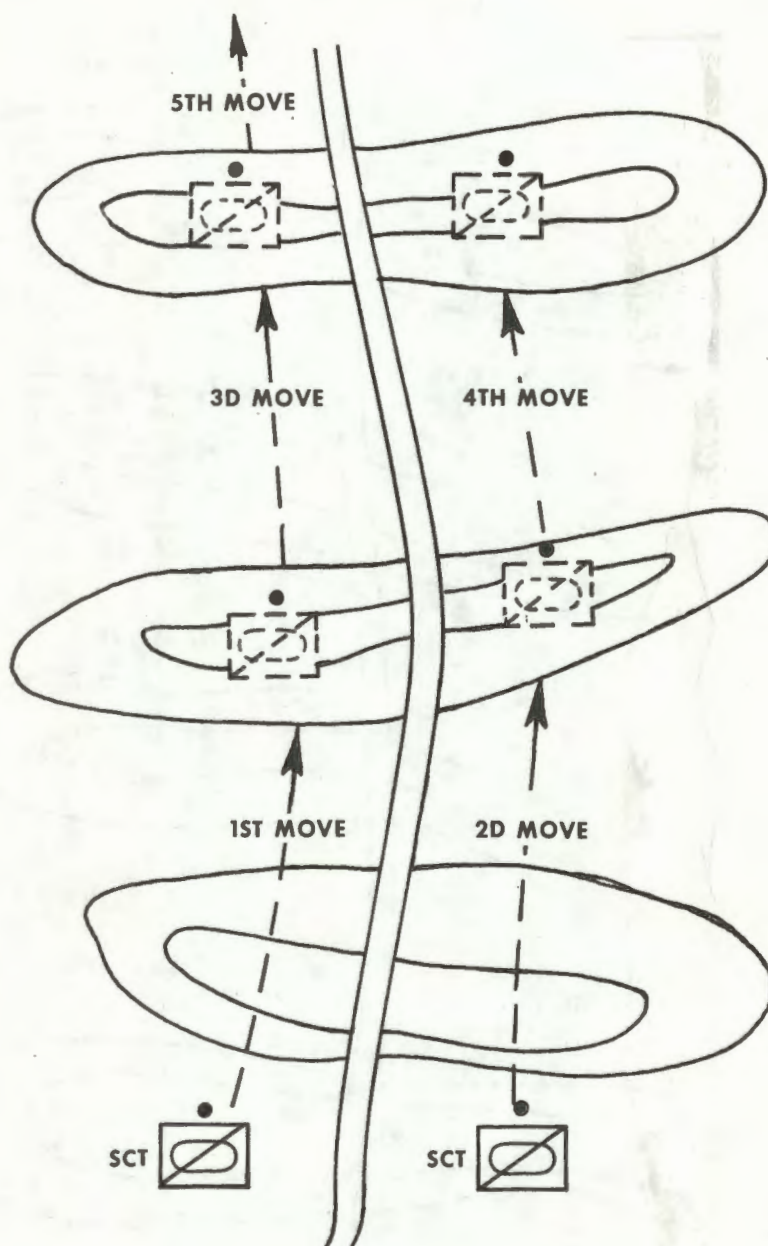


Figure 3-8. Scout section moving by successive bounds.

elements of the platoon to enemy fire at one time.

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

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 3-1, 3-3, and 3-4.

e. The scout section usually leads the platoon in the advance. The determination as to which element leads is based upon a consideration of the factors of METT (mission, enemy, terrain and weather, and troops and time available). When scout elements lead, they normally work as squads and move by bounds (fig. 3-7). 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 select his next position and the

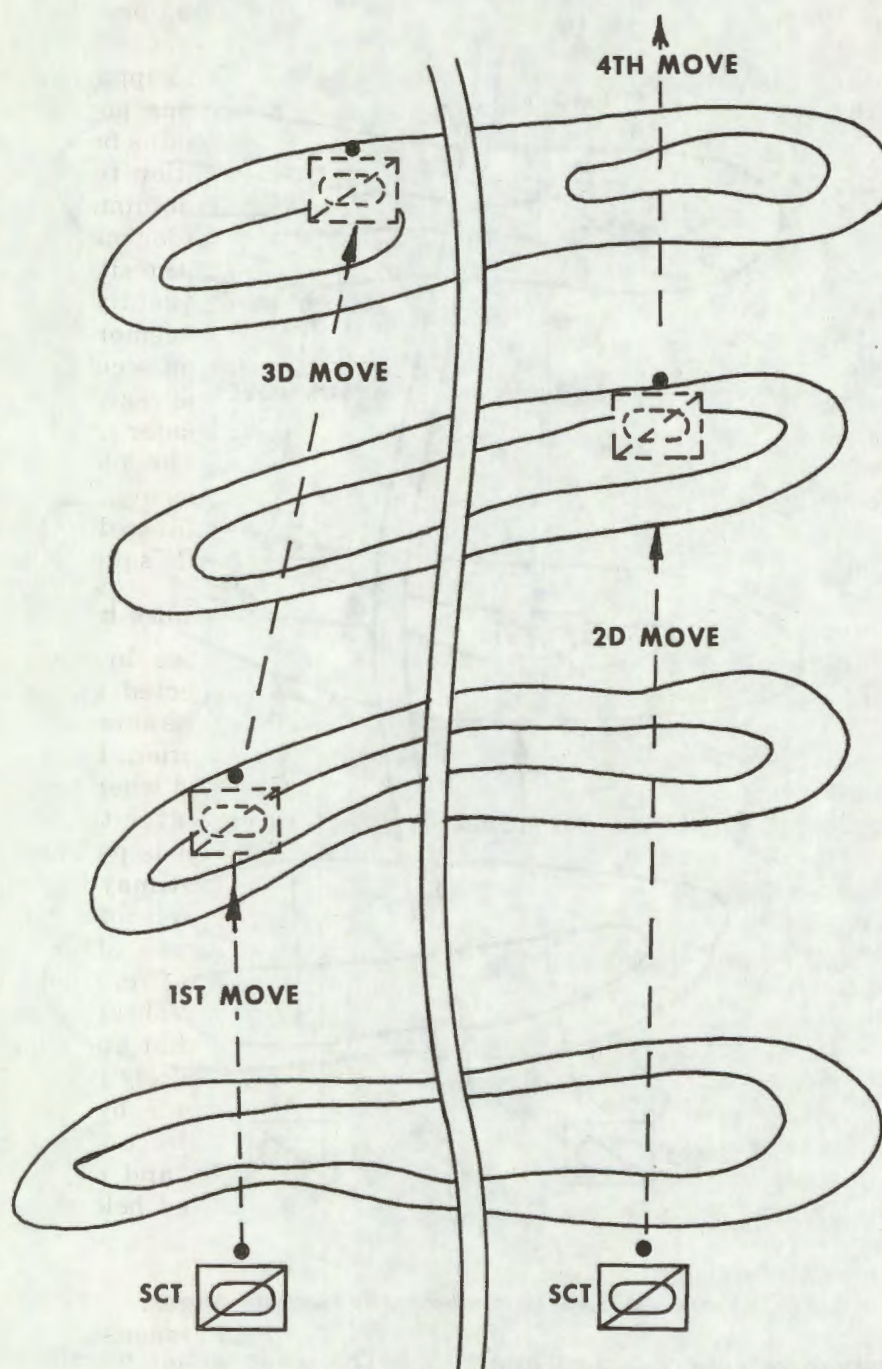


Figure 3-9. Scout section moving by alternate bounds.

most favorable covered and concealed route to it. During movement, the scout element must move as rapidly as the terrain and situation permit, being on the alert for the enemy and ready to move quickly to cover and concealment.

(2) When approaching a position that affords new areas of observation, the commander of the leading vehicle stops his vehicle in defilade and dismounts to prevent enemy forces

beyond the position from detecting his presence. The fundamentals of individual movement discussed in FM 21-75 are applicable. Should the commander and observer move forward dismounted, the driver mans the cupola-mounted weapons and covers their advance. When the position is secure, the overwatching scout element moves forward.

(3) Scouts must not become vehicle-bound. When the vehicle is stationary, all but the driver

normally dismount to improve observation 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.

(5) Movement in each bound must be completed rapidly; however, it is not 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 (covered if possible) 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 friendly moving vehicles. By so doing, crews of the supporting vehicles are usually able to detect enemy fire on the advancing vehicles more easily and can engage hostile forces more rapidly.

(8) Vehicles within the scout squad, or scout squads within the section, advance employing either successive or alternate bounds.

(a) *Successive bounds* (fig. 3-8). 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 than alternate bounds during movement.

(b) *Alternate bounds* (fig. 3-9). 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 preselected 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. Alternate bounds is a faster method of movement than successive bounds, but offers less security.

f. ARAAV's usually move by bounds, overwatching the scout section and prepared to support by fire, or by fire and movement.

g. The rifle squad usually follows the light armor section, and is prepared to be part of the ARAAV/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 light armor section

halts, the riflemen provide dismounted local security.

h. Normally, the support squad displaces forward from one firing position to another. The support squad remains far enough to the rear of the platoon formation to allow employment of the mortar at the minimum range of the weapons. The squad leader monitors the platoon net to stay abreast of the situation. He advises the platoon leader frequently of his status, location, and time of displacement. The support squad provides a degree of 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 normally relies on the platoon sergeant to displace the light armor section and the rifle squad.

3-12. Reconnaissance by Fire

a. Reconnaissance by fire is performed by firing on a suspected enemy position in an attempt to cause the enemy to react and thereby give away his position. Reconnaissance by fire is a technique used when time is critical or the terrain does not favor the employment of dismounted scouts. It is performed at the risk of losing surprise, but may lessen the probability of moving into a well-concealed enemy position without being aware of its presence. During reconnaissance by fire, troops with binoculars must continuously observe the positions being reconnoitered so that any enemy movement or return fire is definitely located.

b. Reconnaissance by fire can be accomplished by either direct or indirect fire weapons. Some advantages and disadvantages of each technique are listed below for your consideration:

(1) Direct fire.

(a) Advantages.

1. Rapid response.
2. Accuracy.
3. Minimum communications required.
4. Fires can be delivered from different

directions.

(b) Disadvantages.

1. Sacrifices stealth and discloses friendly position.
2. Low volume of fire may telegraph intention.
3. Observation capability reduced.
4. Limited by the maximum effective range of direct fire weapons.

(2) Indirect fire.

(a) Advantages.

1. Security for the scout who is directing the fire and observing for enemy action.
2. Permits all scout elements to observe effects of the fire.

3. Not restricted by masking.

4. Wider variety of ammunition available for the mission.

(b) Disadvantages.

1. Slower to deliver initial round.

2. Usually requires adjustment for accuracy.

3. Increased communication required.

4. More difficult to resupply the limited amount of mortar ammunition carried by the support squad.

5. Will seldom cause the enemy to return fire, but may result in movement.

c. If the enemy returns the fire, the platoon develops the situation. If the fire is not returned, the unit reconnoiters the position, exercising caution since reconnaissance by fire may fail to cause seasoned troops to react.

3-13. 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 called *action on contact* (FM 17-1).

a. *Deploy and Report.*

(1) The platoon deploys to positions from which it can fire at or observe the enemy. This deployment must be rapidly executed and is based on platoon battle drills (annex D).

(2) The platoon leader immediately reports the enemy contact to the troop commander.

b. *Reconnoiter.* The platoon leader takes aggressive measures to determine the location, strength, composition, and disposition of the enemy forces encountered. This reconnaissance may be executed by mounted or dismounted elements or, when appropriate, by air cavalry elements. Reconnaissance by fire may be employed where appropriate.

c. *Choose a Course of Action.* The platoon leader then chooses a course of action that will take care of the immediate situation as well as assist him in his assigned mission. The course of action must be chosen as quickly as the reconnaissance will permit.

d. *Report.* The platoon leader 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 intends to adopt. The troop commander approves or disapproves the decision of the platoon leader based on how such action by the

platoon will influence the overall mission of the troop.

3-14. Reconnaissance of a Bridge or Defile

Visual reconnaissance is made for enemy positions before leading elements of the platoon cross a bridge or enter a defile. When mines, boobytraps, or ambushes are suspected, patrols reconnoiter the approaches to the bridge or defile. Sides of defiles are checked to preclude possible ambushes. Bridge reconnaissance includes bridge classification, checking the bridge beneath as well as on top for mines, boobytraps, demolition charges, or weakened construction. Any demolitions detected are removed or neutralized. The light armor section and support squad cover the movement of scout elements to the far side. The remainder of the platoon then passes over the bridge or through the defile. When it is not possible to cross a bridge, possible fording sites are selected, reconnoitered, and acceptable sites used. Reconnaissance includes selection of entrances and exists 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.

3-15. Reconnaissance of a Town, Obstacle or Enemy Position

a. In reconnoitering a town, obstacle, or enemy position, the platoon attempts to approach it from the flanks or rear. If time is available, the reconnaissance is made dismounted; scouts are positioned so they can observe approaches other than the one being used by the remainder of the platoon.

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

c. A mounted reconnaissance usually starts with a reconnaissance by fire. Then the mounted patrol moves forward rapidly, overwatched by the ARAAVs 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. Dismounted troops should precede the vehicles to provide protection from enemy elements equipped with small antiarmor weapons.

3-16. Reconnaissance at Night

a. The reconnaissance mission is habitually continued at night to take advantage of the cover of darkness or to press an advantage gained during the day. Reduced visibility makes reconnaissance slower and less effective, but the probability that the enemy will rely on this limitation to conceal his movement makes night reconnaissance an important information-gathering activity. The degree to which darkness can be offset is based on the increased visibility which can be attained by the use of passive night vision devices, surveillance radars, and illumination.

b. The armored cavalry reconnaissance missions demand that the platoon be capable of both day and night reconnaissance. Normally, the distances assigned in these missions preclude the continuous use of dismounted patrols to lead the mounted elements. This means the platoon will be conducting a great deal of this night reconnaissance mounted, which makes it important that the platoon leader—

- (1) Keep the plan simple.
- (2) Take full advantage of all available night observation aids.
- (3) Conduct a detailed map reconnaissance and, if possible, prepare daylight visual reconnaissance sketches showing roadnets and landmarks that can be easily identified at night.
- (4) Have a firm fix on the location of unattended ground sensor fields.
- (5) Understand the fire support plan.
- (6) Exploit the use of navigational aids; e.g., reconnaissance aircraft, ground radar, and land navigation equipment as available.
- (7) Conduct frequent night training exercises (to dispel psychological inhibitions to night operation).

c. The employment of ground surveillance radars and unattended ground sensors (UGS) places increased importance on terrain appreciation, land navigation, and coordination of patrol plans to include effective placement of sensors and radars. For further discussion of night reconnaissance and surveillance, target

acquisition, and night observation (STANO), and doctrine, see chapter 10; FM 31-1 (Test); and FM 31-100 (Test).

d. The enemy's use of STANO devices to offset darkness must be considered in night reconnaissance. Movement must take advantage of cover, just as in daylight, to prevent observation by passive devices. Metascopes and infrared (IR) binoculars should be employed to detect enemy active IR illumination, and trails and defiles should be checked for possible presence of UGS. Radar illumination detectors, if available, should be used to detect enemy radar surveillance.

3-17. 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, are trained in mounted and dismounted reconnaissance operations behind enemy lines. Further discussion is included in paragraphs 14-10 through 14-15.

3-18. 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 is most frequently employed for this purpose, every member of the platoon must be trained to conduct such operations. For guidance on radiological monitoring and survey operations, see paragraphs 3-2 through 3-6.

3-19. 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 enemy and friendly troops.
- (2) Plans of the higher commander.
- (3) Specific information desired.
- (4) Type of reconnaissance desired.
- (5) When, where, and how information is to be reported to the higher commander.
- (6) Time of departure.
- (7) Phase lines, checkpoints, contact points,

SPOT REPORT (Note)

ALPHA—Who is observer or source ?

**BRAVO—What enemy was observed?
How many? How equipped?**

**CHARLIE—Where and when? (Where and
when did report event occur)**

**DELTA—Doing what? (If moving; direction,
speed, and altitude)**

ECHO—What are you doing ?

EXAMPLE

ALPHA—Timber Rattlesnake 16.

BRAVO—5 medium tanks.

CHARLIE—Coordinates 596715. 0930 hours.

DELTA—Moving south on Highway 17.

ECHO—Keeping them under observation.

**Note: See FM 17-1 for detailed explanation
of SPOT REPORT content.**

Figure 3-10. Spot report format.

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 specific reconnaissance mission is assigned to an armored cavalry platoon. The order is usually issued orally to the platoon leader. He then prepares and issues orders to his platoon. When the situation permits, the key noncommissioned officers assemble to receive the order. After the reconnaissance has started, additional instructions

are disseminated by radio, by messenger, or by the platoon leader in person.

3-20. Transmitting Information (STANAG's 2003 and 2008)

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, accurate, and secure transmission of all positive and negative information gathered. Use of

a standard report format facilitates transmission of essential information (fig. 3-10). 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.

Negative information, regardless of its apparent value, is forwarded to higher headquarters. This information may be of particular importance to the higher headquarters when considered in conjunction with information received from other sources.

Section III. SECURITY OPERATIONS

3-21. General

a. A force performing a security mission must give adequate warning of hostile approach to allow the protected force to take appropriate action. The security force engages the enemy and delays or defeats him. The distance that a security force operates from the protected force varies according to an analysis of the factors of METT. They must be far enough from the protected force to afford that force time and space to cope with any enemy threat that develops. Security forces normally organize or operate along key terrain.

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

3-22. Platoon as Advance Guard

a. 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 that used in route reconnaissance.

c. The platoon conducts the mission as rapidly as the situation permits. It performs continuous reconnaissance to the front and flanks and destroys or forces withdrawal of small enemy groups before they can hinder the protected force. When enemy contact is made, the platoon follows action-on-contact procedures. The platoon is prepared to join or assist the attack by the protected force. An advance guard must be far enough in front of the protected force to insure that the commander has freedom of action in the employment of his force. However, the advance guard 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.

3-23. Platoon as Flank Guard

a. The armored cavalry platoon normally par-

ticipates in a flank guard mission as part of a larger security force.

b. When participating in flank guard operations, the armored cavalry 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 4-15.

c. When protecting the flank of a larger unit, the platoon normally occupies a blocking position that dominates the major avenue of enemy approach into the flank of the protected force. The platoon can effectively occupy one blocking position at a time. Additional flank coverage can be obtained by establishing observation posts (OP's). In a mobile situation, the platoon normally moves from one blocking position to another along its designated route of advance. If the advance of the protected force is uninterrupted, the platoon may move continuously along its assigned route, with scouts checking key terrain and likely avenues of enemy approach on the exposed flank.

3-24. Platoon as Rear Guard

a. *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 protected force is advancing, the platoon, as rear guard, detects and delays enemy forces attacking the rear of the protected force. The platoon follows the protected force at a distance prescribed by the commander of that force and usually moves on the same route of advance. The platoon employs 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 protected force.

b. *Platoon as Rear Guard for Withdrawing Force.* When the platoon provides a 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 protected force or on prearranged plans. The platoon executes the rear guard mission by moving along the route over which the protected force has moved, keeping itself between the force and the enemy. The platoon leader selects a series of delay positions along the route and withdraws 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 protected force to insure that his movement is in consonance with that of the protected force and to keep the force commander informed of the situation. The platoon normally remains one delay position behind the protected force.

3-25. Platoon as Screening Force

a. General. A screening force executes 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 by maintaining positive knowledge of the location and activity of all enemy forces observed. The fundamentals of surveillance and security apply to the conduct of screening missions. The platoon may be employed as a screening force when the higher commander desires only early warning or does not have adequate forces for guard or cover missions in that area. Within its capability, the platoon destroys small enemy patrols that reach the line of OP's, and impedes the advance of the main enemy force by employing organic and supporting fires.

b. Planning. The platoon leader, or higher commander, selects the general location for establishing a series of OP's. Contact points are located between, and forward of, the line of OP's to assist the forces occupying the OP's to insure that space not covered by observation between adjacent OP's is covered by patrols. When selecting locations for OP's, the following characteristics must be considered:

(1) Overlapping fields of observation with other OP's, or identification of areas requiring patrolling when overlapping fields of observation are not possible.

(2) Concealment of OP's and their access routes.

(3) Ease of installation.

(4) Maintaining communications.

(5) Avoiding landmarks.

c. Observation Posts. OP's are located on the forward slope of terrain masses for maximum observation and background concealment, or on the reverse slope near the crest of terrain masses 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 assigned not more than three OP's (fig. 3-11). (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 OP's. However, the use of six OP's reduces the effectiveness of the screen. When six OP's are employed, they are manned by placing a scout vehicle on each of four positions, a dismounted fire team with portable radio on the fifth position, and a fire team and the personnel carrier on the sixth position. The disadvantages of six OP's are a loss of mobility and flexibility for the platoon, insufficient troops for patrolling, and the fact that some of the OP's must use short-range portable radios for communication. The light armor section and support squad are positioned to the rear of the line of OP's to assist in repelling small enemy patrols, extricating OP's, and to provide rear security. Once enemy contact is established, positive knowledge of the enemy's activities and location is maintained. The OP's withdraw, on order, to successive OP positions, maintaining necessary contact to report enemy strength, location, disposition, and composition; and to adjust supporting fires to impede the enemy's advance. When available, short range ground radar sets, night vision devices, and unattended ground sensors are used, particularly during periods of reduced visibility, to search and monitor major avenues of enemy approach. All OP's must have a means of communication, and it is desirable to have one automatic weapon at each OP. OP's make accurate and timely reports and may direct the fires of supporting elements to harass advancing enemy forces. Prior to being decisively engaged or bypassed, and when ordered to do so, the platoon withdraws to the next preselected position, maintains necessary contact, and continues to adjust supporting fires. Under some circumstances, small enemy patrols may be permitted to infiltrate the screen line so that the movement of the larger enemy forces may be observed. When this is done,

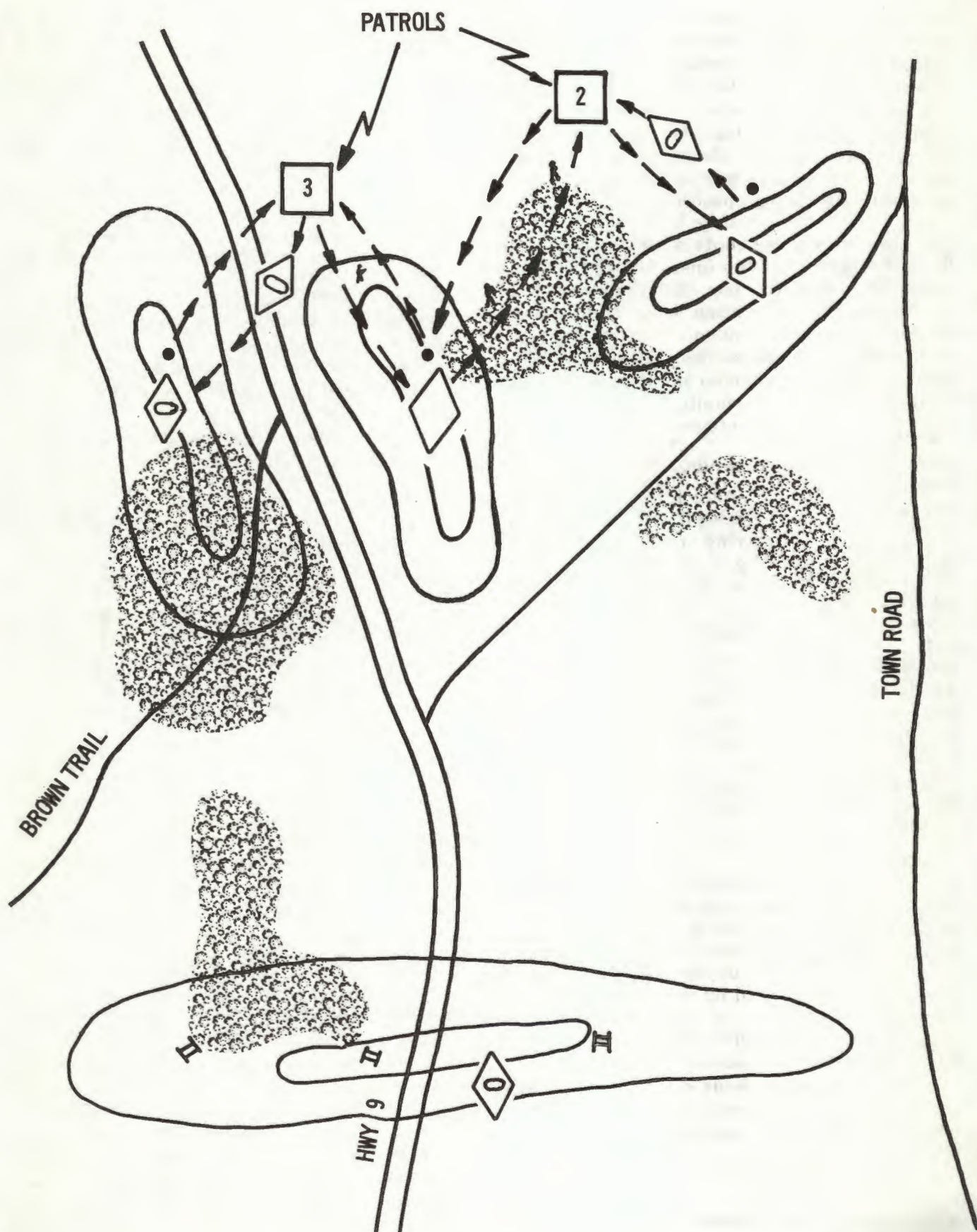


Figure 3-11. Armored cavalry platoon employed as a screening force.

necessary precautions must be taken to insure that the infiltrators do not join with other infiltrated forces and become a threat to the screened force. The platoon leader must know the location of infiltrating forces and request that the troop commander assume responsibility for surveillance of such forces when this requirement exceeds his platoon capability or adversely affects his screening mission.

d. The platoon may be required to screen the flank of a larger moving force, or to participate in mobile flank screening operations as part of the troop. The platoon executes mobile flank screening missions in the same manner as mobile flank guard operations, except that it occupies a series of OP's rather than a blocking position.

e. The platoon may be required to screen, or participate in screening, the advance of a larger force. The platoon advances with scouts abreast and leading the platoon to locate all enemy forces within the assigned zone. The platoon's control measures are similar to those used in zone reconnaissance. The platoon, however, has no responsibility for conducting terrain or route reconnaissance, and orients its operations on providing early warning to the screened force on location of enemy forces within the zone. On making enemy contact, the platoon occupies a series of OP's, and conducts screening operations as described in paragraphs a, b, and c above. The platoon must be prepared to continue the advance screening operation if enemy forces attempt to break contact.

f. The platoon may be required to screen, or participate in screening, a larger force moving away from the enemy. When conducting rear screening operations, the platoon employs the same techniques used in rear guard actions,

except that it occupies a series of OP's rather in a delay position.

3-26. Platoon in Rear Area Security as Part of a Larger Force (STANAG No. 2079)

a. *General.* When the platoon performs a rear area security force mission, normally as part of a larger force, it may accomplish the mission by performing platoon reconnaissance, security, 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 OP's.
- (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.
- (6) Establish a series of strongpoints.
- (7) Conduct road clearing (minesweeping) operations.

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 to act as part of the reserve.

d. *Antiairborne, Antiairmobile, and Tactical Operations Against Guerrilla Forces.* 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 OP's or listening posts (LP's) (surveillance tasks) and to patrol likely drop zones or landing areas (reconnaissance missions), or to act as part of a central reserve.

Section IV. SURVEILLANCE

3-27. General

a. Surveillance is integrated in reconnaissance and security missions and involves the conduct of systematic and continuous observation over specific areas of the battlefield. For the armored cavalry platoon, such tasks are restricted to an assigned area. The platoon may accomplish surveillance tasks in the conduct of any mission. For example, route reconnaissance establishes specific mission requirements

related to the route; however, the platoon may observe areas or enemy activities that are not within the limits of the specific reconnaissance mission. The duty to make and report observations not specifically required by the reconnaissance mission being performed still exists and constitutes an inherent surveillance task. Similarly, the platoon may be performing a security operation, such as a guard mission, and during its conduct observe areas or enemy

activities that are not specifically part of the assigned mission. Again, the duty to observe and report these observations exists and constitutes an inherent surveillance task. The platoon also may perform a task that is solely a surveillance requirement to support the troop or squadron reconnaissance or security mission. For a definition of types of surveillance, see paragraph 1-3.

b. Surveillance is accomplished as an integral part of all combat operations. This section provides guidance for the conduct of surveillance tasks as a part of other missions or separately.

c. The armored cavalry platoon performs surveillance tasks independently or as part of a larger force. When operating independently, it normally performs surveillance tasks in rear areas or behind enemy lines. When a part of a larger force, it normally performs tasks by observing all accessible areas during reconnaissance missions and by using modified screening techniques during security missions.

3-28. Tasks

Small armored cavalry elements are particularly effective in accomplishing the following surveillance tasks.

- a. Determination of activity of the enemy.
- b. Observation and control of nonorganic supporting fires.
- c. Damage assessment.
- d. Location and identification of enemy units within the area of operations or observation.

3-29. Methods of Employment

a. The armored cavalry platoon normally conducts surveillance tasks as an element or by sections or squads. Scouts and infantry are normally employed to perform this task; however, the entire platoon may be involved.

b. In static situations in which the platoon is deployed along a line, the platoon normally employs modified screening techniques and mans surveillance OP's. Contrary to the normal screening mission, however, the platoon avoids direct enemy contact where possible and reports on the enemy's location and activities. The platoon secures its OP's and insures that higher headquarters is aware of any danger of enemy envelopment of the platoon positions. See paragraph 3-25 for basic screening techniques.

c. In rear area surveillance, the armored cavalry platoon mans vantage points and reports any unusual activity within the area of responsibility. In this respect, it is similar to a rear area security mission; however, no patrolling

or enemy engagement (other than self-defense) is included. For comparison with rear area security missions, see paragraph 3-26.

d. In surveillance tasks conducted behind enemy lines, surveillance from concealed positions is normal. The platoon is usually assigned such missions only with approval of division or higher headquarters. Because of platoon vulnerability, such tasks are normally of relatively short duration. Detailed plans are prepared and coordinated with respect to the factors of METT which include:

(1) *Type of surveillance required.* A determination must be made initially as to whether both visual and electronic (attended and unattended sensors) surveillance are required. Visual surveillance is the most secure, while electronic surveillance operations are more easily compromised. For shorter surveillance ranges, passive night vision devices may meet task requirements during the hours of darkness. Radar and passive night vision aids may be deceived through the transmission or reflection of electromagnetic energy, or by the placement of heat producing or similar devices. For these reasons, specific requirements must be spelled out by higher headquarters.

(2) *Time.* The time available to the platoon to accomplish surveillance.

(3) *Distance.* The distance from the surveillance elements in rear of enemy lines to friendly forces and the capabilities of friendly forces to support the elements' operations.

(4) *Movement.* The means employed to get surveillance elements into position and to evacuate them upon termination of the task. (Normally, the force remains in the selected position when friendly elements withdraw, with or without their vehicles; therefore, the movement planning is usually related primarily to withdrawal of the platoon elements from enemy territory.) For these reasons, all individuals in the platoon must be thoroughly trained and competent in helicopter extraction procedures and in the techniques of survival, evasion, and escape discussed in FM 21-76.

(5) *Communication.* A secure means of communications is required. Surveillance reports, by radio, are kept to a minimum to avoid enemy detection. Provisions must be made for communication security and electronic counter-countermeasures (ECCM) in the event radio must be used.

(6) *Attitude of civilian population.* Even though surveillance behind enemy lines must be

clandestine, the attitude of the population will affect the ease of execution and the degree of success of the mission. A friendly population will facilitate, and an unfriendly population will hamper, mission accomplishment.

(7) *Logistical support.* The requirements for food, ammunition, special equipment, and fuel, if required, must be considered. Normally,

the planned duration of the mission limits these requirements. The surveillance force must be prepared to operate with minimum essential supplies and equipment (man portable, if possible).

(8) Additional planning factors are similar to those related to reconnaissance operations behind enemy lines (para 14-15).

Section V. OFFENSIVE OPERATIONS

3-30. General

a. The armored cavalry platoon may attack independently or as part of a troop. The attack may be coordinated or it may be an attack from march column, or from reconnaissance dispositions.

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

3-31. 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 factors of METT. He must evaluate and compare the courses of action open to him and then decide on the course of action 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.

3-32. Combat Support for Platoon in Offense

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

b. When an artillery forward observer is available, he will assist in planning, requesting, and adjusting artillery fire for elements of the troop. The platoon leader normally requests artillery fire through the troop commander or forward observer.

c. Engineer support may be available to the

platoon. Engineer support for the platoon is requested through troop headquarters.

d. Army aircraft or elements of the air cavalry troop are used to assist in locating enemy forces and to maintain contact with the enemy force. This support is requested through troop headquarters.

e. Close air support is provided through the Tactical Air Control Party (TACP) when available, and is requested through the troop commander.

3-33. 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 is normally 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 destruction or capture. Other control measures which may be used are the attack position; line of departure; time of attack, axis of advance, zone of action, or direction of attack; checkpoints, phase lines, assembly areas, and contact points. These measures and others used during offensive actions are discussed in FM 17-1.

3-34. 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, control measures to lift or shift fires, and effective use of all available combat support elements.

b. The composition of the maneuvering force,

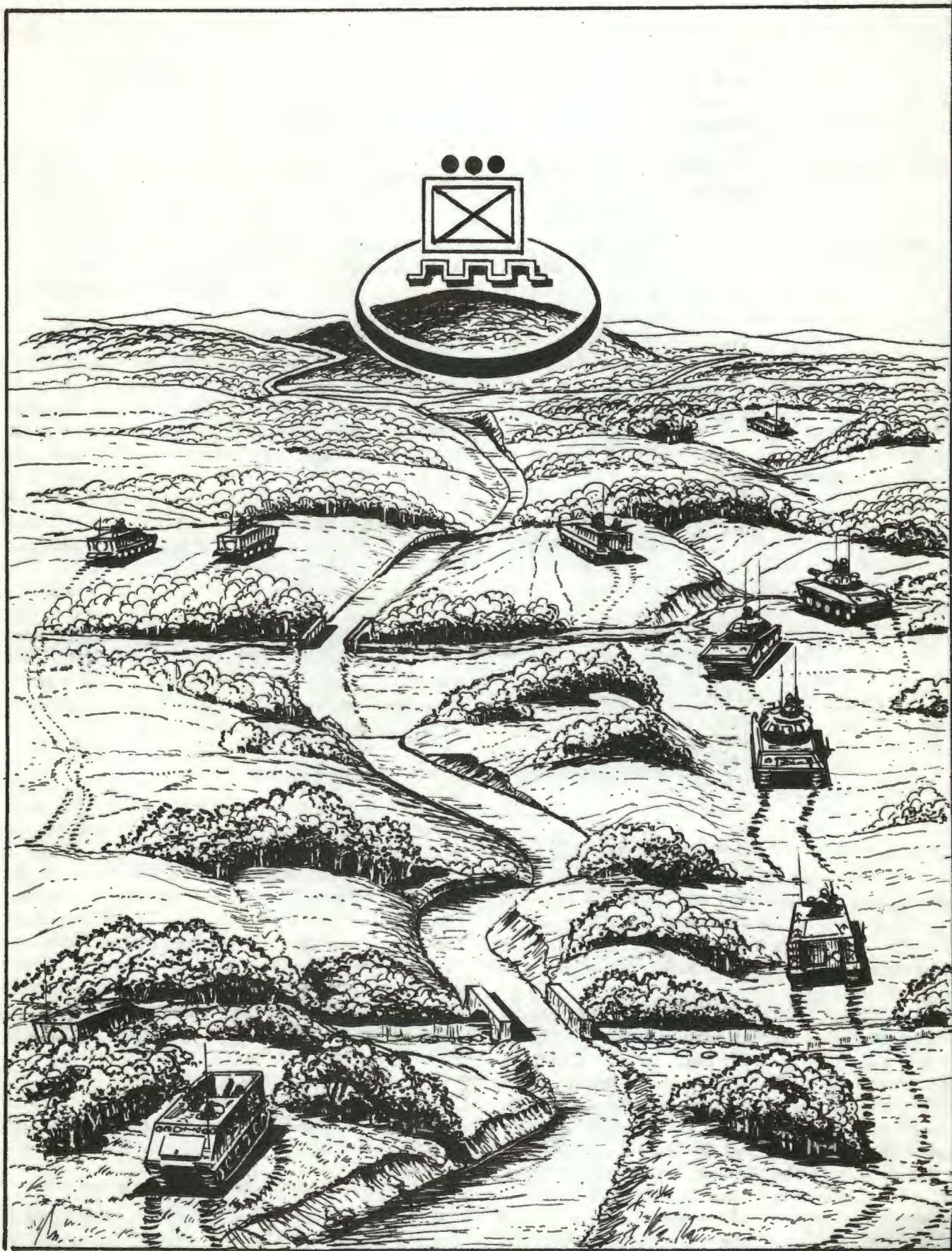


Figure 3-12. Attack formation, armored cavalry platoon.

the route it will take to the objective and, if applicable, when the rifle squad will dismount.

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

3-35. Composition of the Maneuvering Force in a Platoon Attack

a. The maneuvering force contains 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 light armor section and rifle squad in the maneuvering force. Mounted scout elements accompany the maneuvering force to provide flank security and to assist in movement of the force by reconnoitering, reporting, and recommending covered or concealed routes. If a dismounted attack is required, the maneuvering force may consist only of scouts and the rifle squad (fig. 3-12).

b. Normally, the platoon leader rides in the platoon sergeant's ARAAV and directly controls the actions of the maneuvering element throughout the attack. He must have communication with other elements of the platoon. The platoon sergeant assists the platoon leader by controlling the element not directly under the platoon leader's control from the platoon leader's armored command and reconnaissance carrier. Radio is the primary means of communication, but alternate control means such as arm and hand signals, flag signals, and pyrotechnics are planned.

3-36. Composition of the Platoon Base of Fire

a. The base of fire element consists 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. ARAAV's, riflemen, or scout elements may assist the base of fire. ARAAV's are placed in the base of fire only if the terrain prevents their employment in the maneuvering force. Riflemen and scouts may be employed to assist the base of fire when such employment is dictated by the factors of METT and when the composition of the enemy force is such that friendly automatic weapons can provide effective suppressive fire. They are, however, most effectively employed as outlined in paragraph 3-35.

b. Elements of the platoon employed in the

base of fire are normally controlled by the platoon sergeant.

3-37. Supporting Fires for a Platoon in a Coordinated Attack

Supporting fires, organic or attached to the platoon, are planned for 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.

3-38. 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 is to take place. If this cannot be done, the platoon leader issues 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 (FM 17-1).

b. The platoon leader usually issues the order to the platoon sergeant and section and squad leaders. These key noncommissioned officers then issue orders to their elements. Time and situation permitting, all members of the platoon are afforded an opportunity to see the terrain over which the attack is to take place.

3-39. 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 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 insures that local security is established; that use is made of available cover and concealment; that the platoon is in the prescribed formation; and that the readiness of the platoon is reported to the troop commander.

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

3-40. Actions of the Maneuvering Force

a. The maneuvering force closes with the enemy as aggressively and rapidly as possible. Maximum use is made of cover and concealment during the advance. The maneuvering

force advances as close as possible to the objective before employing fire and movement.

b. Maximum fire usually is placed on the enemy by the maneuvering force as soon as it is within effective range. Exception to this technique usually occurs only when the maneuvering force is able to advance without detection. The fires of the maneuvering force, reinforced by the base of fire, suppress enemy fires, deny him observation and movement, and destroy his troops and equipment.

c. In a mounted attack, the terrain and situation dictate the employment of the light armor section and rifle squad. If a requirement exists to dismount the rifle squad in order to secure the objective or provide security to the light armor section, the platoon leader must determine when and where to dismount the squad.

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

3-41. Action of the Base of Fire

a. The mission of the base of fire is to assist in gaining fire superiority, 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 the organic mortar, supporting artillery, tactical close air support, and naval gunfire. The use of ARAAV's in a base of fire is justified *only* when terrain precludes their employment in the maneuvering force. Supporting fires neutralize the enemy defense until the assault elements begin to close on the objective. These fires must be lifted or shifted soon enough to prevent losses to friendly troops. A final coordination line (final CL)—usually a preselected, readily identifiable terrain feature or signal—is used to coordinate the lifting or shifting of supporting fires and the final deployment of the attacking echelon in conducting the assault against the enemy position.

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

3-42. 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 neutralize or eliminate without assistance, the leader requests supporting fires through the troop commander and keeps him informed of the situation.

b. The platoon sergeant assists the platoon leader by carrying out orders of the platoon leader during the attack and by supervising and controlling the actions of elements under his control. The platoon sergeant may assist by controlling the base of fire. The platoon sergeant, on order of the platoon leader, will adjust supporting fires on the objective. As the maneuvering force starts the assault, the platoon sergeant on orders of the platoon leader or by visual observation, will lift or shift all supporting fires. During the reorganization and consolidation, the platoon sergeant assists the platoon leader in placing the vehicles in a good defensive position and supervises the redistribution of equipment and ammunition as necessary.

c. The section and squad leaders assist the platoon leader by carrying out orders aggressively during the attack, and by supervising and controlling the actions of their elements. They maintain constant observation in their immediate areas and keep the platoon leader informed of the situation.

3-43. 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 normally occurs at the final CL and is controlled by radio, observation, and prearranged signals.

b. Fires of the maneuvering force should strike the objective before the supporting fires are lifted. When the base of fire lifts or shifts its fires, the maneuvering force immediately assaults the objective. Fire and movement may be required in the advance of the maneuvering force. In fire and movement, one ARAAV of the maneuvering force covers the advance of the other two ARAAV's. Fire and movement is used only as necessary until the entire maneuvering

force can resume the attack in mass. The ARAAV's stabilized gun allows the light armor section to maintain the momentum of the attack by firing on the objective as the section continues to advance in mass. Dismounted elements use assault fire unless fire superiority has not been gained, in which case fire and movement are initiated. The actual closing with the enemy is 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 is prepared to displace forward on order.

3-44. 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 is consolidated in minimum time. Plans for consolidation are 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 of the objective.

(2) Organization of the position and preparation by the light armor 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. Planning and requests for new or additional fire support by artillery and other fire support agencies are 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 resupply as time and the situation permit.

3-45. 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 plan is adopted and positions are assumed that enable the platoon to readily resume operations. The platoon may reorganize defensively on the position. It may also be required to accomplish reorganization while continuing the advance after overrunning an objective. Continued movement allows little opportunity to reassign individuals within the platoon. The platoon leader receives status reports from each section and squad and reports this information to the troop command post. He makes the necessary changes to insure the continued operational effectiveness of his platoon.

Section VI. DEFENSIVE OPERATIONS

3-46. General

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

b. The two general forms of defense, mobile and area, are discussed in FM 17-1. *Regardless of the type defense 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.*

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 basic considerations of defensive operations (FM 17-1):

(1) Proper use of terrain.

(2) Security.

(3) All-round defense.

(4) Defense in depth.

(5) Responsiveness/flexibility.

(6) Dispersion.

(7) Maximum use of offensive action.

(8) Integration and coordination of defensive measures, including:

(a) Fire planning.

(b) Barrier planning.

(c) Mutual support.

- (d) Surveillance planning.
- (e) Air defense planning.
- (f) Signal Security.
- (9) Time available.

3-47. Employment of the Armored Cavalry Platoon in Defense

a. The armored cavalry platoon normally participates in a defensive action as part of a larger force. While performing other missions, the platoon may be required to defend alone when attacked by enemy forces. This is also true when the platoon is securing a blocking position or roadblock, or when it is participating separately in operations over a broad front conducted by a larger force.

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 elements, assume lateral responsibilities as designated by higher headquarters, and coordinate his efforts with the troop commander in providing all-round local security for the troop. This entails orienting the platoon fires to the front but insuring that the platoon can fight in any direction if necessary.

3-48. Reconnaissance and Selection of Positions

a. When assigned a defensive mission, the platoon leader makes a thorough reconnaissance of the area to be defended. His section and squad leaders should also make a reconnaissance as soon as practicable. When possible, joint reconnaissance by key personnel is desirable.

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 be occupied by platoon security elements to provide early warning and to force the enemy to move into the heaviest defensive fires. Such dispositions eliminate or reduce to a minimum covered enemy approaches into the defensive position.

c. Detailed plans are made for the fires of ARAAV's, automatic weapons, mortars, and other available fire support systems. Primary, alternate, and supplementary positions are selected for ARAAV and crew-served weapons. Antitank defense against a mechanized enemy

force is a primary consideration. The platoon leader assigns sectors of responsibility and fire to each element of the platoon, and designates locations of final protective fires for machineguns and mortars. Every effort is made to insure that the entire platoon area of responsibility is covered by observation and fire. The use of scatterable mines, smoke, illumination, STANO devices, and the military working dog should be envisioned and planned.

3-49. Platoon Order for Defense

The platoon leader issues his oral order 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.

3-50. Occupation and Preparation of the Defensive Position

a. The platoon elements occupy their assigned sectors of responsibility. Local security to the front and flanks of the position is provided by establishing OP's to give early warning of enemy approach. LP's are used at night and during periods of reduced visibility. Patrols and sensors cover areas not otherwise under observation.

b. The platoon defensive position is organized around the light armor section. The primary and alternate positions selected for the light armor section cover the most likely avenues of enemy armor approach into the position. Supplementary positions are then prepared to cover other possible approaches into the flanks and rear. Each ARAAV crew provides its own local security; therefore, at least one member of the crew is required to be in the turret of the ARAAV and alert at all times. At night and during other periods of limited visibility, the ARAAV's are provided with increased security from dismounted elements for better mutual defense and protection. This may require repositioning ARAAV's in order to cover approaches and plan the use of searchlights. A range card is prepared for each ARAAV and for crew-served weapons at each defensive position (FM 17-12).

c. The rifle squad is located to provide maximum firepower to the front and flanks of the position and to protect the ARAAV's from hand-carried antitank weapons or devices. The

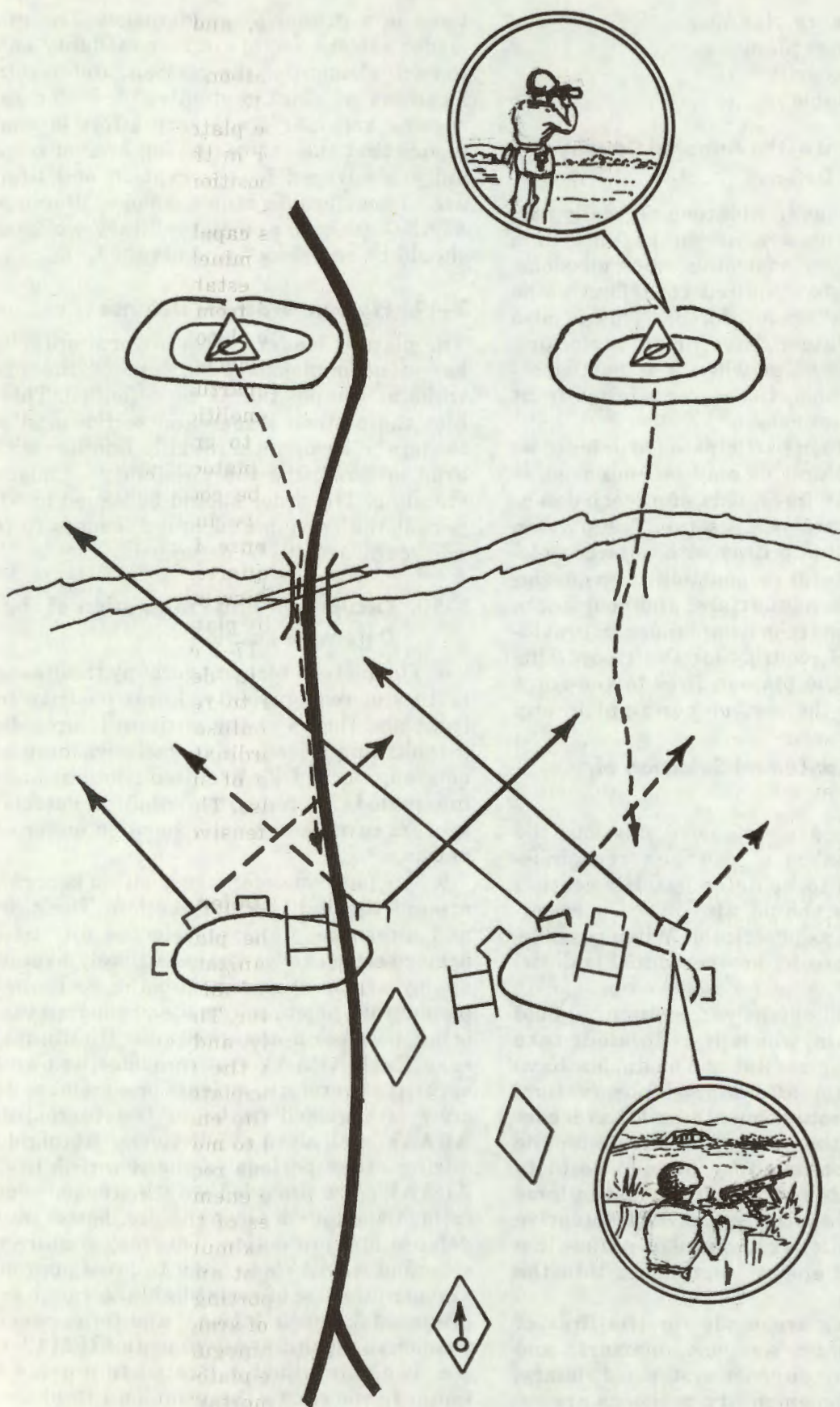


Figure 3-13. Armored cavalry platoon in defensive position.

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 the 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 be changed at night to provide better close-in defense and protection.

d. Scout section personnel 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 normally establishes OP's and conducts patrols. At times, one scout 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 command and reconnaissance 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 limited capability to provide itself with local security. In some situations, the platoon leader may be forced to use 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 support squads may be located and employed under troop control to provide fire support coverage of the entire troop sector from a central location. Such employment generally provides better support to the troop. When the support squad remains under platoon control, the platoon leader normally designates squad

primary, alternate, and supplementary positions.

f. A typical platoon defensive position is shown in figure 3-13.

g. Vehicles of the platoon, not employed in a security mission or in the defense, are 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. The platoon must be prepared to remove mines, emplaced demolitions, and obstacles prior to departure from the defensive position. Use of demolitions to destroy bridges, to fell trees, and to 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. These minefields are covered by platoon direct and indirect fire weapons. FM 17-1 discusses obstacle and barrier planning in detail. Smoke may be planned and used to reduce effective enemy observation and confuse the enemy; however, its use must be coordinated with adjacent units to insure that use of smoke does not inhibit their plan of defense. The platoon continues to strengthen the defensive position as time and material permit.

3-51. Conduct of Defense

a. Success of the platoon defense depends largely on the organization of the position and the effective use of all available organic and supporting firepower. The defense must be conducted aggressively, and the enemy is engaged continuously from the time he comes within effective range. The platoon continues to defend its position until the enemy is repelled or the platoon is directed to move. The platoon leader adjusts his forces as required within the position to counter the enemy threat.

b. Defensive fires of the platoon are coordinated to insure maximum effectiveness of fires during both daylight and darkness. ARAAV's, in mutually supporting positions, cover the probable avenues of armor approach. Interlocking bands of machinegun fire cover the entire platoon sector. The platoon leader plans fires to be placed by the mortar squad and grenadiers into areas that cannot be reached by other weapons of the platoon such as covered areas in

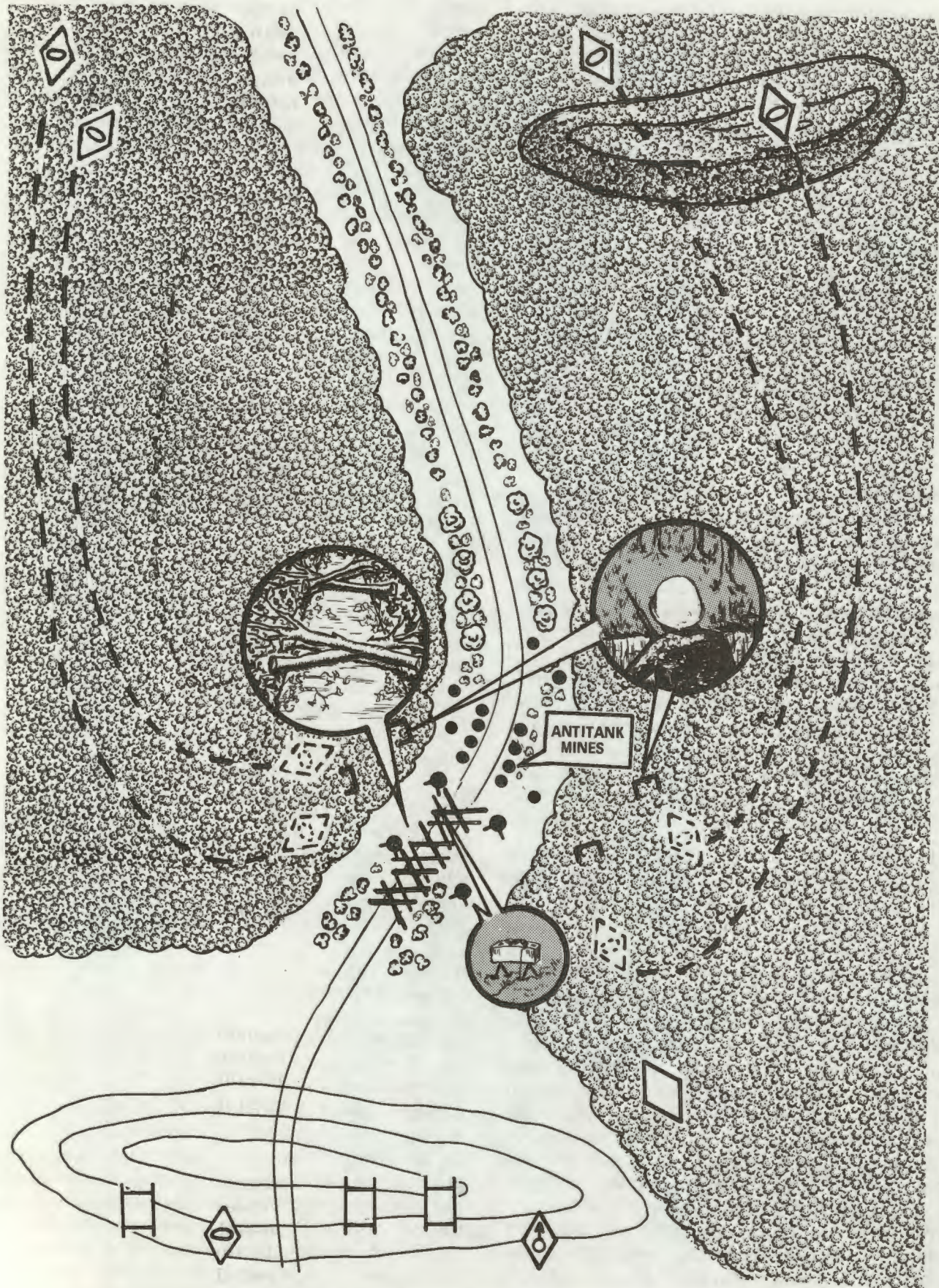


Figure 3-14. Armored cavalry platoon roadblock with an ambush.

which the enemy might assemble and advance. These weapons are prepared to fire within the defensive positions.

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

3-52. 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 considers 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 is to be established, the

platoon leader assigns the necessary work tasks required, consistent with good security, for preparing the position and creating an effective obstacle. In establishing the roadblock, scouts normally provide security to the flanks and assist in covering bypass routes that the enemy may attempt to use in avoiding the roadblock. The light armor section is positioned to cover the roadblock and the approaches to it. The rifle squad normally constructs the obstacles and then provides close-in protection for the ARAAV's. The support squad is positioned to cover designated points by fire along the route and possible bypass routes. It also fires to seal off enemy escape routes. Figure 3-14 illustrates a platoon roadblock.

3-53. 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, elements of the air cavalry troop, and tactical close air support.

b. When an artillery forward observer is available, he will assist in planning, requesting, and adjusting artillery fire for elements of the troop. The platoon leader normally requests artillery fire through the troop commander or forward observer.

c. Engineer support may be available to the platoon. Engineer support for the platoon is requested through troop headquarters.

d. Army aircraft or elements of the air cavalry troop are used to assist in locating enemy forces and to maintain contact with the enemy force. This support is requested through troop headquarters.

e. Close air support is provided when available, and is requested through the troop commander.

Section VII. RETROGRADE OPERATIONS

3-54. General

a. A retrograde operation is a planned movement of the platoon to the rear or away from the enemy. The armored cavalry platoon conducts retrograde operations as required in the conduct of primary missions or as part of the troop when forced to do so by enemy action or voluntarily to gain a tactical advantage.

b. There are three types of retrograde operations: delay, withdrawal, and retirement. The delay is frequently conducted by the platoon and is discussed in detail in this section. The

withdrawal and retirement, normally conducted at troop level, are discussed in chapter 5. These discussions, also applicable to the platoon, are not, therefore, discussed in this section.

3-55. Delay

a. A delay is a retrograde operation in which minimum space is traded for maximum time and the greatest possible 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 in which the platoon may be required to conduct a delaying action are:

(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 delay.

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

3-56. Reconnaissance and Selection of Platoon Delay Positions

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

b. The platoon leader makes a personal reconnaissance of the initial delay position which 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 delay position. The platoon sergeant normally uses the platoon leader's command vehicle and driver, and one or more men from the rifle squad to assist him in reconnoitering and organizing successive delay positions. As the platoon sergeant moves along the platoon route of delay, he selects and plans artillery and mortar targets on his map. Radio contact is maintained with the platoon leader. When the platoon arrives at its next delay position, it is directed into position by the platoon sergeant.

He then briefs the leaders on their fields of fire and routes of delay. As soon as practicable thereafter, the platoon sergeant moves back to the next succeeding position and repeats the procedure described above.

3-57. Coordination and Control of Platoon in Delay 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 personal supervision of the platoon leader.

3-58. Platoon Organization and Employment on the Delay Position

a. *Organization.* Each platoon position is organized around the light armor section. ARAAV's are placed on terrain features that dominate likely avenues of enemy approach, permit long-range fires, and facilitate covered movement to the next delay position. The organization of each delay position is similar to that of the platoon defensive position; however, the requirement for long-range engagement of the enemy and for ultimate movement to successive positions normally influences the terrain actually occupied. For example, in the defense the platoon is normally positioned on or near the military crest of terrain masses, and in the delay it is usually positioned on or to the rear of the topographic crest (fig. 3-15). Basic factors that the platoon leader must consider in occupying a delay 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.
- (7) Plans for an orderly movement to the next delay position.

b. *Employment.*

(1) *Scouts.* The scout section is employed to the front and flanks to provide early warning of enemy approach and to adjust long range supporting fires.

(2) *Light armor section.* The light armor section provides long range direct fire and an-

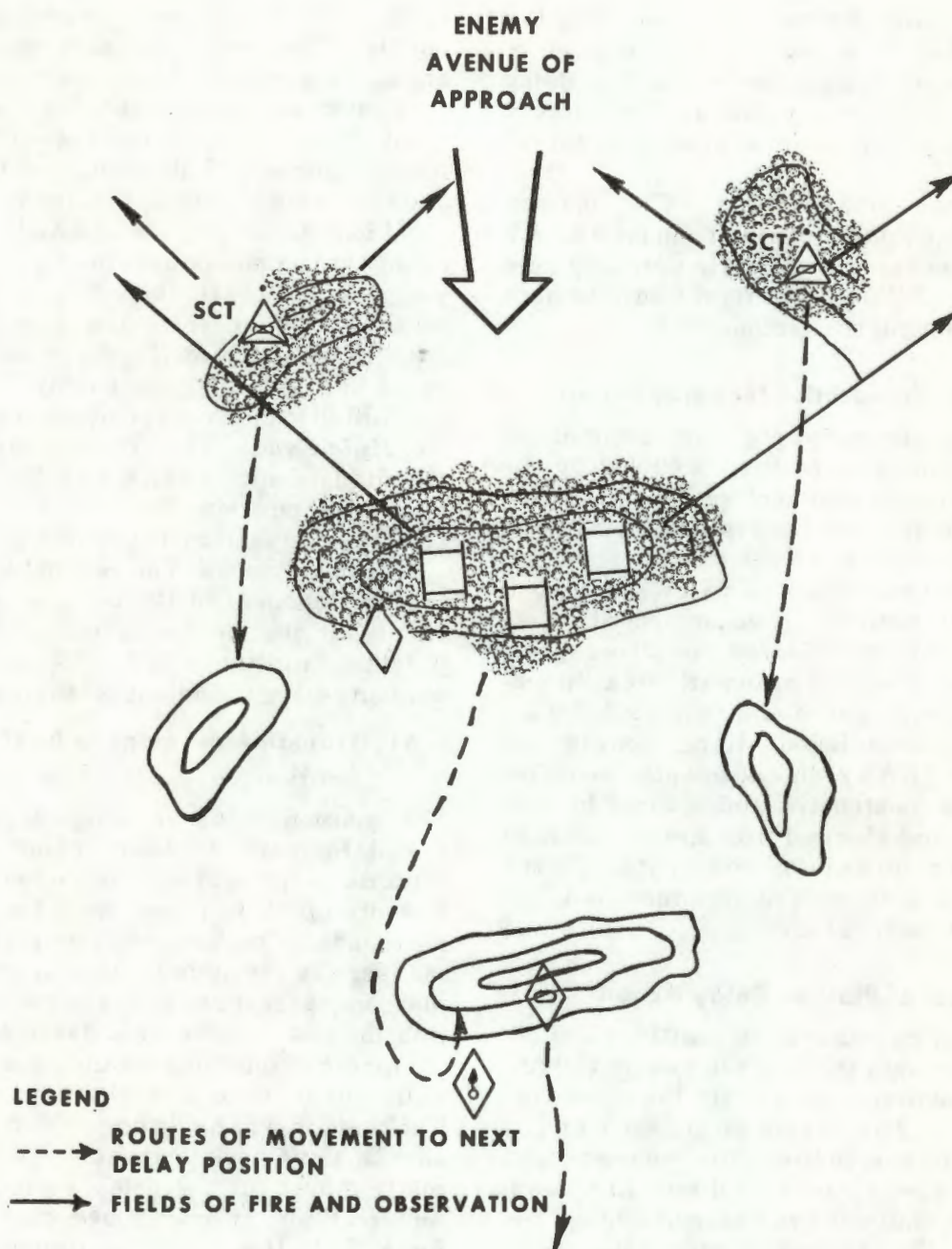


Figure 3-15. Armored cavalry platoon in delay position.

titank defense for the platoon. The section is employed as a single element, with its ARAAV's positioned to be mutually supporting.

(3) *Rifle squad.* The rifle squad is positioned to provide close-in protection for the ARAAV's against dismounted enemy patrols or ARAAV-killer teams and to cover obstacles with fire. Personnel are normally positioned far enough from the ARAAV's to avoid being affected by enemy fire directed at the ARAAV's. When possible, the personnel carrier is placed in hull 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. If the squad leader cannot establish communications with the fire team without a radio, instructions to that squad will normally be issued by appropriate signals given by the commander of the ARAAV nearest that fire team.

(4) *Support squad.* The support squad fur-

nishes indirect fire support. Consistent with the minimum range, it is positioned far enough to the rear so that it may fire within the delay position and provide continuous fire support during rearward movement of other elements of the platoon.

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

3-59. Platoon Preparation for Delay Action

The platoon leader keeps the troop commander informed of the exact position occupied by the platoon. He insures that each squad and section makes maximum use of available time and material to improve and strengthen the position occupied by the platoon. ARAAV's 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 ARAAV 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 delay are reconnoitered and confirmed for each vehicle.

3-60. Conduct of Platoon Delay Action

In a delay action, successive positions are occupied long enough to force the enemy to halt, develop the situation, and begin his maneuver for the attack. The enemy is engaged at the maximum range of indirect fire weapons, and maximum effective range of direct fire weapons. Normally indirect fire weapons engage the enemy first. The platoon leader must avoid decisive engagement during the delay. The platoon leader must keep the troop commander informed of the platoon situation to insure receipt of orders for the platoon movement to the next delay position before it becomes decisively engaged. Positive knowledge of the location and activity of the enemy is maintained throughout the action. Elements of the platoon conduct the delay action as follows:

a. *Scout Section.* As the enemy approaches the platoon's delay position, the scout section withdraws by squads to the flanks. They maintain positive knowledge of the location, activities, and strength of the enemy; continue to adjust supporting fires; and report any attempt

by the enemy to bypass or envelop the platoon position. The scout elements engage suitable enemy targets when the situation requires, but they must not become decisively engaged. The scout squad leaders *must keep* the platoon leader informed of all enemy activity observed and the precise location of their own squads.

b. *Light Armor Section.* ARAAV's 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 ARAAV strength at the delay position, and to avoid heavy volumes of enemy fire, ARAAV's are shifted to alternate positions when desired.

c. *Rifle Squad.* The rifle squad engages dismounted infantry and ARAAV-killer teams that attack the position. They must 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 at its maximum range capability. It provides continuous fire support for the platoon during the defense of the delay position.

3-61. Platoon Movement to Next Delay Position

The platoon holds each delay position until forced to move back by enemy action or to conform to the rearward movement of adjacent friendly units. In either case, the authority to leave a delay position 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 time to make a proper decision. The platoon will hold the position until permission to move back is granted. The platoon normally moves off the delay position by squads and sections. It may move back as a single force. In either case, continuous contact by some element of the platoon is maintained with the enemy, and the delay is accomplished as follows:

a. *Platoon Leader.* The platoon leader remains with the last element to leave the delay position.

b. *Light Armor Section.* In daylight, to make best use of its destructive firepower, the light armor section is normally the last element of the platoon to leave the position. The ARAAV's move back 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 light armor section usually moves back first under-

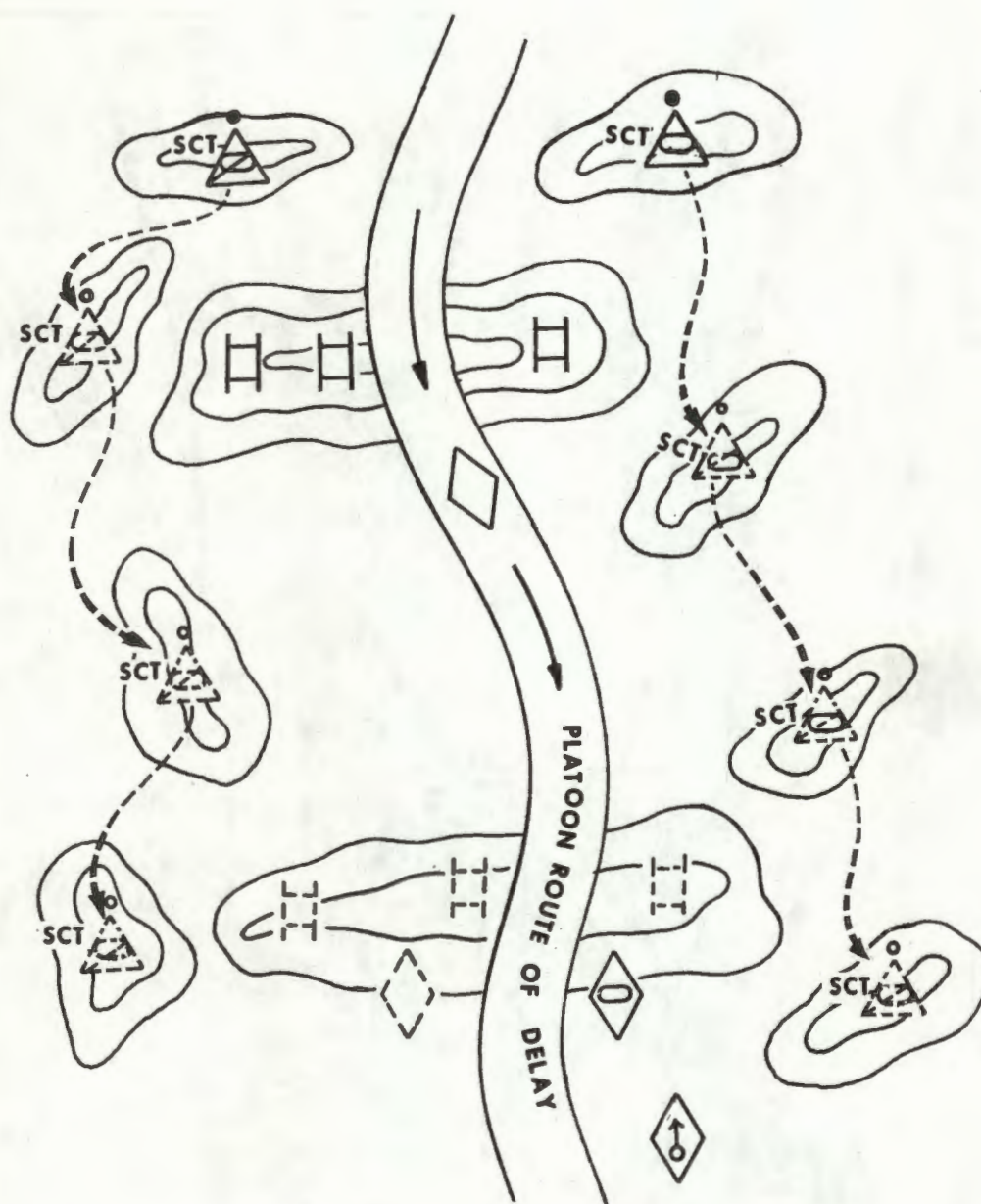


Figure 3-16. Armored cavalry platoon in movement to next delay position.

cover provided by the rifle squad. The night movement is more difficult and must therefore be conducted utilizing the light armor section's night vision equipment.

c. Rifle Squad. When the terrain provides good observation, the rifle squad normally moves back before the light armor section does. 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 normally remains on the delay position until after the light armor section has moved back. The squad employs passive night

vision equipment to assist in the conduct of the delay, and movement to the next delay position.

d. Support Squad. The support squad normally moves back 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 delay position. The squad displaces to the rear when its fires are no longer required to assist the rearward movement of the ARAV's and rifle squad.



Figure 3-17. Organization of armored cavalry platoon ambush in close terrain.

e. Scout Section. Scout squad leaders control the rearward movement of their squads and coordinate this movement with the movement of other elements of the platoon. The scouts move back independently on the flanks of the platoon; maintain positive knowledge of the location, activities, and strength of the enemy; engage targets within their capability to defeat; continue to adjust supporting fires; and report the enemy location, disposition, composition, and direction and speed of movement (fig. 3-16).

3-62. Ambush by Platoon in Delay

a. An ambush is a tactical operation 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 effectively employ an ambush is dictated 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 is normally 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 simultaneously to preclude or reduce effective employment of their weapons against the platoon (fig. 3-17).

c. In an ambush, elements of the platoon are positioned to deliver maximum firepower on the enemy force. ARAAV's 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 also prepares to fire on routes of enemy escape or reinforcement.

3-63. Combat Support for Platoon in Delay

Combat support for the armored cavalry platoon in a delay, as in a defense, may be provided by artillery, engineers, Army aviation, elements of the air cavalry troop, and tactical close air support. See paragraph 3-53 for more detail.

3-64. Withdrawal Through a Rearward Position

a. The platoon is frequently involved in withdrawals through rearward positions. The operations may range in complexity from the simple withdrawal of an outpost to the termination of part of a division general outpost mission. Whatever the level of complexity, the action is critical. The basic principles that apply are:

(1) Insure close personal coordination between the withdrawing unit commander and the commander of the unit on line. This coordination insures that both commanders understand the routes, times, recognition signals, and the point at which the unit on line assumes full responsibility for dealing with the enemy.

(2) Adhere closely to the details of the withdrawal plan once they are agreed to and understood by both units.

b. For a detailed discussion of the control and coordination measures required in a withdrawal through a rearward position, see paragraphs 209 and 210, FM 17-1.

CHAPTER 4

EMPLOYMENT OF THE ARMORED CAVALRY TROOP (STANAG's 2014, 2020, and 2079)

Section I. GENERAL

4-1. General

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

4-2. Organization for Combat

a. The armored cavalry troop commander is responsible for the organization and employment of the platoons, operation of the troop command post, and control of troop trains. 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 platoon support squads under troop control whenever the situation permits them to support the entire troop from one location.

b. Figure 4-1 illustrates five typical task organizations that can be formed by the organic elements of the armored cavalry troop. Frequently used provisional organizations are established as standing operating procedures (SOP). As examples, in figure 4-1, diagram 1 indicates the TOE configuration. Diagram 2 indicates a method of employing the troop with the support squads under troop control where operating frontages permit effective fire support of the entire troop. Diagram 3 depicts a situation in which terrain or other limitations preclude using all platoons forward. Such an organization may be used to provide depth to a delay position. Diagram 4 indicates the troop organized with like elements grouped together. This organization might be used in coordinated

attack missions. Diagram 5 illustrates a type organization which may be appropriate for a dismounted attack with ARAAV's supporting by fire only (for use where terrain precludes effective ARAAV movement), or a situation in which part of the troop is transported by helicopter.

4-3. Combat and Combat Support Units

a. General. The armored cavalry troop normally operates without attachments; however, when the factors of METT so dictate, reinforcement or support of the troop from combat or combat support units is usually provided.

b. Combat Units. Certain organic (to the squadron) and nonorganic combat units frequently are provided to support the troop missions.

(1) Tanks, other ARAAV's and mechanized infantry units may be placed in support of the troop for a particular mission. When these units are attached to the troop, they are usually employed intact.

(2) Elements of the air cavalry troop are available to provide support to the ground troop commander. Air cavalry elements are employed in coordination with ground elements to extend and complement the troop effort by—

- (a) Screening the front and flanks.
- (b) Reconnoitering lateral roads, dominating terrain, and areas inaccessible to surface vehicles.
- (c) Locating and reporting bypass routes around enemy positions and obstacles.
- (d) Establishing and maintaining contact with adjacent units.
- (e) Assisting in command and control.
- (f) Performing communication relay.
- (g) Locating favorable routes of attack and protecting the flank when the armored cavalry troop attacks to accomplish its mission.

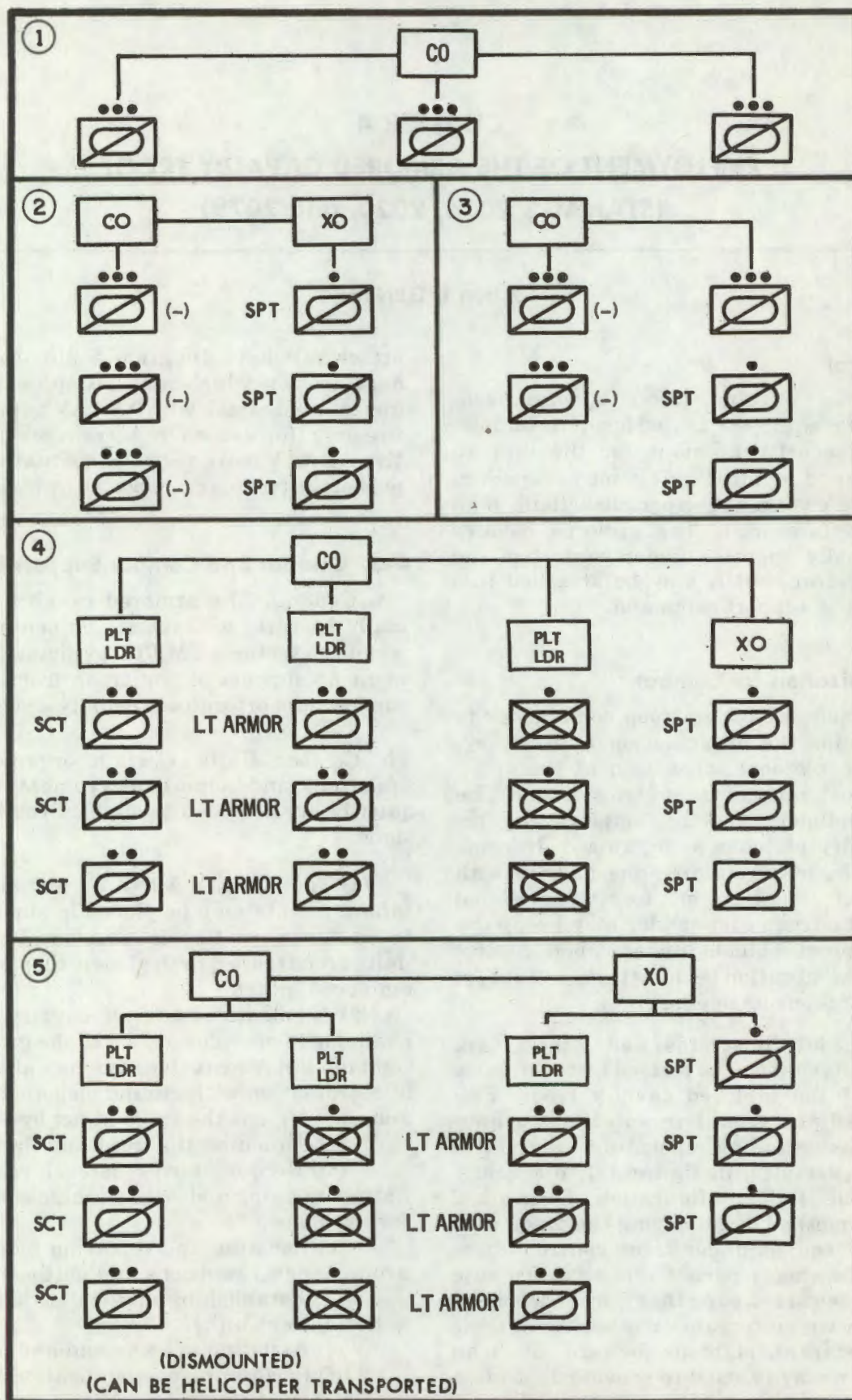


Figure 4-1. Five methods of organizing the armored cavalry troop for combat.

(h) Engaging in offensive, defensive, and retrograde operations in support of the troop.

(i) Gaining contact with the enemy.

c. *Combat Support Units.* Certain organic (to the squadron) and nonorganic combat support units or elements frequently support the armored cavalry troop.

(1) The Redeye section may be attached to the troop, or placed in direct or general support. The employment of the Redeye section is discussed in detail in appendix E.

(2) Army aviation elements from division or corps aviation units may be available to conduct surveillance and reconnaissance; to lift troops and equipment from the scout sections, rifle squads, or support squads; and to perform administrative transport.

(3) The armored cavalry troop normally is provided an artillery forward observer (FO) if artillery is in direct support of, or attached to, the parent unit. When an FO is available, requests for artillery fires are processed through him. When an artillery FO is not available, the troop requests artillery fires through the next higher headquarters and adjusts artillery fires with assigned individuals. All members of the armored cavalry platoon are trained to request and adjust indirect fires.

(4) Engineer reconnaissance parties may be employed with the troop to collect information on roads, bridges, and obstacles.

(5) Tactical close air support is provided, when available, through the squadron or the supported unit.

4-4. Employment of the Ground Surveillance Section

a. In the armored cavalry troop, the ground surveillance 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, including consideration of the enemy's electronic intelligence and electronic countermeasures capability, determines the method of employment and location of radar sets. The locations and employment of troop radar sets are coordinated with other ground radar equipment. They operate in accordance with the squadron or supported unit surveillance plan. Chapter 10 and FM 31-100(T) provide further guidance on employment of the short-range ground radar.

b. Each radar set normally is located in or near the position of the platoon with which it is working. If the mission or terrain conditions do not permit locating the radar near the platoon, it may be necessary to assign scouts or riflemen the mission of providing for its security.

c. Missions assigned to the ground surveillance section depend on the troop surveillance requirements. Sets are used to monitor or search specified areas. The specific mission assigned to each radar team should include the type of radar surveillance to be conducted, an operating schedule, duration of mission, area to be covered, and the reporting procedures to be used. (See chapter 10 for surveillance planning and employment.)

4-5. Employment of Troop Headquarters

a. *General.* During combat operations, the troop headquarters normally is organized into the troop command post (CP) and troop trains. The troop CP 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 operations and combat service support.

b. *Command Post.*

(1) *Troop commander.* When the troop is committed, the troop commander normally controls the unit from his command vehicle. He may be accompanied by an artillery FO. 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 (CP) operations.* The troop CP 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 at the CP may include the executive officer's vehicle and the attached medical evacuation vehicle. The executive officer normally remains in or near the CP to be continually aware of the tactical 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 CP vehicle is located to the rear of the combat elements. When not moving, it is located in a position facilitating communications (app B) with the troop commander, the

platoons, and the squadron CP or other unit CP's to which the troop is attached.

(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 CP, maintenance section, and 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 CP, and consist of those elements that accompany the troop to provide immediate combat service support during combat operations. These normally include the medical aid-evacuation team, elements of the troop 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, and marches and assembly areas, refer to FM 17-1.

4-6. Command and Liaison

The commander of an armored cavalry troop exercises control and commands his unit through the executive officer, first sergeant, and platoon leaders. The troop commander maintains continuous liaison with adjacent and support units during the conduct of all operations. This liaison may be maintained by radio if required. When augmented with a liaison sergeant and a liaison agent, the troop can have liaison representatives permanently located at the adjacent or supporting unit whose operations are of greatest interest to the troop.

Section II. RECONNAISSANCE OPERATIONS

4-7. 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 specific areas and are prepared to engage in combat, as required, 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 and paragraph 1-3 contain detailed coverage of the types of reconnaissance, missions, fundamentals of reconnaissance, and additional considerations appropriate to special reconnaissance operations.

c. The armored cavalry troop can perform chemical agent detection and radiological monitoring and survey operations. These operations may be a part of reconnaissance operations when necessary. Conduct of these operations concurrently results in a reduced rate of reconnaissance. For guidance on radiological monitoring and survey operations; see paragraphs 15-2 through 15-6.

4-8. Reconnaissance Frontages

There is no established frontage for an armored

cavalry troop 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. Wider frontages may be assigned when air cavalry elements are available.

4-9. Conduct of Reconnaissance Operations

a. The armored cavalry troop must make maximum use of its communications, fire-power, and mobility to accomplish reconnaissance missions. 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 needless combat with the enemy. In many situations, the troop can and does fight to obtain the desired information. Although a potent combat force, the troop normally avoids combat whenever possible, and bypasses enemy resistance to accomplish the assigned reconnaissance mission. When bypassing 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 has bypassed enemy forces, the troop must continue to maintain contact with the bypassed force unless relieved of this responsibility by the next higher commander.

b. The troop formation must provide for ade-

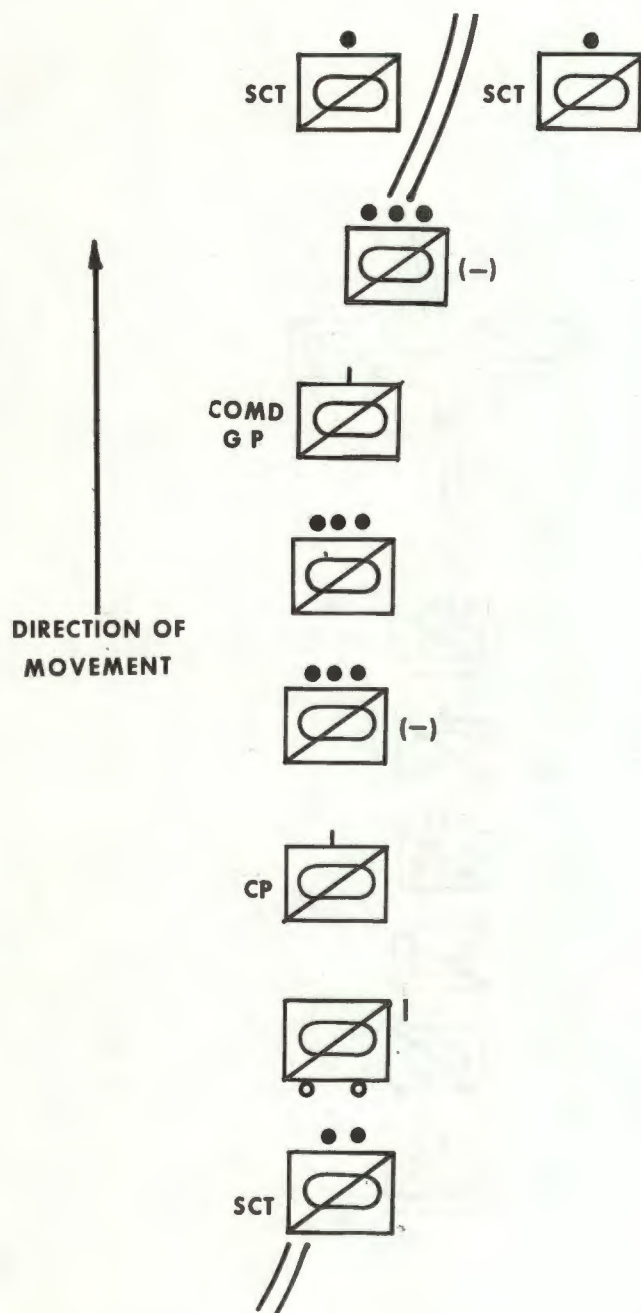


Figure 4-2. Armored cavalry troop conducting reconnaissance in column formation.

quate coverage of the reconnaissance objective. 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, expedite the operation by reconnoitering key terrain features, or assist reconnoitering platoons in avoiding decisive engagement.

c. Figures 4-2 through 4-4 depict typical armored cavalry troop reconnaissance formations.

4-10. Route Reconnaissance

a. When enemy action is imminent, route reconnaissance missions usually are 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; however, such employment requires more time for completion of reconnaissance missions and may subject the troop to defeat in detail.

b. The troop normally retains platoon integrity in conducting a route reconnaissance mission. Route reconnaissance by armored cavalry platoons is discussed in paragraph 3-8. If the troop is conducting a route reconnaissance along a single route, it usually advances in column of platoons (fig. 4-5).

c. Elements of the air cavalry troop may be employed to support the troop as discussed in paragraph 4-3.

d. Army aircraft employed to support the troop in route reconnaissance missions normally:

- (1) Operate to the front and flanks of the troop.
- (2) Are used for observation and to assist in control. Army aircraft used in this manner extend the range of troop observation to the front and flanks.

4-11. Zone Reconnaissance

a. When conducting zone reconnaissance, without supporting air cavalry elements, the troop commander assigns portions of the troop zone to each platoon. When air cavalry elements are available, he may assign each platoon a route and specific locations to reconnoiter. He may employ supporting air cavalry to reconnoiter the area between these routes. This technique facilitates rapid accomplishment of the mission. Platoon zones are established by boundaries. Boundaries normally are easily recognizable terrain features such as roads, streams, ridges, 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

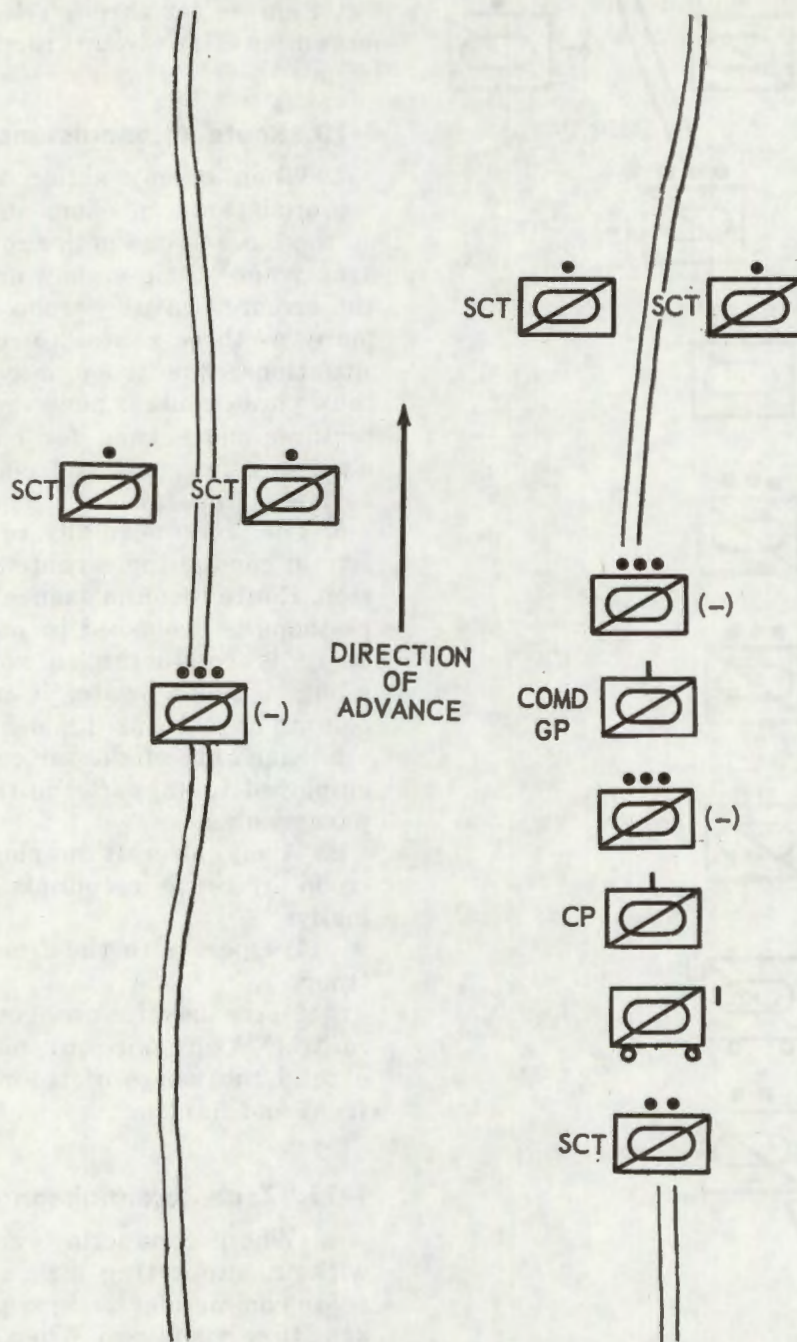


Figure 4-3. Armored cavalry troop conducting reconnaissance on two axes.

units. The troop CP and combat trains usually advance by bounds on the best route available near the center of the troop zone (fig. 4-6 and 4-7).

c. Elements of the air cavalry troop may be employed to support the troop as discussed in paragraph 4-3.

d. Elements of the military working dog units may be employed to support the troop.

4-12. Specific Reconnaissance

a. In the conduct of specific reconnaissance, the troop only reconnoiters those areas that are specifically designated, e.g., towns, woods, and crossing sites.

b. The armored cavalry troop moves to the assigned area by the best available route, reporting and bypassing enemy positions encountered during the move unless ordered to do

otherwise. The troop uses a formation that permits rapid, secure movement. This formation usually is the same as that used for a route reconnaissance.

c. The troop commander plans the reconnais-

sance in detail to insure that the reconnaissance objectives are systematically covered. If the area restricts vehicular movement, dismounted patrols from the scout section and rifle squad normally reconnoiter the area (fig 4-8).

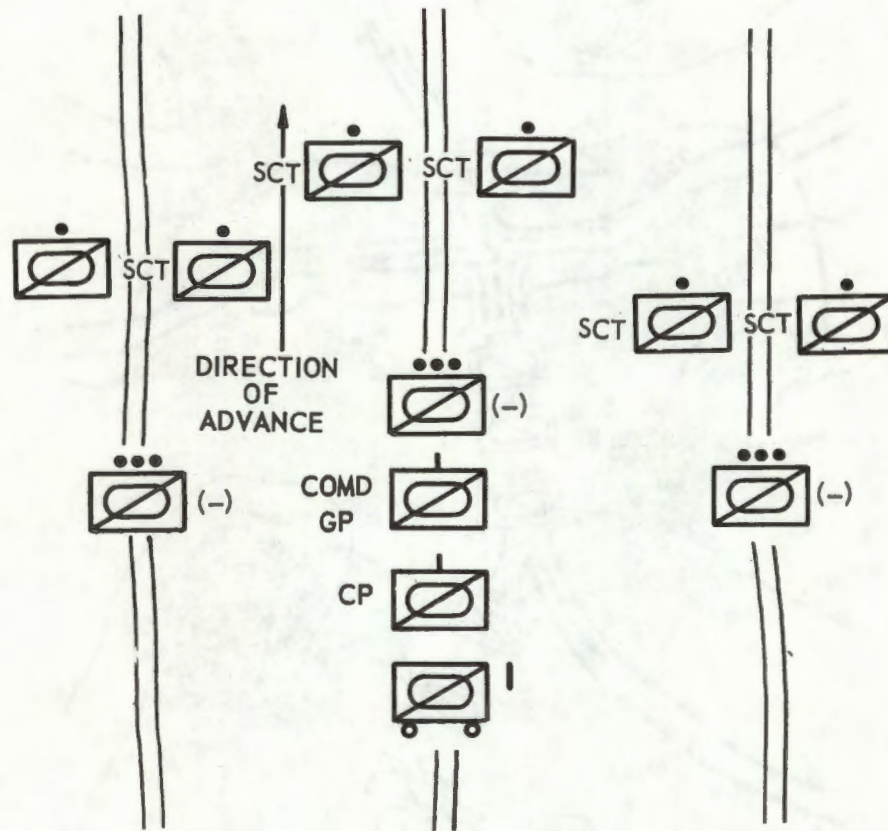


Figure 4-4. Armored cavalry troop conducting reconnaissance on three axes.

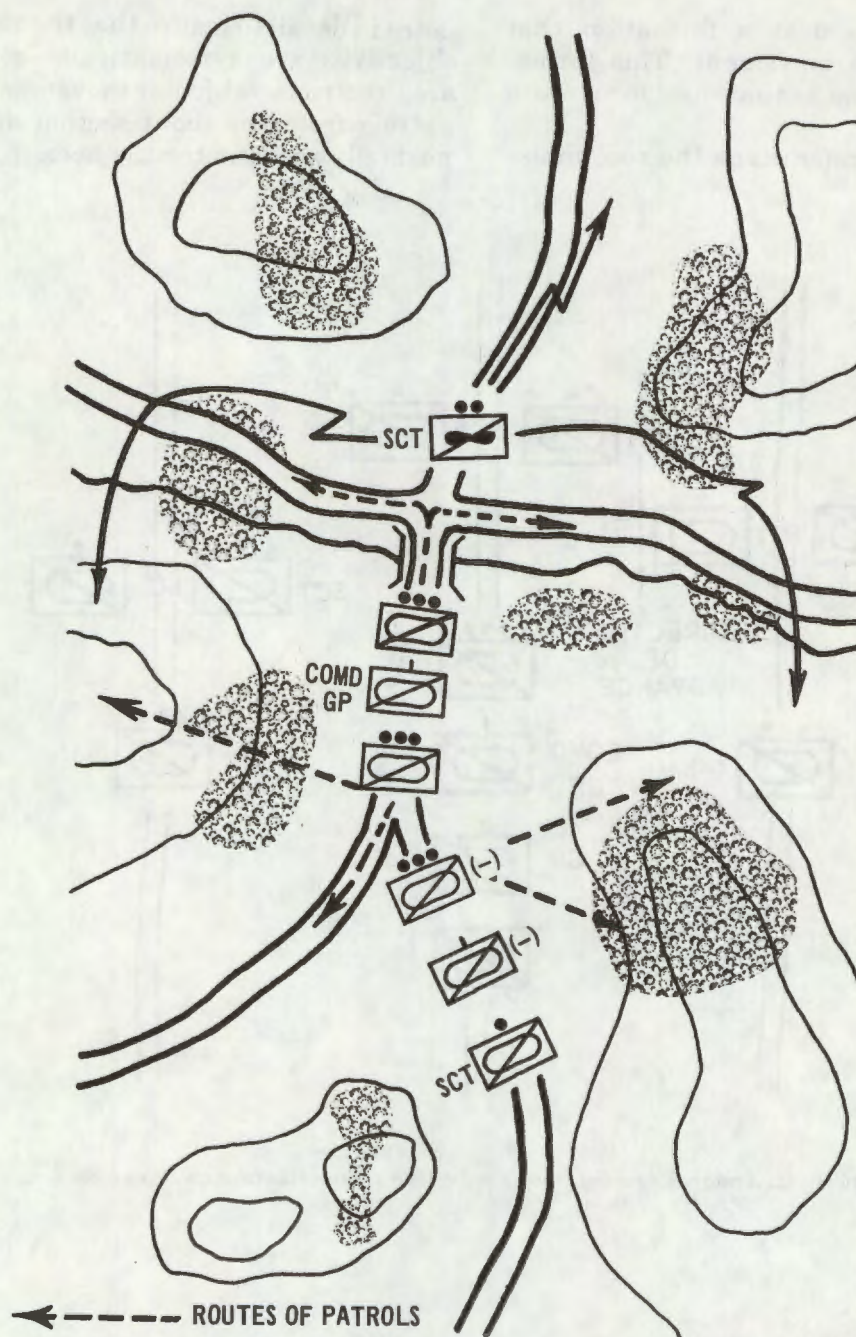


Figure 4-5. Route reconnaissance by the armored cavalry troop with aero scout support.

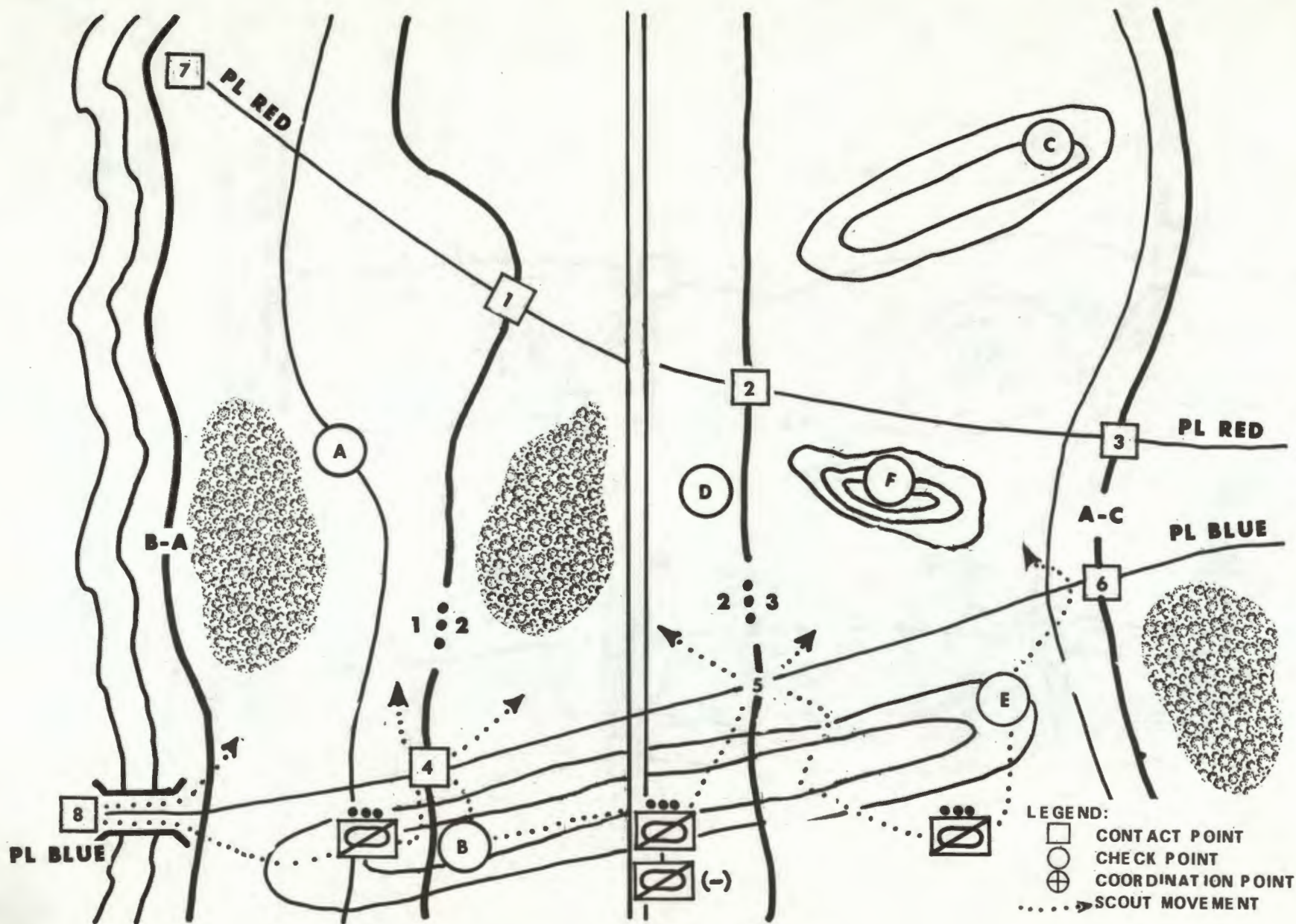


Figure 4-8. Zone reconnaissance by the armored cavalry troop, platoons conducting zone reconnaissance.

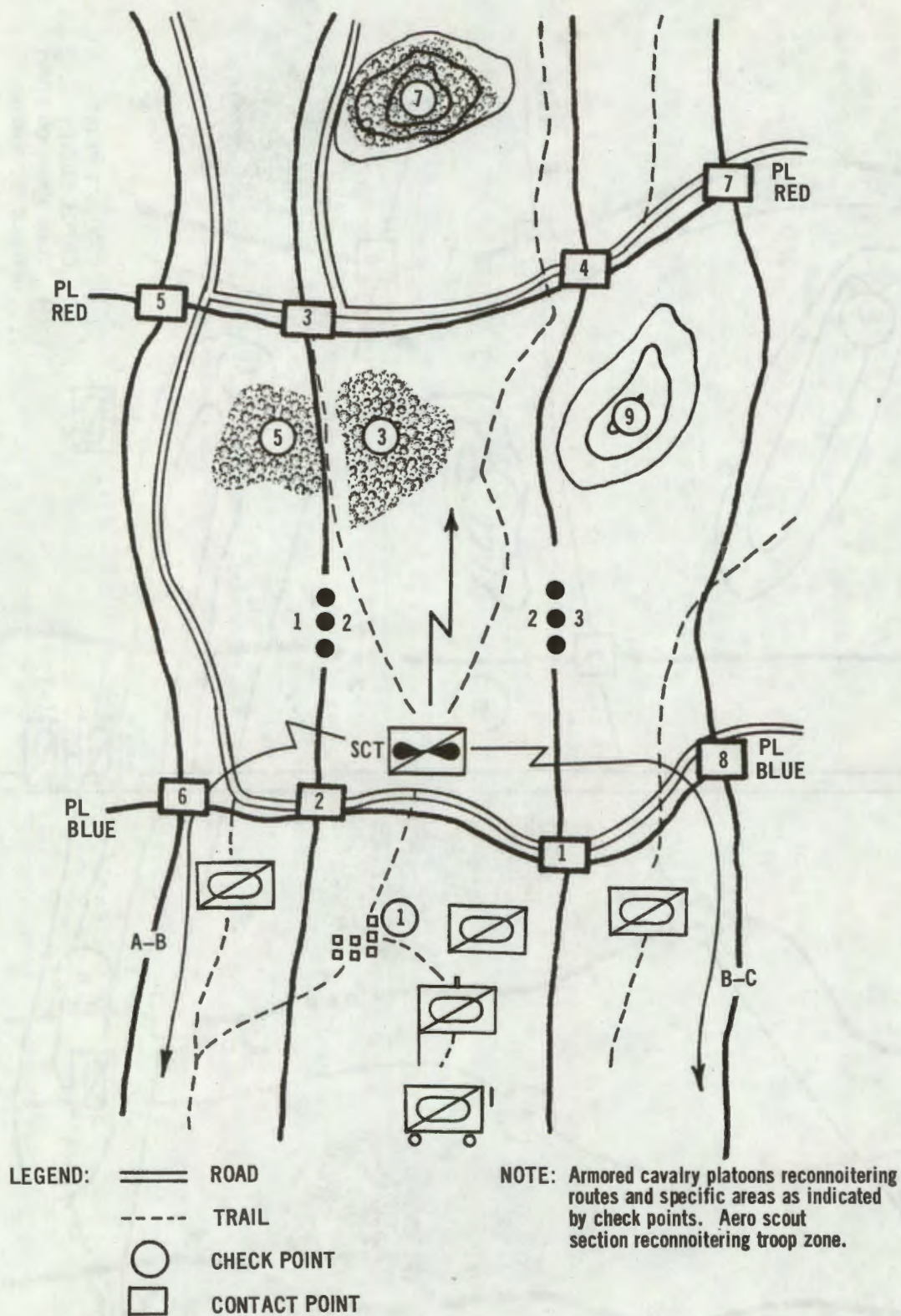
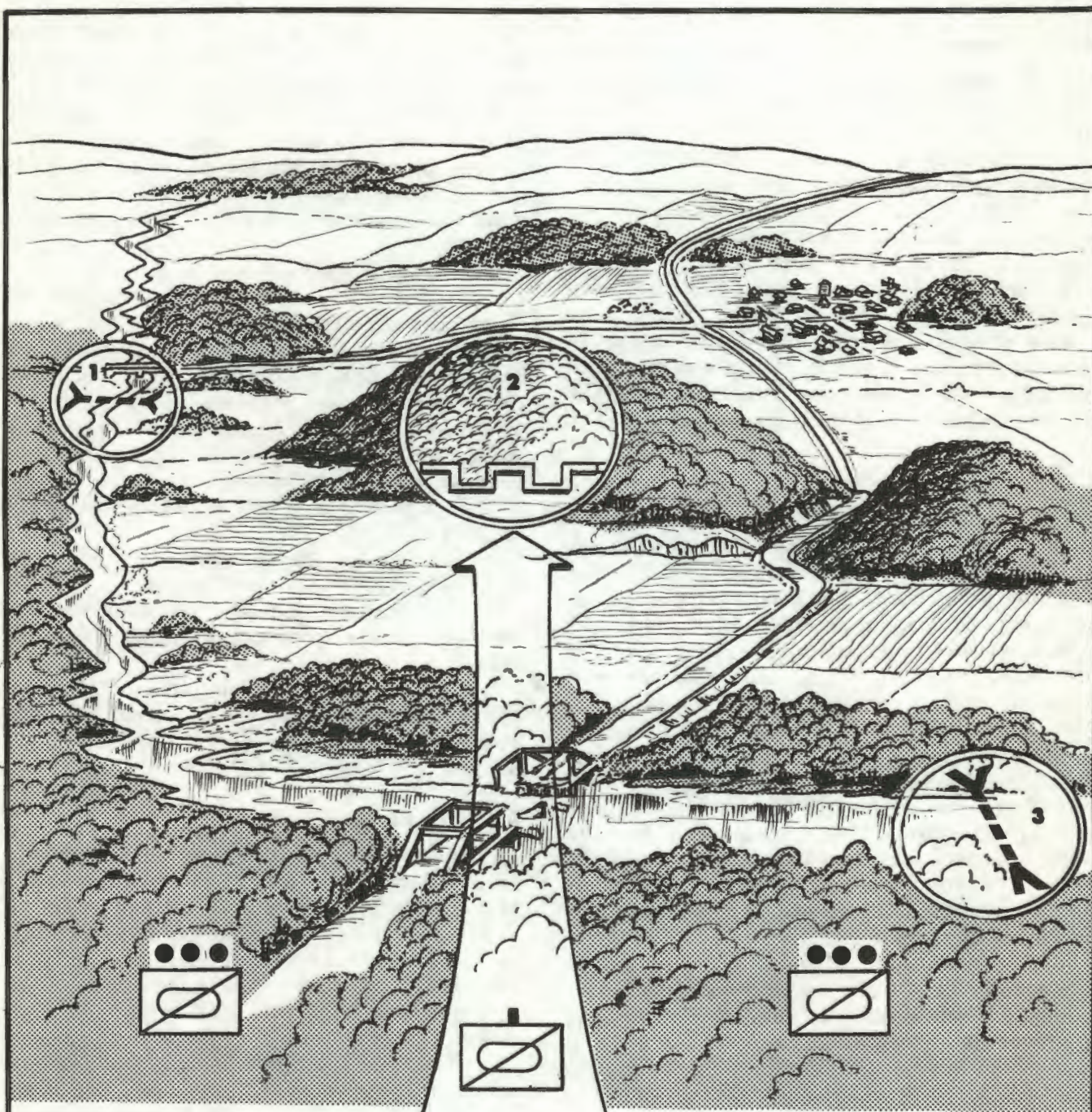


Figure 4-7. Zone reconnaissance by the armored cavalry troop with aero scout section under operational control.



SPECIFIC INFORMATION OBJECTIVES:

1. DETERMINE IF THE BRIDGE IN THE WEST WILL SUPPORT TANKS AND IF THE BRIDGE IS HEAVILY DEFENDED.
2. IS THE HILL MASS NORTH OF THE MAIN BRIDGE IN THE AREA PREPARED FOR DEFENSE?
3. CAN TANKS CROSS THE FORD SITE IN THE SOUTHEAST OF THE AREA?

Figure 4-8. Specific reconnaissance by the armored cavalry troop.

Section III. SECURITY OPERATIONS

4-13. General

a. 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.

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. Surveillance is an inherent task in accomplishment of these missions.

4-14. 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 provide assistance to the advance guard by extending the range of reconnaissance, accomplishing surveillance over wide areas, and providing additional security. When possible, they should be made available to support the troop. The armored cavalry troop, when acting as the advance guard for the squadron, marches far enough in advance of the squadron to insure that the squadron has the time and space necessary to cope with an enemy threat. The troop must also remain close enough to the protected force to receive rapid reinforcement and support if required.

b. *Formation for Advance Guard Mission.* The troop may advance on multiple routes or in column. When moving in column, the trailing platoons are prepared to support the leading platoon in any action necessary to accomplish the mission (fig 4-9). The trailing platoons usually are employed intact; however, their light armor vehicles and rifle squads may be grouped in provisional light armor or rifle units, each under a platoon leader, to provide an attacking force for the troop (fig. 4-1). The scout sections of these platoons may also be grouped to provide flank security and observation. The three support squads may be grouped and employed under troop control and provide mortar fire support to all elements of the troop. When moving on multiple routes, an armored cavalry 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. The advance guard normally advances in column until contact is made. It usually moves continuously, but when contact with the enemy is imminent, it moves by bounds.

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 vary according to the situation as developed by the leading platoon. Action on contact taken by the troop commander includes 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 (protected) force to attack, the troop may provide security, support by fire, or join in the attack.

4-15. 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 guard mission or be required to occupy blocking positions.

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 leading into the flank of the protected force. He selects a series of blocking positions on the flank of the protected force that generally parallel the axis of advance of the protected force. These pre-planned blocking positions are located on defensible terrain that dominates likely avenues of enemy approach into the flank of the protected force. The blocking positions are planned at sufficient distance from the flank of the protected force to permit timely warning of

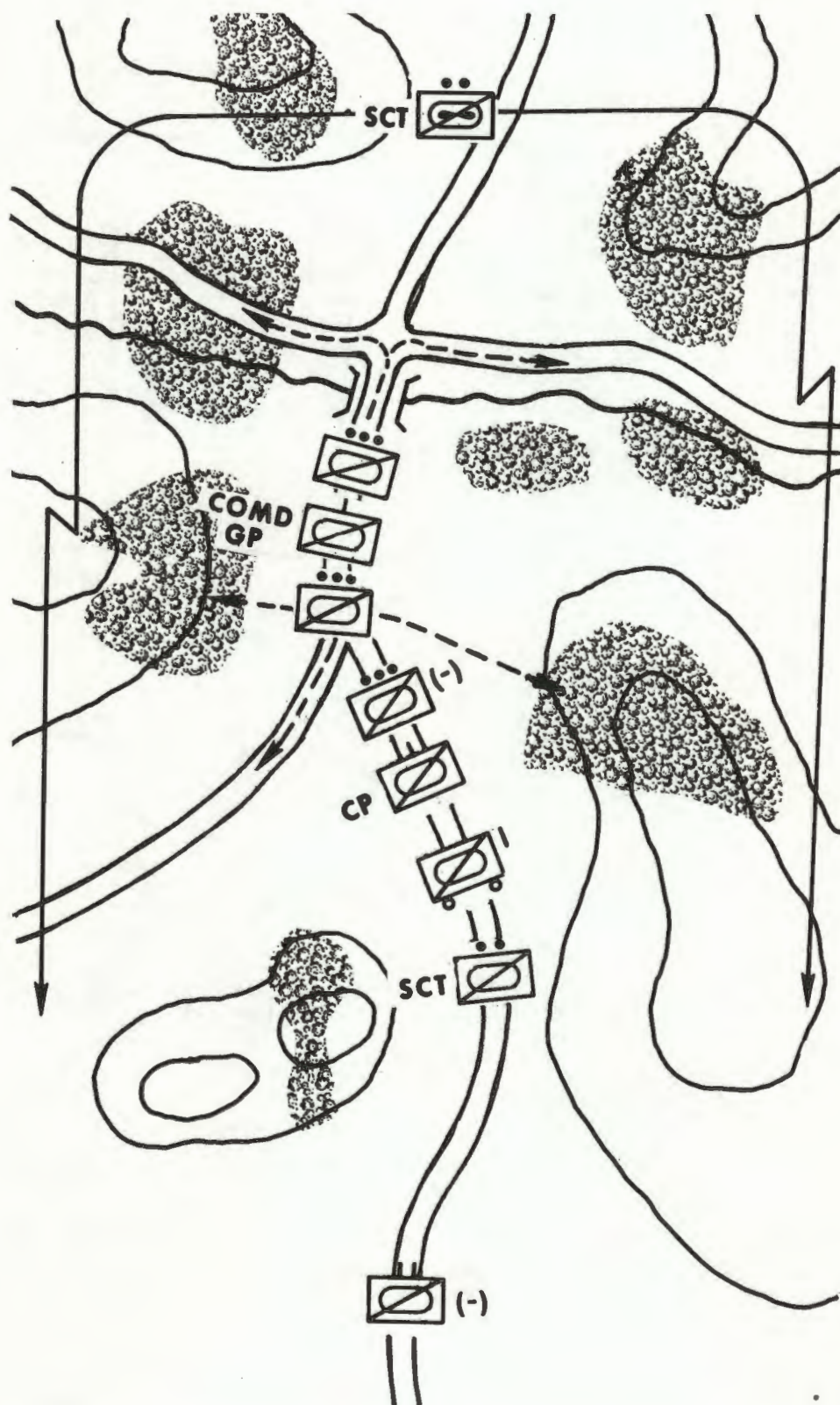


Figure 4-9. Typical formation for the armored cavalry troop employed as advance guard—troop column.

enemy approach and to provide the force with enough time and maneuver space to cope with an enemy threat. The blocking positions are

located in such a manner as to deny the enemy ground observation and direct fire on the force being guarded. These positions should be within

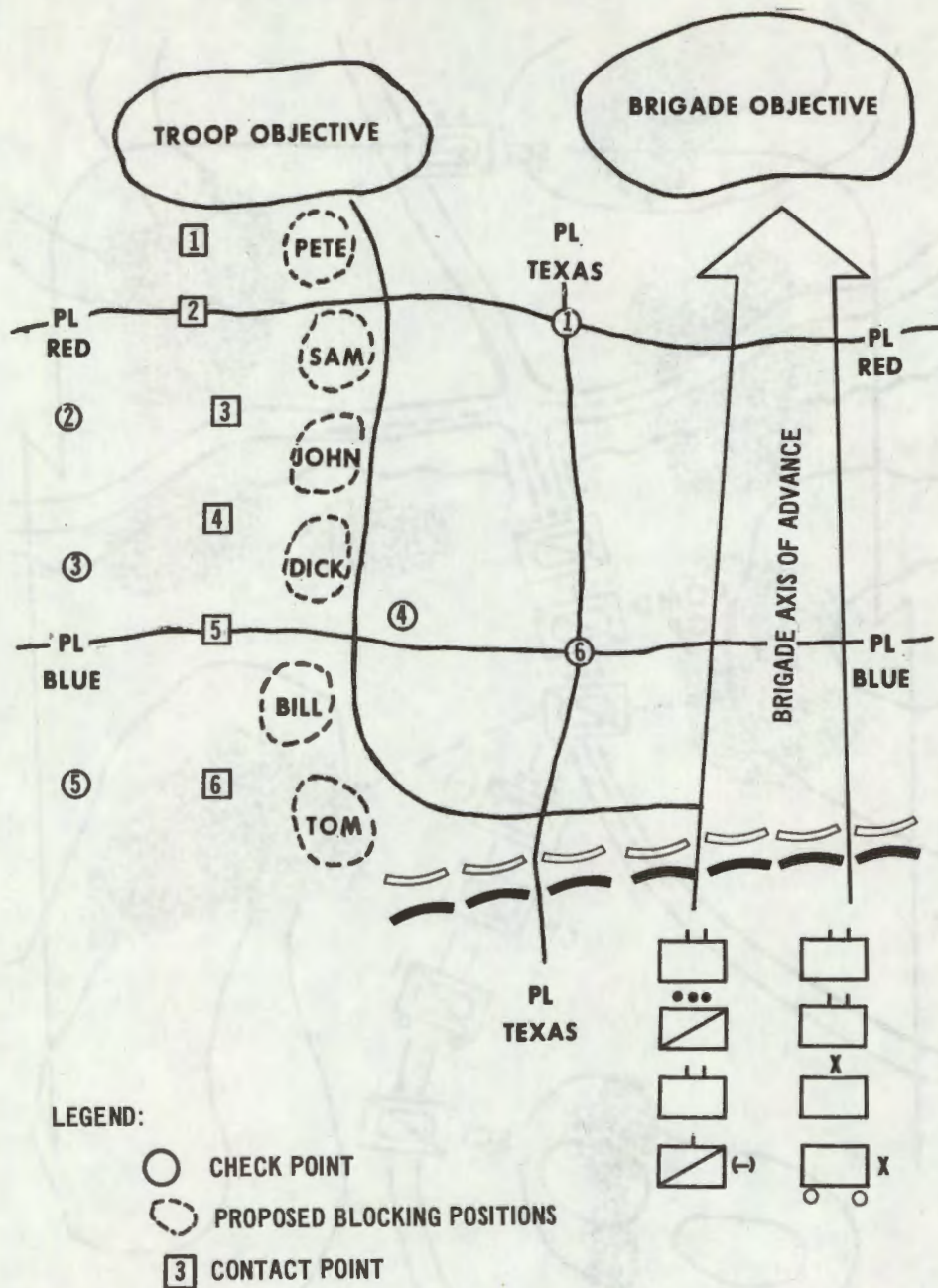


Figure 4-10. Planning for the employment of the armored cavalry troop as a flank guard for a brigade in the attack.

range of the supporting artillery of the protected force. If the flank guard force encounters a superior enemy force, the positions should be far enough from the flank of the protected force to provide sufficient terrain for the conduct of a delaying action toward the protected force. However, the distance between the axis of advance or flank of the protected force and the line of blocking positions should not be so great that one armored cavalry platoon cannot secure this area.

(2) The troop commander 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 protected force to prevent the troop from interfering with the maneuver of the protected force, but within the capability of one platoon to secure the area between the protected force and the troop route of advance. The route is inferior to, and permits rapid access to, the line of blocking positions (fig. 4-10). If a suitable route does not exist, the troop may be required to operate cross-country.

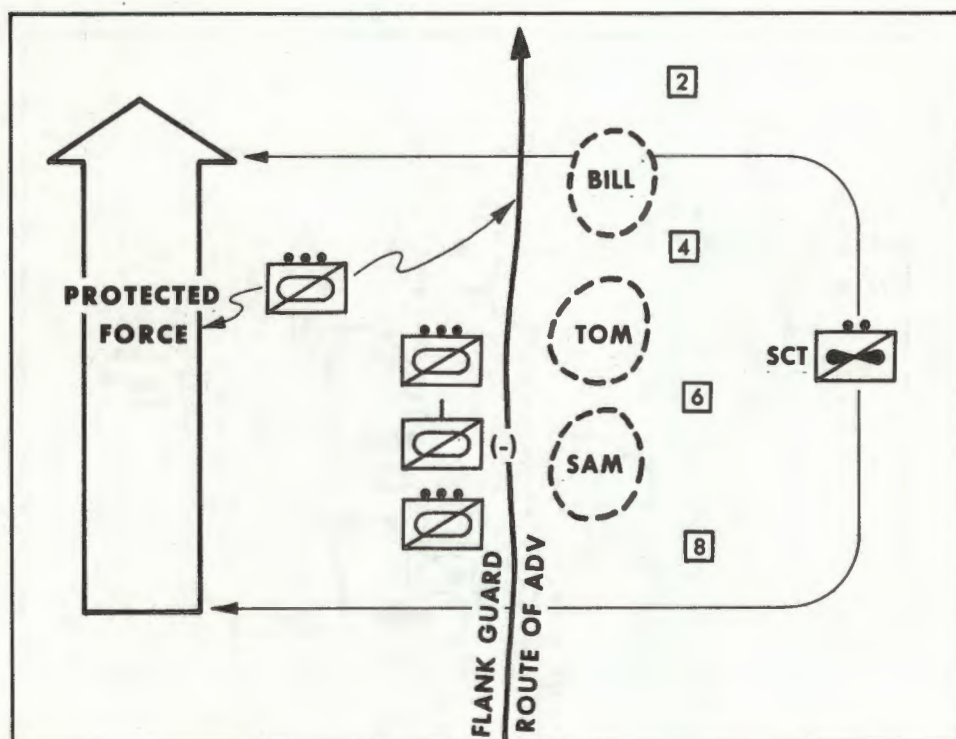


Figure 4-11. Armored cavalry troop employed as flank guard, with one platoon acting as troop advance guard and maintaining contact with the protected force.

(3) The troop commander next develops a scheme of maneuver that enables the troop to secure selected blocking positions and the area between the leading task force of the protected force and the troop route of advance. The scheme of maneuver includes provisions for securing the blocking positions either by individual platoon actions or by a coordinated troop effort. The troop commander also decides the strength required to secure the blocking positions.

(4) Contact points must be easily identifiable; located forward of the line of blocking positions, generally between the individual blocking positions. Contact points delineate the area of responsibility for the force (normally a platoon) holding each position, and indicate that the force is responsible for the position and the area between the contact points. The troop commander next selects other control measures required for accomplishment of the flank guard mission. Phase lines are selected to assist the troop commander in controlling the forward movement of the troop and to facilitate conduct of delaying actions if delay is required. Contact points are selected to delineate responsibility for the area between blocking positions. The blocking force is required to make physical contact periodically with adjacent units at the contact point.

(5) The troop commander selects a formation that permits rapid employment against enemy resistance. The formation must provide for maximum flexibility to meet any change in the situation. 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. Available aircraft may be employed to assist the lead platoon in securing the area between the flank of the protected force and the troop route of advance, or they may be employed to screen forward of the line of blocking positions.

c. During the conduct of a flank guard operation, the troop moves parallel to the axis of advance of the protected force. It regulates its movement on this force. The area of responsibility for the flank guard of an advancing force starts at the rear of the leading battalion task force (TF) of the protected force and ends at the rear of the combat elements of the protected force (exclusive of the rear guard), unless otherwise specified. The lead platoon provides the advance guard for the troop, clears the area

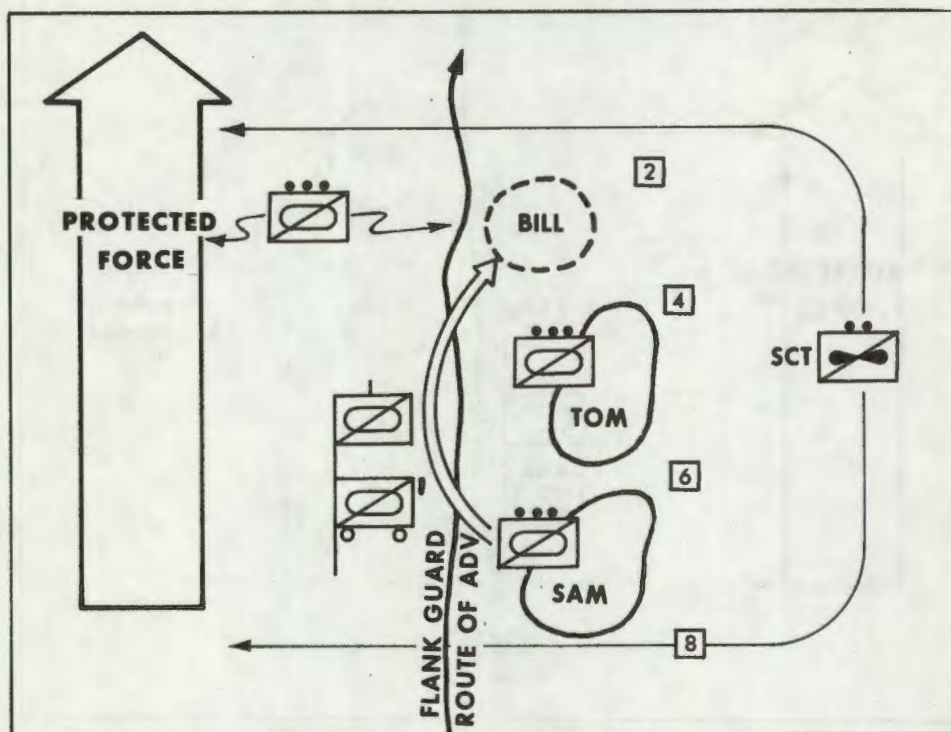


Figure 4-12. Armored cavalry troop as flank guard using alternate bounds.

between the protected force and the troop route of advance, and maintains contact with the rear of the leading TF of the protected force. If the leading platoon is not able to accomplish its three-fold mission, the troop commander either employs an additional platoon or reinforces the leading platoon to the extent necessary to insure that the task is performed properly (fig 4-11). If available, Army aircraft may assist in this mission. The remainder of the troop marches in column on the troop route of advance prepared to secure blocking positions on order. The decision to occupy these positions and the method of movement that the troop may employ depend on the speed with which the protected force is advancing and the enemy situation on the exposed flank. If the troop becomes overextended and cannot effectively protect the entire flank of the protected force, the troop commander should, based on his estimate of the situation, recommend that one of the three following courses of action be adopted:

(1) Reinforce the troop with suitable elements to permit it to continue to protect the flank.

(2) Permit the troop to screen all or the least threatened portion of the exposed flank, as appropriate.

(3) Relieve the troop of any responsibility for a portion of the area of responsibility.

d. When the protected force is stationary, the troop occupies blocking positions covering the likely avenues of enemy approach. When the blocking positions are occupied, the troop CP and combat trains are located far enough from the blocking positions to preclude their frequent displacement if the flank guard is required to conduct a delaying action. There are three basic methods of movement that the troop may employ:

(1) *Alternate bounds.* This method is used when the protected force is advancing slowly and strong enemy resistance is anticipated against the flank guard. When all subordinate units have been employed and the protected force'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. 4-12).

(2) *Successive bounds.* This method is used when the movement of the protected force is characterized by frequent short halts and enemy action against the flank guard is light. Each subordinate unit occupies designated blocking positions. When forward movement is resumed, subordinate units move, simultaneously retaining their relative position in the flank guard formation as they move forward to occupy new blocking positions. This is normally

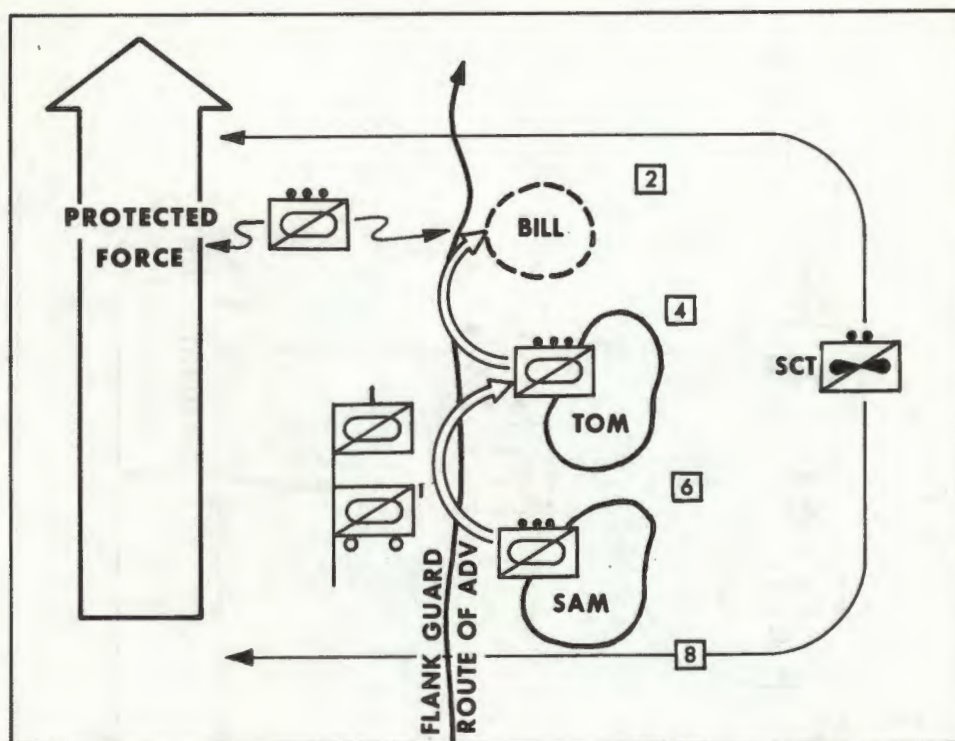


Figure 4-13. Armored cavalry troop as flank guard using successive bounds.

faster than movement by alternate bounds, but is less secure. It is therefore usually employed against light enemy resistance (fig. 4-13).

(3) *Continuous marching.* This method is used when the protected force 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 protected force. Air and ground elements reconnoiter to the flank as the remainder of the flank guard unit moves along the route of advance (fig. 4-14).

e. The troop operating as a flank guard for a defensive force occupies a series of blocking positions to the flank of the force. The blocking positions are located on key terrain that dominates likely avenues of enemy approach into the flank of the protected force. The troop normally is given a sector of responsibility that is defined by specified 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 protected force to cope with the threat.

f. 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 must be specified by the commander of the protected force.

4-16. Rear Guard

a. The rear guard follows the protected force at a distance prescribed by the force 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 protected force. 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 force being protected.

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

(1) *Terrain.* The troop commander analyzes the terrain in the area of operations. He selects a series of delay 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 determines the number of platoons to be employed in the initial delay position. If the situation permits, he may position one platoon to provide depth to the troop. He assigns a troop route of withdrawal and designates the control measures necessary to insure effective control. Measures normally em-

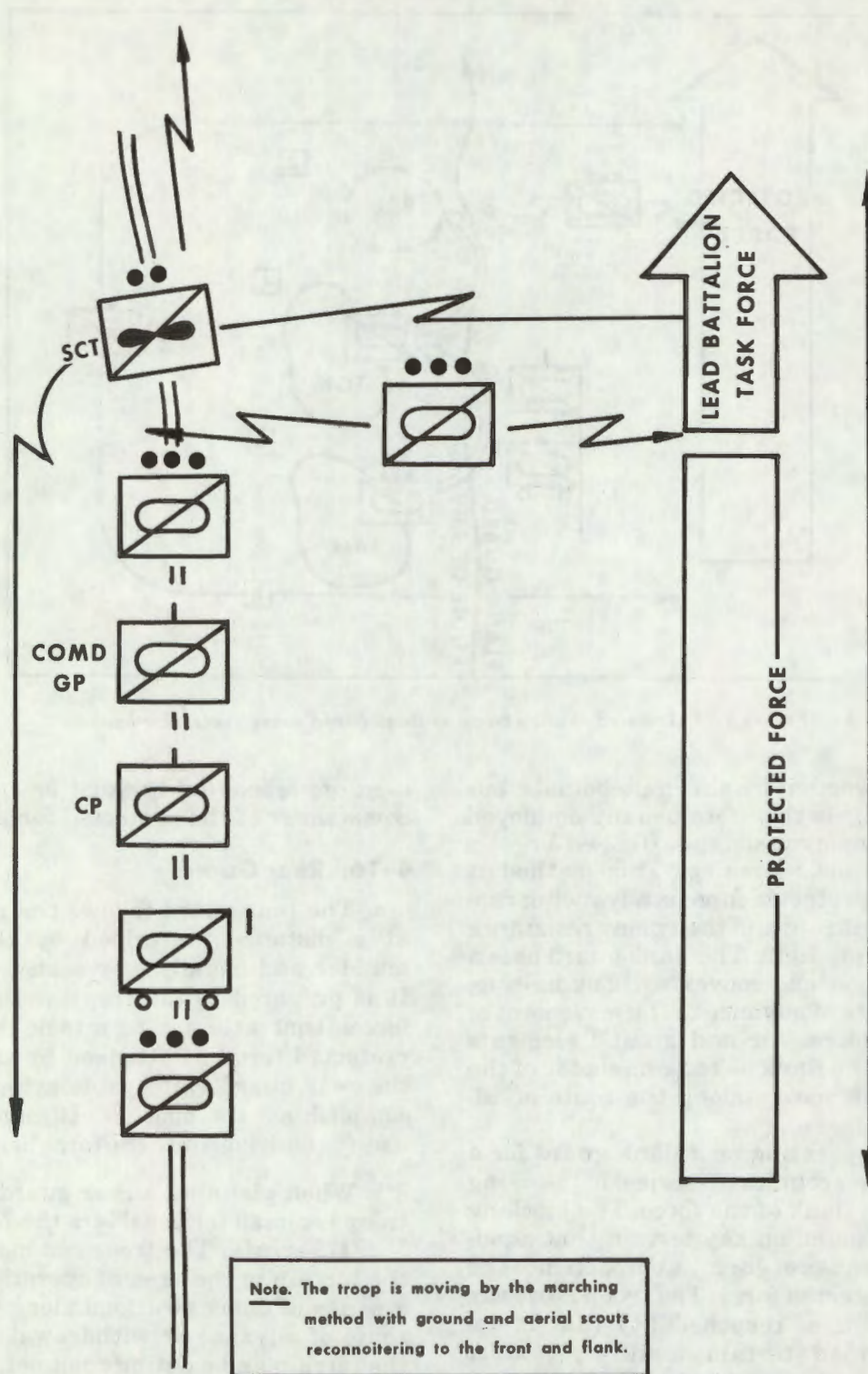


Figure 4-14. Armored cavalry troop as flank guard using continuous marching.

played by the troop commander include delay positions, phase lines, coordinating points, checkpoints, contact points, and routes of withdrawal.

(3) *Security.* The troop commander plans for flank security and reconnaissance to the

front and flanks of occupied delay positions. Active measures are taken to insure that the enemy does not bypass the rear guard and attack the rear of the protected force. Plans may include assignment of a mission to one or more platoons to reconnoiter a given area to the front

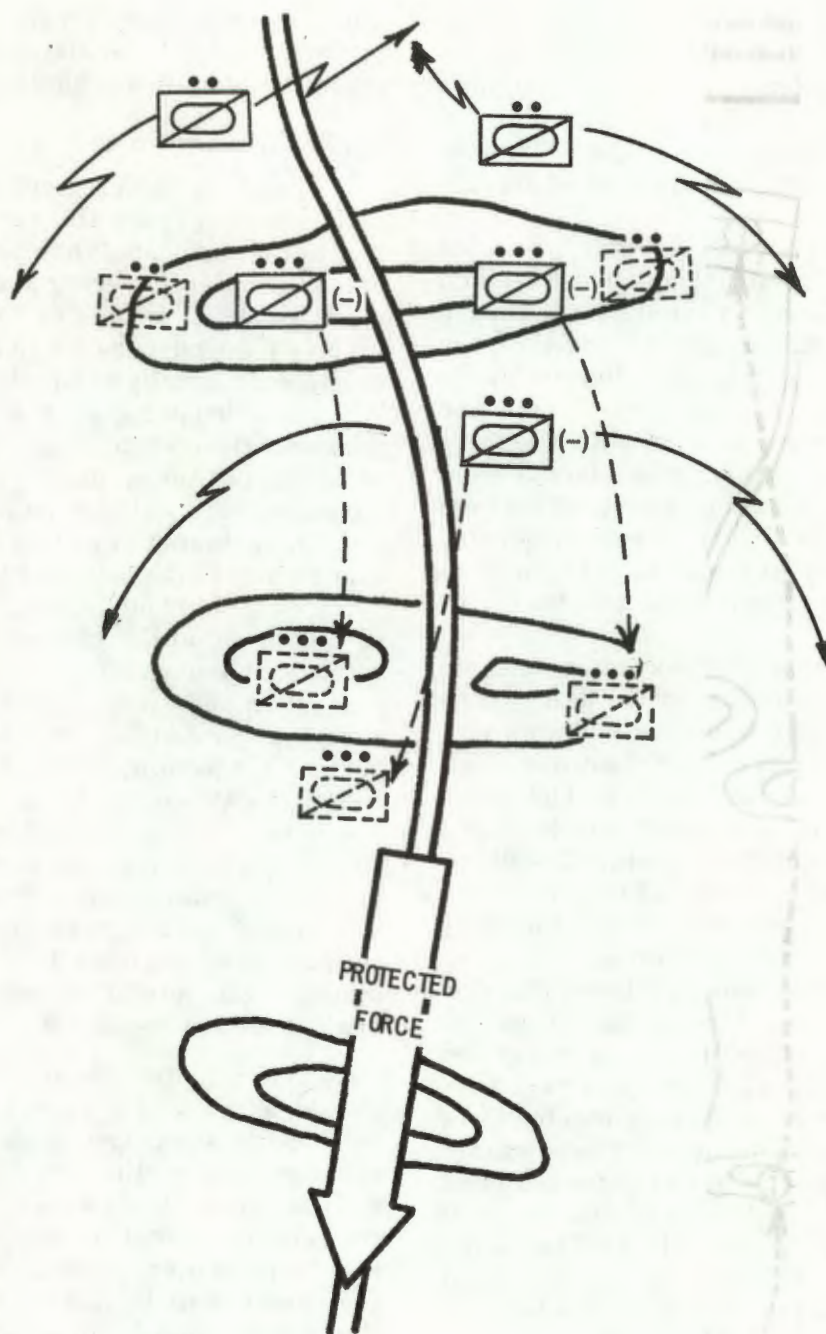


Figure 4-15. Conduct of rear guard action by the armored cavalry troop with aero scout support.

or flanks of a position. The reconnaissance mission to the front and flanks is normally accomplished by scout elements operating under platoon control. Army aircraft can augment the efforts of the platoons by extending observation to the front and flanks. The organic ground surveillance radars may be used to assist security elements in surveillance to the front or flanks. Elements of the air cavalry troop may be employed to maintain contact with the protected force, and to assist in pre-

venting the enemy from bypassing the rear guard and attacking the rear of the protected force. In addition, air cavalry elements may establish an air screen on the enemy side of the rear guard to provide timely warning of enemy approach.

(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, close air support, and the fires of organic weapons.

(5) *Plans and actions of the protected force.* It is essential that liaison be maintained with the protected force 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 protected force and have continuous communication with the force 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 protected force to effect this liaison.

(6) *Delay positions.* Plans must include provisions for reconnaissance of delay positions. The troop executive officer and appropriate personnel reconnoiter delay positions.

(7) *Command post and trains.* The troop commander plans the movement and locations of the troop CP vehicle(s) and trains. The disposition of the combat elements of the troop and the proximity of the protected force normally provide security for these elements.

c. The troop as rear guard follows the protected force by bounds, occupying successive positions or following the force by a prescribed time or distance interval. It occupies each position and remains there until the protected force has cleared the next position. The distance between the rear guard and the protected force must not permit the enemy to bypass the rear guard and attack the protected force, and must be close enough to permit rapid reinforcement and support from the protected force (fig 4-15).

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

e. If the protected force is moving rapidly and no contact is made with the enemy, the rear

guard moves at a given rate of march behind the protected force. It regulates its speed to stay the prescribed distance behind the protected force.

4-17. 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 troop may secure and occupy blocking positions, or be required to act as advance guard of the squadron.

b. The armored cavalry troop normally operates as part of the covering force when the force being covered 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 authorized by the mission or on order of the squadron commander. The troop adopts a formation that provides for rapid deployment 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 the troop is to conduct its operations. Instructions also will include a general line in front of which the enemy is to be held, and the minimum time the enemy must be delayed to accomplish the mission. The time element is normally expressed in hours or days. Control measures such as delay lines are normally annotated with a date time group (DTG) indicating the precise time that a delay line *will be defended* prior to beginning a delay. In executing a covering force mission as part of a larger force, the troop is assigned a sector and accomplishes its mission by delaying action.

4-18. Screening Force

a. A screening mission is characterized by the employment of relatively few forces over a wide area. The mission is accomplished by establish-

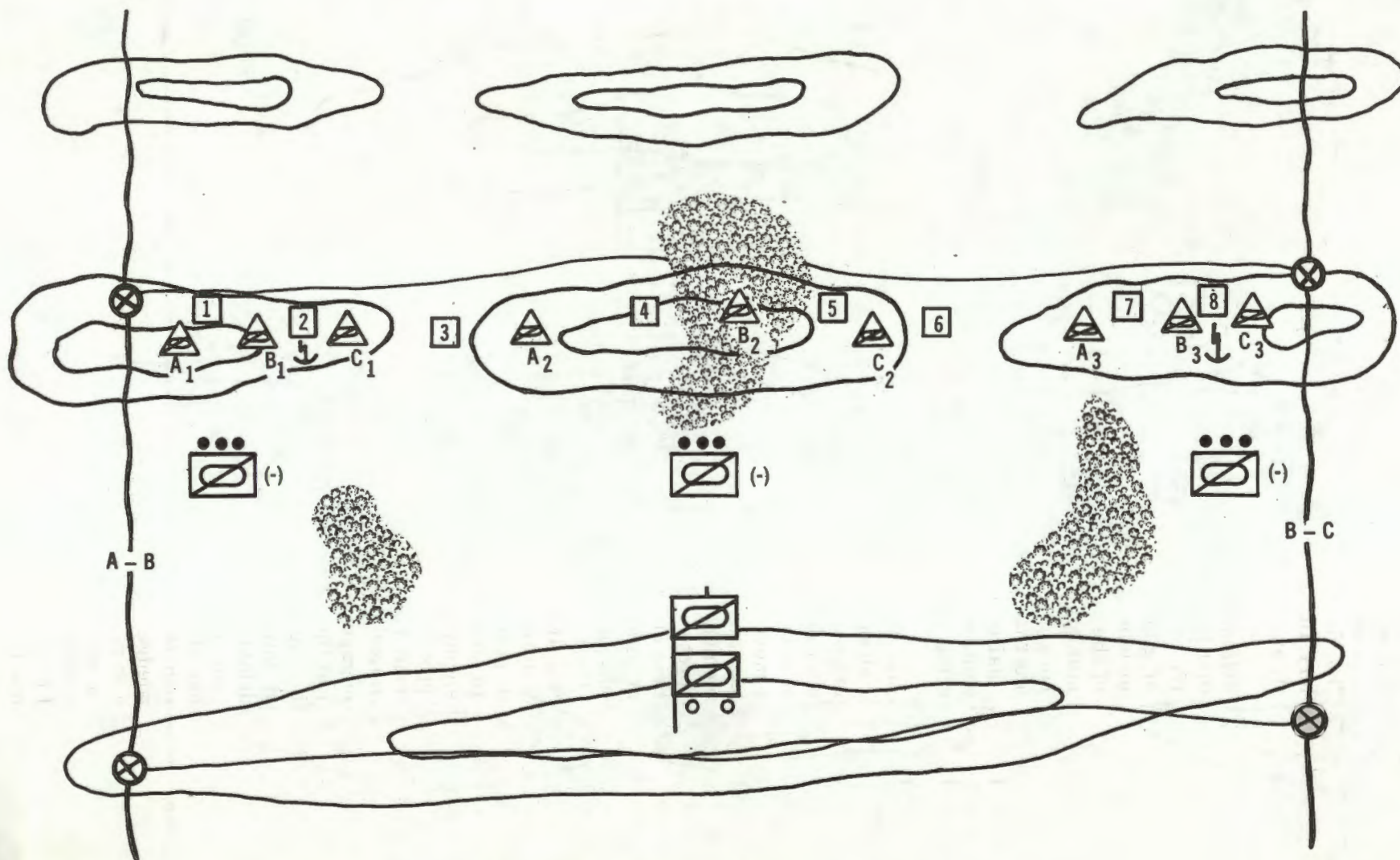
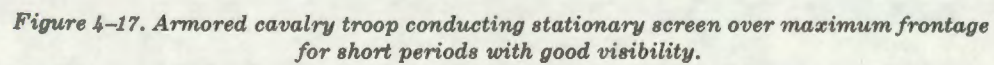


Figure 4-16. Armored cavalry troop deployed on a stationary screening mission.



ing OP's, and patrolling between OP's, 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 positive knowledge of the location, strength, and activity of the enemy. Forces disposed on a screening mission cannot be expected to offer significant resistance to the enemy. Screening forces fight to protect themselves and to destroy enemy small unit patrols (fig 4-16 and 4-17). Screening forces also adjust fires on advancing enemy elements to harass and impede their advance.

b. When the flank of a moving force is to be screened, the mission is conducted in the same manner as is a mobile flank guard operation except that—

(1) The screening force normally does not have responsibility for the area between the screened force and the screening force as does a flank guard.

(2) The screening force may not always be within range of support from the screened force.

(3) The screening force occupies OP's in succession along the flank instead of blocking positions.

c. Scout elements and rifle squads establish OP's and conduct patrols between OP's. The light armor sections and support squads are retained in positions behind the screening force to destroy enemy patrols and assist in the withdrawal of OP elements, if necessary.

d. 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.

(2) Based on his reconnaissance, the troop commander selects the general location of OP's and designates contact points between and forward of the OP's. He makes tentative plans for the employment of each platoon. In selecting the general location of OP's to cover likely avenues of enemy approach, he considers the factors discussed in paragraph 3-25. Normally, ARAVs are not positioned in the vicinity of the OP's. The troop CP is located to the rear.

(3) Phase lines and checkpoints are used to control movement in the event the screen is

forced to withdraw. Contact points are established forward of and generally between the OP's.

(4) When supporting artillery fires are available, the troop commander coordinates their use with the artillery FO. The plan of fire support includes harassing fires on the enemy at defiles or other confining terrain features, and defensive fires for OP's 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, and to maintain contact with the screened force, or any compatible combination of these tasks. 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 or patrols and that periodic physical contact is established.

e. The OP or patrol that observes an enemy force reports its location and progress. The OP or patrol reporting the enemy remains hidden to prevent disclosure of 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.

f. When any enemy force approaches the position, it is reported by the fastest means available. Every effort is made to obtain information on the strength, composition, disposition, and direction of movement of the enemy force. Once contact has been made, one or more OP's may be assigned the mission of maintaining positive knowledge of the location and activity of the enemy. The remainder of the troop may reinforce the OP's, with certain elements designated by the troop commander to withdraw in accordance with the enemy advance and to report changes in the situation. When required, the entire troop may be ordered to withdraw to a new line of OP's. Caution must be taken to insure that such a withdrawal does not subject the remainder of the screen to envelopment. All available fire support is used to harass and impede the progress of the enemy. When contact has been gained with the enemy, positive knowledge of his location and activity is maintained until the enemy moves out of the troop sector responsibility. Enemy movement that may

LEGEND:

-  Main road
-  Secondary road
-  Patrol route

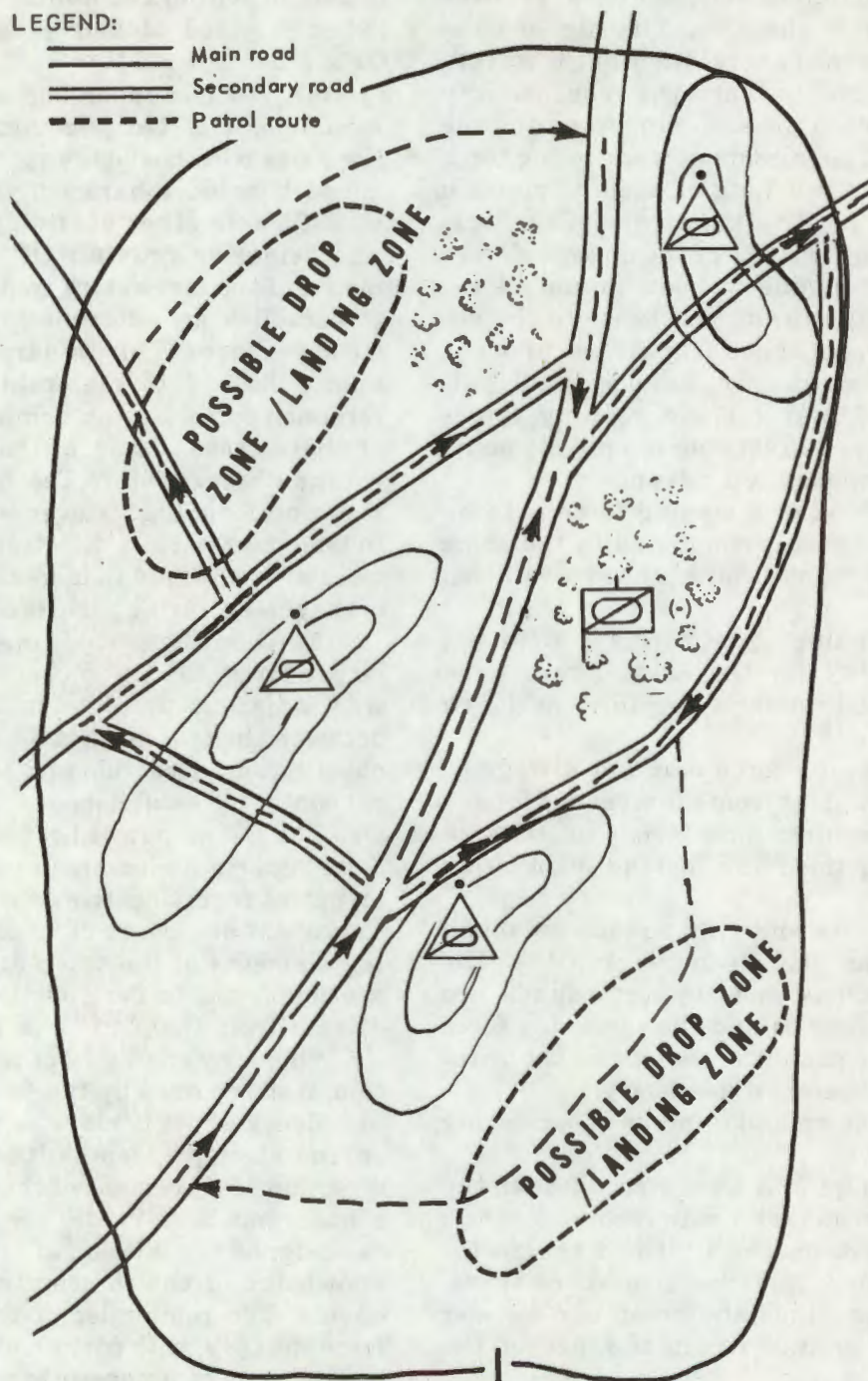


Figure 4-18. Armored cavalry troop deployed for defense against an airborne/airmobile threat.

affect another unit is reported promptly to higher headquarters.

g. The troop may be required to conduct mobile screening operations to the front of a larger force. The troop advances with platoons abreast throughout the assigned zone to locate enemy forces within the zone. The troop employs control measures similar to those used in controlling zone reconnaissance operations. The

troop, however, has no responsibility for conducting terrain or route reconnaissance, and orients its operation on providing the screened force with early warning of the location of enemy forces in the zone. On making enemy contact, the troop occupies a series of OP's and continues the mission using the techniques described above.

h. If the troop is assigned the mission of

screening the rear of a withdrawing force, it employs the same techniques used in conducting rear area security operations, except that it occupies a series of OP's rather than delay positions.

4-19. Rear Area Security Force (STANAG 2079)

a. General. The armored cavalry troop normally performs rear area security as part of a larger force. The troop commander carefully coordinates the efforts of the troop with those of other combat elements in the area. He also avoids stereotype operation of patrols, OP's, and LP's with respect to times, areas, and patrol routes.

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 or surveillance 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 OP's. 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, ARAAV's, and riflemen to accomplish the assigned mission. The scout elements are best used to man OP's and for patrols. They may be augmented with 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 OP's that provide a good view of likely drop zones (DZ), landing zones (LZ), 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 31-16 and chapter 15 contain additional information on tactical operations against guerrilla forces.

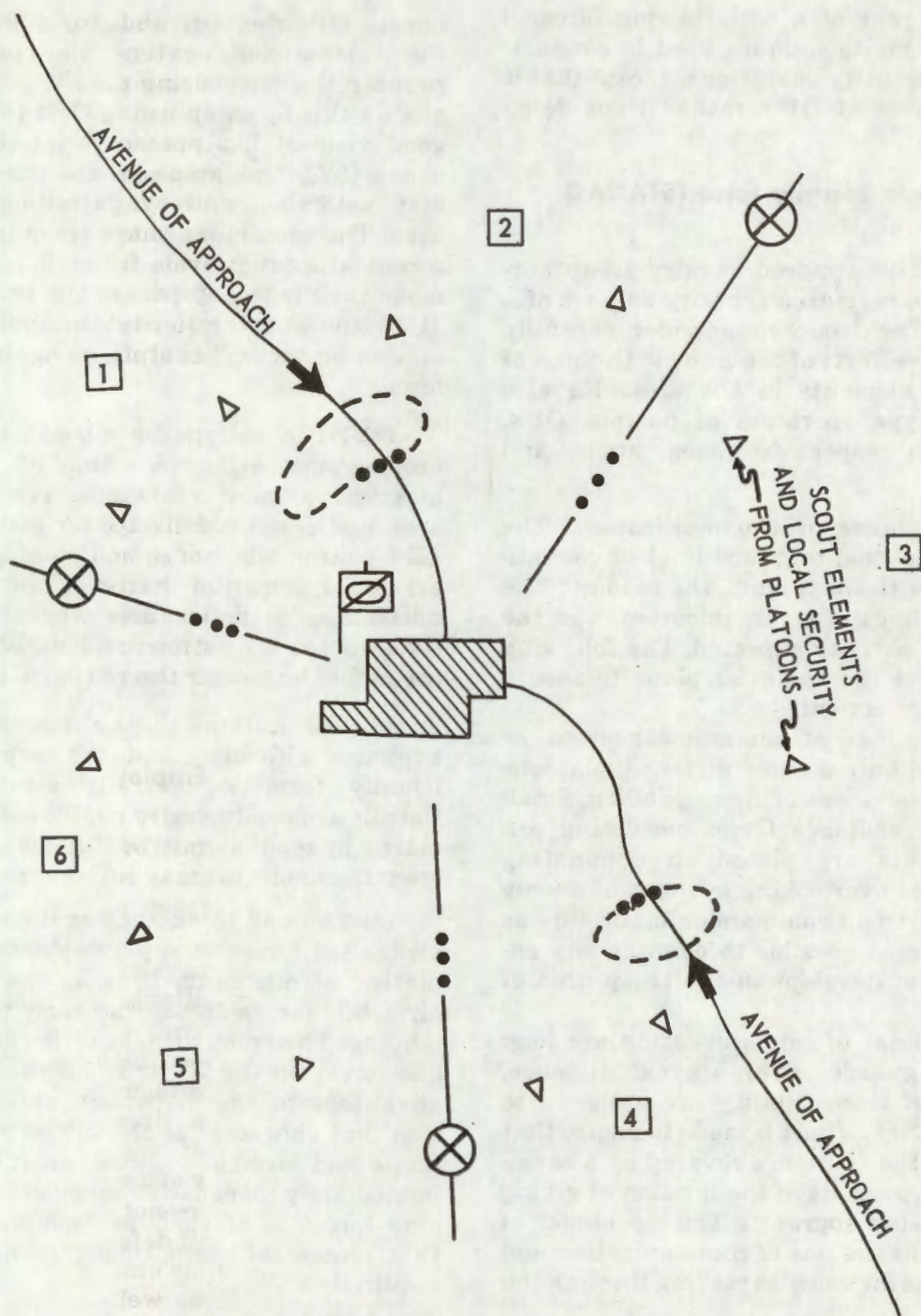
(2) When assigned a mission to defend an area against airborne, airmobile, or guerrilla attack, the troop commander reconnoiters his area and selects likely DZ for airborne forces, LZ for airmobile forces, and potential assembly areas for guerrilla forces. From this reconnaissance, he determines where to establish OP's, routes for patrols, and suitable assembly areas for the troop reserve (fig. 4-18).

(4) The bulk of the light armor strength, available riflemen, and the support squads usually form a centrally located reserve. Patrols are conducted and OP's established primarily by scout elements. Riflemen may supplement the scouts in these duties as required.

(5) 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. The troop attacks airborne and airmobile forces on the DZ or LZ, if possible, to take advantage of the dispersion and disorganization that characterize the initial phases of airborne and airmobile operations. Consequently, immediately responsive movement to attack enemy forces is of such paramount importance that piecemeal commitment of forces may be required.

(6) Tactical operations against guerrilla forces 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 are: detect them early, place them under fire, and attack rapidly to destroy them. A detailed discussion of tactical operations of this nature is contained in chapter 15. Although not necessarily pertaining to the same level of warfare, the principles are the same and tactics and techniques used are similar.

(7) The troop may be required to secure an



NOTE. PLATOON BLOCKING POSITIONS COVERING AVENUES OF ENEMY APPROACH MAY BE OCCUPIED AS SITUATION DEVELOPS.

Figure 4-19. Armored cavalry troop protecting an installation.

attack position and a line of departure (LD) for the main rear area security force when it is committed.

d. Elements of the air cavalry troop, if available, may be employed to perform periodic aerial surveillance of the rear 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 is used to the maximum to rapidly locate (find), fix (in position), and engage (fight) enemy forces.

4-20. 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 4-19). The troop commander provides early warning of enemy approach by establishing an OP surveillance system around the installation, by continuous patrolling, and when Army aircraft are available, by aerial surveillance. The ground surveillance radars,

night vision devices, and unattended ground sensors are used to extend the troop's surveillance capabilities during periods of limited visibility, and normally are employed to monitor enemy avenues of approach leading toward the installation. The troop commander maintains a light armor heavy reserve close to the protected installation. Mortars may be grouped under troop control to provide fire support. Fires are planned on likely avenues of approach to the installation, with priority assigned to routes which afford concealment to dismounted combat forces.

Section IV. SURVEILLANCE

4-21. General

a. Surveillance is integrated in reconnaissance and security missions and involves the conduct of systematic and continuous observation over specific areas of the battlefield. For the armored cavalry troop, these tasks are usually limited to assigned areas.

b. The armored cavalry troop is well suited to perform ground surveillance tasks. Surveillance is accomplished as an integral part of all combat operations. This section provides guidance for the conduct of surveillance tasks as a part of other missions or as a task for subordinate troop elements.

c. While surveillance operations are possible behind enemy lines, the size and combat capabilities of an armored cavalry troop normally preclude use of the entire troop behind enemy lines. This does not mean that elements of the troop, i.e., platoon or elements of platoons, are not effective in accomplishing such tasks (para 3-28 and 3-29).

4-22. Tasks

The armored cavalry troop can effectively perform the following surveillance tasks while conducting other primary missions:

a. Determination by observation of militarily significant activity of the enemy or of Civilians influenced by the enemy.

b. Location of targets for employment of air strikes, artillery, or chemical or nuclear fires within assigned areas.

c. Observation and control of organic and nonorganic indirect and aerially delivered supporting fires.

d. Damage assessment.

e. Location and identification of enemy units within assigned areas of operations.

f. Observation of likely avenues of enemy approach and lines of communication.

g. Observation of routes and key terrain within friendly rear areas. (The troop has greater capabilities for surveillance over large areas than it has for the provision of rear area security.)

4-23. Methods of Employment

a. The armored cavalry troop may accomplish surveillance as a unit or by platoons. In the latter case, the task may require use of modified task organizations such as those discussed in paragraph 4-2.

b. The armored cavalry troop, in relatively static linear dispositions, can accomplish surveillance over relatively large areas using modified screening techniques. The primary difference is that frontages may be greater than screening frontages since combat operations (e.g., destruction of small enemy elements within the capability of a screening force), other than self-defense, are not required for surveillance. Within the self-defense requirement, the troop commander may employ centrally located ARAAV elements, as well as nonorganic supporting fires, to prevent envelopment of surveillance OPs. Progressive increase of enemy forces in contact may require additional reductions of area or force withdrawal. The commander must evaluate the tactical situation continuously and take necessary action to preclude decisive engagement of troop elements. Considerations applicable to surveillance are similar to those of the screen except that surveillance frontages are normally greater both for visual and electronic surveillance elements than for screening elements. Paragraph 4-18 discusses these considerations.

c. In rear area surveillance, the troop (or its elements) occupies vantage points to observe and report any unusual activity within the area. Because of the size of the area under surveillance, the operation normally is limited to establishment of observation or listening posts. Patrolling of routes is not normally included within the surveillance task. As an integrated task in the rear area security mission, patrolling is usually included. Surveillance is

passive. When more active operations are required by the enemy situation, the area of troop responsibility is reduced. Except for the consideration of larger areas and the absence of patrolling, the techniques and considerations of rear area security apply. Since the troop rarely conducts surveillance tasks as a primary mission, the considerations in paragraph 4-19 provide integrated security and surveillance guidance.

Section V. OFFENSIVE OPERATIONS

4-24. General

a. The armored cavalry troop normally conducts offensive actions as part of a reconnaissance or security mission. The troop may also be required to conduct offensive operations in an economy of force role.

b. During reconnaissance and security operations, the troop frequently attacks to reduce enemy positions that are encountered. The following attack methods may be used:

(1) When the troop is in a single column formation (fig. 4-2) and light opposition is encountered, the leading platoon deploys and develops the situation while the remaining platoons deploy for the attack. Normally, the ARAAV's and rifle squads of the platoons are committed to maneuver in the attack. The support squads and other supporting fires usually provide a base of fire with the scouts performing troop security missions.

(2) When the troop is in a double column formation (fig. 4-3) and must attack to reduce an enemy position on either route, the platoon following normally is used to reinforce the attack of one of the committed platoons.

(3) When the troop is disposed along three routes (fig. 4-4) and must attack along any one of these routes, elements of the troop not in contact or not heavily engaged may be maneuvered to reinforce or support the attack on any one of the three routes.

(4) When necessary, the entire troop is massed and committed to the attack. The troop may attack as organized, or like elements may be massed to form provisional platoons, i.e., light armor, rifle, support, and scout platoons (fig. 4-1). An established troop SOP for such provisional organizations is essential. All individuals must be completely familiar with the SOP techniques of rapidly organizing for combat.

c. For a discussion of the purposes of the offense, fundamentals of attack, march plan-

ning and execution, techniques of employing tanks and mechanized infantry, control measures, passage of lines, night attacks, and other offensive operations requiring additional tactical considerations, refer to FM 17-1.

4-25. Preparation for the Attack

a. The troop commander uses all available time to prepare the troop for the attack. Normally he receives 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 refuels, performs maintenance, replenishes supplies, and completes other necessary actions before beginning the attack. For detailed discussion of actions in assembly areas, see FM 17-1.

b. While the troop is in an assembly area preparing for the attack, the troop commander usually joins his commander, or the supported commander, to receive the 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 receiving the order, the troop commander begins his troop leading procedures including making his estimate of the situation. He 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. For further discussion of troop leading procedures, see FM 17-1.

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 detailed 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.

4-26. Commander's 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, or the situation, 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 his platoon leaders. If available, an artillery FO 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 to the objective for the maneuvering force.

(3) When necessary, positions for ARAAV's employed in a supporting role.

(4) Location of obstacles including chemically or radiologically contaminated areas likely to hinder the advance.

(5) Control measures to be employed in controlling the attack. Minimum control measures for the attack are—

(a) Direction of movement.

(b) Time of attack.

(c) Line of departure.

(d) Objective of the attack available, may be employed to develop the enemy situation and to determine the flanks of and weak points in enemy defensive positions. Care is taken to insure that these actions do not unnecessarily disclose the intent or plan of the troop.

e. Army aircraft, when available, are used by the troop commander in his reconnaissance. This simplifies, expedites, and improves the reconnaissance, and the information acquired supplements that gained through ground reconnaissance.

f. The troop commander allows time for platoon leaders to make a ground reconnais-

sance of the area of operations following issuance of the troop order for the attack.

4-27. 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. Its purpose is 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 considers the factors of METT. For a more detailed discussion and the format of the commander's estimate of the situation see FM 17-1.

4-28. Plan of Attack

a. The plan of attack is designed to insure teamwork and maximum coordination of effort within the attacking forces throughout the operation. 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 two basic parts: the scheme of maneuver and the plan of fire support.

(1) The scheme of maneuver includes the composition of the maneuvering force, its approach route to the objective, and its methods 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 includes provisions for security during the attack, for consolidation of the position, for reorganization after the attack, and for resumption of the advance, if appropriate (fig. 4-20).

4-29. 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. 4-21). A detailed discussion of combat formations is contained in FM 17-1.

4-30. Maneuvering Force

a. The troop may comprise all or part of the maneuvering force during an attack conducted by a larger unit. When executing an inde-

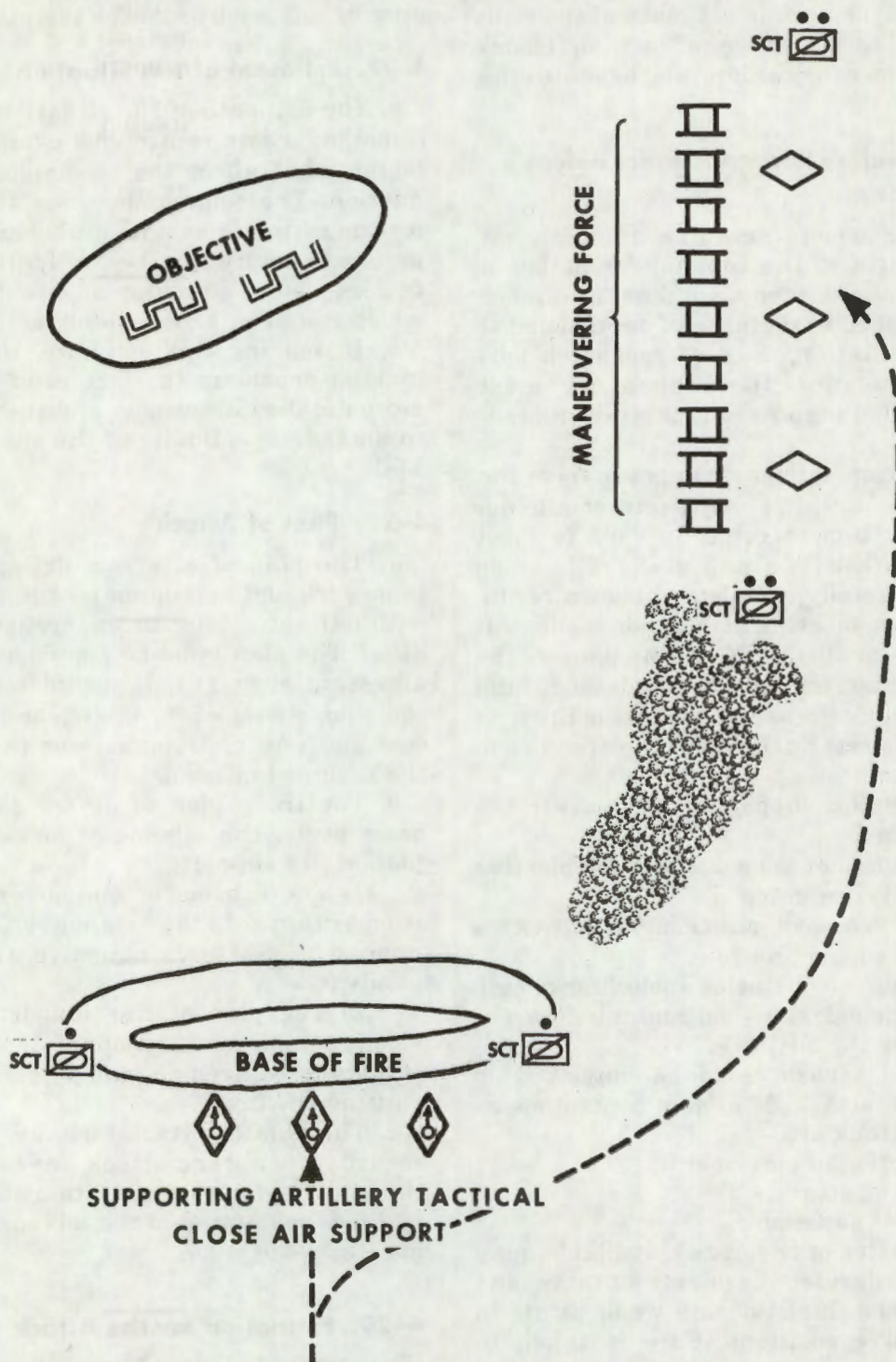


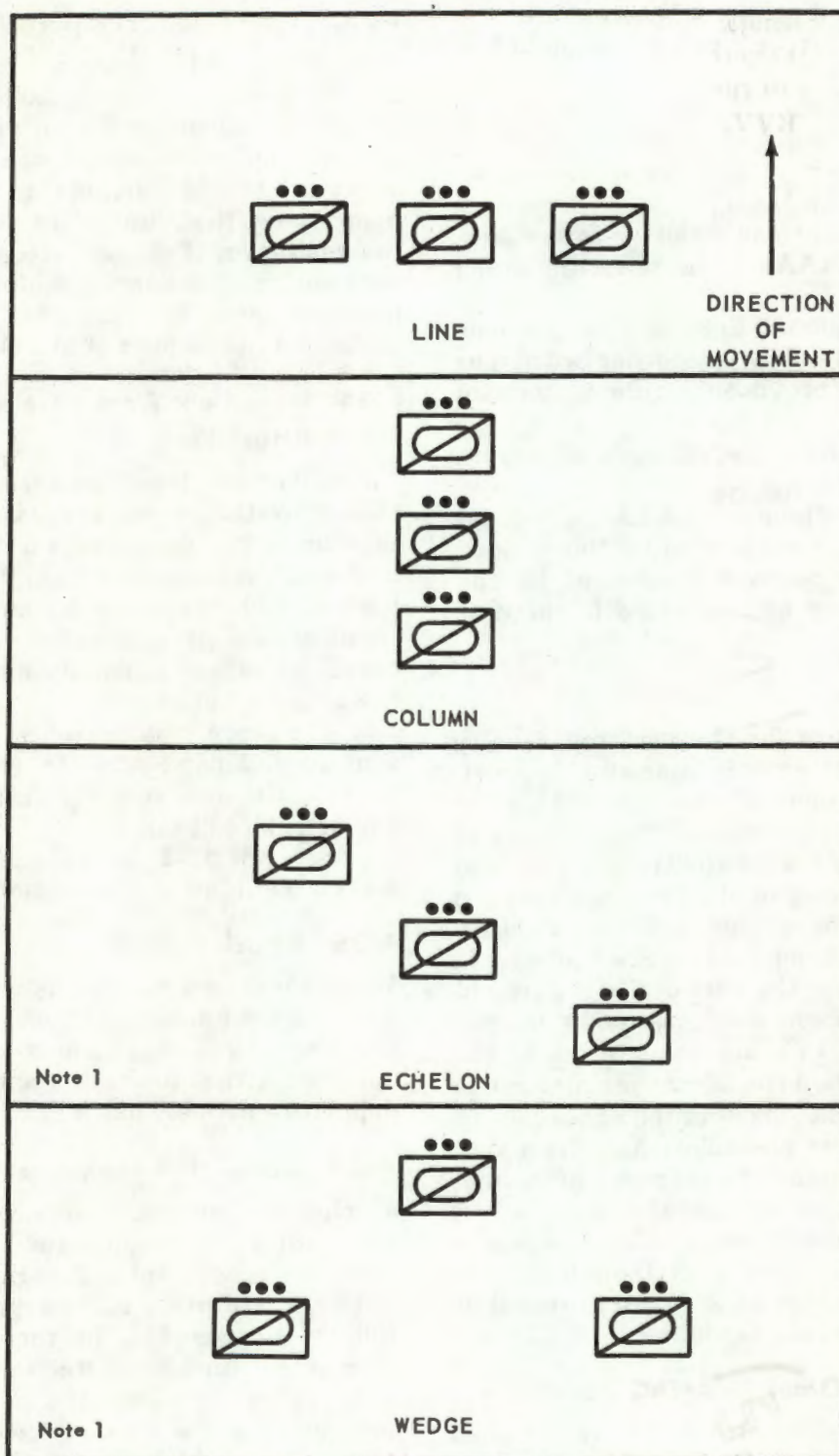
Figure 4-20. Armored cavalry troop in the attack.

pendent attack, the troop provides the elements for both the maneuvering force and the base of fire.

b. When possible, ARAAV's and mounted rifle squads are employed in the maneuvering force as light armor infantry forces.

c. Scout elements usually accompany the ma-

neuvering force to provide flank security. They assist in the movement of the force by reconnoitering covered or concealed routes. In extreme situations, mounted scout elements may also join other elements in closing with the enemy; however, this type of scout employment should be used only after due consideration of the



Note 1. Variations of line and column formation.

Figure 4-21. Armored cavalry troop in offensive formations.

alternative resources available. The primary consideration prior to employing scout vehicles in the assault should be to weigh the combat advantage to be gained by their use against the degraded capability to perform other scout roles

such as a flank screen for the maneuvering force.

d. If the terrain or obstacles prohibit the use of vehicles, the maneuvering force usually consists of dismounted rifle squads and possibly

troops from the scout sections. When scouts are so employed, they are 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 light armor infantry forces consisting of three ARAAV's and one rifle squad each.

(2) Two provisional light armor platoons (one with five ARAAV's, the other with four ARAAV's), and a provisional rifle platoon of three rifle squads.

(3) Attack with intact platoons as organized.

f. Provisional groupings of ARAAV, rifle, and scout elements are commanded by the platoon leaders, other key persons designated by the troop commander, or as prescribed in the unit SOP (fig. 4-1).

4-31. Base of Fire

a. The base of fire for the armored cavalry troop during an attack may consist of supporting artillery and tactical close air support in addition to organic firepower. The nucleus of the organic base of fire for the troop is provided by the three support squads. They are grouped under troop control whenever they can effectively support the troop attack. Scout elements may be used to assist the base of fire in furnishing automatic weapons firepower or by providing security. ARAAV's are used to assist the base of fire only when the maneuvering force is required to attack dismounted because of terrain conditions or obstacles that effectively preclude taking maximum advantage of the mobility and shock characteristics of ARAAV's.

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.

4-32. Operation Order (STANAG 2014)

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 follows the established form for an operation order. It is normally issued from a vantage point overlooking the area of operations. If the situation or time precludes issuing the order at a terrain vantage point, the troop commander issues the order in the assembly area or at any other convenient location.

4-33. Supervision of Preparation for Attack

Supervision by the troop commander, the troop executive officer, platoon leaders, and noncommissioned officers is a continuing process. All officers and noncommissioned officers actively supervise the actions of their subordinates to insure that their units are fully prepared for the operation. Detailed attention is given to such matters as supply, maintenance, communication, and dissemination of information contained in the plan of attack.

4-34. 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 is planned to simplify movement into and out of the attack position. When the troop commander is on reconnaissance or otherwise not available, the executive officer normally moves the troop to the attack position.

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

c. See FM 17-1 for a detailed discussion of march planning and execution.

4-35. 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.

4-36. 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 overcome obstacles as quickly as possible. In the event committed elements cannot be shifted to take advantage of a changing situation, the next most effective method is to use uncommitted elements of the troop or to shift the supporting fires.

4-37. Conduct of Maneuvering Force

The maneuvering force closes on the objective in the shortest possible time. This force should be committed over terrain that is favorable for rapid movement toward the objective unless other tactical considerations dictate significant advantages in the use of less favorable terrain. Available cover and concealment are 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.

4-38. Conduct of Base of Fire

a. The base of fire is prepared to furnish continuous fire support to the maneuvering force 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, the fires are lifted or shifted. If the assaulting force consists of armor-protected mobile elements, 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 is on order of the troop commander. It is important that all elements of the base of fire do not displace at one time. Support squad mortars are displaced in such a manner that fire support is always immediately available.

4-39. 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 accompanies the maneuvering force, placing himself where decisive action is likely to develop. This is usually in the vicinity of the lead elements. In a mounted attack, he is located in one of the vehicles of the maneuvering force. If the scouts are a part of the maneuvering force, he may ride in his command vehicle or mounted in an ARAAV. He avoids placing himself where he may become so involved with the actions of a subordinate element that he cannot influence the actions of the remainder of his troop. Effective visual signals are used to aid in maintaining control.

b. During an exploitation or in other rapidly moving offensive operations, the troop commander is located near the head of the column or immediately behind the lead platoon(s).

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

4-40. Conduct of the Assault

a. *General.* Regardless of the method of attack, the assault is conducted as a coordinated effort. The desired goal in the assault is to bring the maximum firepower and shock effect of ARAAV's, rifle elements, and supporting fires to bear upon the enemy simultaneously to destroy him as rapidly as possible with the fewest casualties to friendly forces. The commander achieves this goal by forceful and decisive action coupled with judgment in employing the combined arms team.

b. *Forms of Assault.* The assault of a defended position by light armor and riflemen supported by mortars may take three forms:

(1) ARAAV's and dismounted rifle squads assaulting in coordination.

(2) ARAAV's and rifle squads in mounted assault.

(3) ARAAV's support by fire only.

c. For a detailed discussion, see FM 17-1.

4-41. Actions on the Objective (STANAG 2020)

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 aero scouts are used to provide security to the front and flanks and to maintain positive knowledge of the location and activity of the enemy. Supporting artillery and tactical air are used to support the position against hostile counterattacks.

b. The troop may be required to remain on or in the vicinity of the objective and to defend it. It also may be required to continue the attack. In either case, time permitting, vehicles are resupplied without delay and placed in the best available positions to accomplish the mission and, at the same time, provide maximum protection. Combat service support is provided by the troop trains. Trains elements are dispatched for replenishment of loads as soon as practicable.

c. After the troop is prepared to repel a counterattack, reconnaissance is begun for a continuation of the attack. Concurrently, reorganization takes place. Casualties are evacuated and troops are redistributed as neces-

sary. The unit situation, strength, and vehicle and ammunition status are reported. Prisoners of war (PW) are interrogated briefly for tactical information of immediate value and sent to PW collecting points as quickly as possible.

4-42. Continuation of Attack

The armored cavalry troop commander must 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 objective to facilitate resumption of the advance. If this procedure is followed, only brief oral orders are required to continue the attack.

Section VI. DEFENSIVE OPERATIONS

4-45. 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 role, the troop also may be required 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, forms, and conduct of defensive actions, see FM 17-1.

4-46. 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 form normally adopted by the armored and mechanized divisions, while the area defense is the form usually employed by the infantry division. The factors of METT, tactical close air support, and the nuclear situation are considered before the final determination of the form of defense.

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

4-47. Organization of the Ground for Defense

When the enemy possesses a modern mechanized force, the primary consideration in the defense is the antitank defense. Measures for

4-43. 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.

4-44. Use of Army Aircraft in Troop Attack

Dismounted scouts, dismounted rifle squads, and support squads may conduct an airmobile assault during an attack. For a detailed discussion of airmobile operations and considerations, see FM 57-35.

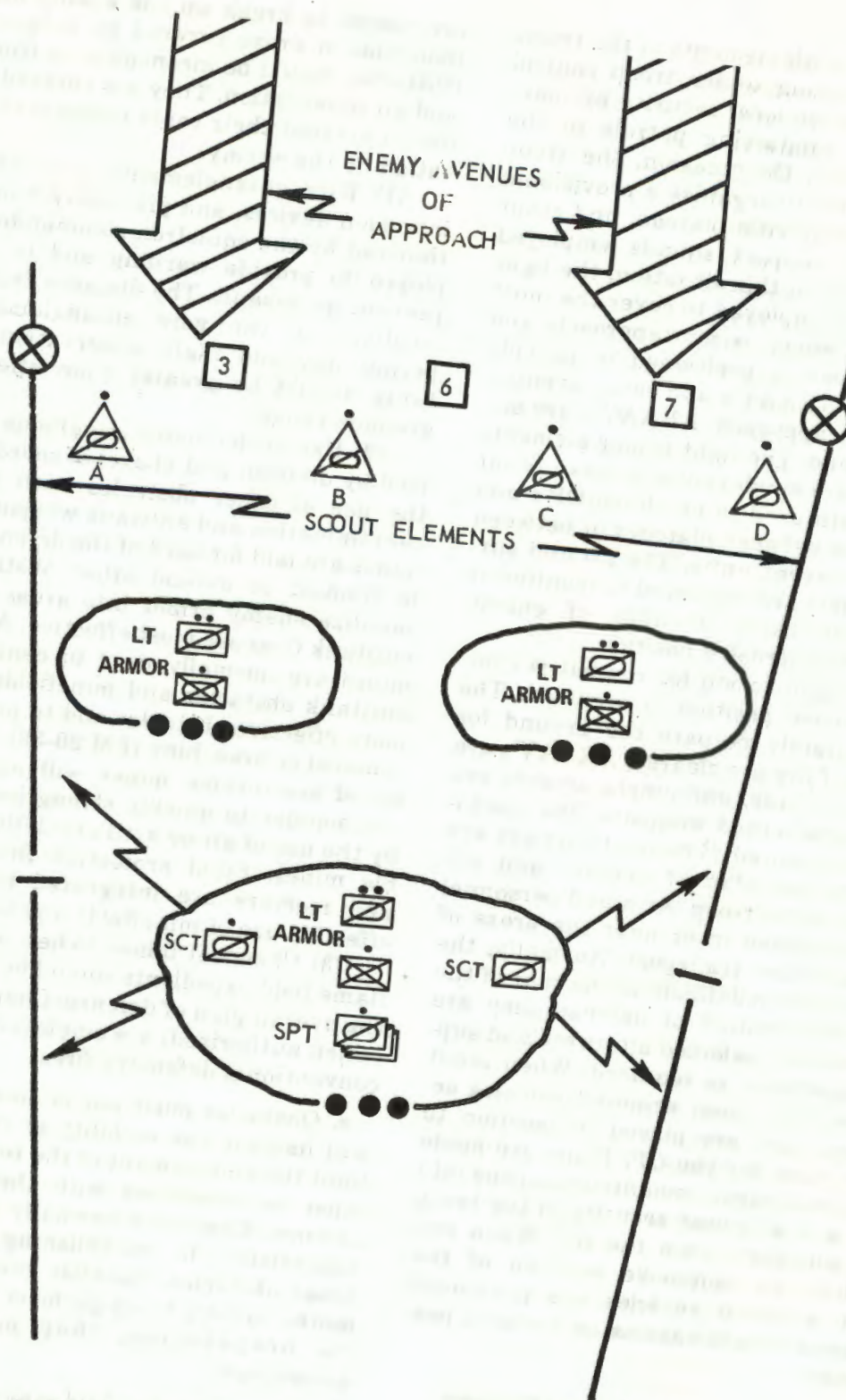
increasing the effectiveness of defensive fires and permitting maneuver by elements of the troop take precedence over other actions in organizing an area for defense. The defensive position is organized to permit delivery of maximum fires on the enemy and to impede and canalize his advance. This organization of the defensive position reduces the effects of the enemy's fires and forces him to mass, thereby providing a lucrative target for conventional, chemical, or nuclear fires.

4-48. Reconnaissance and Selection of Position

Assignment of a defensive position to the armored cavalry troop normally is the responsibility of the squadron or the supported unit commander. The troop commander reconnoiters the position to determine the likely enemy avenues of approach into the assigned 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.

4-49. Occupation of the Defensive Position

a. Based on 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 light armor section and rifle squad. The troop commander may employ the support squads and scout sections from each platoon under troop control. When possible, support squads are massed to



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

Figure 4-22. Schematic diagram of the armored cavalry troop in defense.

support the actions of all elements of the troop. Scout sections operating under troop control may be used to provide local security by manning OP's and by conducting patrols in the troop area (fig. 4-22). On occasion, the troop commander may elect to organize a provisional light armor platoon(s), rifle platoon, and scout platoon, with the support squads employed under troop control. In this situation, the light armor platoon(s) is employed to cover the most likely avenue(s) of enemy armor approach, and the infantry platoon is positioned to provide protection for the ARAAV's and cover avenues of enemy infantry approach. ARAAV's are seldom employed alone. The light armor elements and rifle squads are employed as a team. Scout elements are again used to establish OP's and to patrol the areas between platoons or between the troop and adjacent units. The ground surveillance radar sets are employed to monitor or search 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, ARAAV's are placed in hull defilade, and emplacements are prepared for crew-served weapons. The machineguns on the armored personnel carriers are integrated into the plan of defense and all-round security of the troop. Armored personnel carriers are employed in or near the areas of the rifle squads they transport. Normally, the carriers are placed in defilade to the rear of the position. In the conduct of defense they are moved to previously selected alternate and supplementary positions as required. When scout elements man OP's, their armored vehicles accompany them and are placed in position to provide protection for the OP. Plans are made to integrate their cupola-mounted weapons into the defense and all-round security of the troop when they withdraw from the OP. When employed within the defensive position of the troop, their armored vehicles are positioned using the same considerations as armored personnel carriers.

4-50. Strengthening the Defensive Position

a. Strengthening and improving of the defensive position is continued as long as it is occupied. Consistent with requirements for unit security, all elements perform necessary work to improve the position.

b. Full advantage is 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. They are covered by direct fire to prevent their rapid removal or neutralization by the enemy.

(1) Wire entanglements, trip flares, anti-intrusion devices, and protective mines (as authorized by the squadron commander) are employed to provide warning and to delay and prevent an assault. The distance from the unit positions to the wire entanglement should permit day and night observation. This distance should be greater than effective hand grenade range.

(2) Use of defensive minefields (as authorized by division and above) is coordinated with the use of other obstacles such as chemical contamination 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 troop antitank fires are most effective. Antipersonnel mines are normally used in conjunction with antitank obstacles and minefields to establish more effective obstacles and to prevent ease of removal or breaching (FM 20-32). The new family of scatterable mines will allow the troop commander to quickly strengthen his position by the use of air-or artillery-delivered scatterable mines. Final protective fires by artillery and mortars are integrated to insure more effective use of minefields and obstacles.

(3) Chemical mines (when authorized) and flame field expedients should be integrated into the overall plan of defense. Chemical munitions (when authorized) are employed to complement conventional defensive fires.

c. Obstacles must not be located 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 perform most of the obstacle preparation, they must be trained accordingly.

d. A phony minefield may be employed when lack of time, personnel, or material prevents laying a live minefield and is used to deceive the enemy into thinking the area is mined. The authority to establish a phony minefield is vested in the commander who has the authority to employ the type field simulated.

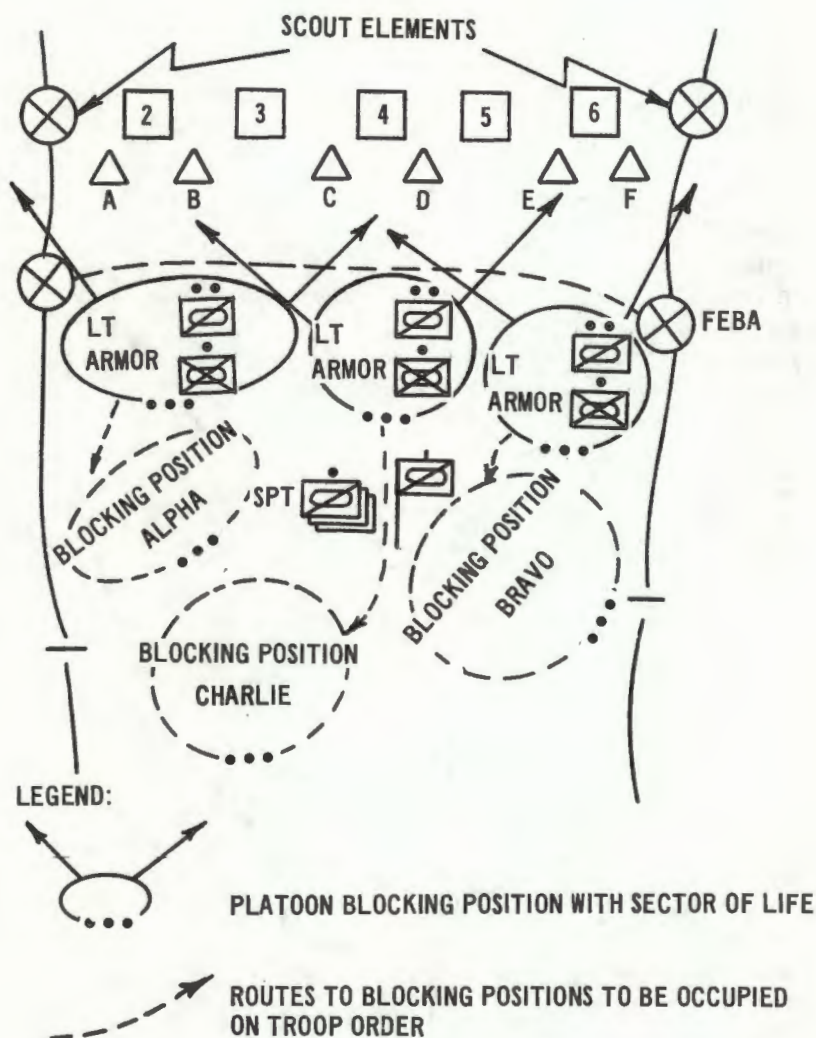


Figure 4-23. Armored cavalry troop occupying a fixing force position.

4-51. Mobile Defense

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

b. Security Force.

(1) In the mobile defense, the troop normally participates as part of squadron performing a covering force or general outpost 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 4-54 and 4-55.

(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 4-15 and 4-19.

c. Forward Defense Force. When the armored cavalry troop is employed in the forward defense area, the higher commander designates

the general trace of the forward edge of the battle area (FEBA). The position is usually indicated by a dashed line intersecting coordinating points that have been fixed along the lateral boundaries in the sector 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 for defense. Platoons are positioned to provide long-range fires and mutual support (fig. 4-23). 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 to provide for all-round defense. The plan of fire support is developed, range cards are prepared for all ARAAV's and automatic weapons, and overlays showing the organization of the troop sector are prepared and sub-

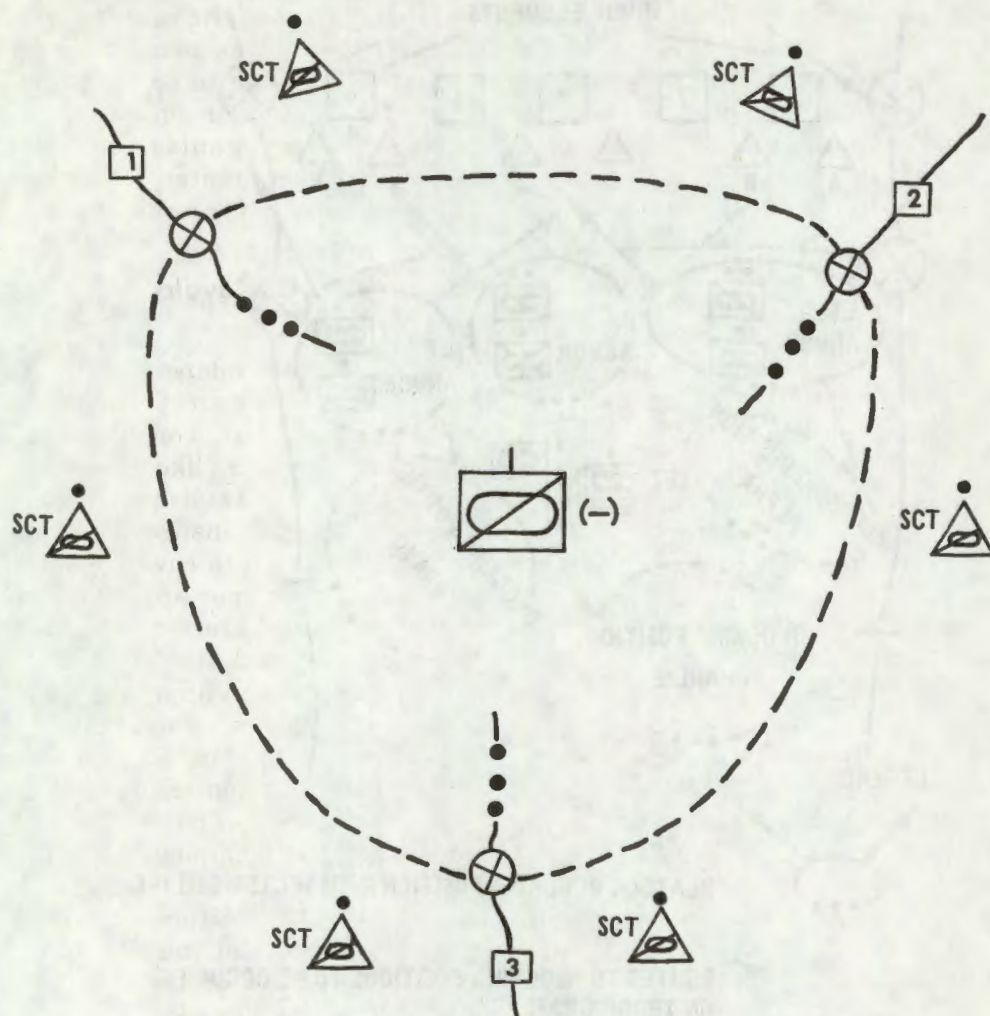


Figure 4-24. Perimeter defense by the armored cavalry troop.

mitted to the commander of the force assigning the mission. The troop CP 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.

4-52. 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 assigned missions stressing maximum use of its mobility and extensive means of communication. These missions 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 furnish the combat outpost for its parent squadron, for a battalion TF, or a brigade. The troop commander divides his area of responsibility into platoon sectors. The combat outpost is normally located far enough in front of the FEBA to deny the enemy ground observation into the battle area. Once the platoons have planned their respective positions, the troop commander coordinates their dispositions, making necessary adjustments as required.

(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 fires are planned 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. Unless authority has been delegated to the troop commander, the combat outpost withdraws only with higher headquarters approval. It uses previously reconnoitered routes of withdrawal that provide maximum cover and concealment. Routes are selected that assist in deceiving the enemy as to the true location of the FEBA. Several plans for withdrawal are made and the troop is prepared for any change in the situation. Forces in the battle area are notified when all elements of the combat outpost have cleared the FEBA.

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 FEBA; 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 light armor/riflemen strength or employ the troop without any change in organization. Platoon and section leaders reconnoiter routes to, and areas of, planned operations or objectives.

4-53. Armored Cavalry Troop Perimeter Defense

When operating independently, the troop must provide for its own perimeter defense (fig. 4-24). The troop commander deploys his platoons to cover likely enemy avenues of approach and establishes local security. The troop commander insures that platoon leaders employ ARAAV's to cover the most likely avenues of enemy armor approach, and riflemen to provide close-in protection for the ARAAV's. Riflemen are used also to cover likely avenues of enemy infantry approach. Scouts establish observation posts, and patrol in the area between observation posts, to provide early warning of the approach of enemy forces and maintain contact with advancing enemy elements. The troop employs normal defensive tactics. If the situation permits, a reserve is maintained and positioned to quickly move and support 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 are placed in the center of the area or in the vicinity of one of the platoons.

Section VII. RETROGRADE OPERATIONS

4-54. 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. A detailed discussion of the characteristics of delay positions, the principles of the preparation for delay, and the procedures for conduct of a delaying action are contained in FM 17-1.

b. Higher headquarters normally assigns the troop a sector in which to conduct delay, and the general area of the initial delay positions. Also designated are successive delay lines and the length of time the enemy is to be delayed forward of each line. As soon as possible, the troop commander reconnoiters the designated

delay areas. He normally selects intermediate delay positions between delay lines selected by higher headquarters and reports these locations. Successive delay positions are spaced far enough apart to force the enemy to deploy to attack each position and reorganize after each attack (fig. 4-25).

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

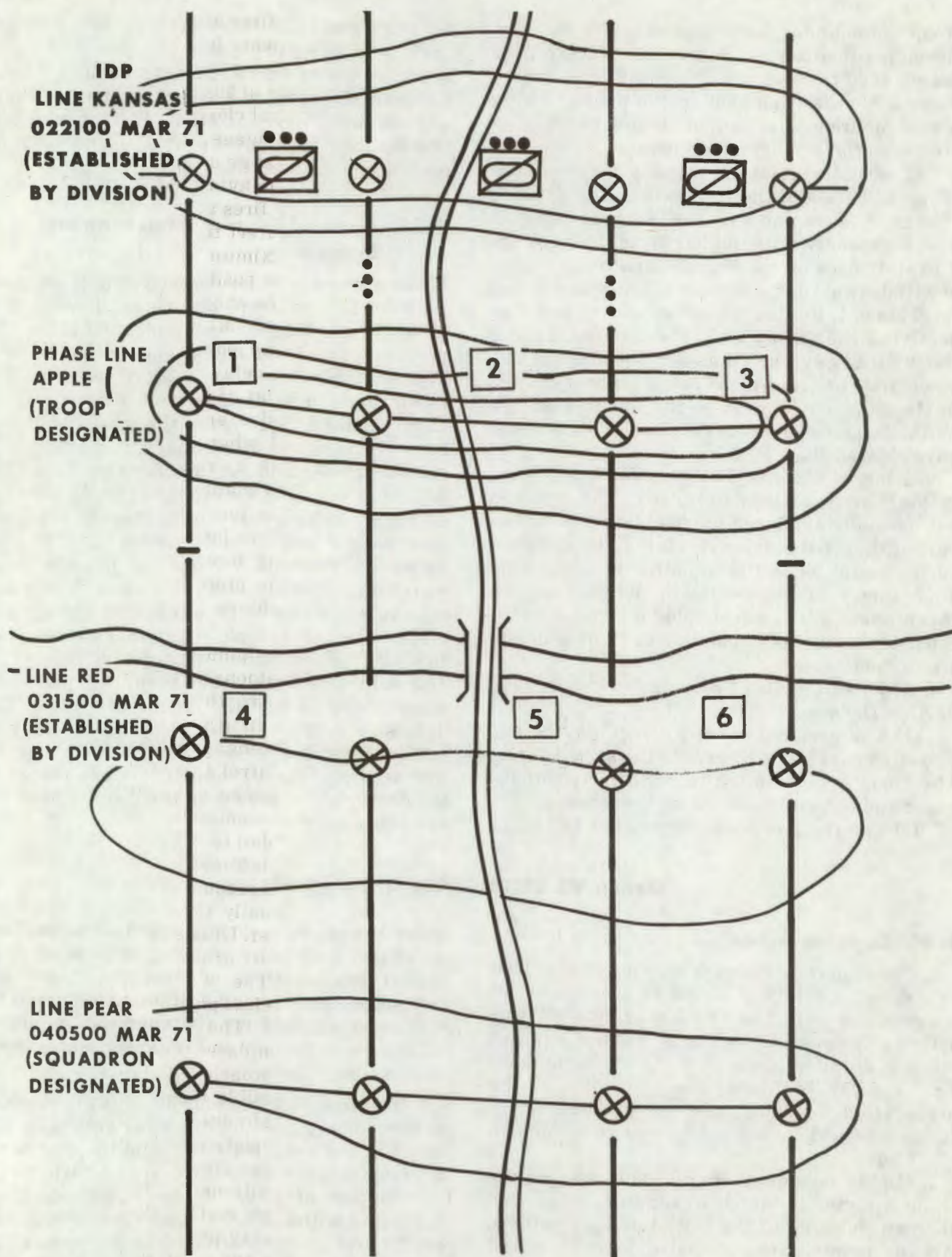


Figure 4-25. Armored cavalry troop organized for a delay mission. Delay lines assigned by higher headquarters and a phase line selected for control by the troop commander.

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 does 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 on the delay position, or to cover the withdrawal of forward elements. The initial organization of the force should be flexible. Changes in organization for combat or distribution of forces are made when required by the tactical situation.

d. The organization of a delay 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. ARAAV's are located to block likely avenues of enemy armor approach and to deliver long-range direct fires. Rifle elements are placed where they can protect the ARAAV's, cover avenues of enemy infantry approach, and prepare obstacles. The fires of machineguns should interlock, and obstacles should be covered by fire. The troop commander prepares and coordinates contingency plans for reinforcements on the delay position by the squadron reserve.

e. The fire support plan provides for normal defensive fires, fires in support of a counter-attack, and fires to cover the withdrawal. Defensive fires concentrate on breaking up advancing enemy formations at long range. Chemical fires (when authorized) and delivery of scatterable mines are planned to disrupt and disorganize attacking enemy. 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 move to the flanks of the delay position. They maintain positive knowledge of the strength, location, and activity of the enemy; adjust supporting fires; and report any attempt by the enemy to bypass or envelop the position. (See armored cavalry platoon delaying actions in chapter 4.) Scout elements providing observation to the flanks do not withdraw in any prescribed order. They keep the enemy under constant observation and move by bounds, using routes to the rear 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 delay position as possible. This is usually accomplished by use of supporting artillery and mortar fires. Tactical close air support and air cavalry elements engage enemy forces *before* they come within range of supporting artillery fires. Within the delaying force, organic and supporting indirect fires are brought to bear at maximum range. Direct fires are held until the enemy is within maximum effective range. OP's 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 delay position.* The troop has obtained maximum delay when it appears that continued occupation of the delaying position will result in decisive engagement. A unit is decisively engaged when it loses freedom of action to accomplish its mission and no longer has the resources available to regain freedom of action. The delaying force is normally ordered from a position before becoming decisively engaged. The delaying force moves to rearward delay positions. The procedure is repeated on each position to achieve continuous maximum delay.

(3) The troop commander maintains close contact with his platoons. He attempts to locate himself with, or hear, 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 does not withdraw until authorized to do so by the higher commander. The troop commander bases his plan to withdraw elements of the delay force on his knowledge of the situation and the reports and recommendations of subordinate leaders. Usually the least engaged elements withdraw first. Unengaged platoons may be employed to assist or disengage heavily engaged platoons. The commander normally remains on the delay position until the last platoon withdraws. The ground surveillance radar section is emplaced to cover likely avenues of enemy approach and remains in position as long as possible to assist the troop by preventing surprise by enemy reinforcements.

g. Figure 4-26 depicts a technique by which the troop commander displaces his platoons to successive delay positions by use of checkpoints rather than platoon sectors and phase lines. Successive troop delay positions are organized and occupied in a manner similar to the initial delay positions. Before arrival of the troop, the next delay position is reconnoitered and

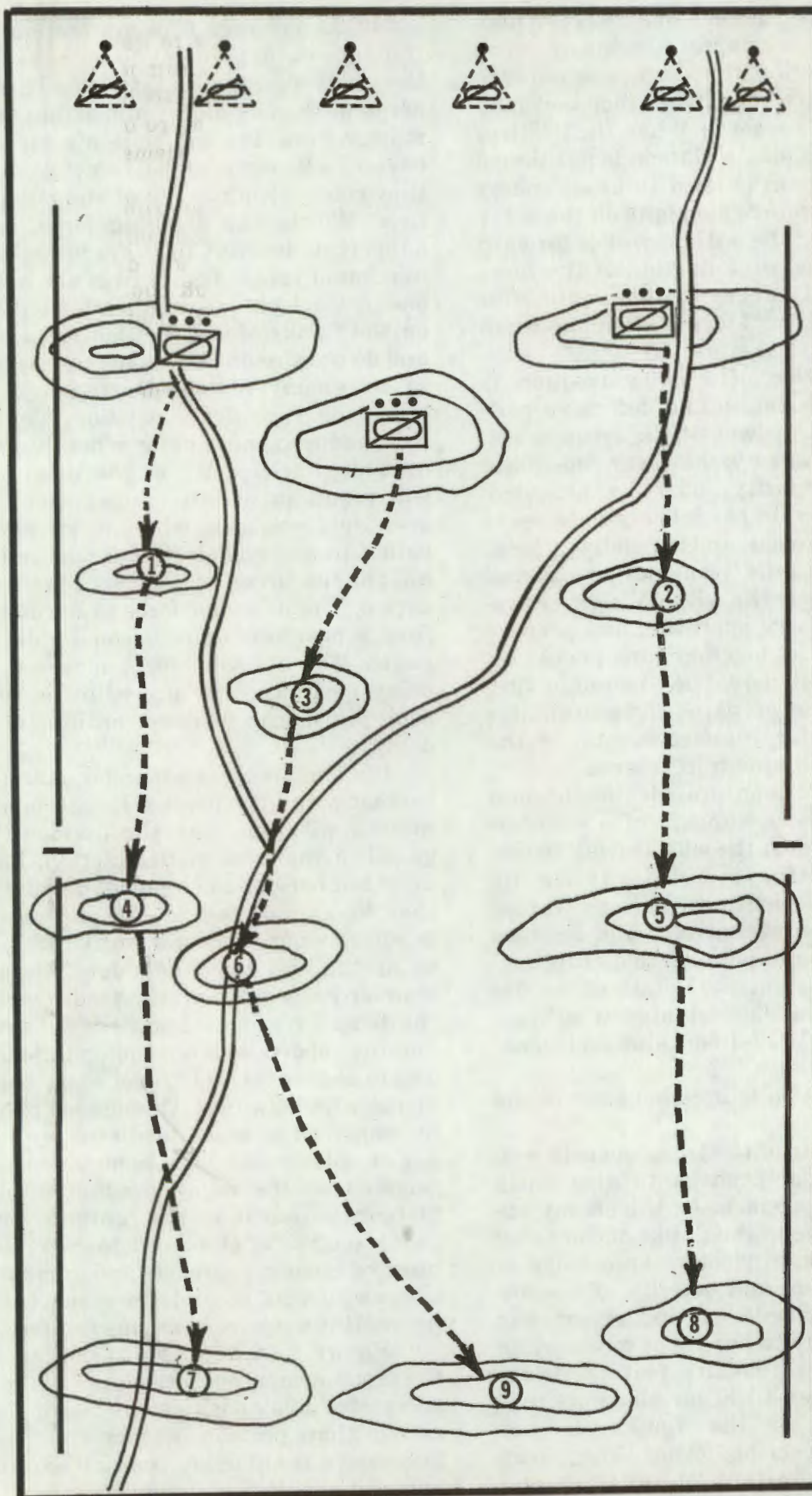


Figure 4-26. Armored cavalry troop conducting a delaying action with all platoons on line. Platoons delay on successive positions. Scout elements provide security to the flanks.

platoon sergeants in coordination with the executive officer. The position is strengthened as much as time and materiel permit. Obstacles are planned and developed and routes are improved. When required, supplies, ammunition, and barrier material are stockpiled on the position.

h. Combat support is normally available to the armored cavalry troop conducting a delaying action. Supporting artillery initially provides long-range fires on advancing formations and continues to fire on the enemy as he advances toward the delaying forces. Artillery fires also are used to support counterattacks to disengage elements of the troop in contact and to cover the withdrawal of delaying forces from one position to the next. If artillery is in direct support, an artillery FO works with the troop; otherwise fires are requested through command channels and are adjusted by persons in the troop able to observe the target. Engineers assist in the delay by destroying bridges, blocking roads, and erecting barriers. They also maintain routes of withdrawal for friendly forces. 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 a counterattacking force. Tactical close air support, when available, assists in the conduct of the delaying action by disrupting and harassing advancing enemy formations. Army aviation provides aircraft for air reconnaissance, command and control, artillery and mortar observers, liaison, and relaying information. If the situation warrants, Army aircraft are used to transport elements of the troop or to carry critical supply items. 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.

4-55. Ambush by Troop in Delaying Action

a. The armored cavalry troop is capable of attaining delay by conducting ambushes against isolated enemy forces. Ambush by an armored cavalry platoon is discussed in paragraph 3-62. The troop uses essentially the same procedures as the platoon. There are differences which apply primarily to insuring effective employment of the larger force involved, insuring proper organization for combat (massing ARAAV and indirect fires), and taking advantage of the greater likelihood of employing movement to close with and de-

stroy the ambushed force prior to its reinforcement. Caution must be exercised to insure that the ambush is not prematurely discovered or triggered and that the troop is not decisively engaged.

b. The following characteristics of ambushes are considered prior to a decision to commit the troop to an ambush in the delay.

(1) Availability of accurate and timely intelligence of the enemy.

(2) Careful site selection (site should not appear to be a likely ambush location but should provide a tactical advantage to the troop while placing the enemy at a tactical disadvantage).

(3) Security of the troop ambush site (all-round physical security is essential without revealing the presence of the troop until the ambush is executed with the enemy force within the killing zone).

(4) Ambush is planned in detail (to insure coordination, mutual support, supervision and control—to include effective employment of available combat support).

(5) Availability of suitable disengagement routes (with the capability to secure these routes and the flanks of the troop against effective enemy counterambush actions).

(6) Employment of simple, yet effective systems of communication (to prevent confusion and maintain control within the troop).

(7) METT factors favor the use of brief, aggressive, and intense combat actions to achieve the destruction of the enemy force and permit rapid disengagement of the troop to prevent its decisive engagement.

4-56. Withdrawal

a. A withdrawal is a retrograde operation whereby 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 another action. The withdrawal may be executed during daylight or at night and either under enemy pressure or not under enemy pressure. 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 organize the troop assets to insure a successful disengagement. One platoon may act as the

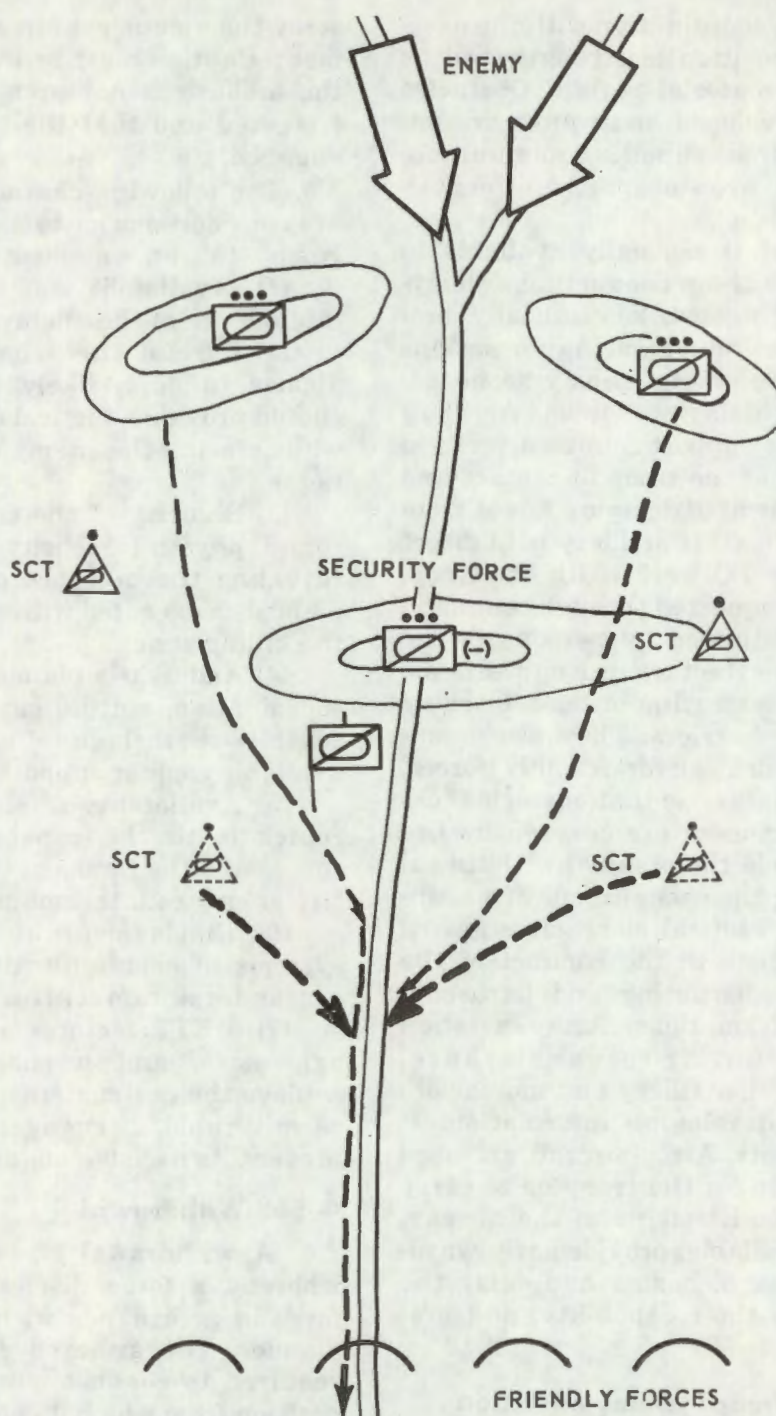


Figure 4-27. The armored cavalry troop executing a withdrawal under enemy pressure. The bulk of the troop withdraws through the security force, forms into march columns, and continues movement to the rear.

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 the troop may act as the security force or reserve for the larger unit. If the troop is to make a withdrawal at night, the decision should be made sufficiently in ad-

vance to permit planning, coordination, and a daylight reconnaissance of routes of withdrawal.

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

(1) *The location of the new position or assembly area.* The new position or assembly area should be behind the line of contact. It

should be designated early enough to permit reconnaissance of the area. See FM 17-1 for a detailed discussion of assembly areas.

(2) *Provisions for preparation and occupation of the new position.* These provisions include necessary defensive measures, disposition of the troop trains and CP, 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 (withdrawal through a rearward position), detailed coordination is required. The troop commander designates a representative—normally the executive officer—to coordinate with the unit through which the troop is to withdraw. Coordination and control measures are disseminated to all platoons. Plans include provision for guides from the withdrawing unit to the unit through which it withdraws. Arrangements are made for liaison, communication, and recognition signals for all units.

(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 earliest time of withdrawal for the troop. Based on this time, a schedule is prepared for the entire operation. The time of withdrawal of the security force must allow the troop main body to completely break contact with the enemy.

(6) *The priority of withdrawal.* Troop trains and the CP vehicles are designated as the first elements to withdraw. They are followed by those elements that allow for an orderly withdrawal of the troop and still maintain element integrity. The support squads, if operating under troop control, begin displacement by squad(s) early so that they are in position to provide indirect fire support for other elements when they begin to withdraw. The security force is the last element to withdraw.

c. In a withdrawal under enemy pressure, the troop commander normally employs about $\frac{1}{3}$ of his unit as a security force. The security force protects withdrawal of the troop main body and withdraws on order of the troop com-

mander. 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. 4-27). 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 withdrawal under enemy pressure, 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. 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.

(3) The first element to move to the rear when it is not required to assist other units in disengaging from the enemy. 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 withdrawal not under enemy pressure is usually conducted at night or with concealment that reduces the effectiveness of enemy air attack and ground fire. It is easier to deceive the enemy under reduced visibility conditions; however, control is more difficult and movement is slower. The troop withdrawing designates a part of its force—both maneuver and support—to remain in contact with the enemy. These forces are called “detachments left in contact” (DLIC). The DLIC provides security and covers the withdrawal of the major elements of the troop. The size and composition of the DLIC force is based upon an analysis of the factors of METT. An example of such a force is shown in fig. 4-28. The DLIC may consist of an armored cavalry platoon or elements of each of the three platoons. In any event, the DLIC must have a single commander. Coordination must

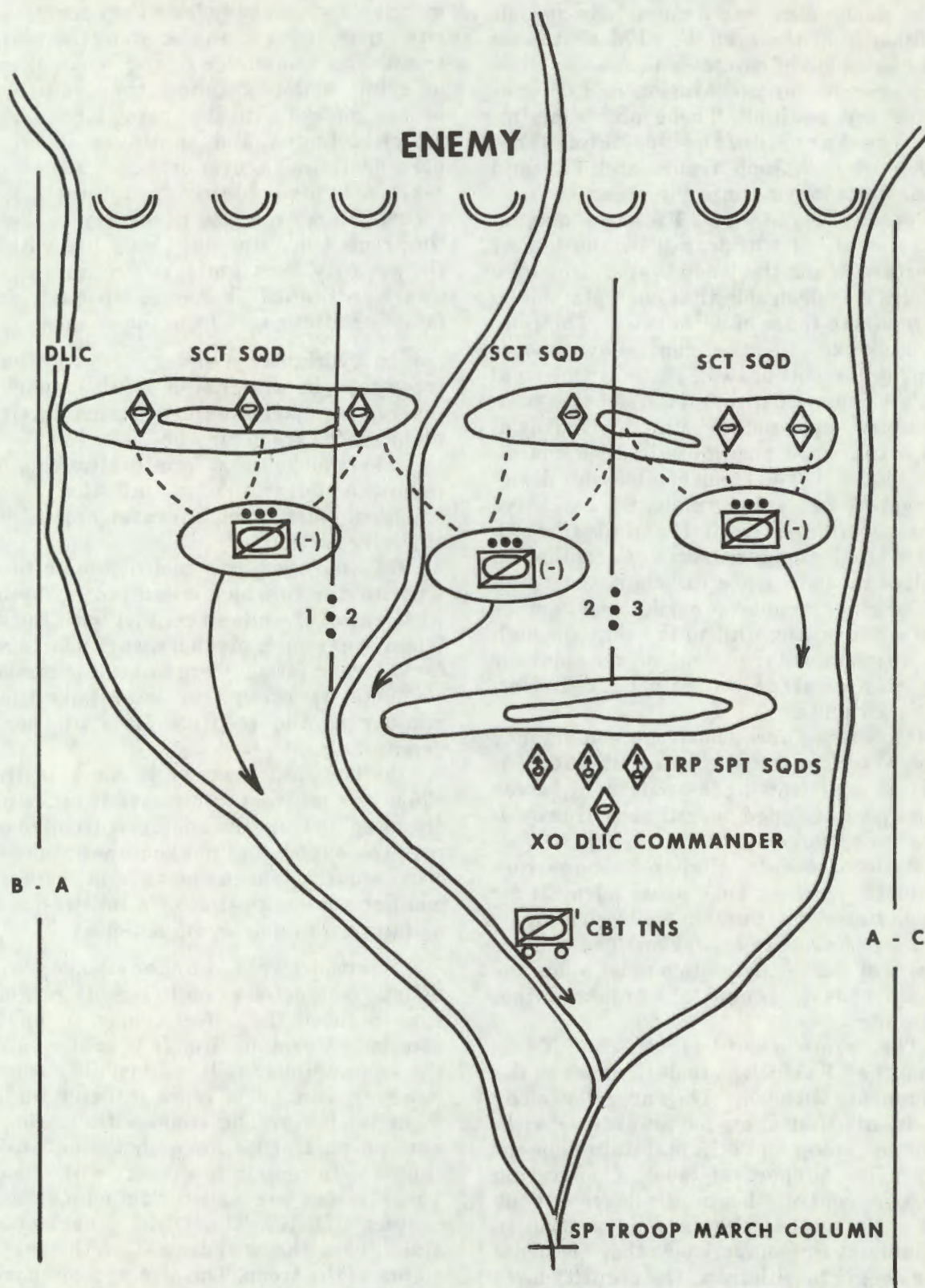


Figure 4-28. The armored cavalry troop executing a withdrawal not under enemy pressure.

be achieved within the security detachment, between this detachment and the withdrawing elements, 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 fully manned positions, such as digging in and moving equipment about. Normal communication and noncommunication (e.g., radar activity) 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 elements, move simultaneously, if possible. Formations are closer and movements are made with greater emphasis on secrecy and security than during daylight withdrawals.

4-57. Retirement

a. A retirement is an orderly withdrawal of troops according to their own plan and without pressure by the enemy. Units conducting retirements do not maintain enemy contact. 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.

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 missions include employment as part of a covering force or as a flank or rear guard for the main force executing the retirement.

PART THREE **AIR CAVALRY TROOP** **CHAPTER 5** **GENERAL**

Section I. GENERAL

5-1. 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 and the armored cavalry regiment. The troop is normally employed as a part of the armored cavalry squadron. The doctrine contained herein is also applicable to the troop when attached to, employed under operational

control of, or placed in support of brigades or other major units.

5-2. Missions and Capabilities

a. The mission of the air cavalry troop is to—

- (1) Extend by aerial means the reconnaissance and security capabilities of ground units.
- (2) Engage in offensive, defensive, and delaying actions within its capability.

AIR CAVALRY TROOP, ARMORED CAVALRY SQUADRON

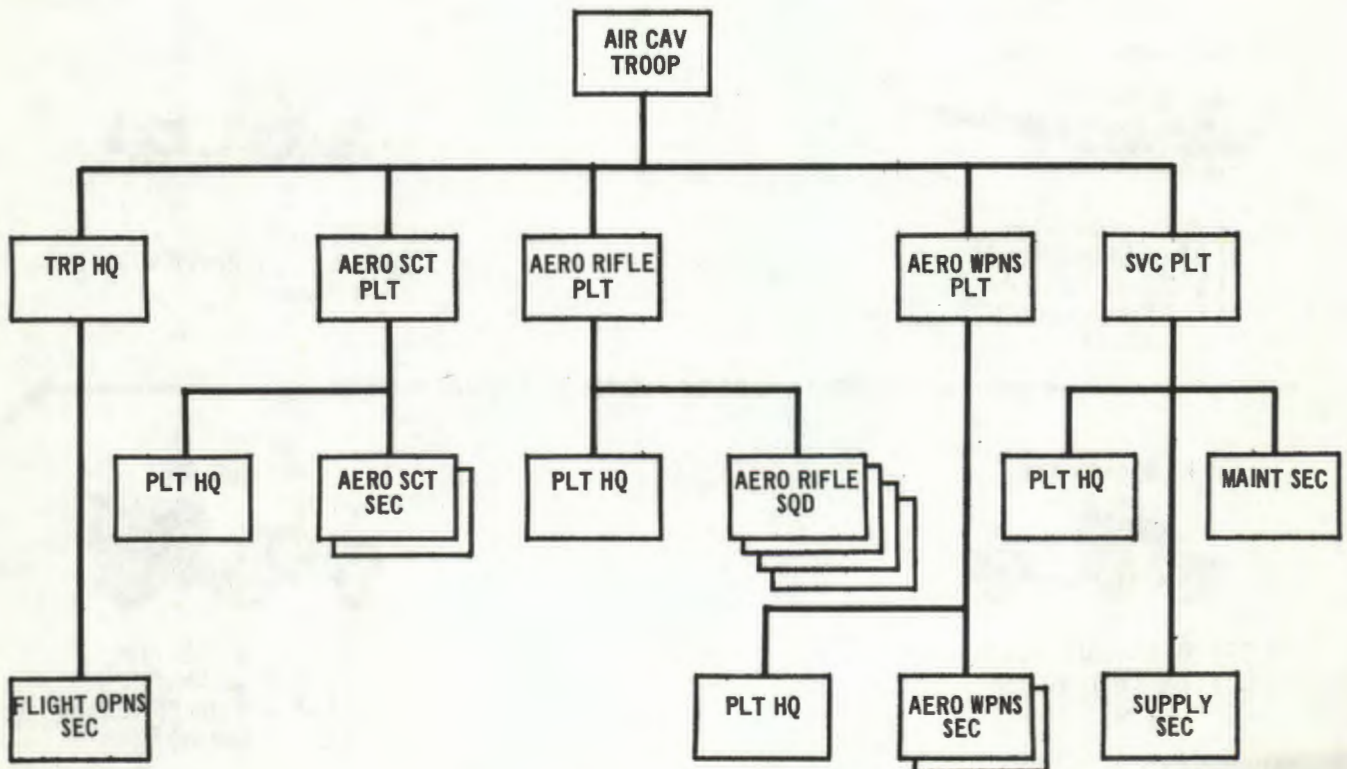


Figure 5-1. Organization, air cavalry troop.

(3) Seize and dominate lightly defended areas or terrain features.

b. The unit is capable of—

(1) Performing aerial and ground reconnaissance and providing security for the unit to which assigned or attached.

(2) Engaging in offensive, defensive, or delaying actions.

(3) Conducting independent actions when properly reinforced.

(4) Performing rear area security as part of a larger force.

(5) Accomplishing surveillance tasks.

(6) Providing a screen for a larger force.

(7) Providing responsive aerial delivery to antitank fires against armor forces.

(8) Conducting chemical agent detection and radiological monitoring and survey operations.

Section II. ORGANIZATION

5-3. Organization

a. *General.* The troop is organized with a troop headquarters, an aero scout platoon, an aero rifle platoon, an aero weapons platoon, and a service platoon (fig. 5-1).

b. *Troop Headquarters.*

(1) Troop headquarters contains the troop commander, one warrant officer (pilot), the

first sergeant, a crew chief, an armorer, and a troop clerk. One helicopter is provided for command and control, and is armed with door-mounted machineguns (fig. 5-2). A $\frac{1}{4}$ -ton truck is provided for necessary command ground transportation. The troop headquarters is the administrative center and performs normal administrative functions. Flight operations may

AIR CAVALRY TROOP

TROOP HQ

AN/URC-10
AN/ARC-54
AN/ARC-51
AN/ARC-115



1 MAJ (Trp Comdr) Rev .38
1 WO (Hel Pilot) Rev .38
1 E-5 (Crew Chief) Rev .38
1 E-4 (Gunner) Rev .38*
XM-23

AN/VRC-47



1 E-8 (ISG) R
1 E-5 (Clk Typ) (Dvr) R w/Grn Lnh
E-4 (Armorer) R

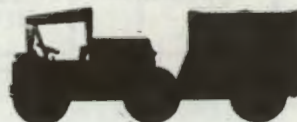
FLIGHT OPERATIONS SECTION

AN/VRC-47



1 CPT (Op Off) (Also XO) Rev .38
1 E-3 (Radio Op) (Dvr) R

AN/VRC-47
AN/GRC-106



1 E-7 (Avn Op SGT) R
1 E-5 (Comm Chief) R
1 E-4 (Sr Radio Op) R
1 E-5 (Flt Op Sp) R

*AUGMENTATION

Figure 5-2. Manning chart, troop headquarters, air cavalry troop.

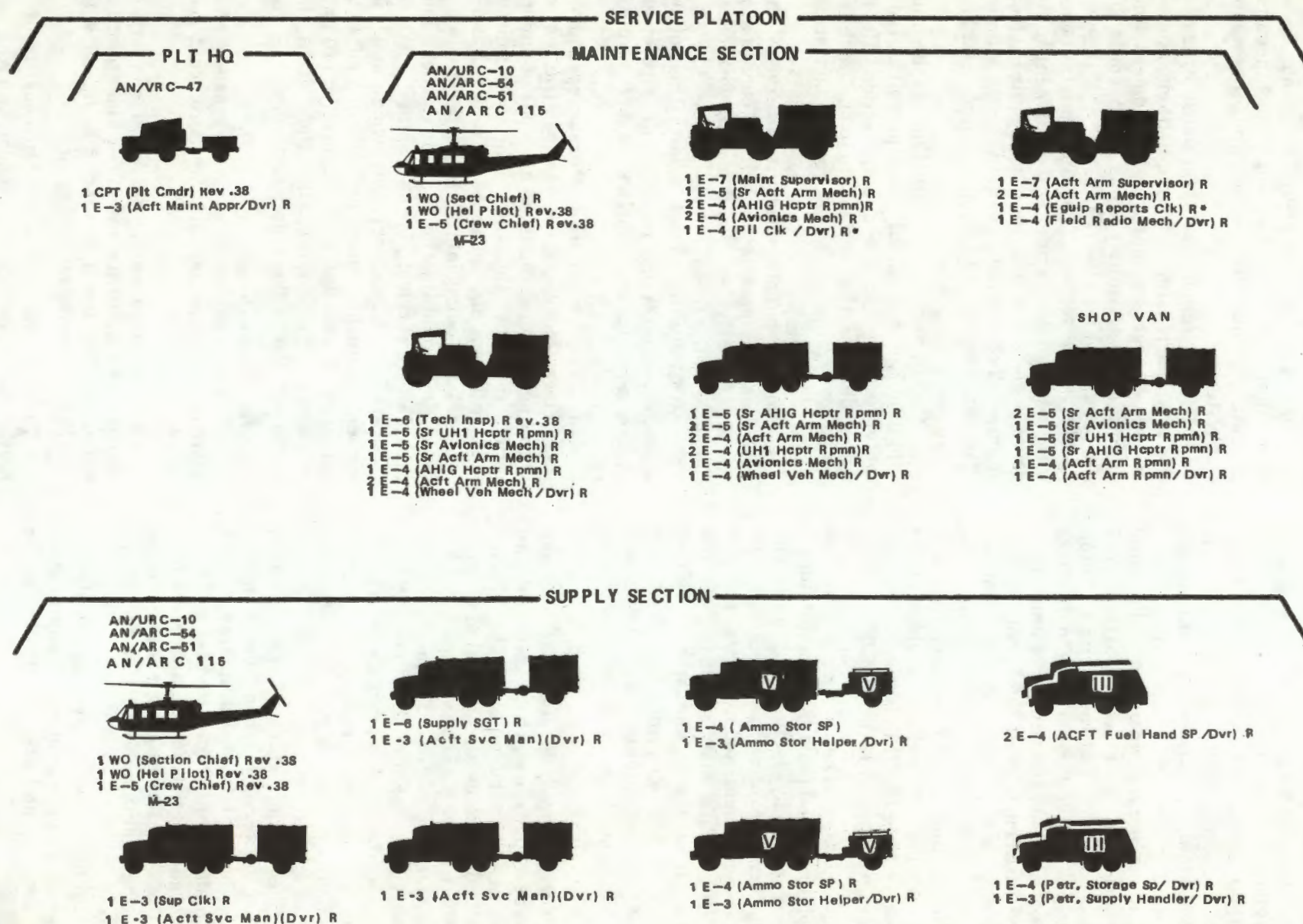


Figure 5-3. Manning chart, service platoon.

be a section under the troop headquarters (in the armored cavalry squadron), or a separate section in the air cavalry troop of the armored cavalry regiment.

(2) *Flight operations section.* The flight operations section consists of a flight operations officer, an air operations sergeant, a communications chief, a flight operations specialist, a senior radio operator, and a radio telephone operator. This section is equipped with a 1/4-ton, with one FM radio, and a 1 1/4-ton truck, with one FM and one AM radio (fig. 5-2). This gives the section the personnel and equipment to exercise control over combat operations of the troop, and provides communications between the troop and supported units. The section participates in the management of airspace by providing unit flight-following services for the troop's aircraft. This is discussed more fully in paragraphs 6-47 through 6-56.

c. *Service Platoon.* The service platoon includes a platoon headquarters, a maintenance section, and a supply section (fig. 5-3). The service platoon provides the necessary personnel and equipment to supervise and accomplish the troop's maintenance, including organizational helicopter and ground vehicle maintenance, and troop supply functions. The helicopters in the maintenance and supply sections are each equipped with door mounted machineguns.

(1) *Platoon headquarters.* The 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 aircraft, troop vehicles, aircraft armament, and avionics equipment. The section is equipped to provide forward emergency repair for the troop via helicopter or ground vehicles.

(a) The section chief is the assistant maintenance officer. He recommends maintenance procedures and policies, and supervises the troop maintenance effort. He also pilots the helicopter organic to the maintenance section.

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

(c) The helicopter and wheel vehicle mechanics perform organizational maintenance on the helicopters and ground vehicles of the troop.

(d) Radio and avionics mechanics per-

form maintenance on troop radios mounted in helicopters and ground vehicles.

(e) Aircraft armament mechanics perform maintenance on the troop's machineguns, aircraft armament subsystems, and other weapons systems.

(f) The repair parts specialist operates the troop parts supply. He requisitions, stores, and issues necessary parts and equipment; and maintains the required forms and records for the prescribed load list (PLL).

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

(a) The section chief functions as the unit supply officer and, in addition, pilots the helicopter assigned to the supply 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 supply clerk assists the supply sergeant; maintains records; and receives, stocks, and issues supplies except aircraft repair parts.

(d) The ammunition storage specialists and helpers receive, stock, assist in the rearming of helicopters, and issue all types of ammunition used by the unit. The ammunition storage helpers also act as heavy truck drivers.

(e) The petroleum storage specialists operate and maintain the fuel tank trucks and provide POL servicing for helicopters.

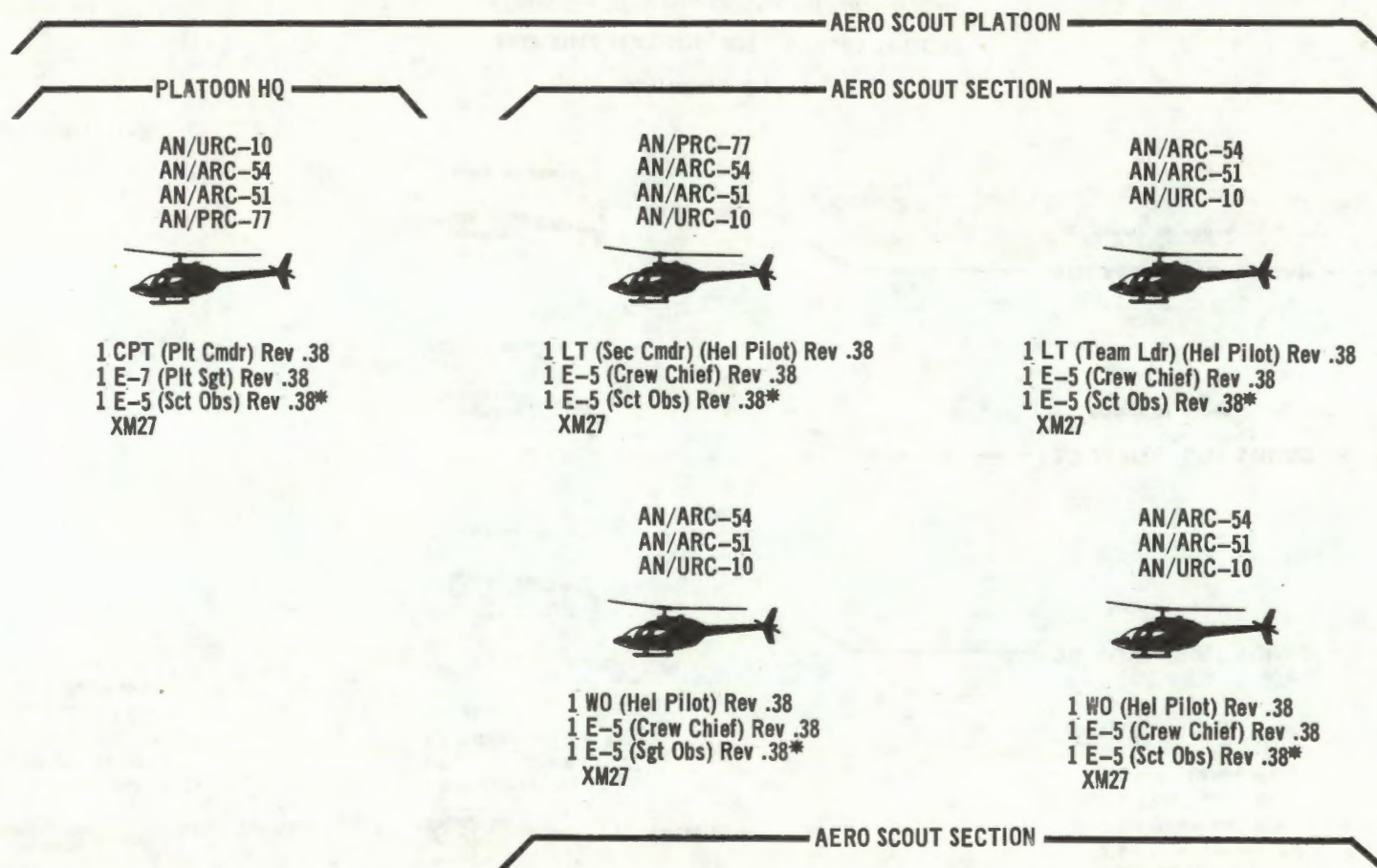
(f) The airfield service crewmen assist in airfield operations such as refueling of helicopters and installation and operation of lighting equipment. Additionally, they drive the cargo vehicles of the supply section.

d. *Aero Scout Platoon (Fig. 5-4).*

(1) The aero scout platoon consists of a platoon headquarters and two aero scout sections.

(2) The aero scout platoon headquarters consists of a platoon commander and a platoon sergeant. The headquarters is equipped with one light observation helicopter.

(3) Each aero scout section consists of a section commander, a team leader, two warrant officer pilots, and four crew chiefs. Each section



*AUGMENTATION

This section contains 5 LOH.

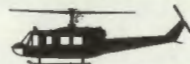
Figure 5-4. Manning chart, aero scout platoon.

AERO RIFLE PLATOON

FM 17-36

PLATOON HEADQUARTERS

AN/ARC 115
AN/URC-10
AN/ARC-54
AN/ARC-51
AN/PRC-77



Hel, Util Tac Trans

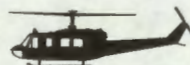
1 CPT (Plt Cdr) (Hel Plt) Rev.38
1 WO (Hel Plt) Rev.38
1 E-7 (Plt Sgt) R
1 E-5 (Crew Chief) Rev.38
1 E-4 (Door Gnr) Rev.38
XM-23

AN/ARC 115
AN/URC-10
AN/ARC-54
AN/ARC-51
AN/PRC-77

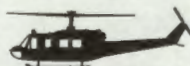


Hel, Util Tac Trans

2 WO (Hel Plt) Rev.38
1 E-5 (Crew Chief) Rev.38
1 E-4 (Door Gnr) Rev.38
XM-23



Same as above



Same as above



Same as above

1ST AERO RIFLE SQUAD

1 E-6 (Sqd Ldr) R
2 E-5 (Tm Ldr) R
2 E-4 (Auto Rifleman) R
2 E-4 (Grenadier) R w/Grn Lnh
3 E-3 (Rifleman) R
1 Sqd 7.62 mm MG

2D AERO RIFLE SQUAD

Same as above

3D AERO RIFLE SQUAD

Same as above

4TH AERO RIFLE SQUAD

Same as above

AUGMENTATION

MANNING CHART

AERO RIFLE PLATOON, AIR CAVALRY TROOP

Figure 5-5. Manning chart, aero rifle platoon.

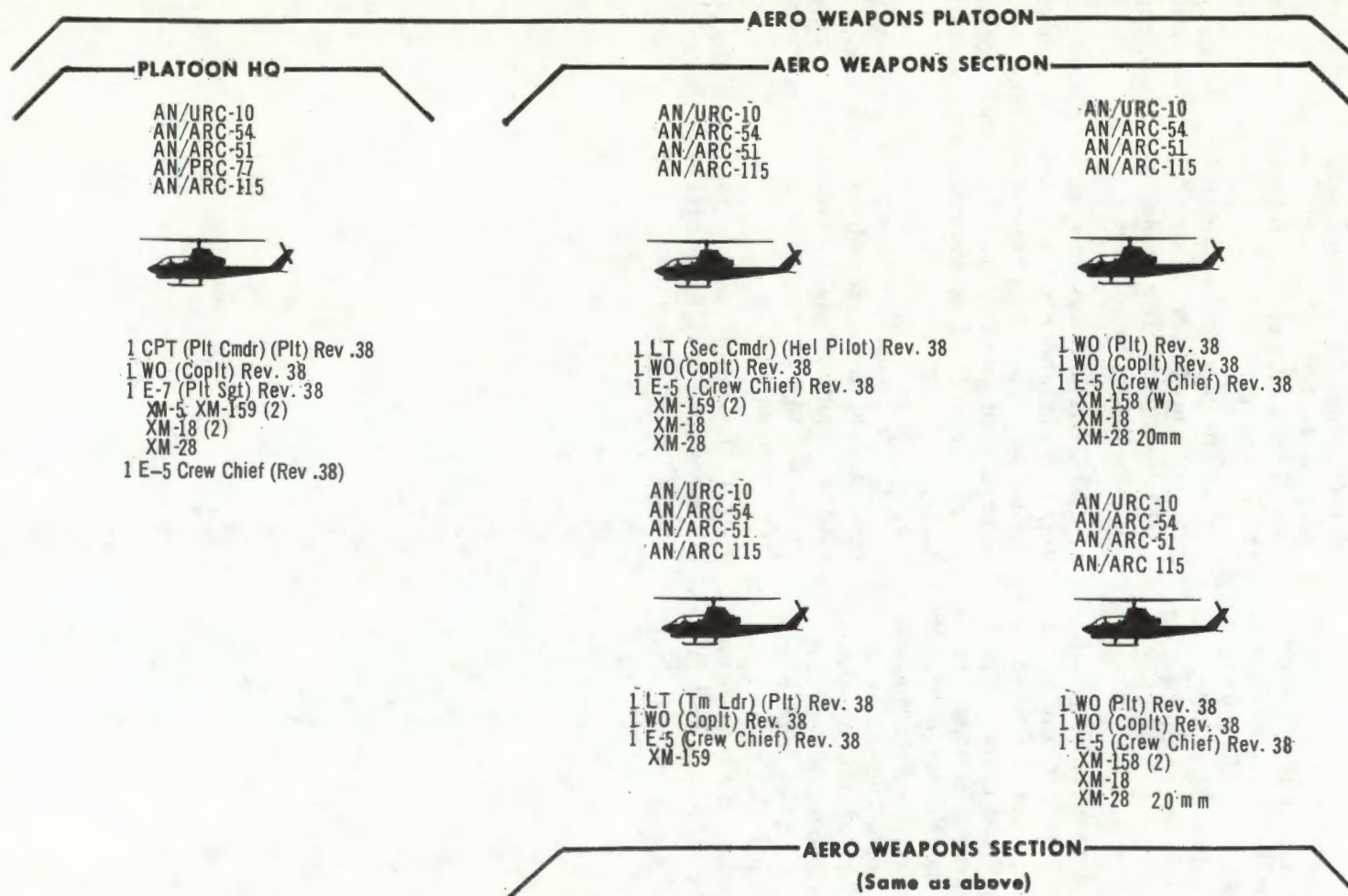


Figure 5-6. Manning chart, aero weapons platoon.

is equipped with four light observation helicopters.

(4) The platoon commander is responsible for the training, discipline, tactical employment, and maintenance of the platoon's equipment.

(5) The section commander is responsible for discipline, training, maintenance of section equipment, and control in his section. He also serves as leader of the first team of the section.

(6) 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 aero rifle squads (fig. 5-5). The platoon provides a limited infantry reconnaissance capability to the troop.

(2) Platoon headquarters consists of a platoon commander, a platoon sergeant, ten warrant officer pilots, five crew chiefs, and five door gunners (augmentation). The utility helicopters are equipped with a machinegun system consisting of two door mounted machineguns.

(3) Each squad has a squad leader, one rifleman designated as a machinegunner, and two fire teams, each consisting of a team leader, rifle grenadier, automatic rifleman, and rifleman.

(4) The platoon commander is responsible for the discipline, control, training, and tactical employment of the platoon, and for the maintenance of his assigned helicopters.

f. Aero Weapons Platoon. The aero weapons platoon consists of a headquarters and two aero weapons sections (fig. 5-6). The platoon provides high volume, high intensity aerial fires for the troop.

(1) The platoon headquarters consists of a platoon commander, a warrant officer, and a platoon sergeant. The headquarters is equipped with one attack helicopter.

(2) Each aero weapons section consists of a section commander, a team leader, six warrant officer pilots, and four crew chiefs. The section is organized into two teams of two helicopters each. The section commander also leads his team.

(3) The platoon commander and section commanders are responsible for the discipline, control, training, maintenance of unit equipment, and tactical employment of their respective organizations.

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

CHAPTER 6

EMPLOYMENT OF THE AIR CAVALRY TROOP

(STANAG's 2079 and 2112 and SEASTAG 2112)

Section I. GENERAL

6-1. Employment

a. General. Successful employment of the air cavalry troop is based 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 is normally employed in conjunction with ground armored cavalry units so that the capabilities of ground and air elements complement each other. When required, it is capable of being used on independent missions.

b. Employment Characteristics. The air cavalry troop is a *combat* force with combat elements that are completely mobile in organic helicopters. The unit combines the characteristics of tactical three-dimensional *mobility* and *destructive air firepower*. The troop operates as close to the earth's surface as vegetation or obstacles will permit, while generally following the contours of the earth. This provides a relatively high degree of protection from enemy ground and air action. Helicopters are armed with area and direct fire weapon systems capable of destruction and suppression of enemy forces.

c. Integration of Forces. 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 essential elements are committed. That portion of the troop's employment which pertains to the aero rifle platoon's ground tactics is contained in FM 7-10, FM 21-75, FM 17-37, and FM 57-35.

d. Location of Combat Units. The air cavalry troop operates from one or more assembly areas for the purposes of organizing for combat, refueling, maintenance, and supply; and for regrouping after an attack or movement. The combat elements operate from assembly areas that are located well forward in the combat zone. 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 well forward in the area of operations, thereby avoiding lengthy disengagement by combat elements to accomplish necessary supply and maintenance functions.

e. Airspace Control. The problem of air traffic regulation and identification of helicopters is of particular importance. If the air cavalry troop is to accomplish assigned missions, air traffic control restrictions must be reduced to an absolute minimum consistent with operational requirements. The use of airspace in the troop area of operations requires coordination with friendly ground elements to include air defense units, maneuver units, artillery units, close air support, and other agencies using airspace in the area of operations (para 6-47 through 6-56).

f. Target Acquisition. Target acquisition is a continuing process and is critical to any air cavalry troop mission. Lucrative targets are either engaged or promptly reported for engagement by other forces. Targets are reported with a 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, iden-

tified, and engaged as soon as possible. Air cavalry units are well suited for nuclear target acquisition. They are frequently the first to discover, identify, and contribute to the development of nuclear targets. The mobility and long-range capability of the air cavalry troop enable it to fulfill requirements for early nuclear target acquisition.

g. Troop Operations Center. The troop operations center must be able to rapidly and frequently displace during combat operations, normally collocating with the major unit headquarters adjacent to or in whose area the troop is operating. This requires the use of one of the troop's helicopters on a mission basis. When the operations section displaces for relatively short periods of time, it will normally include the operations officer, at least one radio operator, an FM radio, power source, and a large antenna. Longer periods of operations will require the movement of the section's organic vehicles by air or ground, additional communications equipment, and the necessary personnel to operate the section. However, the requirement for keeping records and operational reports of the troop CP will require a contingent of operations personnel to remain in the troop CP area. The flight 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.

h. Operational Characteristics.

(1) *Strengths.* Air cavalry is virtually free of surface terrain restrictions and is extremely flexible and rapid. Its organization, firepower, and communications gives the troop an extended range of observation, great offensive striking power, reconnaissance capability, and a limited ground combat capability.

(2) *Limitations.* Air cavalry is limited by weather and enemy air defense fires. The troop's sustained operational capability is considerably less than its maximum capability, as individual elements must frequently break off action to refuel or rearm. The need to relieve aircraft for refueling and rearming, once enemy contact is established, requires close coordination within the troop to insure that contact once gained is not lost. Availability of troop aircraft is a critical factor in the conduct of operations. Operational planning must include realistic provisions for performance of scheduled and unscheduled aircraft maintenance. To be effective, air cavalry operations require that

the unit personnel develop and maintain a high degree of teamwork.

i. Operational Mission Status. The degree of control which the supported unit commander exercises over the air cavalry troop supporting him is defined by the operational mission specified in the operation order. These missions are—

(1) *Attached.* The gaining unit exercises complete control over the attached unit. Under attachment, the major unit (supported) provides rations, quarters, and administrative and logistic support, unless otherwise specified.

(2) *Operational control (OPCON).* Units under operational control are placed under a commander for assignment of tasks and authoritative direction to accomplish the mission. Operational control does not include responsibility or authority for combat service support, discipline, internal organization, or unit training except when a subordinate commander requests assistance in these areas. A commander, upon receiving a unit "OPCON," should task by mission-type order and allow the tasked unit commander to determine the best method of employing his assets to accomplish the assigned mission. The higher commander should impose only those control measures necessary to insure successful mission accomplishment. Operational control provides a relationship where full use of the supporting element/unit is devoted to the supported element/unit without the additional burden of combat service support requirements being placed on the unit receiving the support.

(3) *Support.* Support is the action of an element/unit which aids, protects, complements, or sustains another force. The supporting role is preferred when effective control can be exercised by all commanders. The commander assigning the support mission may include the strength to be allocated to the supporting mission and, when deemed necessary, essential coordinating instructions. Support requires coordinated planning, close contact, and mutual agreement between commanders to facilitate attainment of the common objective. The supported commander may designate targets or objectives, establish timing and duration of the supporting action, and issue other instructions necessary for coordination and efficiency. The supporting commander will take such action to fulfill all the requirements of the supported commander within his capabilities, consistent with the priorities and requirements of the other assigned tasks.

6-2. 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 depends in a large degree on the element of surprise attained. Surprise is achieved by using speed, maneuverability, and the capability of crossing terrain obstacles to strike the enemy at unexpected times from unexpected directions. Surprise can be achieved by well-executed movements using nap-of-the-earth flying techniques; by using available cover and concealment; and by conducting operations with speed, aggressiveness, and deceptiveness.

b. Fire and Movement. Air cavalry units use the technique of fire and movement to destroy the enemy. This technique also provides inherent self-protection. Organic weapons, as well as those of ground forces, are used to provide assault and suppressive fires. This protects the movement of weapons (assault), scout, and aero rifle helicopters and reduces their exposure to ground fire. With speed and maneuverability, air cavalry elements strive to move into unexpected and advantageous positions from which they can disrupt, disorganize, and destroy the enemy. The psychological effect of the concentrated fire of rapidly attacking armed helicopters should be recognized and exploited. On the other hand, the illegality and possible counterproductivity of indiscriminate fires must be recognized, understood, and guarded against.

c. Teamwork. The air cavalry troop is organized and equipped to operate as platoons or as platoon 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 accomplish the mission. Teamwork between air and ground cavalry elements is essential to exploit fully the capabilities of each. Air cavalry normally is employed in elements of two or more helicopters for their mutual security.

d. Economy of Employment. Only those elements of the air cavalry troop that are needed to accomplish the assigned mission should be committed on an operation. This will permit maintenance on uncommitted helicopters, allowing the troop to be ready for those missions requiring employment of the troop in its entirety.

6-3. Factors Affecting Employment

a. General. As with any combat unit, employment of the air cavalry troop is based on the factors of METT.

b. Missions. Reconnaissance and security missions capitalize on the troop's strengths in mobility, communications, and firepower. The troop may also be employed to conduct limited spoiling attacks to delay or disorganize the enemy at critical points. The factors of METT will dictate the organization for combat, formations, and scheme of maneuver to be employed.

c. Enemy Situation. In reconnaissance missions, the troop is oriented on the information objective; in accomplishing surveillance tasks, it is oriented on the assigned area; and in security missions, it is oriented on the location and movement of the friendly element being secured. (For fundamentals of reconnaissance, security, and surveillance, see paragraph 1-3.) Employment of the unit in reconnaissance missions is predicated on gaining information of the area of operations, finding the enemy forces, determining the extent of enemy dispositions, reporting the nature of the enemy located, acquiring targets, and engaging the enemy within its capabilities. Depending on the enemy situation, air cavalry units may be used independently or in support of armored cavalry units. Consideration of the enemy situation frequently dictates the specific mission or task to be assigned, i.e. reconnaissance, security, or surveillance, or a combination thereof. Enemy capabilities, including their chemical and nuclear potential, affect the employment of air cavalry.

d. Terrain and Weather. Terrain has less effect on air cavalry 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-the-earth flying techniques. Landing zones and sites are also a consideration. Weather factors such as high winds, icing conditions, and periods of low visibility may greatly restrict use of these units. However, air operations must be planned to quickly follow up and/or exploit these adverse weather conditions. Darkness presents problems in flight, observation, and delivery of aerial fires. Light observation helicopters are not instrumented; therefore, problems arise in navigation and aircraft control when there is no visible horizon. With proper training, plan-

ning, and equipment, air cavalry units can have limited employment at night.

e. Troops, Aircraft, and Time Available. The assignment of missions and the planned employment of air cavalry units are dependent on personnel, aircraft available, and time. The time factor must be considered in computing fuel requirements, loiter time, ability to sustain an attack, location of refuel and rearm areas, and the thoroughness of reconnaissance within a specified zone. To insure sustained operations, consideration is given to such factors as previous and contemplated employment of the troop, the status of equipment and men, and the adequacy of logistics to support the mission.

f. Command and Control.

(1) Committed elements of the air cavalry troop remain under the command and control of the air cavalry troop commander. He exercises command and control by use of his command helicopter and the troop operations center. The troop-leading procedures discussed in FM 17-1 apply. Signal communications that apply are discussed in appendix B.

(2) Coordination with squadron operations is effected by close, frequent, and direct liaison between the troop operations officer and the squadron S3. Coordination as discussed in FM 17-1 applies.

(3) Leaders of the air cavalry troop elements coordinate directly with ground commanders in whose area they are operating. They insure that flights are cleared and the specific requirements of the ground commander are accomplished. To allow simultaneous transmission of critical information while the flight is airborne, one or more aircraft normally operate in the command net of the supported ground element. The remainder of the aircraft operate in one of the troop UHF nets, while one aircraft will be tasked to monitor the air cavalry troop command net and pass information as necessary.

g. Other Operational Considerations.

(1) Operations are influenced by the factors of METT. Commanders must be alert for changes in the threat, such as enemy tactical air, and balance the risk accordingly.

(2) Measures taken to minimize the effects of these influences include—

(a) Nap-of-the-earth flight which is normally used in the vicinity of the FEBA.

(b) Employment of teams for mutual protection and increased observation.

(c) Use of all suppressive fires, to include tactical air and artillery, on known or sus-

pected air defense positions. These fires have priority while missions are being flown.

(d) Open areas should be crossed at maximum speed, and then only when absolutely necessary.

(e) Maximum possible dispersion between elements in all operations.

(f) Employment of immediate evasive action when taken under fire.

(g) Use of maximum stand-off ranges when engaging enemy targets.

(h) Use of artificial illumination to aid in night target acquisition.

(i) Operations must be capable of being supported logistically.

(3) Operations are mounted from forward assembly areas, located behind the FEBA, so the troop can respond rapidly to its mission. The vulnerability of exposed aircraft is balanced against the urgency of expected need in determining the assembly area's location. For example, aircraft needed on a moment's notice may be located on the ground, with engines running, directly behind the FEBA in the area of expected commitment. The decision to have aircraft engines running is based on whether the 2 to 3 minutes' reaction time gained is worth the corresponding expenditure of fuel and aircraft operating hours.

(4) Air cavalry operations move so swiftly that a high degree of teamwork is essential to their success. Within the air cavalry troop, and between air and ground elements, mutual understanding of each other's capabilities and responsibilities enables the mission to be accomplished quickly and efficiently, with a minimum of time lost in explanation or discussion. To assist in achieving this teamwork, the following should be made part of the squadron SOP:

(a) Air route coordination with ground units.

(b) Control of air cavalry teams while operating in ground troop areas.

(c) Air-to-ground and ground-to-air spot reporting procedures.

(d) Artillery air defense suppression techniques.

(e) Air cavalry team configurations.

(f) Air rescue policies.

(g) Establishment and operation of air cavalry troop refuel and rearm points.

(h) Aircraft loading.

(i) After action requirements.

(j) Airspace control.

(k) Battle damage assessment.

- (l) Liaison officer, duties of.
- (m) Orders.
 - 1. March.
 - 2. Operations.
 - 3. Stand-to.
 - 4. Warning.
- (n) Relief on station.
- (o) Target designation techniques.
- (p) Marking of friendly unit positions.

6-4. Organization for Combat

a. The troop is normally employed intact and without major attachments.

b. Elements of the troop are employed in teams of two or more aircraft to provide mutual support; and to insure mission accomplishment.

c. Only those elements that are necessary to insure mission success are committed. Thus, practicing the principle of war, "economy of force," enables the troop to sustain combat operations by relieving on station.

d. When two or more teams are employed together, these teams may be organized into a provisional platoon.

e. Some of the considerations for selecting varying team compositions are listed below:

- (1) *Two scout helicopters (scout team).*
 - (a) Maximize reconnaissance effort.
 - (b) Conserve attack helicopter strength.
- (2) *Two attack helicopters (weapon team).*
 - (a) Attack a clearly defined enemy target.
 - (b) Conduct a limited spoiling attack at a critical point.
 - (c) Conserve scout helicopter strength.
 - (d) Employed against a light antiaircraft threat.
- (3) *One scout and one attack helicopter (mixed team).*
 - (a) Used to field the greatest number of teams for general reconnaissance.
 - (b) Provide a balanced team for reconnaissance and security missions.
 - (c) Employed when a light enemy air defense threat is imminent.
- (4) *Two scout helicopters and one attack helicopter (scout-heavy team).*
 - (a) Reconnoiter critical areas rapidly.
 - (b) Greater capability of maintaining contact with the enemy once contact is established.
- (5) *One scout helicopter and two attack helicopters (weapons heavy team).* Attack a

deployed enemy force, or similar targets which are not clearly identified.

(6) *Two scout and two attack helicopters (mixed heavy team).*

(a) Rapid reconnaissance.

(b) Greatest capability to maintain contact with the enemy once contact is established.

f. Figure 6-1 shows examples of the type organizations and teams that may be used.

6-5. Combat and Combat Service Support

a. Combat Support.

(1) The organic firepower of the air cavalry troop should be supplemented by fires from the ground maneuver elements, supporting artillery, and tactical air.

(a) Ground fires are usually coordinated directly between the air cavalry team leader and the ground unit commander.

(b) Artillery fires are usually called for and adjusted by unit personnel or the artillery forward observer, when available; however, the aviators and aerial observers in the troop are also trained to perform this mission. The problem of obtaining artillery fire clearance due to high density of aircraft in the air is alleviated by employing nap-of-the-earth (NOE) flight, using available fire support warning nets to obtain fire support advisories, and through maximum planning for and utilization of pre-planned targets.

(c) Tactical air support is planned for and requested by the squadron fire support coordination center in conjunction with the Tactical Air Control Party. It is normally directed on target by Air Force forward air controllers.

(d) A team from the squadron Redeye section is normally attached, or placed in support, to increase the troop capability for defense against low level air attack.

(2) Engineers may be attached to the troop to assist with demolition requirements and technical reconnaissance.

b. *Combat Service Support.* The organic logistic support capability of the air cavalry troop is limited. In order to compensate for this:

(1) The troop support elements, less those required for immediate support in the troop forward assembly area, are generally located in, or near, the squadron trains area.

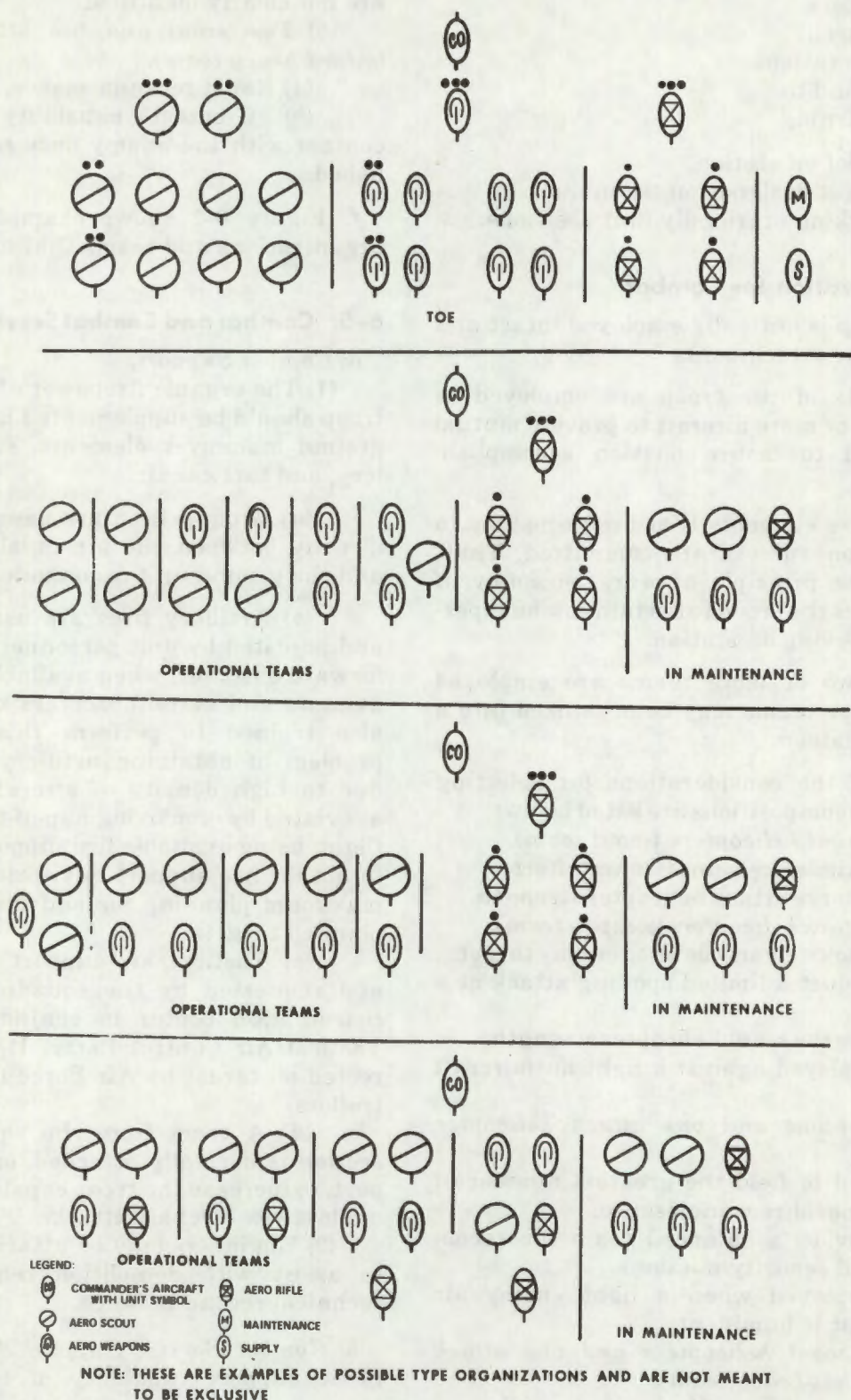


Figure 6-1. Type organization for combat, air cavalry troop.

(2) Four forward rearming and refueling areas with two points in each area can be established using TOE equipment. These points

are as close to the troop's area of operations as possible in order to reduce length of time aircraft must break contact for servicing.

Section II. RECONNAISSANCE OPERATIONS

6-6. General.

a. Reconnaissance is one of the primary missions performed by the air cavalry troop. The best method of employing the air cavalry troop is to have it remain with the ground squadron if possible. However, if it is necessary to place the troop under control of a ground maneuver unit, then the preferred command relationship is operational control (OPCON). This relationship does not burden the ground commander with the combat service support required by the air elements, and allows the air cavalry troop commander to balance assets against requirements. The troop engages in offensive action to accomplish the mission.

b. Reconnaissance is a mission undertaken to obtain, by visual observation or other detection method, information about the activities and resources of an enemy or potential enemy; or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area. Enemy information includes location, identification, disposition, strength, and activity. Information about the area of operations includes the tactically significant aspects of the weather, terrain, trafficability, and obstacles.

c. During reconnaissance, the collection of information must be recognized as the primary task and must not be jeopardized by unnecessary combat actions. As dictated by the mission, and after permission has been obtained, enemy resistance may be bypassed; but, if this cannot be accomplished, the troop may fight to obtain information. If an enemy force has been bypassed, the troop commander must report this fact, as well as the complete enemy situation, to the commander directing the reconnaissance operation. It may be necessary to detail elements of the troop to maintain contact with bypassed forces until contact is gained by ground forces.

d. When enemy contact is imminent, or has been established, teams of scout and attack helicopters will be utilized to develop the situation and provide immediate firepower when required.

e. Aero rifle elements are used to reconnoiter specific locations that cannot be effectively reconnoitered from the air. Engineers may assist with technical reconnaissance of roads, bridges, fords, and obstacles. While limited combat may be necessary to gain the required intelligence,

care must be taken to avoid a decisive engagement. When aero rifle elements are committed, they will normally be supported by aero weapons and aero scout elements. Only essential elements are used to accomplish the mission. The method of inserting the platoon varies with the factors of METT. Aircraft may land singly, in pairs, or as a platoon. Occasionally, the riflemen may be required to rappel into the area. The most desirable method of insertion is for the lift aircraft to land simultaneously in a formation affording a favorable posture for platoon movement after dismounting. In areas where enemy contact is imminent, extreme care should be taken to avoid landing where the helicopters and aero rifle elements are exposed to direct fire of the enemy. The airmobile capability of the platoon provides a large degree of latitude in choosing the direction of approach to an objective. Operations on the ground are basic rifle squad and platoon tactics.

6-7. Reconnaissance Planning and Frontages

a. Planning.

(1) The troop-leading procedures described in FM 17-1 are followed when a reconnaissance mission is assigned.

(2) The time available to conduct the reconnaissance mission generally guides the employment of the troop and the techniques used. For example, a mission with a sufficient amount of time, and a small zone, can be accomplished with a detailed search. Conversely, a mission to cover a large zone in a short period of time requires rapid and hasty search. Alternatively, reconnaissance over a large area in a short period of time can be handled by assigning the unit a specific reconnaissance mission to provide only the essential elements of information.

(3) The instructions which implement the plan must be complete and understood by all concerned; the five-paragraph field order should include and emphasize the following:

(a) Pertinent information of the enemy and friendly troops.

(b) Plan of the higher commander.

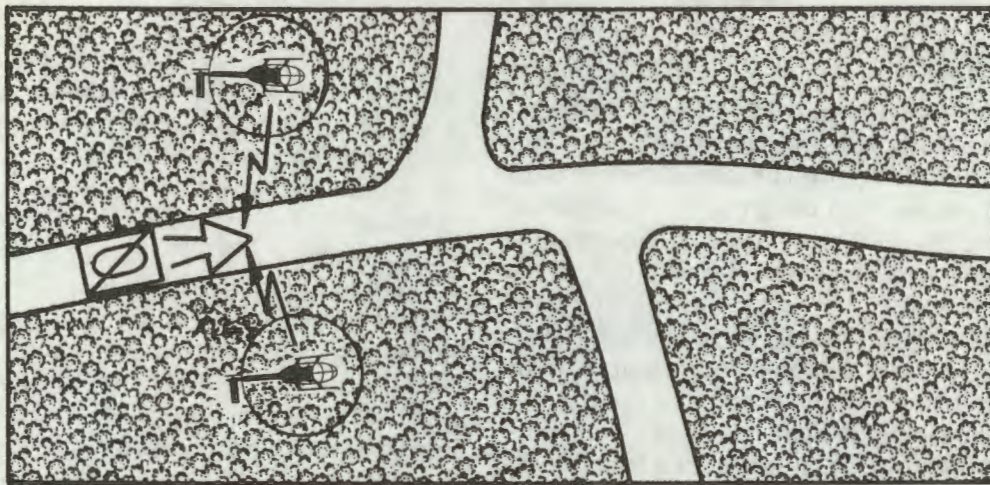
(c) Specific information desired.

(d) Zone, specific area, or routes to be reconnoitered.

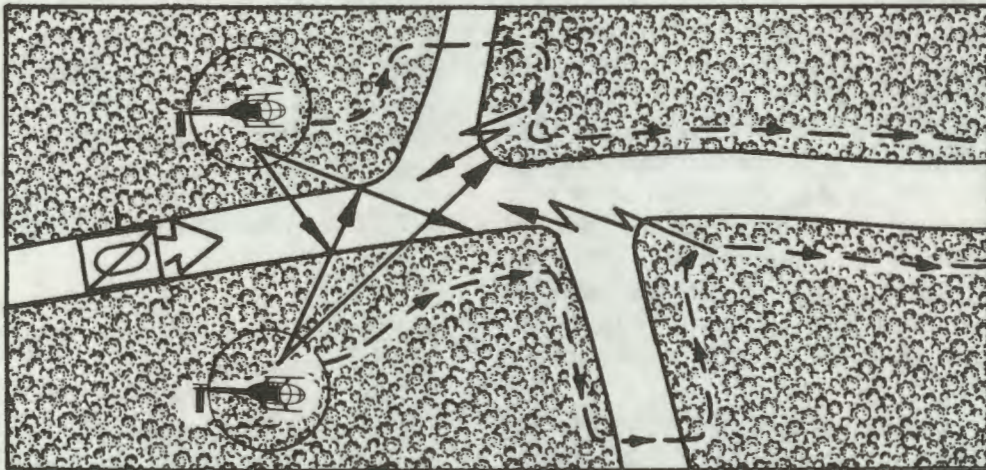
(e) When, where, and how information is to be reported.

(f) Time of departure, crossing the line of contact and reentry over the front line trace.

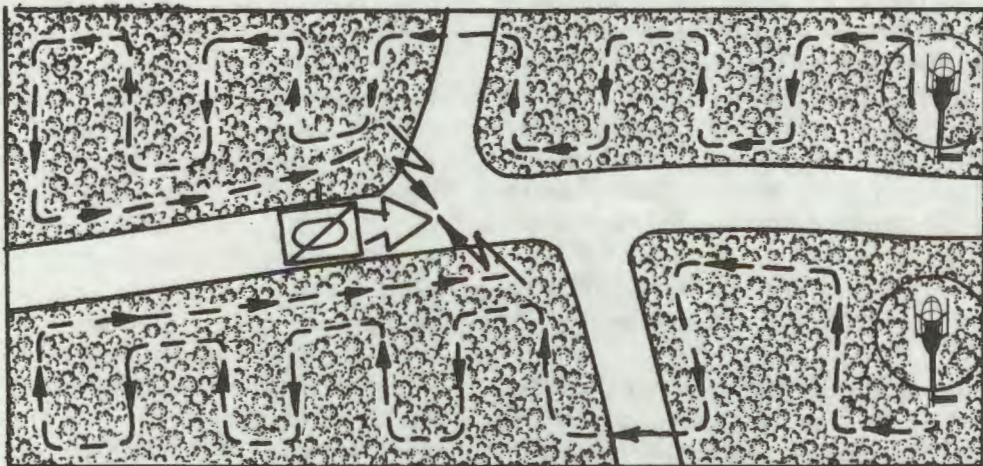
(g) Control measures.



PHASE I



PHASE II

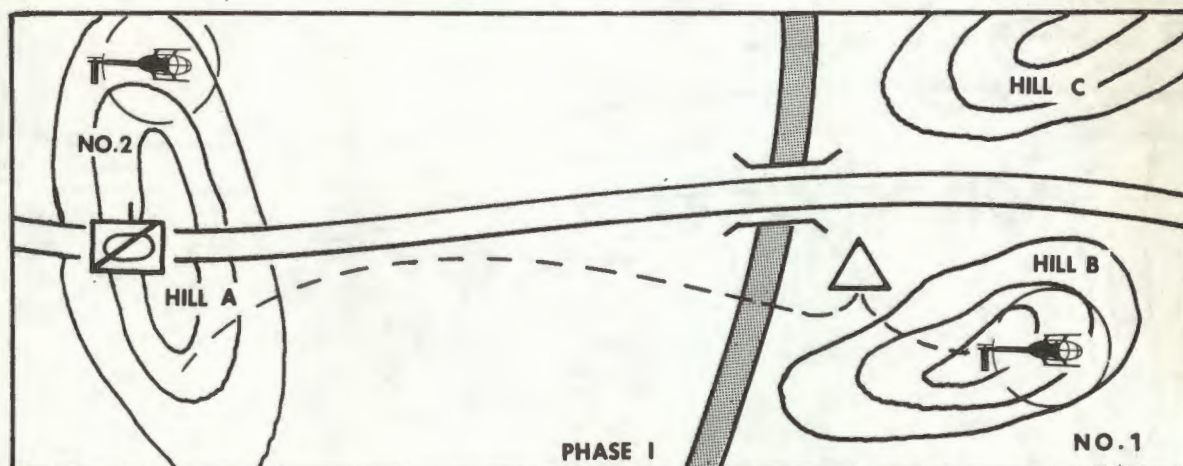


PHASE III

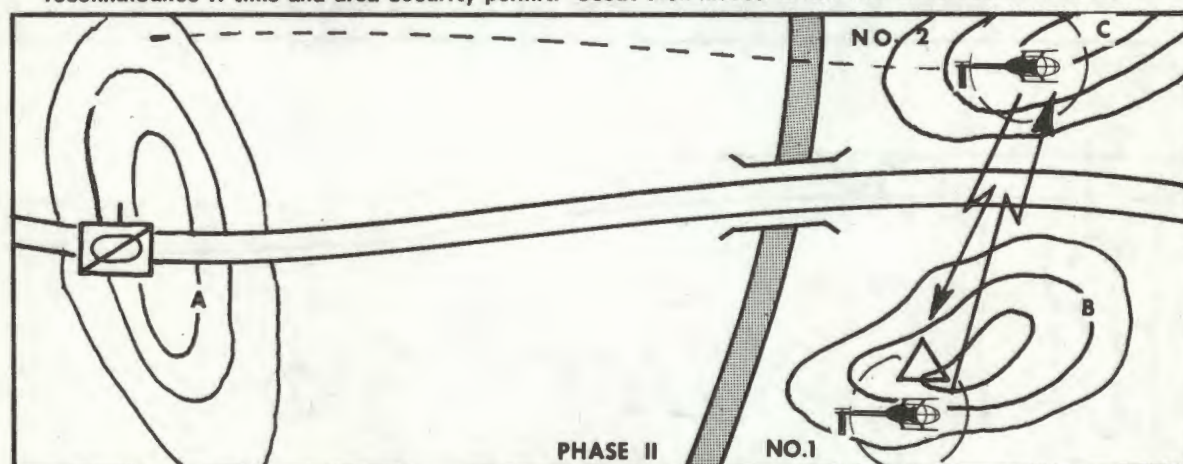
Legend:

- Aerial routes -----
- Direction of observation >>>
- Communication <-->

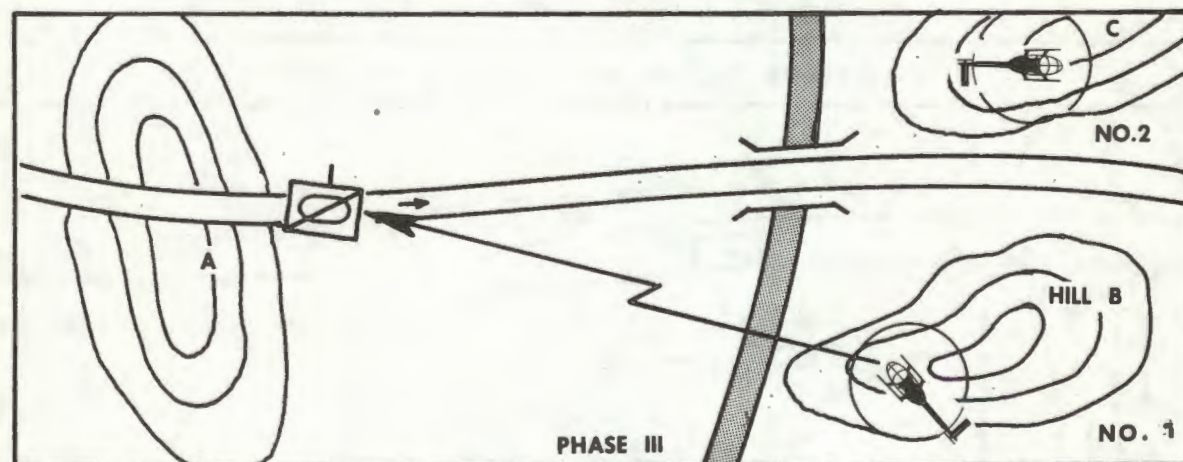
Figure 6-2. Aero scouts reconnoitering a route through a wooded area.



First scout moves to position to reconnoiter bridge and local terrain. Observer conducts dismounted reconnaissance if time and area security permit. Scout then moves to hill and observes local area.



Second area scout moves forward to hill C and reconnoiters immediate area. Scouts exchange information.

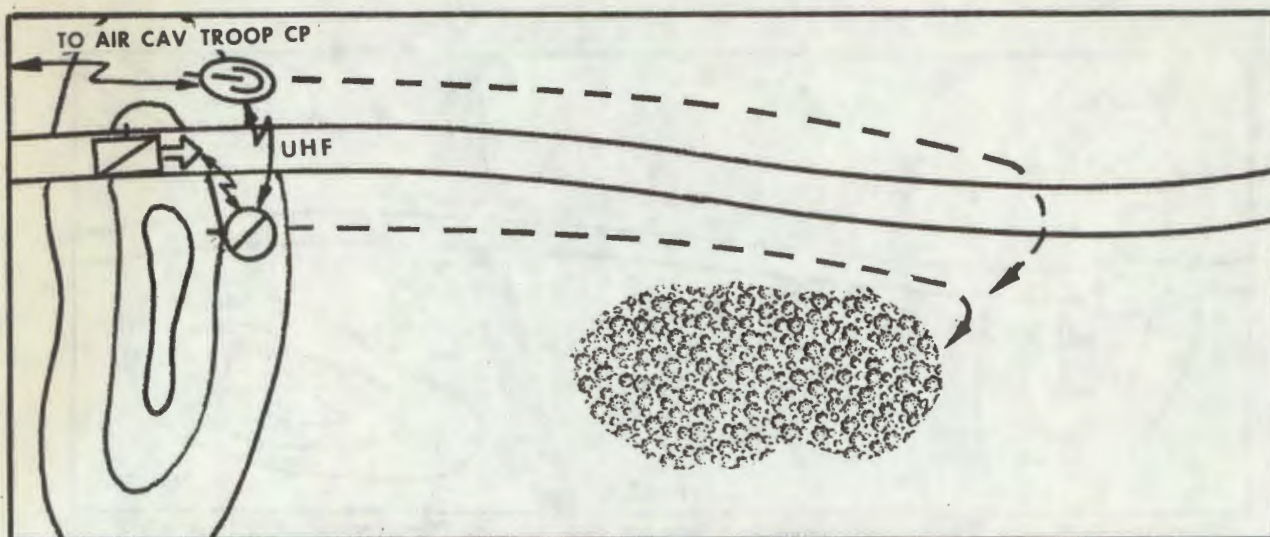


Aero scout team leader reports bridge and pertinent terrain information to ground troop. Second aero scout continues to observe.

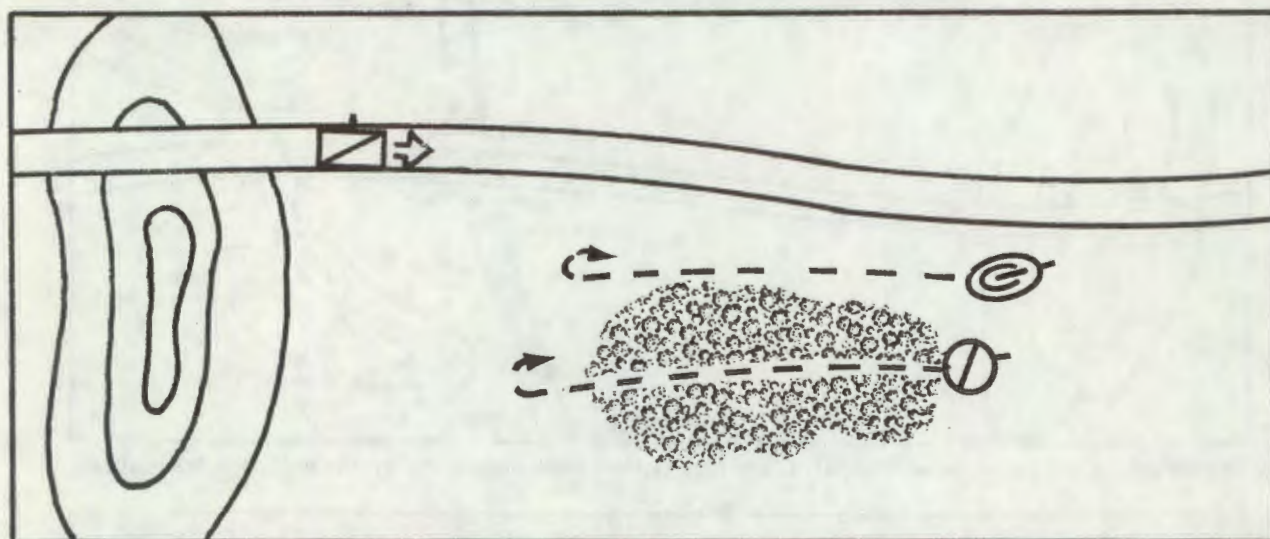
Legend

- Aerial routes — — — —
- Aerial/ground OP's Δ
- Communication $\rightarrow$

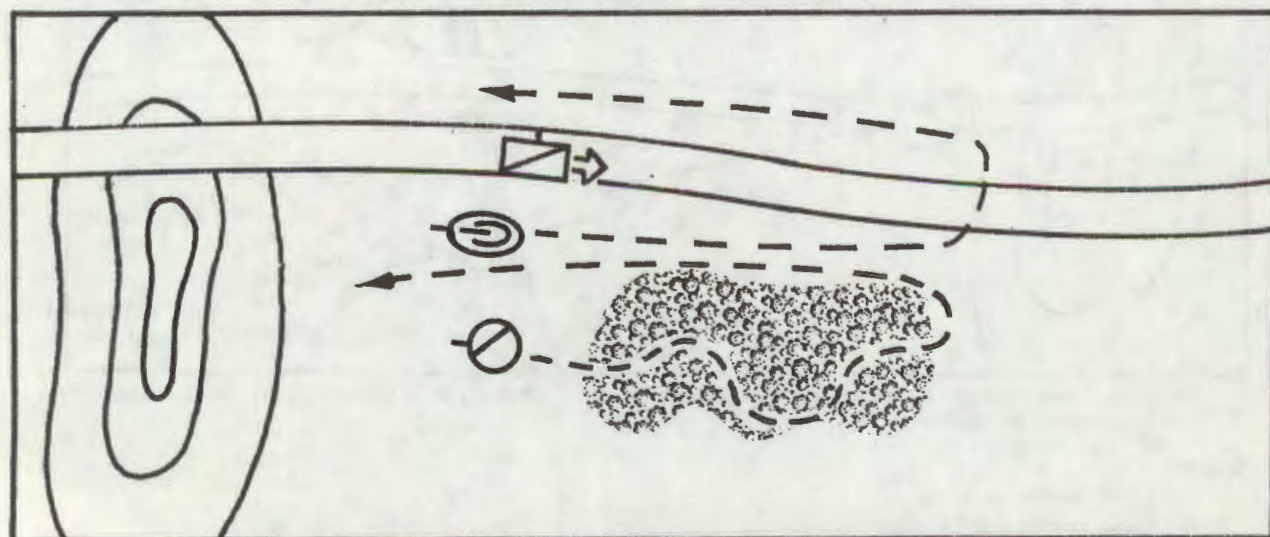
Figure 8-3. Aero scouts reconnoitering a bridge.



AIR CAVALRY TEAM INITIATES RECONNAISSANCE OF WOODED AREA.



TEAM MAKES INITIAL SWEEP OF AREA TO DETERMINE ENEMY PRESENCE.



DETAILED SEARCH IS CONDUCTED, AFTER WHICH TEAM MOVES ON TO ANOTHER AREA.

Figure 6-4. Air cavalry reconnoitering a wooded area.

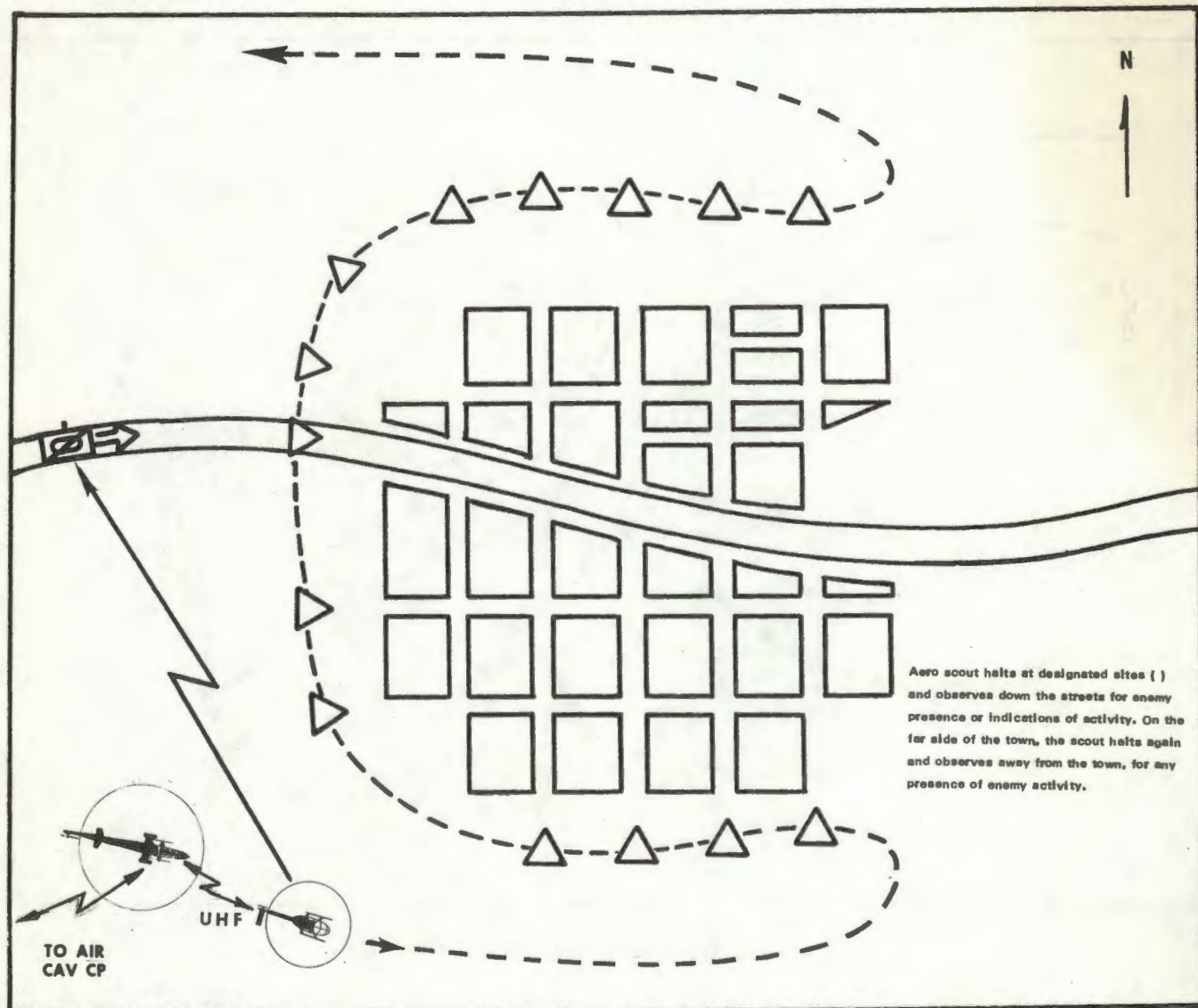


Figure 6-5. Air cavalry reconnoitering a town.

(h) Fire support provisions.

(i) Rules of engagement, when in effect.

(j) Actions to be taken when the mission is completed.

b. Frontages and Depths.

(1) There are no prescribed frontages or depths to be covered by air cavalry troops in performing reconnaissance missions.

(2) Aero scout elements can reconnoiter most effectively in open or cleared areas. Increases in cover and concealment will cause a corresponding increase in the time it will take to accomplish the reconnaissance. Aero scouts can cover wide frontages to considerable depth in open terrain. Figures 6-2 through 6-9 depict the techniques employed by aero scouts, in conjunction with armored cavalry units, during reconnaissance operations.

(3) Aero rifle elements are used to the best advantage to reconnoiter specific locations which 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 immediate aero scout and aero weapons response, and of being rapidly delivered to and removed from target areas (fig. 6-10). When not actively engaged on a reconnaissance mission, the platoon is centrally located on the ground, ready for rapid employment. Commitment of the aero rifle platoon is made only as necessary to accomplish the mission.

(4) The aero weapons section may be held in a central location or employed as part of a team. The section is prepared to rapidly sup-

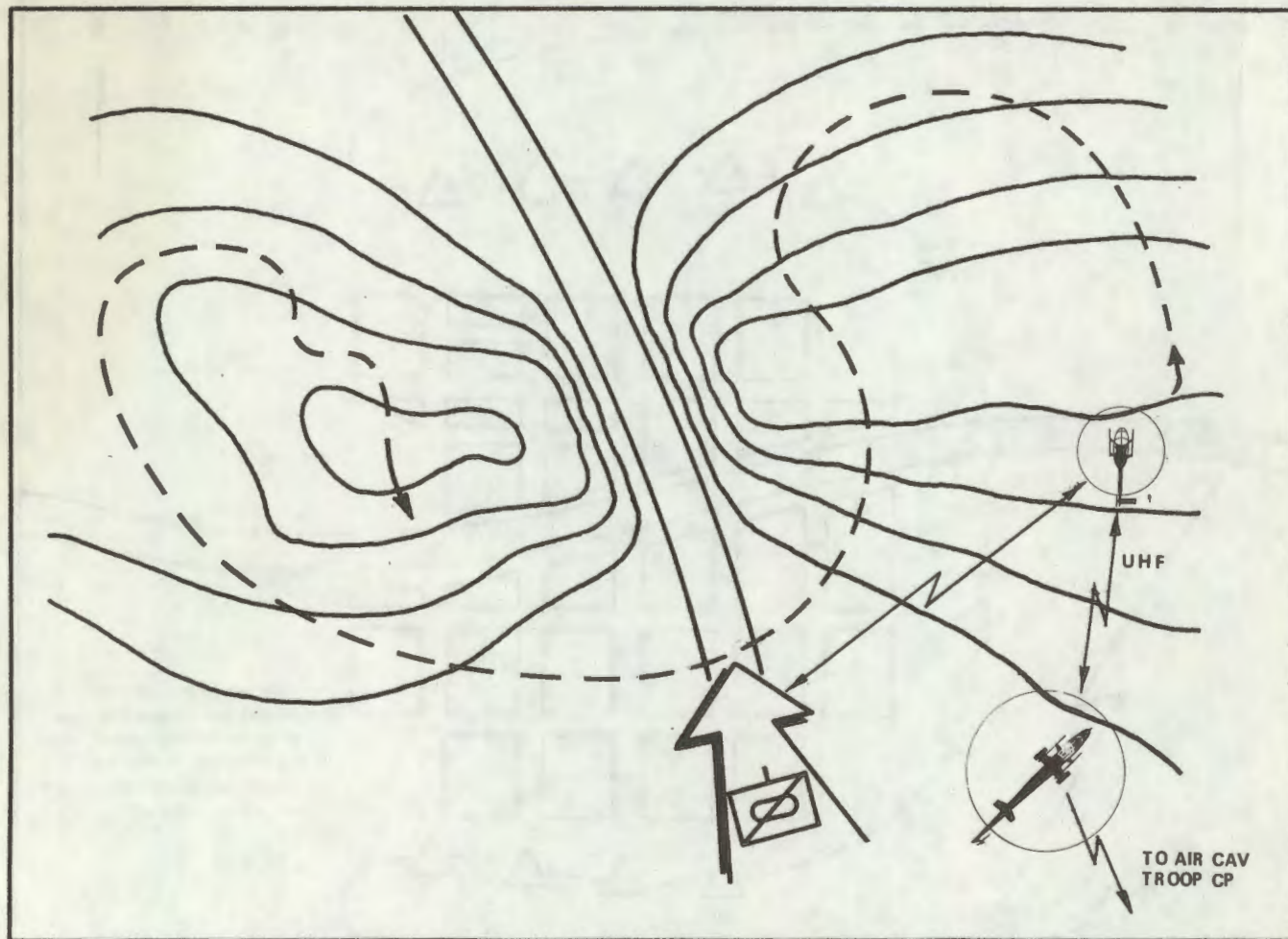


Figure 6-6. Air cavalry reconnoitering a defile.

port the actions of the aero scout or aero rifle elements.

6-8. Route Reconnaissance

a. 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 directed to support an armored cavalry troop. Conversely, elements of the armored cavalry troops may be placed under operational control of the air cavalry troop.

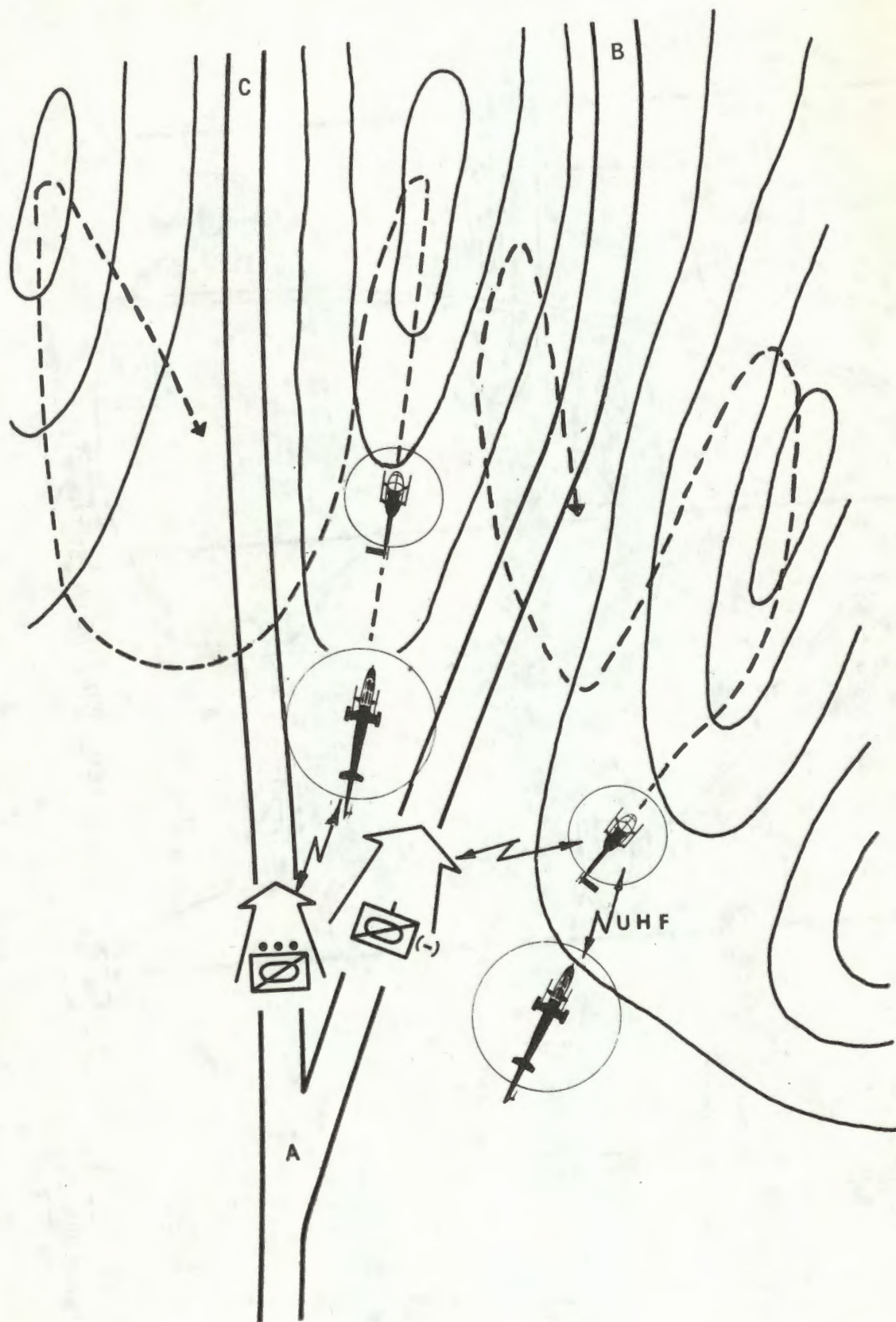
b. Although the troop is capable of conducting a route reconnaissance independently, it can best perform this mission in conjunction with ground elements of the squadron. Critical route information should be confirmed by ground reconnaissance.

c. Route reconnaissance may be executed by the aero scout platoon operating alone or in conjunction with other elements of the troop, or the 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, 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.

d. During a route reconnaissance, the leading aero scout section reconnoiters the main route in column formation. When 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 routes, 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 (fig. 6-11).

e. When the aero rifle platoon is committed to a ground reconnaissance mission, the platoon



Legend
Aerial routes - - - - -
Communication ————>

Figure 6-7. Air cavalry reconnoitering parallel corridors on multiple routes.

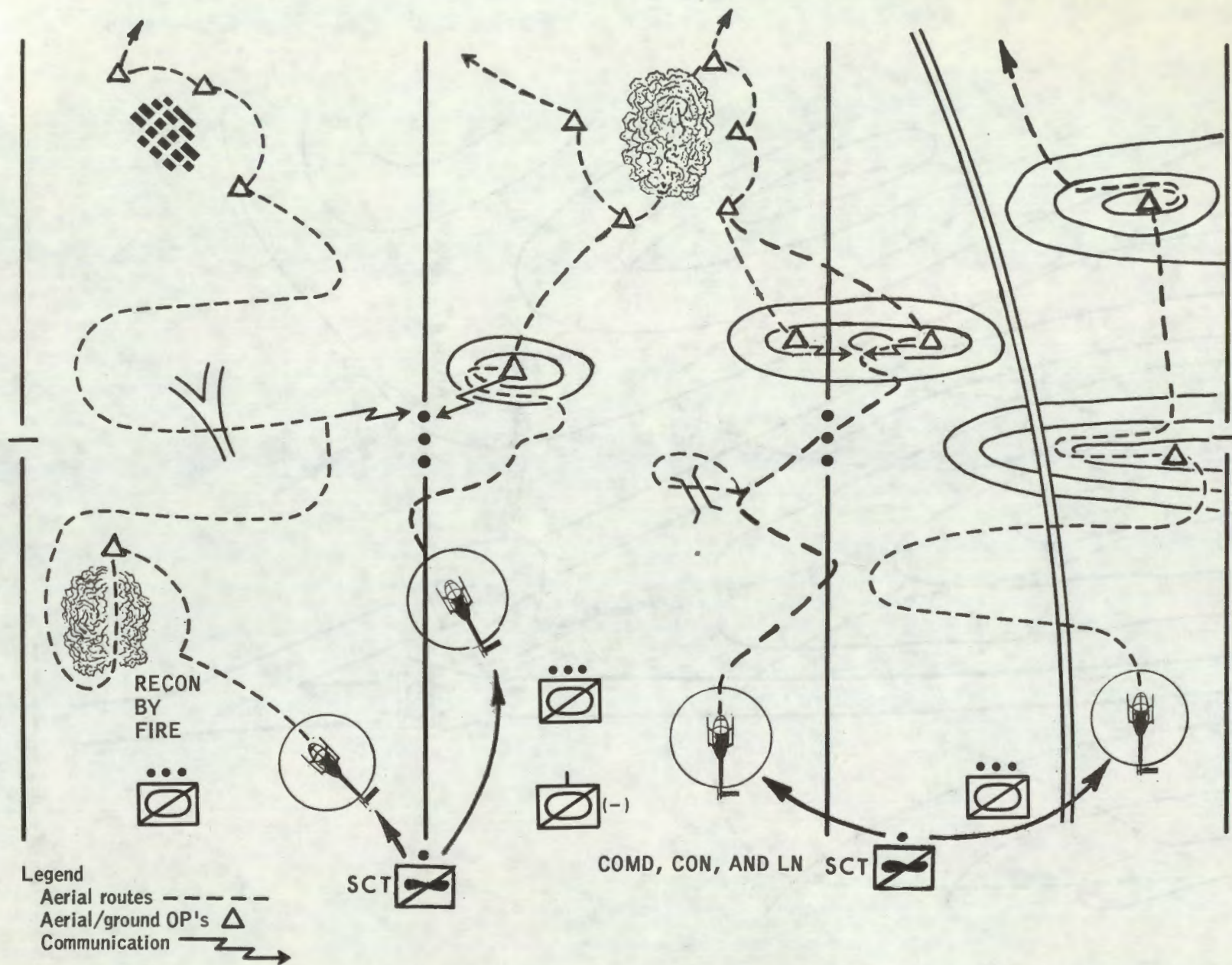


Figure 6-8. Aero scouts on a zone reconnaissance with extensive coverage.

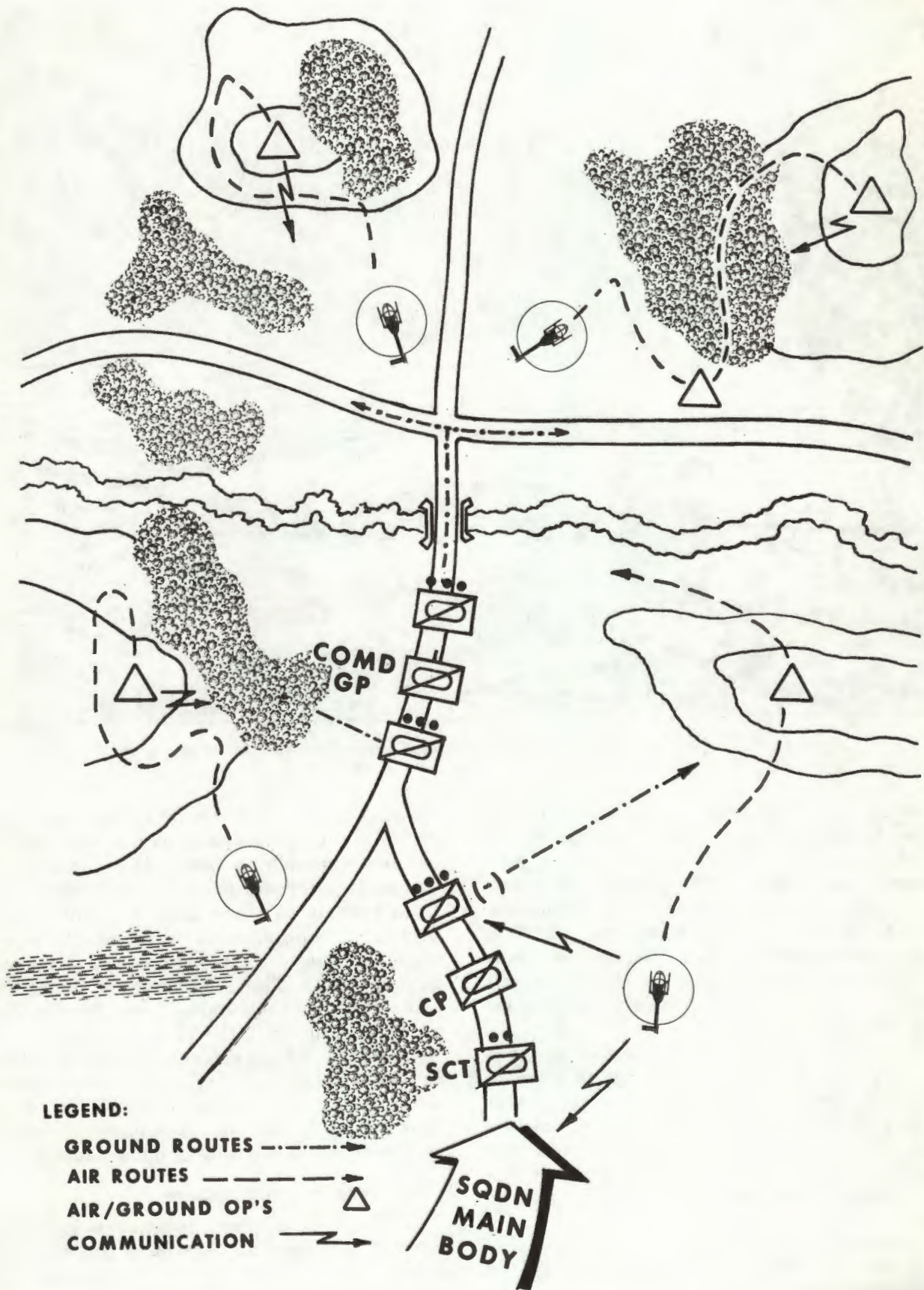


Figure 6-9. Aero scouts as part of an advanced guard.

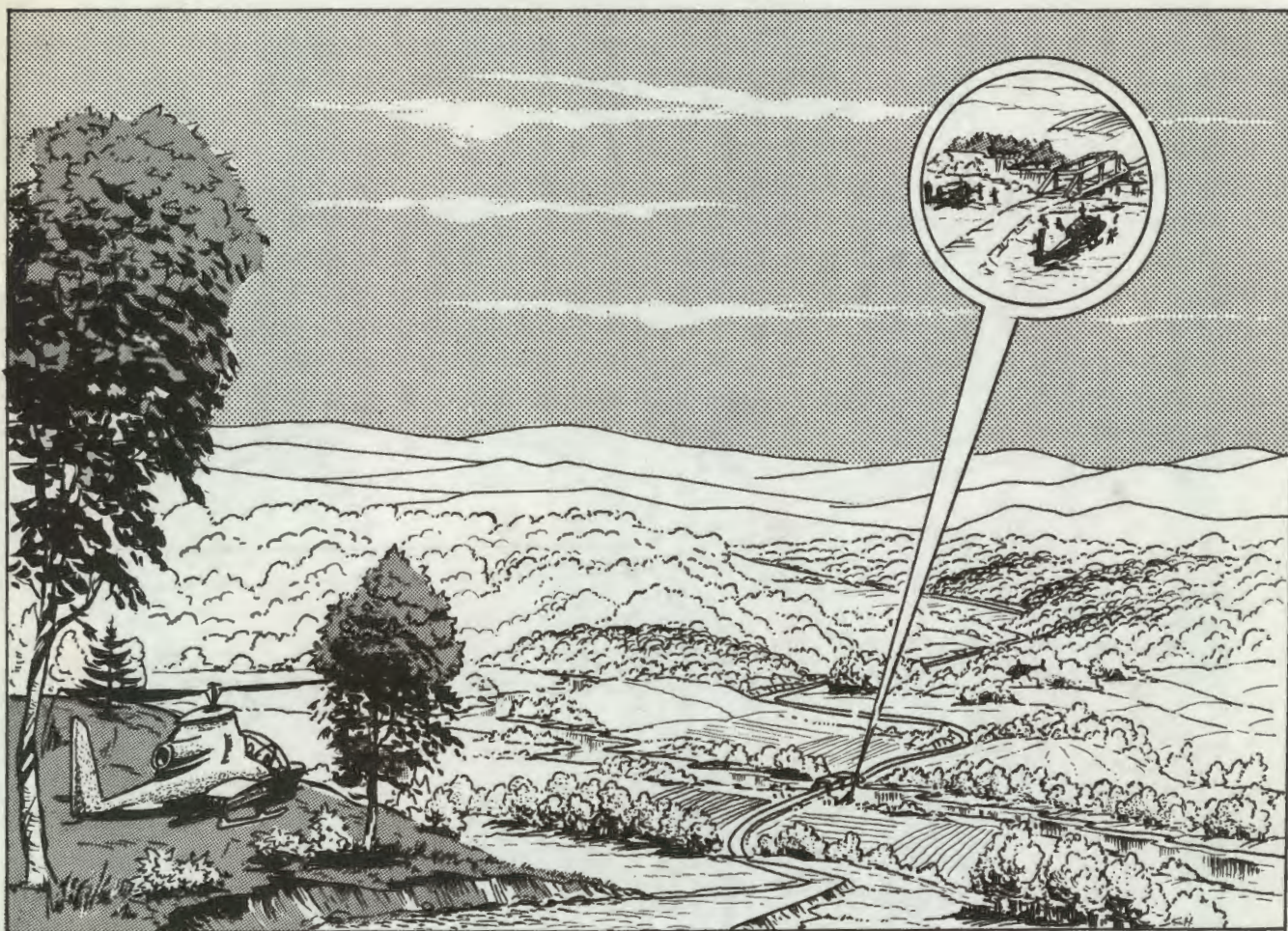


Figure 6-10. Aero rifle squads conducting detailed ground reconnaissance of a critical area.

operating either as part of a larger force or independently, moves by air as close to its objective as the situation permits and dismounts the riflemen. The riflemen then 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 aerial fire support. It may be used to deliver suppressive fires on enemy ground forces, or assist the aero scout elements or the dismounted riflemen. It habitually protects 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.

h. The air cavalry 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 available time permits. The progress of the air cavalry element is coordinated with the advance of the armored cavalry units. The air cavalry element maintains close contact, liaison, and free exchange of information with the ground troops. In addition to its reconnaissance function, the air cavalry element may accomplish simultaneous surveillance over areas accessible to observation and provides the ground reconnaissance unit with early warning of enemy forces.

6-9. Zone Reconnaissance

a. 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 (fig. 6-12). Factors that determine the width of the zone are surface concealment, terrain features within the zone,

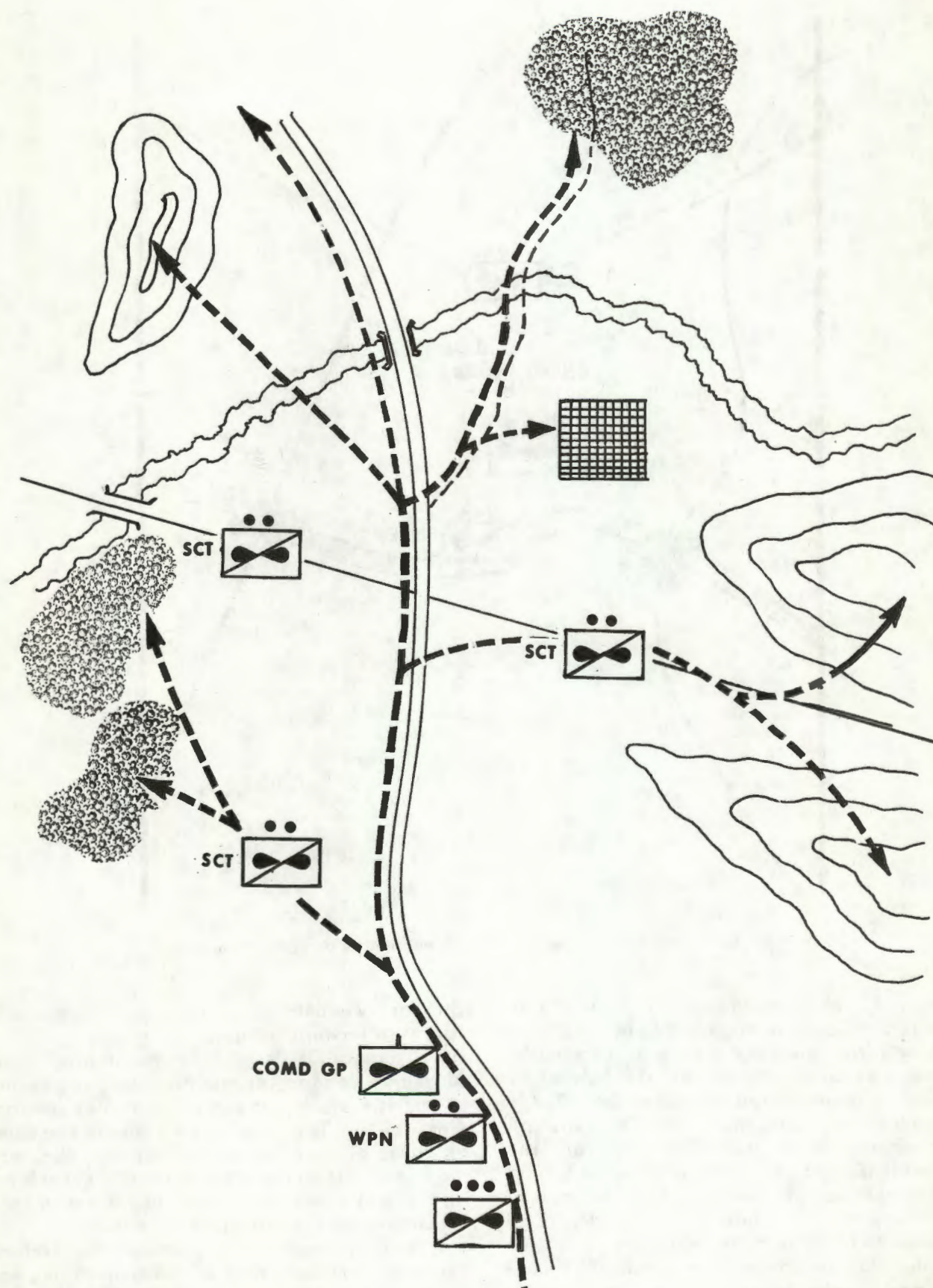


Figure 6-11. Air cavalry troop conducting route reconnaissance.

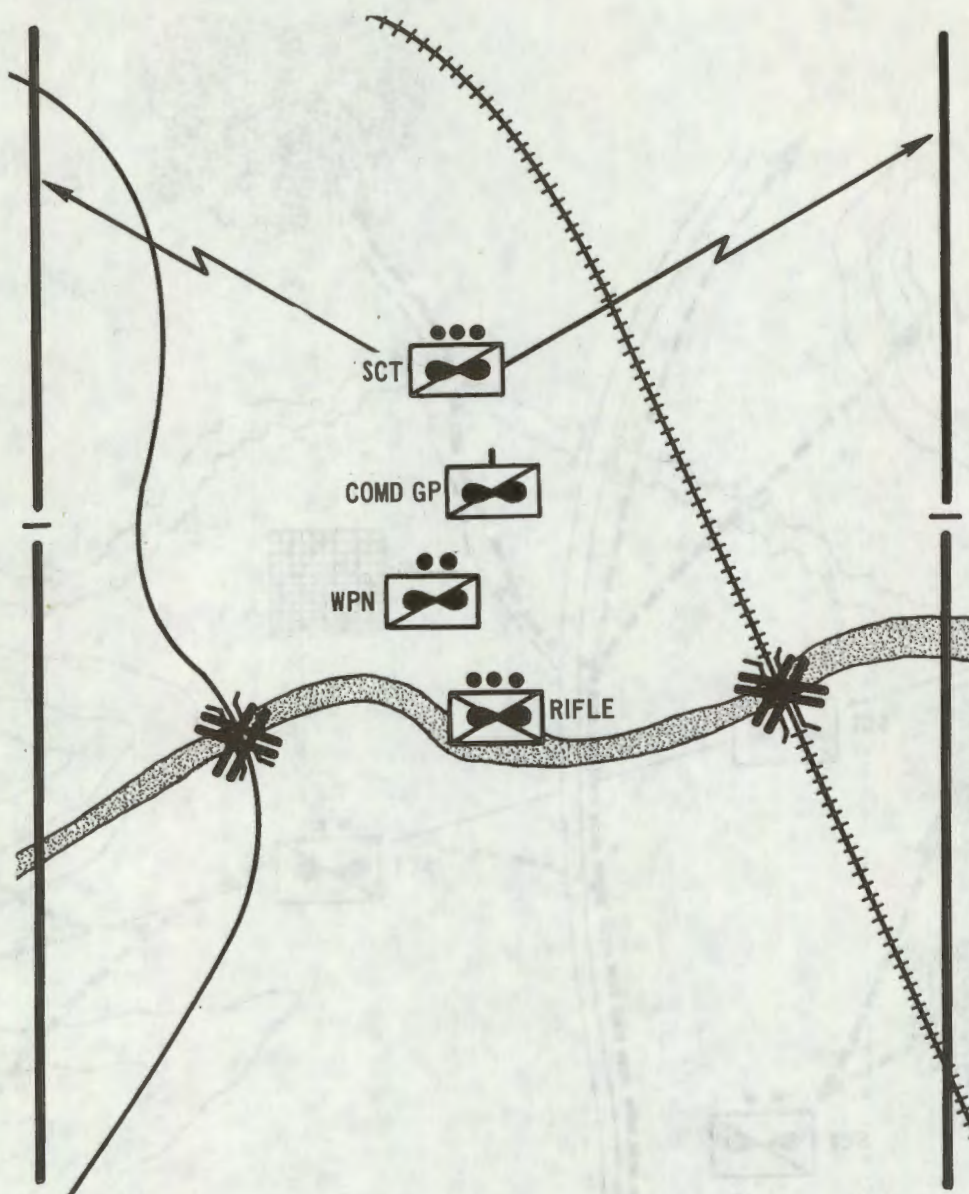


Figure 6-12. Air cavalry troop conducting zone reconnaissance in column formation.

time to accomplish the mission, degree of visibility, and anticipated enemy action.

b. 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. 6-13). Team organizations normally include elements from the aero scout platoon, aero weapons section, and aero rifle platoon (fig. 6-1). 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. Critical route information should be confirmed by ground reconnaissance. The roles of the aero scout platoon, aero rifle platoon, and

the aero weapons section remain the same as for route reconnaissance.

c. The aero rifle platoon frequently is required to conduct dismounted reconnaissance of specific areas not suited to reconnaissance from the air. The techniques used are the same as those of specific reconnaissance. The very slow rate of such operations must be considered and adjustments in the rate of the troop zone reconnaissance effort must be made.

d. Formations and techniques of searching the zone vary according to the size, shape, and nature of the zone, as well as the time available and the factors of METT. In a large zone of rectangular shape, parallel sweeps of the air

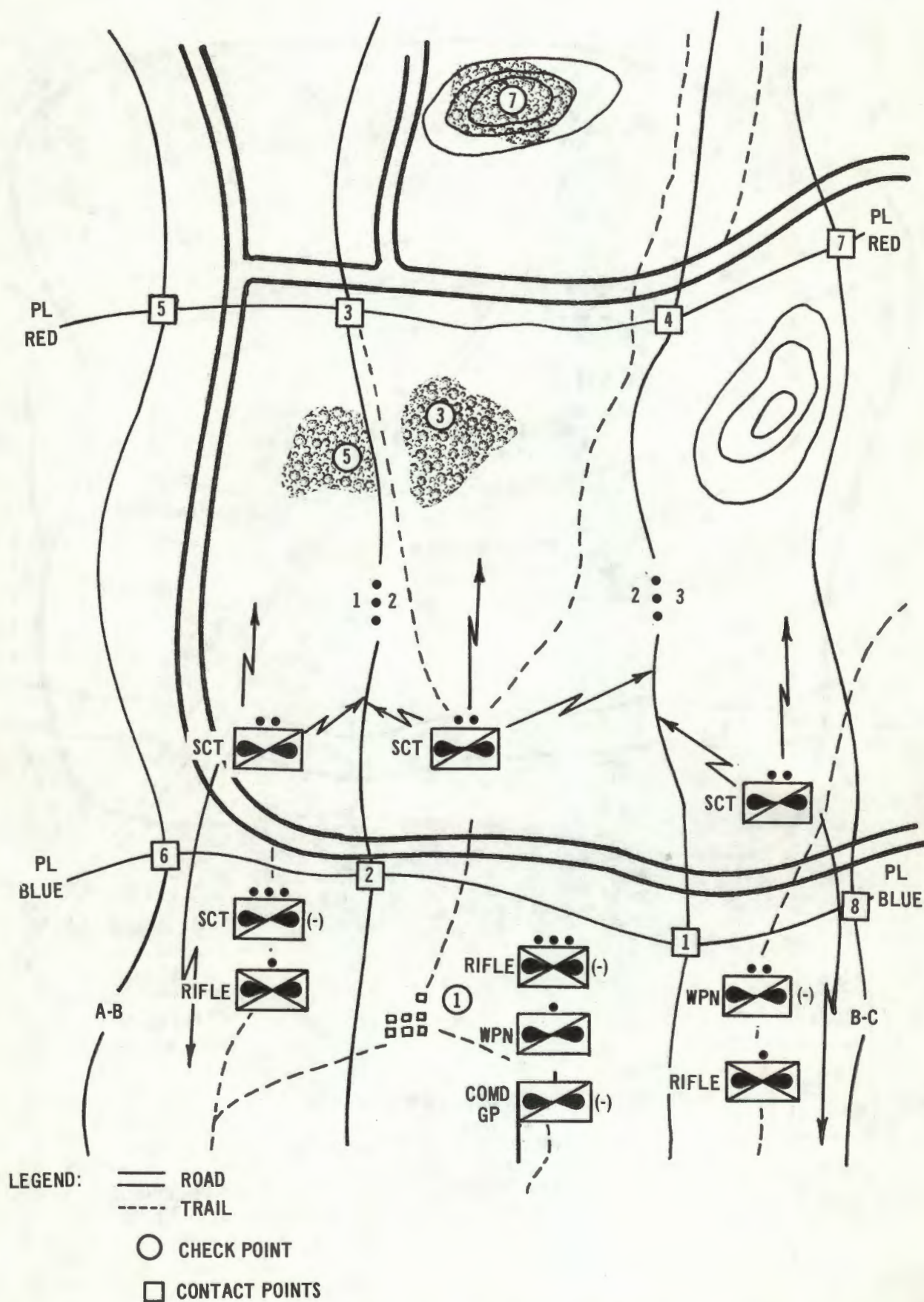


Figure 6-13. Air cavalry troop conducting zone reconnaissance with platoon teams.

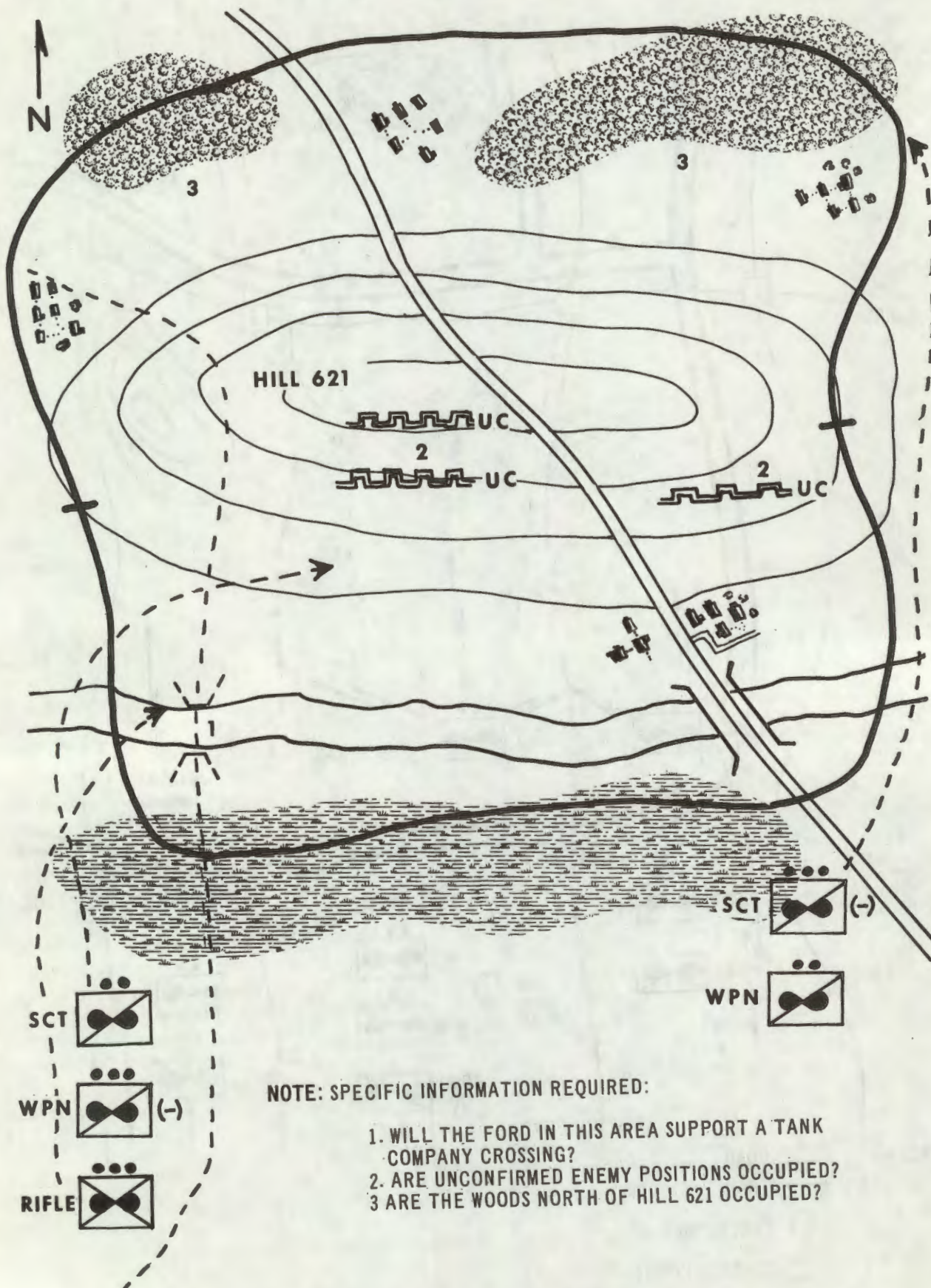


Figure 6-14. Air cavalry troop conducting specific reconnaissance.

formation between boundaries are normal. The aero rifle platoon (element) is 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.

e. 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 troop freedom of action. Thus, the troop in the conduct of a zone reconnaissance mission also executes a security mission, and at the same time accomplishes surveillance over areas not within the mission area but accessible to observation. In this situation, the troop primarily extends the ground reconnaissance effort. The troop rate of advance is oriented on the location of information objectives, but is regulated by the progress of the ground reconnaissance forces. Reliable communication and coordination between the air and ground reconnaissance elements are essential.

6-10. Specific Reconnaissance

a. Specific reconnaissance by the air cavalry troop is to obtain specific information pertaining to a designated area. It is performed with the troop or its elements in accordance with the factors of METT. Reconnaissance teams first conduct an aerial reconnaissance of the designated area. The aero rifle element is then landed to conduct a detailed ground reconnaissance of specific items not obtainable only by air reconnaissance. The aero scout platoon and aero weapons section support the ground reconnaissance performed by the aero rifle platoon (fig. 6-Q $\frac{1}{8}\frac{1}{2}$).

b. Detailed ground reconnaissance of suspected targets deep in enemy territory may be performed by air-delivered patrols from the aero rifle platoon. However, this is a long-range reconnaissance patrol mission and should be conducted by that type of unit, if possible. Patrols used in this manner achieve their mission by stealth, without air protection or support by other elements of the troop. Normally, the helicopter(s) do not remain with the scout or rifle element but return to pick up the patrol according to prearranged plans. Adequate communication between the patrols and troop head-

quarters must be maintained by establishing either forward area radio stations or air radio relay. The patrols may remain in enemy territory for extended periods, but their movements must be coordinated with higher headquarters to avoid casualties from friendly fires.

c. 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 accomplished by air activity only. However, for reconnaissance objectives such as towns, river crossing sites, bridges, and wooded areas, some dismounted reconnaissance is usually required. In such a situation, elements of the air cavalry troop provide air reconnaissance and early warning for the armored cavalry.

6-11. Conduct of Reconnaissance

a. In the execution of reconnaissance missions, i.e., route, zone, and specific 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) Placed, wholly or in part, in support, or under operational control, of armored cavalry troops requiring air cavalry assistance to accomplish assigned missions.

(3) Provided with armored cavalry elements under operational control.

b. Reconnaissance missions are executed boldly and aggressively, taking full advantage of the troop's mobility and firepower. Maximum use is 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 reconnaissance teams execute the air reconnaissance mission within the troop zone of responsibility. The aero rifle platoon is positioned to support the reconnaissance teams, when necessary. They occupy positions that permit them to move quickly to support the aero scout elements if enemy forces are encountered that cannot be bypassed or are of a size and type that would affect the completion of the mission if bypassed.

c. Flight altitudes for reconnaissance are 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 C).

d. The troop attacks, when necessary, in performing the reconnaissance mission. Care must



Figure 6-15. Aero scouts employing reconnaissance by fire (note firing and observing aircraft).

be taken not to become decisively engaged and thus fail to complete the reconnaissance mission.

6-12. Reconnaissance by Fire

a. During reconnaissance by fire, the positions being reconnoitered are continually observed to locate any enemy movement or return fire. Reconnaissance by fire is used when time is critical. It risks the loss of surprise, but it reduces the probability of unknowingly flying over a well-concealed enemy position (fig. 6-15). In the conduct of any reconnaissance by fire, there is a requirement for separate aircraft, or personnel, to fire or to observe the target area.

b. If the enemy returns the fire, the element proceeds to develop the situation. If the fire is not returned, the element continues on its mission; however, caution is exercised because re-

connaissance by fire may not draw the fire of seasoned enemy troops.

6-13. Control of Air Cavalry

a. The commander controls and coordinates the advance of his subordinate units primarily by radio. The commander places himself in a position, normally a central location, from which he can contact and control all elements. He is 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 control measures such as phase lines, contact points, and a series of reconnaissance objectives. Platoons or other elements report, but do not stop, on reaching or crossing phase lines. (For a discussion of control measures, see FM 17-1).

6-14. Instructions

a. A reconnaissance mission normally is assigned to the troop as a unit. When more than one mission is assigned, a priority is stated. The troop commander then allots tasks to the platoons or air cavalry teams. Operations are coordinated by the troop flight 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 required, the times they are to be reached.

(8) Locations and procedures for refueling/rearming, when required.

(9) Time mission is to be completed.

(10) Action after the mission is completed.

c. The troop commander usually issues orders orally to his platoon and section/team leaders. After the reconnaissance has started, necessary additional instructions are transmitted by radio, messenger, or by the troop commander in person.

6-15. Transmitting Information

Rapid transmission of information is essential to the success of any reconnaissance mission. For principles involved, see paragraph 3-20.

6-16. Chemical Agent Detection and Radiological Monitoring and Survey Operations (STANAG 2112)

a. Elements of the air cavalry troop are capable of performing ground chemical agent detection and air radiological monitoring in conjunction with other missions. Generally, the objective of detection and monitoring operations is to determine the presence of significant levels of chemical contamination and significant levels of radiological contamination.

b. The air cavalry troop can accomplish rapid air survey of the radiation hazard in the vicinity of a nuclear explosion. Radiological surveys are specific missions that normally divert a part of the unit from the normal reconnaissance and security missions. Therefore, they are conducted only when essential information cannot be obtained by monitoring or by other agencies.

c. Damage assessment of either friendly or enemy nuclear weapons can be performed by elements of the air cavalry troop. The troop may be the most readily available means to complete the first damage assessment survey operation.

Section III. SECURITY OPERATIONS

6-17. Security Operations

a. When performing security missions, the air cavalry troop must give the protected force adequate and timely warning of hostile approach. Within the capabilities of the troop, it engages the enemy to defeat, delay, and disorganize him. A security force orients its maneuver on the force being protected. There is no prescribed distance at which the air cavalry troop operates from the protected force. The distance varies with the factors of METT. The troop must be far enough from the squadron (force) to provide adequate time and space for the squadron (force) to cope with an enemy threat.

b. Security missions are frequently assigned to the air cavalry troop. The security mission is accomplished by offensive, defensive, and delaying action, or a combination thereof. The air cavalry troop normally performs security mis-

sions 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 often is 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 takes full advantage of his unit's mobility and radio communication capabilities to overcome the disadvantages of dispersion. The troop can be assembled quickly for a given mission, then rapidly redeploy as the situation requires.

6-18. Advance Guard

a. In an advance guard mission, the air cavalry troop normally acts as the air extension of the armored cavalry squadron (fig. 6-16). The

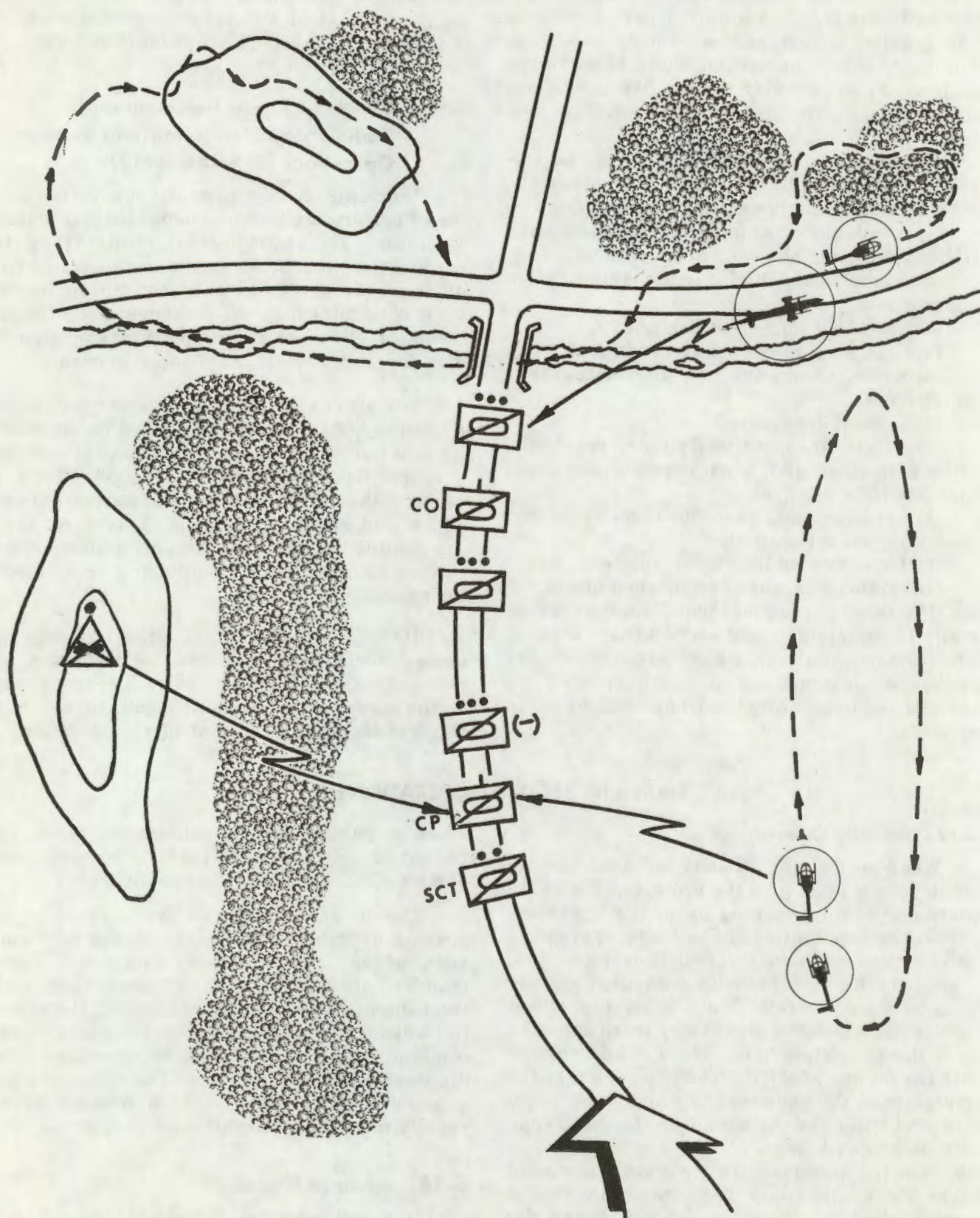


Figure 6-16. Air cavalry platoon teams under operational control of a ground troop conducting an advance guard mission.

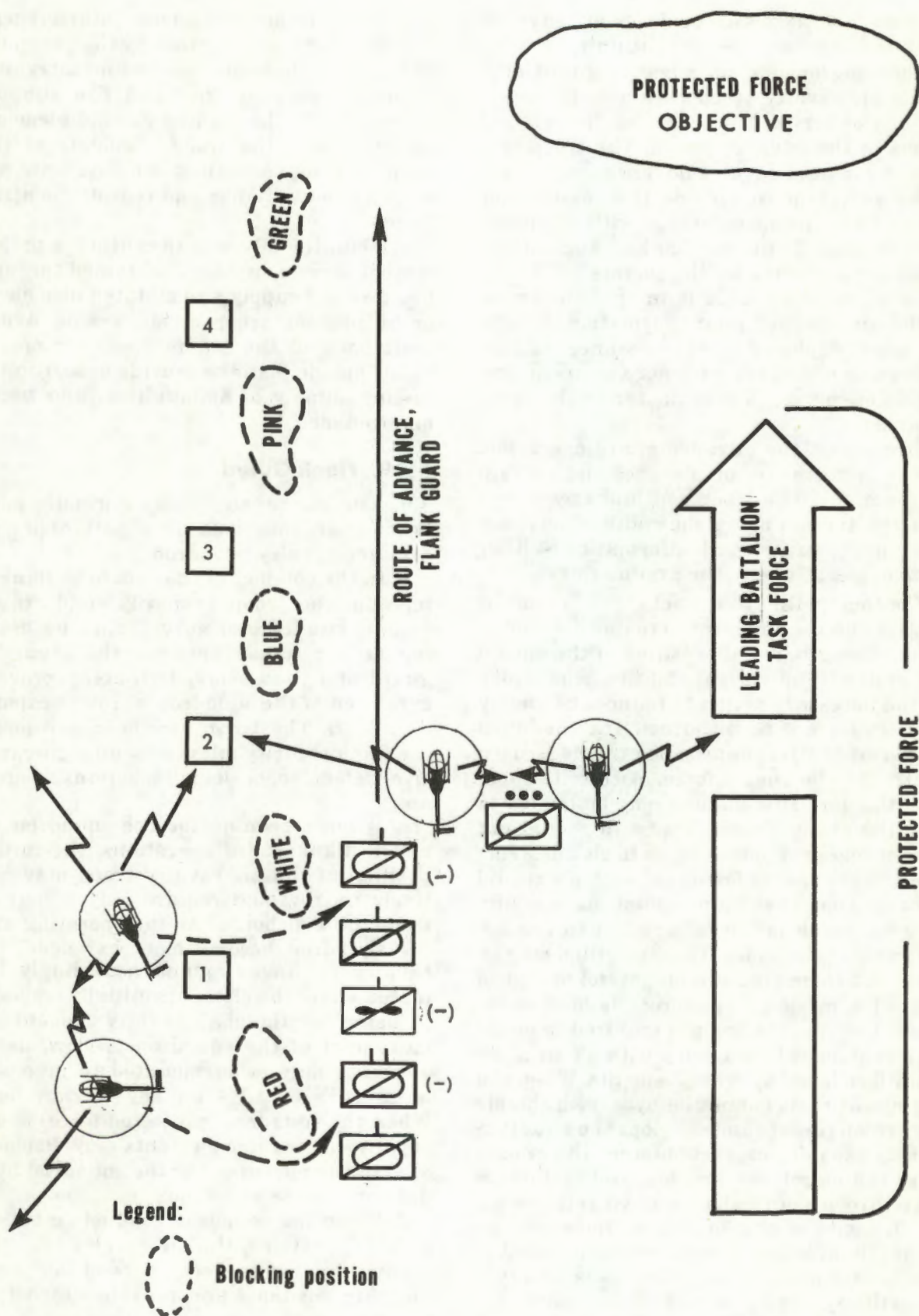


Figure 6-17. Air cavalry troop as part of the armored cavalry squadron in a flank guard security mission.

troop does not normally perform an advance guard mission as an independent unit.

b. When performing an advance guard mission, the air cavalry troop regulates its movement on the forward progress of the ground elements of the advance guard. The troop precedes the armored cavalry advance guard by a distance sufficient to provide the commander adequate time and space to cope with an enemy threat to the front or flanks. Formations adopted are governed by the factors of METT. When the protected force is in column formation, the air advance guard formation usually consists of deployed reconnaissance teams, reinforced as necessary with aero weapons and aero rifle elements, to reconnoiter to the front and flanks.

c. Throughout the advance guard operation, the troop performs reconnaissance and surveillance functions. The troop continuously reconnoiters the terrain along the route of advance and regularly reports all information—either positive or negative—to the ground forces.

d. Contact with the enemy is reported promptly. The reconnaissance teams 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 reconnaissance teams is used to neutralize the enemy force. Within its capabilities, the aero rifle platoon may be landed 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 not to engage the enemy force and to continue its mission, bypassing the located resistance. Usually, the troop is required to maintain surveillance of the enemy with a part of its force until relieved by other elements. When the enemy dispositions 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 through 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, artillery fires, aerial fires, and dismounted infantry action to develop the situation. Coordination with the ground element of the advance guard is continuous. Within its capabilities, the troop initiates offen-

sive action to prevent enemy interference with the preparations for attack by the ground units. This may include dismounted infantry attacks, reconnaissance by fire, and fire suppression measures. 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.

e. When the advance to contact is prolonged, combat service support is obtained through mobile forward supply and maintenance elements, or by phasing troop or supporting Army aircraft back to the trains area. Air operations must include plans to provide opportunities for fueling, supply of ammunition, and necessary maintenance.

6-19. Flank Guard

a. The air cavalry troop normally performs flank guard missions as a part of its parent armored cavalry squadron.

b. In the conduct of the squadron flank guard mission, the troop primarily conducts an air reconnaissance and surveillance by establishing an air screen between the ground flank guard and the enemy. It thereby provides an extension of the squadron's ground capabilities (fig. 6-17). The troop assists in accomplishing the flank security mission by engaging in offensive, defensive, or delaying actions as appropriate.

c. When screening for the squadron during mobile flank guard operations, 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 operating areas of the squadron become more extended, the air cavalry frontages extend accordingly by displacement of the elements initially employed, or by using additional air cavalry elements. If the movement of the squadron is slow, aero rifle elements may be dismounted to man surveillance OP's or LP's on key terrain features. When the squadron (protected force) is moving rapidly, air cavalry elements may displace parallel to the movement of the squadron by alternate or successive bounds.

d. When the squadron conducts mobile flank guard operations, the air cavalry troop is normally employed to screen beyond the line of the blocking positions and provide support to the troop acting as squadron advance guard. Normally, the air reconnaissance and security operations of the troop do not extend beyond the line of the air screen. In situations where the

flank guard is not in contact with the enemy, elements of the troop may reconnoiter avenues of enemy approach out to the operational range of assigned helicopters. Ground dispositions of the squadron do not unduly influence the dispositions and actions of the troop; however, all actions of the air cavalry troop are coordinated to support the squadron mission. When contact is established with an enemy force, the air cavalry troop engages the enemy to harass and delay his advance. Positive knowledge of the activities, strength, and location of the enemy force is maintained as it approaches the squadron blocking positions. The squadron commander is kept informed of the situation.

e. In a slow moving or static situation, the troop may use a combination of dismounted and air actions. Elements of the aero rifle platoon may be landed to man OPs along primary avenues of enemy approach. Concurrently, reconnaissance teams conduct air patrolling forward of and between the ground OP's. The aero weapons platoon usually remains centrally located and prepared to support the aero scout or aero rifle platoon.

6-20. Rear Guard

a. The air cavalry troop normally performs a rear guard mission as a part of the parent squadron. The troop may, but does not normally, perform a rear guard mission as an independent unit.

b. Rear guard missions may be conducted as a series of delaying actions. The rear guard follows the protected force at a prescribed distance or time interval and generally along the same axis as the force. Based on the situation, movement may be continuous, and is regulated by the movement of the protected force. Movement may also be by bounds with the rear guard force occupying key terrain positions to block possible enemy attacks.

c. Elements of the air cavalry troop are normally under the operational control of the rear guard force commander if he is other than the squadron commander.

d. The troop performs continuous reconnaissance and surveillance to the rear and flanks, reporting all information promptly. Air cavalry 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 its own destruction, the troop reports the situation to the rear guard force commander and maintains surveillance over the enemy.

e. Rear guard 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 cavalry troop extends its operations to the distances required to insure adequate time and maneuver space for the protected force commander to cope with the enemy threat.

f. When participating in a rear guard mission in conjunction with ground forces, the aero rifle platoon is not usually required to conduct dismounted action. If the air cavalry troop is performing a rear guard action as an independent force (a above) the aero rifle platoon may be used to occupy ground positions designed to provide delay consistent with the platoon's capabilities. The platoon is airlanded on or close to the initial delay position, and its helicopters return to a protected rear area until required to extract the platoon. Each landing is made under cover provided by the aero scout platoon and aero weapons platoon. While the aero rifle elements occupy their designated positions, the aero scout platoon and aero weapons platoon extend the platoon area of reconnaissance coverage to the flanks and in the direction of the enemy. As the protected force increases its distance from the rear guard, the aero rifle element is extracted, again under cover of elements of the aero scout platoon and aero weapons platoon, and is moved to the next delay position. When the progress of the protected force is rapid, and the enemy is not threatening direct interference, an air screen to the rear and flanks of the protected force 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 platoon are located to provide rapid support at any point of enemy contact.

g. In a withdrawal from contact, the air cavalry troop is normally employed in conjunction with ground elements of the squadron. Specific actions of the troop involve reconnaissance, security, offensive, and delaying action. Because of the difficulties of recognizing friendly helicopters during the withdrawal, detailed coordination to establish usable control procedures and recognition signals is required. Coordination is very critical when the troop is engaged in night withdrawals. The air cavalry troop may take part in the withdrawal as an element of the security force protecting the withdrawal of the protected force. When acting

as part of the security force, the air cavalry troop conducts its operation in the same manner as in the rear guard mission.

6-21. Screening Force

a. The air cavalry troop may be used as a screening force. This is accomplished by conducting surveillance over an extended frontage to the front, flank, or rear of a moving or stationary force in order to provide early warning to the screened force by observing, reporting, and maintaining positive knowledge of the location and activities of all enemy forces encountered. The air cavalry troop probably performs screening missions more often than any other security mission. A screening mission is assigned to the air cavalry troop when security is required on an extremely wide front and limited forces are available to accomplish the mission. The air cavalry troop covers this extended front with aero scout patrols, aero rifle patrols, or a combination of both. These patrols are supported by elements of the aero weapons platoon. The screening force, when deployed over such a wide area, normally observes and reports enemy activity. The air cavalry screen may be required to engage small enemy patrols within its capability. Unless otherwise ordered, elements of the screen maintain positive knowledge of the activities, strength, and location of the enemy force and report this information to the squadron commander.

b. When the air cavalry troop is assigned a screening mission, the team elements normally conduct the air patrols required for 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 OP's. Aero weapons elements reinforce scout elements in provisional teams when the assigned frontage is too great to permit employment of aero weapons elements from a position in the center of the troop section.

c. When ground deployment is required, elements of the aero rifle platoon are transported to the selected OP locations in their organic helicopters. When adequate cover and concealment are available 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. Aero rifle screening positions are usually organized in squad strength and provided with adequate communication to the platoon CP. OP's are located on commanding or key terrain features

covering likely avenues of enemy approach. The mission of each OP or LP is to maintain surveillance over an assigned avenue of enemy approach and report all information as obtained. Small LP's may be advanced from the OP's at night. Except in self-defense, aero rifle elements of the screen normally engage only small enemy patrols. Maximum use is made of stealth and concealment. Limited patrol operations may be conducted from OP's. These operations include reconnaissance patrols and contact patrols to adjacent OP's. Air contact and surveillance are maintained between widely separated OP's.

6-22. Covering Force and General Outpost Force (GOP)

a. The air cavalry troop is not capable of performing covering force operations independently. It normally operates as part of the armored cavalry squadron or under the operational control of another headquarters on such missions.

b. The air cavalry troop normally performs a security or reconnaissance mission when the squadron is performing a covering force or GOP force mission. The air cavalry may be used on the flanks, to the front, or to the rear of the squadron. The squadron or supported unit commander specifies the air cavalry troops area of responsibility. The areas or units to be protected by the covering or GOP force are also designated.

c. The troop accomplishes its missions, as part of the covering force or GOP force, by establishing an air screen and necessary ground OP's to provide early warning of enemy approach. The screen is forward of the squadron covering force or GOP force positions. The air screen serves as a warning system, and consists of reconnaissance teams and aero rifle OP's. When forced to withdraw, the troop delays the enemy and protects the flanks of the squadron within its capability. The troop avoids decisive engagement with the enemy. Every effort is made to deceive the enemy as to the location of all elements of the squadron.

d. The air cavalry troop may be used as part of an advance covering force in a movement to contact (fig. 6-18). In such a situation, the troop normally operates under control of the armored cavalry squadron. The troop usually reconnoiters to the front and flanks of the covering force, employing zone reconnaissance techniques. It seeks out the enemy force and

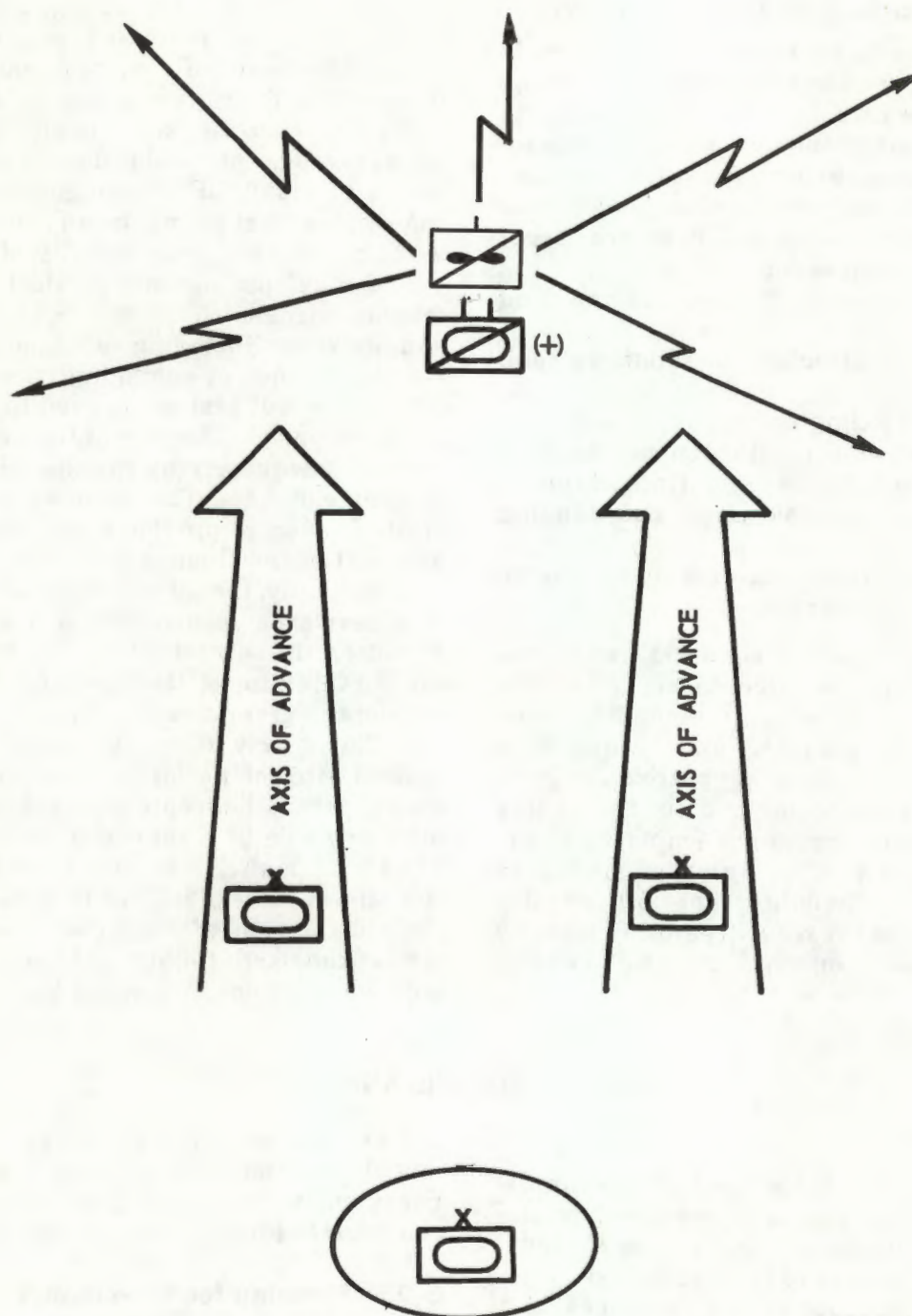


Figure 6-18. Air cavalry troop as part of a covering force.

destroys the enemy within its capabilities. When superior enemy forces are encountered, the troop develops the situation to determine the composition and disposition of the force, and prepares to assist the squadron during its attack. The troop is normally employed as a unit to conduct thorough reconnaissance of the area through which the friendly forces are advancing. In seeking out the enemy positions, the reconnaissance teams are supported by the aero

rifle platoon. Small enemy forces are destroyed or dispersed by fire. The aero rifle platoon may be dismounted to conduct limited offensive operations on the ground. Aero rifle elements may secure bridges or defiles to assist the uninterrupted advance of the ground elements. When aero rifle elements are so used, they are relieved as soon as possible by the advancing ground cavalry elements, relifted, and resume their supporting position in the troop formation.

6-23. Rear Area Security (STANAG 2079)

a. The mission of a rear area security force 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, and 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 of attacked installations and units.
- (3) Route patrolling and convoy escort.
- (4) Surveillance of possible enemy 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 normally consists of planning and occupying a series of OP's, and conducting patrols designed to detect enemy activities and fix the enemy until highly mobile forces are employed to destroy him. Because of its speed of maneuver and operational flexibility, the air cavalry troop is well suited to execute rear area security missions as 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 provide a dismounted force with a limited defense capability for securing key installations. Greater area coverage can be obtained by establishing a series of small OP's throughout the area as information gathering means and a warning system. The rear area security plan must provide for defense against vertical envelopment (enemy airmobile/airborne operations), partisan activities (including sabotage), and for 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 OP's or ground combat elements. The aero weapons are centrally located to provide immediate support to any part of the troop sector.

d. Normally, the air cavalry troop is employed in a rear area security mission as part of the squadron. In this situation, the troop provides air surveillance of the squadron rear area to extend the ground capability.

e. The enemy forces weapons systems and limited size, of normally encountered in rear areas, permit helicopters to assume a greater offensive role in a rear area security mission. Flights at higher altitudes permit more effective surveillance of the entire area with periodic close inspection of suspected enemy activity. Nap-of-the-earth flight techniques are required only when an enemy force is encountered.

Section IV. SURVEILLANCE**6-24. General**

a. Surveillance is integrated in reconnaissance and security missions and involves the conduct of systematic or continuous observation over specific areas of the battlefield.

b. There are no prescribed frontages and depths which may be assigned to the air cavalry troop. The factors of METT, which must include aircraft limitations and performance characteristics, must be considered. Due to the nature of the task, the troop can perform surveillance over greater frontal areas than it can reconnoiter or secure. It usually performs surveillance from nap-of-the-earth altitudes, balancing the air defense vulnerability against the requirements for the surveillance task. When it is necessary to go forward of friendly lines to observe assigned areas of the battlefield, one or more reconnaissance missions (in sequence)

are appropriate since systematic and continuous observation (surveillance) over enemy territory may be subject to effective enemy countermeasures.

6-25. Planning for Surveillance

Surveillance by the air cavalry troop is generally passive in nature and normally does not require the entire troop. The commander plans to accomplish surveillance with the minimum expenditure of resources consistent with his overall requirements. When possible, surveillance tasks performed as part of reconnaissance and security missions. Daylight surveillance is essentially visual, and at night the troop may employ visual and photographic/electronic means (when available). Surveillance requirements are generally outlined by higher headquarters. Final troop plans must be coordi-

nated with the ground surveillance plan. Normally, no specific information is requested, and all observations are reported. A major consideration when planning to assign a surveillance mission to the air cavalry troop is the number of flying hours required to accomplish the surveillance task. Under normal circumstances, prolonged surveillance over an extended area, or a line, is best performed by fixed wing aircraft controlled by higher headquarters.

6-26. Conduct of Surveillance

a. The troop commander assigns tasks to subordinate platoons and sections/teams. All combat elements of the troop can perform surveillance.

b. Troop elements are issued oral orders by

the commander. They proceed to their assigned sectors or routes and overwatch their sectors/routes in accordance with prescribed schedules. These schedules should be varied to preclude establishing patterns which allow the enemy to employ deception measures designed to provide false information. Information obtained by observation of the enemy and terrain (significant data—no activity observed may be as significant as increased enemy activity) is reported over radio in accordance with the order (usually in spot report form). Confirmatory photography may be used when camera equipment is available. Upon completion of the surveillance task by each element, the aircraft crews are debriefed for detailed information not previously transmitted.

Section V. OFFENSIVE OPERATIONS

6-27. General

a. The air cavalry troop normally attacks in conjunction with other elements of the squadron to accomplish assigned reconnaissance and security missions. The air cavalry troop may attack to develop a specific reconnaissance objective, or to seize a critical target of opportunity when these objectives are lightly defended. The attack must be mounted quickly before the enemy can reinforce the objective, and the troop must be reinforced quickly before the enemy can mount a significant counter-attack. The troop 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 platoon and the aero rifle platoon are normally employed as the maneuver force; however, the aero weapons section may provide an air base of fire (fig. 6-19).

c. The air cavalry troop is capable of being employed as an attacking force to secure an objective in a planned offensive role, although this is not a normal mission. Its capabilities for sustained offensive action are limited.

6-28. Preparation for the Attack

a. The commander's preparation for the attack consists of issuing a warning order, making an estimate of the situation, coordina-

tion 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 to form platoon teams. After receipt of the order in which the troop commander announces the team composition, team leaders coordinate their actions. They make all necessary arrangements concerning communication, liaison, reconnaissance, and other matters of mutual interest.

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

d. All individuals of the troop must receive the order in sufficient detail to insure understanding and proper attack execution.

e. Before the troop is committed to an attack, the commander normally makes a personal air

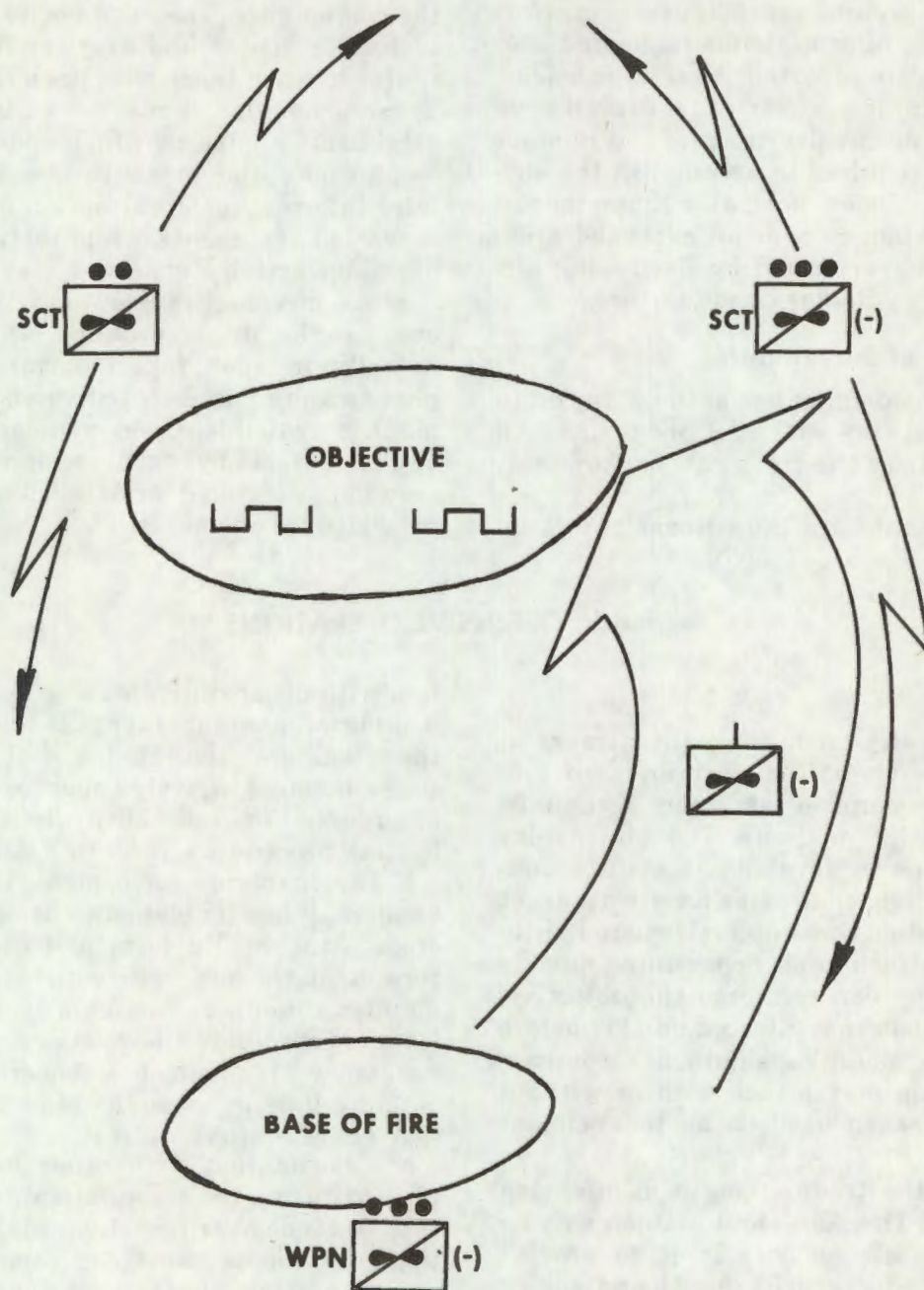


Figure 6-19. Air cavalry troop in a coordinated attack.

reconnaissance. He arranges to have his subordinate leaders accompany him or 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 visibility do not permit visual reconnaissance, 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 in relation to terrain identifiable from the air.

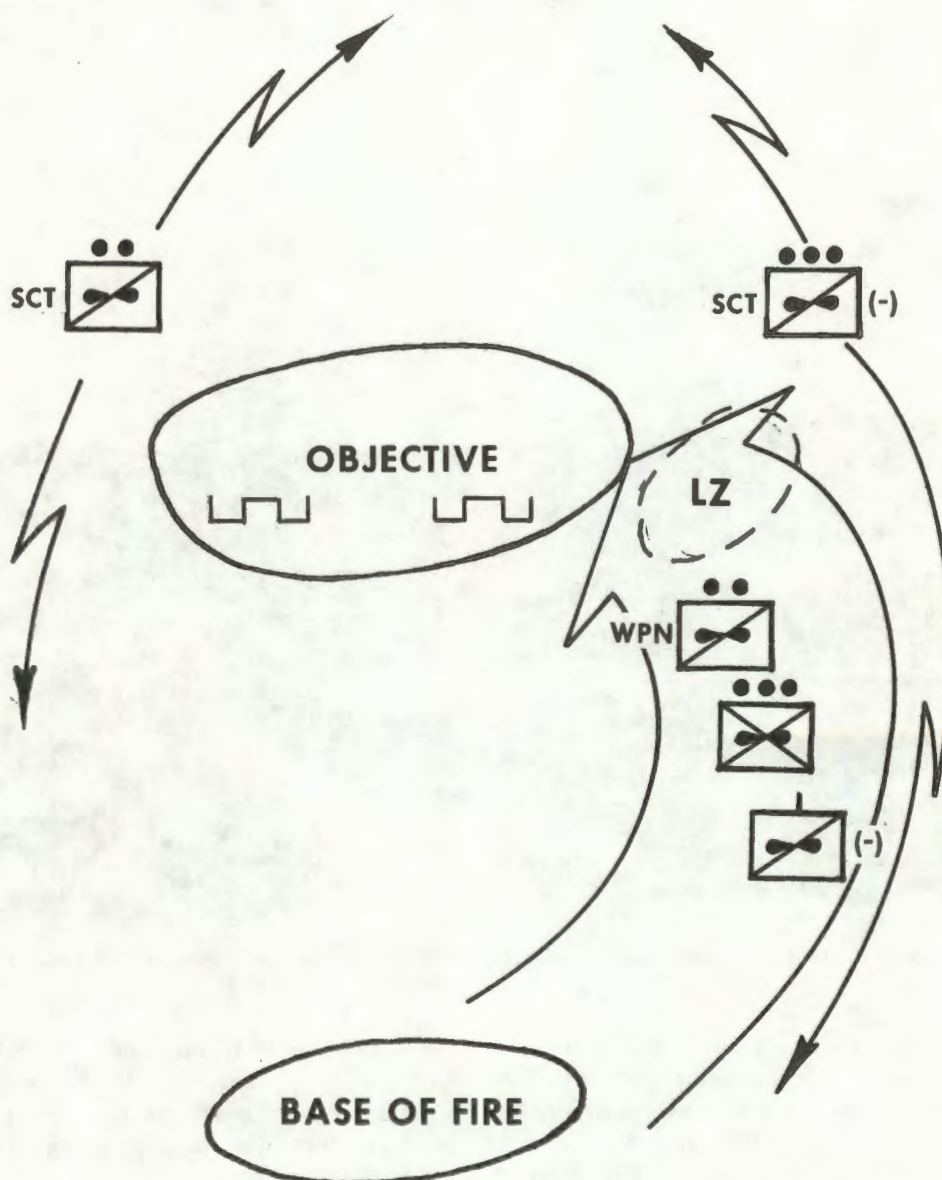


Figure 6-20. Distribution of forces, air cavalry troop in the attack.

(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 takes maximum advantage of the information developed by the reconnaissance. It must be simple but cover all essential details—the location and composition of targets to be fired upon; signals for lifting or shifting the fires; composition of the maneuvering force; avenues of approach to the objective; formation to be used; and if required, the method of advance, provisions for security during the attack as well as for consolidation and reorganization on the objective; and details of

the linkup and relief by the ground forces, with particular emphasis on the location of fire coordination lines and linkup points, recognition signals, and communications channels (fig. 6-20).

h. Organic fire support is normally provided by the aero weapons platoon. Artillery or mortar support from ground units is used if the objective is within supporting distance; also, tactical air is used if available. When supporting fires are provided, coordination is required to insure that helicopters are aware of all artillery and mortar fires, to include directions of fire and maximum ordinates within the troop's area of operations. Simple control measures relating airspace utilization to easily recog-

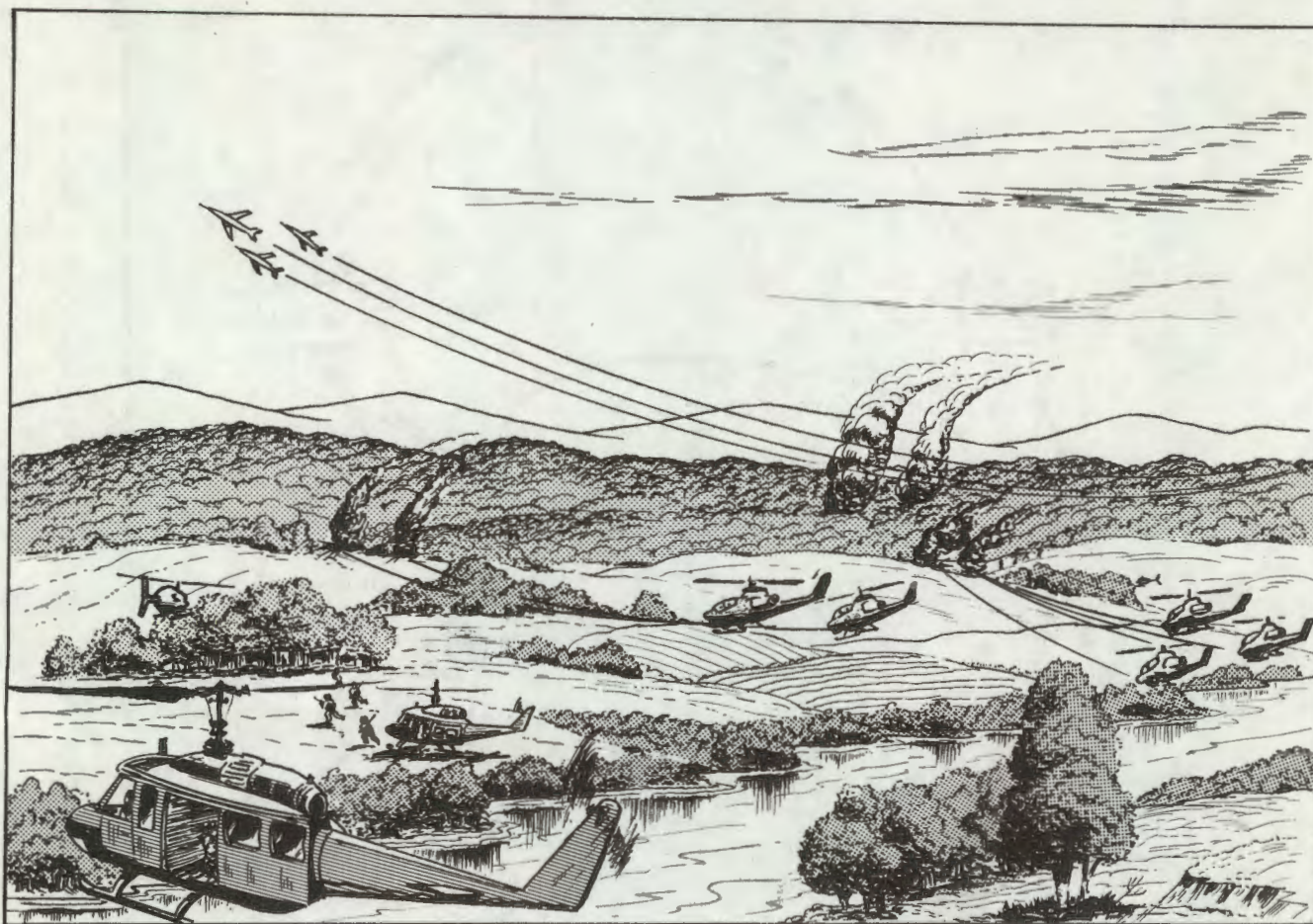


Figure 6-21. Air cavalry troop employing coordinated fires in support of an aero rifle platoon assault.

nized terrain features are essential. When the range to the objective is too great for artillery support, tactical close air support (if available within reasonable time limits) may be used to soften up the objective area before the assault and to seal off the objective to preclude reinforcement or counterattack.

i. During these preparations, the command must constantly balance the risks of losing valuable time against the risks of hasty and incomplete planning. Time is of the essence. Simple plans which employ well-developed SOP's are vital.

6-29. 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 within reach. Air movement brings the organic firepower into new and more advantageous positions.

b. Unless otherwise planned, fire and movement begin immediately with the first definite hostile contact. The troop commander places

himself where he can best control those elements of the troop that exert the main effort in the attack. He maintains communication with the other elements. Radio is the primary means of communication.

c. The mission of the 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. Aero scout elements may assist in directing the base of fire. They have the advantage of being able to move rapidly in and out of position over terrain that is difficult or impossible for ground units to traverse. When used to assist the base of fire, aero scout elements may locate and mark the targets for the aero weapons platoon. Tactical close air support is employed when available to seal off the objective.

d. On a prearranged order, all base of fire weapons begin firing on the objective. The 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

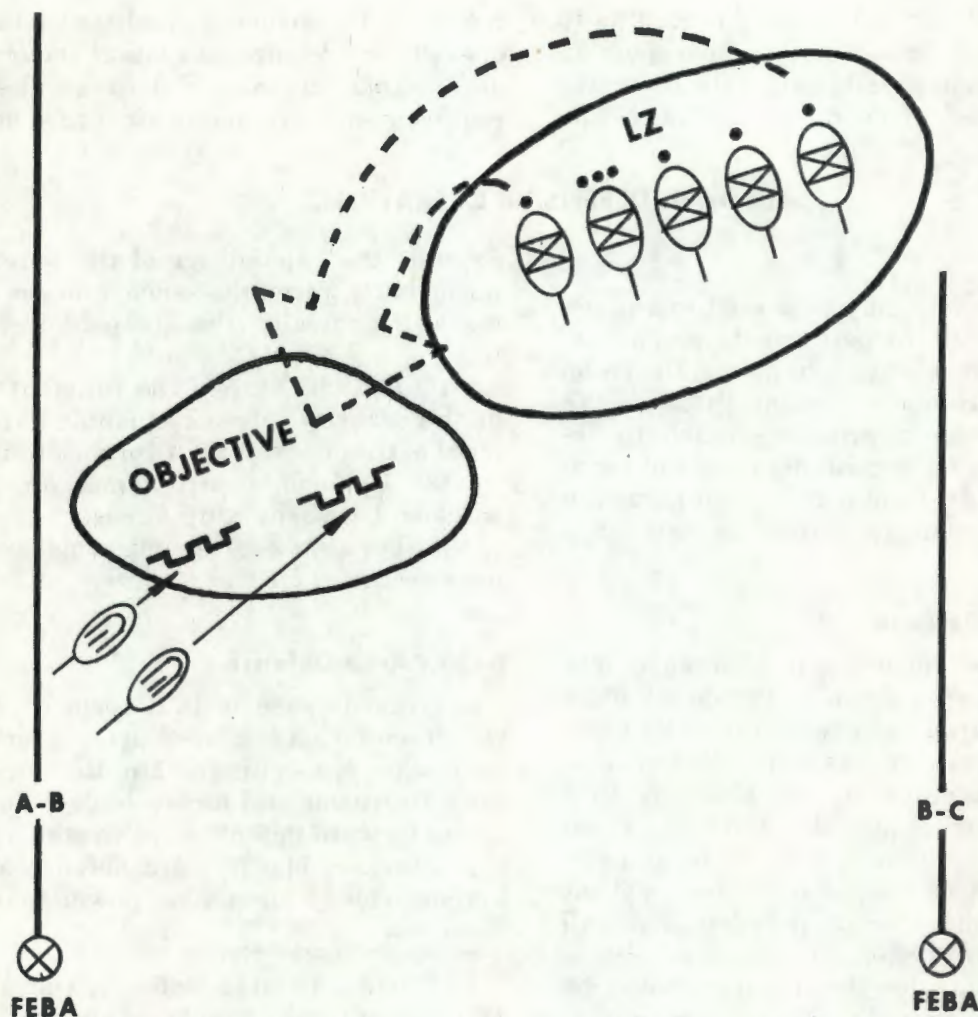


Figure 6-22. Aero rifle platoon landing and assaulting from flanks or rear of objective.

objective. Elements of the aero scout platoon or aero weapons platoon seal off the objective with suppressive fire, protect the flanks and rear of the ground assault force, and fire on targets of opportunity beyond the capability of the aero rifle platoon (fig. 6-21). This is controlled by radio, observation, 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 avoid enemy fires. This is done by using air gunnery techniques outlined in appendix C.

e. The aero rifle platoon assaults mounted or dismounted. When the terrain and the situation permit, the aero rifle platoon normally approaches an enemy position from the flanks or rear (fig. 6-22). It moves by covered or concealed air routes to the aero rifle dismount point. Elements of the aero scout platoon and aero weapons platoon cover the landing of the aero rifle platoon. Immediately after landing,

the aero rifle platoon moves into position to make the final dismounted assault on the objective.

f. Fire from elements of the aero rifle platoon should strike the objective before supporting fires are lifted. The moment that the base of fire lifts or shifts, the aero rifle platoon moves directly into the final assault on 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 immediately established. Aero scout elements provide security at greater distances than the ground elements. This security includes maintaining visual contact with any forces that may have been driven from the objective. Casualties are provided medical aid and emergency evacuation by medical or troop helicopters as required. Members of the troop are designated to replace key individuals who are wounded and evacu-

ated. Prisoners of war are handled according to unit SOP. The commander makes his report on the action as soon as possible after the objective has been secured. The report includes the

results of the attack, casualties sustained, prisoners taken, equipment losses incurred, immediate and future combat service support requirements, and plans for future action.

Section VI. DEFENSIVE OPERATIONS

6-30. General

The air cavalry troop may be forced to engage in defensive actions to perform its reconnaissance and security missions; however, the troop does not normally operate alone in defensive actions when better alternatives exist. In defense, other than for reconnaissance and security mission requirements, the troop normally takes part in defensive action as part of a larger force.

6-31. Forms of Defense

a. There are two basic forms of defense: mobile defense and area defense. Preparation for either mobile or area defense requires the same detailed reconnaissance, position selection, and 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 permit. It includes 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 paragraph 12-1.

c. The techniques of conducting reconnaissance and security missions (to include integrated surveillance), and offensive operations, as discussed in paragraphs 6-6 through 6-29, are applicable to the employment of the air cavalry troop in both mobile and area defense.

6-32. Mobile Defense

a. Mobile defense is that form of defense in which minimum forces are deployed forward and priority is given to use of mobile combat elements and forces concentrated in the reserve. Primary reliance is placed upon the use of offensive action by the reserve to destroy enemy forces. 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) Initially extend the range of operations of the security forces to include early engagement of the enemy forward of the ground force.

(2) Perform security missions (normally screens) between fixing forces.

(3) Perform security missions (such as rear area security) for the reserve.

6-33. Area Defense

a. Area defense is that form of defense in which emphasis is placed upon retention of, or control over, specific terrain. Reliance is placed upon firepower and forces deployed on position in the forward defense area to stop and repulse the attacker. The forward defense area has a higher priority for combat power than does the reserves.

b. During an area defense, the air cavalry troop is normally employed as part of the armored cavalry squadron. The troop may be used as part of the covering force or general outpost (GOP) force, or it may provide a small airmobile counterattacking force (reserve). It is not normally assigned a sector within the battle position because of the limited ground-holding capability of the aero rifle platoon, which is the only air cavalry element suitable for ground employment.

c. The troop may appropriately act as a security force for the squadron during covering force operations or when the squadron is part of the GOP force. 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 screening large sectors more rapidly than ground reconnaissance units.

d. The air cavalry troop may be used as an independent airmobile reserve, but normally acts as a reconnaissance and security force or accomplishes surveillance for the squadron. While in reserve, it may have an additional responsibility for rear area security.

Section VII. DELAY ACTION

6-34. General

a. The air cavalry troop may be required to conduct a delay action in order to accomplish other assigned missions. The troop normally conducts this action as a part of the squadron. Usually, the troop performs reconnaissance and security missions to support the squadron delay action.

b. When the troop commander is assigned a delay mission, or it becomes apparent that he must fight a delay action, he makes a map reconnaissance of designated positions and selects successive positions that his troop is to occupy as it delays. This map reconnaissance is supplemented by air reconnaissance when the situation permits.

6-35. Organization of Delay Position

a. The aero rifle platoon is located on the most dominating ground to cover the primary avenue of enemy approach. The platoon is capable of occupying a position normally occupied by an infantry platoon. It is the ground nucleus of the delay position. The capabilities of the aero rifle platoon to accomplish delay with organic weapons are minimal. The aero rifle platoon can be employed to direct supporting fires on an advancing enemy force. These supporting fires must be used to cover the platoon's rearward movement prior to its becoming decisively engaged. The aero scout platoon screens to the front and flanks of the delay position. The aero weapons platoon provides direct aerial fires. Artillery and tactical close air support must be planned and efficiently employed.

b. Helicopters of the aero rifle platoon are positioned in areas offering cover and concealment as close to the delay position as possible. Each squad of the aero rifle platoon should have a concealed route by which it can go to its helicopters for movement to the next delay position. The helicopters normally fly forward shortly before rearward movement begins to the next delay position. Where possible, all helicopters use defilade flight routes to, from, and between delay positions.

c. Hastily prepared obstacles are improvised to slow the enemy's advance. These obstacles are covered by fires from the aero weapons platoon and supporting artillery.

d. Chemical munitions (when authorized) are used to disrupt, disorganize, and slow the enemy advance.

e. The delay position may be organized as an ambush. This may occur in either close or open country and under conditions when vehicular movement is restricted, observation is limited, and fields of fire are short. The enemy can be expected to approach such an ambush site with alertness and caution.

6-36. Conduct of a Delay Action

a. Delay at each position is accomplished by forcing the enemy to deploy and attack. The troop engages enemy forces at the maximum effective range of organic ground weapons. Aero weapons platoon aircraft engage advancing enemy forces whenever possible; and supporting indirect fires are employed when enemy forces come within their effective range. The troop is withdrawn, on order from higher headquarters, in time to prevent decisive engagement. Frequent air harassing attacks by the aero weapons platoon are conducted to impede the enemy's advance.

b. The aero scout platoon provides security to the front and flanks of the position. They give early warning of the approach of enemy forces, provide harassing fires, and adjust long-range supporting fires. Because of their air mobility, they may engage the rear and flanks of the enemy force in a series of hit-and-run harassing attacks as the enemy approaches the troop delay position. As the enemy continues his approach, the recon teams move to the flanks of the aero rifle positions and continue to maintain contact with advancing enemy forces and adjust indirect fires.

c. The aero rifle platoon, occupying the dominating terrain astride the enemy's axis of advance, adjusts fires from supporting indirect fire weapons when enemy forces come within maximum range of those weapons and engages the enemy at maximum effective range of organic direct fire weapons. On order, the platoon assembles at waiting helicopters and moves to the next delay position. The movement should be covered by aero scouts, aero weapons, and all available supporting fires. Coordination of these supporting fires and aircraft airspace is essential.

d. The troop commander employs the aero weapons platoon when and where it can best influence the action. Normally, aero weapons aircraft are located initially in defilade some distance to the rear of the delay position; how-

ever, they are available for rapid air employment to support the aero scout or aero rifle platoons.

6-37. Rearward Movement From a Delay Position

a. Movement to the rear from a delay position is rapid, but it is conducted in an orderly manner. Elements move back only on the troop commander's order.

b. Close control in a delay action is essential. It is exercised by the troop commander through personal on-site supervision and by radio. To exercise maximum control and to achieve maximum delay, the troop commander locates 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.

c. Coordination and reliable communications with the ground elements of the delay force are essential. As the covering echelon of the ground delay force withdraws, the air cavalry troop exerts maximum effort to immobilize and impede the enemy forces. Effective use of the troop may permit the ground forces to break contact as long as air contact with the enemy is maintained. The troop insures continued surveillance of the enemy until ground forces can or are prepared to reestablish contact.

d. The aero rifle platoon is usually the first element to move back. It moves back rapidly to its waiting helicopters and is airlifted to the next delay position.

e. The aero weapons platoon, less any attachments to the aero scout platoon, is next to move back. The aero weapons platoon may be used to deliver aerial fires on the enemy advancing forces between delay positions.

f. The aero scout platoon is normally the last element to move back while maintaining contact with advancing enemy forces. The aero scouts maintain contact with the enemy during the rearward movement of the remainder of the troop. A part of the aero scout platoon, reinforced with elements of the aero weapons section, may perform continuous delay and maintain contact with the enemy between delay positions. One method of doing this is to make hit-and-run attacks on the enemy's rear and flanks. Aero weapons elements concentrate attacks on area targets and strike hard point targets, if possible.

6-38. Employment in Delay as Part of a Larger Force

a. When used as part of a larger force, the air cavalry troop normally performs reconnaissance and security missions and accomplishes necessary surveillance for the squadron during delay actions (fig. 6-23). Operating as a unit, the troop maintains contact with the enemy forces, continuously reporting enemy dispositions and progress to the squadron commander. The aero scout platoon maintains surveillance. The aero weapons section provides the major source of area firepower with rockets and machineguns for the troop. Employment of troop forces in the delay does not ordinarily require ground employment of the aero rifle platoon. The aero rifle platoon accompanies the other elements of the troop in a delay role, prepared for employment as the situation requires. When acting as part of the squadron delay force in contact with the enemy, the air cavalry troop may be used to deliver aerial fires on forward enemy elements, to maintain air surveillance over the enemy front and flanks, and to execute offensive actions against small isolated units. During movement to the rear, the troop organization for combat and flying formations are influenced by the factors of METT. In the conduct of reconnaissance and security missions and integrated surveillance tasks over a broad front, formations are dispersed. On a narrow front, dispersal between helicopters, together with the use of only a part of the troop organized in teams, permits adequate reconnaissance and contact to be maintained on a continuing basis by rotating provisional platoon teams. Air formations avoid concentrations of helicopters and make maximum use of cover and concealment.

b. When used in a delay action as part of the squadron, the air cavalry troop pays particular attention to the flanks. Small enemy reconnaissance and security elements are destroyed, and enemy attempts to envelop the delay 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 a rear area security mission (para 6-23).

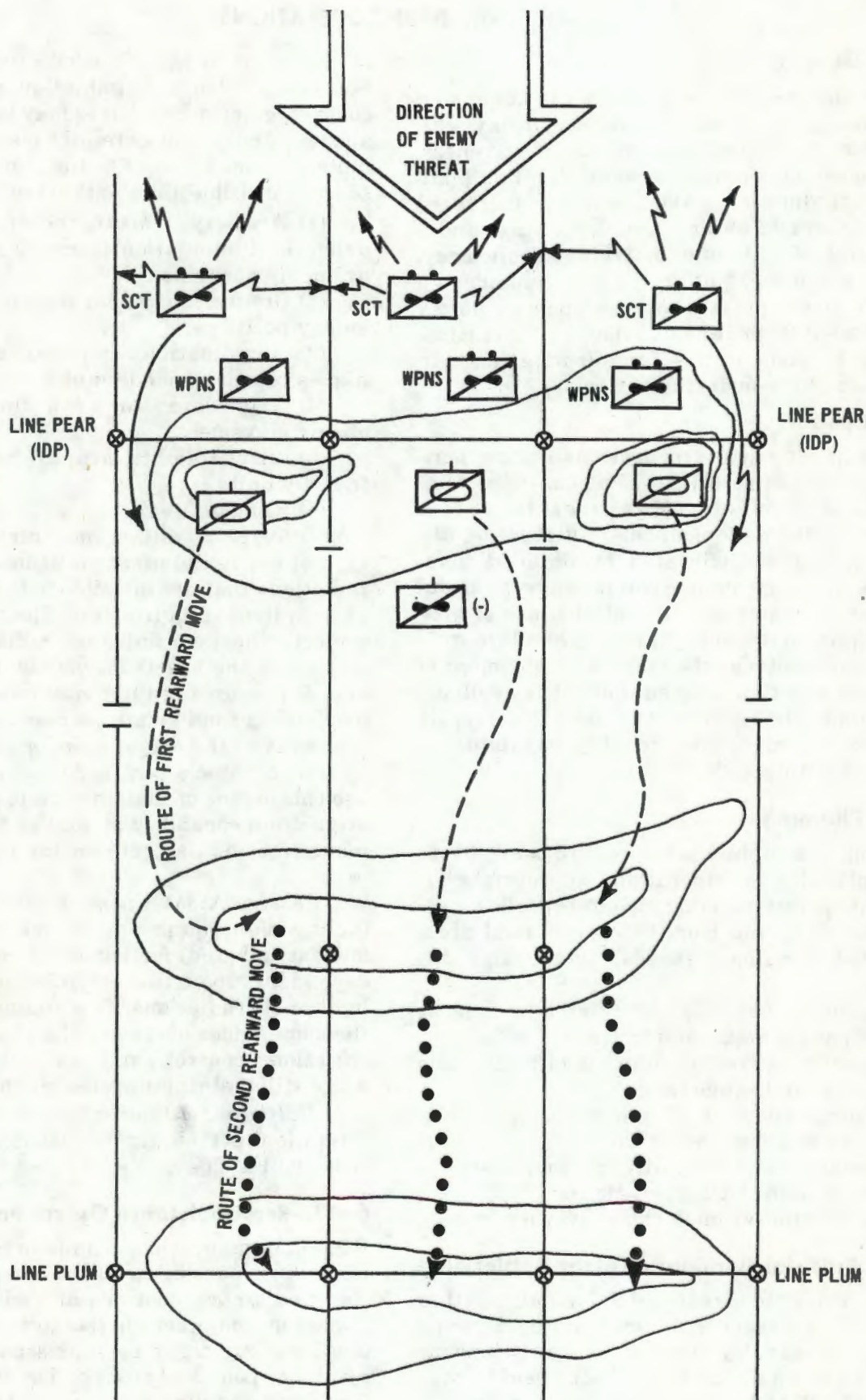


Figure 6-23. Air cavalry troop as part of the squadron delay force.

Section VIII. NIGHT OPERATIONS

6-39. General

Air cavalry operations at night are conducted in basically the same manner as in daylight. However, to insure maximum effectiveness, night operations require greater detail in planning, coordination, and control; increased night vision and observation device use; and a high level of unit and individual proficiency. Night operations offer the commander a number of unique advantages such as better concealment from enemy visual observation, increased opportunities for surprise, and an extension of the operational day.

6-40 Control

Control of air cavalry operations during periods of darkness is difficult, but can be accomplished effectively. Measures to aid in controlling the actions of the unit must be utilized. Control is facilitated by detailed planning; a thorough map reconnaissance; careful selection of routes and formations; use of artificial light to include flares, ground searchlights, and light signals; and the employment of whatever night-viewing equipment is available to the unit. The use of pathfinders can greatly increase the night/low visibility capability of air cavalry units (FM 57-38).

6-41. Planning

Planning for night operations, in addition to those planning considerations appropriate for daylight operations, must include the following:

- a. Routes to and from the operational area, computed headings, speeds, times, and distances.
- b. Location of readily identifiable landmarks such as rivers, roads, and towns.
- c. Location of friendly units, and their radio frequencies and range fans.
- d. Coordination of illumination, identification, and navigation assistance.
- e. Terrain clearance altitudes, and obstacles to flight in night NOE operations.
- f. Coordination of employment of other fires.

6-42. Artificial Illumination of the Battlefield

Until such time as an effective, all-weather night vision system is available for operational aircraft, air cavalry aircraft must rely to some extent on illumination of the battlefield by visible (artificial) and non visible (infrared) means.

- a. *Visible Illumination.* The employment of visible light is the most common means of in-

creasing the range of vision during darkness. Sources of visible illumination will often become targets; enemy forces may be immediately alerted; and, if not carefully planned, the illumination may benefit the enemy. Several sources of visible illumination are listed below:

- (1) Artillery, mortar, rocket, and aerially-delivered illumination flares to mark friendly or enemy positions.
- (2) Ground and aerial searchlights to mark enemy positions.
- (3) Illumination grenades and pyrotechniques to mark friendly units.
- (4) Trip flares to mark the presence of enemy movement.
- (5) Strobe lights are useful in marking friendly units.
- (6) Weapon fires.

b. *Infrared Illumination.* Infrared (IR) is a type of active illumination using near infrared radiations that are invisible to the unaided eye. The system requires an illuminator which projects the near infrared radiations to that portion of the spectrum visible by the human eye. This source of illumination may be available from ground or air sources that are in the proximity of the target area, or can be supplied by unit organic aircraft. Air cavalry units can use this means of illumination to increase their acquisition capability as well as their ability to maneuver and navigate during periods of darkness.

c. *Passive Night Vision Equipment.* Passive night vision equipment (image intensification and far infrared) for battlefield surveillance is dependent upon the amplification of natural light or IR radiations. This equipment will help the commander overcome the acquisition, identification, control, and navigation problems while still maintaining stealth and secrecy.

d. *Battlefield Illumination.* For detailed information pertaining to battlefield illumination, see FM 20-60.

6-43. Reconnaissance Operations

Reconnaissance will continue to be the primary mission responsibility of the air cavalry troop. Reconnaissance missions at night will be conducted in a manner similar to such missions in daylight, but night reconnaissance is assisted by night vision and observation devices and the firepower and illumination capabilities of other supporting elements. Day familiarity with the area of operations is desirable to reduce night

navigation errors and to insure the effective use of terrain as an aid in the reduction of vulnerability.

6-44. Night Offensive Operations

a. Air cavalry units execute limited-objective night offensive operations independently, or as part of a larger force, or to link up with other ground forces, usually against light enemy threats. Offensive operations are either armed reconnaissance missions or air assault-type actions.

b. For a detailed discussion pertaining to night armed reconnaissance and air assault-type actions, see FM 17-37.

6-45. Night Defense/Delay Operations

a. Air cavalry units participate in night defensive and delay type operations independently, or as part of a larger force. Independent operations can consist of a delay mission using blocking positions to cover main avenues of enemy approach into a unit's sector. It must be remembered that, due to the unit's limited ground-holding capability, this mission must be carefully planned and coordinated to insure

success. Operating as part of a larger force, air cavalry units can be employed in all types of defensive operations, but are best suited for use in the reconnaissance and security missions and surveillance tasks during defensive operations.

6-46. Night Operations in Conjunction with Attack Helicopters

Air cavalry operations will habitually utilize assets of attack helicopter units during the conduct of night operations. The air cavalry elements will continue to gather all available enemy information and initial acquisition of enemy targets. As this information is translated into intelligence, targets may well be developed that result in requirements for the attack helicopters. When this situation occurs, direct coordination between the aero scout elements of the air cavalry unit and the attack helicopter units will have to be completed to establish target location, description of the target, and size of the target. Once the target transfer coordination is completed, the aero scouts continue with their original mission.

Section IX. AIRSPACE CONTROL

6-47. Control Responsibilities and Procedures

a. The airspace control element (ACE) is responsible for the coordination of airspace requirements within the division area.

b. The commander of the armored cavalry squadron is responsible for coordinating the use of airspace above his squadron's zone of action or sector. This will include coordination of all flights of his own organic air cavalry troop aircraft, other Army aircraft, and aircraft of other services that will be operating in or passing through his airspace on a pre-planned basis. The squadron commander may designate his S-3 air or S-3 as the commander's

representative responsible for insuring that airspace control is accomplished.

c. Whenever the air cavalry troop's aircraft are operating outside the armored cavalry squadron's zone, the operations officer of the air cavalry troop will notify the division airspace control element (ACE) on the routes of flight, times, destination, and number of aircraft. The flight leader of the air cavalry elements will contact ground units prior to entering their airspace for final coordination and warning of any hazards to flight and indirect fires impacting or being fired within the unit boundaries. Detailed discussion of army airspace control doctrine is contained in FM 44-10 (Test).

PART FOUR

ARMORED CAVALRY SQUADRON

CHAPTER 7

GENERAL

Section I. GENERAL

7-1. Purpose and Scope

a. Part Four is a guide for the employment of the armored cavalry squadron of the armored, infantry, and mechanized, and infantry divisions.

b. This part covers organization and employment of the divisional armored cavalry squadron in reconnaissance and security missions and offensive, defensive, and retrograde operations as an economy of force. The armored cavalry squadron of the armored cavalry regiment is discussed in FM 17-95.

7-2. 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, defensive, and 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, infantry, or mechanized infantry divisions.

b. The armored cavalry squadron has the following capabilities:

- (1) Conduct ground and aerial reconnaissance over wide fronts and to extended depths.
- (2) Collect and report information of intelligence value, including information of nuclear targets and nuclear damage assessment,

employing ground and air observation and electronic ground surveillance means.

(3) Protect or screen the flank or flanks of the division.

(4) Provide security or maintain contact between elements of the division or between the division and an adjacent unit.

(5) When reinforced, act as a division covering force in offensive, defensive, and retrograde operations, and as a divisional general outpost (GOP) in defensive operations.

(6) Conduct chemical agent detection and radiological monitoring and survey operations.

(7) Perform area damage control and rear area security operations.

(8) Exploit the success of other units and effects of mass-destruction weapons.

(9) When suitably reinforced, conduct extended semi-independent operations.

7-3. Combat Service Support

The tactical success of the armored cavalry squadron requires adequate and continuous combat service support. Detailed prior service support planning is essential. Supply, medical evacuation, transportation, and maintenance support must be adequate and timely. The procedures for all aspects of combat service support, the service support elements available to the commander, and the employment of the squadron trains are covered in detail in FM 17-1 and FM 54-2

Section II. ORGANIZATION

7-4. General

The divisional armored cavalry squadron (TOE 17-105) consists of a headquarters and headquarters troop, three armored cavalry troops, and an air cavalry troop (fig. 7-1). Organizations of the armored cavalry troop and the air

cavalry troop are discussed in chapters 4 and 6 respectively.

7-5. Headquarters and Headquarters Troop

a. The headquarters and headquarters troop of the armored cavalry squadron consists of

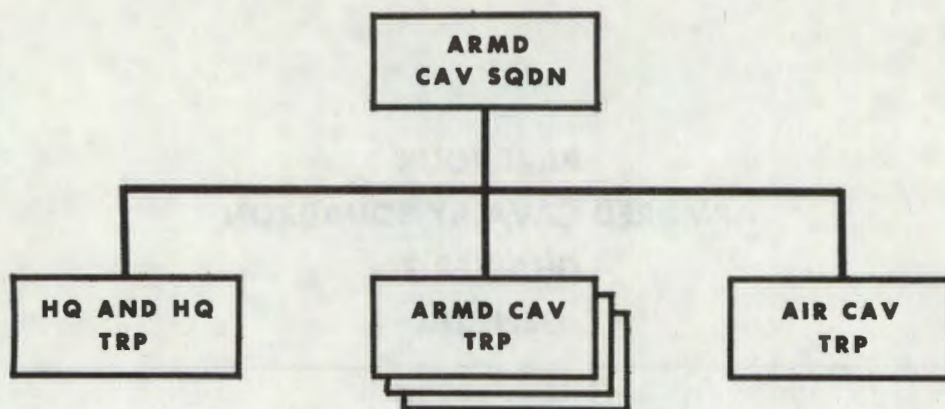


Figure 7-1. Organization chart, armored cavalry squadron, armored infantry, and mechanized infantry division.

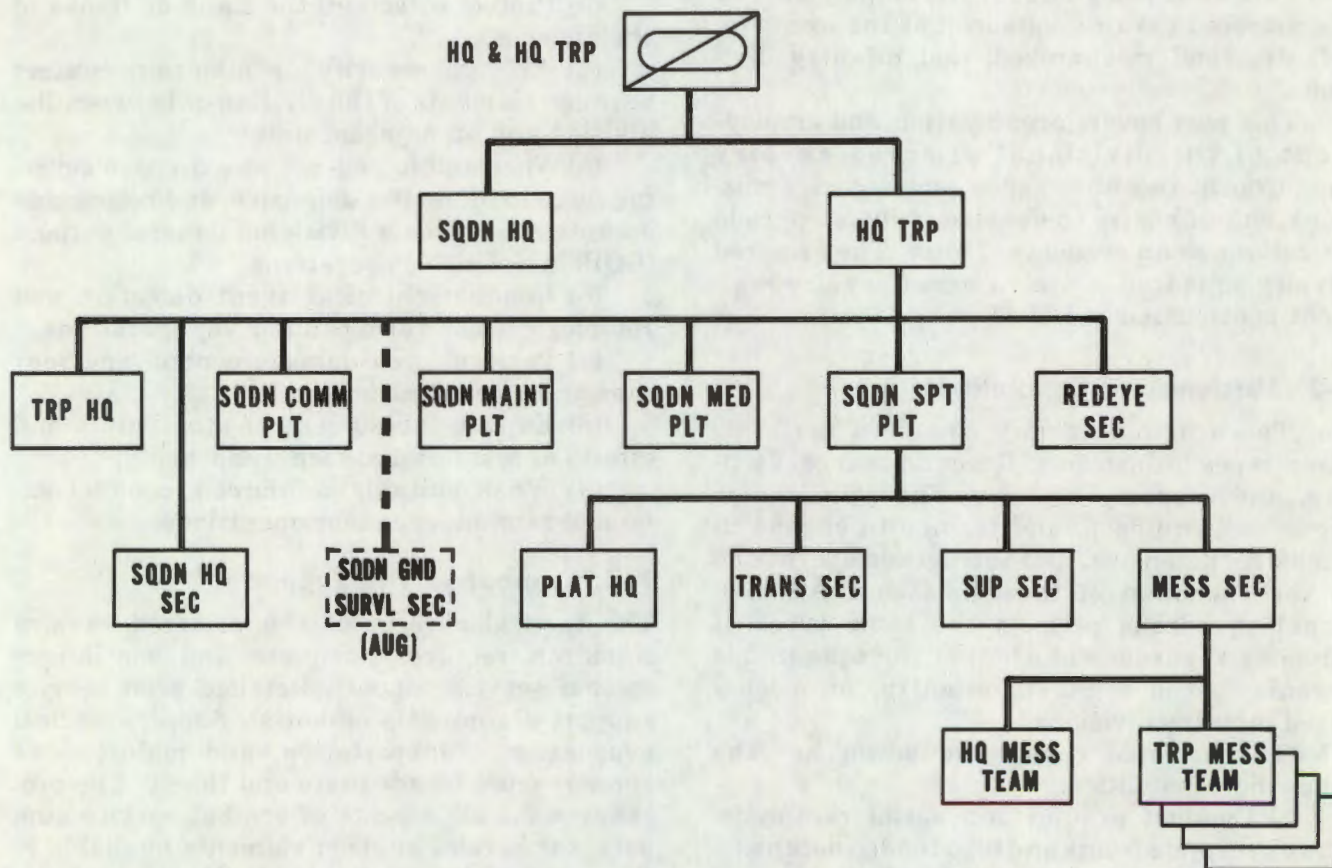


Figure 7-2. Organizational chart, headquarters and headquarters troop, armored cavalry squadron.

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, squadron air de-

fense section, squadron ground surveillance section, and a squadron air control team (fig. 7-2). The ground surveillance section may be authorized under mobilization conditions as an augmentation when conditions require it.

b. The mission of the headquarters and headquarters troop is to provide command, administration, communication, supply, medical,

transportation, and maintenance support for the squadron. It also provides organic combat support for the Redeye section and tactical air control party (TACP).

7-6. Squadron Headquarters

The squadron headquarters is organized to command, control, train, and employ the squadron. Its personnel includes the squadron commander, executive officer, personnel staff officer (S1), intelligence officer (S2), operations and training officer (S3), S3 air officer, logistics officer (S4), civil-military operations officer (S5) (when authorized), communications officer, motor officer, and the command sergeant major. For duties and responsibilities of the squadron commander and his staff, refer to FM 17-1 and FM 101-5.

7-7. Troop Headquarters

a. Generally. The troop headquarters, headquarters and headquarters troop, is organized to provide necessary combat service support for the troop and for squadron headquarters. It consists of a headquarters section and a maintenance section.

b. Headquarters Section. This section includes the troop commander, executive officer, first sergeant, supply sergeant, troop clerk, and a driver. The troop commander commands and controls headquarters troop and is responsible for the organization, security, and movement of the squadron command post.

c. Maintenance Section. The maintenance section is supervised by the automotive maintenance technician. This section includes the motor sergeant, mechanics and drivers, maintenance data and repair parts specialists, and the troop armorer. It maintains all headquarters troop vehicles and armament.

7-8. Squadron Headquarters Section

The squadron headquarters section provides the bulk of the enlisted men for the staff sections and some of the vehicles needed for command and control of the squadron. Headquarters section includes three liaison officers, an intelligence sergeant and assistant, an operations sergeant and assistants, a personnel staff non-commissioned officer (PSNCO), a chemical noncommissioned officer (augmentation), radio operators, clerk typists, a legal clerk, drivers for the section vehicles, and two commanders for the armored command and reconnaissance carriers. Transportation includes

two light tracked command post carriers, two armored command and reconnaissance carriers, and necessary general purpose vehicles.

7-9. Squadron Communication Platoon

The squadron communication platoon, commanded by the squadron communication officer, contains sufficient personnel, equipment, and organic transportation 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 also serve as cryptographic specialists using CEOI and CESI codes and ciphers. The platoon has two secure radio teletypewriter sets, each mounted in a command post carrier; they are used to support the S1/S4 and the S2/S3 complexes. The platoon has an additional command post carrier for use as the squadron message center, and additional wheel vehicles for messengers.

7-10. Squadron Support Platoon

a. General. The support platoon consists of a platoon headquarters, a transportation section, a mess section, and a supply section. It has the personnel, 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 a light truck driver. The platoon leader serves as the assistant S4 and controls the squadron field trains. He has radio communication with the transportation section leader and the squadron S4, using the squadron administrative and logistics FM net.

c. Transportation Section. The transportation section is organized and equipped 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 distribution points to troops of the squadron. The section leader has radio communication with the support platoon leader and the squadron S4 on the squadron administrative and logistics net (FM). He normally leads 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.

7-11. 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 led by the squadron motor officer who is also a special staff officer. He is assisted by a warrant officer automotive maintenance technician. He has radio communication with the squadron S4 and the troop maintenance sections over the squadron administrative and logistics net (FM) or, in an emergency, over the squadron command net (FM). Details of operation of the maintenance platoon are contained in FM 54-2 and FM 17-1.

7-12. Squadron Medical Platoon

a. The medical platoon provides unit level medical support to the squadron. The platoon is organized into a platoon headquarters which includes an aid station section, an aidman section, and an evacuation section. It establishes and operates the aid station. The platoon 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 medical and sanitation inspections. Details of its operation are contained in FM 17-1.

b. The normal allocation of medical platoon support to each troop in the armored cavalry squadron consists of one medical aid-evacua-

tion team composed of an ambulance, with aidman and driver, and three aidmen per troop.

7-13. Redeye Section

The Redeye section headquarters contains a section leader, section sergeant, and a radio telephone operator/light truck driver (augmentation). The section provides command and control of the Redeye teams when in general support of the squadron, or designated troops, or direct support of a given troop. The section headquarters has a light truck with trailer and radio communication with the squadron on the command net (FM) and with the Redeye teams on the Redeye section net (FM). There are five identical Redeye teams provided to meet local air defense requirements. Each team has a Redeye team chief (sergeant) and a Redeye gunner. Each is equipped with a 3/4 ton truck and trailer with FM radio. The Redeye section may be employed to support the squadron as a whole, or teams may be attached to, or placed in direct support of, troops. When the section supports the squadron as a whole, it is assigned a general-support mission and a priority of protection is designated. Appendix E contains details of employment and a sample air defense annex to a squadron SOP.

7-14. Ground Surveillance Section (Augmentation)

The ground surveillance section contains a section sergeant, a team leader, two senior radar operators, and two 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 ground radar surveillance. The section normally operates under the staff supervision of the squadron S2. Details on the section equipment and employment are found in FM 17-1.

Section III. COMBAT SUPPORT

7-15. General

a. The material discussed 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 Air Force tactical close air support. Tank and infantry units may be attached to, or placed under the operational control of, the squadron for specific missions.

7-16. Artillery Support

When the squadron performs independent or semi-independent operations, field artillery

may be attached to the squadron. When direct support artillery is available, the squadron commander and artillery representative must coordinate the supporting artillery fires with the squadron plan of operation.

7-17. Air Defense Artillery Support

Divisional air defense artillery (ADA) may be attached to, or placed in direct support of, the squadron, especially when the squadron is operating beyond range of the division air defense systems. The supporting ADA commander provides liaison and communications to the squadron CP to insure integration of air defense with squadron operations. The commander will specify the relationship of the supporting ADA commander and the organic Redeye section leader to insure a coordinated air defense. If ADA is used in the ground fire support role, the squadron fire support coordinator (FSCOORD) (if present) or S3 plans and directs such utilization. For employment details, see FM 44-3.

7-18. Tank and Infantry Support

a. Tank and infantry units may reinforce or support the armored cavalry squadron.

b. When mechanized infantry or tank units reinforce the squadron, they are normally employed as units under squadron control. Infantry and tank units may be attached to, or placed under operational control of, armored cavalry troops if such reinforcement is necessary to accomplish armored cavalry troop missions.

c. If tanks and mechanized infantry are attached at the same time, they are usually employed as a tank-infantry team(s).

7-19. Engineer Support

Engineers may be attached to or in direct support of the squadron to perform demolition functions; assist in the crossing, clearing, and installation of obstacles; assist in the crossing of inland waterways; perform technical reconnaissance; and accomplish road maintenance to facilitate movement of the squadron. Engineers may be employed under squadron or troop control.

7-20. Army Aviation Support

Army aviation support is provided by corps or division aviation units or the brigade aviation

section. Aviation staff assistance and advice are provided to the squadron commander by the air cavalry troop commander. Army aircraft are used by the squadron commander, the staff, and troop commanders for observation, reconnaissance, and command and control. Army aircraft are usually available to the squadron commander on request, and are used to transport scouts and riflemen for reconnaissance, security, or combat missions and to move supplies.

7-21. Close Air Support (CAS)

When tactical close air support is available, the Air Force provides a Tactical Air Control Party (TACP) to the squadron.

a. The TACP establishes and maintains facilities for communications between supported units and the appropriate Air Force control agencies; receives, coordinates, and transmits immediate requests for tactical air support; assists with airlift; advises the squadron commander on Air Force tactical air support matters; and controls airstrikes on enemy positions.

b. The squadron is responsible for providing an armored personnel carrier to the TACP for combat operations. An armored personnel carrier is authorized in the squadron headquarters section of the headquarters and headquarters troop to meet this requirement. The TACP furnishes all radio equipment to provide tactical air support to the squadron.

c. The Air Force Liaison Officer (ALO) with the TACP is the principal advisor to the squadron commander on tactical air support matters. Normally, he is located in the fire support coordination center (FSCC) with the FSCOORD and the S3 (air) to facilitate coordination of CAS. The ALO is qualified in the control of airstrikes, thereby providing flexibility to the TACP.

d. The TACP will operate in the following radio nets:

(1) Air Force tactical air request net (AM). This net is used for immediate tactical air support requests.

(2) Air Force tactical air direction net (UHF). The purpose of this net is for control of airstrikes.

(3) Supported squadron command net (FM). This net is used for coordination with the supported unit.

e. Employment of the TACP is as follows:

(1) Control of CAS may be from the ground

or from the air. If observation aircraft equipped to communicate with high performance aircraft are available, it may be desirable to control the CAS from the air where the FAC will have a better overall picture of the situation.

(2) When controlling CAS from the ground, the FAC or ALO will go forward to the request-

ing unit utilizing the armored vehicle provided him by the armored cavalry.

(3) Normally, one of the officers of the TACP remains with the command group while the other is controlling the CAS.

(4) The TACP is organized for sustained operations.

Section IV. ORGANIZATION FOR COMBAT

7-22. General

a. The squadron commander determines the best organization for combat by using the factors of METT.

b. The squadron commander and his staff develop SOP and operational techniques to permit rapid reaction during the course of operations.

7-23. Command Relationships

The degree of control and support that a supported unit commander has over a nonorganic unit is defined by the operational mission status specified in the operation order. These missions are usually expressed in the following terms:

a. *Attachment.* Attached units are assigned temporarily to a command other than their parent unit. When one unit is attached to another, the commander of the unit to which the attachment is made exercises full tactical control over the attached unit. Subject to the limitations imposed by the attachment over, this includes full responsibility for combat service support, discipline, training, and operations. Attachment represents the firmest control of a supporting unit by a supported commander, but may impose an administrative or logistical burden on the unit to which the attachment is made, especially in cases involving the attachment of aircraft. Generally, attach-

ment is preferred when the unit being attached cannot receive combat service support from its next organic higher headquarters.

b. *Operational Control (OPCON).* Units attached for operational control are placed under a commander for assignment of tasks and authoritative direction to accomplish the mission. Operational control does not give the gaining unit responsibility or authority for combat service support, discipline, internal organization, or unit training, except when a subordinate commander requests assistance in these areas. Operational control provides a relationship where full use of the supporting element/unit is devoted to the supported element/unit without placing the additional burden of combat service support on the unit receiving the support. A support unit placed in support of another unit is responsible for providing responsive support to the unit being supported, and plans its operations to facilitate provision of support. The unit being supported exercises no control over the supporting unit, which remains under tactical control of its own next higher headquarters. Combat support and combat service support units may be placed in general support or direct support of the armored cavalry squadron. The air cavalry troop may be directed to provide support to maneuver units (para 7-21). Support as a command relationship should not be confused with the tactical missions assigned to fire support units.

Section V. EMPLOYMENT, HEADQUARTERS AND HEADQUARTERS TROOP

7-24. General

The organization of the headquarters and headquarters troop is identical in squadrons organic to armored, and mechanized infantry divisions. The organization of the squadron headquarters and headquarters troop permits flexibility in its organization for combat. It provides capabilities for control and coordination of, and combat and combat service support

to, organic and attached units. During combat operations, squadron headquarters usually operates in two echelons, the command post and squadron trains. The composition of the CP and trains varies with the situation.

7-25. Squadron Command Post

a. *General.* The squadron command post is the principal command installation of the

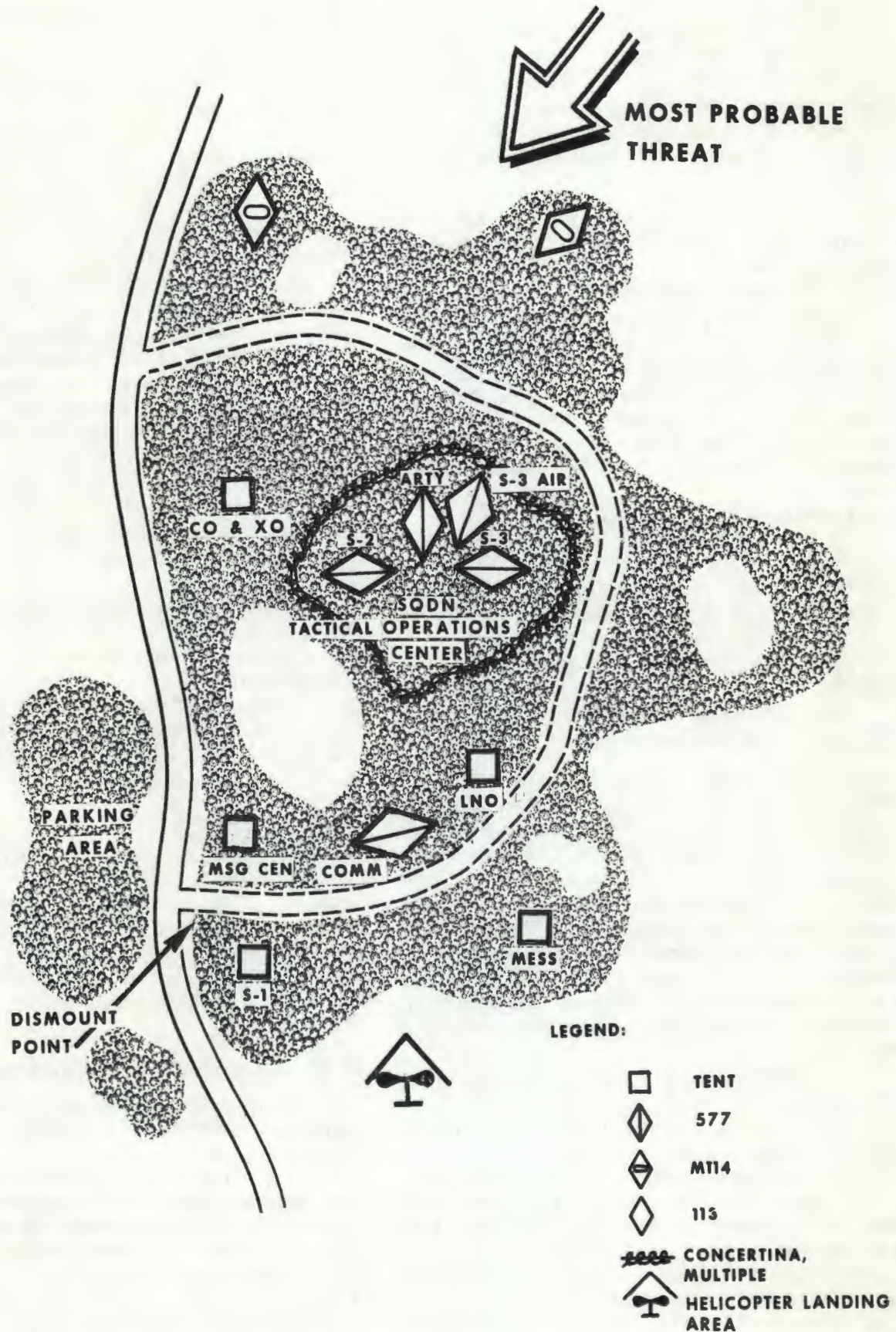


Figure 7-3. A method of arranging elements of the squadron command post.

squadron. The command post is a flexible facility capable of rapid and frequent movement using organic vehicles, and it can operate on a sustained 24-hour basis. It relies heavily on radio communication and has the capability for operation while moving. Figure 7-3 shows a method of arranging elements of the squadron command post.

b. Composition. The following are normally located at, or operate from, the squadron command post:

- (1) Squadron commander.
- (2) Squadron executive officer.
- (3) Squadron unit staff members with their respective sections, except the S1 and S4 sections. The S1 and S4 usually operate from or in the vicinity of the command post, but most of the personnel from those sections are usually located in the appropriate squadron trains area.
- (4) Squadron special staff.
- (5) Troop headquarters from headquarters and headquarters troop.
- (6) Squadron communication platoon.
- (7) Artillery liaison party.
- (8) Tactical air control party.
- (9) Redeye section headquarters representative.
- (10) Liaison officers/agents from supporting and subordinate elements.

c. Location. The squadron S3 recommends the general location of the command post after coordination with the communications officer and other appropriate officers. The S1, in conjunction with the headquarters troop commander and the communications officer, selects the actual site and plans the internal arrangements of command post elements. The primary consideration in command post location is the ability to command and control the squadron. Additional desirable characteristics for the site include—

- (1) Optimum conditions for efficient communication.
- (2) An area large enough for proper dispersion of command post elements.
- (3) A landing space suitable for helicopters.
- (4) Adequate cover and concealment, firm and well drained ground, access roads, and parking area.
- (5) Terrain that facilitates both ground and air defense of the command post.

d. Security. The S1 has staff responsibility for local ground security of the command post. The headquarters troop commander plans and

implements the local command post security plan.

e. Displacement.

(1) Rapid and efficient displacement of the command post is enhanced by—

(a) Thorough understanding of the squadron SOP for command post displacement.

(b) Effective coordination.

(c) Use of radio (especially CW) and motor messengers to maintain contact with key personnel during the move.

(2) Squadron headquarters is not large enough to establish two command posts and provide security at two locations at the same time. Since the squadron has the capability of operating while moving, there is no necessity to displace in two echelons. In addition, the squadron commander and the command group will normally be away from the command post during the movement of the command post in order to preclude loss of contact or control over the squadron's subordinate units. At this time, the command group is, in effect, the forward command post.

(3) One vehicle from the command post may be used to establish a forward command post with limited communications facilities. If one of the command post vehicles is displaced forward to act as a forward CP, it must be received by a combat element and will normally be collocated with the CP of an armored or air cavalry troop, or a reinforcing combat unit.

7-26. Squadron Trains

Squadron trains consist primarily of elements of the squadron that provide combat service 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 trains operations, see FM 17-1 and FM 54-2.

7-27. Command, Control, and Coordination

a. The squadron commander controls and coordinates operations through the CP and command group.

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 CP and command group when the latter is operating away from the CP. The CP must keep abreast, and higher headquarters informed, of the squadron situation. To do this, the CP staff must be knowledgeable of the decisions, loca-

tions, and actions of the squadron commander. On the other hand, the commander can satisfactorily command the squadron only if 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 information and makes decisions as authorized by the commander. The commander, with the command group, locates himself where he can be in constant communication with the CP and where he can best supervise the activities of the squadron. To insure prompt combat service support, coordination and communication must be maintained between the CP 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 squadron field trains.

c. Command and control of the squadron is

facilitated by the efficient use of liaison personnel. Liaison personnel are controlled and 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 communications with their parent unit. In addition, the liaison officer operating at the higher headquarters operates in the squadron command net FM. Thus, the liaison officer at higher headquarters receives information directly from the squadron operations section and passes it immediately to the next higher headquarters. He may also transmit information and instructions from the higher headquarters to the squadron. His duties include liaison for the entire squadron staff, even though he may be primarily operations-oriented.

Section VI. MARCHES AND ASSEMBLY AREAS

7-28. Marches

The squadron movements are classified as tactical or administrative. Most movements in an area of operations are tactical marches. Detailed planning and coordination are required to insure successful accomplishment of the movement. Control is essential in the execution of the march. See FM 17-1 for a detailed discussion of planning, coordination, and terms used in the execution of marches.

7-29. Assembly Areas

The squadron and its subordinate units are normally in assembly areas when not actually performing a tactical mission. The assembly area is the location where units prepare for future action. Details on characteristics, organization, occupation, and security of assembly areas are discussed in FM 17-1.

CHAPTER 8

RECONNAISSANCE OPERATIONS

(STANAG's 2020, 2022)

Section I. GENERAL

8-1. General

a. The divisional armored cavalry squadrons are the principal reconnaissance agencies for their parent divisions. The armored cavalry squadron may perform reconnaissance operations as organized, or when required, may be reinforced for these operations. Air cavalry is employed to extend the range and speed of reconnaissance operations conducted by the squadron.

b. The armored cavalry squadron normally 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.

8-2. Reconnaissance Frontages

a. There is no prescribed 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. In this and following discussions, major avenues of approach pertain to those suitable to the supported force in offense and to avenues support-

ing enemy forces of significance to the supported force in the defense or security mission.

c. Army aircraft, other than those organic to the air cavalry troop, may be attached to or placed under the operational control of the squadron. The number and types of aircraft depend on the priority of the squadron mission. These aircraft are normally employed for command, control, reconnaissance, and limited administrative missions in support of squadron headquarters and the armored cavalry troops.

d. Ground surveillance radar equipment, unattended ground sensors, and night vision devices can be used to extend and augment the reconnaissance effort of the squadron, particularly during periods of limited visibility.

8-3. Reconnaissance Missions

The squadron commander designates 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. *Instructions 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 must 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

8-4. Route Reconnaissance

a. The armored cavalry squadron, as a unit, does not normally conduct route reconnaissance as a primary mission. Usually, the

squadron obtains the route information desired by the division by acting as a covering force in the advance, when assigned the mission of reconnoitering in the division area, or by employ-

ing subordinate troops to reconnoiter designated routes or zones. When enemy action is imminent or anticipated, route reconnaissance missions are usually assigned on the basis of one major route per troop. When enough Army aircraft are available from aviation units or a brigade aviation section, at least one should be employed with each troop conducting reconnaissance to facilitate command and control and to perform air reconnaissance.

b. In the execution of route reconnaissance missions, the air cavalry troop 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 areas that cannot be effectively reconnoitered by the air cavalry troop are promptly reported and reconnoitered by ground elements. Air cavalry elements maintain communication with 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.

8-5. Zone Reconnaissance

a. The squadron may be assigned zone reconnaissance as a primary mission. The squadron also uses zone reconnaissance techniques when performing advance covering-force operations (para 9-11b).

b. The squadron's assigned zone is subdivided into troop zones. Troop boundaries are designated along easily recognizable terrain features such as roads, streams, and ridge lines. In assigning troop boundaries, care must be taken to avoid dividing responsibility for friendly or enemy avenues of approach between adjacent troops. The zone to be reconnoitered must be subdivided into troop zones that permit the troops to remain abreast of each other throughout the reconnaissance. Failure to keep reconnoitering troops generally abreast of each other can result in the bypassing or envelopment of individual troops by enemy forces. Contact points are designated between adjacent troops to assist in keeping reconnoitering troops abreast and to insure that the entire squadron zone is covered.

c. The squadron must reconnoiter all routes and terrain, and locate all enemy forces, within the assigned zone. The squadron normally employs all three armored cavalry troops and the air cavalry troop to obtain required information. The technique to be employed in reconnoitering the zone is determined after an analysis of the factors of METT.

d. If the terrain in the squadron zone permits good observation from the air, the squadron commander may direct the air cavalry troop to conduct zone reconnaissance of the entire squadron zone, and assign the armored cavalry troops route reconnaissance missions. As required, the armored cavalry troops are directed to perform specific reconnaissance of areas that cannot be effectively reconnoitered by the air cavalry troop (fig. 8-1).

e. If terrain and vegetation in the squadron zone preclude effective aerial reconnaissance, the squadron commander may employ the air cavalry troop to screen the advance of the armored cavalry troops, and then assign zone reconnaissance missions to the armored cavalry troops. When this technique is employed, the air cavalry troop operates forward of the armored cavalry troop in order to provide the armored cavalry troops early warning of the location and activities of enemy forces. The air cavalry troop also reports terrain information of interest to the squadron. The armored cavalry troops reconnoiter the entire zone, using techniques explained in paragraph 6-9. The air cavalry troop provides support to those armored cavalry troops requiring such assistance if they are to accomplish their mission.

f. The squadron must be prepared to rapidly change the technique being used to conduct reconnaissance in order to adjust to changing terrain or enemy situations. To facilitate the rapid change of techniques, each armored cavalry troop should be assigned both a zone and a proposed primary route, or routes, within that zone. The air cavalry troop will normally conduct either screening or zone reconnaissance operations across the entire squadron zone.

g. If the squadron zone is relatively narrow, one armored cavalry troop may be retained in reserve. A troop retained as a reserve is employed to assist in maintaining the momentum of the squadron's advance, to help reconnoitering troops avoid decisive engagement, and to conduct specific reconnaissance as required. It is not normally appropriate to retain the air cavalry troop in reserve.

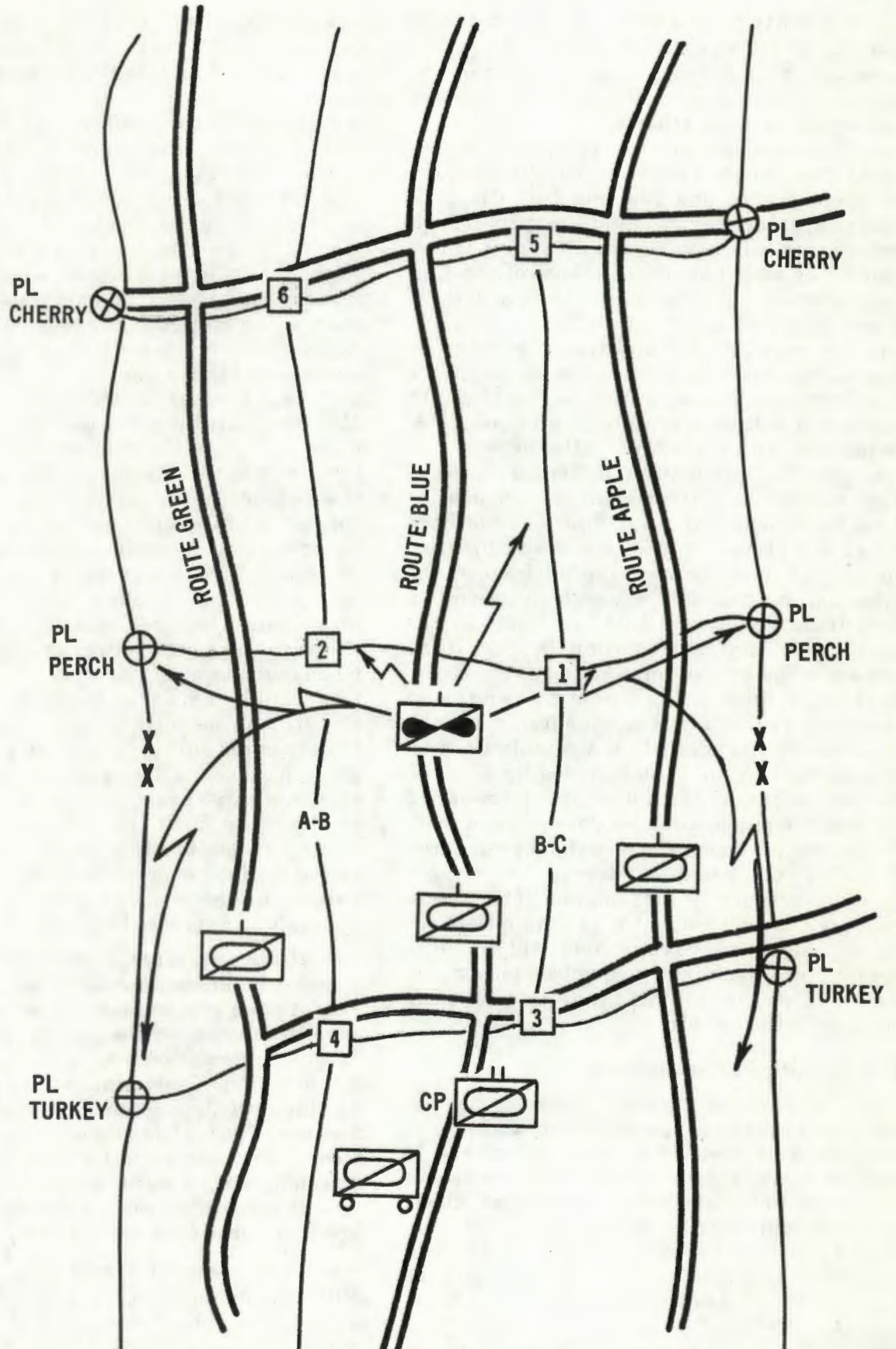


Figure 8-1. Armored cavalry squadron reconnoitering in zone with air cavalry troop conducting zone reconnaissance and troops reconnoitering routes and specified areas within assigned zones.

h. If infantry or tank units are attached to, or placed under operational control of the squadron, they are normally held in reserve, and perform functions similar to an armored cavalry troop in the reserve.

i. Priority of air defense protection is normally given to the reserve (if constituted), the squadron trains, and the squadron CP. It is rarely appropriate to assign priority of air defense protection to armored cavalry troops conducting reconnaissance because of the difficulty of providing adequate protection to these widely dispersed units.

j. The squadron CP and trains advance by bounds on routes in or near the center of the squadron zone. The squadron may employ unit trains if it will be operating at a considerable distance from other elements of the division.

k. Specific instructions on troop missions after completion of the reconnaissance mission must be issued. If the squadron has not been assigned a specific mission to be accomplished on completion of the zone reconnaissance, the squadron commander issues instructions to each troop for occupation of positions at the termination point of the reconnaissance. If the terrain in the area of termination of the reconnaissance dominates enemy avenues of approach leading into the squadron zone, the squadron commander will assign objectives on dominating terrain to be occupied by armored cavalry troops. If terrain at the termination point of the reconnaissance does not dominate the enemy avenues of approach, the squadron will occupy delay positions across the squadron front and prepare for continuation of the reconnaissance or delay actions, as appropriate. In either case, the air cavalry troop will screen to the front and flanks of the squadron to gain and maintain enemy contact and provide early warning to the squadron.

8-6. Specific Reconnaissance

a. The armored cavalry squadron may be required to perform specific reconnaissance of a single large area, or it may be required to conduct simultaneous specific reconnaissance of several widely dispersed information objectives. Specific reconnaissance may be conducted within portions of the battlefield controlled by friendly elements, or it may be conducted behind enemy lines.

b. On receipt of a specific reconnaissance mission, the squadron commander analyzes the factors of METT, with particular emphasis on the information required and the disposition of

enemy forces capable of affecting reconnoitering elements. He then determines the size of the force required to gain the designated information.

c. In moving to specific reconnaissance objectives in areas controlled by friendly units, the reconnoitering elements conduct a tactical road march to the information objective. Special care must be exercised in the selection of routes leading to information objectives forward of friendly positions. Speed of movement to the information objective is important, but the primary consideration in the selection of routes or areas of advance is security. If possible, routes are selected that avoid known enemy locations and known areas under enemy surveillance. Multiple routes are normally selected. One of these routes is the primary route, while the other routes are alternates, which may be used if movement on the primary route is blocked or threatened by enemy action. Air and armored cavalry elements conduct route reconnaissance on primary and alternate routes to locate enemy forces and obstacles on each route. Planning must include consideration of rapid shifting of elements between routes as required by changing enemy situations. The air cavalry troop will be employed to assist armored cavalry troops moving between routes. Enemy forces located during movement to the objective are reported and bypassed by reconnoitering elements. Air cavalry troop elements may be employed to maintain contact with enemy forces capable of affecting the squadron. Armored cavalry elements not committed to reconnaissance missions may also be employed to maintain contact with bypassed enemy forces.

d. If the squadron is required to conduct specific reconnaissance of a single large area, it employs the reconnaissance techniques necessary to accomplish the information objective. Specific information requirements are clearly established for subordinate units. When conducting specific reconnaissance of large areas forward of other friendly units, the air cavalry troop may be assigned the additional mission of screening enemy avenues of approach leading into the specific reconnaissance objective to preclude surprise of ground units.

e. When assigned a mission to conduct specific reconnaissance of several widely dispersed information objectives, the squadron commander assigns detailed instructions to individual troops, which then perform independent operations under squadron control (fig. 8-2).

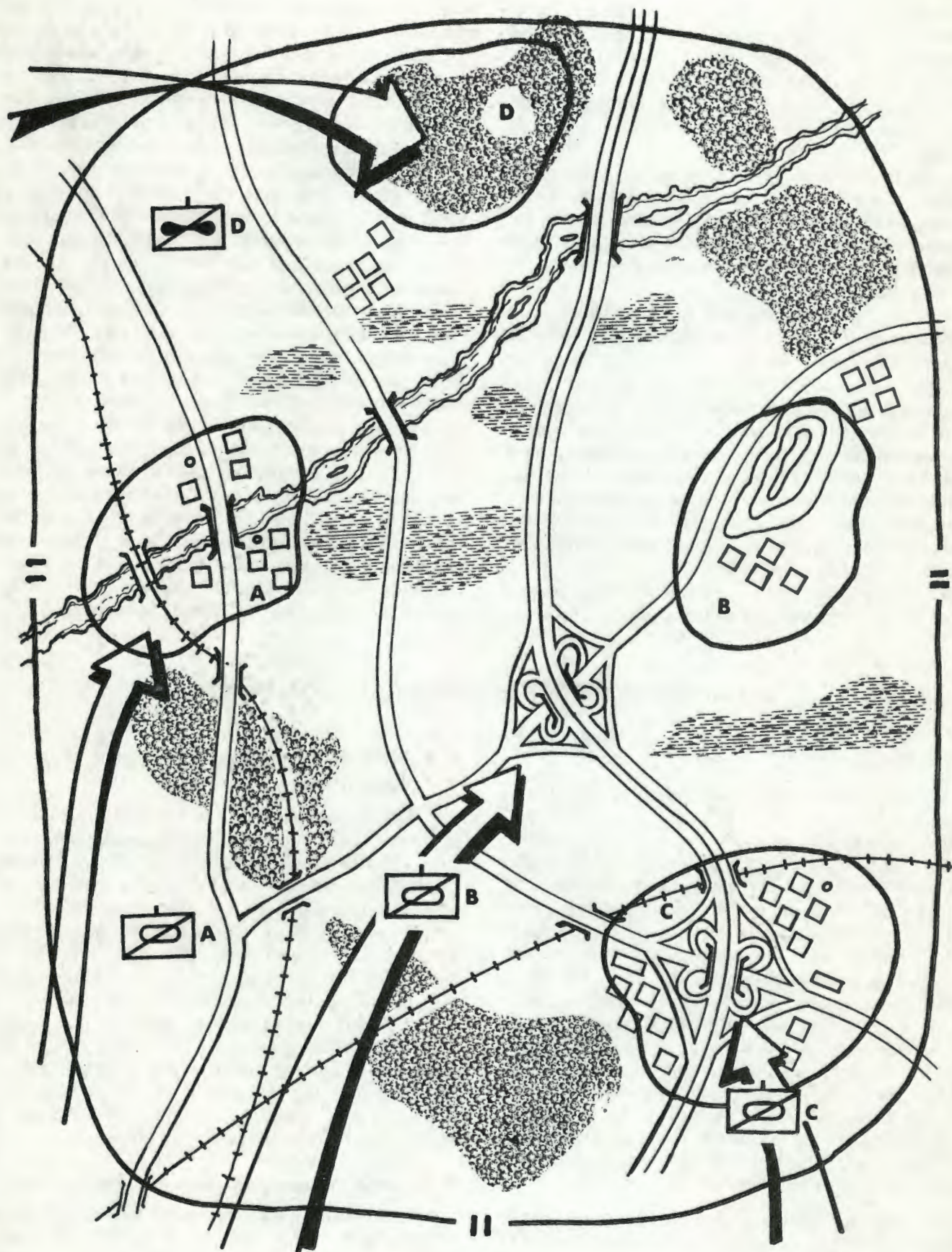


Figure 8-2. Armored cavalry squadron conducting specific reconnaissance.

The air cavalry troop may be assigned a troop specific reconnaissance objective, or it may be employed to assist individual armored cavalry troops requiring air cavalry support for accomplishment of missions. The air cavalry troop may also be employed to screen committed troops.

f. Armored cavalry troops not committed to reconnaissance, and infantry and tank units attached to, or placed under operational control of the squadron, are retained in reserve, and are employed to assist reconnoitering elements as required.

g. The primary task of field artillery and engineer units attached to, or placed in support of the squadron, is to assist reconnoitering elements. When several widely dispersed information objectives are assigned, the squadron commander will normally attach Redeye teams to reconnoitering troops to provide protection for these elements during movement. When the squadron reconnoiters one large information objective, the Redeye section is normally retained under squadron control and assigned a priority of protection.

h. Movement away from reconnaissance objectives forward of friendly elements is prob-

ably the most critical phase of specific reconnaissance operations. The commander employs advance flank and rear security elements. Primary and alternate routes are selected. Air and armored cavalry units reconnoiter multiple routes to locate enemy forces and obstacles to movement. All elements of the squadron must be prepared to rapidly shift between routes to avoid enemy contact. If possible, the routes used in movement to the information objective are avoided in order to minimize the enemy's ability to react against the squadron. Enemy units encountered are bypassed by the main body. Appropriate security elements maintain contact with these elements until the main body has completed movement out of the area of influence of bypassed enemy elements. The squadron can perform specific reconnaissance by assigning a portion of the area to the air cavalry troop or by combining the efforts of both air and ground elements. However, employment of the intact air cavalry troop provides a rapid means of obtaining specific information about an area that is difficult to reach using a ground troop. Information about the condition of critical locations on routes should be confirmed by ground reconnaissance.

Section III. CONDUCT OF RECONNAISSANCE OPERATIONS

8-7. 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. When the squadron commander elects to bypass enemy forces with the squadron, he must provide elements to maintain contact with these elements until relieved of the responsibility by another unit or by higher headquarters.

b. Reconnaissance missions assigned to the squadron normally require the commitment of all troops. If a part of the squadron is uncommitted, it is designated as a reserve.

8-8. 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 to coordinate the efforts of elements of the squadron and prevent interference among troops. Maximum freedom of action is granted to the troop commanders. FM 17-1 contains a discussion of control measures.

8-9. 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 specific reconnaissance objectives 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.

8-10. Transmitting Information by Elements of the Squadron (STANAGs 2020 and 2022)

a. Prompt transmission of accurate information is essential to the success of any reconnaissance mission. The use of a standing operating

procedure (SOP) and spot report procedure facilitates transmission of important information. Information of first contact with the enemy and terrain information vital to a higher headquarters is transmitted at once.

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 appropriate intelligence net. If the information is of particular significance, it may be reported over the appropriate command net.

c. Supporting Army aircraft may be used to facilitate transmission of information; for radio relay; or to transport messengers, liaison officers, or other individuals. The air cavalry troop is not normally used for these tasks since it is a combat element of the squadron and such use degrades its capability to perform its part of the squadron mission.

CHAPTER 9

SECURITY OPERATIONS

(STANAG 2079)

Section I. GENERAL

9-1. General

a. The purpose of security operations is to preserve secrecy and to gain and maintain freedom of action. Security is achieved by providing for the detection of a threat; for enough space and time to react to the threat; and for the avoidance, neutralization, or destruction of the threat. The armored cavalry squadron may perform security operations as organized, or, when required, may be reinforced for the conduct of these operations. The troops conduct offensive, defensive, or retrograde operations 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 and surveillance is used to facilitate ground security operations by the armored cavalry troops and vice versa.

b. The squadron may be reinforced with tank and mechanized infantry, and supported by combat support elements such as artillery, engineers, and Army aircraft. Additionally, tactical close 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 a guard force, covering force, general outpost (GOP) force, screening force, or as a rear area security force. When used as a covering force, the squadron should be reinforced with tanks and mechanized infantry, and provided support by artillery, engineers, and Army aircraft.

9-2. Frontage for Security Operations

There are no prescribed distances for security frontages and depths which may be assigned to armored cavalry squadrons. The factors of METT apply. 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 takes full advantage of the mobility and the extensive and flexible communication of the squadron to offset the disadvantages of dispersion.

9-3. Liaison in Security Operations

In performing security missions, the armored cavalry squadron maintains liaison with the protected force and adjacent units. The squadron commander uses his liaison officers for this purpose.

Section II. FLANK GUARD OPERATIONS

9-4. General

a. As a flank guard for the division, the squadron can protect one flank. This mission normally requires the entire squadron; however, in some situations, elements of the squadron may be attached to the brigade with the least vulnerable flank in order to protect or screen that flank as appropriate. Flank guard responsibility in offensive operations, however, ends at the line of departure (LD).

b. The commander of the protected force 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 (TF) and ends at the rear of the protected elements, exclusive of the rear guard, unless otherwise specified. When performing a mobile flank guard mission, the armored cavalry squadron operates along a route of advance. The route of advance is a specific route

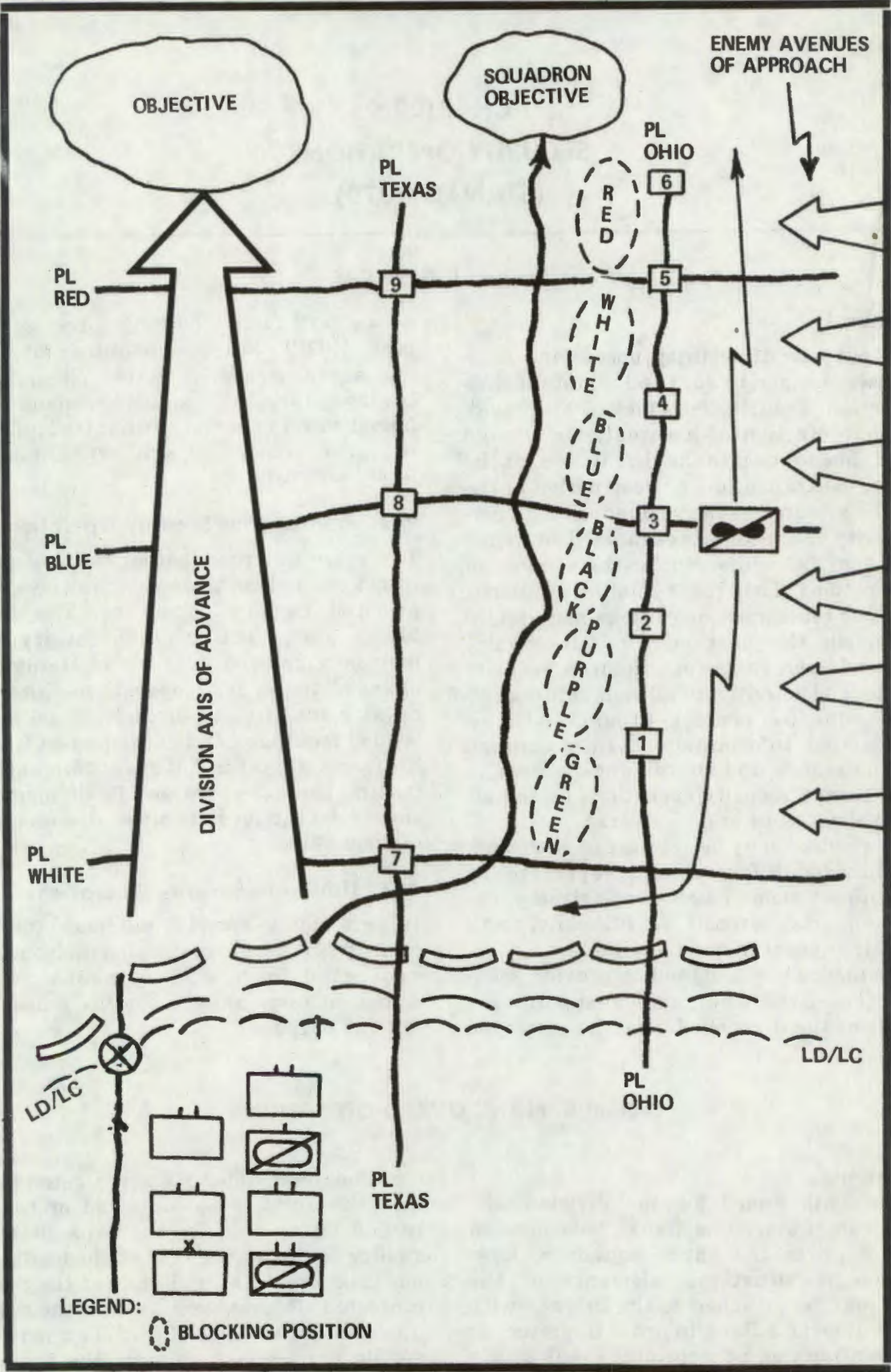


Figure 9-1. Planning for the employment of the armored cavalry squadron as a division flank guard during a penetration.

following well-defined and easily recognizable terrain along which the majority of the elements of the flank guard march. The route of advance generally parallels the axis of advance of the protected force and provides rapid access to key terrain dominating likely avenues or enemy approach. When the protected force halts, the squadron establishes blocking positions on key terrain to protect the flank. The leading troop acts as advance guard for the squadron, clears the areas between the protected force and the squadron route of advance, and maintains contact with the rear of the leading battalion TF of the protected force. The air cavalry troop is required to provide support to the troop assigned this mission.

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 in the enemy defense 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 TF and the remainder of the squadron follows the combat elements of the leading brigade (fig. 9-1). The lead troop follows the leading (flank) battalion TF through the gap until the situation permits its movement to the flank. The troop acts as the advance guard for the squadron, maintains contact with the rear of the leading battalion TF, and secures the area between the rear of the leading battalion TF and the squadron route of advance. When the remainder of the squadron moves through the penetration, it moves to the flank on the route of advance and is prepared to secure blocking positions. The initial phase of the operation is usually a slow-moving one. Therefore, the squadron normally employs the successive bounds method of movement. As the rate of advance of the protected force increases, the squadron then employs the alternate bounds or marching method of movement. Initially, the squadron's area of responsibility is from the rear of the leading battalion TF 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 from the rear of the leading battalion TF 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 are employed to screen the front and flanks of the troop. When the entire squadron reaches the

squadron route of advance, aero scouts of the air cavalry troop usually are placed in support of the lead troop to assist it in its threefold 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 positions. Elements of the troop reconnoiter each succeeding blocking position forward of the lead ground troop to determine its accessibility to surface vehicles and to determine the presence or absence of enemy forces. Aero scouts conduct a hasty reconnaissance of key terrain and likely avenues of approach? Where is the critical line of blocking positions and the line of air screen. The air screen orients its movement on the squadron. It must be far enough from the squadron to provide the commander time and space to cope with an enemy threat. The air screen is normally 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 platoon and aero rifle platoon (if not otherwise employed) are located centrally to facilitate immediate employment to support the aero scouts. When contact is established, the aero weapons platoon in conjunction with the aero rifle platoon harasses and delays 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.

9-5. 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 into the flank of the protected force. He selects a series of blocking positions on the flank that generally parallel the axis of advance of the protected force. These blocking positions are located on defensible terrain that dominates likely avenues of enemy approach. The blocking positions are located far enough from the flank of the protected force to permit timely warning of enemy approach and to provide the protected force with sufficient time and maneuver space to cope with any enemy threat.

(2) The commander normally selects the squadron route of advance unless otherwise directed. During a penetration, the protected

force commander normally designates a specific route for the squadron. The selected route is far enough from the axis of advance of the protected force to prevent the squadron from interfering with the maneuver of that force but near enough to draw its artillery support from the protected force's artillery units, and be within the capability of one troop to secure the area between the protected force and the squadron route of advance. The route should be interior, and permit rapid access, to the line of blocking positions (fig. 9-1). 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 enables the squadron to secure selected blocking positions and secure the area between the leading battalion TF of the protected force and the squadron route of advance. The scheme of maneuver includes provisions for securing the blocking positions either by individual troop actions or by a coordinated squadron effort. The squadron commander also decides the strength required to hold the blocking positions that are secured.

(4) Contact points must be easily identifiable to friendly forces but not obvious to the enemy; 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 prearranged physical contact on a staggered schedule with adjacent units at the contact point.

(5) The squadron commander selects a formation that permits 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 usually the 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 or accomplish surveillance.

(6) An artillery liaison officer and TACP are normally available to assist the squadron commander. The squadron does not normally receive artillery in direct support. Artillery elements moving with the main body provide fire support to the squadron on a mission basis.

Priority of Redeye protection is normally assigned to the troops marching on the squadron route of advance, squadron trains, command post, squadron reserve if retained, and, finally, the lead troop. Lowest priority for Redeye protection is normally accorded to the lead troop which is difficult to protect because of the wide area over which it is dispersed. Engineers may be attached to, or placed in direct support of, the squadron and are employed to assist the lead troop and elements occupying blocking positions.

(7) Squadron combat trains normally accompany the squadron CP. Squadron field trains usually move with the trains of the nearest brigade.

b. During a mobile flank guard, the squadron moves parallel to the axis of advance of the protected force. It regulates its movement on that of the protected force. The lead troop provides the advance guard for the squadron, secures the area between the protected force and the squadron route of advance, and maintains contact with the rear of the leading battalion TF of the protected force. If the leading troop is not able to accomplish this three fold mission, the squadron commander employs an additional troop or reinforces the leading troop to the extent necessary for the mission. The remainder of the squadron marches in column and is prepared to secure selected blocking positions on order. The decision to occupy these positions depends on the speed with which the protected force advances and the enemy situation on the exposed flank. The squadron CP 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 protected force and the enemy situation. If the squadron becomes overextended, the squadron commander should inform the main body commander of the situation and recommend one of the following courses of action, based on the situation:

- (1) That the flank guard be reinforced.
- (2) That the flank guard's area of responsibility be reduced.
- (3) That the flank guard be permitted to screen all or a portion of its area of responsibility.

c. When the protected force is stationary, the squadron occupies selected blocking positions dominating the likely avenues of enemy

approach (fig. 9-2). The squadron operating as a flank guard for a defensive force occupies a series of blocking positions on the flank of the protected force. 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 defined by specific terrain features. In accomplishing the mission, the squadron employs defensive tactics. If forced

from its position, it employs delaying action techniques which provide time and space for the protected force to cope with 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 in the retrograde movement the area of responsibility must be specified by the protected force commander.

Section III. REAR GUARD OPERATIONS

9-6. General

a. During the advance, the rear guard defeats or delays hostile forces attacking toward the rear of the protected force, protects the trains, and collects stragglers. It follows the protected force at a distance prescribed by the protected force commander and usually moves on the same axis of advance as the protected force. During a withdrawal, the rear guard protects the disengagement of the protected force. This is accomplished by organizing a position behind the protected force. The force then withdraws through the rear guard at which time the rear guard assists in the disengagement. The rear guard subsequently conducts a delaying action and withdraws by bounds, basing its rate of movement on that of the protected force or moving in accordance with prearranged plans.

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, mechanized infantry, and engineer elements in addition to artillery support and Army aircraft. The squadron follows behind the protected force and executes delaying actions if the force 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 the air cavalry troop may be used to maintain contact with the protected force.

9-7. Rear Guard Planning and Conduct

a. *Planning.* The squadron commander reconnoiters by all practical means and selects positions along the route or routes of the protected force which the squadron can occupy to protect that force against enemy action. He makes plans to maintain contact with the rear of the protected force.

b. *Conduct.* Movement of the rear guard is regulated on the movement of the protected force. It may move according to time or distance intervals. The squadron is deployed and maneuvers so that suitable delay positions are between it and the rear of the protected force. When the squadron rear guard is attacked, the squadron commander deploys the squadron on selected delay positions or executes a counter-attack. The squadron must not allow itself to be bypassed or driven in on the force it is guarding (fig. 9-3).

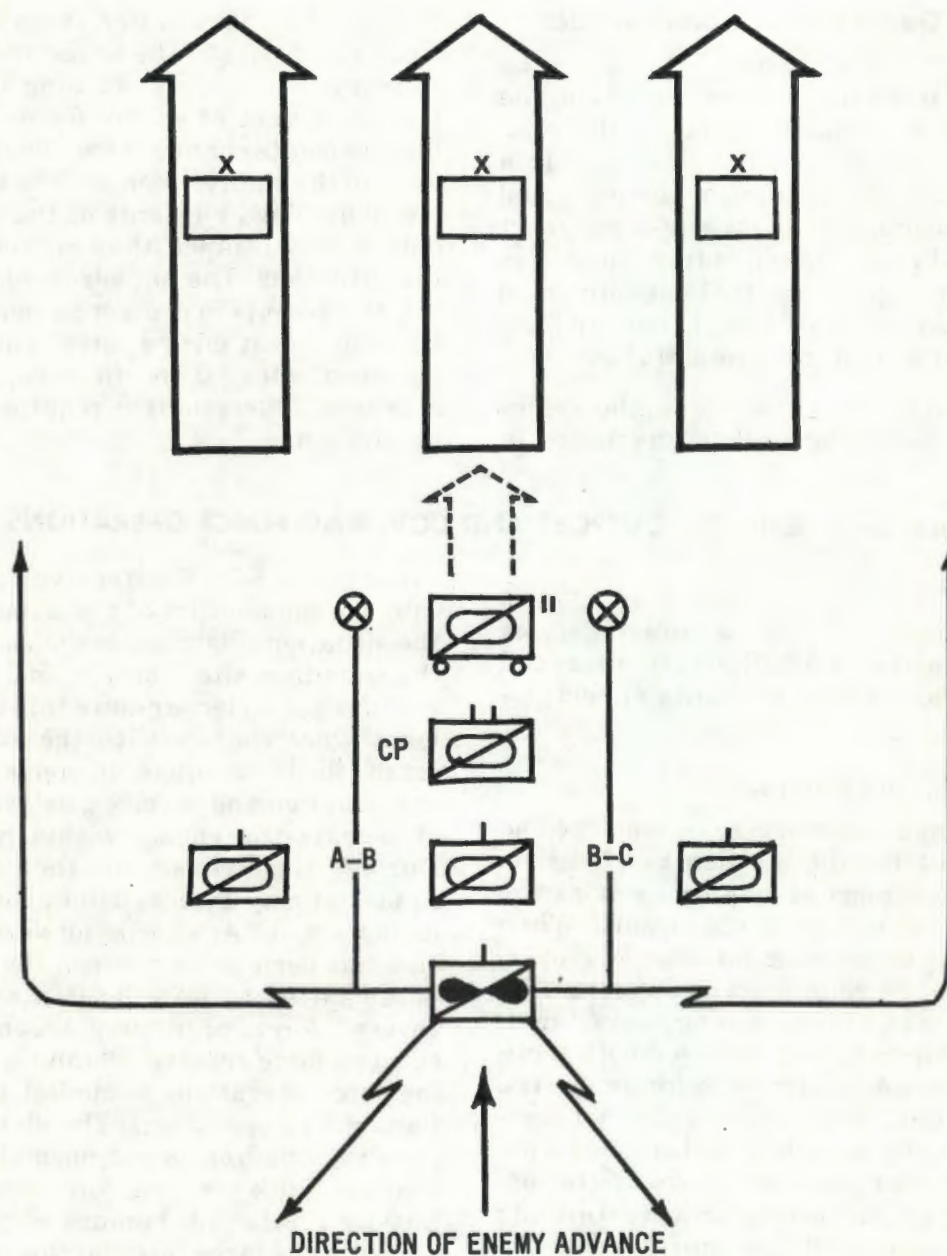


Figure 9-3. Armored cavalry squadron employed as rear guard with the air cavalry troop screening the rear and flanks.

Section IV. ADVANCE GUARD OPERATIONS

9-8. General

a. The squadron may be required to protect the advance of the division, or of a major subordinate element of the division. This mission normally requires the employment of the entire squadron. In some situations, such as movements made by the division on widely separated multiple routes, elements of the squadron may be attached to the brigade(s) advancing on the least critical route(s).

b. The primary task of the squadron in advance guard operations is to insure the uninterrupted movement of the force being protected. The squadron engages in any combat action required to accomplish this mission. If the squadron encounters superior enemy forces that it cannot defeat, it defends or delays, as appropriate. The squadron may be required to assist or secure operations of the protected force if the protected force or any of its subordinate elements, is committed.

9-9. Advance Guard Planning and Conduct

a. Specific guidance on the interval to be maintained between the advance guard and the protected force is normally given by the commander of the protected force. The squadron moves far enough to the front of the protected force to allow adequate maneuver space to react to an enemy threat. The squadron must also remain close enough to the force being protected to receive combat support and, if required, responsive reinforcement from the main body.

b. The squadron advances along the designated route(s) with the bulk of its units in

column. The air cavalry troop screens to the front and flanks of the squadron to provide the squadron with early warning of the location and movement of enemy forces. Armored cavalry elements conduct zone reconnaissance forward of the main elements of the squadron.

c. When lead elements of the advance guard gain enemy contact, they aggressively develop the situation. The squadron commander reinforces elements in contact as required to enable them to defeat enemy forces encountered. The squadron engages in offensive, defensive, and retrograde operations as required to accomplish its mission.

Section V. GENERAL OUTPOST AND COVERING FORCE OPERATIONS

9-10. General

A general outpost (GOP) or a covering force may operate to the front, flank, or rear and beyond the local security elements of the protected force.

9-11. 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 GOP in defensive operations. When employed in either covering force or GOP operations, it should be reinforced or supported by tanks, mechanized infantry, engineers, artillery, or Army aircraft, and provided with tactical close air support. Units reinforcing the squadron for GOP and covering force operations are normally attached to the squadron. When operating at distances beyond the optimum control by the parent unit, these units are attached because of the considerable distances between covering and GOP forces and other friendly units. The distance between the covering force and other units precludes control and logistic support of reinforcing units by their next higher headquarters.

b. *Planning for Covering Force Missions.* Planning for rear covering force missions is similar to planning for rear guard operations (para 9-6 and 9-7). The squadron commander retains a reserve, normally consisting of attached tank and mechanized infantry. When the squadron is conducting an advance covering force mission 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 plans and executes a zone reconnais-

sance (para 8-5). The reserve is used to maintain the momentum of the advance or develop the situation. Planning includes employment of the squadron after contact and, if required, its withdrawal under pressure through the covered force. Once contact with the enemy has been established, the squadron commander develops the situation and deceives, delays, disorganizes, or defeats the enemy within his capabilities. 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 area security for the covered force, or it may become part of the covered force reserve. Planning of flank covering force operations is similar to planning for flank guard operations. The divisional armored cavalry squadron is not normally employed to conduct flank covering force operations unless heavily reinforced, because of the difficulty of securing the large interval that normally exists between the squadron route of advance of the force being covered.

c. *Conduct of Covering Force Missions.* In executing a covering force mission, the armored cavalry squadron moves aggressively to develop the situation and to insure that the enemy does not threaten or surprise the covered force.

(1) During a movement to contact, small enemy forces may be bypassed by the covering force; however, the covering force commander must notify the covered force commander. A small ground or air cavalry unit may be left to maintain contact with the enemy. The reserve may be used to destroy small enemy forces that are bypassed by the leading elements of the covering force (fig. 9-4 and 9-5).

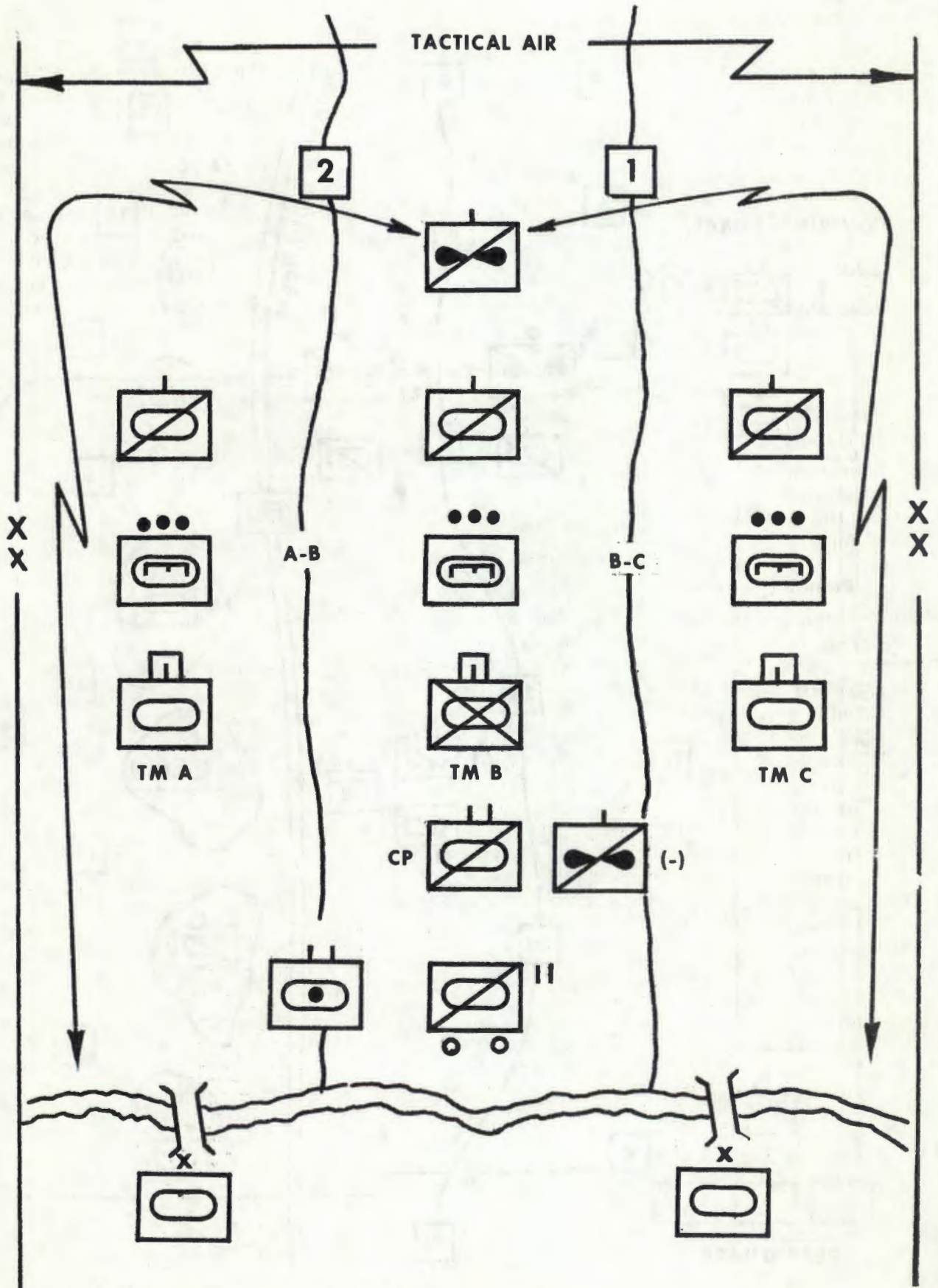


Figure 9-4. Armored cavalry squadron advancing in zone as covering force during a river crossing by the division.

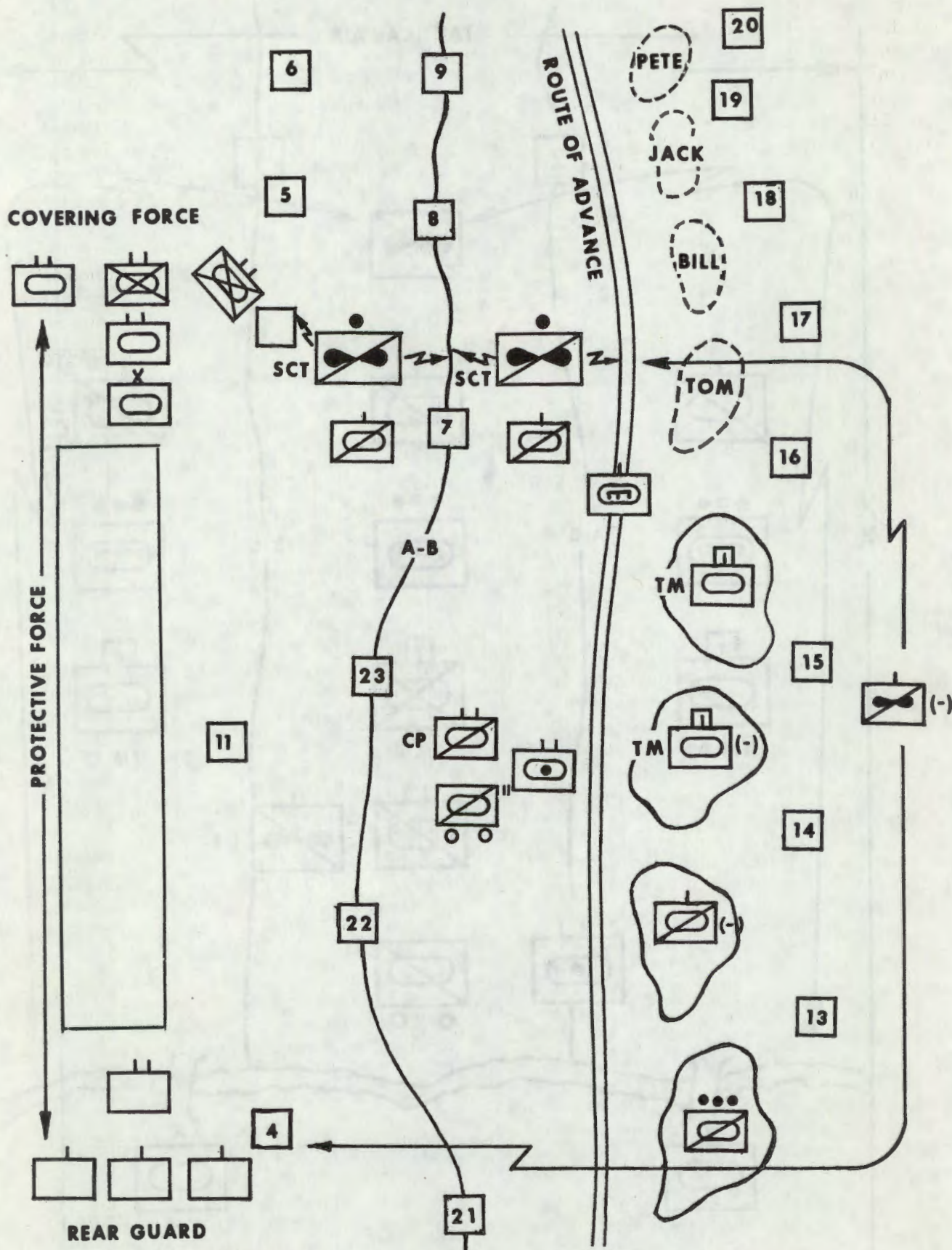


Figure 9-5. Armored cavalry squadron conducting mobile flank covering force operations for the division with two armored cavalry troops and aero scouts forward. Attached company teams and an armored cavalry troop occupy blocking positions while air cavalry troop, minus, screens to the flank and rear.

(2) After contact has been gained and the squadron is unable to continue the advance due to enemy strength, or when the squadron is covering the division in a defensive operation, the squadron deceives the enemy as to the location of the covered force and delays the enemy effort to advance. Ambushes may be used effectively by the squadron to add to the delay of the enemy. In covering force operations for division offense, defense, or retrograde, the air cavalry troop is 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.

d. Planning of GOP Mission. Planning for a GOP mission involves the same basic considerations as the planning for defense. The GOP may be an intermediate or forward security force. When it is the forward security force, and

enemy contact is imminent, it employs zone reconnaissance techniques in its movement to GOP positions. When contact is not imminent or the GOP force is an intermediate security force, it moves by tactical march to its position and occupies defensive positions. Coordination of the withdrawal of the forward covering force and the GOP withdrawal through the FEBA is essential.

e. Conduct of GOP Mission. The GOP force executes offensive, defensive, and retrograde operations to develop the situation and defeat, disorganize, deceive, and delay the enemy. When the GOP mission is accomplished, the force withdraws on order through the FEBA, and may be used to provide flank or rear area security to the protected force or act as a part of the force reserve (para 12-14 and 12-19).

Section VI. SCREENING FORCE OPERATIONS

9-12. General

a. The screening mission is accomplished by establishing a series of OP's and conducting patrols to insure observation of enemy approaches into a designated sector. Army aircraft augment the ground surveillance capability. The squadron rarely receives reinforcements or combat support while conducting screening operations.

b. A screening force is not capable of offering strong resistance to the enemy. However, it protects itself and, within its capability, destroys or disperses small elements that attempt to penetrate the screening position.

9-13. Squadron as a Stationary Screening Force

a. General. The squadron may be used as a screening force as required. Screening is applicable when operations of the division have created extended flanks, when gaps between major subordinate elements exist that cannot be secured in force, or when required to provide early warning over gaps 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 plans provide for screening the squadron sector by establishing ground and aerial OP's and patrols. A reserve is not nor-

mally planned 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 planning and executing air patrols between ground OP's, maintaining contact with the screened force, and providing an air screen to the front and flanks of the screening force. Provisions for air cavalry troop use to destroy small enemy forces should be planned. Successive lines of OP's (screen lines) are planned and used if required.

c. Conduct. When forced by enemy action, the squadron withdraws to successive lines of OP's. These lines are preplanned and depicted as phase lines. The squadron continues to maintain the screen line and contact with the enemy throughout the withdrawal. Supporting fires or elements of the air cavalry troop may be used to impede the enemy's advance. During periods of reduced visibility, the squadron and troop ground surveillance sections balanced with other STANO devices are employed to cover the major likely avenues of enemy approach.

9-14. Squadron as Mobile Screening Force

a. The squadron may be required to conduct screening operations to the front, flanks, or rear of a moving force. The missions and tasks of mobile screening forces are identical to those of a stationary screening force; however, the techniques of employment differ.

b. When the squadron conducts screening operations forward of a moving force, it normally advances with three armored cavalry troops abreast and the air cavalry troop screening forward and to the flanks of the armored cavalry troops. Control measures used are identical to those employed in zone reconnaissance operations. The squadron is not required to gain the detailed information required during zone reconnaissance operations, but is responsible only for providing early warning of enemy forces' locations and movements. If enemy contact is made, the squadron maintains that contact. If the enemy forces encountered are of sufficient strength to force the squadron to withdraw, the techniques outlined in paragraph 9-14b and c are used.

c. The armored cavalry squadron screening the flank of a moving unit employs techniques

similar to those used in flank guard operations, with the following exceptions:

(1) The squadron plans to occupy a series of OP's, if required, rather than a line of blocking positions.

(2) The squadron is not responsible for clearing the area between the main body and its route of advance.

(3) If the screen line which it occupies is threatened by advancing enemy forces, the squadron withdraws to successive lines of OP's.

d. The squadron screens the rear of a larger moving force by using the techniques employed in rear guard operations, except that lines of OP's are occupied rather than delay positions, and, when threatened by advancing enemy forces, the squadron withdraws to successive lines of OP's rather than delaying the enemy advance.

Section VII. REAR AREA SECURITY OPERATIONS (STANAG 2079)

9-15. General.

When the squadron is engaged in rear area security missions, 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. See FM 17-1 and FM 31-85 for a discussion of planning considerations and coordination of rear area security operations.

9-16. Protecting Routes of Communication

a. The methods employed to guard routes of communication vary depending upon the factors of METT. Lines of communication may be protected by establishing a series of OP's for surveillance and a number of mobile reconnaissance patrols throughout the area of responsibility. A centrally located mobile reserve is then employed according to the information received from the OP's and patrols. If the area is too large to be protected in this manner, it is 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 retains 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 supply routes and to escort convoys through threatened areas. The unit that is escorting a convoy usually holds the preponderance of its combat strength in the

forward part of the formation and establishes security to the front, flanks, and rear. The size of the escort is determined largely by the size of the escorted convoy and the anticipated enemy threat. During periods of good visibility, air patrolling of the route facilitates more rapid movement of convoys. This technique may reduce or eliminate the requirement for tracked vehicles in the convoy escort.

9-17. Security Against Attack by Enemy Airborne, Airmobile, and Guerrilla Forces

a. *General.* When protecting a rear area against enemy airborne, airmobile, and guerrilla forces attack, the squadron commander deploys his units by placing OP's in the vicinity of likely drop zones, landing areas, and potential assembly areas. He uses active reconnaissance patrolling to secure the rest of the area. Stereotype operations of OP's and patrols must be minimized, particularly with respect to their 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, and assembly areas. Sectors are then assigned to the armored cavalry troops. As large a squadron reserve as

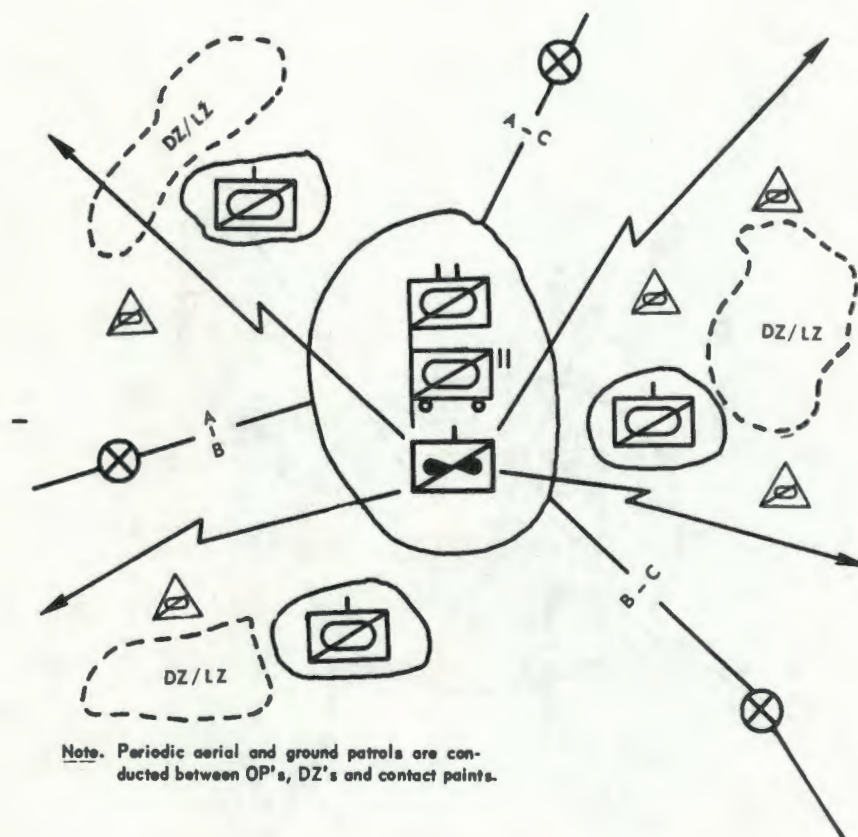


Figure 9-6. Armored cavalry squadron employed over a large area as rear area security force for the division. Air cavalry troop reconnoiters entire area.

possible is designated. The reserve may be centrally located or dispersed throughout a large area. The area is covered by air and ground patrols or OP's. 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 surveillance radar and unattended ground sensors are used to cover likely avenues of enemy approach during periods of reduced visibility. The Redeye section is deployed for a maximum coverage of the area for defense against airmobile or airborne forces. Elements of the air cavalry troop may be employed to screen the periphery of the squadron area, reconnoiter likely avenues of enemy approach, conduct 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 reconnoiter the area at irregular intervals as long as visibility permits (fig. 9-6).

c. *Conduct.* The key to success against attack by airborne, airmobile, or guerrilla forces 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. Any armored force is extremely effective against airmobile forces during and immediately after landing. Movement to reinforce any engaged element must be accomplished rapidly. Ground and air scouts execute continuous reconnaissance of the squadron area to insure adequate and early warning of enemy activity. Helicopters and the airmobile forces are most vulnerable during the approach and landing phase. All available means are employed to inflict maximum damage on the enemy during this period. If the enemy is successful in landing, the air cavalry troop harasses the enemy to destroy, contain, or maintain contact until ground elements arrive. The squadron commander is kept informed of the situation as it develops. Aero scouts may assist in guiding ground elements to the enemy force.

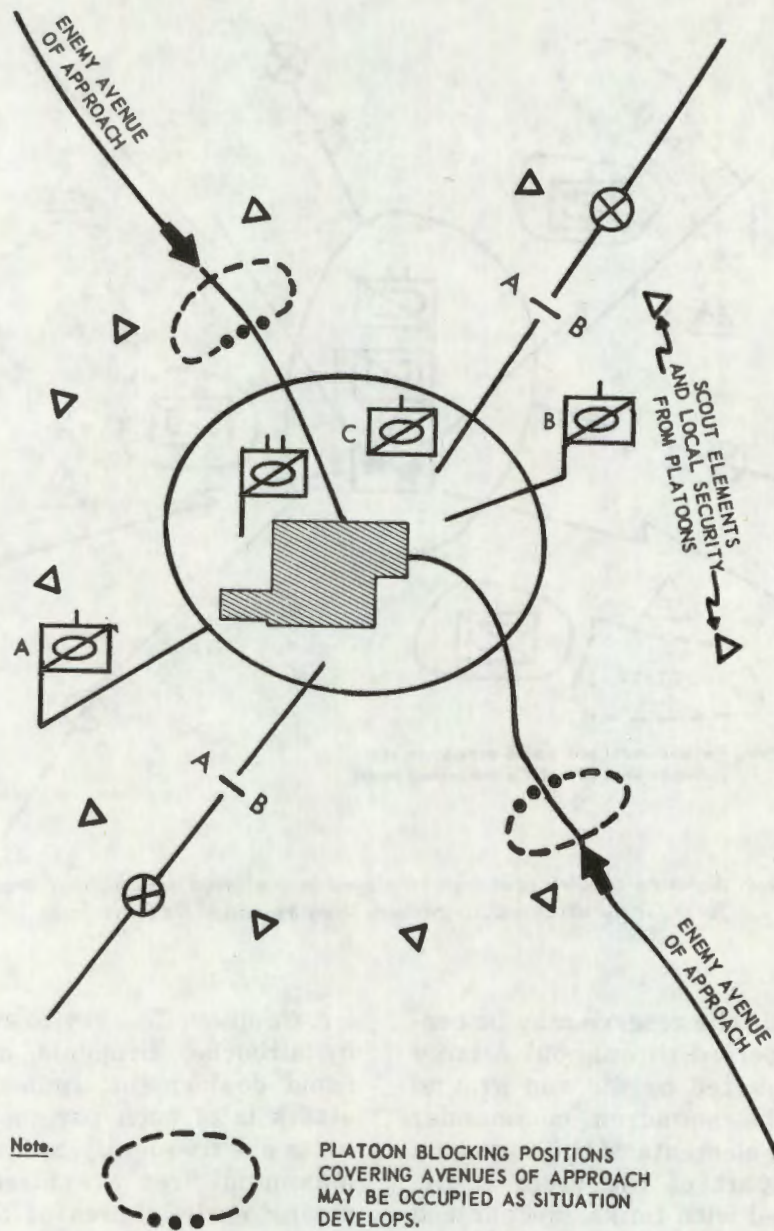


Figure 9-7. Armored cavalry squadron protecting an installation as a rear area security force.

9-18. Protecting an Installation

When an armored cavalry squadron is assigned the mission of protecting an installation, the squadron commander normally designates sec-

tors for the armored cavalry troops, retaining at least one troop of the squadron as a reserve. The organization of the area and actions of all or parts of the squadron are similar to those in all-round defense (fig. 9-7).

CHAPTER 10

SURVEILLANCE PLANNING AND EMPLOYMENT

10-1. General

a. In planning for the employment of his forces, the cavalry commander needs intelligence about everything taking place within his battle area. An important portion of this intelligence is produced through the collection of information by ground and aerial surveillance services.

b. Armored and air cavalry units will perform surveillance in such missions as border or boundary security, area security, as part of a screening mission, and in the offense and defense. Armored and air cavalry units complement each other in performing surveillance missions. Air cavalry organizations have the necessary equipment to cover large areas rapidly while armored cavalry organizations are relatively slower but more thorough. For additional information on aerial surveillance, see FM 17-37 and FM 30-20.

c. Related to surveillance is target acquisition. Target acquisition pertains to the detection, identification, and location of a target in sufficient detail to permit the effective employment of weapons. Again, the distinction between surveillance and target acquisition lies not in the method of gaining the information nor in the information itself, but in its use. Information gathered by surveillance operations is a key input to target acquisition activities. Armored and air cavalry organizations are primary target acquisition sources.

10-2. Surveillance Assets

a. General.

(1) The primary surveillance assets of a unit are the eyes and ears of the individual Soldier and his ability to reason—a capability no mechanical or other device can completely duplicate. This point cannot be overemphasized, and it must be realized that surveillance target acquisition and night observation (STANO) devices are a means of augmenting the natural senses.

(2) A highly effective means of enhancing visual observation is through the use of optical devices such as binoculars, telescopes, and weapon sights. These devices extend the range of vision by their magnification and increase effectiveness under low light conditions by their light gathering capability. Stabilized vision devices aid in observation from both ground and air vehicles.

(3) Observation under very low light levels is markedly increased by the use of night observation devices (NOD) and thermal imaging devices. Both types of devices are passive in nature; but thermal images provide greater range, give better target contrast, are relatively unaffected by atmospheric conditions, and are much more difficult for the enemy to counter.

(4) Active surveillance devices include near infrared observation sights, with associated searchlights, and ground surveillance radars. These devices, especially radars, provide good range capabilities but can scan only a relatively narrow field of view; therefore, they must be used in a search mode. Area surveillance can be provided by aircraft-mounted radars of the moving target indicator (MTI) or side-looking airborne radar (SLAR).

(5) Unattended ground sensors (UGS), when properly employed, greatly extend the area and density of surveillance. These devices are remotely monitored sensors which signal activity in their vicinity by detecting seismic, magnetic, acoustic, or physical disturbances. They are particularly useful in covering areas that are in defilade from direct acquisition means. Monitoring can be accomplished from ground or aerial receivers directly, or through the use of relays.

(6) Other surveillance devices include airborne infrared sensors which detect fires or other concentrations of heat; "people sniffers" which indicate presence through chemical sampling of the air; airborne gradiometers which detect the presence of concentrations of metal such as supplies, caches, or tank units; a vari-

ety of radio and radar intercept and direction finding equipment; and specialized devices for detecting enemy optical devices through the use of optical augmentation techniques.

(7) These various assets may be found from squad to corps level, but their characteristics, uses, availability and responsiveness must be considered in surveillance planning, and necessary assets requested through appropriate channels.

b. STANO Equipment Organic to the Armored Cavalry Squadron (H-Series).

(1) The night vision sight, AN/PVS-2 starlight scope is a passive, battery-powered, 5.75 pound light intensifying device that magnifies objects four times in a 10.4° field of view at rated ranges of 400 meters in moonlight, and 300 meters in starlight conditions. Its effectiveness is limited by rain, fog, smoke, dust, or extremely low light levels. The device can be used in both offensive and defensive operations during periods of reduced visibility either as a telescope or mounted as a weapons sight on the M16E1 rifle or the M60 machinegun. The starlight scope should be used for surveillance, target acquisition, verification of detections by other devices, and as an aid in land navigation and command and control of maneuver elements.

(2) The crew-served weapon sight, AN/TVS-2 is a passive, battery-powered, 15.25 pound, electro-optical device which magnifies objects seven times in a 6° field of view at rated ranges of 1,000 meters in moonlight, and 800 meters in starlight conditions. Its effectiveness is limited by rain, fog, smoke, dust, or extremely low light levels. It should augment and be employed in the same manner as the AN/PVS-2.

(3) The tripod mounted medium range night observation device (NOD-MR) AN/TVS-4 is a battery-powered electro-optical device which magnifies objects seven times in an 8° field of view at rated ranges of 2,000 meters in moonlight, and 1,200 meters in starlight conditions. Its effectiveness is limited by rain, fog, smoke, dust, or extremely low light levels. Artificial illumination, to include IR, can enhance its effectiveness. The NOD-MR provides a passive means of detection, identification, and observation of both friendly and enemy operations during periods of reduced visibility and provides an excellent means of passively detecting enemy IR sources.

(4) The patrol seismic intrusion device (PSID) is a line-of-sight seismic sensor system

consisting of detector/transmitters and a receiver which converts the tone fixed radio frequency signal into an audio signal. It is used in a local security role, patrols, OPs, and LP's. It has the capability of monitoring roads, trails, and defiles near defensive positions. It is most effective when mixed with other surveillance devices to verify detection in the area.

(5) The radar set, AN/PPS-5 is a 95-pound ground surveillance radar with a rated range of 10,000 meters for vehicles, and 5,000 meters for personnel moving with radial velocities between 1 and 35 miles per hour.

(6) The electronic binocular, AN/PAS-5, is a 12-ounce, battery-operated binocular designed as a specialized night vision device. The device has no capacity to function without an external light source. Primary employment of the device is to permit vehicle operation during darkness without use of visible light. Secondary employment includes using the device to detect the opposing forces' IR source, to locate and read road signs, and to perform other close-up tasks at night.

(7) The metascope, AN/PAS-6 is a handheld, near-infrared, multipurpose, monocular viewing device equipped with a small battery-powered infrared light source. The rated range using its own light source is 25 meters. The device has a capability of passively detecting enemy IR light at extreme ranges.

(8) The infrared xenon searchlight, AN/VSS-3 produces either a visible or infrared light. During operations in which contact with the enemy is possible, the AN/VSS-3 should not be used as long as the situation and ambient lighting permit accomplishment of the mission using only the passive devices. In operations where the mission cannot be accomplished with passive means because of insufficient lighting, the searchlight should be employed in the IR mode as a light assist for troops equipped with viewing devices, even though contact with the opposing force is likely and observations by him is possible. In operations when contact with the enemy becomes imminent, or when the enemy has initiated white light, the searchlight should be employed in the white light mode to illuminate the battle area.

10-3. Surveillance Principles

a. Maximum Use of Passive Devices. Passive equipment should be used in preference to active means when the mission can be accomplished satisfactorily by passive means. Active STANO devices emit electromagnetic energy,

and each device has its own electromagnetic "signature", so that identification by the enemy yields some information about friendly order of battle, makes the device/system susceptible to enemy electronic countermeasures (ECM), and possibly enables the enemy to feed the device/system false or misleading information.

b. In Depth Employment. In any surveillance operation, assets should be employed in depth, compatible with range limitations, with progressive density and accuracy of systems as the enemy approaches the major friendly position. Consideration must be given to the trade-off between the value of acquisition at maximum range versus the need for more accurate information and denser coverage at closer ranges.

c. Factors of METT. The factors of METT, as modified herein, provide a framework for surveillance planning.

(1) *Mission*—What type of surveillance is assigned—area, border, route, flank, anti-infiltration, etc? What are the commander's information needs?

(2) *Enemy*—What is the type force likely to be encountered? What are his capabilities, tactics, equipment, normal method of movement? What countermeasures can he be expected to use?

(3) *Terrain and weather*—What are the likely avenues of approach? Where is the critical terrain? What areas are in defilade from direct observation? How will the terrain, to include soil type and vegetation, affect the employment of radars, sensors, NOD's, and optical devices? How will the weather, to include moon phase and cloudiness, affect vision devices? Will there be fog? Will temperature changes cause lapse or inversion conditions?

(4) *Troops and time available*—What is the best utilization of personnel to set up the systems? How many men are available to man OP's and monitor sensors? How much time is available to implement the plan and what is the duration of the effort?

d. Intensity and Duration. Closely related to time available is the relationship between surveillance intensity and duration. Given a set level of personnel and equipment, they may be employed for a short time in devising a very intensive surveillance plan; or, if long term surveillance is required, planning must recognize the requirement for resting, replacing, rotating, and resupplying personnel as well as maintaining equipment. If long duration efforts are planned, consideration must be given to sensor operating life.

e. Multiplicity. In developing the surveillance plan, multiplicity of systems should be provided whenever possible. This provides a back-up capability in case of the failure or countering of one system, and improves the reliability of information by providing a confirmatory capability with another system. Examples are covering a UGS field by radar to obtain a recognition of the cause of the activation, and pairing of NOD with radar to utilize the greater identification capability of the NOD to confirm the radar acquisition.

f. Man is Best. An alert, well-trained observer is the most reliable surveillance system. STANO devices are designed to extend man's capabilities. They may be used directly, as in the case of optical and imaging devices, or indirectly as in the case of UGS, radars, and other sensors. Their capabilities, limitations, and vulnerabilities should be considered in determining which device should be employed where. Generally speaking, man is the more accurate and precious system, whereas STANO devices have longer range and are more easily replaced.

g. Coordination. Sensor and observation post locations must be precisely reported to higher headquarters and coordinated with adjacent units so that information can be accurately evaluated. In particular, these locations must be considered in the *fire support plan* so that rapid, accurate fire can be brought to bear on targets detected.

h. Balance. No single type of STANO equipment can satisfy all of a commander's information needs; nor can it replace the requirement for an alert, well-trained individual. Neither can a single STANO item function effectively in all operational and physical environments. Therefore, the basic tenet in STANO doctrine is to employ a balanced combination of available means to insure adequate coverage of the battlefield and a high reliability of the collected data.

10-4. Employment Sequence

a. The first step in establishing a surveillance network is to consider the terrain. Prime factors are likely avenues of approach, the surface and vegetation, and radio communications. The enemy threat, and whether it is mounted or dismounted, has bearing on avenues to be monitored. Surface conditions and vegetation affect the employment of sensors. The geography of the area will affect line of sight, and communications with OP's and radio-linked sensors.

b. After determining likely avenues of

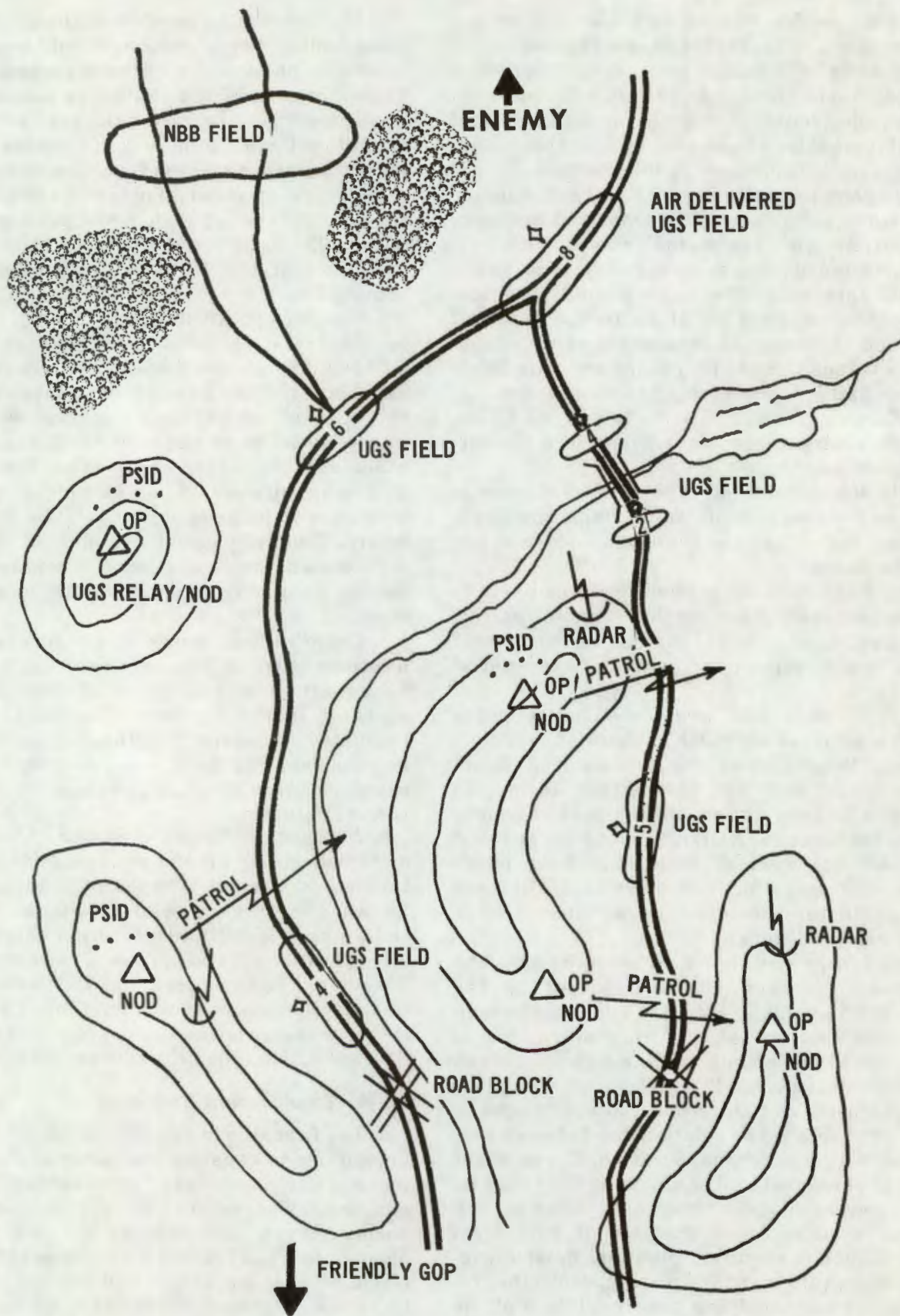


Figure 10-1. Illustrative example portraying surveillance employment.

approach, emplace first those sensors with the longest range. Emplace them early and consider both day and night—for example, the enemy may use an avenue at night which by day would not be practical. Test communications with these sensors to insure proper functioning. If OP's are placed well forward, weigh their ability to give early warning against the compromise caused if they have to be extracted because of detection or isolation.

c. Develop the network by increasing the density, overlap, and multiplicity of systems as friendly forces are approached. Plot the sectors covered by direct surveillance devices and then cover gaps with UGS or periodic patrols (fig. 10-1).

d. If a large area is to be covered, particularly for a period of time, consider requesting aerial surveillance by assets from division or higher

units. Their mission schedules must be planned by considering the duration of the operation, the depth of surveillance, the responsiveness of the enemy, and the priority of the mission.

e. Continuously update the plan. As assets change, new information is received, and details of the area develop, revise the plan to insure the most thorough coverage of the area possible.

10-5. Basic Principles

There is no set solution for the use of STANO devices. The above guidelines should prove a useful framework, but for maximum effectiveness these three basic principles must apply: Know the equipment and its capabilities, know your enemy, and use your ingenuity. For further discussion on employment of STANO assets, see FM 31-100 (TEST).

CHAPTER 11

OFFENSIVE OPERATIONS

(STANAG 2029)

Section I. GENERAL

11-1. General

The armored cavalry squadron is capable of conducting offensive operations as an economy of force measure. It engages in offensive action most frequently to accomplish assigned reconnaissance or security missions. 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, wholly or in part, to a major subordinate command.

11-2. The Armored Cavalry Squadron

Employing the basic forms of offensive maneuver in offensive operations conducted by the armored, infantry, or mechanized divisions, the armored cavalry squadron normally is assigned a security mission (flank guard, rear guard, covering force, or screening force).

a. Penetration. In the penetration, the armored cavalry squadron normally is 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 provides flank security, patrols lines of communication, secures terrain features, or is committed as an independent combat force.

b. Envelopment and Turning Movements. In conducting an envelopment or turning movement, the division usually has both flanks exposed. The armored cavalry squadron is normally assigned the mission of securing the more vulnerable flank of the division.

11-3. 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 normally operates over a broad front when performing a security mission for a larger unit conducting an offensive operation or in open terrain. It usually operates 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 visibility is limited.

11-4. Distribution of Forces

The squadron normally is divided into a maneuvering force and a base of fire (figs. 11-1 and 11-2). If sufficient forces are available after the requirements of the maneuvering force and base of fire are met, a reserve may be designated. See FM 17-1 for a detailed discussion on employment of these forces.

11-5. Maneuvering Force

a. The maneuvering force should consist primarily of ARAAV's and infantry elements. The squadron commander insures that the squadron maneuvering force has enough light armor and infantry strength to provide the combat power required to accomplish the mission. Normally, this can be accomplished through task organization within each troop (para 4-2); however, if required, the commander can reorganize like elements into troop teams; e.g., light armor troop, infantry troop, or light armor infantry troop, to provide necessary combat power. Scouts of ground and air cavalry usually are employed to provide flank security for the maneuvering force.

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. Usually the maneu-

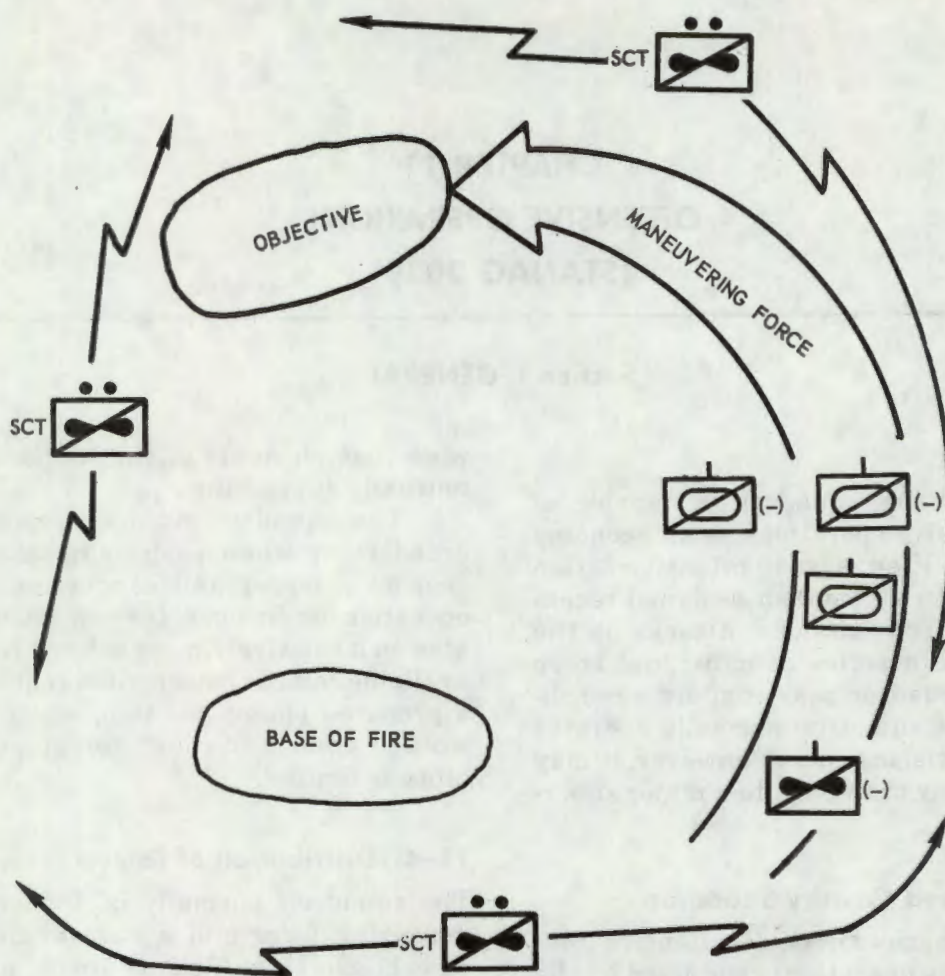


Figure 11-1. Distribution of forces, armored cavalry squadron in the attack (method 1).

vering force is 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 positive knowledge of the activities, strength, and location of enemy units through periodic visual means 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 secure key terrain, such as bridges and defiles, thus facilitating the squadron attack.

d. Ground surveillance radar and unattended ground sensors (UGS) are employed to assist in providing flank security and to search beyond the line of contact. Terrain permitting, the radar is positioned well forward to allow searching the objective before and during an attack. This is done to detect any movement by the enemy that might indicate reinforcement or a change in disposition. During reorganization, the radar searches enemy avenues of approach to assist in preventing a surprise counter-attack. Proper electronic security (ELSEC) measures must be applied to prevent the enemy from gaining valuable information from the detection, intercept, and analysis of radar pulses. (See chapter 10 for further discussion of surveillance planning and employment.)

11-6. Base of Fire

In a squadron attack, the base of fire is provided by mortars, artillery, and, when available, tactical close air support. ARAAVs are placed

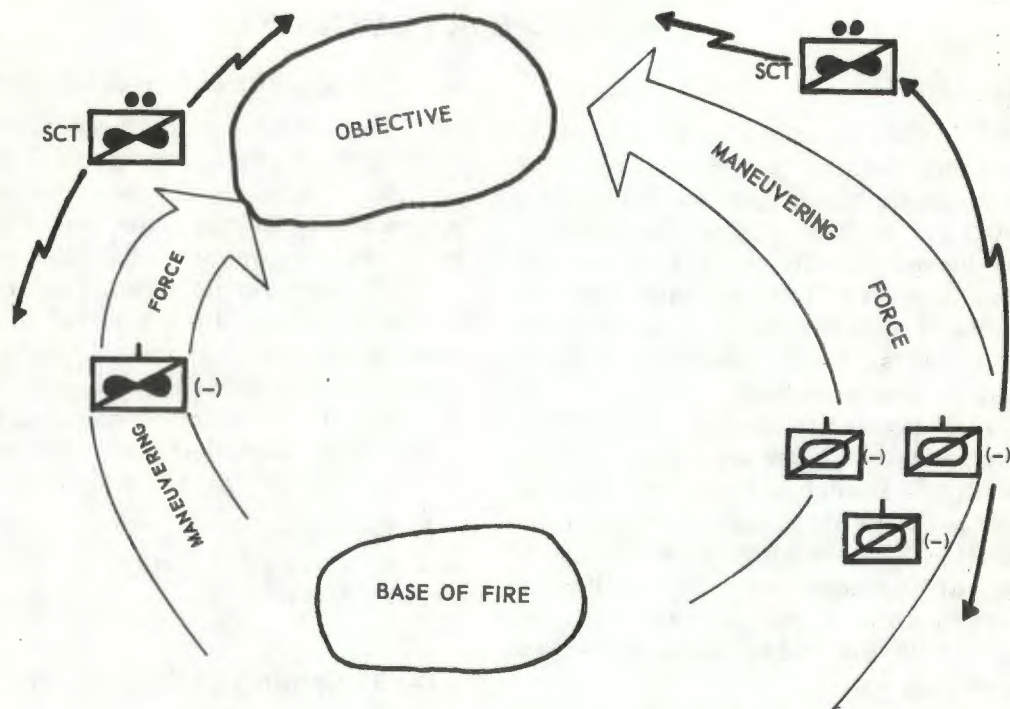


Figure 11-2. Distribution of forces, armored cavalry squadron in the attack (method 2).

in the base of fire *only* if terrain does not permit their 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.

11-7. Reserve

a. Combat forces are designated 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 insufficient forces are available to constitute a reserve, the squadron commander uses 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

11-8. General

To accomplish its offensive missions, the armored cavalry squadron attacks with aggressiveness, speed, shock, and violence. The conduct of such attacks requires thorough and deliberate planning. In planning for a squadron attack, the commander considers the factors of METT. His plan must be practical and capable of rapid and forceful execution.

11-9. 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. Minimum control measures that must be used are—

- Objectives.
- Direction of movement.
- Line of departure.
- Time of attack.

11-10. Control Measures (STANAG 2029)

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

11-11. General

a. Once the squadron attack is launched, it must be executed with aggressiveness and violence, using all available firepower. Under the cover 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 the 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 and positive 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 must not become so involved with the actions of one portion of this command that he is unable to control the entire squadron. During the attack, he depends largely on radio communication to control the squadron. By remaining in a forward position and maintaining personal contact with his troop commanders, he normally can control the action effectively. The S3, artillery liaison officer, and FAC usually accompany the squadron commander.

11-12. 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 to the objective. Fire and movement techniques may be employed by elements of the maneuvering force. Fire and movement are used so that the maneuver force as a whole may continue to advance while elements of the force halt temporarily to fire at known enemy targets that restrict continuous movement in mass. For a detailed discussion of methods of fire and movement, see FM 17-1.

b. The maneuvering force assaults the objective in a deployed formation to close with and destroy the enemy.

11-13. 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 (at the Final CL), the base of fire lifts or shifts its fire to the rear or flank of the objective. Coordination of these fires with the maneuver force and aviation elements in the area is essential.

b. Direct fire weapons in the base of fire and other elements of the base of fire, as required, are prepared for immediate displacement forward to participate in the reorganization of the objective.

Section IV. CONSOLIDATION, REORGANIZATION, AND CONTINUATION OF ATTACK

11-14. Actions on the Objective

a. *General.* The occupation of the objective is a critical stage of the attack. This is the time when control is most difficult and when an aggressive enemy delivers a carefully planned and coordinated counterattack, supported with all available supporting fires. When the squadron has assaulted and secured an assigned objective, it then accomplishes *consolidation and reorganization* actions. In nuclear warfare, the actual securing 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 objective. Such dispersion avoids presenting a lucrative nuclear target to the enemy.

These actions are in accordance with plans made by a higher commander.

b. *Consolidation.* As soon as leading elements of the assaulting force reach the objective, actions are taken with maximum speed to destroy remaining enemy resistance, prepare to move to dispersed locations, or continue the attack on order. These actions include:

(1) Establishing OP's and local security 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 lucrative targets.

(4) Submitting requests for artillery and tactical close 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 the maximum combat effectiveness of the unit and to restore control. These actions include:

(1) Reporting of units on their combat status, including disposition and status of personnel, equipment, and supplies.

(2) Redistributing men, ammunition, equipment, and fuel as required.

(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 consolidation and reorganization phase, the air cavalry troop usually is employed to provide security to the front and flanks of the squadron, to harass the enemy rear and flanks, and to help prevent the enemy from regrouping 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 any advancing enemy. (See paragraphs 12-9 and 12-10 for a discussion of security actions by the ground units during these phases.)

11-15. Continuation of Attack

Unless otherwise directed, the armored cavalry squadron continues 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 enable the unit to continue the attack rapidly. Troop commanders require only brief oral orders to resume the advance.

Section V. EXPLOITATION AND PURSUIT

11-16. General

a. Exploitation is the offensive action that usually follows a successful coordinated attack. During an exploitation by the division, the armored cavalry squadron normally is employed on security missions. In some situations, the squadron may be employed in an economy of force role.

b. Pursuit normally follows the exploitation. It differs from the exploitation in that its primary purpose is the capture or destruction of retreating enemy forces. The squadron may be employed as a covering force to regain contact with the enemy or as a guard force to protect the flank or rear of the division.

11-17. Armored Cavalry Squadron in the 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. The squadron can also fill a gap between forward attacking

brigades by moving along an internal axis of advance or zone.

b. The squadron is usually assigned an axis of advance or zone that permits it to advance on a broad front. The CP usually is 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 such protection as may be needed. Normally small enemy forces are bypassed. The next higher commander is 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 launched by the squadron, or the enemy may be bypassed. The air cavalry troop normally is 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 troop may also be employed to harass the rear and flanks of retreating enemy forces. In some situations, the troop may be employed to secure or destroy bridges to the rear of retreating enemy forces.

11-18. Armored Cavalry Squadron in Pursuit

a. Enveloping Force. The mission of the en-

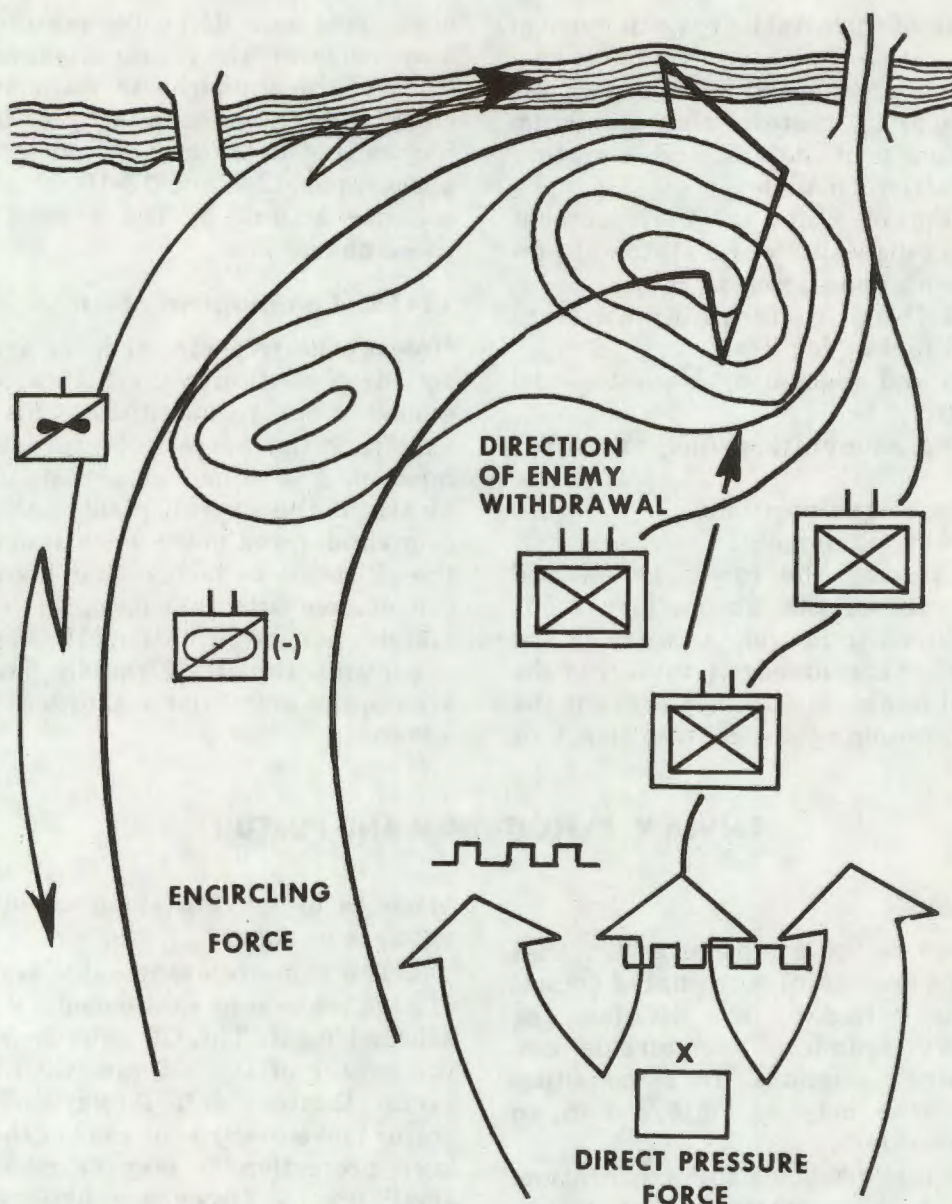


Figure 11-3. Armored cavalry squadron as encircling force in the pursuit.

veloping force is to get into the rear to intercept and destroy 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 enveloping force (fig. 11-3). This mission is assigned to the squadron, as all or part of the force, when the bulk of the division has become engaged with the enemy and a highly mobile force is needed to execute a rapid encirclement. The squadron in the enveloping maneuver advances along routes paralleling the enemy's line or retreat to secure defiles, bridges, and key terrain before arrival of the

enemy force. The air cavalry troop may be employed to protect the front, flanks, and rear of the enveloping force and to reconnoiter routes of advance and bypasses for the force.

b. Direct-Pressure Force. The mission of the direct-pressure force is to attack continuously to prevent enemy disengagement and subsequent reconstitution of enemy defenses. It seeks to inflict maximum casualties. As a direct-pressure force, the squadron acts as a part of a larger force. It advances along its assigned axis, usually employing multiple

columns, to close with the retreating enemy quickly and to maintain unrelenting pressure. Every effort is made to break through the enemy rear guard and engage the enemy main

force. 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 12

DEFENSIVE OPERATIONS

Section I. GENERAL

12-1. General

a. When performing reconnaissance and security missions, the armored cavalry squadron may be required to conduct defensive operations as an economy of force measure. These operations normally result from situations arising during the conduct of the assigned mission and are executed in the accomplishment of the particular mission. When performing reconnaissance or security missions, the squadron may be forced to adopt an all-round defensive posture for local security. Techniques and considerations in the following paragraphs apply to all defensive operations unless otherwise stated in the discussion.

b. The squadron may be assigned a defensive mission. Such a mission may place the squadron in the security area, the forward defense area, or the reserve area. The form of defense by the major unit may be either a mobile or an area defense.

c. The armored cavalry squadron commander plans, 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) All-round defense.
 - (4) Defense in depth.
 - (5) Responsiveness/flexibility.
 - (6) Dispersion.
 - (7) Maximum use of offensive action.
 - (8) Integration and coordination of defensive measures, including:
 - (a) Fire planning.
 - (b) Obstacles.
 - (c) Surveillance planning.
 - (d) Air defense planning.
 - (e) Signal security.
 - (9) Time available.
 - (10) Mutual support.
- d.* When the enemy possesses a modern mech-

anized force, antitank planning is a primary consideration in the defense.

12-2. 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 does not normally engage in an independent defensive operation except in accomplishing a reconnaissance or security mission. In either area or mobile defense, the squadron may be employed as a security force, part of the forward defense force, or as the reserve. Its employment in the forward defensive or reserve area should be considered an economy of force measure and should be undertaken only when the need for the squadron in this role exceeds the requirements for conduct of reconnaissance or security missions.

b. The armored cavalry squadron adopts an appropriate defensive posture for local security as a standard procedure whenever the squadron is not moving. The factors of METT determine what posture is required. For example, the combat power may be oriented to the front in a forward defensive area, with security to the flanks and rear and a capability to defend in any direction, or the squadron may organize a perimeter where forces are deployed for immediate strong defense in any direction.

12-3. Squadron as Division General Outpost

a. When performing a GOP mission, the squadron is normally supported by artillery and engineer units and reinforced with tank and mechanized infantry units. The GOP provides early warning of enemy approach, disorganizes and delays his advance, deceives him as to the exact location of the forward edge of the battle area (FEBA), and attrites the enemy by

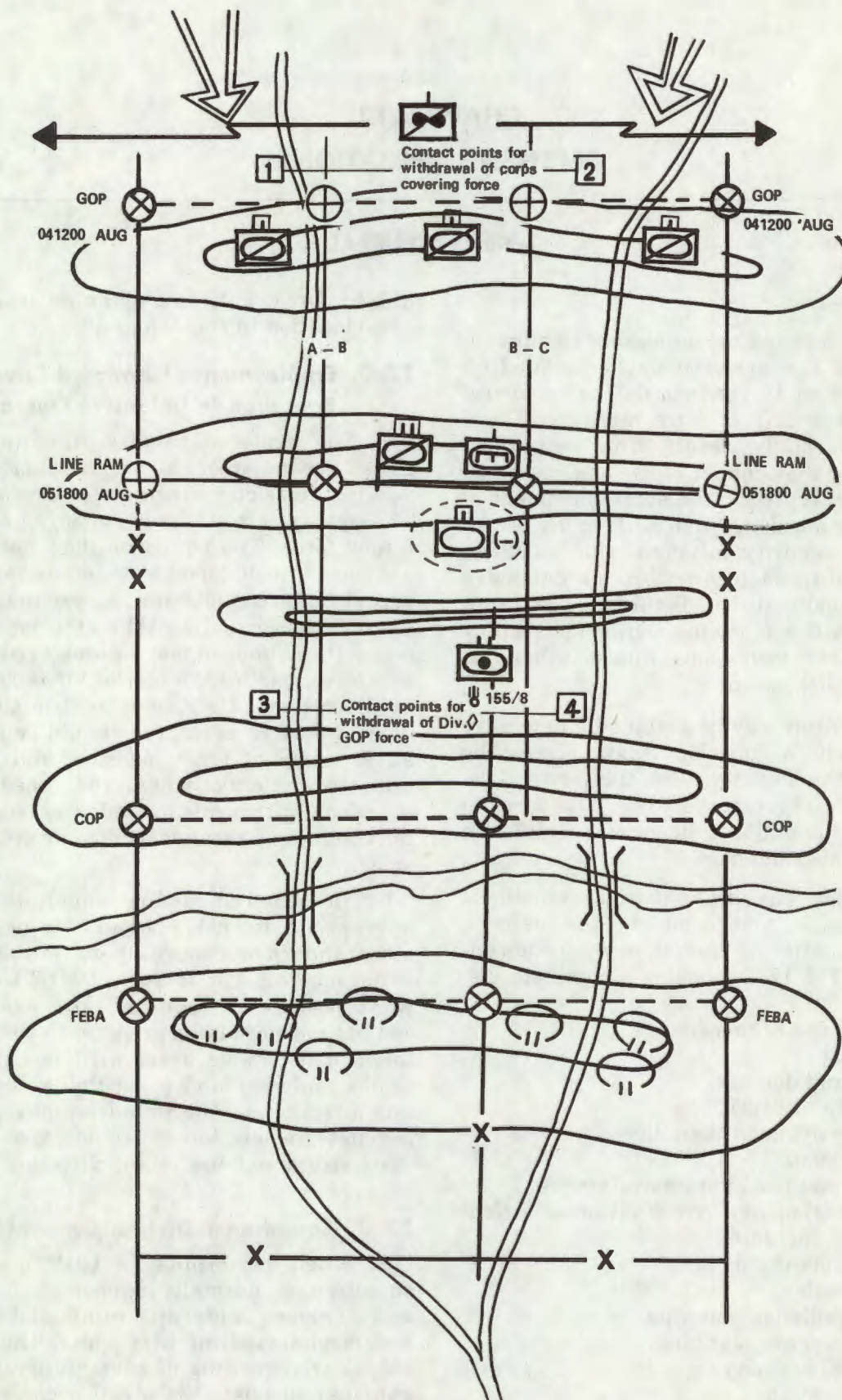


Figure 12-1. Armored cavalry squadron (reinforced) as a covering force in the defense.
Armored cavalry troops and the air cavalry troop screening forward of the GOP.

employing all available supporting fires and organic combat power (fig. 12-1).

b. When the squadron is employed as a security force, the withdrawal through the FEBA (withdrawal through a rearward position) must be coordinated when planning the operation. This is accomplished with the fixing forces or the forces in the forward defensive area. The corps covering force will establish contact with the squadron to plan and coordinate its withdrawal through the GOP.

c. Tactics employed by the squadron as a GOP are basically the same as those for a delay. Squadron movement to the GOP position is as discussed in paragraphs 9-10 and 9-11 unless there is a corps covering force deployed forward of the GOP line. In such cases, the movement is by tactical marching over the best available routes. Upon arrival at the GOP position, the squadron commander usually, of necessity, organizes his forces to operate on a wide front with little depth. Early development of the situation is essential, and the division commander is provided with information of the enemy by the most expeditious means available.

d. The air cavalry troop greatly enhances the squadron capability to provide early warning and delay the enemy. Ground surveillance radar and UGS are used to search and monitor likely avenues of enemy approach. (See chapter 10 for planning and employment of surveillance devices.)

e. For additional information on employing the squadron as a GOP, see paragraphs 9-10 and 9-11.

12-4. Squadron as Flank Guard in Defense

a. In either an area or a mobile defense, the armored cavalry squadron may be assigned a flank guard mission. Normally, the entire squadron is employed on the most critical flank. In some situations, a troop may be attached to the brigade with the less vulnerable flank of the division to perform a similar mission. 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 9-4 and 9-5.

b. Flank guard protection for forces engaged in either mobile or area defense is provided by the occupation of selected blocking positions located on key terrain to the flank of the protected force defensive positions. Blocking positions are selected to cover the most likely

avenues of enemy approach from the flanks. Intervals between the positions are covered by observation and patrols. Supporting fires are planned to cover likely target areas. The air cavalry troop usually is 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 protected force. Ground surveillance radar sets and UGS are used to supplement ground and air observation and other surveillance means, particularly during periods of limited visibility.

12-5. Filling the Gap in the Defense

The squadron may be employed under division control to fill a gap between forces occupying dispersed defensive positions. This measure assumes the same mission as the units on the flanks and in this case occupies a defensive position in the forward area. Similarly one or more troops may be attached to a brigade occupying a defensive position for the purpose of filling a gap between battalion task forces and maintaining contact with those adjacent forces. These missions are applicable to any form of defense. Before employing the squadron in this manner, the factors discussed in paragraph 12-2a should be considered.

12-6. Squadron Providing Rear Area Security in Defense

The armored cavalry squadron may be employed to provide rear area security for the division. The procedures in paragraphs 9-12 through 9-15 cover the squadron in this type of operation.

12-7. Employment of Redeye Section

The Redeye section provides local air defense. While not mandatory, best results are normally attained when the Redeye teams can mutually support adjacent teams. The entire section or team may be employed in one of three methods: General support, direct support, and attached. Each method has specific advantages; however, in the defense either general or direct support is preferred since both methods relieve the troop commanders of the burden of control of the team. When the section is assigned a general support mission, the following protection priority is normally assigned: Forces in the forward defense area, reserve, CP, and trains.

12-8. 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 includes 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 avenues of enemy approach.

12-9. Organization and Preparation of Defensive Position

a. The squadron commander indicates to his troop commanders a general trace of the FEBA, troop boundaries, and other control measures as required. He designates key positions for squadron defense.

b. If the width of the sector and the terrain permit, the squadron commander disposes his force in the manner that provides depth to the squadron sector. This is normally accomplished by placing one or more troops in depth.

c. The squadron commander makes 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 normally is employed to provide early warning of enemy approach from the front or flanks of the squadron, to screen areas between blocking positions, and to maintain contact with adjacent units.

d. The squadron normally accomplishes defensive missions by using troop blocking positions. They are usually organized in a manner to control key terrain features. The locations of these positions depend on the importance of the terrain and the enemy approaches that they dominate. Supplementary and alternate positions are selected and prepared by each troop to permit the squadron commander flexibility. He can 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 are covered by ground or air OP's, LP's, and patrolling.

e. The squadron headquarters usually occupies the least vulnerable location within the defensive position consistent with the requirement to properly control and support all tactical units.

12-10. Strengthening the Position

Strengthening of a squadron defensive position includes the measures taken to prepare 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 is 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 work priorities and the organization and preparation of defensive positions.

12-11. 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 are planned to insure that they will be effective during both daylight and darkness.

b. The squadron fire support plan includes detailed plans for the coordination of fires of artillery, mortars, ARAAV's, automatic weapons, and tactical close air support. 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, fires within the defensive positions, and fires to support the attack by the reserve. The squadron commander plans and requests artillery fires through the field artillery fire support officer.

c. Fires are 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

12-12. General

In mobile defense, forces are deployed in the security area, forward defense area, and reserve. The armored cavalry squadron is used in one or more of these areas or to provide flank security. Normally, when the squadron is committed along the forward edge of the battle area, it is attached to one of the brigades in the forward defense area; however, the squadron can occupy a sector independently as an economy of force measure. The squadron will routinely be used, at least initially, in the security area.

12-13. Squadron in the Security Area

The squadron, when employed in the security area, may be part of the reserve brigade or elements thereof, or a portion of a division task force, reinforced with mechanized infantry, armor, aviation, artillery, and engineer support. When reinforced with maneuver elements and fire support, it may also be assigned the entire security mission.

12-14. Squadron as Part of the Forward Defense Force

In the mobile defense, the armored cavalry

squadron may be required to defend or delay as an economy of force measure. The squadron normally defends by organizing and defending blocking positions. The squadron normally delays by occupying positions along the FEBA and by preparing and occupying blocking positions in depth. This type of mission is not normally assigned to the armored cavalry squadron when other resources are available. If the armored cavalry squadron is assigned one of these missions, the squadron commander organizes and prepares the squadron position as discussed in paragraphs 12-10 through 12-12.

12-15. 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 GOP force mission and has withdrawn through the forward defense force. The squadron may be used to perform reconnaissance and security missions for the division reserve or act as a maneuver force of the reserve. Operations of the reserve are similar to normal offensive operations. After the major portion of the reserve has been committed, the armored cavalry squadron *may be retained* as the division reserve.

Section III. AREA DEFENSE

12-16. General

The armored cavalry squadron is most effective when assigned missions that make maximum use of its mobility, firepower, and extensive communication system. In the area defense, these missions include:

- a. Security force on the GOP.
- b. Providing security for division flank or within the division area.
- c. Acting as all or part of the reserve. (Its use as division reserve is not considered to be the normal or best type employment.)
- d. Acting as part of the forward defense forces in an economy of force role.

12-17. Defense Areas

In area defense, as in all types of defense, there are three areas of defense forces: security areas, forward defense area, and reserve area. The squadron may be employed in one or more of these areas. The squadron normally is not

used with the forces in the forward defense area except as an economy of force measure. If employed in this manner, 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 12-10 and FM 17-1.

12-18. Squadron as the General Outpost Force in Area Defense

- a. The armored cavalry squadron performing as the GOP force for a division should be reinforced with tanks and mechanized infantry units and supported by engineers, artillery, and Army aircraft. The squadron is capable of being employed as all or part of the GOP force of a division engaged in area defense. The GOP force is controlled by the division commander. The mission of the GOP force is similar to that of the covering force. It is to give early warning of enemy approach, disorganize and delay his

advance, deceive him as to the exact location of the FEBA, and destroy the enemy by employing all available supporting fires and organic combat power.

b. When assigned a GOP force mission, the squadron commander immediately initiates reconnaissance of the area. When possible, he performs a preliminary map or aerial photograph reconnaissance followed by visual reconnaissance of the area. He then formulates his plan, which includes security measures, disposition and frontages of subordinate units, selection of advantageous delay positions between the initial GOP line and the FEBA, and organization and coordination of organic and supporting fires. The plan encompasses the organization of the ground to include obstacles, means for deceiving and disorganizing the enemy, and procedures 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 GOP force mission are essentially the same as for a delaying action. Unless required to delay the enemy for a specified time, the squadron begins its movement to rearward positions as soon as it is apparent that a superior enemy force is deployed for attack and the GOP is likely to become decisively engaged. The rearward movement is begun on order of the GOP commander with permission of the division commander.

12-19. Squadron as Reserve in Area Defense

a. When the squadron is designated as the

reserve, it may be employed to plan and execute counterattacks, to prepare positions to extend the depth of the battle area, and to protect the rear of the higher command. The squadron may be required to plan for all of these missions; however, it normally can execute only one at a time.

b. The squadron is positioned near a good road net that permits rapid movement to any part of the battle area. It occupies a position that adds depth to the defensive area.

c. When the squadron is employed in the reserve, it is prepared to conduct counterattacks against enemy penetration threats. Counterattacks are designed to destroy the enemy force and restore the original positions. When possible, it is desirable to execute counterattacks by striking hostile forces in the flank or rear. Plans are coordinated 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 secure 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, objective(s), actions on the objective, communication arrangements, rehearsals or briefing of troop commanders, and coordinating instructions. Commanders at all echelons 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. Counterattacks are offensive in nature and are conducted in the same manner as a coordinated attack (chapter 11 and FM 17-1).

Section IV. PERIMETER DEFENSE

12-20. General

The perimeter defense is a technique which is employed to provide an all-round defense posture. With this technique, 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.

12-21. Perimeter Defense 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. For instance, the squadron may perform these missions after completing an airborne/airmobile-armor linkup in defense of the airhead.

12-22. Squadron Employing the Perimeter Defense

a. The armored cavalry squadron normally operates at relatively long distances from other elements of the division. Consequently, it must often employ the perimeter defense to protect itself during operations and while preparing for other actions (fig. 12-2). Usually the situation

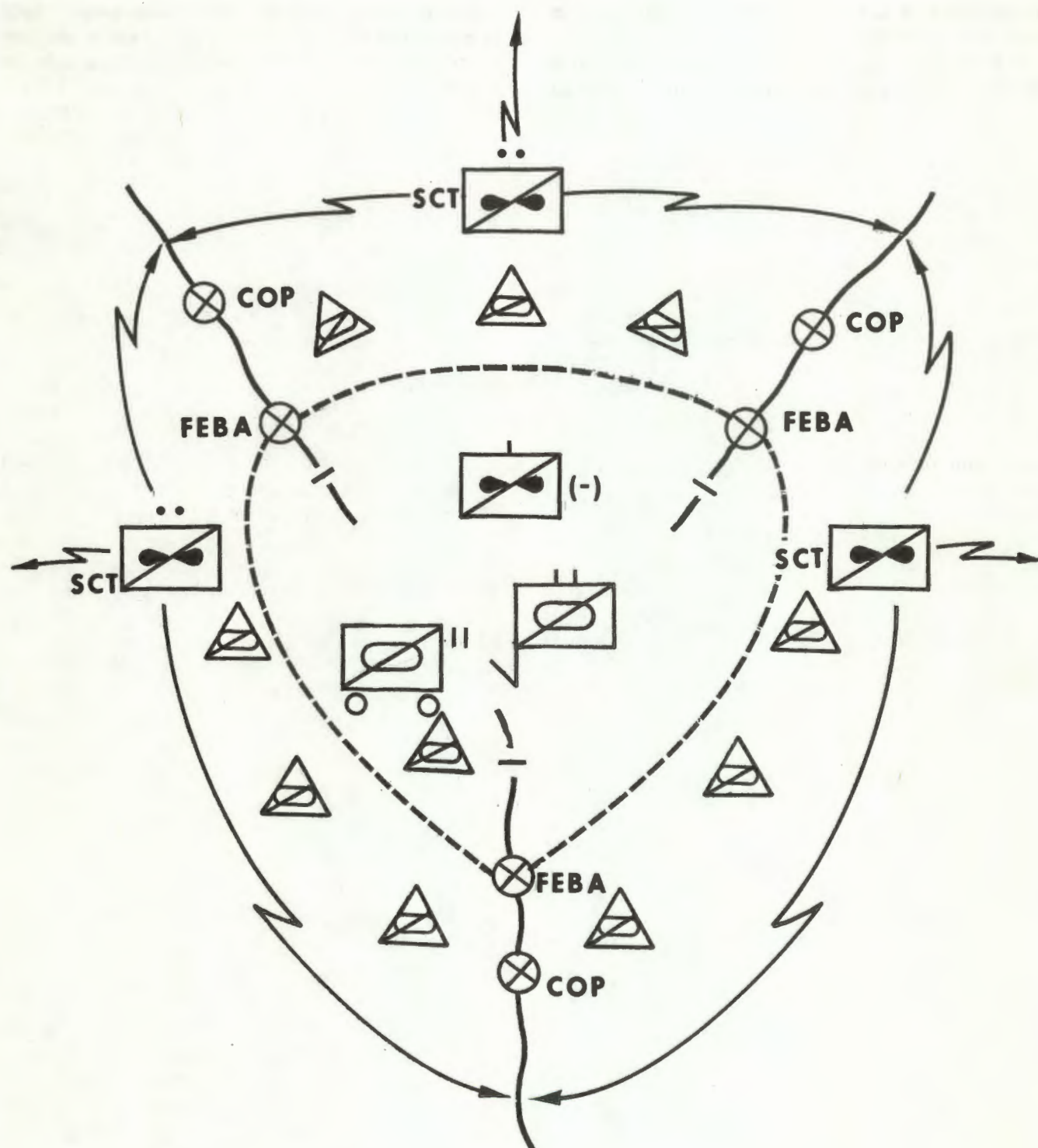


Figure 12-2. Armored cavalry squadron perimeter defense.

requiring establishment of a perimeter defense allows little time for detailed prior planning. Each troop on the perimeter 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 providing mutual support, developing effective counterinfiltration measures, and reducing chemical and nuclear vulnerability. Employment of chemical munitions (when authorized—

to include riot agents) should be considered in perimeter defense.

b. The squadron commander should retain a reserve when possible. It may be one armored

cavalry troop, or the squadron commander may require one or more troops to retain a platoon in reserve that can be employed singly or in mass.

CHAPTER 13

RETROGRADE OPERATIONS

Section I. GENERAL

13-1. 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 normally conducts retrograde operations as a part of a larger force.

13-2. Types of Retrograde Operations

There are three types of retrograde operations: delay, withdrawal, and retirement. (FM 17-1

contains a detailed discussion of the types and purposes of retrograde operations.)

13-3. Control Measures

a. Control measures used in retrograde operations include phase lines, coordinating points, checkpoints, contact points, lateral boundaries, routes, delay lines, and other measures associated with tactical operations (FM 17-1).

b. In selecting control measures, the commander allows maximum freedom of action at the small unit level; however, missions and details of execution are more detailed than for other operations.

Section II. DELAY

13-4. General

a. The squadron, because of its firepower, mobility, and communications, is well suited for a delay mission. However, squadron effectiveness is significantly increased by attachment of or reinforcement with tanks or mechanized infantry units, and supported by 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 delay position and continuation of this resistance through successive delay positions. (A discussion of the basic considerations is contained in FM 17-1.) Higher headquarters normally assigns the squadron a sector for delay, the general trace of the initial delay position, successive delay lines, the period of delay, contemplated future actions, and any limitations imposed on the squadron by higher headquarters.

b. Delay 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 delay in a narrow sector, or when reinforced, may retain a small

reserve. Troops normally do not designate reserves. The squadron commander influences the action by maneuver and supporting fires. Execution of the delay within assigned zones, and between squadron delay positions, is decentralized to troop level. The troops normally select intermediate delay positions between squadron delay positions. These positions are reported to squadron. The squadron commander controls the action by assigning troop sectors, designating squadron delay positions, and requiring troops to receive squadron authority for withdrawal to subsequent delay lines.

13-5. Reconnaissance and Selection of Delay Positions

Delay positions may be designated by higher headquarters and intermediate delay positions may be selected. A reconnaissance to select delay positions is made as early as possible. Likely avenues of approach are located, and plans are made to deny their use to the enemy. In selecting delay positions, the squadron commander considers the same factors as those considered in selecting any defensive position. He selects positions affording long-range fields of fire with routes suitable for rearward and lateral move-

ment, and establishes priorities thereon. Delay positions should incorporate as many of the following characteristics as possible:

- 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 (desirably from topographic crests of ridge lines).
- d. Covered or concealed routes of movement to the rear.
- e. A road net or areas providing good cross-country trafficability.

13-6. Disposition of Forces for the Delay

a. The squadron commander assigns troop sectors corresponding to the most likely avenues of approach available to the enemy through the squadron sector. Where possible one troop is assigned one major avenue of approach and the terrain dominating that avenue. Each troop sector should include at least one good route for rearward movement.

b. The squadron reserve, if available, 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 CP and combat trains are located well to the rear and normally behind the next rearward delay line to avoid the necessity of frequent displacement and interference with actions of combat elements of the squadron. The command group, however, remains in positions best suited to control the operation, normally well forward with the engaged elements. The command group usually is among the last elements to leave the area.

13-7. Task Organization of an Armored Cavalry Squadron Conducting the Delay

Organization of the squadron for delaying action is based on the factors of METT. Troops of the squadron are normally employed intact.

13-8. Security in the Delay

a. During a delay, the enemy normally makes every effort to envelop and destroy the delay force. The squadron commander is particularly careful that the enemy does not turn the flank or surprise the squadron. Continuous reconnaissance and security with integrated surveillance provide the best sources of security.

Ground reconnaissance and surveillance may be extended by patrolling, and by use of ground surveillance radars and unattended ground sensors. Coordination between adjacent units is essential to avoid presenting an exposed flank to the enemy. 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. If elements of the delay force are not in contact with the enemy, action must be taken to provide security to the front in order to prevent surprise of the delay force and to provide early warning of enemy approach. The air cavalry troop operating to the front provides early warning of enemy approach. OP's are established and necessary patrols conducted to the front of delay positions during daylight. These are replaced by more patrols, LP's, ground surveillance radars, and UGS at night. Routes from the delay position to the OPs and the patrol routes are carefully chosen to prevent enemy detection of the delay or security positions.

c. Armored cavalry units on a delay position establish their own flank security by all-round observation, patrols, and contact with adjacent units. Detailed reconnaissance enables the delay force to locate avenues of approach that the enemy is likely to use in an effort to envelop the delay force. Any enemy force attempting to advance along these avenues is blocked or ambushed. For additional details and discussion of control measures, combat support, employment of fires, and use of obstacles in the delay, see FM 17-1.

13-9. Organization of the Ground for the Delay

a. Planning considerations for the organization and occupation of a delay position are generally the same as for any defensive operation. In planning for a delay, definite sectors of responsibility are delineated. Boundaries may extend to the rear through the depth of the squadron sector. As a minimum, they must extend rearward through the next delay position and forward to the limits of the effective range of supporting weapons.

b. When sectors are assigned to subordinate units, each enemy avenue of approach is given to a unit when possible. Boundaries are assigned so that terrain features that facilitate control of fires and observation into a sector are assigned to the unit having responsibility for that sector. Coordinating points and contact

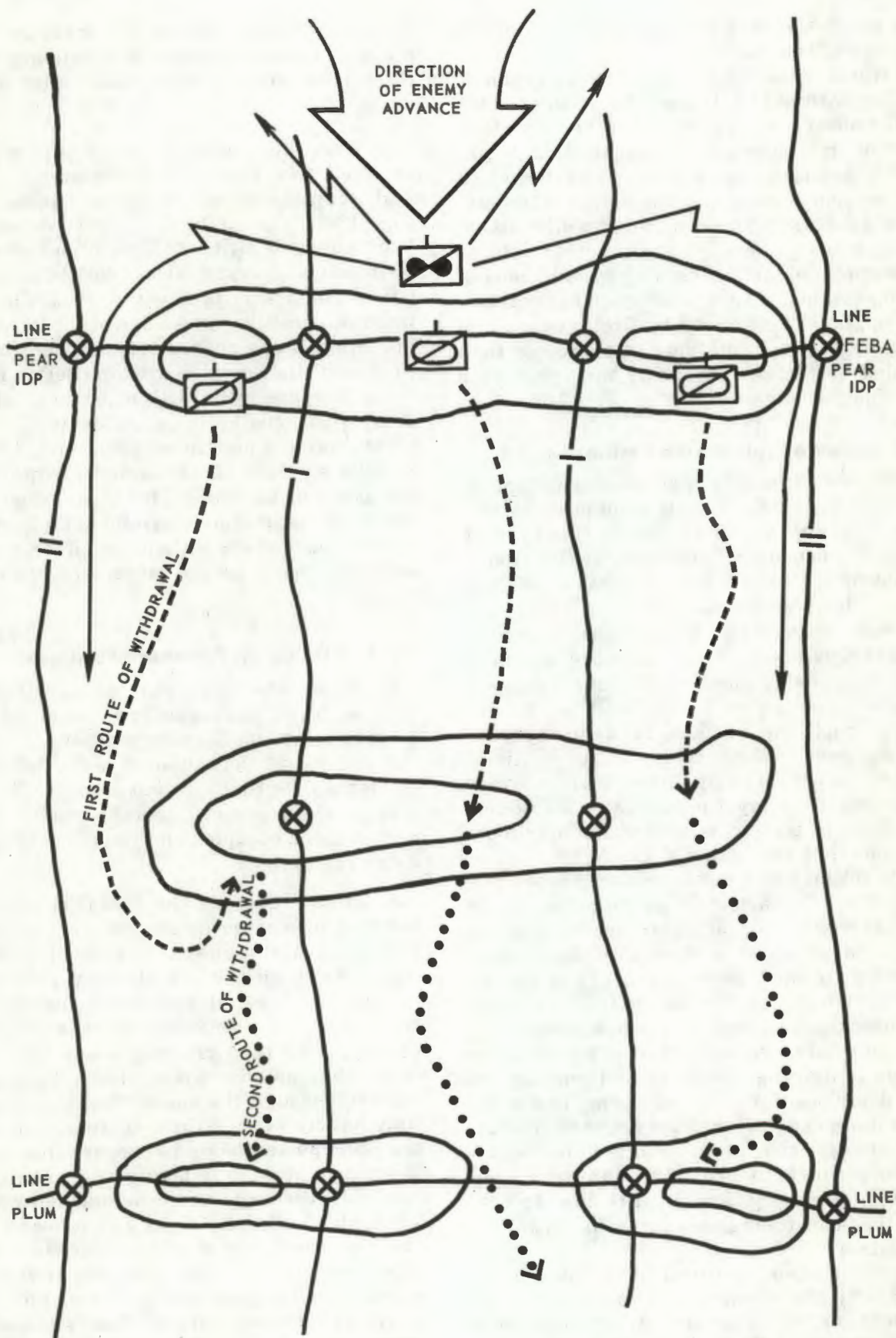


Figure 13-1. Armored cavalry squadron in delaying action—successive positions.

points are designated for coordination and for continuity of the position.

c. Natural obstacles are exploited in organizing delay 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 often attempts 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.

13-10. Delay on Successive Positions

a. Delay on successive positions is the type of delay action most frequently conducted by the armored cavalry squadron. When this type of delay action is used, all armored cavalry troops are normally committed on each of the squadron delay positions.

b. Delay on successive positions is accomplished through occupation and improvement of each natural delay position. However, delay is conducted not only from these successive squadron positions, but also between the positions on intermediate troop delay positions. Terrain is never given up unnecessarily. Every opportunity to delay the enemy is exploited, and minimum terrain is traded for maximum delay time (FM 17-1 and FM 17-15).

c. The initial delay position is organized and occupied by the armored cavalry troops. In some cases, the initial delay 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 delay position. Long-range artillery and units in the initial delay position take the enemy under fire at maximum range of indirect fire weapons and maximum effective range of direct fire weapons. These fires inflict casualties on the enemy, force him to deploy, and require 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, movement to

the rear, on order of the higher commander, is initiated in accordance with prearranged plans. Each movement is coordinated with adjacent units.

e. When the order to move to the rear is received, the affected unit displaces to the rear and occupies the next designated delay position (fig. 13-1). Normally, the unit displaces the least engaged elements first under cover of its own and supporting fires. *No detachments are left in contact as in a withdrawal.* The scouts maintain positive knowledge of the location and activities of the enemy between the first position and the next rearward delay position. When the enemy is within range of the next delay 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 has achieved maximum delay and is no longer able to hold the position without becoming decisively engaged, the rearward movement procedure is repeated.

13-11. Delay on Alternate Positions

a. When the squadron is operating on a narrow front, the squadron commander may elect to delay on alternate positions. Employing this technique, the squadron is divided into two elements. The first element occupies the initial delay position and engages the enemy. The second element occupies and improves the second delay position.

b. Units occupying the initial delay position conduct maximum delay and employ continuous delay techniques. They accomplish maximum delay on the initial delay position and, on order, between it and the second delay position. When the delaying units arrive at the second delay position, they move through the units that are occupying that position. After moving through the second delay position, the units proceed to the third delay position. There they occupy and begin to prepare that position. Responsibility for delaying the enemy is assumed by the units on the second delay position when the first delay force has moved through their position. The delaying procedure is then repeated, with each element being alternately in contact and responsible for occupying and improving rearward positions. These elements overwatch the forces that are in contact and provide covering fire for their rearward movement (fig. 13-2).

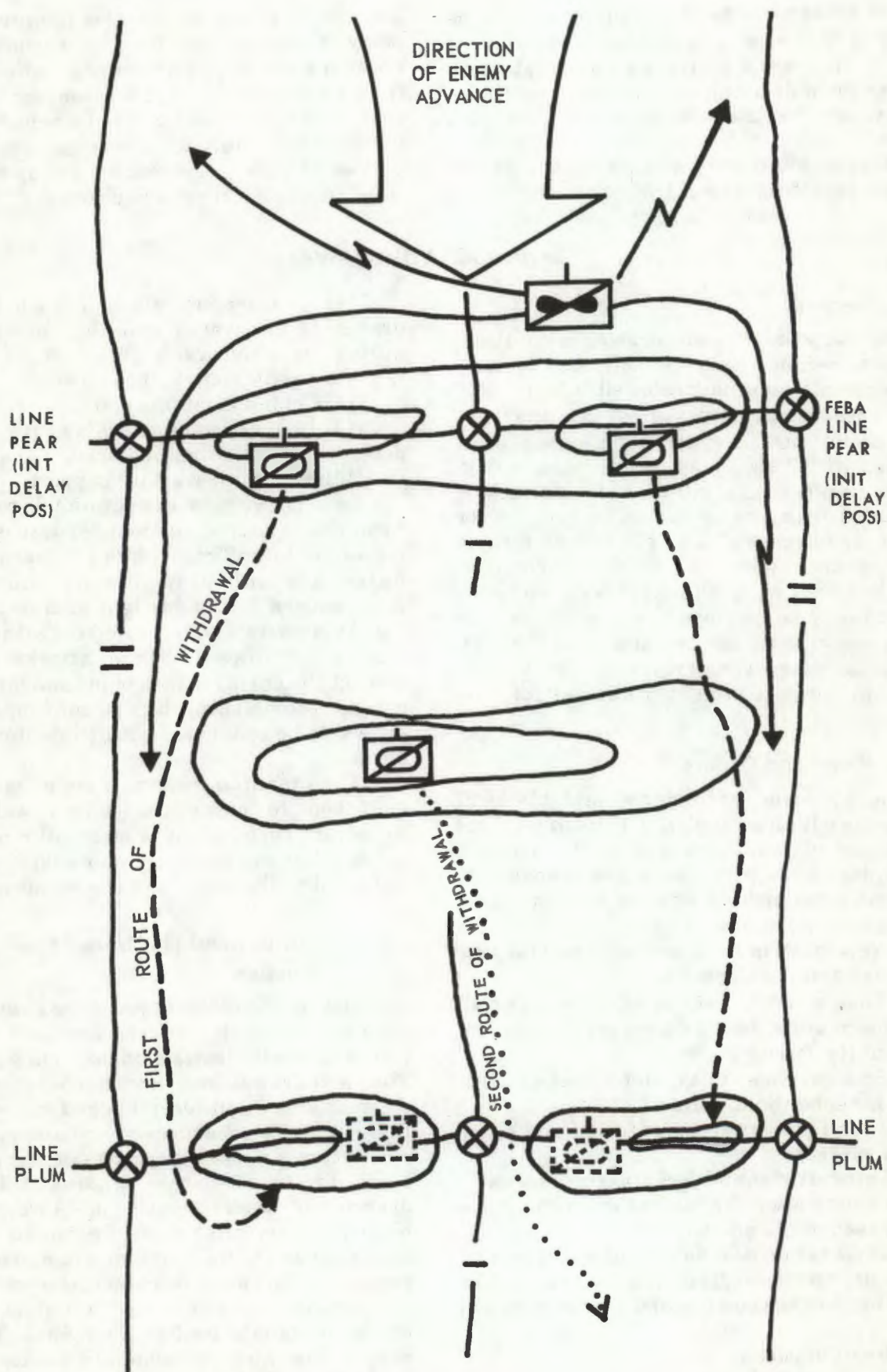


Figure 13-2. Armored cavalry squadron in delaying action—alternate positions.

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 than delay on

successive positions for the improvement of delay positions and for the performance of maintenance on equipment. It also provides troops with periods of relief from combat. However, this technique makes the squadron more vulnerable to nuclear attack because of short periods of high troop density during the movement through a rearward position.

Section III. WITHDRAWAL

13-12. General

a. The purpose of a withdrawal is to disengage, or to regain freedom of action, or to draw the enemy into an unfavorable situation.

b. A withdrawal is classified as either not under enemy pressure or under enemy pressure. The withdrawal may be executed in daylight or darkness. 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.

13-13. Plans and Orders

a. The squadron commander and his staff develop the withdrawal plan. This plan includes the scheme of maneuver and a fire support plan. Orders for a withdrawal are prepared in detail and must include, but are not limited to, the following elements:

- (1) New location to be occupied and disposition of units in that location.
- (2) Time and sequence of withdrawal of all subordinate units, based on preserving the integrity of the force.
- (3) Sectors, phase lines, and routes of withdrawal for subordinate units.
- (4) Provisions for security forces and other security measures.
- (5) Tactical cover and deception measures.
- (6) Organization for combat and time phasing of attachments and support.
- (7) Disposal or destruction of supplies and equipment, except medical, in a manner and at a time that will not compromise the withdrawal plan.
- (8) Fire support.
- (9) Combat service support.
- (10) Evacuation of casualties.

(11) Contingency plans in case the withdrawal is discovered and the enemy attacks during the withdrawal.

(12) Traffic control measures.

(13) Communications plan.

(14) Instructions concerning preparation of demolitions and other obstacles.

(15) Electronic warfare support.

b. Once the concept of operation is reasonably firm, the squadron commander issues a warning order in sufficient detail to permit reconnaissance and planning by subordinate commanders during daylight hours.

c. Aggressive, limited objective attacks facilitate a withdrawal. These attacks serve to disrupt the enemy attack plans and force him to assume the defense, thus permitting the withdrawal to be conducted with minimum interference.

d. The squadron reserve, if organized, may be employed to cover the withdrawal of the squadron, perform route or specific reconnaissance missions, or secure and hold key terrain essential to the success of the withdrawal.

13-14. Withdrawal Not Under Enemy Pressure

Because of the advantages to be gained, withdrawals not under enemy pressure are preferred over withdrawals under enemy pressure. The withdrawal not under enemy pressure 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 not under enemy pressure normally begins shortly after dark. The hours of darkness are used to the maximum in moving to the rear, especially for movement of the main force.

a. Armored cavalry troops in contact with the enemy designate part of their forces (approximately one-third) to remain in position and to cover the withdrawal of the remainder of the squadron. These security detachments are left

in position and they 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. The security detachments may remain in contact until the withdrawal is completed, or they may withdraw through another troop position established by the squadron on or in front of the next delay position. In either case, security detachments employ delay tactics as described in the following subparagraphs.

b. 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. ARAAV's may be withdrawn by infiltration prior to the withdrawal of the main force if there is not a definite threat of enemy armor and their withdrawal does not nullify deceptive measures. ARAAV's that remain with the detachments left in contact withdraw with other elements of the detachments. ARAAV's with night vision equipment, infrared equipment, or searchlights may provide assistance to the detachments in the event of an enemy attack during a night withdrawal. To facilitate the reorganization and assembly of units, the squadron may designate troop assembly areas. Such areas, when used, are widely dispersed and are occupied for the minimum time.

c. 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 13-16 and in FM 17-1.

13-15. Withdrawal Under Enemy Pressure

a. The high degree of mobility of the armored cavalry squadron enables it to conduct successful withdrawal under enemy pressure. As withdrawals may be subject to enemy observation, success depends largely on speed, control, fires, and effective employment of security forces.

b. The procedure followed in a withdrawal under enemy pressure is similar to that of withdrawal not under enemy pressure except that assembly areas are not required and ARAAV's are usually withdrawn last. Each troop in contact with the enemy normally provides and controls its own security detachments. These detachments should be composed primarily of ARAAV's to effect maximum delay. They inflict casualties on the enemy and attempt to minimize friendly losses. Coordination and control between troop security forces are necessary. The security detachments cause continuous delay of the enemy by employing delay 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. Troops move directly to the rear, form march columns, and continue to withdraw without halting.

Section IV. RETIREMENT

13-16. General

A retirement may be made following a successful 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).

13-17. Conduct of the Retirement

a. In a retirement, the squadron commander 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.

b. Security for the retiring force is provided by advance, flank, and rear guard action. 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 threats.

CHAPTER 14

SPECIAL OPERATIONS

(STANAG's 2036, 2079, 2112; SEASTAG 2112)

Section I. CHEMICAL AGENT DETECTION AND RADIOLOGICAL MONITORING AND SURVEY OPERATIONS (STANAG 2112)

14-1. General

This chapter is a guide for employment of armored cavalry units in special operations. It covers chemical agent detection and radiological monitoring and survey operations, area damage control operations, reconnaissance operations behind enemy lines, airmobile operations, and inland water-crossing operations. Information on other types of special operations in which armored cavalry units may participate is covered in FM 17-1.

14-2. Armored Cavalry Squadron Monitoring and Survey Operations

a. The armored cavalry squadron is one of the principal division-level organizations that conduct chemical agent detection and radiological monitoring and survey. The air radiological monitoring and survey missions are performed primarily by the air cavalry troop. This section discusses the conduct of these operations in general terms as applicable to armored cavalry squadrons, 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 are 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 3-12 and FM 21-40.

14-3. Definitions

a. Radiological Monitoring. The act of detect-

ing the presence of radiation and the measurement of radiation contamination on areas, structures, personnel, equipment, and supplies with radiation measuring instruments.

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 carries out a survey and 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 consisting of one or more individuals, plans, coordinates, and directs the efforts of the radiological survey parties under its control. It screens and reports radiological survey data to the appropriate higher echelon. Control party personnel are normally school trained, when possible.

f. Survey Team. A survey team consists of a control party and two or more survey parties.

14-4. Monitoring Operations

a. Chemical agent detection and radiological monitoring are a command responsibility of armored cavalry units. They are essentially protective measures to detect and identify chemical agents.

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 per-

form radiological monitoring and chemical detection. Monitor and assistant monitor are trained to operate the authorized equipment.

c. Once chemical or nuclear operations have been initiated, detecting and monitoring activities must be conducted on a periodic basis. While a unit is moving, designated persons perform continuous monitoring to prevent movement into an area of dangerous contamination without warning. When a unit has occupied a position, periodic monitoring may suffice. See FM 3-12 for details on radiological monitoring, and FM 21-40 for details on chemical agent detection.

d. The objective of monitoring by air is to determine the presence of significant levels of radiological contamination but not to determine accurate ground dose rates unless the monitor is specifically directed to do so.

14-5. Survey Operations

a. When an armored cavalry unit is assigned a survey task, the size and composition of the survey team is based on a consideration of the persons available, equipment on hand, the size of the area to be surveyed, the road net in the area, and the specific information desired. Survey personnel must be afforded protection from radiation. 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 tasks 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 are 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.

14-6. Reporting Data

a. Information obtained while conducting chemical detection and radiological monitoring operations is reported 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 reports his location by grid coordinates, the time the radiation reading was taken, and the dose rate in rad/hr. The format for monitoring reports is contained in appendix C, FM 3-12.

Section II. AREA DAMAGE CONTROL (STANAG 2079)

14-7. 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 area damage control planning, training, and implementation.

c. Refer to FM 17-1 for additional information on area damage control operations.

14-8. Squadron Area Damage Control Operations

a. The armored cavalry squadron is well suited to conduct area damage control operations. Frequently, the squadron, or a portion

thereof, may be required to conduct 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 may be employed in accomplishing 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 to 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 is established at squadron level. The squad is assembled on order and attached to a control and assessment team for area damage control operations.

(3) *Troop rescue squad.* One of these squads is established by each armored cavalry troop. Each squad is assembled on order and attached to a control and assessment team for area damage control operations.

14-9. Troop Area Damage Control Operations

a. The armored cavalry troop, or portions thereof, may be required to participate in area

damage control operations. The troop is responsible for organizing and training individuals to perform area damage control functions. A type unit is the troop rescue squad. It normally operates under control of a designated noncommissioned officer.

b. The functions of area damage control elements 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 III. RECONNAISSANCE BEHIND ENEMY LINES

14-10. 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. When cavalry units are thus disposed deliberately, or as a result of enemy action, they must capitalize on the opportunity to collect and report any information that can be obtained. This is normally a reconnaissance mission, but the tactical situation may dictate that the mission be accomplished through use of both reconnaissance and surveillance techniques.

b. Reconnaissance behind enemy lines requires aggressive and imaginative leadership by junior leaders as well as confidence in the ability of small armored cavalry units to operate independently. This type of operation provides an excellent means of gathering information of immediate tactical value.

c. An understanding of the information contained in FM 21-75 on scouting and patrolling activities is essential to this type of operation.

14-11. 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, chemical, or nuclear fires.
- b. Observation and control of air and artillery fires.
- c. Damage assessment.
- d. Radiological monitoring or survey.
- e. Route and specific reconnaissance.

f. Location and identification of enemy units and installations.

g. Surveillance over routes and enemy lines of communication.

14-12. Methods Used to Get Behind Enemy Lines

Methods that may be used by armored cavalry elements to deploy behind enemy lines include:

- a. Foot or mounted elements infiltrating enemy units or areas.
- b. Army air transport.
- c. Elements left behind deliberately.

14-13. Employment Behind Enemy Lines

a. The armored cavalry platoon may be employed in reconnaissance operations behind enemy lines as a platoon 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 move frequently to avoid detection by enemy communication detection devices and patrols. These moves are made during darkness or other periods of limited visibility, or when higher headquarters executes cover and deception operations.

c. Communication is maintained so that timely reports can be transmitted to higher headquarters. Radio transmissions are held to the

minimum consistent with the mission. This reduces the 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 is 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. OP's normally are established during daylight to observe the area designated. When required, patrols are used to supplement the OP's. At night, LP's replace OP's. Local security is maintained, and suitable withdrawal routes are planned and coordinated with units on the friendly front lines.

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 deliberately leave small forces behind is normally made at division or higher. Units temporarily isolated by enemy action may perform the same function as forces deliberately left behind.

14-14. Factors Affecting Employment

The factors of METT affect the employment of armored cavalry elements operating behind enemy lines. Other 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. *Communications.* The requirement for reli-

able communications equipment with sufficient range.

e. *Logistical Support.* The requirements for food, ammunition, and special equipment.

14-15. 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 factors, the requirement for establishing and maintaining communications is the primary consideration.

c. Plans for employing Army aircraft must provide for sufficient aircraft to transport troops and equipment, a suitable pickup (loading) zone, a 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 IV. AIRMOBILE AND INLAND WATER-CROSSING OPERATIONS

14-16. Airmobile Operations

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 aircraft termi-

nal guidance procedures. The scout sections and rifle squads of the armored cavalry platoons are particularly well suited for transport by helicopters.

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. Smoke may be used for screening purposes to deny enemy observation during helicopter-borne assault operations. In addition, it may be used to blind the enemy, reduce the effectiveness of small arms and other observed fire, and confuse or deceive the enemy through the use of decoy screens. However, the use of smoke in connection with airmobile operations requires careful planning and coordination because indiscriminate use could adversely restrict the movement of helicopters. (FM 3-50 contains a detailed discussion of the use of smoke in airmobile operations.)

d. When possible, landing zones (LZ) are prepared by indirect fires prior to inserting the airmobile force. Several LZ's may be prepared by fire to deceive the enemy as to the actual LZ site.

14-17. Employment of Armored Cavalry in Inland Water-Crossing Operations

a. Armored cavalry units are well suited for inland water-crossing operations since all organic combat vehicles are capable of swimming or fording, and the units have an organic air capability of rapidly placing ground troops on the far bank. However, to enhance the swimming and fording capabilities of these units, underwater reconnaissance personnel should be made available.

b. Once a crossing area has been selected, the commander determines the number of crossing sites. Leading units in the approach to the water obstacle determine enemy strength and dispositions and locate crossing sites. The initial objective is to eliminate enemy emplacements defending the near bank. When available, underwater reconnaissance personnel are part of the force used in the approach to the water obstacle.

c. Against lightly or poorly defended water obstacles, rifle squads and air cavalry units move across the obstacle and secure the far shore. Aero weapons and aero scout elements first concentrate on the enemy on the far shore and then shift to deeper targets which might affect the bridgehead. ARAAV's support the reconnaissance by direct fire. ARAAV barrier installation is accomplished in an area that

affords protection from observation on the far bank. Organic and supporting artillery supports the operation by placing indirect fires on targets on the far shore and shifting to deeper targets as the bridgehead is secured and expanded. Artillery positions are located as far forward as possible to exploit the range of the weapons; however, they must not interfere with the movement of units conducting the crossing. Direct support artillery begins to displace to the far bank as soon as the assault units have eliminated resistance in the bridgehead and have occupied positions that deny the enemy direct fire on the crossing area. Displacement is by echelon to insure continuous support. The size of the supporting unit and the number of crossing sites establish the size unit that it is to displace. Once crossed, direct support artillery occupy positions that provide the assault force with maximum fire support for continuing the mission.

d. When the water obstacle is not defended and is capable of being crossed with little or no site or vehicular preparation, the formation need not be changed and the unit can move rapidly into the water, cross the obstacle, and continue the mission without loss of momentum. When arriving at waterways, armored cavalry units halt briefly to install ARAAV barriers. If attached or reinforcing main battle tank units lead the formation, they require installation of kits before deep water fording. Armored cavalry troops pass through the tank units, cross the water obstacle, secure the bridgehead, and continue the forward movement while tanks prepare for deep fording. If, after crossing, enemy resistance prevents the armored cavalry units from advancing, the cavalry elements secure the bridgehead and wait for the tank units to complete their crossing, move forward, reduce the resistance, and continue the advance. While waiting for the tanks to complete their crossing, every effort is made to destroy the enemy and continue the advance. This includes using organic and supporting mortar and artillery fires and air cavalry units.

e. It is often advantageous to use smoke in inland waterway crossings. Commanders should consider the advantages and disadvantages of smoke in these operations.

f. Refer to FM 17-1 for additional information on operations at inland waterways.

Section V. COMBAT IN BUILT-UP OR FORTIFIED AREAS**14-18. General**

While not designed primarily for this type employment, armored and air cavalry units have the capability to conduct attacks on fortified and built-up areas, usually as an economy of force measure. This type of fighting is most readily accomplished by employing the cavalry

combined arms team which includes air. The first requirement for combat in a fortified or built-up area is the acquisition of detailed information. Normally, this requirement will be the first priority task assigned to the squadron. For a detailed discussion of the tactics and techniques of combat in these areas, see FM 17-1 and FM 31-50.

CHAPTER 15

STABILITY OPERATIONS

15-1. General

a. This chapter deals with the special tactical considerations which apply to divisional armored and air cavalry units in the conduct of stability operations. It should be used in conjunction with FM 17-1, FM 31-16, and FM 31-23, which are the basic references.

b. Gaining the support of the population is of paramount importance in the formulation of national strategy in a stability operations environment. The military role must be viewed as part of the larger problem of internal development; therefore, military actions must not only provide tactical benefits but must also support long-range internal development objectives. This requires, for example, prudent and selective use of the firepower available to armored cavalry units to insure that the support of the population is not lost as a result of tactical operations.

c. The distinguishing feature of stability operations is the nature of the enemy. A communist-led insurgency consists of three phases:

- (1) Latent or incipient insurgency;
- (2) Organized guerrilla warfare; and
- (3) War of movement.

During the first two phases, the enemy is generally more lightly armed and is organized into smaller, more dispersed units than in conventional warfare. During phases I and II, his military campaign consists of a series of raids and ambushes against vulnerable targets. During the third phase, when insurgency becomes primarily a war of movement between organized forces of the insurgents and those of established authority, the insurgents will possess the ability to conduct a greater variety of operations and will more frequently stand and fight against internal defense forces. During this phase, support to the insurgents by the sponsoring nation may increase and include more sophisticated weapons, communication, transportation, and "volunteers." In phase III, insurgent forces may mount mobile warfare

between organized forces of the insurgents and those of the established government in addition to continuing phase I and II tactics and operations. Together, these campaigns are intended to render the existing government ineffective and to disaffect the population, enabling the guerrilla to take over the government. He draws his basic manpower and supplies from disaffected or intimidated elements of the population. He also obtains men, materiel, and equipment from government forces (particularly in the first two phases of the conflict, and, if successful, in the third phase), from sponsoring nations, neutrals, and external sympathizers. He may also obtain great skill and quantities of materiel and equipment from previous conflicts within the country. He operates wherever he can within the country. There is no FEBA or line of contact.

d. The objective of friendly tactical operations is to destroy insurgent forces and bases and establish a secure environment within which internal development is possible. Tactical operations are coordinated with civilian agencies through the area coordination center (ACC). Tactical operations are aimed at countering guerrilla subversive operations and severing his support from the local population. The majority of these operations against guerrilla forces consist of small unit actions, are generally offensive in nature, and are continuous once initiated. Several unique tactical considerations have general application:

(1) The enemy's relatively light combat power in the first two phases of insurgency enables the lightly armored vehicles of the armored cavalry squadron to be used in tank-like roles. As a result, the squadron can be effectively employed on missions normally assigned to other combat maneuver elements.

(2) Tactical operations must aim to destroy the guerrilla force without destroying the civilian population or economy in the process, because these tactical operations are conducted in

the name of a government whose validity rests on its ability to—

(a) Win the support and confidence of the people for the government.

(b) Establish an effective government.

(c) Provide a program of internal development.

(d) Maintain internal security with minimum disruption of internal development.

(e) Assimilate dissident factions without undermining the government's capability for action.

(3) The link between the guerrilla and the population is critical, when it is broken the guerrilla becomes ineffective. Civil-military operations, to include stability operations, advisory assistance, civil affairs, psychological operations, intelligence operations, and populace and resources control, are as important to the overall campaign as are tactical operations.

e. Although the armored cavalry platoon, troop, and divisional squadron will normally be employed in tactical (reconnaissance, security, economy of force) operations, these units cannot disassociate themselves from the civil-military aspects inherent in all stability operations. At times they may be employed in tasks essentially civil-military in nature; and they must constantly be prepared to exploit opportunities to conduct civic action and other civil-military operations when such actions will contribute to the accomplishment of assigned or deduced missions, assist in the prevention of civilian interference with mission accomplishment, or assist the commander in the discharge of his legal obligations with regard to the population of the area.

15-2. Missions

Both reconnaissance and offensive missions are best performed by air cavalry and armored cavalry working together. Specific missions should be those which directly counter the greatest enemy tactical threat. Security, defensive, and support missions can be performed but do not take maximum advantage of the unit's inherent capability.

15-3. Offensive Operations

a. *General.* Offensive tactical operations are keyed to the guerrilla forces rather than to any specific terrain objective. Guerrillas habitually operate in areas which are quite large in proportion to the size of the guerrilla forces in the area. The guerrilla takes advantage of this large area, and his intimate familiarity with it,

to elude forces as well as locate widespread vulnerable targets to attack. This makes the process of finding and destroying guerrillas exceptionally difficult and slow. Three basic principles apply:

(1) Develop reliable sources of intelligence.

(2) Take the initiative and keep it.

(3) Develop the ability to rapidly concentrate forces on proven contacts to destroy the guerrilla forces before they escape.

b. *Develop Reliable Sources of Information.*

(1) The squadron has four principal sources of information:

(a) Organic reconnaissance capability. The armored cavalry squadron elements do not ordinarily conduct zone or specific reconnaissance in stability operation, but are assigned an area of operation (AO) and patrol selected areas. This type of operation has four purposes: Permits troops to become thoroughly familiar with the local terrain; threatens the enemy with the loss of supply caches and hidden cultivated food plots; forces the enemy to keep constantly on the move; and denies the enemy his guerrilla base camps, meeting sites, and hospital areas. In addition, any group movement of guerrilla units is threatened by chance encounters with friendly cavalry units. Caution must govern the scheduling, size, and routes of mounted combat patrols to reduce the possibility of guerrilla ambush. Mounted combat patrols should not become standardized throughout the AO nor establish predictable patterns. Suitable supporting air- and ground-delivered fires must be planned in addition to providing high response reaction forces (which may be airmobile) to reinforce patrols that establish contact with superior enemy forces. The best organic information-gathering source is the air cavalry troop as discussed in chapters 5 and 6.

(b) Surveillance, target acquisition and night observation (STANO) devices selectively placed and manned by trained operators will permit early warning of approaching personnel, advise the commander of the direction of movement, and in some instances, the number of personnel moving. The judicious employment of STANO devices will permit surveillance, both day and night, without placing troops into a suspect area. Selected STANO devices can be either hand emplaced or air dropped into a desired area, and then activated and monitored during times deemed to be critical by the commander and/or during times of suspected enemy movement within the suspect area.

(c) Information obtained from friendly

civilians, prisoners, deserters, and ralliers provides accurate and timely information to the commander. An assessment of the local enemy force may be made based upon information provided by a cooperative civilian, PW, deserter, or rallier. Information regarding enemy size, location, equipment, intents and plans, weaknesses and losses may all be obtained, thus contributing to the commander's understanding of the enemy unit and personnel who oppose him. Fragments of information previously learned may be pieced into a composite picture based upon further information given by a civilian, PW, deserter, or rallier and can often correlate previous information regarding the current enemy situation. This type of information and intelligence gathering is of particular significance during stability operations where there is no demarcation of the battle area, and the enemy forces are composed of guerrilla units and insurgents that cannot be readily identified by nationality, uniform, or equipment, or who are not clearly separable from the population.

(d) Local government sources, police, and paramilitary units offer another source of vital information to the cavalry commander. Local police officials will be familiar with the surrounding area and can identify possible cache sites, meeting places, and potential safe havens or rest areas for guerrilla personnel. Local officials and paramilitary units will be familiar with local guerrilla tactics and methods of operation, and may be able to advise area commanders of possible courses of action to locate and destroy guerrilla elements. Local police may be able to provide identification and dossiers on guerrilla leaders and insurgent leaders which may lead to their subsequent capture or elimination. FM 31-16 and FM 31-23 discuss the applicable procedures.

(2) The most effective organic information gathering source is the air cavalry troop.

(a) The extended scope of stability operations often strains the squadron's aircraft resources, and requires that the squadron commander closely monitor aircraft maintenance. Despite this strain, the principle of reconnoitering by teams and the flying time limitations of crews and aircraft must be adhered to; otherwise, unacceptable loss rates over a prolonged period will result.

(b) The air cavalry troop should be assigned an area of operation and remain in that area as long as possible. This enables the observers to spot any changes which could indi-

cate guerrilla activity. Care should be taken to insure that routines are not established. The enemy would probably take advantage of them to avoid detection and employ countermeasures.

(c) The aero rifle platoon is generally used to reconnoiter areas on the ground which cannot be adequately observed from the air. Depending on the reconnaissance objective and expected enemy resistance, these tasks may be performed by individual squads, several squads, or the entire platoon. Insertions are supported by scout and attack helicopters, as described in chapter 6. If a significant contact is established, the aero rifle platoon, supported by the attack helicopters, attempts to fix the enemy until friendly reinforcements can be brought in.

(d) Effective, sustained reconnaissance over relatively small areas can be performed by dismounted organic scout or infantry elements either inserted by helicopter or left behind by ground elements as they pass through an area. However, since the latter type of operation usually requires specially trained personnel, it is usually performed by teams from divisional infantry elements rather than cavalry troops. The principles contained in FM 31-18 apply.

c. Take the Initiative and Keep It. Initiative is usually gained by conducting sustained troop- or platoon-clearing or patrol-type operations. As long as the guerrilla is kept off balance, he cannot conduct his own offensive campaign of carefully planned raids and ambushes. He is denied the freedom of movement essential to his survival; he is not permitted to resupply or maintain himself in remote areas; and he is further denied contact with the local population.

(1) FM 31-16 discusses these operations in detail. Essentially, patrol units are as small and widely dispersed as can be allowed without risking defeat in detail. Daylight patrols using reconnaissance techniques are combined with night ambush patrols to deny the enemy freedom of movement.

(2) Other small unit considerations are as follows:

(a) Armored cavalry's organic firepower should be used against the greatest enemy threat; armored cavalry's excellent mobility enables it to patrol large areas.

(b) Units in difficult terrain should be reinforced with engineers.

(c) Test the trafficability of questionable

or doubtful terrain before rejecting it as impassable.

(d) Terrain which is impassable to vehicles should be patrolled by air with organic air cavalry elements, or by dismounted infantry or scouts.

(e) Cultivated areas should be patrolled carefully to limit crop damage. Indiscriminate cruising about may destroy the results of several months' work by a farmer and encourage him to sympathize with the guerrilla movement.

(f) In assembly areas, vehicles are parked in a close defensive perimeter to prevent enemy infiltration. Infiltrators are usually a greater threat than the enemy's stand-off firepower.

(g) Maintenance cannot be neglected. Time must be made available for periodic servicing of all vehicles. When operations are widespread, particular care should be taken to insure that individual platoons do not become isolated from their maintenance support.

(h) Overhead cover for dismounted personnel will prevent needless casualties from guerrilla harassing attacks by fire.

(i) All fires should be carefully controlled; the use of excessive firepower, in particular, should be resisted. Indiscriminate use of force may result in undue damage and/or civilian casualties, thereby encouraging the population to sympathize with the insurgent movement.

(3) The guerrilla is most likely to counter patrolling tactics with extensive nuisance mining, raids on small isolated elements, and ambushes. He will increase terrorist activity against the local population by placing mines in urban centers and roads, conduct small scale raids against remote police and paramilitary outposts and assassinate selected local government officials. Mines are usually the most persistent and damaging. Their effect can be reduced by repeated breaching and clearing operations using the techniques discussed in FM 20-32; by avoiding areas likely to be mined, such as defiles; by constantly changing routes; and by aggressively applying ambush tactics. In any event, mining techniques must not be allowed to lead to defensive tactics else the initiative will return to the guerrilla. Guerrilla raids and ambushes usually cause significant damage to military units only when the guerrillas attack units which are not alert. Since boredom and fatigue, at times, can blunt the effectiveness of the most dedicated Soldier, occasional changes of mission and short periods of rest are essential. Other command considerations are contained in FM 22-100.

(4) Guerrilla forces seldom remain static. The commander must be continuously alert to insure that the size, composition, and location of the patrolling forces are all keyed to the latest intelligence on the guerrilla force. If the enemy is believed to be concentrated in a particular area, a reinforced squadron sweep may be necessary. At other times, a number of troop operations are best. A number of platoon operations may be conducted when the enemy situation indicates a reduced threat or when the terrain permits immediate reinforcement by other ground and air elements.

d. Concentrate Forces Quickly to Destroy Known Guerrilla Forces. While maintaining the initiative prevents the guerrilla from inflicting serious damage, he still must be destroyed. The key to his destruction lies in concentrating forces rapidly at whatever point he is located before he can escape.

(1) The aero rifle platoon is the most rapid ground reaction force of the squadron units and is generally committed first when a guerrilla force is definitely located by the air cavalry troop. Its mission, with the support of the air cavalry troop, is to fix the enemy and prevent his escape. Ground cavalry and attached infantry units are then committed as rapidly as they can be brought up to surround or cut off the enemy and then destroy him with fire and movement. Airmobile infantry, if available from other division assets, is similarly employed. The danger that the enemy will escape to fight another day often overrides the consideration of piecemeal commitment, which the principles of war traditionally preclude. The technique of rapidly committing troops to decisively engage the guerrilla force, once the force has been located and fixed in position, has proven successful. During the operation, adjustments to the command structure must be made as the committed force grows larger. Since the process is repeated with every significant contact, the procedures for building up such troop concentrations and concurrent command structures are generally made a part of the unit SOP. The aero rifle platoon is usually withdrawn from such actions as early in the buildup as possible in order to retain the integrity of the air cavalry troop.

(2) When faced with overwhelming combat power, the guerrilla generally has two options for saving his force: He can exfiltrate in small groups, or he can hole-up in the ground. Exfiltration is checked by saturation patrolling along likely routes such as stream beds or

trails. Aggressive aerial reconnaissance should be conducted ahead and to the flanks of these patrols, at about the distance the exfiltrating groups are expected to rally into larger groups. This distance must be carefully judged, based on the size of the guerrilla force, the terrain, and the time differential between the rate of advance of friendly patrols (which is normally cautious and probing) versus the rate of withdrawal of the guerrilla (which is normally carefully planned and rapid). For example, guerrilla forces of company size or smaller could be expected to rally within a kilometer of the last line of contact, in less than half an hour after breaking contact. The guerrilla could conceivably rally within 10 minutes of breaking contact; thus, aerial reconnaissance should be quickly and aggressively implemented. Emplacement of unattended ground sensors across likely infiltration routes is another effective means of locating an evading force. Holing-up, which is particularly suspect if the enemy repeatedly appears in force in the same area, is countered by a detailed, inch by inch, dismounted search of the battle area. If at all possible, forces should remain concentrated and search within the battle area for three or four days to starve out guerrillas who may be hiding. Indigenous military and paramilitary forces may be effectively used in this task considering their familiarity with the area and knowledge of local guerrilla operations.

(3) Since guerrillas normally evade contact except on their own terms, friendly maneuver units which come under sniper or harassing attack should generally suspect these attacks of being diversionary actions aimed at luring them away from a larger guerrilla force, base camp, sensitive area, or into attacking a nonmilitary target. Only the minimum necessary force should be deployed to counter these sniper attacks. The bulk of the force should remain concentrated for rapid employment elsewhere. Intense aerial reconnaissance in conjunction with ground reconnaissance in force operations should probe for several kilometers opposite from, and to the flanks of, the sniping attacks to search for more lucrative targets.

(4) The ambush is an effective tactic against a guerrilla force. The procedures are covered in FM 21-75. Infantry forces are employed normally on ambushes, although armored cavalry may be used effectively if imaginatively deployed. The main principle is that they be established in absolute secrecy and, when executed, obliterate the enemy with an

initial overwhelming volume of fire before he can react. Armored cavalry units achieve the necessary secrecy and surprise by deception rather than stealth. A great deal of random movement may cover the establishment of a vehicular ambush which, because of the greater range of its weapons, may be set up further from the killing zone than a dismounted ambush. A dismounted ambush team may be secretly dropped off from a mounted column as it moves through an area.

(5) The guerrilla's use of major waterways or roads at night may be interdicted by employing air cavalry teams composed of an illumination helicopter and several attack helicopters as discussed in FM 17-37. Guerrilla's habitually use streams, rivers, and canals to transport personnel and supplies and for purposes of navigation to and from objectives during operations. A relatively small commitment of resources to these operations may effectively deny the entire river or road to guerrilla use. Waterway control techniques require considerable skill and close teamwork by the team members. These techniques work best when the same people are habitually dedicated to their use. The denial of principal inland waterway supply routes will diminish the guerrilla's logistics and is well worth the commitment.

(6) The raid is still another effective offensive technique. The aero rifle platoon is well suited to make raids on lightly defended objectives such as guerrilla clandestine civil operations centers, or on the hideouts of key guerrillas operating within the civilian environment. Local police and indigenous paramilitary forces usually accompany such raids to make arrests and confiscate materiel, while aero riflemen provide security and seal off the area. Raids against defended strongholds are made by ground troops who proceed to the area rapidly and in force to conduct a normal assault. As in any operation against guerrilla forces, success depends upon swift reaction to good intelligence.

e. Other Offensive Operations. A number of missions such as reserve or population/resources control are basically offensive, though not always the most desirable missions for the armored cavalry squadron.

(1) The armored cavalry squadron's combination of mobility and firepower make it suitable as the division reserve force when operations are sufficiently restricted in space to permit timely commitment of the squadron anywhere in the area. When assigned a reserve

mission, the commander develops detailed plans and reconnoiters all possible routes to insure rapid movement to any place where action may develop. The force is committed when reconnaissance or maneuver elements uncover a significant guerrilla force. It may also be employed to relieve a force under attack. A degree of caution is needed in the latter case, however, as the guerrilla may launch a secondary attack against a small element, while deploying his main force to ambush the reserve as it comes up.

(2) Since the guerrilla mixes with and draws support from the civilian population, certain population and resource control measures are applied to weed him out. The application of these controls is normally a police responsibility, but combat troops may occasionally have to assist the police in performing their mission. The aero rifle platoon is particularly well suited to assist the police in operating wide-ranging, rapidly shifting airmobile checkpoints. The most common technique is to check all personnel and goods passing a point to insure that identity papers are in order and that no contraband gets through. Suspected personnel and materiel are detained for further examination by civil/police investigators.

(3) Effective PSYOP support of stability operations, including staff planning and coordination thereof, is essential. A key element in this regard is the civil military operations staff officer. With reference to PSYOP, every action taken by military forces has a psychological impact on the population and must be considered in all planning activities. PSYOP is an effective tool which can be employed before, during, and after the conduct of military operations. When such operations involve civilians as well as enemy forces, PSYOP can assist by informing the target audiences of what can be expected in the area, and issuing instructions, when appropriate, that will minimize materiel, crop, and plant damage, and nonmilitary casualties. There will be situations where short-range tactical advantages and expediciencies should be sacrificed in favor of long-range objectives.

15-4. Security Operations

a. While stability operations usually do not require defensive tactics in the traditional sense, there is a heavy and constant security requirement. Each and every element must provide continuing close-in security against sabotage, ambushes, raids, and standoff indirect

fire attacks. Since there is no FEBA, no echelon can be considered secure from these attacks. In addition to constantly providing their own close-in security, armored cavalry units may also be tasked to provide security for large installations and for lines of communication. Such missions do not maximize armored cavalry's offensive capabilities, since they are based on the enemy striking first instead of carrying the fight to the enemy. For this reason, they should be assigned only when more profitable offensive missions cannot be assigned. The principles of these operations are summarized below. (See FM 17-1 for detailed coverage.)

b. The defense of a large installation is conducted very much as an all-round area defense, with infantry manning the perimeter and armored cavalry, if used, in reserve. Air cavalry provides a ready reaction force that functions with the reserve. An extensive barrier and obstacle system is constructed around the perimeter, covered by interlocking strongpoints and watch towers, with carefully controlled entry/exit checkpoints. Daylight patrols and night ambushes are aggressively employed outside the perimeter to as great a depth as possible. The greater part of the security force is frequently employed in these ambushes and patrols to prevent the guerrilla from getting close enough to launch an attack. Fire support measures, illumination sources, and intrusion sensors are provided as resources permit and are carefully coordinated in the defense plan. As a general rule, a guerrilla force will avoid strong defenses; therefore, a well-defended installation is usually safe from serious attack. The greatest danger is that, in time, the security forces will grow lax if there is no enemy activity. It is then that the guerrilla will strike. To guard against this, duties are rotated and command vigilance is exerted at every echelon.

(1) The escort method will be used on routes infrequently traveled. Strength and composition of the escort will depend upon the forces available, the enemy threat, and additional security provided by reserves and operations in contiguous areas. When the situation permits, use of a relatively small escort is economical in that large forces are not tied down to a series of outposts along the road. The exact size and composition of the escort force will be based on the factors of METT. In the event of enemy ambush, the escort vehicles will immediately return a high volume of fire against the ambush site while unengaged elements maneuver to overrun and destroy the ambush force. Escort

procedures should be rehearsed to insure that all personnel fully understand their requirements and that counterambush actions are immediate and violent. Escort elements may discover an enemy ambush by observation, or reconnaissance by fire, and set off prematurely. The convoy is then alerted and escort elements can engage and eliminate the enemy ambush without loss or damage to personnel and vehicles of the convoy.

(2) More permanent route security usually requires that mutually supporting strongpoints be established along the route. Frequent patrols are sent out from these strongpoints at irregular intervals to clear mines and prevent ambushes from being set up. There should be a designated reaction force located centrally

along the route to relieve forces which are ambushed. A highly effective means of discouraging ambushes and assisting the maneuver of relief forces is to remove all natural concealment for several hundred meters back on each side of the road. However, the advantage of using this technique must be weighed carefully against the possible alienation of local, national, and world opinion resulting from such action. Preplanned artillery concentrations along the route should be used to neutralize guerrillas and to prevent their withdrawal from the ambush site. Bridges are particularly vulnerable to guerrilla attack and generally require a permanent outpost for defense. These types of static positions are best manned by infantry or indigenous forces.

APPENDIX A

REFERENCES

A-1. Publication Indexes

Department of the Army Pamphlets of the 310-series should be consulted frequently for latest changes or revisions of references given in this appendix and for new publications relating to material covered in this manual.

A-2. Army Regulations (AR)

190-11	Physical Security of Weapons, Ammunition, and Explosives.
210-10	Administration.
310-25	Dictionary of United States Army Terms.
310-50	Authorized Abbreviations and Brevity Codes.
380-5	Department of the Army Information Security Program.
604-5	Clearance of Personnel for Access to Classified Defense Information and Material.

A-3. Department of Army Pamphlets (DA Pam)

(C) 71-4	Optional Concepts for the Army Unattended Ground Sensor Systems (U).
108-1	Index of Army Motion Pictures and Related Audio-Visual Aids.
310-series	Military Publications Indexes.

A-4. Field Manuals (FM)

1-10	Army Aviation Organizational Aircraft Maintenance.
1-15	Aviation Company Battalion, Group, and Brigade.
1-40	Helicopter Gunnery.
1-60	Army Air Traffic Operations.
1-100	Army Aviation Utilization.
3-10	Employment of Chemical and Biological Agents.
3-12	Operational Aspects of Radiological Defense.
3-50	Chemical Smoke Generator Units and Smoke Operations.
5-20	Camouflage.
5-25	Explosives and Demolitions.
5-34	Engineer Field Data.
5-36	Route Reconnaissance and Classification.
6-20-1	Field Artillery Tactics.
6-135	Adjustment of Artillery Fire by the Combat Soldier.
6-140	Field Artillery Cannon Battalions and Batteries.
7-10	The Rifle Company, Platoons and Squads.
7-20	The Infantry Battalions.
7-30	The Infantry Brigades.
8-15	Medical Support in Divisions, Separate Brigades, and the Armored Cavalry Regiment.
9-6	Ammunition Service in the Theater of Operations.
17-1	Armor Operations.
17-12	Tank Gunnery.

17-15	Tank Units, Platoon, Company and Battalion.
17-30	The Armored Division Brigade.
17-37	Air Cavalry Squadron.
17-95	The Armored Cavalry Regiment.
19-40	Enemy Prisoners of War and Civilian Internees.
20-32	Landmine Warfare.
20-32A	Landmine Warfare (Scatterable Mines).
20-60	Battlefield Illumination.
21-26	Map Reading.
21-30	Military Symbols.
21-40	Chemical, Biological, Radiological, and Nuclear Defense.
21-60	Visual Signals.
21-75	Combat Training of the Individual Soldier and Patrolling.
22-100	Military Leadership.
23-17	Redeye Guided Missile System.
(C) 23-17A	Redeye Guided Missile System (U).
23-23	Antipersonnel Mine M18A1 and M18 (Claymore).
23-30	Grenades and Pyrotechnics.
23-92	4.2-Inch Mortar M30.
24-1	Tactical Communication Doctrine.
24-18	Field Radio Techniques.
27-10	The Law of Land Warfare.
29-2	Organizational Maintenance Management.
30-5	Combat Intelligence.
30-10	Military Geographic Intelligence (Terrain).
30-20	Aerial Surveillance—Reconnaissance Field Army.
30-28	Armed Forces Censorship.
30-31	Stability Operations—Intelligence.
(C) 31-1 (test)	Employment of Unattended Ground Sensors (U).
31-10	Denial Operations and Barriers.
31-12	Army Forces in Amphibious Operations (The Army Landing Force).
31-16	Counter guerrilla Operations.
31-18	Long Range Reconnaissance Ranger Company.
31-23	Stability Operations, US Army Doctrine.
31-25	Desert Operations.
31-35	Jungle Operations.
31-50	Combat in Fortified and Built-Up Areas.
31-60	River-Crossing Operations.
31-71	Northern Operations.
31-72	Mountain Operations.
31-85	Rear Area Protection.
31-100 (test)	Surveillance, Target Acquisition and Night Observation (STANO) Operations.
(C) 32-5	Signal Security (SIGSEC) (U).
(S) 32-10	USASA in Support of Tactical Operations (U).
(C) 32-20	Electronic Warfare (Ground Based) (U).
33-1	Psychological Operations—US Army Doctrine.
41-10	Civil Affairs Operations.
44-1	US Army Air Defense Artillery Employment.
44-3	Air Defense Artillery Employment, Chaparral/Vulcan.
54-2	The Division Support Command and Separate Brigade Support Battalion.
57-35	Airmobile Operations.
57-38	Pathfinder Operations.
61-100	The Division.
100-5	Operations of Army Forces in the Field.

100-10	Combat Service Support.
101-5	Staff Officers' Field Manual; Staff Organization and Procedure.
101-10-1	Staff Officers' Field Manual—Organization, Technical, and Logistical Data, Unclassified Data.
101-31-1	Staff Officers' Field Manual, Nuclear Weapons Employment, Doctrine and Procedures.

A-5. Technical Manuals (TM)

3-220	Chemical, Biological, and Radiological (CBR) Decontamination.
9-1300-206	Care, Handling, Preservation, and Destruction of Ammunition.
9-2350-230-12	Organizational Maintenance Manual, Armored Reconnaissance/Airborne Assault Vehicle, FT, 152-MM, M551.

A-6. Technical Bulletin (TB)

9-380-101	Security Classification of Missile and Large Rocket Systems and Components.
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A-7. Training Circulars (TC)

23-15	Engagement of Aerial Targets with Small Arms.
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A-8. Training Texts (TT)

44-101	Army Airspace Coordination Techniques.
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A-9. Joint Publications

JCS Pub 1	Dictionary of United States Military Terms for Joint Usage.
(C) AN/VAS-1-	Far Infrared Target Indicator (FIRTI).
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APPENDIX B

SIGNAL COMMUNICATIONS IN ARMORED CAVALRY

Section I. GENERAL

B-1. General

Communications are a function of command. Each armored cavalry unit commander is responsible for the establishment, operation, and maintenance of his communication system and for its efficient operation as a part of the next higher headquarters communications system. The communication systems of subordinate and supporting elements must be integrated into the unit communication system.

B-2. Communication Means

a. Radios provide the primary means of communication in armored cavalry units. Supplemental means of communication include wire, messenger, visual, and sound means. No one communication mean 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 CESI's CEOI'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. Additionally, it is vulnerable to hostile signal intelligence, electronic warfare support measures, and electronic deception activities. 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 ranges of radio sets, the compatibility of tactical communication equipment, and the inherent vulnerability of radio transmissions to enemy detection, interception, signal analysis, and direction-finding.

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 radioteletypewriter (RATT) operation. This RATT equipment with on-line security 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. Most of the AM radios used now are single side band (SSB) equipment.

d. Where a high degree of reliability, under all conditions, is required, continuous wave (CW) transmission is the principal mode. CW transmissions are used extensively as a standby or backup capability for RATT and voice transmissions during periods of unintentional or deliberate (e.g., jamming) interference, and atmospheric disturbances; when terrain prohibits movement of stations; and for communications over extended distances. Commanders must realize the importance of their unit's CW capability and the necessity for effective training to maintain and increase operator CW proficiency.

B-3. Communication Security

a. Due to the high degree of reliance on radio for the success of squadron operations, it must be assumed that the enemy will take all steps necessary to degrade or destroy armor unit communications and thereby render ineffective armor operations mounted against him.

(1) The communications structure, usage patterns, and message traffic content associated with armor operations can provide enemy communications intelligence elements with valuable information, not only of the plans and

activities of armor units but, more importantly, plans and operations of the general force structure of which armor units are a part. Enemy intercept and direction-finding of radios organic to armor units may enable him to locate these units and to bring fire to bear on them, conduct electronic countermeasures against them, or to evaluate the meaning of their activities.

(2) Squadron units, being dependent on reliable communications, are especially vulnerable to enemy electronic countermeasure activities. The enemy may employ jamming or initiate communications deception to interfere with effective command and control of elements of the armor units.

b. For the reasons cited above, special attention should be given at all times to internal and external communications security associated with squadron units. Communications security is the protection resulting from all measures designed to deny unauthorized persons information of value which might be derived from the possession and study of communications, or to mislead unauthorized persons in the interpretations of the results of such possession and study. Communications security (COMSEC) includes: Cryptosecurity, physical security, transmission security, and emission security. The following guidelines are especially pertinent to armor operations:

(1) Keep transmissions as brief as possible; use wire and messenger whenever possible, especially during the planning phase.

(2) Use cryptographic devices, when available, to encipher radio message texts or (as a minimum) those message text elements which will reveal specific details of impending operations.

(3) Authenticate all radio transmissions,

and request a second authentication if deception is suspected.

(4) Avoid patterns and message transmissions which can be associated sequences of events in squadron operations or operations of the force structure as a whole. See FM 32-5 for details on COMSEC.

B-4. Electronic Warfare (EW)

a. *Vulnerability.* All communication systems with the exception of physically secure wire are vulnerable to enemy electronic warfare activities. Radio, the primary means of communication in armored cavalry units, is particularly vulnerable since its radiated electromagnetic energy may be readily detected, intercepted, analyzed, and subsequently exploited. Enemy exploitation may be oriented toward communication intelligence (COMINT) support of his fire and maneuver, or it may be in the form of electronic jamming and deception (ECM). The recognition and identification of ECM are discussed in FM 24-18 and FM 32-20.

b. *Defensive Measures.* To minimize enemy exploitation, commanders must insure that communications personnel locate and employ communication systems properly, adhere to sound COMSEC practices, and are proficient in the use of electronic counter-countermeasures (ECCM) discussed in FM 24-18.

c. *Reporting.* Prompt, accurate reporting of both enemy ECM and accidental interference is necessary so that location and possible elimination of the source can be initiated. Reports from individual operators frequently provide intelligence on the extent and importance of enemy action associated with ECM operations. Initial and followup detailed reports are submitted in accordance with guidelines contained in FM 24-18 and FM 32-20.

Section II. COMMUNICATION SYSTEMS, ARMORED CAVALRY SQUADRON; ARMORED, MECHANIZED, AND INFANTRY DIVISIONS

B-5. 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 organi-

zational 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) Installation, operation, and maintenance of the wire communication system within the squadron command post and, when re-

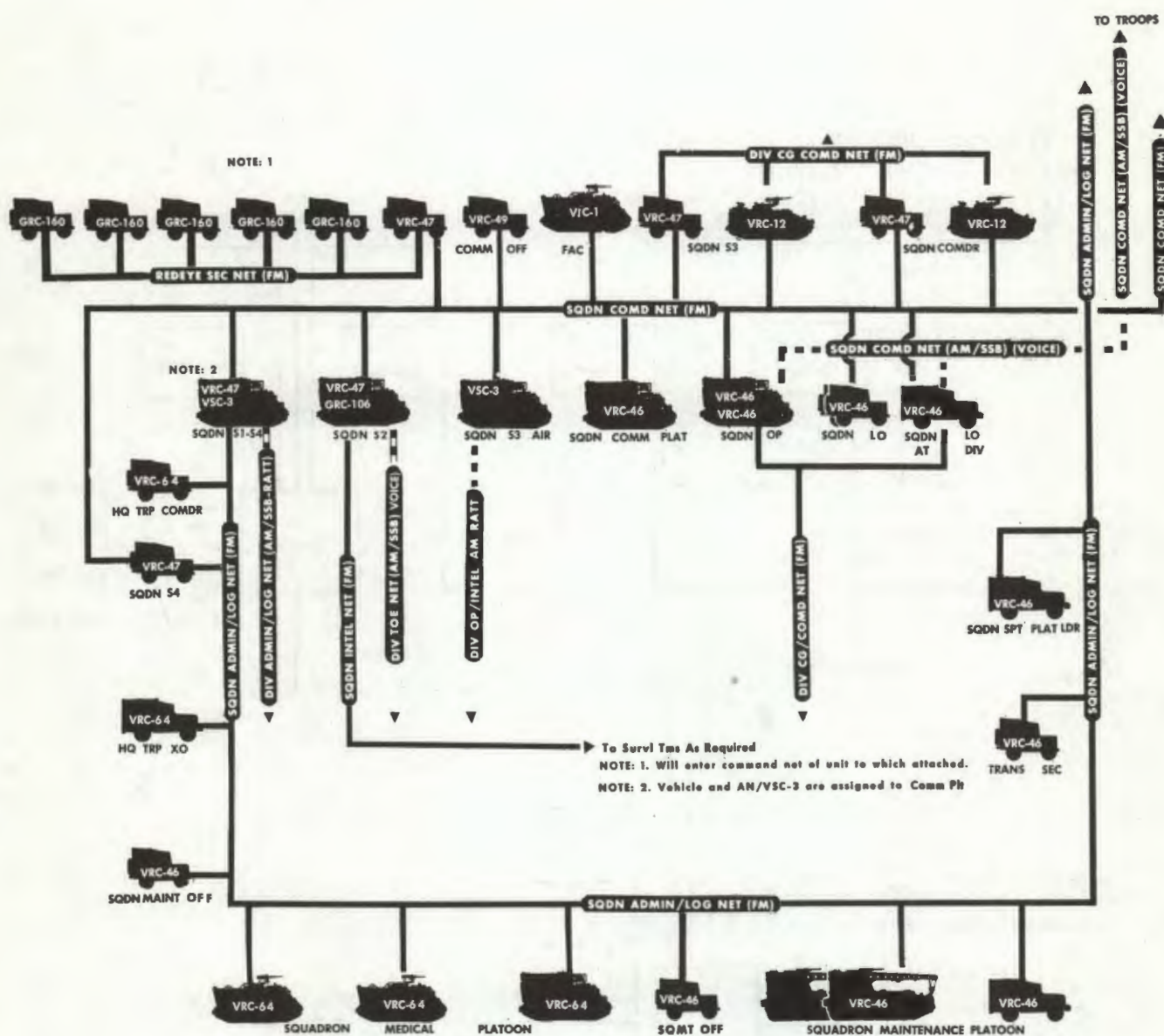


Figure B-1. Type radio net diagram, armored cavalry squadron; armored and mechanized divisions.

quired, to subordinate elements (troops, trains, and outposts).

(2) Operation of panel displays and message pickup facilities.

(3) Operation of the squadron message center and messenger service.

(4) Provides secure radio teletypewriter (RATT) facilities for sending messages.

(5) Performs organizational maintenance for communication equipment of the squadron headquarters and headquarters troop only.

(6) Preparation, distribution, and supervision of CEOI extracts.

c. Specialists to operate the 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). CW operator training and proficiency should be emphasized by commanders provided with the CW capability.

B-6. Type Radio Nets (Fig. B-1).

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:

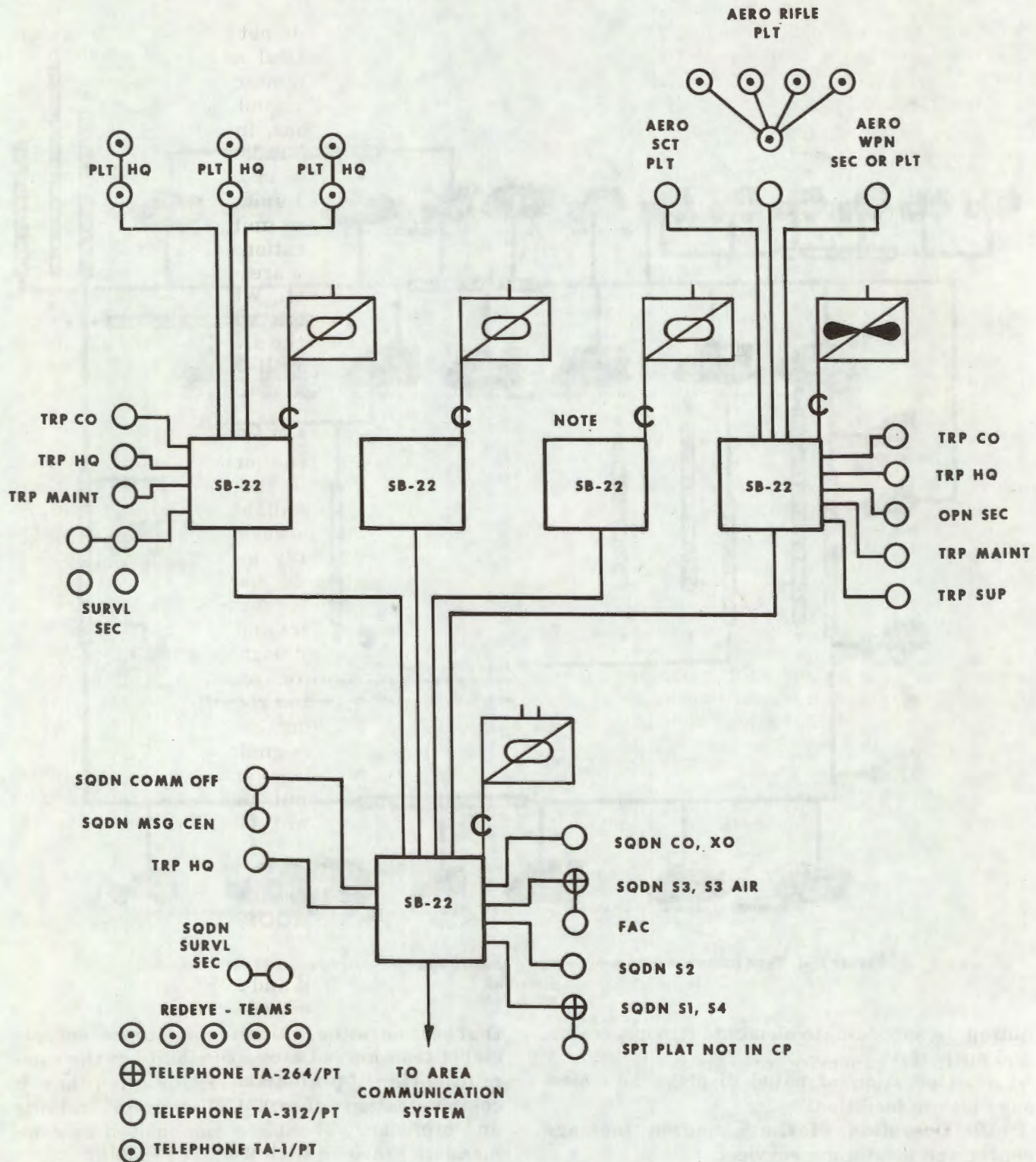


Figure B-2. Type wire net diagram, armored cavalry squadron; armored and mechanized divisions.

- (1) Squadron command net (FM).
- (2) Squadron command net (AM/SSB) (Voice).
- (3) Squadron intelligence net (FM).
- (4) Squadron administrative/logistical net (FM).

- (5) Air defense section net (FM).

b. *Nets to Higher Headquarters.* The armored cavalry squadron is authorized FM, AM/SSB (Voice and CW), and radio teletypewriter (AM/SSB-RATT) radios for operation in division radio nets. In the armored, infantry, and

infantry (mechanized) divisions, these radios are employed in the following nets:

- (1) Division CG Command Net (FM-Voice).
- (2) Division TOC Net (AM/SSB-Voice).
- (3) Divisions OP's/INTEL Net (AM/SSB-RATT).
- (4) Division ADMIN/LOG Net (AM/SSB-RATT).

(a) *Air Force tactical air direction net (UHF)*. When a forward air controller is provided, he is equipped with an armored personnel carrier in which he mounts Air Force UHF radio sets enabling him to operate in the AF tactical air direction net, and direct air strikes in support of the squadron.

(b) *Air Force air request net (UHF)*. The tactical air control party (TACP) forwards immediate air requests over Air Force provided facilities. As an interim measure pending availability of Air Force equipment, the Air Control Team (ACT) provides this capability.

(c) *Other nets*. For more detail, see FM 100-26.

(2) *Other special purpose nets*.

(a) *Flight coordination center (FCC) net (UHF)*. The air cavalry troop operates a station in the higher headquarters flight coordination center (FCC) net (UHF) for coordination and control of airspace in forward areas.

(b) *Other nets*. Other special purpose nets may be established as required.

B-7. Type Wire Net

The armored cavalry squadron wire net is installed and operated by the squadron communi-

cation platoon. This net is installed whenever time and the tactical situation 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 whenever feasible to increase communication flexibility. Wires from supporting units are integrated into the squadron wire net. Wire communication to higher headquarters, when used, is normally available through the division area communications system. Figure B-2 shows a type wire net diagram and indicates the equipment used.

B-8. 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 when aircraft are available. Messenger service is also provided by higher headquarters and adjacent units.

b. *Sound*. Sound signals such as whistles, horns, and gunfire, each with prearranged meanings are used as required for transmitting messages of warning.

c. *Visual*. Visual signals, such as panels, pyrotechnics, lights, flags, and smoke, are used as required to transmit short prearranged messages. For standard visual signals, see FM 21-60.

Section III. COMMUNICATION SYSTEMS, ARMORED CAVALRY TROOP; ARMORED AND MECHANIZED DIVISIONS

B-9. Troop Communication Personnel

The armored cavalry troop is authorized a communication chief, radio mechanics, and radio operators to supervise, operate, and maintain the troop communication system.

B-10. Type Radio Nets (Fig. B-3).

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/SSB) (Voice).
- (3) Squadron intelligence net (FM).
- (4) Squadron administrative/logistical net (FM). The squadron intelligence net (FM) may be entered by appropriate troop elements, as required, by receiving approval to leave their normal net.

B-11. Type Wire Net

Because of the type of tactical missions assigned the armored cavalry troop, there is little

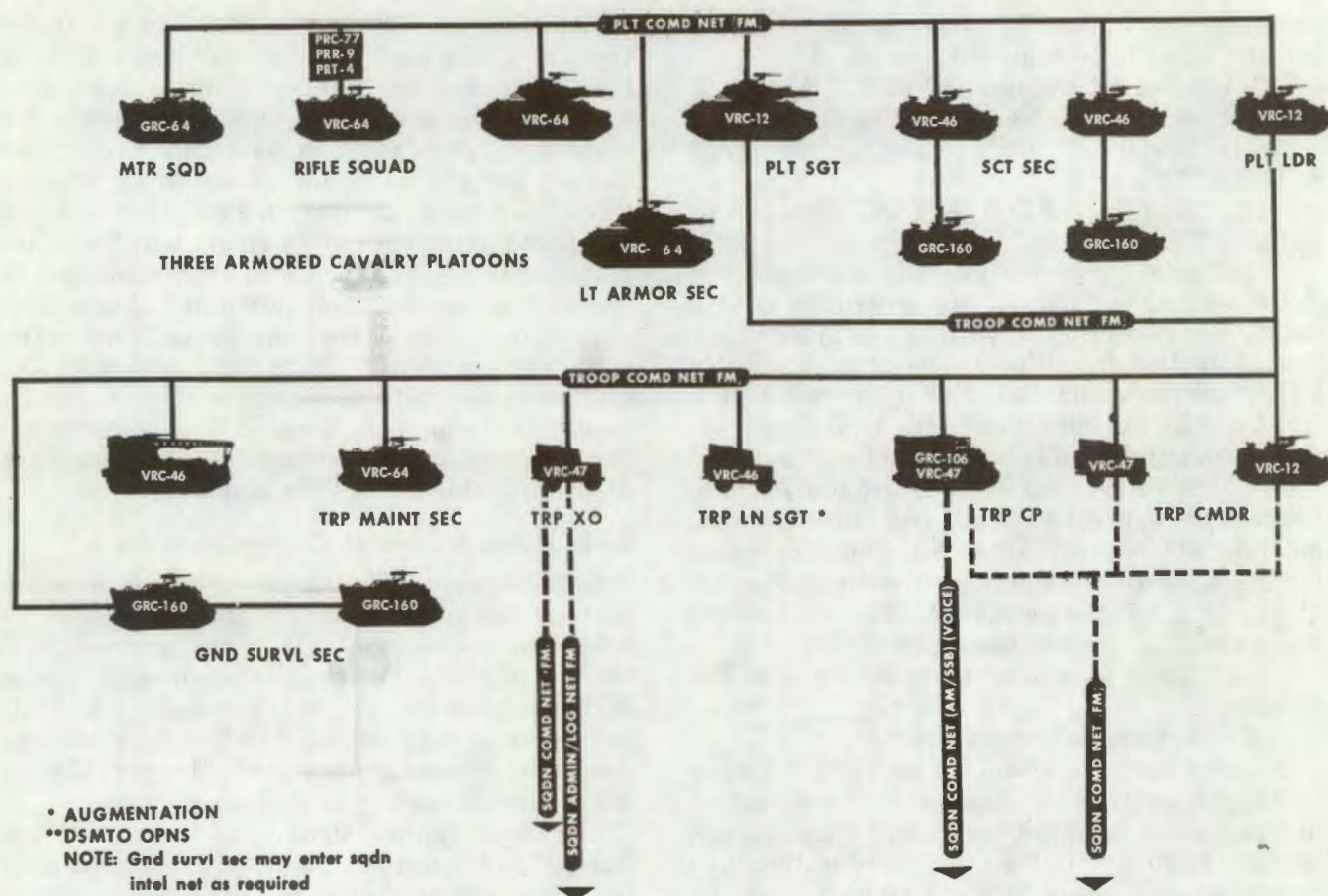


Figure B-3. Type radio net diagram, armored cavalry troop, armored cavalry squadron; armored and mechanized divisions.

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 B-2 shows a typical armored cavalry troop wire net as part of the armored cavalry squadron wire net.

B-12. 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.

Section IV. COMMUNICATION SYSTEM, AIR CAVALRY TROOP, ARMORED AND MECHANIZED DIVISIONS

B-13. Troop Communication Personnel

The air cavalry troop is authorized a communication chief, radio mechanics for both air and ground communication equipment, and radio operators to supervise and support the troop communication system.

B-14. Type Radio Nets

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 (fig. B-4). 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 platoon command net (FM).

b. *Higher Headquarters Nets.* The troop also has organic ground and air FM and AM radio

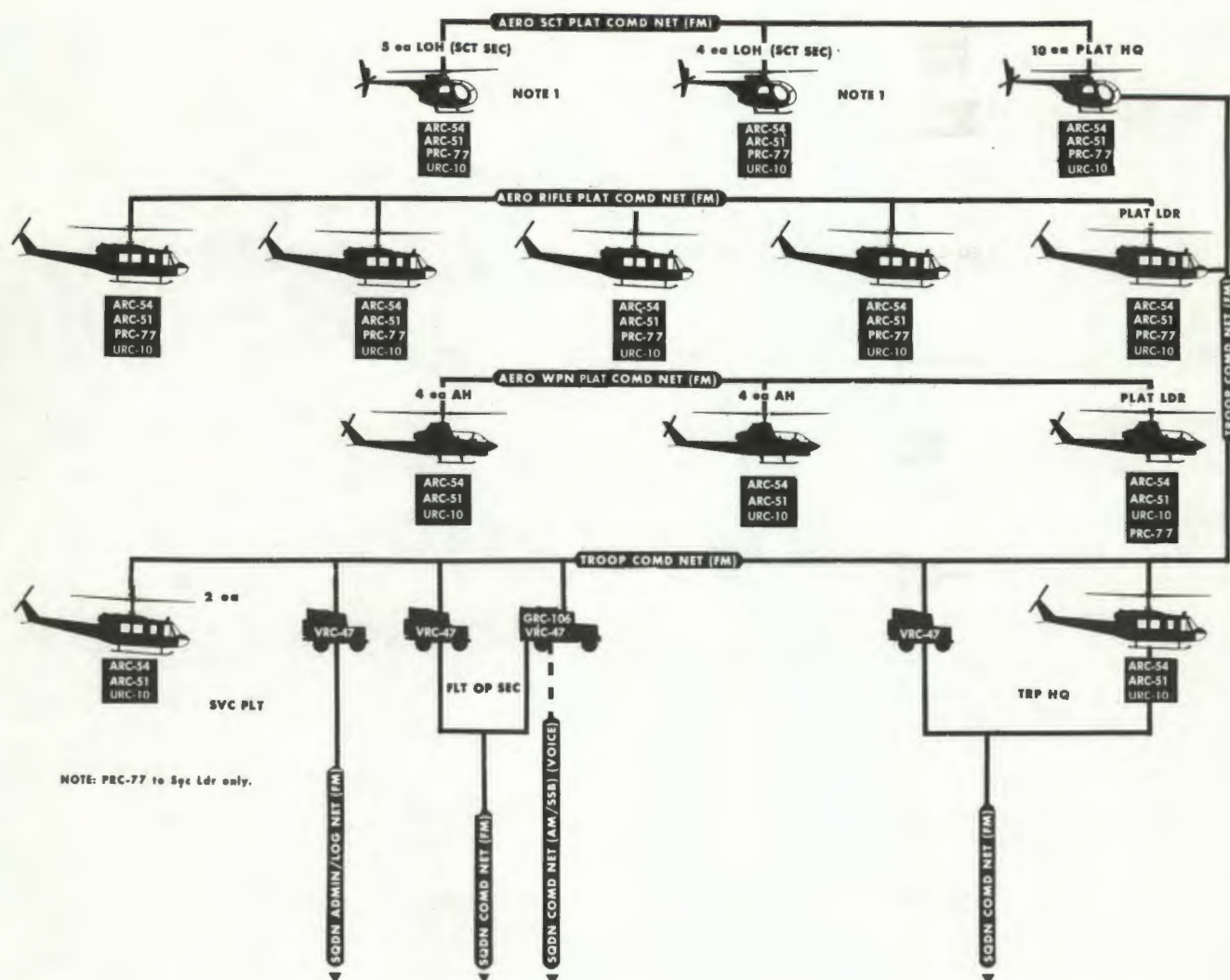


Figure B-4. Type radio net diagram, air cavalry troop, armored cavalry squadron, armored and mechanized divisions.

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/SSB) (Voice).
- (3) Squadron administrative/logistical net (FM).
- (4) Division warning broadcast net (AM).

c. Special Purpose Nets.

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.

e. Flight control center (FCC) net (UHF). This net may be operated by division, corps, or army, and is used to coordinate air traffic within a specified area. Each helicopter is equipped with an AM UHF radio that the pilots use to contact airfield control towers or a higher headquarters flight operations center (FOC).

B-15. 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 the tactical situation permit, the wire communication system may be expanded within the capability of the authorized equipment. Figure B-2 shows a typical air cavalry troop wire net as part of the armored cavalry squadron net.

B-16. 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 extensively in connection with aircraft control.

APPENDIX C

EMPLOYMENT OF ARMY AIRCRAFT

Section I. LOW LEVEL AND ADVERSE WEATHER FLIGHT

C-1. General

a. The information provided in this section is primarily for the general guidance of commanders and staffs and is not intended to provide data other than employment considerations.

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

c. For a detailed discussion of flight and gunner techniques and other technical data, see FM 1-40, FM 1-100, FM 1-105.

C-2. 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 are flown close to the treetops or foliage to gain maximum concealment from enemy observation and to exploit surprise to the fullest.

b. Advantages of low altitude operations are that detection and engagement of helicopters by hostile high performance aircraft are difficult, and enemy air defense capabilities are reduced. However, navigation at such low altitudes is more difficult, observation is more restricted, and aircraft malfunctions are more dangerous than at higher altitudes.

c. Autorotation is an emergency procedure requiring constant practice and continuous training emphasis. This is a process by which a helicopter is safely landed in the event of engine failure.

C-3. Low Level Navigation

a. Pilotage is the primary means of navigation for the helicopters of the air cavalry troop. It is essential that aviators and observers be proficient in map reading and terrain appreciation. All movement is continuously related to a tactical map or an aerial photograph. Aeronautical charts are not suitable for nap-of-the-earth navigation. Detailed planning must be accomplished before any mission. Specific emphasis is placed on routes to be used, protection afforded by terrain, avoidance of areas known to be occupied by enemy antiaircraft units, location of flight obstacles, and flying techniques to be used.

b. Regardless of the terrain over which the air cavalry troop operates, 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 proper use of surprise, vegetation, and terrain forms. Study of maps and aerial photographs are directed toward a specific area. This map/photograph reconnaissance is conducted in a manner that enables the aviator and observer to visualize the area of operations for the duration of the mission by short in-flight map or photograph reference. Helicopters are flown as low as the terrain and vegetation permit. Care is taken 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 is 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 path is arranged 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.

C-4. Low-Visibility Operations

a. Air cavalry operations during periods of adverse weather are conducted in basically the same manner as daylight operations. Adverse weather operations offer the commander unique advantages such as better concealment from enemy visual observation and increased opportunities for surprise. A successful adverse weather-attack increases the shock effect of the air cavalry aircraft with a corresponding increase of fear and confusion in the enemy ranks.

b. Until a full range of helicopter adverse

weather vision and navigation devices are developed to give the helicopters an acquisition, identification, and navigation capability roughly comparable to clear day weather, adverse weather operations must be planned to overcome these very special problems. Hence, adverse weather is characterized by: Greater detail in planning; more simplicity in concept and maneuver; thorough prior coordination; tighter control; reduced aircraft and unit dispersion; slower movement; and use of special viewing devices. Further, adverse weather operations require a higher level of individual and unit proficiency.

Section II. AIR MARCHES AND ASSEMBLY AREAS**C-5. 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.

C-6. Types of March Columns

The troop normally uses one of three types of march column: 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 is prescribed by the commander. 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 is 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; also, 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 maximum secrecy, deception, and dispersion are 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.

C-7. 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.

C-8. Planning the March

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

- a. Mission considerations.
- b. Objective(s).
- c. Routes.
- d. Route reconnaissance.

Section III. AIR CAVALRY BATTLE DRILL

C-9. Introduction

Battle drill is a series of preplanned immediate action maneuvers by which air cavalry helicopter elements or teams can be trained to accelerate combat action, to improve teamwork, and to rapidly gain or maintain a combat advantage over the enemy without issuing lengthy oral orders. Air cavalry action is fast and violent; teams must react quickly and effectively to unexpected or changing situations to insure mission accomplishment.

C-10. Purpose

This appendix explains and illustrates battle drill formations and techniques used by air cavalry elements in reacting to changing situations. It provides guidelines for battle drill which will train air cavalry pilots in the mechanics of preferred solutions to situations frequently encountered in combat. Battle drill will teach, quickly and effectively, how to accomplish by drill what must often be done in battle.

C-11. Training

a. Battle drill includes single situation tactical maneuvers for air cavalry elements designed to simulate actual combat situations.

b. Prior to the aerial application, aircrews should be given basic instruction on battle drill utilizing models and terrain boards. The quickest and easiest way to train is by practicing the drill after a brief explanation.

c. Battle drill does not pretend to solve all the problems encountered in battle. A battle drill formation may be modified to meet specific combat situations; but, when modified, it must quickly convert the commander's decision into action.

d. After proficiency is acquired, training in the drills should be conducted at an increasingly faster tempo and under battlefield conditions made as realistic as possible.

e. Battle drill should be practiced in conjunction with gunnery training to add realism and increase participant interest. Gunnery techniques for attack helicopters should be practiced at low-flight altitudes to simulate

conditions expected against a sophisticated enemy. For a detailed discussion of attack helicopter gunnery, see FM 1-40.

C-12. Team Composition

Team compositions are designed to enhance control, flexibility, and tactical handling of elements engaged in combat operations. These teams are employed in two or more aircraft to provide mutual support, and use only those elements necessary to insure mission success. Team composition will depend on the commander and the factors of METT.

C-13. Evasive Maneuver Battle Drill

a. Air cavalry helicopter elements are vulnerable to attack by enemy ground units anytime during—

- (1) Movement to the operational area.
- (2) Conduct of reconnaissance or security missions.
- (3) Movement after mission completion.

b. In order to nullify this threat, evasive maneuver battle drill will need to be practiced and perfected to insure mission accomplishment. The following principles apply to all evasive maneuver battle drills:

- (1) Maintain sufficient distance or intervals between aircraft to permit maneuver and visual contact. Separation will depend on the terrain being traversed.
- (2) Execute evasive maneuvers as rapidly as possible consistent with safety limitations and procedures.
- (3) Execute evasive maneuvers as prescribed and proceed to the first available cover that breaks line-of-sight with enemy weapon.
- (4) Engage targets with low-level gunnery tactics using mask cresting and the maximum effective range of organic weapons. For more detailed gunnery information, see FM 1-40.

c. The following are some examples of evasive maneuver battle:

- (1) Figure C-1—Mixed Team—Evasive Maneuver.
- (2) Figure C-2—Weapons Heavy Team—Evasive Maneuver.

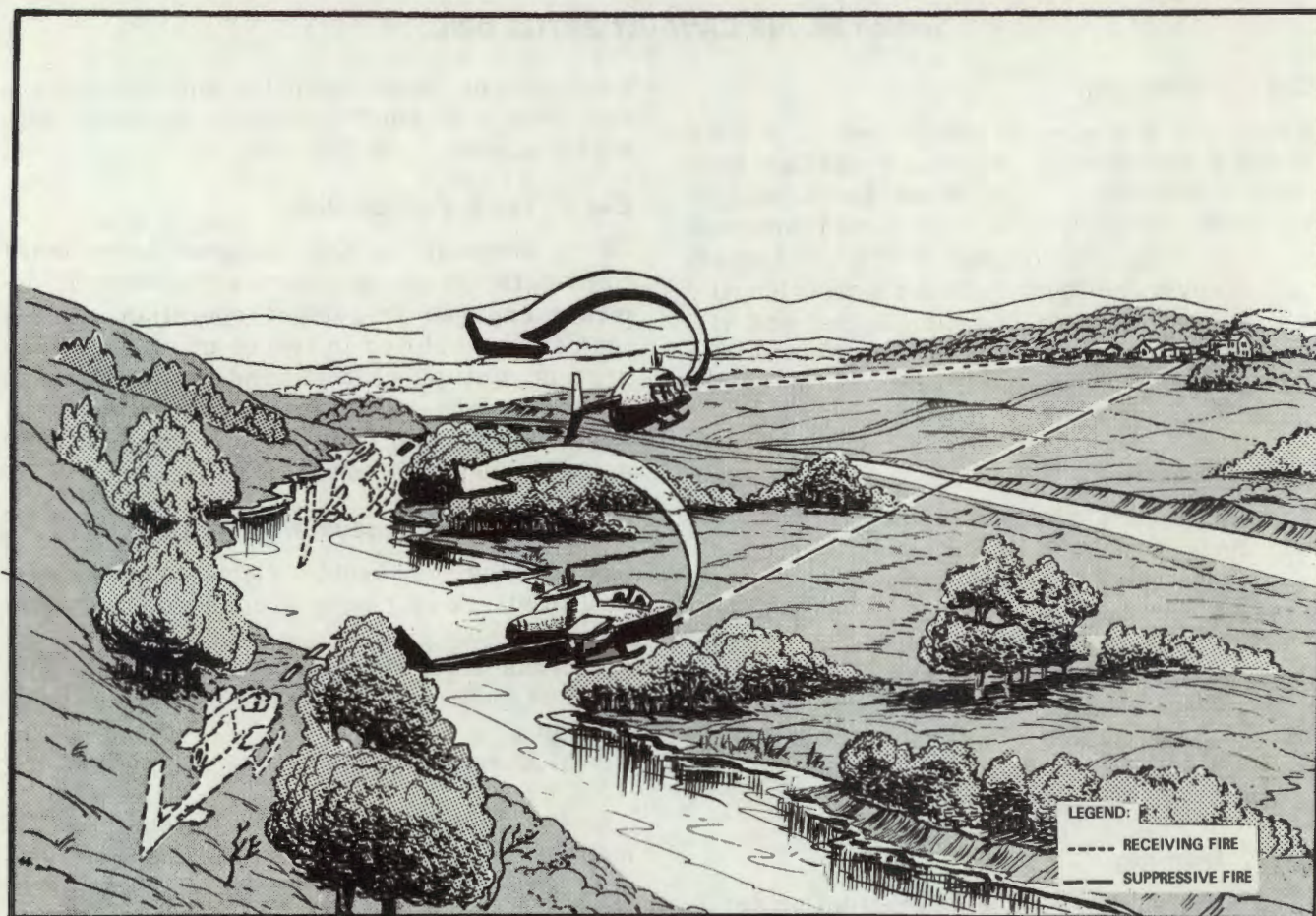


Figure C-1. Mixed team—evasive maneuver.

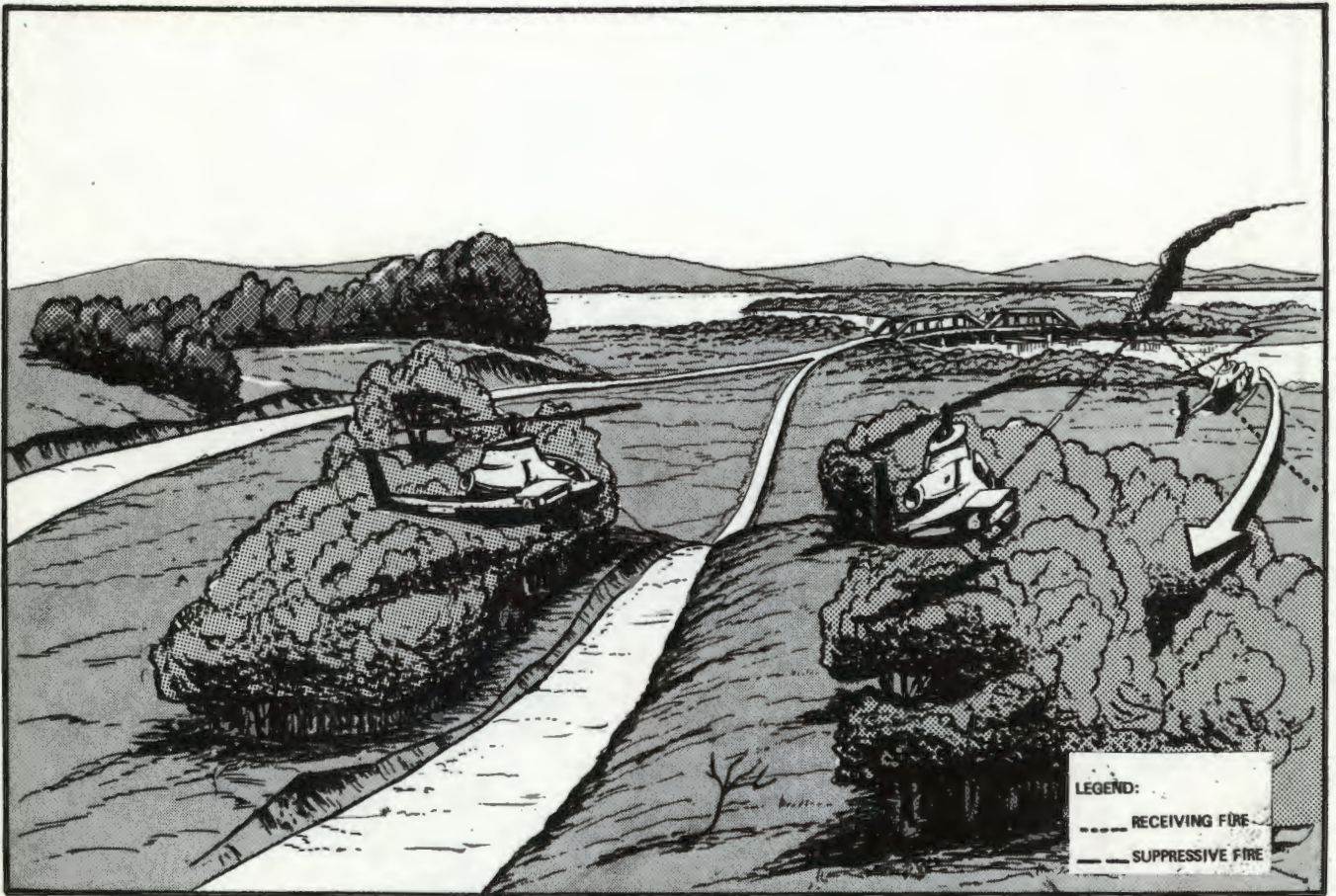


Figure C-2. Weapons heavy team—evasive maneuver.

APPENDIX D

ARMORED CAVALRY BATTLE DRILL

D-1. Purpose

a. Battle drill is the immediate action taken by small armored cavalry elements to accelerate combat action, and optimize teamwork to rapidly gain or maintain a combat advantage over the enemy without issuing lengthy oral orders.

b. 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 action in specific combat situations. Battle drill includes the movement toward and assault of specific objectives, and necessary defensive movements.

D-2. Training

Battle drill training requires instruction and continuing practice in:

- a. Crew drill.*
- b. Dismounted combat formations.*
- c. Mounted combat formations.*
- d. Arm and hand signals, flag signals, and other visual signals as may be prescribed by unit SOP.*
- e. Mechanized infantry dismounted formations.*
- f. ARAAV and mechanized infantry integrated formations.*
- g. Fire and movement.*
- h. Fire and maneuver.*

D-3. Signals

a. Flag Signals. Flag kits containing red, green, and orange 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. These signals may be established by standing operating procedures (SOP). 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. To avoid confusion, only those other visual signals and sound signals that are included in the unit SOP should be used.

D-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 D-1.

b. Formations. Combat formations for the armored cavalry platoon are shown in figures D-1 through D-12 and D-14. Similar formations for armored cavalry troops can be devised. Figure D-13 applies to troop or squadron formations.

D-5. Missions

Battle drill for armored cavalry units is based on specific tactical situations encountered during the conduct of the following type missions:

a. Reconnaissance. In accomplishment of reconnaissance missions, the Y formation and its variants are applicable (figs. D-5 through D-7).

b. Attach 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 firing position, and the squad leader requests fire instructions from the platoon leader.)

(1) *Command:* (PLATOON) ATTACK, ARAAV's and RIFLES MOVE LEFT (RIGHT) (fig. D-8).

(2) *Command:* (PLATOON) ATTACK, ARAAV's MOVE LEFT (RIGHT).

(3) *Command:* (PLATOON) ATTACK, RIFLES MOVE LEFT (RIGHT). ARAAV's 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—

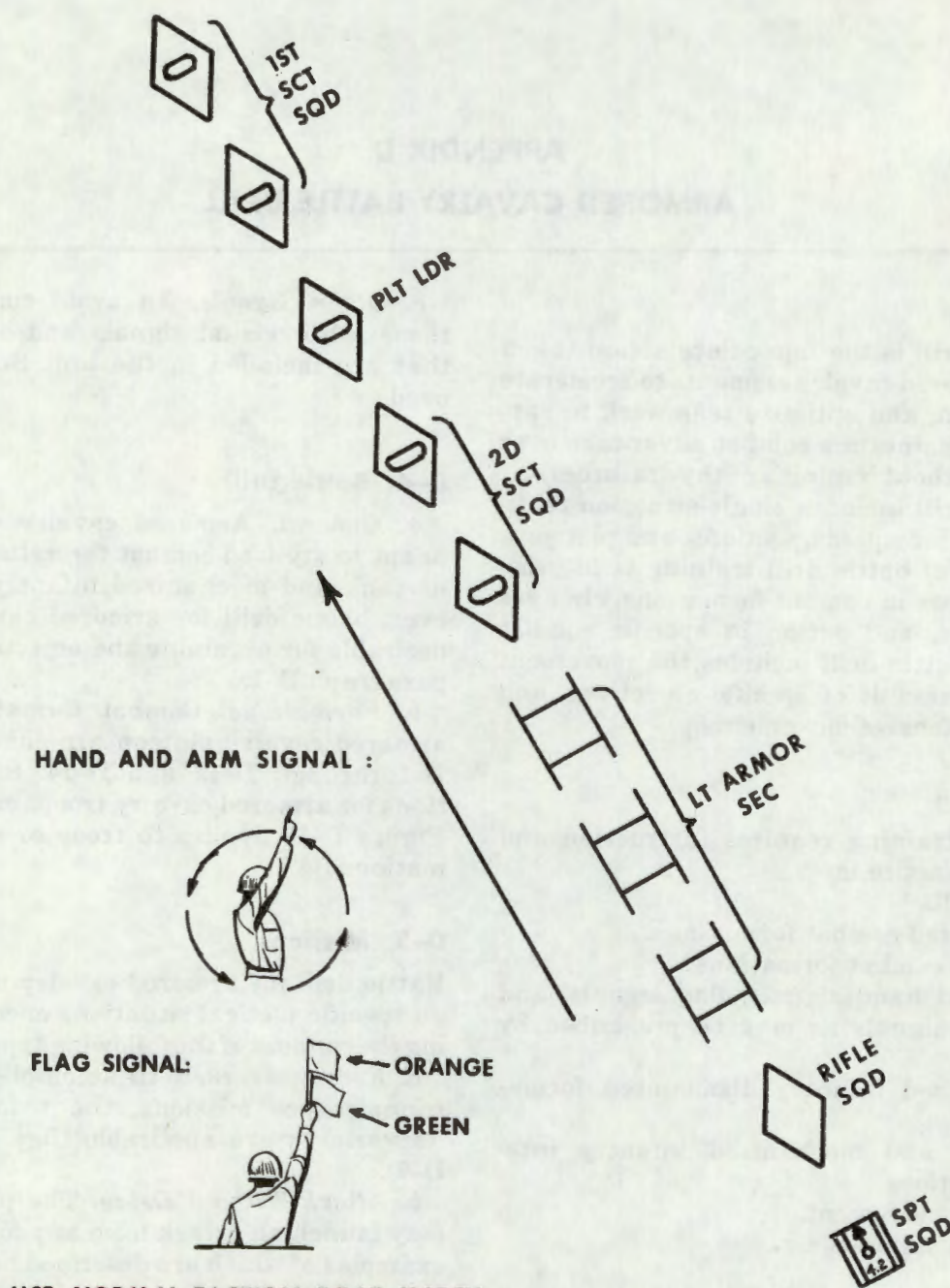


Figure D-1. Armored cavalry platoon, normal column formation.

- (a) Act as reconnaissance elements and guides for the maneuvering force; or
- (b) Join the base of fire; or
- (c) Protect an exposed flank by observation and fire.

(4) *Command:* (PLATOON) **FRONTAL ATTACK RIFLES (ARAAVs) UP, (RIFLES AND ARAAV's ABREAST).** The Γ formation is taken and modified as required (fig. D-9 through D-11).

c. Hasty Defense.

(1) The command should be **FORMATION, DEFEND IN PLACE** or **FORMATION, ON THAT HILL, DEFEND** (fig. D-12). 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) ARAAV's place immediate fire in the enemy direction.

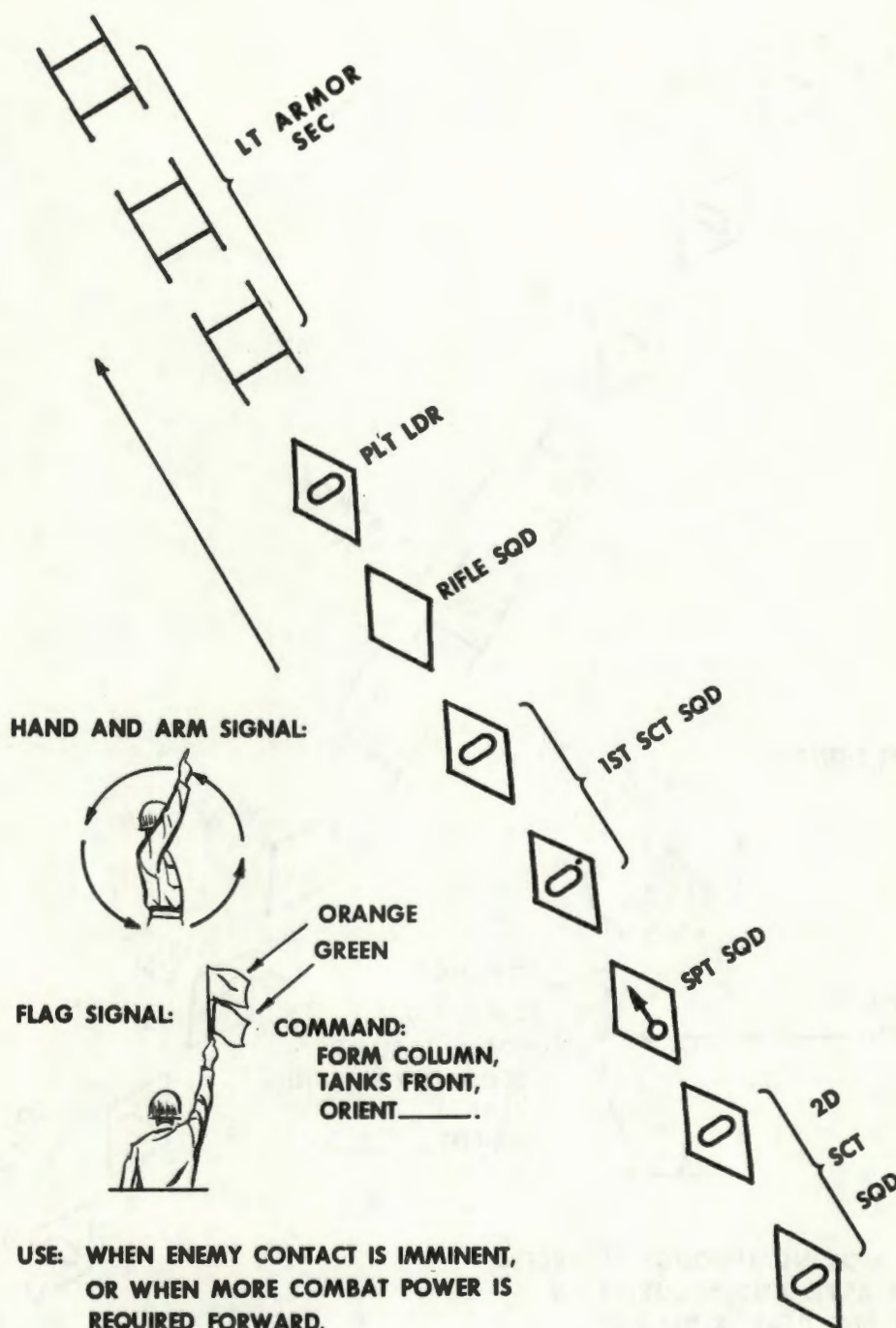


Figure D-2. Armored cavalry platoon, column formation. ARAAVs UP.

(b) The rifle squad fights on foot, action left (right), and goes into fire position. The armored personnel carrier caliber .50 machine-gun is manned by the driver after he positions the carrier in defilade.

(c) The support squad and scout squads go into firing positions and immediately engage enemy targets.

d. *Delay.* Having occupied a delay position, elements withdraw to the next selected position

on the platoon leader's order. Conduct of a delaying action is discussed in paragraphs 4-55 through 4-57.

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.

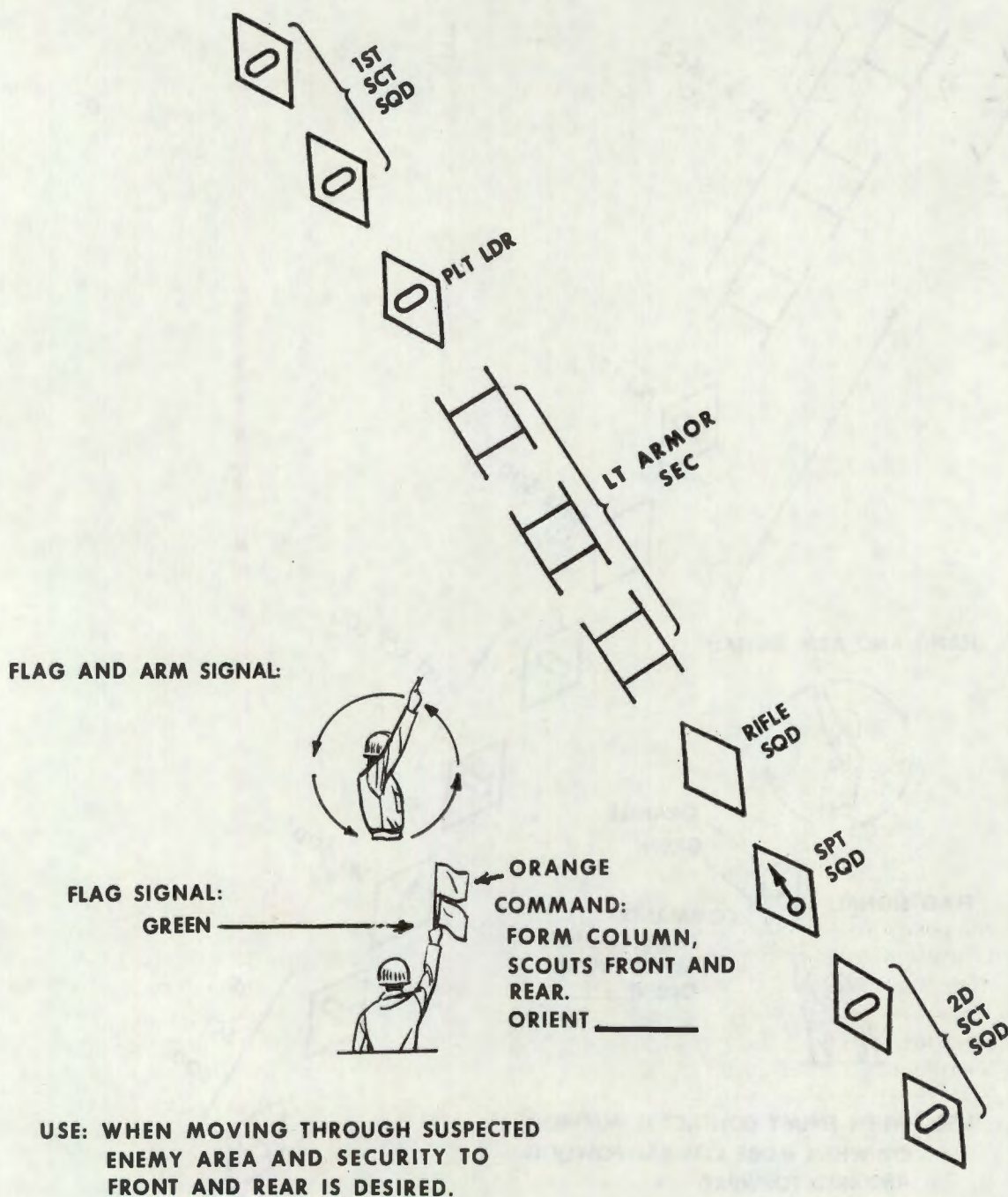


Figure D-3. Armored cavalry platoon, column formation, SCOUTS FRONT and REAR.

f. Counterambush Operations in Close Terrain.

(1) Using a reconnaissance column formation (for movement to contact in close terrain with little or no off-road vehicle trafficability—applicable primarily in stability operations), the platoons of the troop or troops or the squadron may employ two sequential techniques to effectively defeat enemy ambush forces. These techniques are called the “herring-

bone” formation and “compression” of the enemy. For best employment, these techniques require additional infantry attached. Infantry is normally available for such operations (fig. D-13).

(2) The “herringbone” formation (fig. D-13, phase 2) is automatically executed on contact with enemy ambush force. Each tracked vehicle halts at a 45° angle to the direction of movement on alternate sides of trail (leaving at least

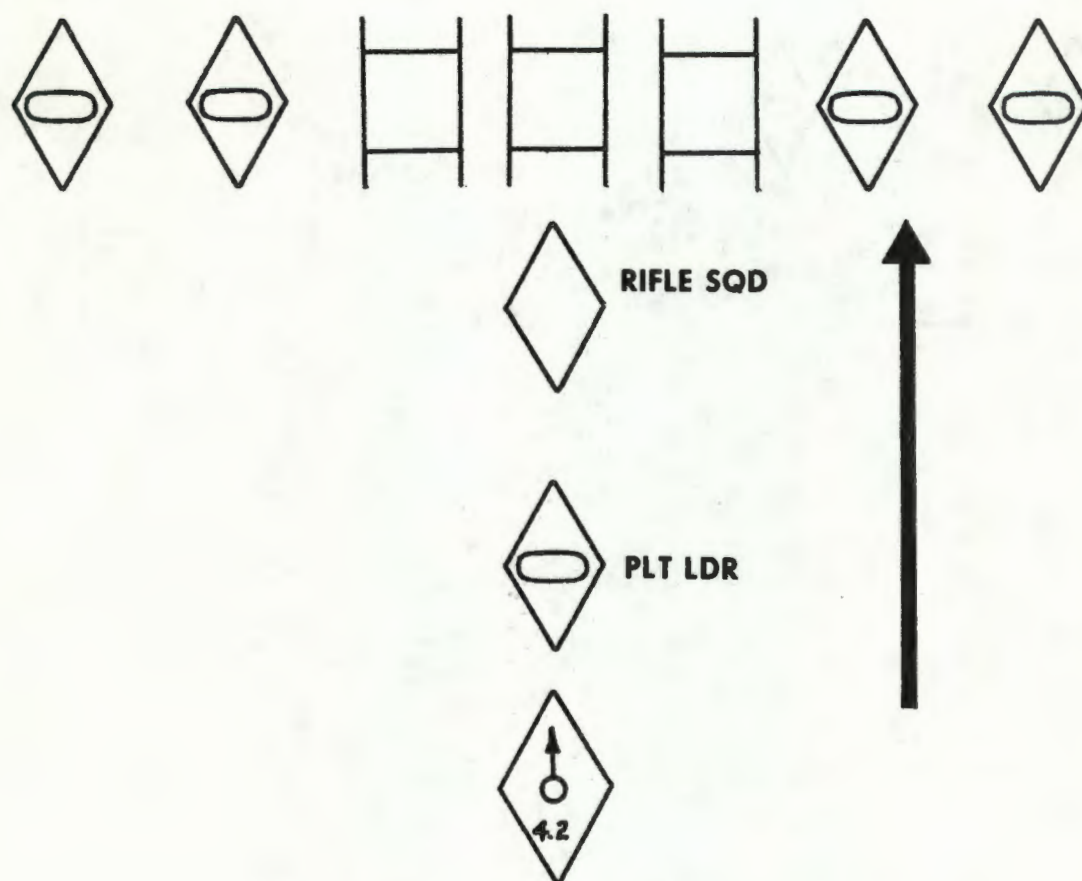


Figure D-4. Armored cavalry platoon, T formation.

enough room along trail for vehicles to pass through). Distances between vehicles are 15 to 25 meters. This positions vehicles at an angle to the bulk of incoming fires and permits all weapons to be effectively employed to front and flanks. Individual vehicles move at random within their position to reduce danger of mortar or antitank weapons being adjusted to hit individual vehicles. The lead element becomes the base of fire.

(3) The infantry dismounts short of enemy and sweeps to the side where enemy forces are located. Simultaneously, the following force (troop or platoon) bypasses on the least engaged side to place fires on the enemy positions forward of lead force (base of fire) and beyond. As the infantry sweeps forward, uncovered track

vehicles displace forward to continue the operation. Preplanned artillery, mortar, air cavalry, and tactical close air support are employed as available. If the situation warrants or permits, airmobile forces are landed to seal off routes and assist in enemy destruction.

(4) The "compression" tactic (phase 3A) is used where off-road trafficability does not permit the off-road maneuver described. The following force then moves along the route between the base of fire elements as the infantry sweeps forward and uncovers their location. These actions must be rehearsed and become automatic for all elements involved.

g. Platoon Laager. The command should be PLATOON LAAGER (fig. D-14).

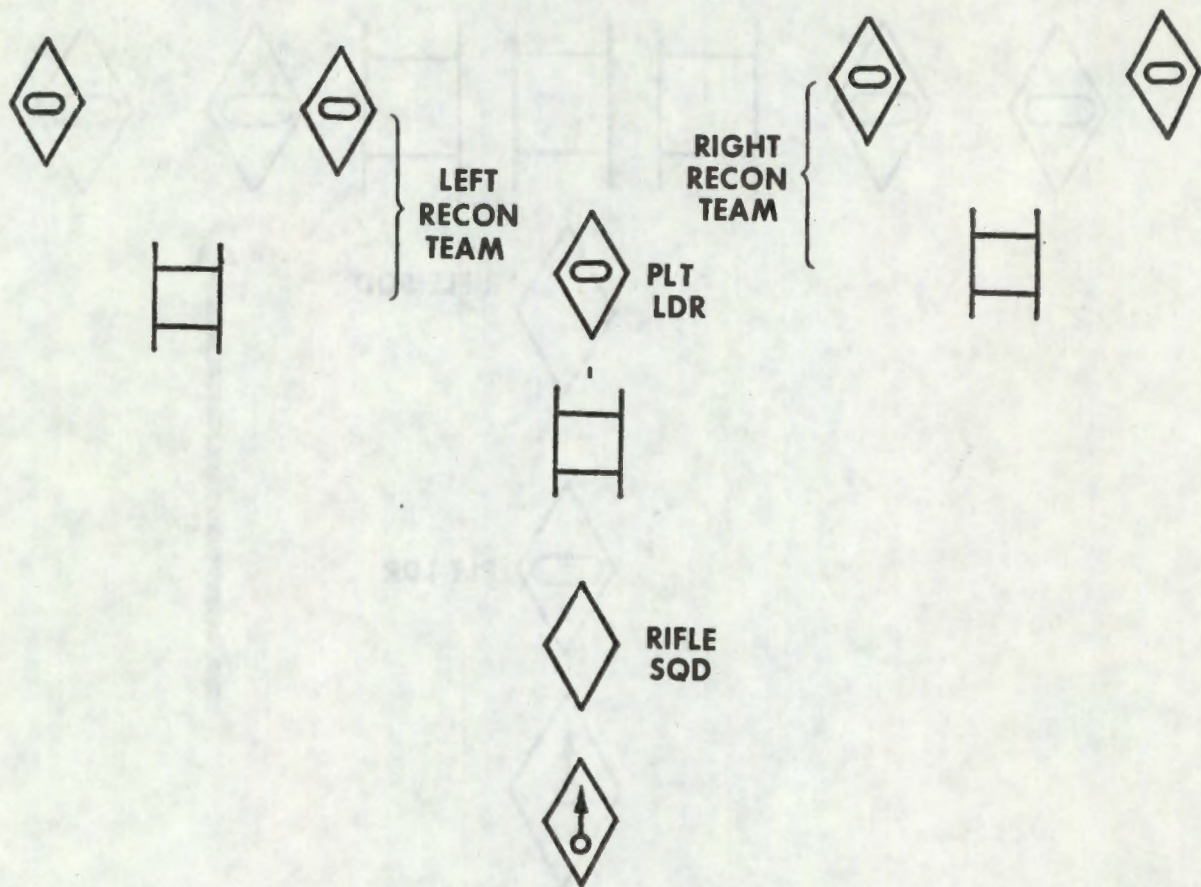


Figure D-5. Armored cavalry platoon, Y formation.

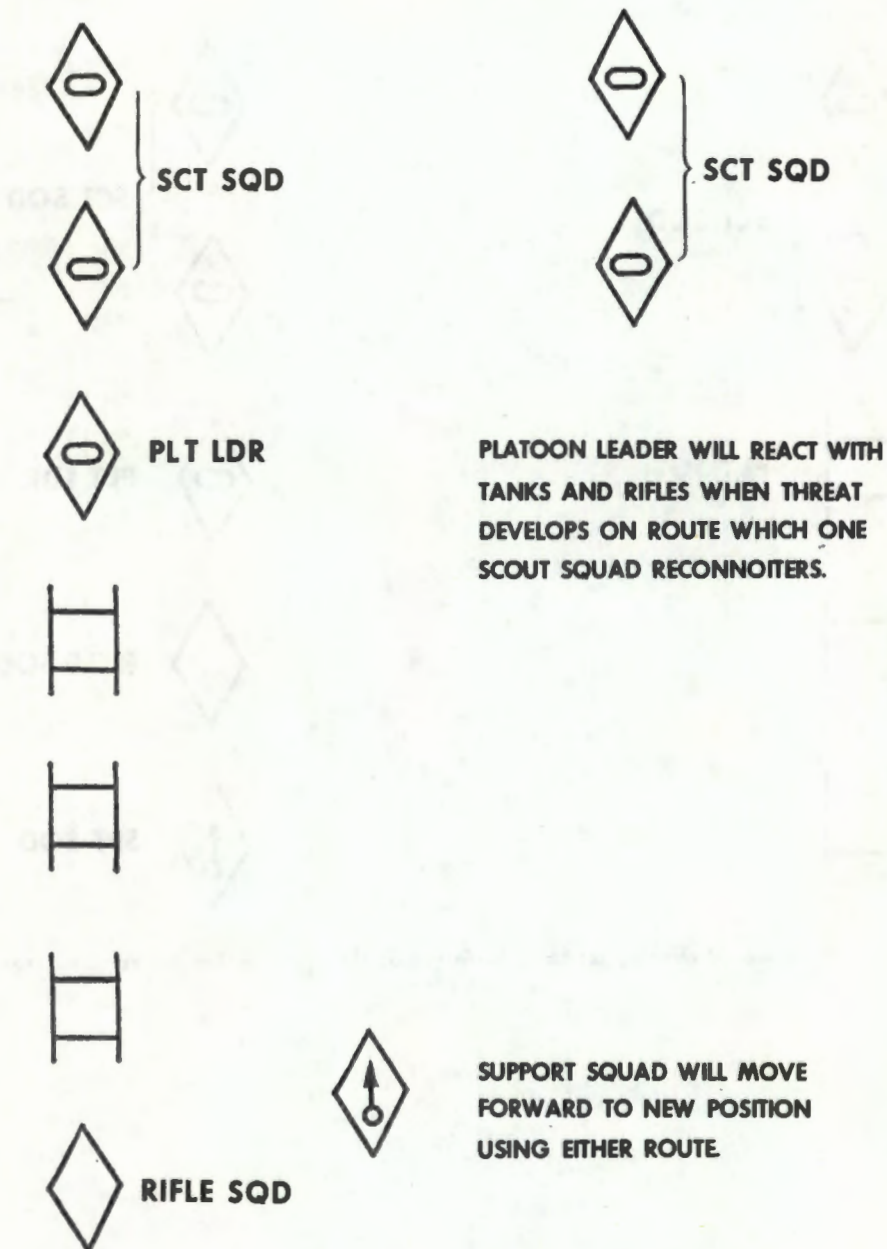


Figure D-6. Armored cavalry platoon, variation of the Y formation for reconnaissance on two routes.

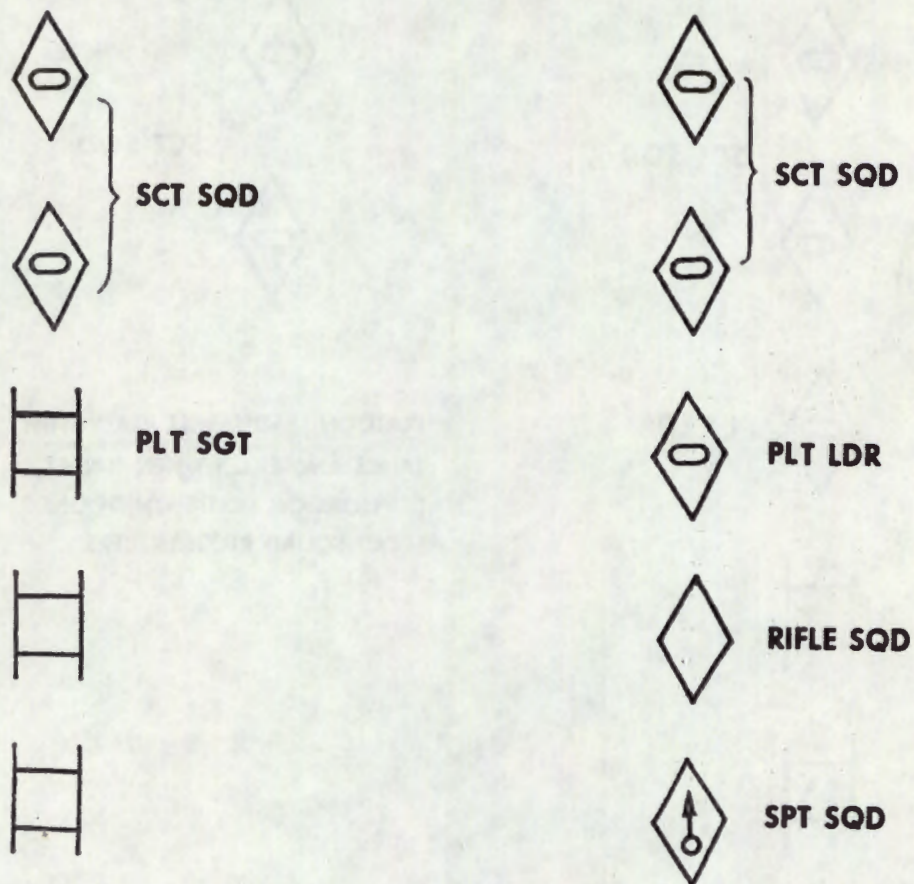


Figure D-7. Armored cavalry platoon, variation of the Y formation for reconnaissance on two routes.

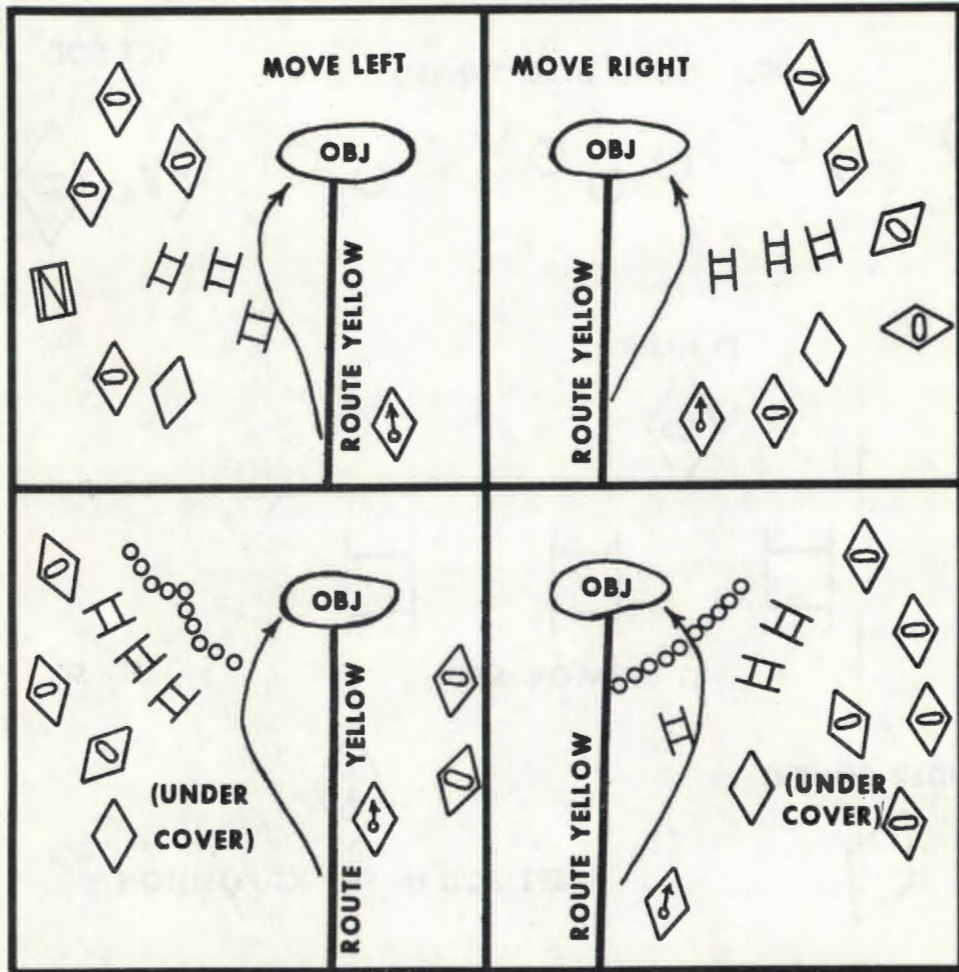


Figure D-8. Armored cavalry platoon attack, ARAAVs and rifles move left (right), mounted or dismounted.

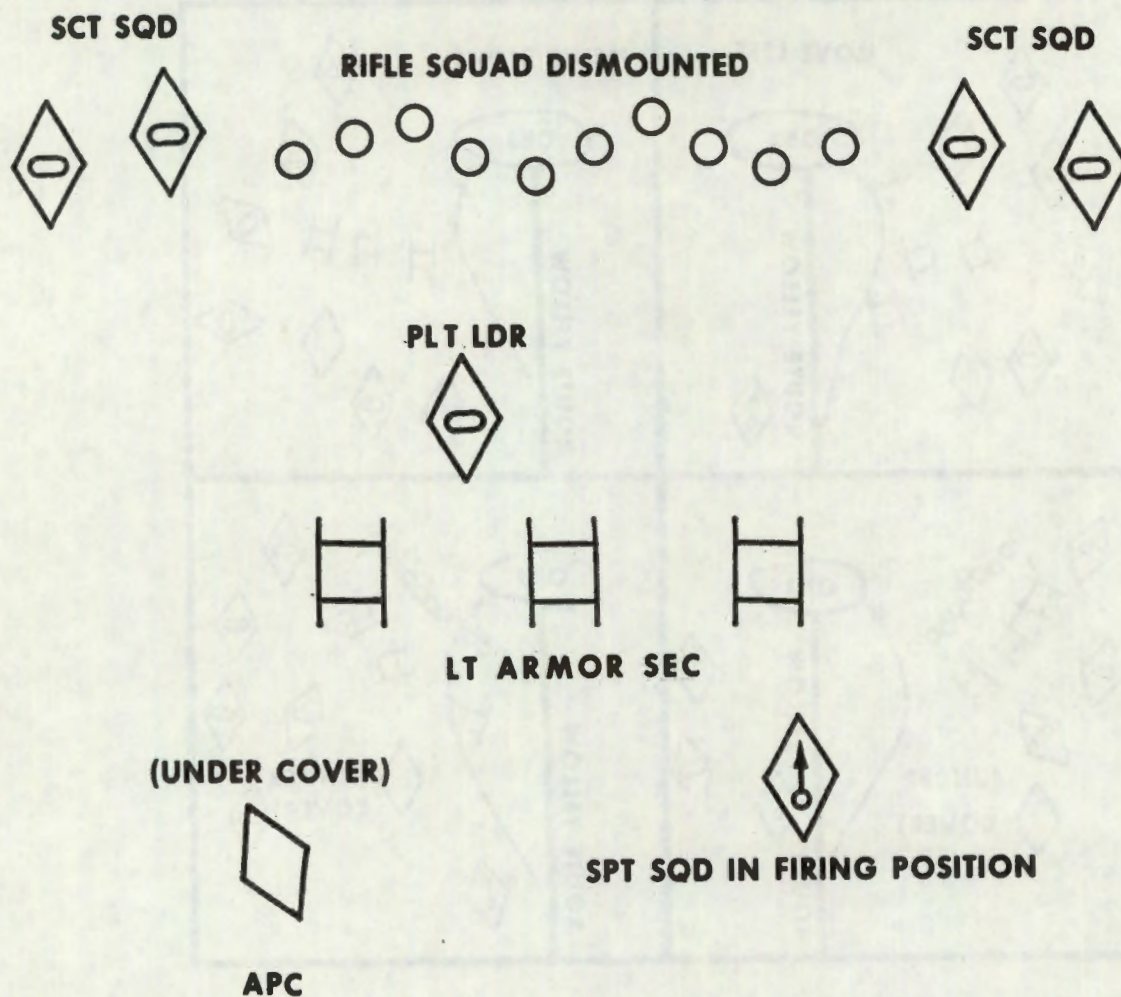


Figure D-9. Armored cavalry platoon, *FRONTAL ATTACK, RIFLES UP.*

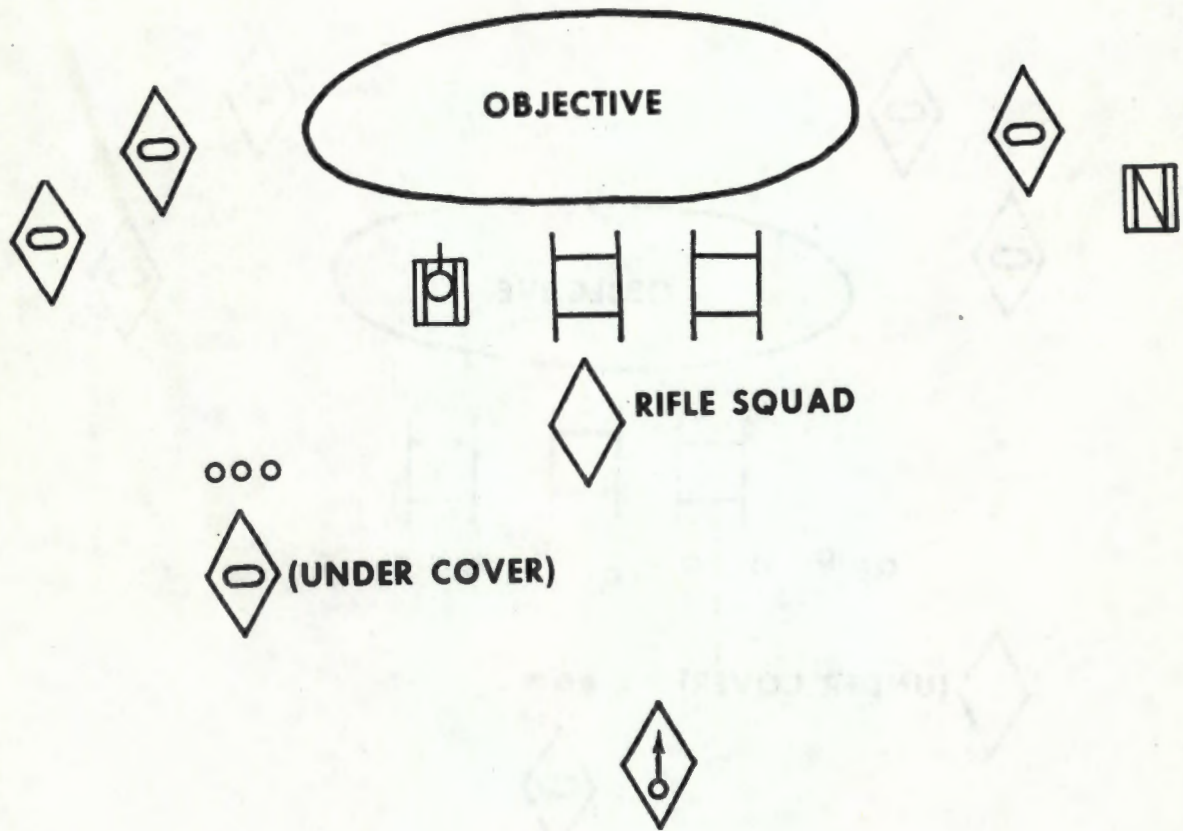


Figure D-10. Armored cavalry platoon, FRONTAL ATTACK, ARAAVs UP.

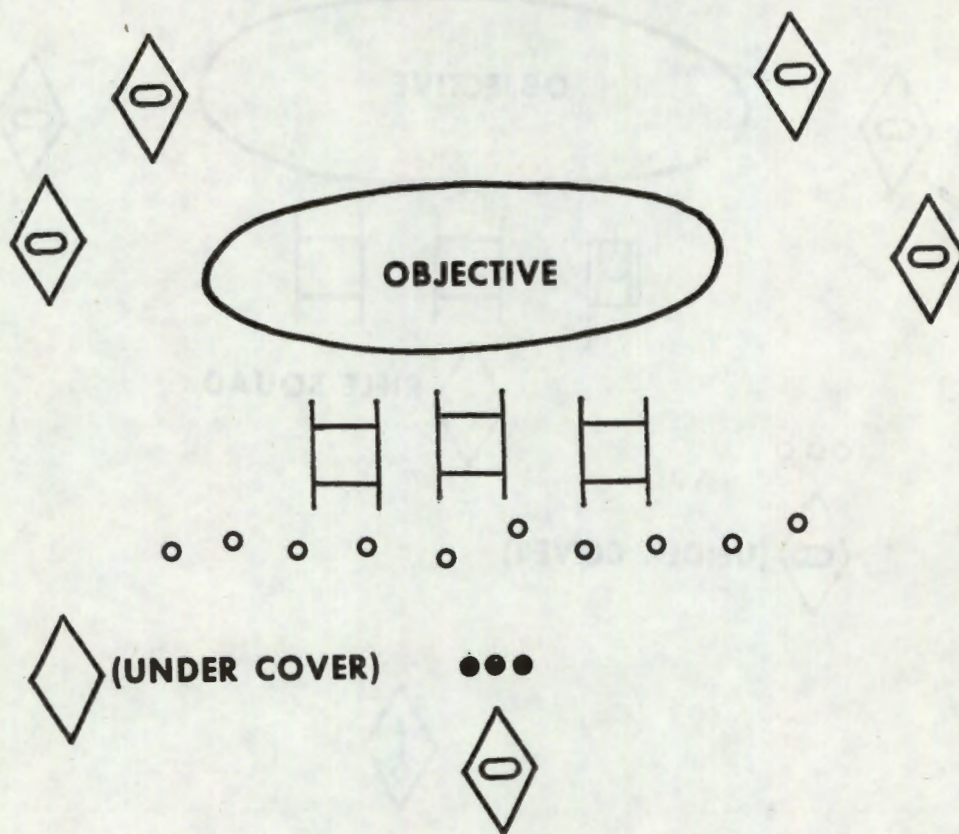


Figure D-11. Armored cavalry platoon, **FRONTAL ATTACK, RIFLES AND ARAAVs ABREAST.**

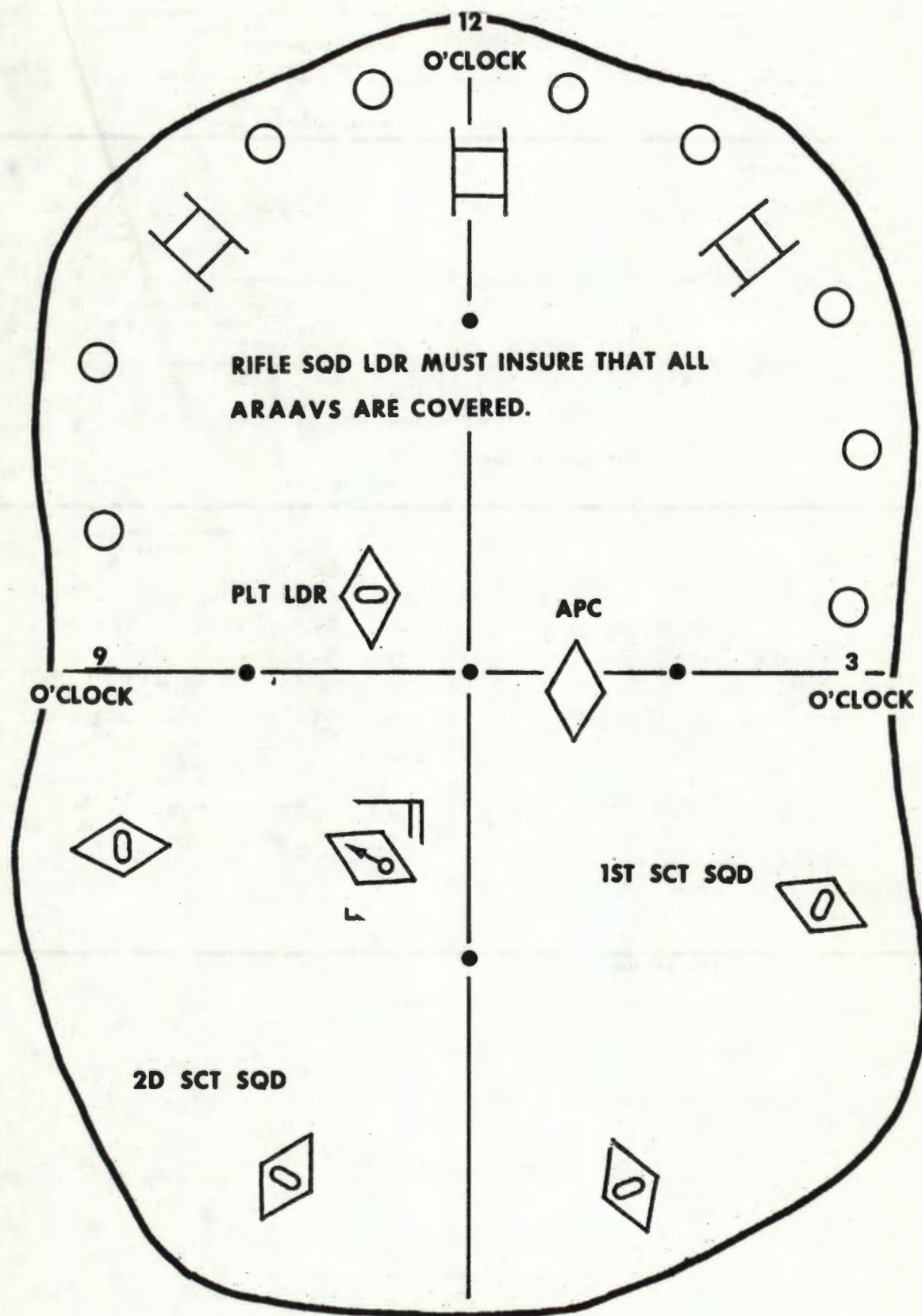


Figure D-12. Armored cavalry platoon defense (one method).

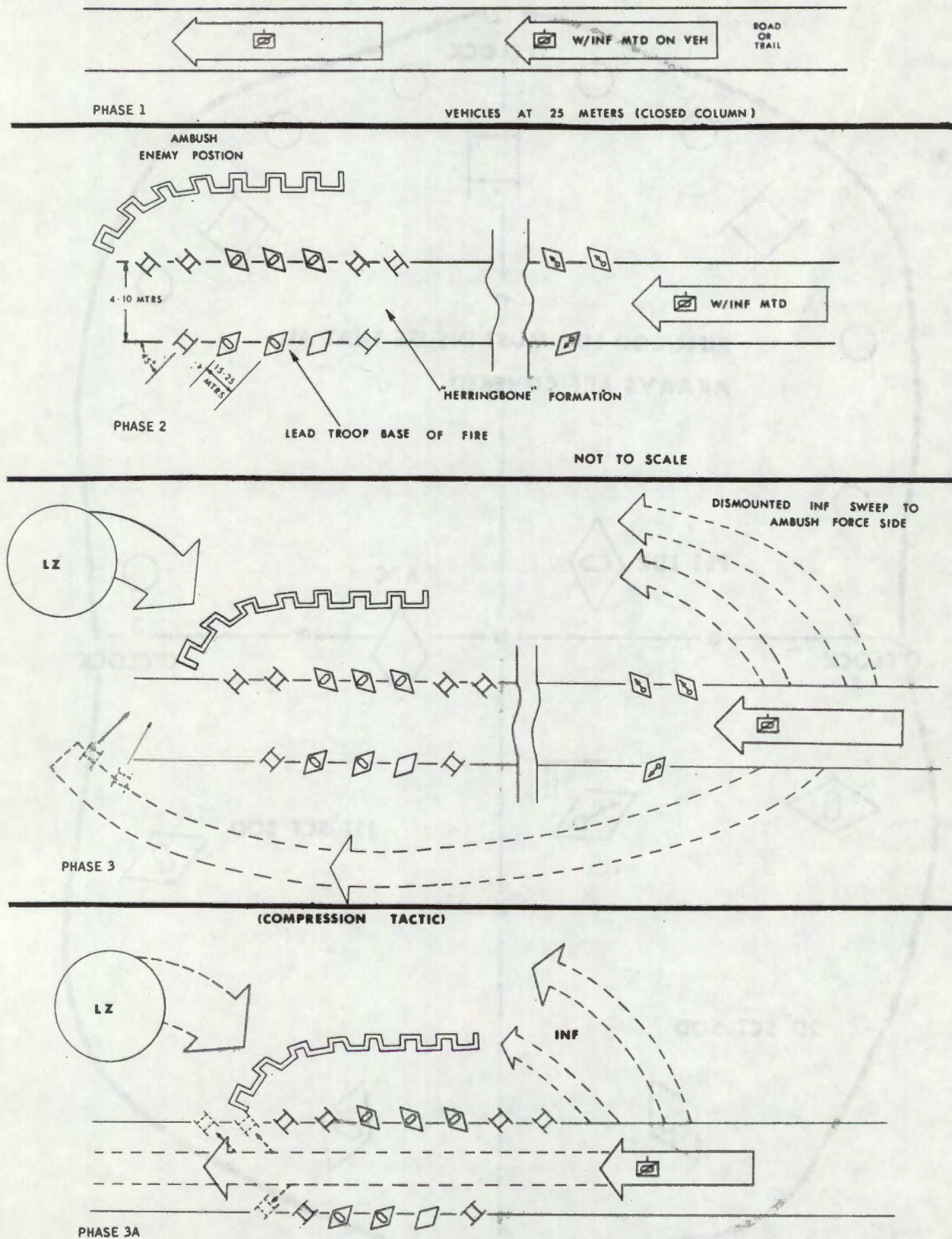


Figure D-13. Armored cavalry counterambush techniques in close or restricted terrain.

Note

Size depends on:

1. Observation and fields of fire.
2. Enemy situation.
3. Night or day.
4. Barriers and mines are used as required
5.  is observation post or listening post dependent on time and visibility conditions.

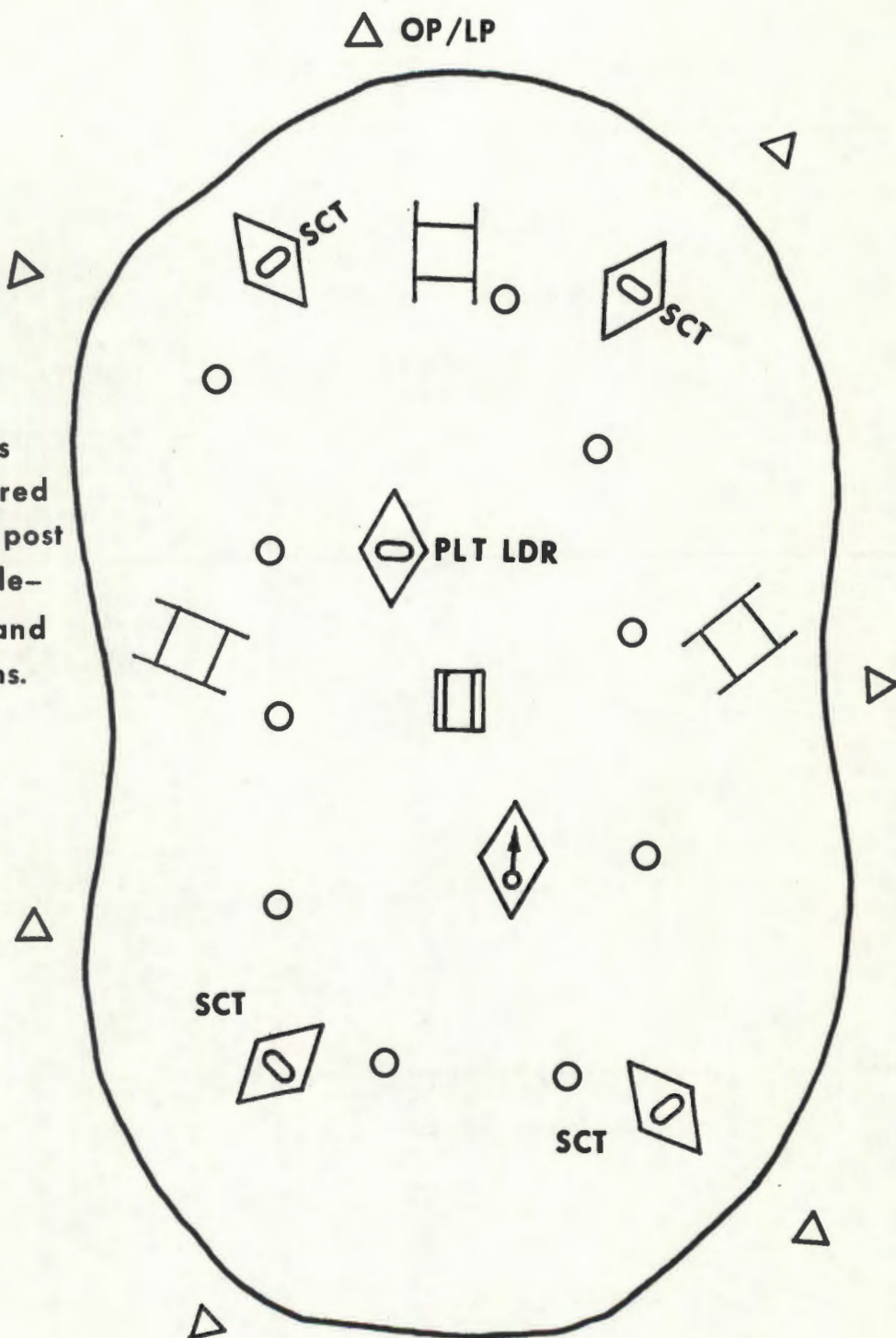


Figure D-14. Armored cavalry platoon Laager.

APPENDIX E

AIR DEFENSE

Section I. GENERAL

E-1. General

This appendix discusses the employment of the organic weapons of the armored cavalry squadron for air defense. It also provides a sample air defense annex to the squadron standing operating procedures (SOP). The material discussed applies to both individual and crew-served weapons (henceforth called *nonair defense weapons*) of the squadron, and the organic air defense weapon (the Redeye missile), unless otherwise stated. Additional air defense information is contained in FM 17-1.

E-2. Concept of Air Defense

a. The low-altitude air threat faced by the elements of the squadron in combat may be partially countered by aggressive use of the Redeye missile system and the large volume of fire that nonair defense weapons can deliver against enemy aircraft. The low-altitude threat may include armed helicopters and low-, medium-, and high-performance aircraft.

b. The responsibility of units or elements to exercise the individual and collective right of self defense against hostile aircraft is emphasized. A large volume of fire from nonair defense weapons is capable of destroying both high- and low-speed aircraft or disrupting their attack. However, to bring together the total firepower of the unit's nonair defense weapons, it is necessary that sectors of observation and fire be established. This action will provide the commander with the means of rapid reaction and control of the unit's air defense fire.

c. Indiscriminate use of nonair defense weapons must be prevented to reduce danger to friendly aircraft and preclude unnecessary disclosure of friendly positions.

d. Situations may arise where the exercise of the right of self defense should be temporarily suppressed (e.g., when friendly airmobile or tactical close air support missions are endangered by the exercise of this right, or when necessary to prevent position disclosure). Alternatively, situations may exist when freer use of

nonair defense weapons against aircraft should be encouraged. The former case involves a local command decision that the prevention of position disclosure or the protection of friendly aircraft is paramount. The latter case is established at theater level.

E-3. Rules of Engagement

In the absence of orders to the contrary, attacking aircraft will be engaged with nonair defense weapons. (See sample Air Defense Annex to SOP for type rules of engagement for Redeye.) Engagement of all other hostile aircraft is on orders issued by the unit commanders and under the supervision of unit leaders. *Nothing in this rule is to be construed as requiring actions prejudicial to the accomplishment of the primary mission of the unit.*

E-4. Techniques of Engagement

This paragraph is applicable to nonair defense weapons. The techniques described maximize the destructive and/or deterrent effect of fires against aircraft. Aircraft may be divided into two categories: Low and high speed. Low-speed aircraft include helicopters and fixed-wing propeller-driven, liaison, reconnaissance, and observation aircraft. High-speed aircraft include all other propeller driven aircraft and all jet-propelled, fixed-wing aircraft. This distinction permits the use of *simplified engagement procedures* by category of target. FM 23-12 and TC 23-15 provide detailed discussions of techniques of fire against aerial targets.

a. *Engagement of Low-Speed Aircraft.* The target-leading technique is used against low-speed aircraft. Using the maximum rates of fire, gunners distribute their fire by continuously tracking along the flight path of the aircraft so that the weapon is aimed at a point well ahead of the aircraft when it is fired.

b. *Engagement of High-Speed Aircraft.* The pattern-of-fire technique is used against high-speed aircraft. A high volume of sustained fire is massed at a fixed point in space well ahead of

the aircraft. The fire is continued until the aircraft flies through it. An alternate technique, called the "sweep-through method," may be employed by automatic weapons gunners. In this method, the gunner starts tracking to the rear of the hostile aircraft, "sweeps-through" the aircraft at a tracking rate faster than the aircraft rate, commences fire at "sweep-through" or a little later, and continues the fast sweep until the burst is completed. The technique is designed primarily for use against high-speed aircraft, but may be used against any moving target.

c. *Mass Fire Techniques.* In either of the target categories, units employ massed fire techniques with small arms and automatic weapons in order to be most effective.

E-5. SOP Items

For a sample air defense annex to a squadron SOP, see section II, below. A troop level SOP annex is not included. A troop SOP should cover the following items relevant to engagement of aircraft with nonair defense weapons as a minimum.

a. *General.* Applicability (to operators of designated weapons).

b. *Relation of Air Defense to Primary Mission.* (The primary mission of the troop is never prejudiced.)

c. *Relation of Active and Passive Air Defense.* The necessity for aggressively engaging hostile aircraft is balanced with the requirement to place in proper perspective the passive tactic of withholding fire to preclude disclosure of position, and this relationship must be clearly defined and established.

d. *Authority to Engage.* Authority to engage attacking aircraft is delegated to individual weapons operators; however, fire discipline and fire distribution by unit leaders are stressed. Authority to engage all other hostile aircraft is on order of unit leaders through the chain of command. The latter authority is subject to the

rule for engagement and rules for withholding fire. This paragraph applies to organic and attached weapons of the troop, but does not apply to the Redeye weapons in a supporting role.

e. *Rule for Engagement.* The SOP must clearly establish that this is normally *the rule for engagement. Engage all attacking aircraft in self-defense.* Engage other positively identified enemy aircraft on orders of unit commanders.

f. *Rules for Withholding Fire Against Aircraft.* Fire is withheld—

(1) When ordered to do so (may be SOP order to implement passive air defense, i.e., prevention of disclosure of position);

(2) When weapons operators are not positive that aircraft are actually attacking or are otherwise hostile, except in *Weapons Free* status.

(3) When friendly aircraft or troops are endangered, unless the danger of enemy attacking aircraft exceeds the danger of firing.

g. *Position Selection.* The SOP should clearly establish desirable position characteristics for automatic weapons in an air defense role when such use is compatible with the selection of positions to accomplish the unit's primary mission.

h. *Firing Techniques.* The SOP should provide guidance for lead and superelevation, massed fire, and maximum rate and volume of fire, either by extracts from, or specific reference to, appropriate field manuals.

i. *Unit Training Requirements in Air Defense Gunnery.* The SOP should define and establish firing discipline and motivating factors for training in proper gunnery techniques. Aircraft recognition procedures should be stressed.

j. *Sectors of Observation Fire.* Each element of the unit should be assigned a sector of observation and a sector of fire to be used in an air defense role.

Section II. SAMPLE AIR DEFENSE ANNEX TO SQUADRON SOP

This section deviates from the field manual format in order to provide paragraphing appropriate to its intended use. It is emphasized that this is a *type SOP annex* and must be adapted to the needs of the particular unit having a need for the SOP. While it is based on current doctrine, it is not intended to establish doctrine.

Sample

Annex _____ (Air Defense) to SOP, _____ Squadron, _____ Cavalry

1. GENERAL

a. References.

- (1) FM 23-17.
- (2) FM 23-17A.
- (3) FM 23-65.
- (4) FM 44-1.
- (5) Air Defense Annex, Division SOP.

b. Purpose. This annex prescribes authority, responsibility, and implementing procedures for the employment of nonair defense weapons and Redeye air defense weapon systems organic to this squadron in providing local air defense for the squadron.

2. CONCEPT

The squadron employs organic weapons to provide for its local air defense in accordance with the guidance outlined. The concept is discussed in two parts: concept for individual and automatic weapons (nonair defense), and concept for Redeye. This annex is applicable to all routine or recurring air defense operations executed by members or units of this squadron unless otherwise directed by appropriate commanders.

a. The squadron employs nonair defense weapons to counter air attack by low and high speed enemy aircraft, without order, when squadron elements are under attack and when such employment is compatible with the primary squadron or subordinate unit missions. This right of self-defense is never denied, and the priority of the unit mission is never prejudiced.

b. The Redeye provides fair weather, low-altitude air defense for the squadron and troops. Redeye may also be employed to provide air defense for small vital areas such as landing/drop zones during the early phases of airborne or airmobile operations. The Redeye section operates under the command of the squadron commander/troop commander. Command of Redeye is normally exercised through the Redeye section leader. Command may be delegated to troop commanders as dictated by the situation to provide the best organization for the squadron and its subordinate units. The exercise of command of Redeye elements is subject to compliance with air defense rules for engagement.

3. Passive Air Defense is defined as employment of all measures except engagement by fire to preclude attack by hostile aircraft. This is the normal type defense employed by the squadron except when attacked by hostile aircraft or when otherwise ordered.

4. Active Air Defense is defined as employment of all measures and all suitable weapons to engage hostile aircraft. This type air defense is executed on order or when under actual enemy air attack.

5. Local Air Defense is defined as the planned employment of all suitable weapons for air defense (Redeye and nonair defense weapons) in a coordinated air defense. The squadron is prepared to employ all suitable weapons to engage hostile aircraft at any time in accordance with the applicable rule(s) for aircraft engagement and the assigned mission of the squadron. Local air defense is employed when it is compatible with assigned ground missions.

6. RESPONSIBILITIES

a. Local air defense is a command responsibility at all echelons. Unless otherwise ordered, the rule for engagement (paragraph 7a(1)) will apply to employment of nonair defense weapons in air defense.

b. The division commander is responsible for the dissemination of air defense (AD) rules for engagement (weapon control status and hostile criteria), and for the dissemination of appropriate hostile and friendly flight information. This is done by the airspace control element (ACE) in the division tactical operations center. The specific channel(s) for dissemination is established upon the arrival of the division in the theater of operations.

c. Squadron. The squadron S3 is responsible for the overall establishment of channels for the dissemination of air defense information and for the staff supervision of the squadron air defense officer (ADO) (Redeye section leader).

d. Squadron ADO. The Redeye section leader is appointed as the squadron ADO, an assistant S3 function, and is charged with the following:

- (1) Staff responsibility for Redeye operational planning.
- (2) Development and maintenance of this SOP in accordance with applicable provisions of the division SOP.
- (3) Timely dissemination of temporary changes in weapon control status, hostile criteria, and

the exchange of special hostile and friendly flight information through the squadron command net when Redeye teams are attached to subordinate unit commanders.

(4) Maintenance of an operational journal on all changes of rules for engagement, and consolidation of after-action and such other reports as may be required.

(5) Insuring that during periods of loss of communications Redeye teams automatically assume a "Weapons Hold" status until communications are restored.

e. Squadron Redeye Section Leader. The air defense section leader commands the air defense section and has special staff duties as squadron air defense officer. He is responsible for—

(1) Commanding the section headquarters and assigned and attached Redeye teams.

(2) Planning and conducting the air defense of the squadron in accordance with priorities determined by the squadron commander.

(3) Advising the squadron commander and staff and subordinate unit commanders on air defense matters.

(4) Preparing and maintaining the squadron air defense SOP.

(5) Providing air defense input to squadron plans.

(6) Establishing and maintaining coordination with the division Chaparral/Vulcan battalion.

(7) Maintaining Redeye team and forward area alert radar (FAAR) position plots on the squadron situation overlay.

(8) Acquiring and maintaining a record of friendly air movement data and informing deployed Redeye teams as appropriate.

(9) Insuring that status of air defense warning, weapons control status, and hostile criteria are current and are made known to Redeye teams.

(10) Maintaining a journal of events to include mission assignment, changes in weapon control status, team location, operational status, missiles on hand, missiles expended, and engagement results.

(11) Planning and supervising section and team training in accordance with appropriate field manuals, technical manuals, and command directives.

(12) Selecting Redeye team general position areas and approving position changes when required.

f. Defended Troop Commander. The commander of a unit to which a Redeye team(s) is attached assumes command thereof. His responsibilities include:

(1) Insuring that the Redeye team(s) under his command operates in accordance with the weapon control status and hostile criteria in effect.

(2) Disseminating temporary changes in rules for engagement and exchange of special hostile and friendly flight information from the Redeye section leader (ADO), through his unit's command net, to the Redeye team(s) under his command.

(3) Passing of hostile flight information to the squadron S3/ADO over the squadron command net.

(4) Employing the Redeye team(s) attached to his unit to include the designation of team firing position areas.

(5) Providing security and necessary combat service support to attached Redeye teams.

7. FIRE CONTROL. Fire control includes all actions taken in preparing for, and placing effective fire on, a hostile aircraft and all actions taken to preclude engagement of friendly aircraft.

a. Rules for Engagement.

(1) For nonair defense weapons, a single rule of employment applies: in the absence of orders to the contrary, weapons operators engage attacking aircraft. Engagement of all other hostile aircraft will be on orders issued by the unit commander and under the supervision of unit leaders.

(2) Rules for engagement for Redeye are established and issued to the squadron by the division. These rules specify the various conditions under which Redeye may engage aircraft. These rules can be relaxed only by the division (actually controlled at Army level, but this is not a concern of the squadron). Subordinate commanders may impose more restrictive rules. They are not authorized to relax the restrictions imposed by any higher commander except that the right of self-defense is not denied. Since Redeye, while not a part of the area air defense (AD) system, contributes significantly to the theater's AD effort. Coordination with the next higher authority will be made prior to the imposition of a squadron wide "Weapons Hold" order.

(3) The rules for Redeye follow:

(a) Conditions prior to outbreak of hostilities—engagement of aircraft is permitted only in self-defense (e.g., Redeye is in weapon control status—Weapons Hold).

(b) Conditions subsequent to outbreak of hostilities—engage aircraft in accordance with the weapon control status and the hostile criteria in effect.

1. Weapon control statuses. There are three degrees of restriction that may be imposed upon Redeye engagement of aircraft:

(a) Weapon tight—engage only those aircraft positively identified as hostile, in accordance with established hostile criteria, at the Redeye firing site/position. This status is considered *normal* for Redeye.

(b) Weapon free—engage aircraft *NOT* positively identified as *friendly*. In this status, unknown aircraft may be engaged. This status is seldom used for Redeye.

(c) Weapon hold—DO NOT FIRE (CEASE FIRE). Weapon hold does not preclude engagement in self-defense.

d. Authority to declare. The division commander disseminates changes in weapon control status and hostile criteria. The Redeye command chain may *not* increase freedom to fire, but may restrict Redeye fires temporarily. For example, if Redeye is placed on "Weapon Free," the division may place Redeye in "Weapon Tight" against Army type aircraft, or "Weapon Hold" if the primary consideration is to avoid a premature disclosure of position.

2. Hostile criteria. The division commander transmits through the intervening echelons of command the established hostile criteria defining those acts which label an executing aircraft as hostile. Aircraft committing such acts should be engaged. Generally, the following hostile criteria apply: attacking friendly units (strafing or bombing), spraying or smoking friendly units without prior permission, dropping flares on friendly units without prior permission, discharging parachutists or unloading troops without prior coordination, laying mines without prior coordination, entering restricted air corridors or areas, dropping ECM devices (chaff reflectors); dropping propaganda leaflets without prior coordination, and visual identification of enemy military insignia or known enemy aircraft configuration.

b. Special Friendly Flight Information. Flight information of friendly air traffic other than the air cavalry troop is disseminated by the division ACE/brigade S3 Air to the squadron CP for purposes of friendly protection. Only that flight information which requires action by a specific unit, or concerns the next few minutes of operation, is disseminated. The squadron S3 and air cavalry troop commander insure that necessary air cavalry troop flight information is provided to the armored cavalry troops and, when necessary for coordination, is provided to all affected (adjacent and higher) headquarters.

(1) Higher headquarters passes on to the squadron pertinent information of immediate and preplanned Army aircraft operations. Information is relayed to troops as required.

(2) Higher headquarters passes on to the squadron pertinent information on immediate and preplanned Air Force aircraft operations. Information is relayed to troops as required.

(3) Higher headquarters passes on to the squadron pertinent information on interdiction, tactical air reconnaissance, and other "fly-overs." Information is relayed to troops as required.

c. Special Hostile Flight Information. The squadron S3 disseminates to the Redeye teams any available warning of hostile air attack.

(1) Higher headquarters passes to the squadron hostile air information obtained through Army or Air Force facilities.

(2) Hostile aircraft warnings from units or Redeye teams are transmitted rearward through the channels specified below in paragraph 9.

d. Air Defense Warnings. Air defense warnings designate the probability of air attack and are disseminated on the squadron and troop command nets, and the air defense section net.

WARNING
Red
Yellow
White

CODEWORD

MEANING

Attack is imminent or is taking place.
Attack is probable.
Attack is *not* probable.

e. States of Alert. States of alert establish maximum times within which squadron nonair defense and Redeye weapons must be capable of engagement. The squadron headquarters (ADO) disseminates states of alert to troops and Redeye teams as required. The following are designated states of alert:

(1) Battle stations.

(a) Redeye gunners will be capable of missile launch within 10 seconds. Nonair defense weapons crews will be capable of immediate fire.

(b) Redeye gunners will have backup rounds ready for employment.

(c) Communications nets are continuously manned.

(d) Upon assuming battle stations, a report is submitted to the next higher headquarters.

(e) Surveillance of the air will be conducted with 360° coverage, or in assigned sectors.

(2) Standby.

(a) Gunners will be capable of engagement within five minutes.

(b) Surveillance is maintained from firing positions.

(c) Communications are operational and monitored.

(d) Upon assuming standby, a report is submitted to next higher headquarters.

(3) Released (all clear).

(a) Out of action.

(b) Instructions for further action will be disseminated by higher headquarters.

f. Reports and Warnings. Reports and warnings will be as prescribed.

(1) Air defense warnings, states of alert, and weapons control status messages: formats follow. All will be challenged, authenticated, and acknowledged upon receipt.

TYPE MESSAGE	MESSAGE CONTENT
(a) Air defense warning	Red (or codeword)
(b) State of alert	Battle stations (or codeword)
(c) Control status	Weapon tight (or codeword)
(2) Assumption of state of alert (format):	
(a) Alert	"Battle stations" (or codeword)
(b) Effective time	"061405"
(3) Actual air warning, (format):	
(a) Description of threat	"Four enemy jets"
(b) Location of threat	"NW sector"
(c) Enemy action	"Heading north"
(d) Time	"061405"
(4) After action report, (format):	
(a) Action	"Engaged four enemy jets"
(b) Time of action	"061407"
(c) Results	"Two jets destroyed, two escaped to north, status of enemy pilots: no parachute from one jet; other pilot captured on landing"

8. OPERATIONS

a. Basic Redeye Deployment Options.

(1) General support. Under this option, Redeye team deployments are planned and executed at squadron level with command being exercised by the Redeye section leader through the air defense section net. The section leader provides or arranges for team security, resupply, messing, and medical support.

(2) Direct support. Under this option, Redeye team(s) is deployed in defense of a specific subordinate unit or element with command at squadron (section) level as described above. Teams automatically position themselves with their defended unit or element and relocate therewith.

(3) Attachment. Under this option, Redeye is commanded by the troop to which attached. The section leader assumes the role of squadron ADO for the dissemination of rules for engagement, and special instructions and information, using the squadron command net. Normal attachment within the armored cavalry squadron is—

Team A—Troop A

Team B—Troop B

Team C—Troop C

Team D—Troop D (Air Cavalry)

Team E—Hq & Hq Troop

b. Criteria for the Selection of Firing Positions.

(1) Nonair defense weapons. Positions for nonair defense weapons are selected based on the troop mission.

(2) Redeye.

(a) Maximum observation and fields of fire. Redeye team firing positions should be selected as far forward as practical. They should be on commanding terrain affording a minimum aircraft detection range of 5 kilometers with unobstructed fields of fire along the most probable low altitude routes of hostile aircraft approach into the squadron area.

(b) Mutual support. Redeye teams should be separated by no more than two kilometers, if the threat consists primarily of jet aircraft, and be positioned to provide maximum coverage of the dead space zones of adjacent teams. (This positioning is the most suitable, although it may rarely be possible in support of normal armored cavalry missions.)

(c) Defense in depth. When sufficient teams are available, they should be deployed in depth to provide an increasing density of fire as the threat approaches the defended area.

(d) Accessibility. Although the Redeye team can operate on foot, or from unit tracked vehicles when required, selected firing positions normally should be accessible by team vehicle in order to maintain mobility, communications, and facilitate resupply.

(e) Location of the sun with respect to the position. Firing positions should be selected to minimize the effects of the sun on the gunner's observation, and flight of the missile.

(f) Ground security. Redeye firing positions should be selected within the protection of friendly troop positions unless provision is made to provide ground security for the team.

(g) Safety. In order to preclude the possibility of burns or injury to other individuals, a circular zone, 42 feet in radius around the firing positions, should be kept clear in order to permit the team to fire in all directions. In addition, the weapon is fired from the standing position only, at tube elevations not less than 15 degrees nor more than 65 degrees from the horizontal, and will not be fired from vehicles other than armored vehicles except when absolutely necessary.

c. Rules for Target Selection.

(1) Nonair defense weapons. Engage low speed targets with aimed fire with appropriate lead. Engage high speed targets with massed fire directed well in front of and above targets.

(2) Redeye. When faced with multiple attackers, the gunner first engages that aircraft in his sector constituting the greatest threat to the defended area. If both members of a team are engaging a formation, the gunner engages the leading aircraft and the team chief engages the second aircraft, or vice versa if individual positions would cause fires to cross. When two aircraft are approaching the Redeye team side by side, the gunner engages the lead or right aircraft, and the team chief engages the trailing or left aircraft.

d. Air Defense During Unit Movement.

(1) Nonair defense weapons. Defend from the weapon location in the formation in accordance with the assigned sector of observation and fire.

(2) Redeye. Defense of squadron/troop formations is provided by placing teams so that coverage is available throughout the formation. If the unit is moving by infiltration, the formation/unit commander locates the teams upon recommendations made by the Redeye section leader.

e. Offensive Operations.

(1) Nonair defense weapons. The unit mission dictates air defense application.

(2) Redeye. During squadron offensive operations, one Redeye team may be attached to each of the maneuver troops, with the remaining teams being positioned to support the attack from successive preselected firing positions.

f. Defensive Retrograde Operations.

(1) Nonair defense weapons. The unit mission dictates air defense application.

(2) Redeye. During squadron defensive/retrograde operations, Redeye teams operate from preselected firing positions so as to best support the overall operation.

9. COMMUNICATIONS

a. Primary Nets.

(1) Nonair defense weapons. Appropriate command net is primary net.

(2) Redeye. The squadron air defense section net is primary. The section headquarters station is net control station for the net.

b. Alternate Net. Alternate or backup Redeye section communications are provided by the command nets of the troops and squadron.

c. Information that will be transmitted over the air defense section net includes:

- (1) Weapon control status and hostile criteria changes.
- (2) Deployment control.
- (3) Exchange of information between teams.
- (4) Early warning from teams to higher echelons.
- (5) Special friendly flight information.
- (6) Special hostile flight information.

d. Special hostile flight information will be transmitted by the squadron to higher headquarters on the following nets:

- (1) Primary. Division OPs/INTEL net (AM/SSB-RATT).
- (2) 1st Alternate. Division OPs/INTEL net (FM).
- (3) 2nd Alternate. Division air request net (AM/SSB) (Voice).
- (4) 3rd Alternate. Division CG Command net (FM).

e. Discipline and Security. Squadron standing operating procedures for communications security apply. All messages changing weapon control status will include authentication. Receipt of status change will be acknowledged.

f. Loss of Communication. Upon the discovery of loss of communications, Redeye teams will automatically assume a "Weapons Hold" status until communications are restored. In order to insure that communications are operational, radio checks will be conducted once each half-hour when units are not under radio or listening silence. The right of self-defense, however, shall not be denied.

10. SECURITY

a. Ground Security and Passive Air Defense Procedures. Ground security for the Redeye teams normally is provided by friendly troops located in the vicinity of the team position. Although Redeye must be fired from a standing position, for safety reasons, each team member prepares a camouflaged foxhole adjacent to the firing position which affords maximum surveillance of the route being defended. When time permits, dummy Redeye positions may be constructed to increase survivability. Team members insure that their activity does not disclose the defended unit positions.

b. Redeye Weapon Security (Peace-Time).

(1) Redeye nature and sensitivity.

(a) The Redeye weapon is a complete guided missile weapons system which may be put in a ready to fire condition by the insertion of a launcher battery/gas unit.

(b) Continuous safeguarding of the weapon is of paramount importance. The weapon, if obtained by unauthorized individuals, could be employed against commercial, state, military, or allied aircraft.

(c) Due to Redeye's nature and its sensitivity, physical security cannot be overemphasized. The weapon is small enough to be concealed easily and can be fired with little skill.

(d) Physical security for Redeye is in accordance with AR 380-5 and, in addition, will meet minimum requirements for security control of classified items established by TB 9-380-101.

(2) Loss or theft of Redeye. Personnel discovering a loss, theft, or surreptitious action involving Redeye, will notify the appropriate commander immediately. The commander will take action as prescribed in AR 210-10 and AR 190-11. Each commander will notify appropriate law enforcement agencies to expedite recovery actions.

(3) Storage and handling.

(a) Storage and handling of Redeye weapons will be in accordance with TM 9-1300-206.

(b) Redeye weapons should be under continual receipting of responsible personnel such as squadron S4, air defense section leader, and Redeye team chiefs.

(4) Safeguarding.

(a) The Redeye weapon will be safeguarded in accordance with AR 380-5.

(b) Locations utilized for the Redeye weapon system will be established as "exclusion areas" or "limited access areas." (This is a peacetime requirement which may be revised after initiation of hostilities.)

(c) Physical and surveillance control will be maintained at all times in areas where Redeye weapon systems are located.

(5) Personnel clearance.

(a) Granting of security clearances to personnel for access to Redeye weapons will be accomplished in accordance with AR 604-5.

(b) Limited access to classified or sensitive areas to be established by responsible commanders in accordance with AR 604-5.

11. LOGISTICS

Logistics support of the squadron Redeye teams will be coordinated by the Redeye section leader. The team chief will submit equipment status reports to the Redeye section leader twice daily, or more frequently should the tactical situation dictate. This report will include—

- a. Missiles on hand.
- b. Nonoperational equipment.

12. EMERGENCY DESTRUCTION

In the event capture by the enemy becomes imminent, the Redeye team members destroy or otherwise make the missiles on hand unusable by the following actions in order of priority:

- a. Firing.
- b. Thermite grenade placed in the missile container near seeker head.
- c. If time does not permit either of above actions, throw away the battery/gas units, and smash the seeker heads.

13. SAFETY

- a. Personnel.

- (1) Weapon is fired from a standing position only.
- (2) The team chief insures that a 42 foot radius around the firing site is clear of all personnel, if practical.

- (3) Redeye is fired at an elevation of not less than 15° nor more than 65°.

- (4) The team chief and gunner wear helmets when firing the weapon.

- (5) The team chief/gunner insures the eye shield is in the proper position prior to firing.

- (6) Weapons taken from a shipping and storage container that has been dropped from 5 feet or more onto a hard surface, or from a container that has visible damage inside to its saddle type supports, will not be fired. A weapon that has been dropped or hit, or that has any visible damage, will not be fired.

- b. Equipment.

- (1) The Redeye weapon round will not be stored in any area of high intensity r.f. transmission, such as near ground surveillance radar sets or AM/SSB radios.

- (2) The launcher battery/gas unit will not be carried in pockets of personnel, nor placed near inflammable materials.

- c. Hangfires, Misfires, and Duds.

- (1) Hangfire. A hangfire is a delay in functioning of the weapon round due to loose connections or damaged propellant. The delay may be from a split second to several minutes. If the weapon round fails to fire, always assume it to be a hangfire. Immediate action is to—

- (a) Continue to track the target for three more seconds, keeping both the firing trigger and the uncaging switch depressed.

- (b) If the missile fails to eject after three seconds, release both the trigger and the caging switch. Then remove the launcher/battery cooler unit and replace the receptacle cap. Keep the weapon round oriented in a safe launch position for ten minutes, if practical.

- (c) Lay weapon round down with an elevation of 20°.

- (d) Notify Explosive Ordnance Disposal (EOD).

- (2) Misfire. A misfire is a complete failure to fire because of faulty electronic or propulsion components. Since a misfire cannot be immediately distinguished from a hangfire, it should be treated as a hangfire.

- (3) Duds. A dud missile occurs when the sustainer motor fails to fire and the ejected missile falls to the ground. Following actions are taken:

- (a) Do not disturb the missile in any way.

- (b) Note the location of the missile.

- (c) Notify Explosive Ordnance Disposal (EOD).

14. LOADING PLAN

See appropriate squadron SOP annex.

15. DECONTAMINATION PROCEDURES

Weapon decontamination will be in accordance with FM 23-17 and FM 21-40.

16. TRAINING

Redeye section and Redeye team training will be under the scheduling and guidance of the section leader in accordance with appropriate TMs, FMs, and command directives.

Sample

Appendix 1 (Redeye Team SOP) to Annex _____, (Air Defense) to SOP, _____ Squadron, _____ Cavalry

1. GENERAL

Each Redeye team chief is responsible within his team for strict adherence to the provisions of this SOP, and any changes thereto, made by proper (identified or authenticating) authority. All Redeye gunners will act in accordance with the rules for engagement made effective by designated authorities. (May be SOP.) The Redeye section leader, or the commander of the unit to which the team is attached, normally disseminates authenticated changes in these rules, although any commander in the team's command chain, who is at the team's position, is also authorized to announce changes when disseminated by appropriate higher headquarters. They may impose more restrictive rules, but they are not authorized to relax restrictions imposed by higher commanders.

a. Weapon Control Status.

(1) **Weapon tight.** Engage only those aircraft that you positively identify hostile. Assume this status upon declaration of hostilities except when ordered otherwise, or upon discovering loss of communication.

(2) **Weapon free.** Engage only those aircraft that you do not positively identify as friendly.

(3) **Weapon Hold.** Do not fire (cease fire) except in self-defense. Gunners revert to this status upon discovering loss of communication (including oral and visual).

(4) Commanders may not increase freedom to fire beyond the prescribed effective weapon control status but may restrict fires temporarily when required by the situation.

(5) The individual and collective right of self-defense is never denied.

(6) During wartime operations, weapon tight will be the normal control status unless specified otherwise. Redeye is primarily employed for purposes of self-defense of the defended unit. Kills of hostile aircraft fly-overs are a bonus to be sought only when such aircraft are positively identified as hostile. When under a weapon tight control status, and when both of the Redeye team members are operating from the same position (as a team), if either of the team members disagree as to the identity of a detected aircraft the team chief will not permit the engagement of the aircraft. When the team members are not together, the decision to engage detected aircraft must be made by the detecting gunner. If any doubt exists, the decision will be in favor of friendly aircraft protection (aircraft will not be engaged).

b. Hostile Criteria. To be hostile, an aircraft must meet one of the following criteria:

(1) Attacking a friendly unit (strafing or bombing).

(2) Spraying or smoking a friendly unit without prior permission.

(3) Dropping flares on friendly unit without prior permission.

(4) Discharging parachutists or unloading troops without prior coordination.

(5) Laying mines without prior coordination.

(6) Entering restricted air corridors or areas.

(7) Dropping ECM devices (chaff reflectors).

(8) Dropping propaganda leaflets without prior coordination.

(9) Visually identified if the aircraft is bearing military insignia or has the unmistakable configuration of a known enemy aircraft. Where humanly possible, there will be a comparison of identifications before engaging. Aircraft will be engaged in accordance with weapon control status and rules for engagement in effect at the time. The team chief is responsible for compliance with established directives.

c. Type Rules for Engagement. The application of fire controls in the engagement of aircraft.

(1) State of alert short of war (standby or all clear). Engage aircraft only in self-defense.

(2) Wartime state of alert (battle stations). Redeye teams will engage aircraft according to the weapon control status in effect and hostile criteria, unless ordered otherwise.

3. AIR DEFENSE FIRE CONTROLS

a. States of Alert. Times within which air defense weapons will be capable of engagement.

(1) Squadron headquarters (ADO) will disseminate states of alert to troops or Redeye teams as required.

(2) States of alert are as follows:

(a) Battle stations.

1. Redeye gunners will be capable of missile launch within 10 seconds.

2. Redeye gunners will have backup rounds ready for employment.

3. Communications are continuously manned.

4. Upon assuming battle stations, a report will be submitted to next higher headquarters (para 4).

5. Surveillance of the air will be conducted for 360° coverage or in assigned sector.

(b) Standby.

1. Gunners will be capable of engagement within five minutes.

2. Surveillance is maintained in firing position.

3. Communications are operational and monitored.

4. Upon assuming standby, a report will be submitted to next higher headquarters (para 4).

(c) Released (All Clear).

1. Out of action.

2. Instructions for further action will be disseminated by higher headquarters.

b. Air Defense Warnings. Air defense warnings designate the probability of air attack and will be disseminated with the desired state of alert on the squadron and troop command nets and the Redeye section net.

WARNING

Red

Yellow

White

CODEWORD

MEANING

Attack is imminent or is taking place.

Attack is probable.

Attack is not probable.

4. REPORTS AND WARNINGS

a. Air defense warnings, states of alert, and weapon control status.

(1) Format.

(a) Warning—Red (codeword).

(b) Alert—Battle stations (codeword).

(c) Control status—Weapon tight (codeword).

(d) Authentication.

(2) Warnings, states of alert, and weapon control status messages will be challenged, authenticated, and acknowledged.

b. Assumption of State of Alert (format):

(1) Alert—Battle stations (codeword).

(2) Time—1405.

c. Air Warnings (format):

(1) Description—"Four enemy jets."

(2) Location—"NW sector."

(3) Action—"Heading north."

(4) Time—"1405."

d. After Action Report (format):

(1) Action—"Engaged four enemy jets."

(2) Time—"1405."

(3) Results—"Two jets destroyed, remainder headed north."

5. FIRING DOCTRINE

Detection, identification, and techniques of engagement.

a. Weapon Tight.

(1) Detection is accomplished when an observer sees an aircraft. The observer alerts other members of his crew and unit.

(2) Identification. Aircraft must be positively identified as hostile. Unidentified aircraft will not be engaged (para 2a(6)).

(3) Methods of engagement.

(a) Low speed aircraft (fixed or rotary). Redeye—fire on inbound course. Fire one missile and assess damage. Fire additional missiles as required.

(b) High speed aircraft. Redeye—fire on outbound course. Team fires two missiles and assesses damage. Fire additional missiles as required.

(c) Multiple aircraft. Redeye—engage on inbound and outbound courses. Gunner fires at lowest and closest target. Other gunner engages highest and closest. If targets are split laterally, team chief fires at closest target left of center and the other gunner fires at closest target right of center. Continue firing without assessing damage until targets are destroyed or out of range, or the team is out of ammunition.

b. Weapon Free.

(1) Detection is the same as for weapon tight.

(2) Identification. Aircraft must be identified as not positively friendly. To identify an aircraft as friendly, Redeye teams and tactical units should have:

(a) Information from higher headquarters to include direction, approximate speed, altitude, and model of aircraft.

(b) Positive visual recognition using binoculars.

(3) Engagement methods are the same as under weapon tight.

c. Weapons Hold. In wartime state of alert under hold fire, do not fire. Exception: the right of self-defense is never denied.

6. COMMUNICATIONS

a. Communications checks with the NCS will be made once every half hour. (On the hour and half hour.)

b. CESI and CEOI in effect.

c. Changes in alert status, weapon control status, hostile criteria, and rules for engagement will be received in the format in paragraph 4.

7. SAFETY

See Annex _____, (Air Defense) to SOP.

8. EMERGENCY DESTRUCTION (Methods are listed in order of priority).

a. Firing, if acquisition of friendly aircraft is unlikely.

b. Thermite grenade detonated in the missile container near the seeker head.

c. If time does not permit either of the above actions, throw away the battery/gas units and smash the seeker heads.

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By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

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