FM 17-20

DEPARTMENT OF THE ARMY FIELD MANUAL

ARMORED INFANTRY UNITS PLATOON, COMPANY AND BATTALION

HEADQUARTERS, DEPARTMENT OF THE ARMY

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FIELD MANUAL
No. 17–20

HEADQUARTERS,
DEPARTMENT OF THE ARMY
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ARMORED INFANTRY UNITS—PLATOON, COMPANY, AND BATTALION

* This manual supersedes FM 7–17, 23 March 1951, including C 1, 12 September 1952.

CHAPTER 1

GENERAL

Section I. GENERAL

1. Purpose and Scope

a. This manual covers detailed doctrine, tactics, techniques, procedures, and organization of armored infantry units—platoon, company, and battalion—acting either with or without reinforcements.

b. The procedures described in this manual are intended to be used as guides and should not be considered inflexible. Each new situation in combat must be solved by an intelligent interpretation and application of the doctrine set forth herein, and not by blind adherence to any set of rules.

c. This manual must be used in conjunction with FM 17–1, *Armor Operations, Small Units.* General information contained in FM 17–1 is repeated in this manual only where necessary to insure clarity and understanding. Although this manual deals primarily with armored infantry units, it emphasizes the fact that armored infantry normally operates in close coordination with other arms, and that success in battle is certain only when all arms and services work together.

d. While the employment of other types of units, such as tanks, artillery, engineers, and Army aircraft, is mentioned in this manual, FM 17–1, and manuals of the 5-, 6-, 17-, and 20-series, should be consulted for the basic and detailed tactics and techniques of these units. This also applies in the field of logistics and communication. In addition to FM 17–1, armor series manuals which supplement this manual are as follows:

FM 17–100 *The Armored Division.*
FM 17–33 *Tank Battalion.*
FM 17–35 *Reconnaissance Battalion Armored Division.*
FM 17–50 *Logistics Armored Division.*
FM 17–70 *Signal Communication in the Armored Division.*

e. Discussions in this manual of organizations and equipment are based on TOE of the 7- and 17-series.

f. Unless otherwise specified, the material presented herein is applicable without modification to both atomic and nonatomic warfare. Paragraphs 15 through 18 and 183 through 189, FM 17–1 provide additional atomic considerations.

2. The Role of Armored Infantry

Armored infantry is the infantry striking force of armor. It engages in offensive, defensive, and retrograde actions, with or without tanks. It is capable of providing infantry support for tank units in all types of actions. Armored infantry units are employed most frequently either with tank units attached or attached to tank units. The armored infantry battalion is both an administrative and a tactical unit, with self-contained facilities for administrative, supply, evacuation, and maintenance activities sufficient for limited periods of combat. Its continued operaton depends on adequate and timely logistical support.

3. Mission of Armored Infantry

The armored infantry has the mission of assisting in the successful advance of tanks through mounted or dismounted action. To accomplish this mission, the armored infantry closes with and destroys or captures the enemy by fire, maneuver, and shock action.

4. Capabilities of the Armored Infantry Battalion

The armored infantry battalion has the following capabilities:

a. Provides armored infantry support for division tank units.

b. Conducts offensive and defensive operations with or without the support of tanks units.

c. Possesses high cross-country mobility with light armor protection and multiple means of communication.

d. Traverses unfordable water obstacles while mounted.

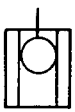
e. Rapidly exploits the effects of atomic weapons.

f. Dismounted armored infantry elements may be helicopter lifted to positions beyond an obstacle so as to outflank and seize enemy defensive positions and key terrain features. See FM 17–1.

5. Legend for this Manual

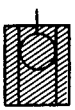
Figure 1 gives the symbols most frequently used in illustrating this manual.

LEGEND

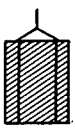


TANK PRIMARY POSITION

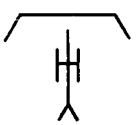
ARMORED PERSONNEL CARRIER



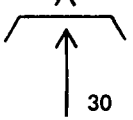
ENEMY TANK POSITION



ENEMY SELF-PROPELLED ANTITANK GUN



TOWED ANTITANK GUN IN POSITION



MACHINE GUN IN POSITION

TYPICAL TANK

NOTE: ILLUSTRATIONS OF VEHICLES AND EQUIPMENT OTHER THAN PHOTOGRAPHS IN THIS MANUAL ARE ARTISTS DRAWINGS AND ARE NOT INTENDED TO INDICATE FUTURE DESIGN

Figure 1. Symbols used in manual.

Section II. ORGANIZATION, ARMORED INFANTRY BATTALION

6. General

The armored infantry battalion consists of a headquarters and headquarters company and four rifle companies (fig. 2). There are four armored infantry battalions in the armored division.

7. Headquarters and Headquarters Company

a. Organization. The headquarters and headquarters company of the armored infantry battalion consists of a battalion headquarters and a headquarters company. The battalion headquarters contains the battalion commander and his staff. The headquarters company has a company headquarters, a battalion headquarters section, a battalion scout platoon, a battalion 4.2-inch mortar platoon, a battalion communication platoon, a battalion support platoon, a battalion maintenance platoon, a battalion personnel section, and a battalion medical section (fig. 3).

b. Mission. The mission of the headquarters and headquarters company is to provide command, reconnaissance, motar support, communication support, administration, supply, medical support, transportation, and maintenance support for the battalion.

8. Battalion Headquarters

The battalion headquarters contains the necessary personnel to command and control the battalion. These are the battalion commander, executive officer, adjutant (S1), intelligence officer (S2), operations officer (S3), S3 air, logistics officer (S4), surgeon, chaplain, communication officer, maintenance officer, and sergeant major. For duties and responsibilities of the battalion commander and his staff, see paragraphs 68 through 88, FM 17–1.

9. Headquarters Company Headquarters

The company headquarters of headquarters company is organized to provide administrative, supply, maintenance, and mess facilities for the company and for battalion headquarters personnel. It consists of a company headquarters section; an administrative, mess, and supply section; and a maintenance section.

a. Company Headquarters Section. The company headquarters section includes the company commander, the first sergeant, and a driver. The company commander may be designated as battalion headquarters commandant. As such, he is responsible for operations pertaining to the internal arrangement of the command post, its movement under direction of the executive officer, and its security. In addition, he is charged with the responsibility of providing messing facilities for attached or supporting personnel, such as liaison officers and forward air controllers. He

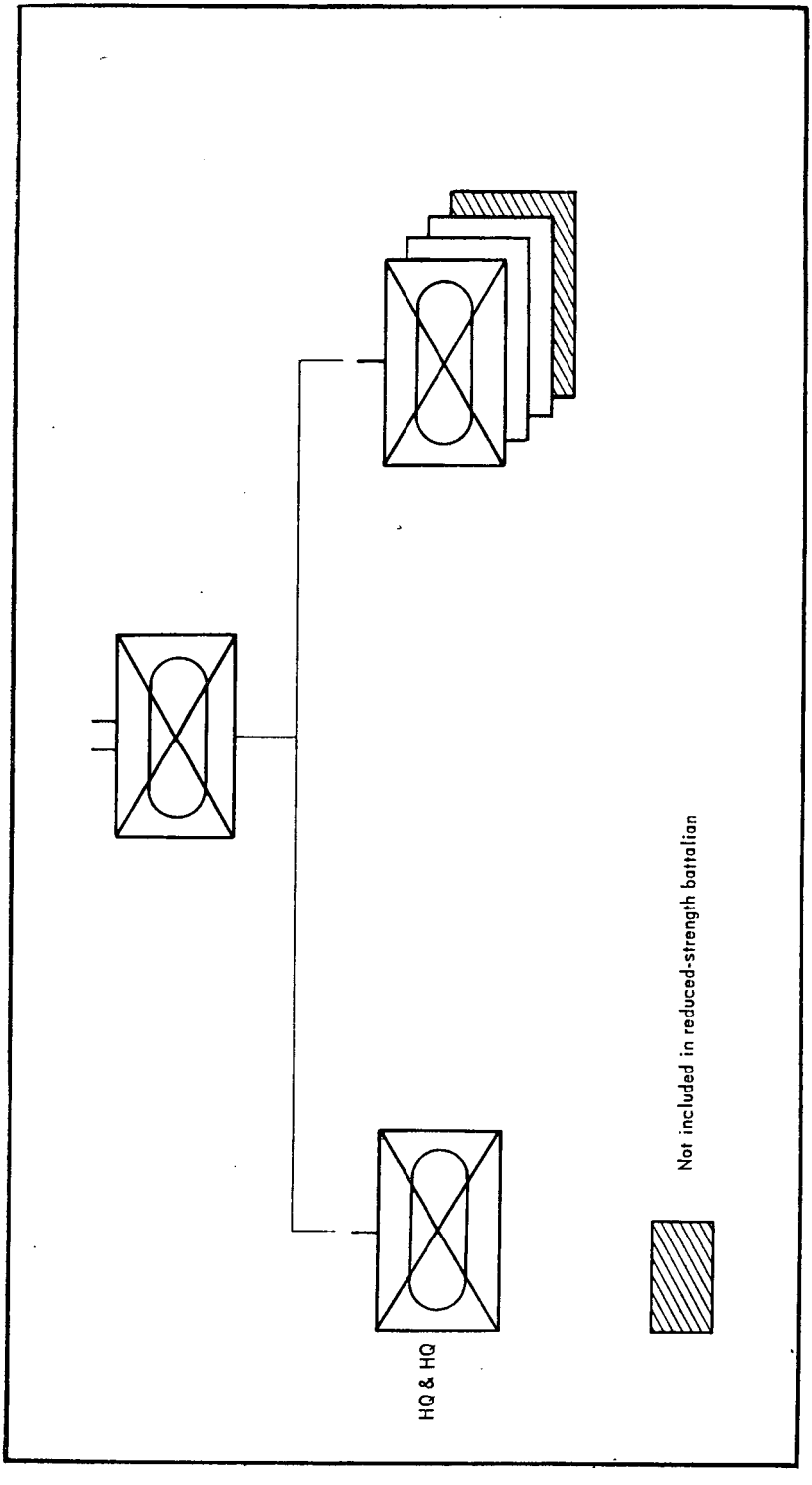


Figure 2. Organization, armored infantry battalion.

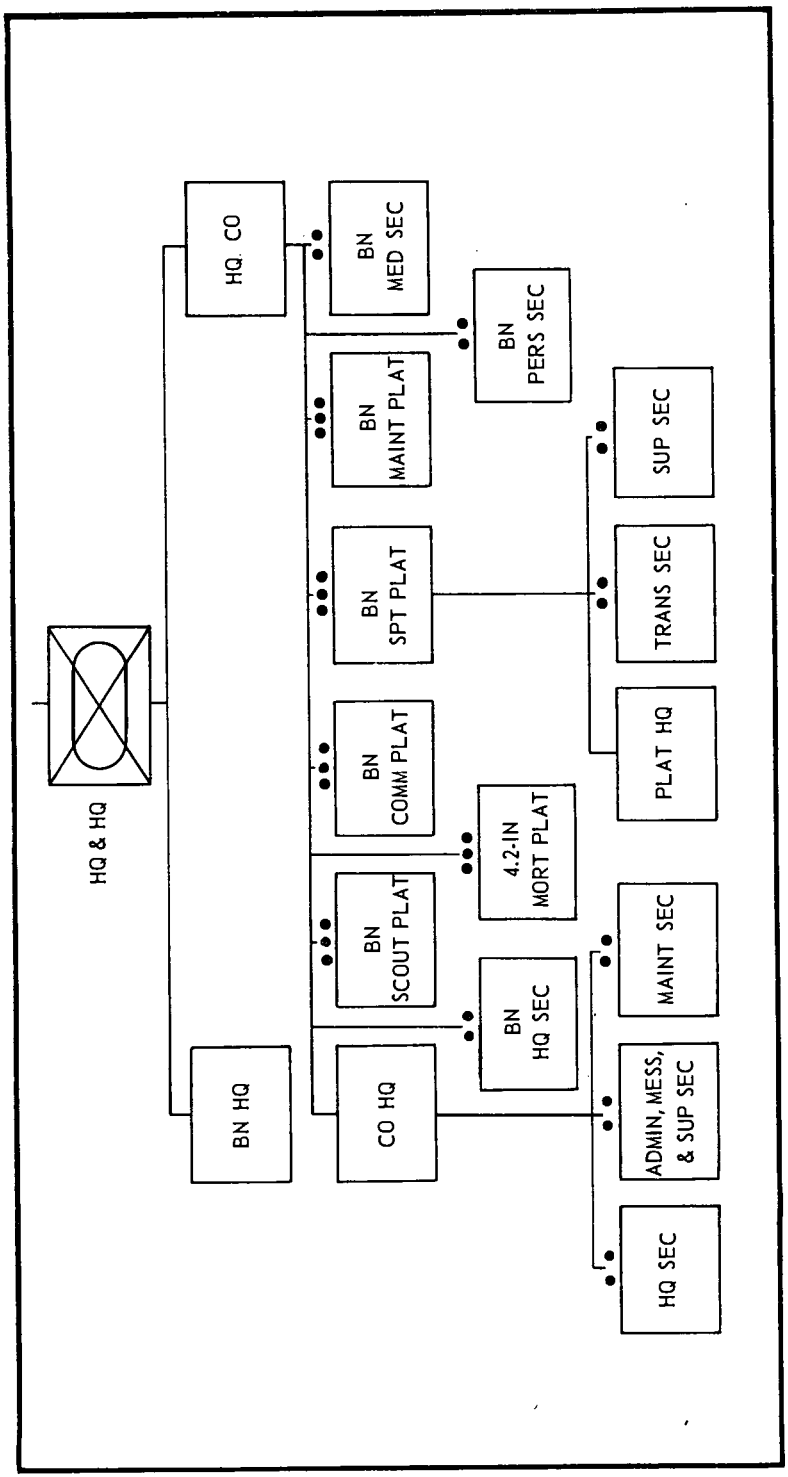


Figure 8. Organization, headquarters and headquarters company, armored infantry battalion.

may be required to assume temporarily the duties of any member of the staff.

b. Administrative, Mess, and Supply Section. The company administrative, mess, and supply section prepares administrative data for submission to higher headquarters, and feeds, clothes, and equips personnel of the company. It includes the supply sergeant, mess steward, cooks, company clerk, and driver. This section is transported in cargo trucks and trailers.

c. Maintenance Section. The company maintenance section is commanded by a warrant officer who is the company maintenance officer. In addition, the section includes the maintenance sergeant and necessary mechanics. This section has the function of keeping all headquarters company vehicles, armament, and communication equipment operating at maximum efficiency.

10. Battalion Headquarters Section

The battalion headquarters section provides the bulk of the enlisted personnel for the staff sections and part of the vehicles and equipment needed for the command and control of the battalion. This section also contains two liaison officers (par. 88, FM 17–1). Enlisted personnel include an intelligence sergeant, operations sergeant and assistants, chaplain's assistant, mail clerk, clerk typists, and drivers for the section vehicles. Transportation includes armored personnel carriers and necessary general-purpose vehicles.

11. Battalion Scout Platoon

a. General. The scout platoon (fig. 4) consists of a platoon headquarters and three scout sections. The platoon headquarters consists of the platoon leader, platoon sergeant, and drivers of the two ¼-ton trucks. Each scout section consists of two squads. Each squad has six enlisted men mounted in two ¼-ton trucks. The section leader commands one squad. The squad leader of the other squad is also the assistant section leader.

b. Mission. The scout platoon performs missions of security and reconnaissance to the front, flanks, and rear of the battalion. It may be reinforced with tanks and armored infantry to enable it to accomplish these missions. In addition, the scout platoon assists in the control of movements of the battalion, or elements thereof, by route reconnaissance, posting of guides and markers, and reconnaissance of assembly areas and attack positions. For details of employment, see FM 17–35.

12. Battalion Mortar Platoon

a. General. The 4.2-inch mortar platoon (fig. 5) has the mission of furnishing close and continuous indirect fire support for the rifle com-

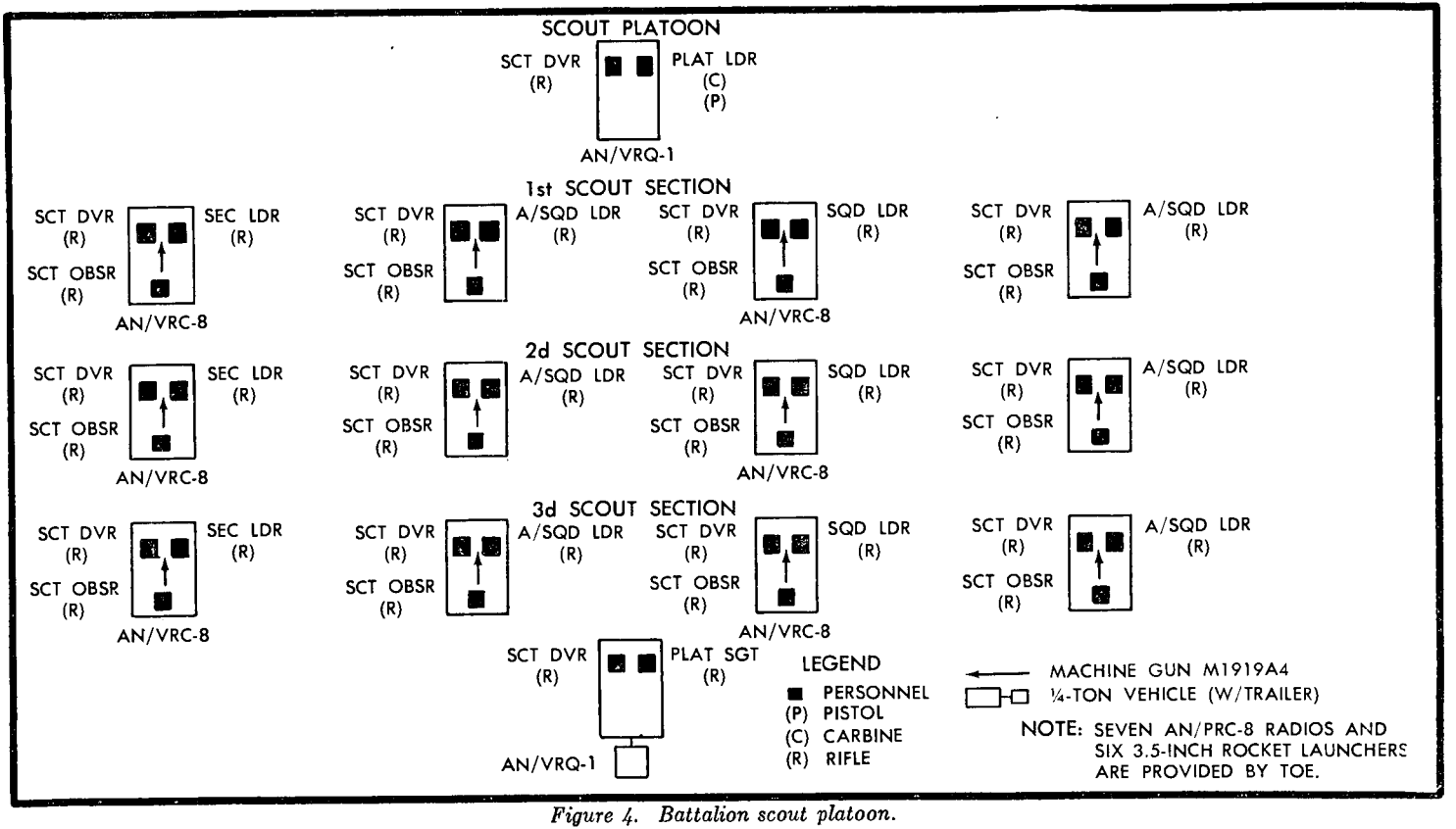


Figure 4. Battalion scout platoon.

panies of the armored infantry battalion. Normally this platoon is employed directly under battalion control. It is capable of—

(1) Delivering high explosive ammunition on area or point targets.

(2) Delivering chemical munitions on area targets.

(3) Providing battlefield illumination.

b. Organization.

(1) The platoon is operationally self-sufficient. It is dependent on its parent company and battalion for logistical and administrative support and, partially, for security.

(2) The platoon headquarters consists of a platoon leader, three forward observer teams, and a fire direction center (FDC), each having its own transportation and communication facilities.

(3) Each of the four mortars is mounted in an armored mortar carrier.

(4) For details of tactical employment of this platoon, see appendix IV, FM 17–1.

13. Battalion Communication Platoon

The battalion communication platoon, commanded by the battalion communication officer, contains sufficient specialist personnel, equipment, and organic transport to install, operate, and maintain the battalion communication system. Following the instructions of the communication officer, the communication chief supervises the assignment and activities of the platoon's radioteletype and CW radio operators and the message-handling, wire, and maintenance personnel. The platoon is transported in an armored personnel carrier and four ¼-ton trucks, except that the radioteletype and CW radio operators ride with the staff sections to which they are assigned.

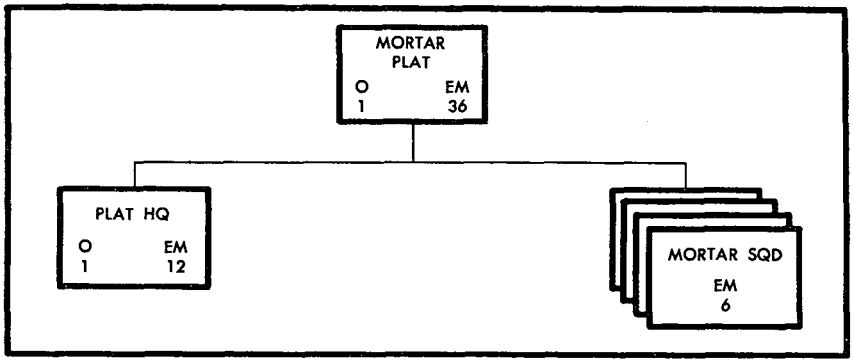


Figure 5. Battalion mortar platoon.

14. Battalion Support Platoon

a. General. The support platoon is organized into a platoon headquarters and two sections: transportation section and supply section. The platoon is organized with the personnel, vehicles, and equipment to furnish the transportation and supply support required by the armored infantry battalion to sustain itself for limited periods of combat. Details of its operations are included in FM 17–50.

b. Platoon Headquarters. Platoon headquarters consists of a platoon leader and driver. The platoon leader controls the battalion field trains. He has radio communication with the transportation section leader and the battalion S4, using the battalion logistical net or, in emergencies, the battalion command net.

c. Transportation Section. The transportation section is organized and equipped with the personnel and trucks necessary to transport that part of the battalion basic load of class V and prescribed load of class III which is carried in the battalion trains, and all other supplies from division supply points forward. The section leader has radio communication with the support platoon leader and the battalion S4, using the battalion logistical net.

d. Supply Section. The supply section operates under the supervision of the battalion supply warrant officer. The section is responsible for receiving and consolidating supply requests from the companies, preparing all requisitions, and procuring supplies and issuing them to the companies.

15. Battalion Medical Section

a. The medical section, an integral part of headquarters company, provides unit medical service and medical support for the battalion. It establishes and operates the battalion aid station and provides medical aid-evacuation teams to the companies for first-aid treatment and evacuation of casualties to the aid station. It assists in technical instruction in first aid, field sanitation, and related subjects, and carries out technical inspections of a medical and sanitation nature. The battalion medical section may be augmented, when necessary, by personnel, vehicles, and equipment of the division medical battalion. Details of its operation are contained in FM 17–50.

b. The detachment is organized to furnish each rifle company with one aid-evacuation team, mounted in a ¼-ton ambulance, and one aidman for each rifle platoon.

16. Battalion Maintenance Platoon

The battalion maintenance platoon is organized and equipped to perform battalion-level second-echelon (organization) maintenance, recovery and evacuation of vehicles, and resupply of parts for weapons and

vehicles of the battalion. The platoon is commanded by the battalion maintenance officer, who is assisted by a warrant officer. He has radio communication with the battalion S4, using the battalion command and logistical nets, and can communicate with the unit maintenance sections, using the battalion logistical net. Details of operation of the maintenance platoon are contained in FM 17–50.

17. Battalion Personnel Section

This section prepares and maintains personnel records, rosters, correspondence, and reports pertaining to personnel matters of the battalion. The personnel section consists of the personnel officer (warrant officer), personnel sergeant, and designated specialists. It relieves the companies of as much paper work as possible. When the battalion is not engaged in combat operations, this section works under the supervision of the battalion adjutant (S1). When the battalion is fighting, this section normally operates in the division administrative center under the supervision of the division adjutant general.

18. Rifle Company, Armored Infantry Battalion

a. General. The rifle company, armored infantry battalion, is organized into a company headquarters, three rifle platoons, and an 81-mm mortar platoon (fig. 6).

b. Company Headquarters. The company headquarters is divided into a headquarters section; an administrative, mess, and supply section; and a maintenance section.

c. Headquarters Section.

(1) Key personnel in the headquarters section include the company commander, company executive officer, first sergeant, and communication chief. Vehicles authorized are an armored personnel carrier and two ¼-ton trucks. The carrier serves as the company command post vehicle. The company commander rides in either the armored personnel carrier or one of the headquarters section ¼-ton trucks. The other ¼-ton truck is used by the company executive officer and the first sergeant.

(2) For responsibilities of the company commander, see paragraphs 68 through 75, FM 17–1.

(3) The executive officer is second in command of the company. He keeps abreast of the tactical situation and must be prepared to assume command at any time. As the company commander's principal assistant, the executive officer supervises the functioning of company service support elements. He handles most of the company administrative details so that the company commander can devote the bulk of his time to operations, training, and discipline. The executive officer also

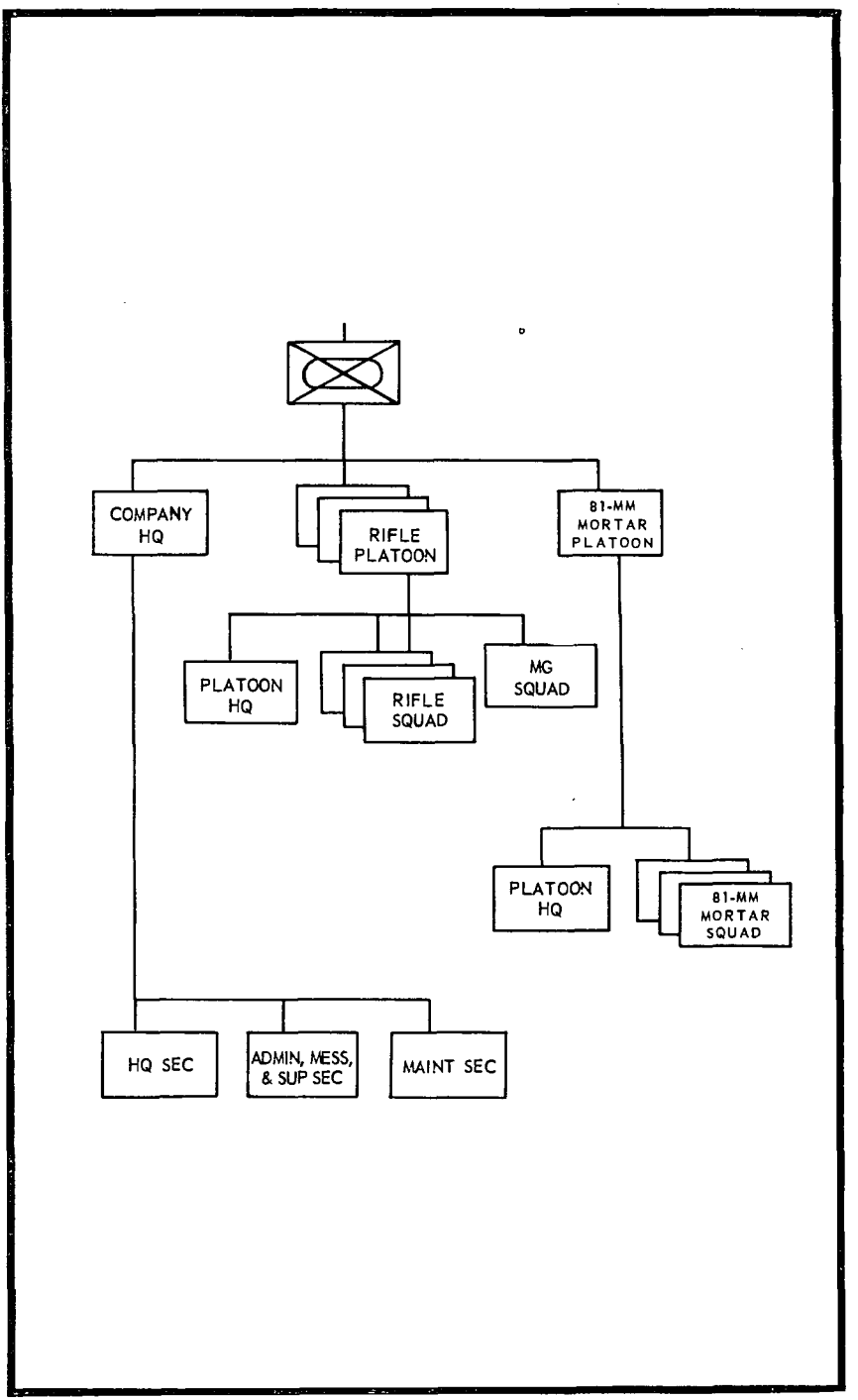


Figure 6. Organization, armored rifle company.

is responsible for the movement, security, and operation of the company command post. He insures that communication is maintained with the platoons, the company commander, and battalion headquarters.

d. Administrative, Mess and Supply Section. This section includes the company supply sergeant, company clerk, mess steward, and cooks. Vehicles provided for the section are two 2½-ton trucks, which are normally used as mess and supply trucks. When combat is imminent and during combat, this section is normally placed in the battalion trains. The supply sergeant, however, may be kept forward with the company.

e. Maintenance Section. The maintenance section is composed of a maintenance sergeant, tracked vehicle mechanics, recovery mechanics, a radio mechanic, and an armorer. Vehicles authorized are an armored personnel carrier, a medium recovery vehicle, and a ¼-ton truck. The company maintenance section has the primary function of keeping all company vehicles, armament, and communication equipment operating at maximum efficiency. The extent of its operations during combat is determined by the capabilities of its personnel and the time, tools, and repair parts available. Vehicles requiring more extensive repairs than it can accomplish are turned over to the battalion maintenance platoon. The maintenance sergeant supervises company organizational maintenance, is in charge of the company reserve of repair parts, and keeps records of all scheduled maintenance.

19. Rifle Platoon, Rifle Company, Armored Infantry Battalion

The platoon is divided into a platoon headquarters, three rifle squads, and a machine-gun squad.

a. Platoon Headquarters. The platoon headquarters is composed of the platoon leader, the platoon sergeant, and a messenger. It has no vehicles; its personnel ride in the squad vehicles. The platoon leader rides with a rifle squad; the platoon sergeant rides in another vehicle, usually with the machine-gun squad.

b. Rifle Squad. The rifle squad rides in one armored personnel carrier; there is one carrier for each squad. The squad consists of a squad leader, two fire teams, and a driver. Each fire team consists of a fire team leader (noncommissioned officer), an automatic rifleman, and three riflemen. In addition to individual weapons, the squad is armed with a caliber .30 machine gun with ground mount, plus the carrier-mounted caliber .50 machine gun.

c. Machine-Gun Squad. The machine-gun squad rides in its own armored personnel carrier. The squad consists of a squad leader, two machine-gun crews, and a driver. Each machine-gun crew consists of a gunner, an assistant gunner, and an ammunition bearer. The principal

weapons of the squad are two caliber .30 machine guns with ground mounts.

20. Duties of Key Personnel, Rifle Platoon

a. The *platoon leader* is responsible to the company commander for the discipline and training of his platoon, its maintenance and equipment, and its success in battle. He must master platoon and company tactics and prepare himself to meet the many problems of combat leadership. He must be proficient in the employment of the platoon's weapons. Since his platoon normally will be operating with tanks as part of a combined-arms team, he must be well grounded in the tactics and techniques of employment of the tank platoon. Finally, he must know the men of his platoon and be able to earn their respect and command their obedience.

b. The *platoon sergeant* is second in command of the platoon and is the principal assistant of the platoon leader. He keeps abreast of the situation and is prepared to assume command at any time.

c. The *messenger* maintains liaison between the company commander and the platoon leader. When the company prepares for action, the messenger reports to the company commander.

d. The *rifle squad leader* is responsible for the discipline, training, control, and conduct of his squad. His squad is trained to use and care for its weapons, equipment, and vehicle; to move and fight efficiently as individuals; and to function effectively as a team, with or without tanks. When the squad is mounted in its armored personnel carrier, the squad leader is the vehicle commander. He is responsible for maintaining intervehicular distances in mounted formations; employment of the vehicular weapon; stowage of ammunition, supplies, and equipment in the vehicle; rotation of drivers on long marches; and first-echelon maintenance of the vehicle.

e. The *machine-gun squad leader,* in addition to the general duties listed above for the rifle squad leader, selects and assigns exact locations for the weapons, and selects targets and controls fire, within the general area assigned by the platoon leader. He regulates the displacement of weapons, controls the expenditure of ammunition, and supervises the supply of ammunition by the ammunition bearers.

f. The *first team leader* performs duties assigned by the squad leader to assist the latter in the execution of his duties. The principal duty of the fire team leader in combat is to control the actions and fires of the fire team in the accomplishment of the assigned mission. The fire team leader acts as an integral part of the fire team, supervising its actions at the same time.

g. No individual is formally designated by tables of organization as *assistant squad leader.* In the absence of the squad leader, one fire team

leader—or, in the case of machine gun squads, a machine gunner—acts in the squad leader's place, in addition to his own duties.

h. The *driver* is responsible for the efficient operation of the armored personnel carrier. He works with the personnel of the company maintenance section on all maintenance and repair operations on his vehicle. He accompanies his vehicle to the battalion maintenance platoon for major checks and repairs.

21. 81-Mm Mortar Platoon

The 81-mm mortar platoon of the armored rifle company consists of a platoon headquarters and three mortar squads.

a. Platoon Headquarters. The platoon headquarters is composed of the platoon leader, the platoon sergeant, the fire direction computor, and a driver. The platoon headquarters is provided with one ¼-ton truck.

b. 81-Mm Mortar Squad. The mortar squad is composed of a squad leader, gunner, assistant gunner, ammunition bearer, and driver. Each squad is mounted in an armored mortar carrier. The principal weapon of the squad is the 81-mm mortar; in addition, it is equipped with a caliber .30 machine gun and the caliber .50 machine gun mounted on the armored mortar carrier in which the squad rides.

22. Duties of Key Personnel, 81-Mm Mortar Platoon

a. The *platoon leader* is responsible to the company commander for the discipline, training, and control of his platoon; for the maintenance and efficient operation of its vehicles; and for its success in battle. He advises the company commander on the use of his platoon and controls its action through appropriate orders. He goes where he can best influence the action of his platoon. His platoon normally will be in general support of the company or company team. He also acts as an adviser to the company commander and rifle platoon leaders on the tactical employment of the mortars. When the mortar squads are in direct support of the assault platoons, he supervises their employment; when they are in general support, he personally controls their fire. He adjusts fire when necessary and appropriate and therefore must be capable of acting as a forward observer for the platoon.

b. The *platoon sergeant* is second in command of the platoon. He keeps abreast of the platoon's tactical situation, supervises ammunition supply, and assists the platoon leader in observation and fire control. He assumes command during the absence of the platoon leader.

c. The *squad leader* is responsible for the training, discipline, and conduct of the members of his squad. He moves his squad to its position area, selects and supervises the preparation and occupation of the exact firing position, and uses his carrier and ammunition bearers in

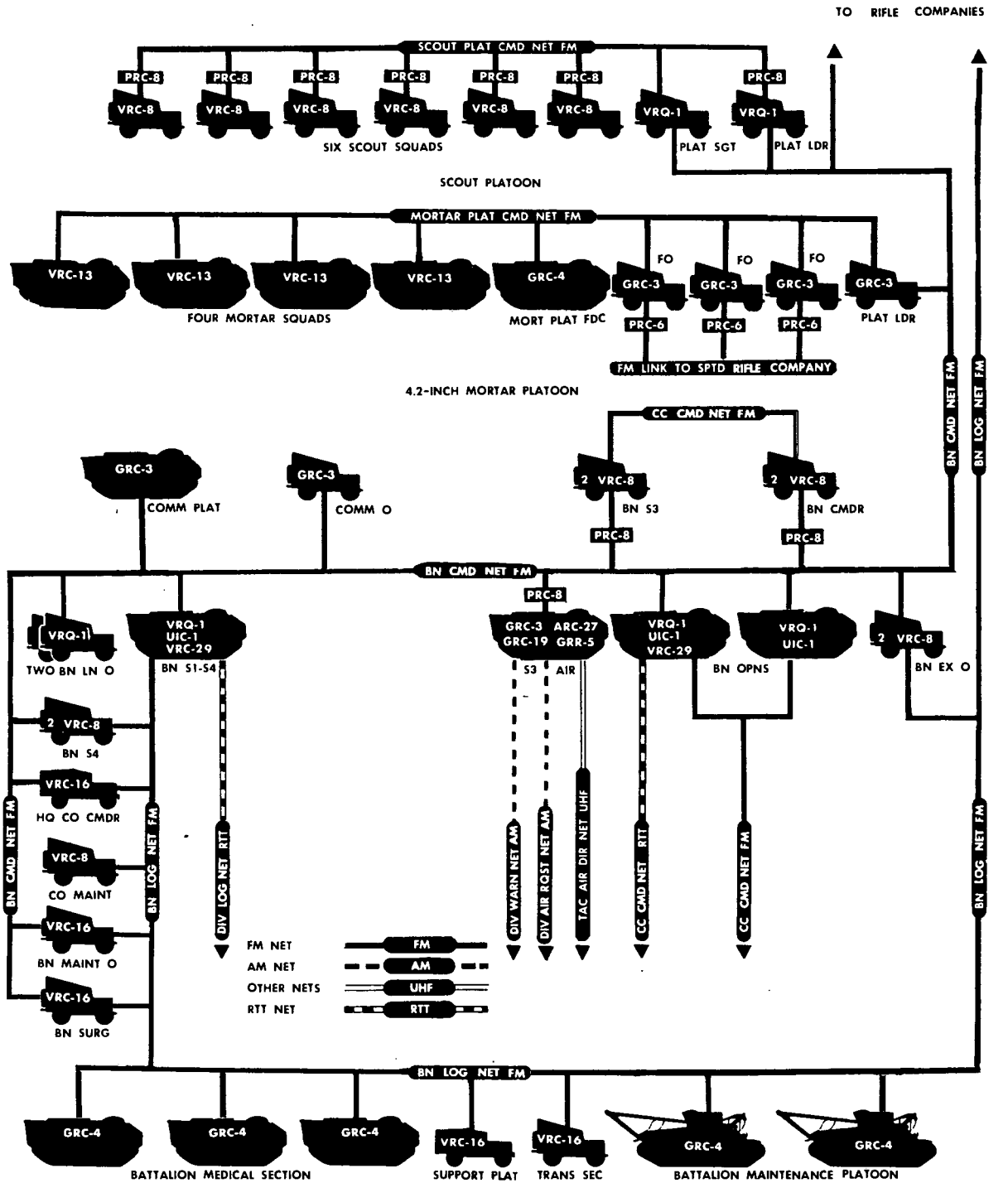


Figure 7. Typical radio nets, headquarters and headquarters company, armored infantry battalion.

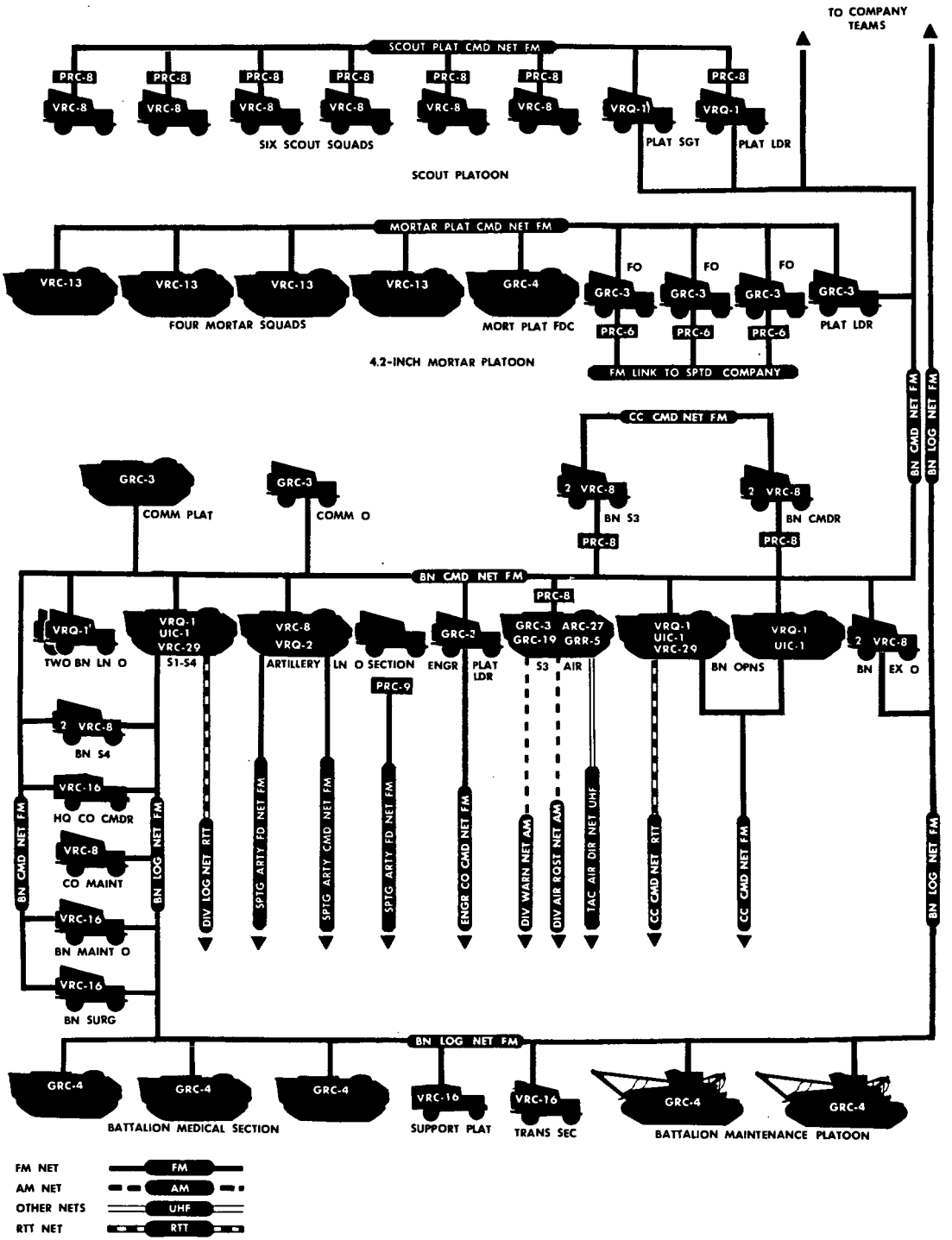


Figure 8. Typical radio nets, armored infantry battalion task force.

the resupply of ammunition. When his squad is in general support of the company, the squad leader supervises the operations of his squad. When his squad is in direct support of, or attached to, an assault platoon, the squad leader supervises the employment of the squad and controls, observes, and adjusts its fire.

b. The ¼-ton truck *driver* operates the vehicle and also operates its voice radio in the absence of the platoon leader.

Section III. COMMUNICATION, ARMORED INFANTRY BATTALION

23. General

Definitions, descriptions, and details of signal communication common to all armor units are contained generally in FM 17–1 and specifically in FM 17–70.

24. Command Post Communication

The battalion headquarters operations, air request, and administrative and logistical personnel carriers are normally located in the battalion command post area. These vehicles are equipped with medium-power AM and FM radio facilities to assist the battalion staff sections in performing their duties.

a. To assist the operations sections in planning, coordinating, and recording battalion combat operations, the radio facilities in the operations armored personnel carrier are operated in the following radio nets:

(1) *Combat command command net RTT.* This net affords the armored infantry battalion command post a long-range link to the combat command command post. It is particularly suited for lengthy operational messages.

(2) *Combat command command net FM.* This net provides the battalion commander with means of voice communication with the combat command commander. It is normally used for short command type traffic.

(3) *Battalion command net FM.* The FM radio set in the operations armored personnel carrier is the net control station of the battalion command net. This net links the battalion commander, fire support representatives, and staff, mounted or dismounted, and the companies. The battalion commander uses this net to command and control the battalion and attached units.

b. To assist the operations section in planning and coordinating tactical air support, the battalion S3 air is provided an armored per-

sonnel carrier containing a medium-power AM set used to communicate with combat command and the division fire support coordination center. It is used primarily to transmit air request traffic on the division air request net. The vehicle is also equipped with a UHF air-to-ground set for direct communication with aircraft, and an FM set. These two sets may be operated in conjunction with each other, utilizing retransmission. This facility permits the forward air controller with the battalion to communicate with tactical aircraft using any FM set in the battalion. A back-pack FM set is provided for the use of the forward air controller when dismounted.

c. The armored personnel carrier shared by the adjutant's and logistics officer's sections operates in the following nets:

(1) *Division logistical net RTT.* This net affords the battalion logistics officer a long-range link with the combat command S4, division G4, and division logistics control center (DLCC). It is used primarily to transmit administrative and logistical traffic.

(2) *Battalion logistical net FM.* The FM radio set in the administrative and logistical armored personnel carrier is the net control station of the battalion logistical net. This net provides the battalion logistics officer voice communication to the support platoon leader. The companies operate in this net when required to transmit administrative and logistical messages.

d. Battalion liaison officers are provided with radio equipment which permits them to operate in the command net of the unit with which they are performing liaison and within their own battalion command net.

e. Since the control communication facilities for the battalion and the terminating radio facilities to combat command are located in the command post area, it is essential that the command post be sited for good radio communication.

f. The battalion message center is established by the communication platoon. The message center furnishes message processing, cryptographic, and messenger service.

25. Command Group Communication

a. The battalion commander and the operations officer are provided with vehicular-mounted, medium-power FM radio equipment that permits them to operate in the battalion command net FM and the combat command command net FM. They also have back-pack FM sets that permit them to operate in either the combat command net or the battalion command net while dismounted.

b. The artillery liaison officer is also provided with vehicular-mounted, medium-power FM radio equipment which permits him to

operate in the battalion command net and a supporting artillery battalion fire direction net. He operates in the battalion command net to coordinate artillery fires with battalion operations. He operates in an artillery fire direction net to determine the availability of artillery fires and coordinate his forward observers. The artillery liaison officer also has a back-pack FM set for operation in the artillery battalion fire direction net while dismounted.

c. When the forward air controller is provided with an air control team (ACT), he will communicate directly with tactical aircraft using the UHF set furnished by the ACT. However, if the forward air controller is not provided an ACT, he may use any FM set in the command group for direct communication with tactical aircraft by utilizing retransmission through the S3 air UHF set. He directs air strikes using the tactical air direction net.

26. Battalion Radio Nets

Figures 7 and 8 show typical radio net diagrams for the headquarters and headquarters company of the armored infantry battalion and the armored infantry battalion task force.

27. Battalion Wire Communication System

The battalion wire system is installed, operated, and maintained by the battalion communication platoon. This system is installed whenever time will permit and is normally used during periods of radio or listening silence, in defensive or stabilized operations, and in assembly areas. Wire lines are installed to adjacent units whenever possible to increase flexibility. Local wire lines are installed to the staff sections as required. Wire lines from supporting units are integrated into the battalion wire system. A wire team from the division signal battalion installs wire lines from the combat command to the battalion. Figure 9 shows a typical wire net diagram for the battalion.

28. Rifle Company Radio Nets

a. The armored rifle company command net FM is used for the tactical and administrative command and control of the company. It provides communication between the company commanders, platoon leaders, artillery forward observer, and maintenance elements, and between each platoon leader and his squad leaders (fig. 10). Both vehicular and portable voice radio sets are provided. The portable voice radio sets are used for dismounted action.

b. The company commander's radios operate in the company and battalion command nets. The company command net operates in the common band of frequencies due to the fact that the portable radios available throughout the company for dismounted action are common

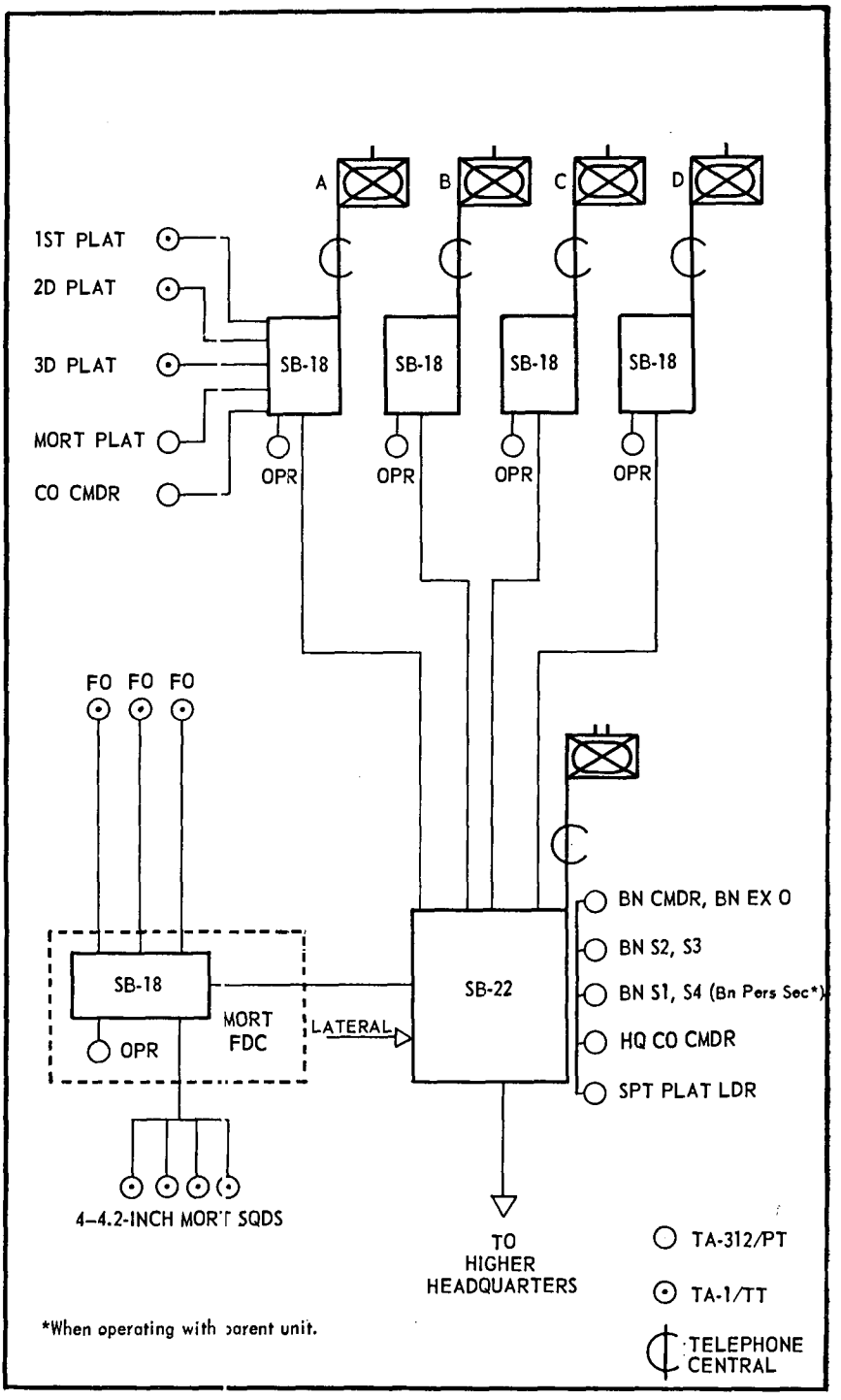


Figure 9. Typical wire net, armored infantry battalion.

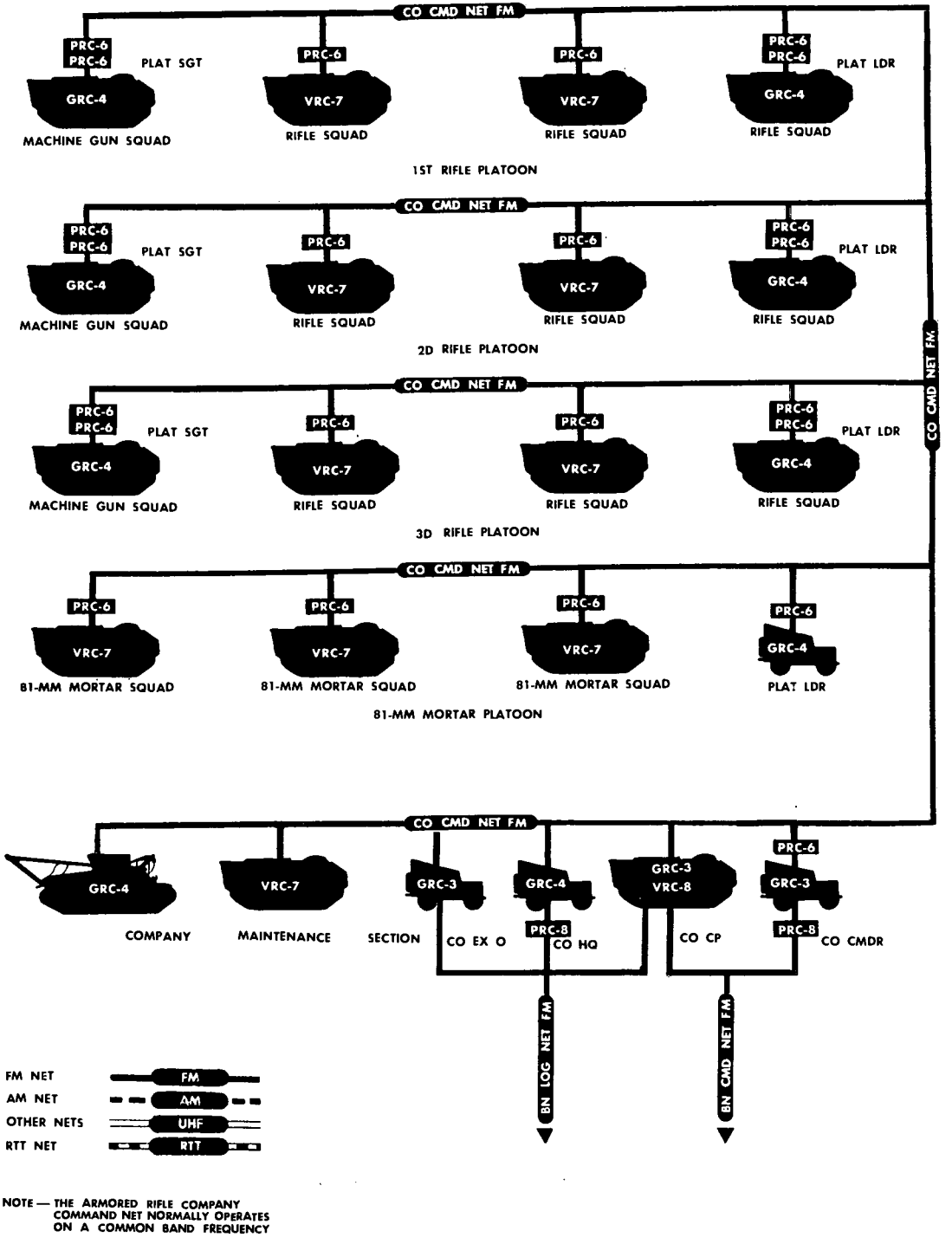


Figure 10. Typical radio net diagram, armored rifle company.

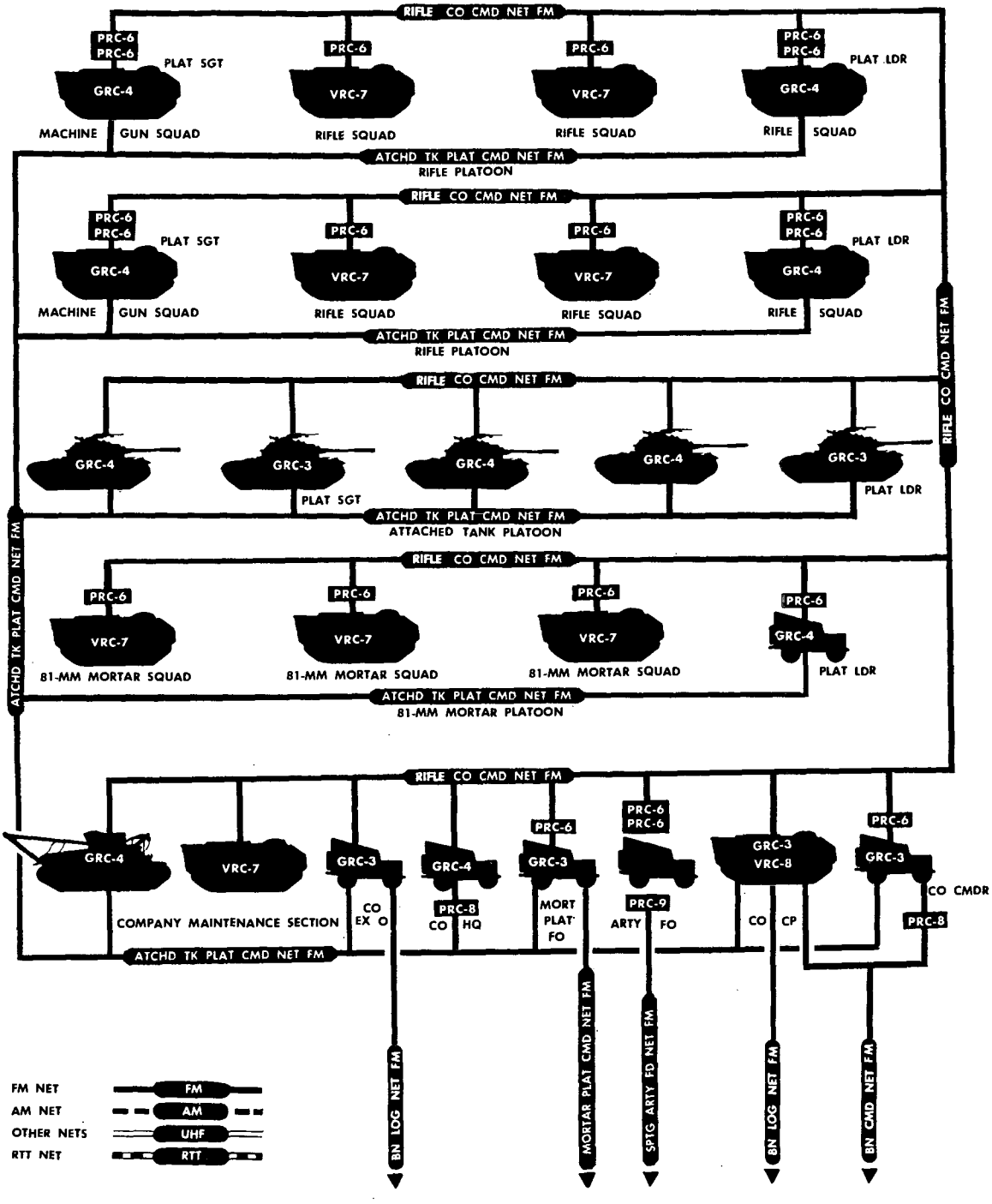


Figure 11. Typical radio net diagram, armored rifle company team.

band radios. The company uses the armor band of frequencies for communication with tanks and with higher headquarters.

c. The company command net is operated on the low-power transceivers when the company is mounted in its vehicles. When all or a portion of the company dismounts, the hand-held portable sets are operated in the company command net.

d. When a tank platoon is attached to the company, all low-power transceivers in the tanks enter the company command net (fig. 11). Tanks of the tank platoon may continue to communicate on their medium-power FM transceivers, using the platoon command net. The armored rifle platoon leaders, and the armored rifle company commander, may employ their medium-power FM transceivers on this frequency to communicate with the tanks.

e. The external tank interphone located on the rear of each tank is used by dismounted personnel to communicate with individual tank commanders. Various means of communication between dismounted armored infantry and tanks are shown in figure 12.

f. Supporting artillery forward observers bring with them necessary vehicular and portable FM voice radio sets to permit them to operate in the supporting artillery fire direction net and the armored rifle company command net.

29. Supplemental Means of Communication, Armored Rifle Company

a. Wire nets. The wire system in the armored rifle company is simple but adequate (fig. 13). The battalion wire line is connected to the company emergency switchboard; whenever possible, lateral wire lines are extended to adjacent units for greater flexibility. Sound-powered telephones at the platoon positions are tied into a similar telephone at the company CP. The wire lines for this system are installed by the company communication personnel, augmented by personnel from the platoons if necessary. Only those lines necessary for command and fire control are installed. Principally, the wire system is installed during certain phases of defensive operations, in assembly areas, and during periods when radio or listening silence is imposed and the situation permits the use of wire communication.

b. Sound and Visual. These means, as covered in FM 17–70, are used to the maximum.

c. Messengers. Mounted and dismounted messengers operate between the company command post and the battalion command post, as well as between the company CP and the platoons. Within the company, there are two messengers in company headquarters and one in each rifle platoon headquarters. Although radio is the primary means of com-

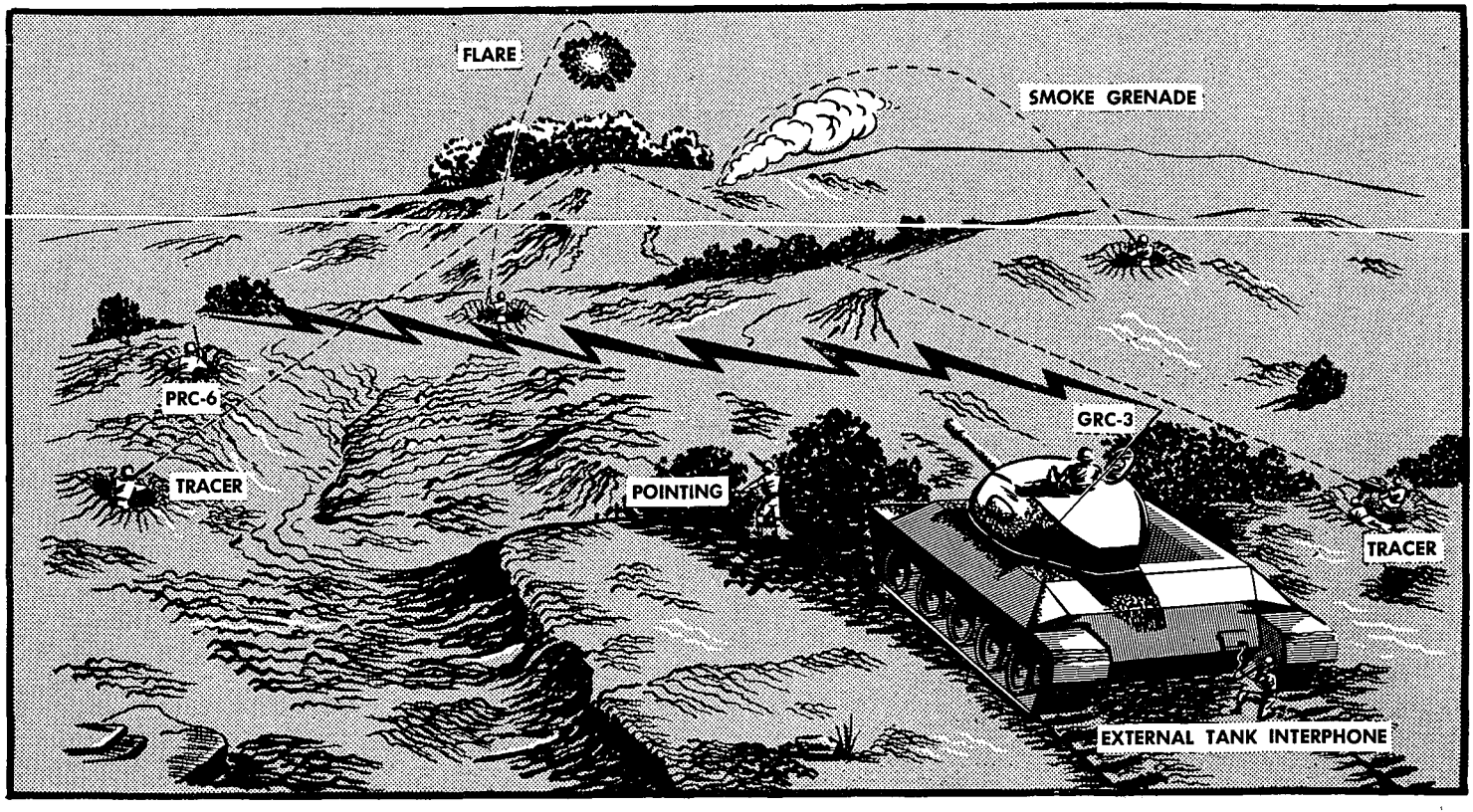


Figure 12. Communication between tanks and dismounted armored infantry.

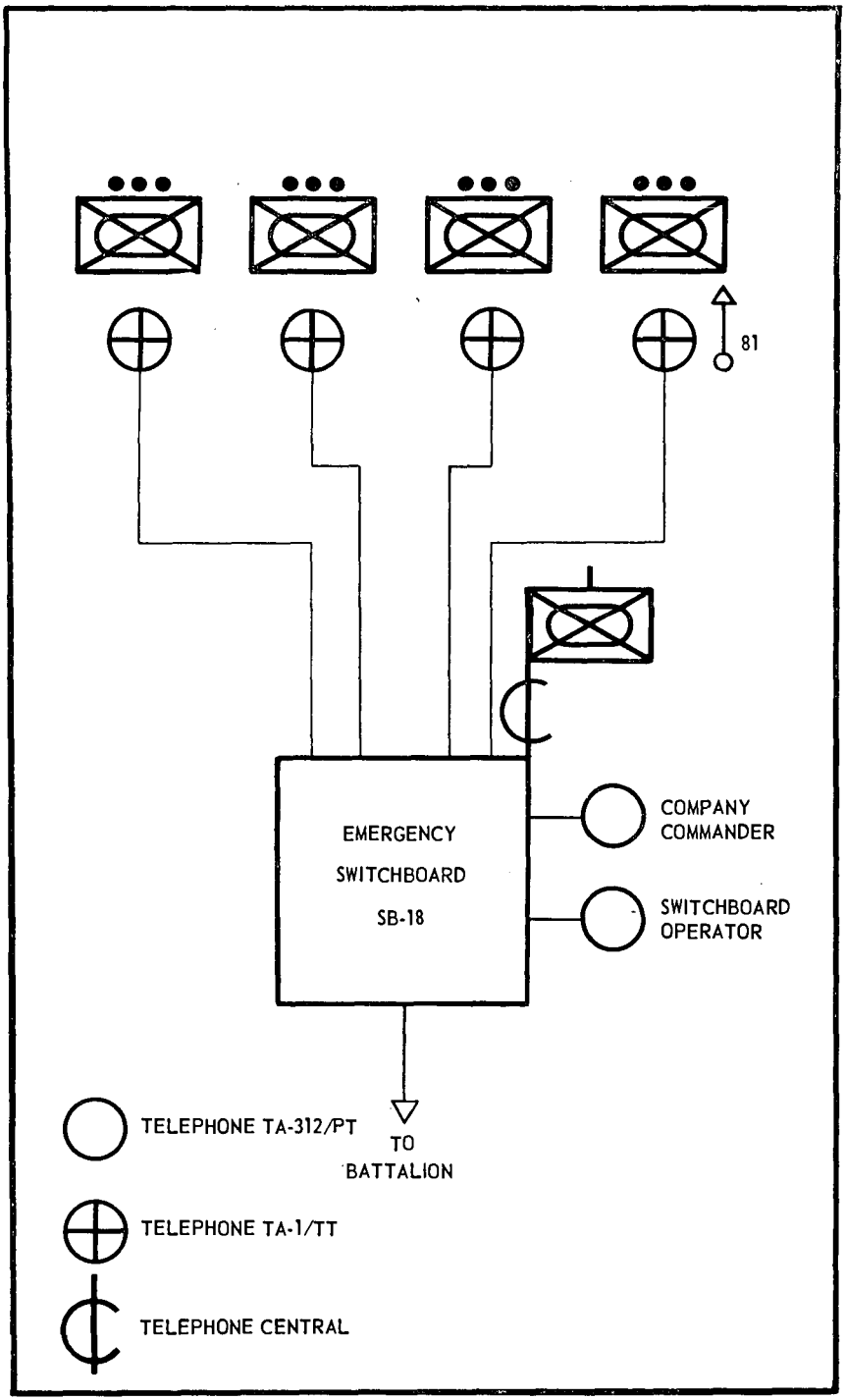


Figure 13. Typical wire net diagram, armored rifle company.

munication, messengers may be employed as a supplementary means in various situations, such as during periods of radio or listening silence, in bivouac or assembly areas, and during certain defensive situations. When a requirement for a mounted messenger exists, the company commander may dispatch a messenger in one of the ¼-ton trucks of the company headquarters. When the rifle platoon is mounted, the messenger rides in an armored personnel carrier designated by the platoon leader.

30. Liaison by the Armored Rifle Company

a. The armored rifle company maintains liaison with adjacent units, supporting or supported units, and higher headquarters, as the tactical situation requires. When an armored infantry unit is attached to another unit, the armored infantry unit commander is responsible for continuous liaison from the time his unit is attached, or alerted for attachment, until it is relieved from attachment. This liaison may be maintained by designated liaison agents or by periodic personal contact between unit commanders (command liaison).

b. An armored rifle company commander normally maintains liaison with his next higher commander by frequent personal contact. At times, liaison with higher headquarters is maintained by use of a qualified noncommissioned officer who is provided with a ¼-ton truck and radio.

c. When available, Army aircraft may be used to advantage by the company commander in maintaining liaison.

CHAPTER 2

COMBAT OPERATIONS, GENERAL

Section I. ORGANIZATION FOR COMBAT

31. Battalion Task Forces

An armored infantry battalion may be organized for combat without attachments or as an armored-infantry-heavy or balanced task force. For a discussion of battalion task forces, see paragraphs 45, 46, and 48, FM 17–1.

32. Employment of Armored Rifle Platoons and Companies

The armored rifle platoon is normally employed as part of a tank or armored rifle company team; the 81-mm mortar platoon may be employed as part of its parent company or as part of another company team. Platoons lack the maintenance and administrative facilities necessary for sustained independent effort and therefore must be provided this support by the commanders of the units with which the platoons are operating. The armored rifle company normally operates as part of an armored infantry battalion or a battalion task force. A battalion task force may be based on an armored infantry battalion or an armor battalion; support furnished is the same in both cases. When suitably reinforced, the company can perform small-scale independent missions for short periods of time. In combat, armored infantry units form part of a combined-arms team, usually consisting of tanks, armored infantry, artillery, and engineers.

33. Armored Rifle Company Teams

a. The armored rifle company may be organized as an armored rifle company team (pars. 47 and 48, FM 17–1) by attaching one or more platoons to it. Also, one or more platoons may be detached from the company for attachment to another company team. A company team normally is given a designation corresponding to the alphabetical designation of the company forming the nucleus of the team. For example, a company team organized with Company B as the nucleus is designated Team B or Team BRAVO.

b. The company team may be employed alone; however, it usually is employed as part of a battalion task force. Company teams are formed

after a consideration of the factors of METT (mission, enemy, terrain and weather, and troops available). There is no fixed composition for such a team.

c. The 81-mm mortar platoon seldom is detached from its parent company. The battalion mortar and scout platoons and attached engineer units normally are kept under battalion control and assist in accomplishing the battalion (or task force) mission. Although an armored rifle company may be attached to a tank company, such attachment may not be desirable because it does not effectively utilize the headquarters of the attached company.

d. Examples of armored rifle company teams are shown in figure 14.

34. Platoons in Company Teams

Tanks and armored infantry rarely are attached in less than platoon strength. The attachment of less than a platoon can be justified only when the terrain or other conditions are such that a complete platoon would not be able to operate effectively.

35. Armored Rifle Companies Without Attachments

The armored infantry battalion commander may organize his battalion for combat without forming company teams. This may be the preferred organization, particularly if the battalion is operating on a single axis where the commander can closely coordinate all elements of his command, or if the terrain conditions (i.e., dense woods or steep hills) necessitate the employment of companies without attached tanks. In these situations, however, tanks should whenever possible be in a position to support by fire.

36. Command of Armored Rifle Company Teams

The armored rifle and attached tank platoons in an armored-infantry-heavy company team normally will operate under the direct supervision of the armored rifle company commander. As a general rule, a platoon leader will not command any platoon other than his own. Coordinated action between platoons is attained by orders to each platoon leader from the company commander, and by cooperation between the various platoons of the company team. Under exceptional circumstances, such as when a tank platoon and armored rifle platoon are joined together to perform a semi-independent mission, one of the platoon leaders may be designated as the commander. Depending on the situation, the individuals involved, and the nature of the operation, the company executive officer may be designated as the commander of the two platoons. If a tank company, either complete or minus some portion, is placed under the command of the armored rifle company commander, the tank company is best employed under its own commander. This insures the best

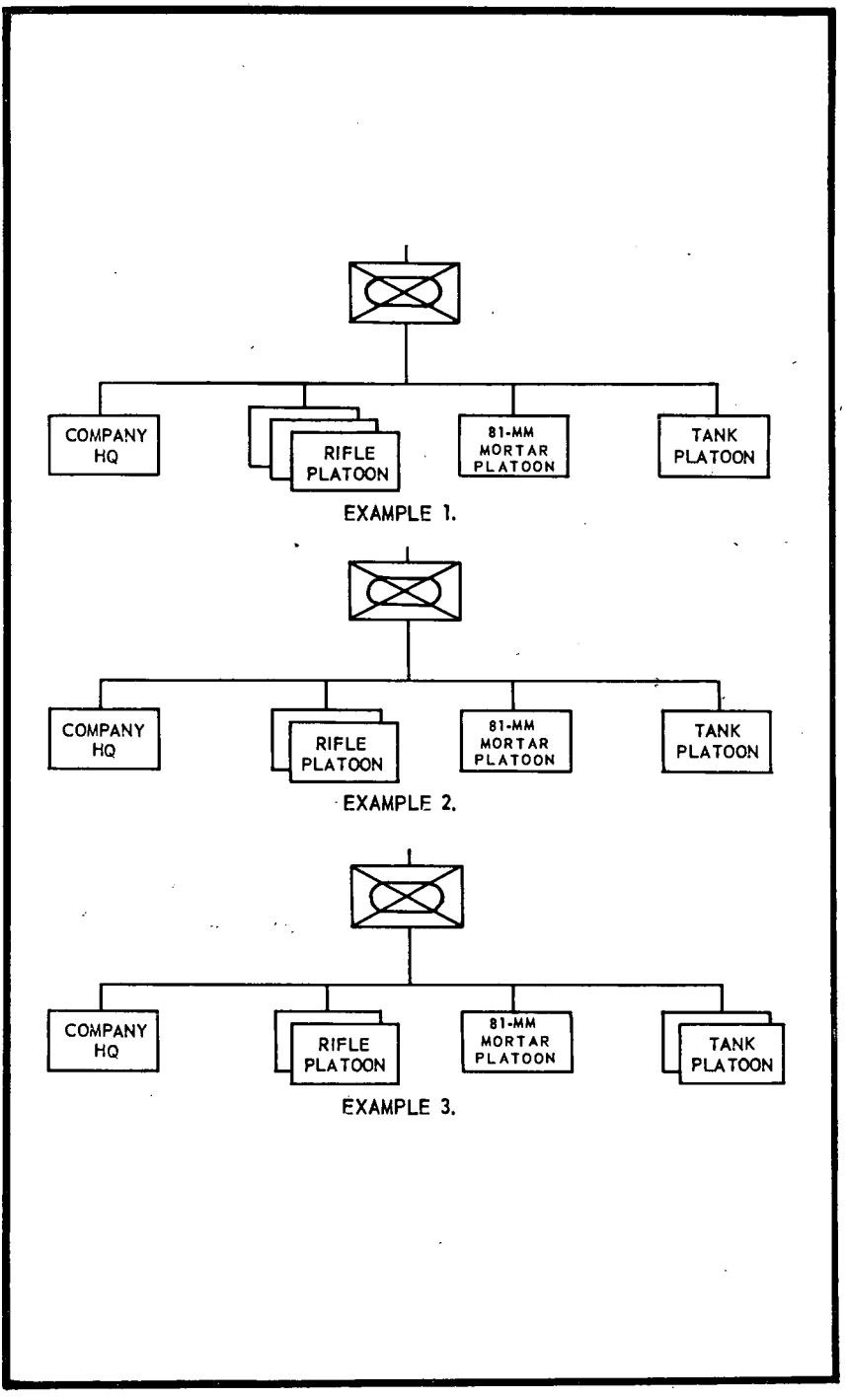


Figure 14. Examples of armored rifle company teams.

utilization of the tank company headquarters. If the situation demands that portions of the team operate on separate axes, the tank company commander may be placed in command of one portion.

37. Cooperation in the Armored Rifle Company Team

a. Cooperation is the working together of the different arms and services within the team, and of the elements and members of the company, platoon, or squad. This mutual support or teamwork starts with the squad and extends throughout all forces engaged in combat operations. When a company-level combined-arms team (normally consisting of tanks and armored infantry, supported by artillery) works in harmony for the accomplishment of a common mission to destroy the enemy, the team has achieved cooperation.

b. Cooperation within the tank-armored infantry team is continuous. All leaders, study, plan, and prepare ways of coordinating the elements of the team to meet changing battlefield conditions.

c. The duties of armored infantry in armored rifle company teams are—

(1) Breaching or removing antitank obstacles.

(2) Assisting in the neutralization or destruction of antitank weapons.

(3) Designating targets for the tanks.

(4) Protecting the tanks against individual antitank measures.

(5) Leading the attack when necessary.

(6) Providing security for tanks.

(7) Mopping up and assisting in consolidation of the objective.

(8) Protecting the tanks in assembly areas and attack positions.

d. The duties of the tank elements in armored rifle company teams are—

(1) Neutralizing or destroying hostile weapons by fire and maneuver.

(2) Clearing paths for dismounted armored infantry through wire and antipersonnel minefields.

(3) Neutralizing fortified installations with direct fire.

(4) Supporting by direct fire the advance of the armored infantry when dismounted armored infantry lead the attack.

(5) Providing antitank protection.

(6) Leading the attack.

Section II. COMBAT FORMATIONS

38. General

Discussion of combat formations in this section is oriented on the armored rifle platoon. Discussion of squad formations and of the execution of formations within the platoon is contained in appendix II. Battalion formations are discussed in paragraph 271, FM 17–1; company formations are discussed in chapters 3 and 4, this manual. The symbols shown in figure 15 are used in this section to indicate key personnel.

39. Mounted Formations—Platoon

a. Mounted formations are preferred to dismounted formations and are used whenever possible. Mounted platoon combat formations are used during the movement from the attack position to the line of departure and beyond. The formations are flexible. Mounted formations for the armored rifle platoon are similar to those for the tank platoon; thus, combined tank-armored rifle platoon formations can be organized without delay or difficulty. The type of terrain and available cover and concealment govern the position of each vehicle in the formation.

b. The platoon leader moves where he can best control his platoon. This normally places him in the lead vehicle.

c. In selecting the formation to accomplish his mission, the platoon leader considers control, security, firepower, terrain, enemy information,

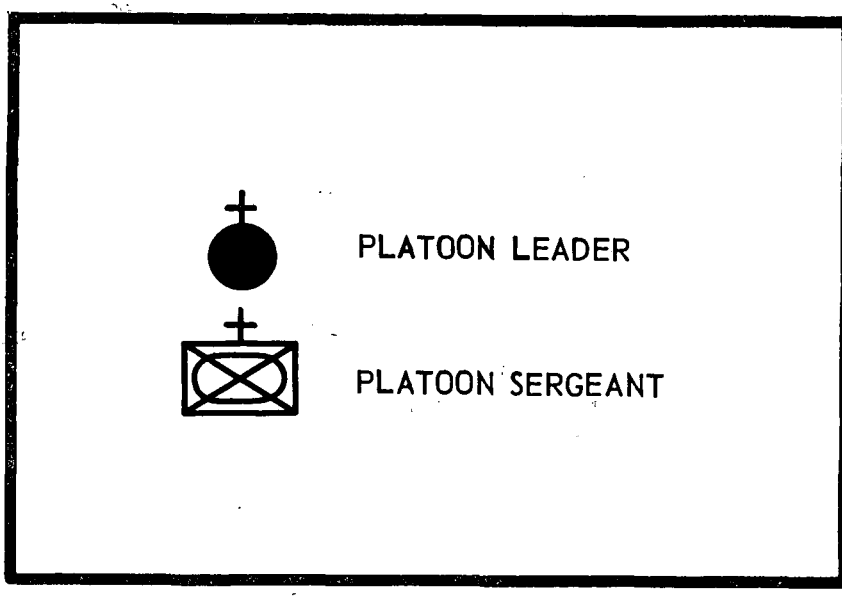


Figure 15. Symbols for key personnel.

and the combat formation adopted by the tank unit with which the armored rifle platoon is operating. As the platoon advances, he may change formations to fit the situation. During movements in formation, platoon security is achieved by giving each vehicle commander a definite zone or sector of observation. When an attack is expected from a known direction, formations are chosen that permit rapid concentration of fire in the direction of known enemy locations (fig. 16–18).

d. The machine-gun squad vehicle is placed in a central location in order to permit its rapid deployment. To place this squad on the flank or at the rear will cause delay in its dismounted employment. The position of the machine-gun squad may be changed to conform to the situation. For example, if squads are not to dismount until on or just short of an objective, and the platoon is in line formation, the machine-gun squad probably should be centrally located in the line (fig. 16).

e. Changing from one mounted formation to another must be accomplished smoothly, in minimum time, without loss of momentum, and without straying from the axis of advance. Techniques for changing from one mounted formation to another are shown in figure 19.

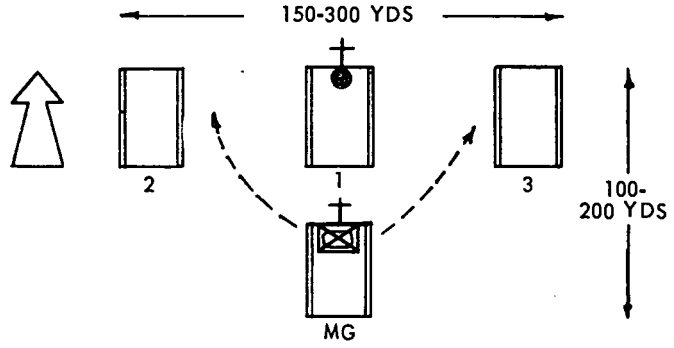
40. Dismounted Formations—Platoon

The company commander ordinarily decides on the company formation and allows the platoon leader to select the formation for his platoon. The usual formations are the platoon column, line, wedge, and echelon (app II). They are similar to mounted platoon formations. When the platoon prepares to dismount, a mounted formation should be assumed which is the same as the contemplated dismounted formation in order to facilitate dismounted deployment.

a. Platoon Column is used when the requirement for control is the overriding consideration. For example, it is normally the best formation for movement in woods, smoke, or fog, at night, and through defiles and along trails. It is flexible and easy to control because it facilitates all-round protection and immediate action toward the flanks.

b. Platoon Line is used when the location of the enemy is known. In this formation, the platoon can deliver the greatest amount of fire to the front in the shortest time. The line formation is suitable for a frontal attack, for an attack against an enemy flank when maximum fire is desired, and in the assault phase of a night attack. This formation permits rapid crossing of areas exposed to mortar, artillery, and long-range machine gun fire.

c. Platoon Wedge is used when enemy strength and dispositions are not known or when the platoon is acting alone. Its all-round protection and ease of control give flexibility.



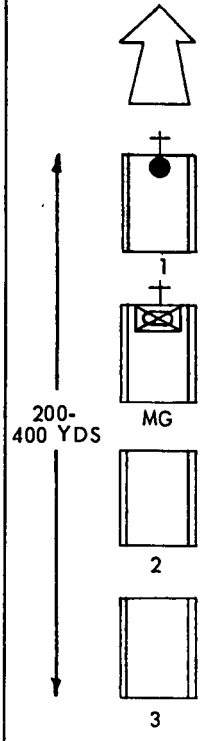
LINE

(1) AFFORDS MAXIMUM FIREPOWER AND SECURITY ONLY TO THE FRONT OR REAR.

(2) IS DIFFICULT TO CONTROL WITHOUT GOOD VISUAL CONTACT.

(3) AFFORDS NO SUSTAINING ACTION WITHIN THE FORMATION.

(4) IS USED BY ELEMENTS IN SUPPORTING POSITIONS, COVERING DETACHMENTS, EMERGING FROM SMOKE, CROSSING CRESTS OR LEAVING WOODS UNDER ADEQUATE SUPPORTING FIRE, WHEN CROSSING OPEN GROUND, AND IN THE ASSAULT.



COLUMN

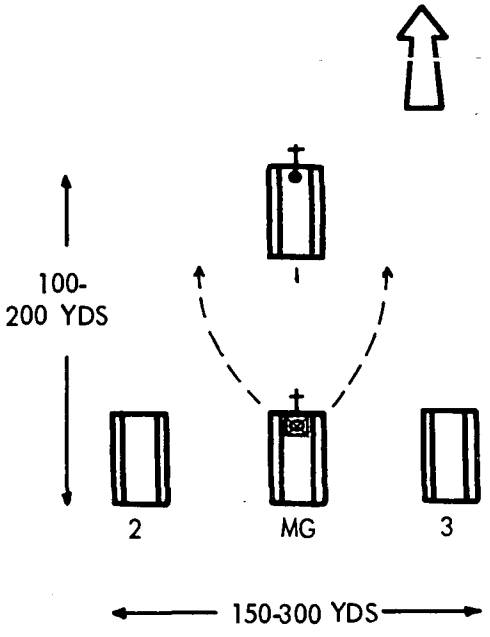
(1) AFFORDS MINIMUM FIREPOWER AND SECURITY TO THE FRONT.

(2) ALLOWS MAXIMUM CONTROL.

(3) PERMITS RAPID DEPLOYMENT TO ANY OTHER FORMATION.

(4) IS USED IN MARCHES, NIGHT MOVEMENTS, FOG, AND WHEN PASSING THROUGH DEFILES OR DENSE WOODS.

Figure 16. Mounted formations, rifle platoon—line and column.



WEDGE

(1) AFFORDS EXCELLENT FIREPOWER TO THE FRONT AND GOOD FIREPOWER TO EACH FLANK.

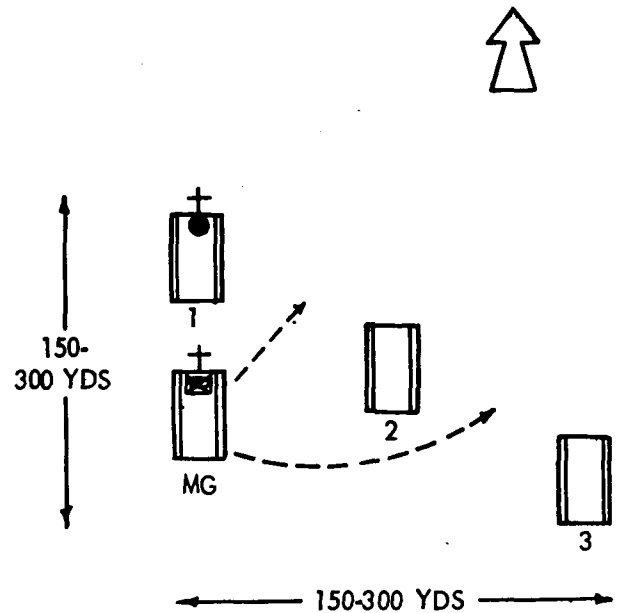
(2) PROVIDES GOOD DIRECTIONAL CONTROL, BUT THE CONTROL DEPENDS LARGELY UPON VISUAL CONTACT BETWEEN ADJACENT VEHICLES.

(3) LENDS ITSELF READILY TO DEVELOPMENT OF MOVEMENT BY BOUNDS OR FIRE AND MANEUVER.

(4) IS USED PRIOR TO CONTACT WHEN THE PLATOON LEADER WANTS TO MAINTAIN MAXIMUM CONTROL THOUGH DEPLOYED.

(5) POSITION OF MG SQUAD MAY BE CHANGED AS SHOWN AS SITUATION DICTATES.

Figure 17. Mounted formations, rifle platoon—wedge.



ECHELON RIGHT (LEFT)

(1) AFFORDS MAXIMUM FIREPOWER TO THE RIGHT (LEFT) FRONT.

(2) IS DIFFICULT TO CONTROL WITHOUT GOOD VISUAL CONTACT.

(3) MAY BE USED ON THE EXPOSED FLANK OF A LARGER FORMATION

(4) POSITION OF MG SQUAD MAY BE CHANGED AS SHOWN AS SITUATION INDICATES.

Figure 18. Mounted formations, rifle platoon—echelon.

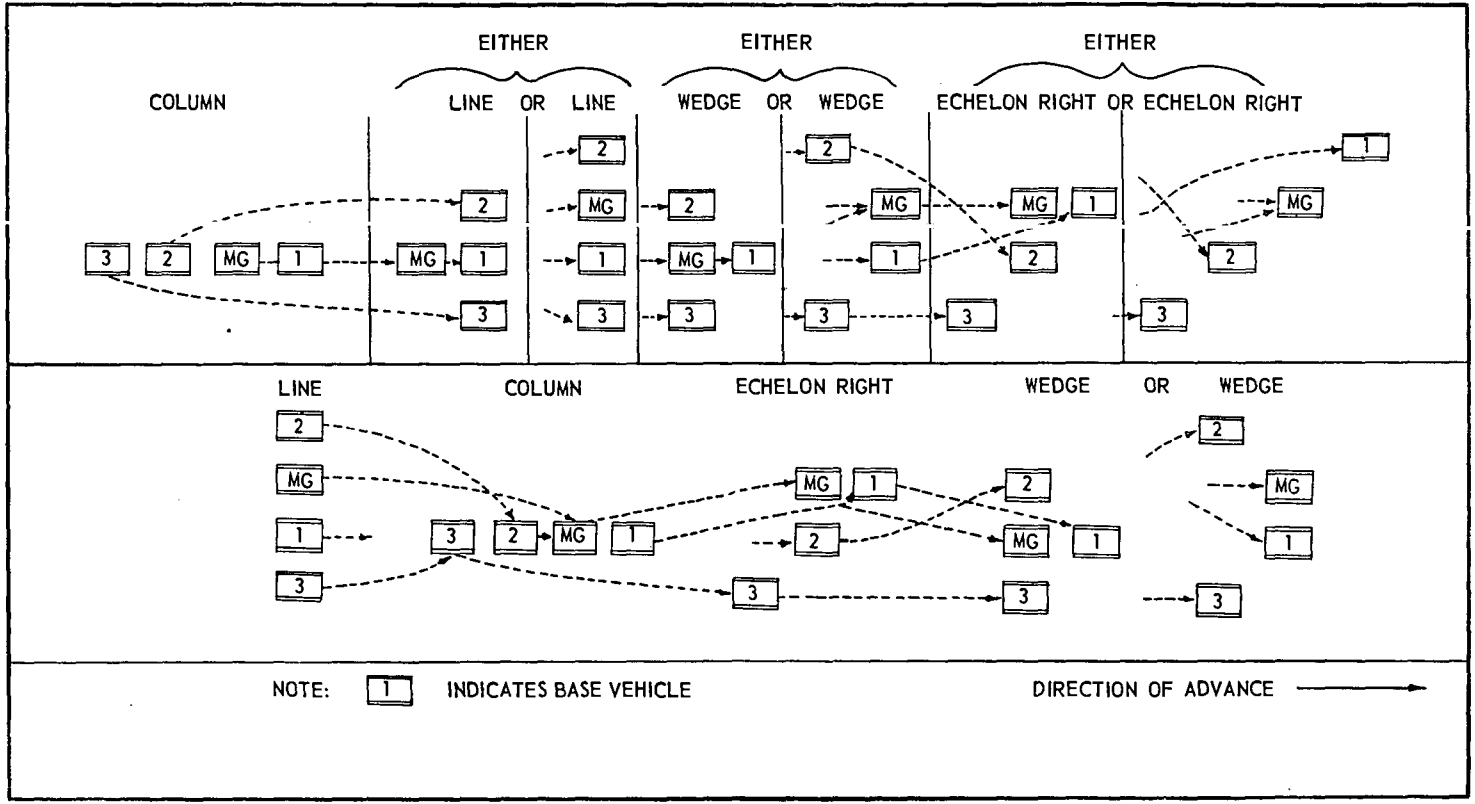


Figure 19. Examples of changing from one mounted formation to another.

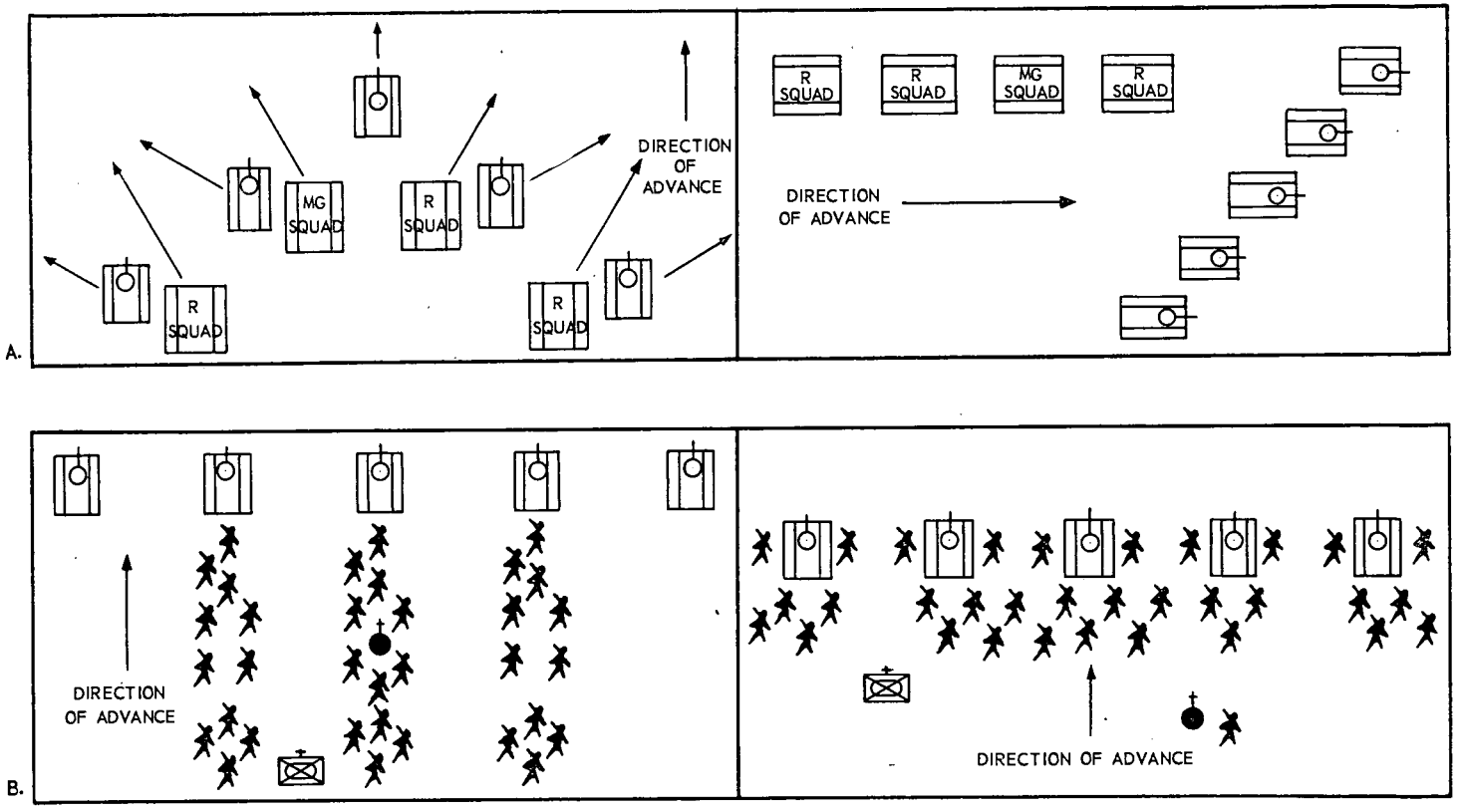


Figure 20. Typical tank-armored rifle integrated platoon formations.

d. Platoon Echelon Right, or Left, is used to protect an open or exposed flank. It permits heavy fire to the front and in the direction of the echelon.

41. Tank-Armored Infantry Formation—Platoon

a. Mounted. The formations used by elements of the company team depend primarily on the employment technique adopted for the tanks and armored infantry. Tanks and armored infantry may attack in an integrated formation (A, fig. 20). When the mounted armored infantry element follows the tank element by bounds, each tank and armored infantry unit uses the formation best suited for the accomplishment of its mission.

b. Dismounted. The formations adopted by the elements of the team are determined by the technique of attack used. The tanks may lead, the dismounted armored infantry may lead, or, during the assault phase, the two may advance together (B, fig. 20). When the tanks initially support by fire, the dismounted armored infantry lead. If the tanks move forward to join the armored infantry for the assault, either the tanks lead, followed closely by the dismounted armored infantry, or the two advance together in the assault. Each uses the formation best suited for its advance. Normally, an integrated formation is selected for the assault, with tanks leading or tanks and dismounted armored infantry advancing together. When dismounted armored infantry lead, they should not mask the fires of the tanks.

42. Squad Combat Formations

The squad formations used during the various stages of the attack are squad column, squad diamond, and as skirmishers. The initial formation is usually prescribed by the platoon leader; thereafter, the equad leader changes his formation to meet changes in the situation and terrain. Detailed discussions of these formations are included in appendix II.

Section III. UTILIZATION OF FIREPOWER

43. Vehicular Weapons

a. The weapons mounted on armored personnel carriers provide automatic firepower. Emphasis is placed on firing these guns from the carriers. When vehicles are halted, the drivers may be used to man these weapons.

b. The use of the vehicluar machine guns depends on the need for additional firepower to facilitate the accomplishment of the assigned mission. In employing the vehicular weapons, consideration must be given to the number of personnel required for the gun crews, the need of rifle protec-

tion for each dismounted gun crew, the need of weapons for local defense of the vehicles, the need for large amounts of ammunition, and the exposure of the vehicle to effective enemy fire.

44. Firing Positions for Armored Personnel Carriers

Carriers used for fire support are placed in hull-defilade firing positions. A carrier is in hull defilade when the lowest portion of the carrier visible from the front is the machine gun mounted on the top of the carrier. The use of hull defilade provides maximum protection while engaging enemy targets with direct fire.

45. Organic Weapons and Ammunition

a. Machine guns are the vehicle's basic antipersonnel weapon. In addition to its antiaircraft mission, the caliber .50 machine gun, with which all carriers are equipped, is highly effective against ground targets and may be used for long-range reconnassance by fire. Each rifle and mortar squad (both 81-mm and 4.2-in.) is equipped with one caliber .30 machine gun with ground mount. Each machine gun squad is equipped with two of these. The caliber .30 machine guns are usually fired from the ground mount.

b. Mortars are high-trajectory, close-support weapons used against personnel and unarmored vehicles and for the laying of smoke. They are capable of prompt delivery of sustained fire on area targets.

c. Rocket launchers are found in platoon headquarters and in certain sections of company and battalion headquarters.

d. Individual weapons include pistols, carbines, rifles, automatic rifles, and submachine guns. It is the responsibility of unit commanders to insure that all members of their units become proficient in the use and maintenance of their individual weapons and that the individuals have these weapons with them at all times. The vehicles carry a supply of hand and rifle grenades, including fragmentation, HEAT, and smoke grenades, the latter being used for signaling and screening.

e. Characteristics of weapons in armored infantry units are shown in figure 21.

f. Proficiency of members in the use and maintenance of all weapons organic to the armored infantry company is highly desirable.

46. Selection of Targets

a. Organic Weapons. Target selection for the organic weapons of armored infantry units is accomplished according to the characteristics of each type of weapon. Individual weapons are used against ground troops. Machine guns are used against groups of ground troops and against unarmored vehicles. Mortars are employed against targets con-

SMALL ARMS AND AUTOMATIC WEAPONS

WEAPON	WEIGHT	METHOD OF OPN	TYPE OF FEED	RATE OF FIRE		EFFECTIVE RANGE (Yds)
				Max	Sustained	
GRENADE HAND	1.3 lb	Throw	Manual			35
PISTOL CAL .45	2.4 lb	Recoil semiauto	Magazine 7 rds	21-28		50
GUN SUBMACHINE CAL .45	8.9 lb	Blowback auto	Magazine 30 rds	450	40-60	100
GRENADE RIFLE	1.3 lb	Manual single shot	Manual	4	4	Point target 75 Area target 330
CARBINE CAL .30	5.5 lb	Gas, semi or full automatic	Magazine 15 or 30 rds	750-775	40-60	275
RIFLE CAL .30 M1	9.5 lb	Gas, semiauto	Clip, 8 rds	16-24	16	500
RIFLE CAL .30 M1C	12 lb	Gas, semiauto	Clip, 8 rds	10-15	10	1000
RIFLE AUTO CAL .30 BRG M1918A2	19.4 lb	Gas, automatic	Magazine 20 rds	350-550	40-60	500
GUN MACHINE CAL .30 M1919A4E1	31.5 lb	Recoil automatic	Belt	400-550	60	900
GUN MACHINE CAL .50 HEAVY BARREL M2	84 lb	Recoil semi and full automatic	Belt	400-600	40	1800

HEAVY WEAPONS

WEAPON	WEIGHT (lb)	RATE OF FIRE		APPROX EFFECTIVE BURST	EFFECTIVE RANGE (Yards)	EFFECTIVE RANGE Limiting Factor
		Rds Max	Min Sus			
LAUNCHER ROCKET 3.5-IN M20A1B1	13	8	4	10 yd radius	Moving target 200 Point target 300 Area target 900	ACCURACY
MORTAR 81-MM M29	119	30	18	17 yd HE Light 20 yd HE Heavy	3300 HE Light	Chamber pressure
MORTAR 4.2-IN M30	650	20	5	45 x 15 yd	6000	Chamber pressure

Figure 21. Characteristics of weapons in armored infantry units.

sisting of personnel and unarmored vehicles which are defilated, dug-in, or in woods, and for laying smoke. Rocket launchers are employed against armored and unarmored vehicles and against weapon and personnel emplacements. The rocket launcher is the principal organic antitank weapon of armored infantry units. Hand and fragmentation rifle grenades are used against personnel. Rifle grenades (HEAT) are used against armored vehicles.

b. Organic Weapons Supplemented by Tanks. Tanks with armored infantry engage enemy armor and automatic weapons and support the advance of the infantry. The armored infantry, in turn, employing infantry tactics of fire and maneuver, support the tanks by destroying dug-in antitank guns and tank hunters who cannot be engaged or observed by the tank crews. In close terrain it may be necessary for the armored infantry to place fire directly on the leading tanks in providing this support. Armored infantry fire can cause casualties among enemy tank crews and force them to close tank hatches. Dismounted armored infantry, when operating with tanks, use the fastest and most convenient means available to designate targets for the tanks. The armored infantry may designate targets by pointing (mounting the tank if necessary); by firing smoke grenades, flares, or tracers into the target area; or by using radio or the external tank interphone. Any combination of these methods may be used to meet the requirements of a particular situation.

47. Distribution of Fire

Unless the fires of the unit are controlled, men may expend ammunition carelessly and ineffectively. On the other hand, sufficient fire must be delivered to insure destruction of the target in the shortest possible time. The company commander and the platoon leaders constantly endeavor to control the distribution and volume of fire. The following factors are considered:

a. Number of Weapons in Position To Fire. When more weapons are in position than are needed to destroy a single target, only those in the most favorable positions will fire. This is acomplished by assigning each man a definite, primary sector of responsibility. A company might have only one platoon in action, the others remaining concealed until another target appears. This control may lead the enemy commander to underestimate the force opposing him and thereby produce opportunities for surprise (*e* below).

b. Supporting Units Available.

(1) If adjacent units are located so as to protect its flanks and rear, the company concentrates the bulk of its fires to the front, with a minimum to the flanks and rear. If such is not the case, the flanks and rear are vulnerable, and certain portions of the company must be assigned the responsibility of protection in

those directions. For example, a flank platoon would be assigned the responsibility for protection of the company flank in addition to its primary mission.

(2) Supporting artillery and mortars should be employed against distant or large area targets, leaving the company free to engage those targets closer to it (par. 260, FM 17–1, and par. 150, this manual). They must also be employed to perform any smoke screening missions which the company may require in the accomplishment of its mission (par. 267, FM 17–1). Any attached or supporting tanks are employed to cover the most likely avenues of hostile armor approach.

c. Number of Targets. When there are several important targets, the fire should be distributed to engage as many targets as possible. Should a dangerous new target appear at a moment when the company is fully engaged, certain weapons must be designated to take it under fire. If the company does not have sufficient firepower to engage all available targets, it requests assistance from the battalion commander. Meanwhile, it continues to engage the most dangerous targets.

d. Type of Target. Generally, the more dangerous a target, the more fire is concentrated upon it. A target which is hard to see is hard to hit and therefore requires a greater volume of fire than one in the open. For example, a well-concealed antitank gun may be very difficult to destroy or neutralize, even though its general location is known. Targets which are concealed or which cover an area are better suited to area weapons employing high explosive ammunition than they are to small arms. Targets which are defilated from friendly forces are better suited to indirect-fire area weapons, such as mortars or artillery.

e. Surprise. When the armored rifle company is in a position which enables it to surprise an enemy force, each platoon is given a definite sector of fire. The platoon leaders, in turn, designate definite sectors of fire for each squad. All platoons fire together on the company commander's order. If the company is attacked suddenly, each squad immediately engages the most dangerous targets in its assigned sector of observation until such time as the platoon leaders and company commander are able to determine the point or points where fire should be concentrated.

48. Firing Positions

Organic weapons used for fire support are placed in defilated positions in so far as is possible. Firing positions are classified as primary, alternate, and supplementary. In fast-moving, fluid situations, however, organic weapons must be employed rapidly and in the most convenient firing positions available. For example, the 81-mm mortars of the company often are fired from hasty positions at or near their march column locations.

Section IV. SECURITY OPERATIONS

49. General

a. Security is a command responsibility. The armored infantry battalion commander provides for the local security of his battalion at all times. In addition, he contributes to the general security of the larger unit of which his battalion is a part, to the extent required by the higher commander.

b. The overall responsibility of the battalion commander in no way relieves company commanders, platoon leaders, and squad leaders of their own responsibility for the local security of their respective units. In the final analysis, each individual of the battalion is responsible for the security of himself, his weapons, and his vehicle. The battalion scout platoon is integrated into the overall battalion security plan.

50. Column Security

When the armored infantry battalion is on the move, its security is provided by security forces; by air and ground reconnaissance to the front, flanks, and rear; by liaison with adjacent units; and by the composition of the column. Administrative and service elements in the column are protected by placing them close to combat elements.

51. Covering Force

The armored infantry battalion by itself normally will not be used as a covering force (pars. 165 and 175, FM 17–1). When suitably reinforced with tanks, reconnaissance units, engineers, and artillery, it may perform a covering force mission. It is more usual, however, for an armored infantry unit to be employed as part of a larger force on a covering force mission. The combat actions of an armored infantry unit participating in a covering force mission may be offensive or defensive (ch. 3 and 4). Often a delaying action is employed (ch. 5). Emphasis is placed on security, use of long-range fires, observation, speed, and mobility.

52. Advance Guard

The armored infantry battalion or rifle company normally does not function as the advance guard for a larger armor formation. Advance guard missions normally are assigned to tank-infantry combined-arms teams. Armored infantry should be well forward in the advance guard column, ready for immediate employment in reducing roadblocks, clearing paths through minefields, attacking defended defiles, and similar actions. Advance guard actions are characterized by frequent attacks from march column (par. 293, FM 17–1). When armored infantry is employed, its actions are offensive in nature and are conducted as explained in chapter 3.

53. Flank Guard

The flank guard is employed to protect the flanks of the main body and to obtain enemy information for the main body commander. Armored cavalry units or tank-infantry combined-arms teams normally are assigned flank guard missions. Armored infantry units alone seldom perform this function. When armored infantry units participate in flank guard operations as part of a larger unit, their actions are offensive in nature and are conducted as explained in chapter 3.

54. Rear Guard

Armored infantry units normally are attached to tank units assigned a rear guard mission. The rear guard normally employs delaying action tactics as discussed in chapter 5.

55. Armored Rifle Company Team on a General Security Mission

The armored rifle company team may be assigned the mission of providing the entire outpost for a larger unit, or it may occupy only a portion of the outpost.

a. The company commander divides the outpost sector assigned him among his platoons; he frequently holds out one platoon as a reserve. Tanks attached to the company are employed with the rifle platoons as the situation and terrain may require. A rifle platoon outpost covering rolling ground normally requires more tank protection than does a platoon outposting broken or heavily wooded terrain. Once the platoons have organized their respective sectors, the company commander coordinates their dispositions, making any necessary adjustments.

(1) The company commander arranges for artillery supporting fires with the artillery forward observer working with his company. Mortar concentrations are prepared to cover possible avenues of enemy approach, with particular emphasis being placed on areas which cannot be adequately covered with flat-trajectory weapons.

(2) A system of patrols maintains contact between the outposts. The company commander should inspect each outpost periodically.

b. At night, outposts take up positions which are closer to the main body than those they occupy during the day. The company commander must carefully coordinate the movement of his platoons from the day positions to the night positions.

c. If attacked, outpost positions are defended with all available weapons, including artillery supporting fires. Estimated strength, composition, and actions of the enemy are reported to higher headquarters. If the situation requires such action, the company commander may counterattack.

56. Armored Rifle Platoon on Outpost Mission

a. The rifle platoon leader receives the general location of the outposts, and the limits of his sector, from his company commander. He makes as detailed a map reconnaissance as time permits before moving his platoon to a temporary position in his general area of responsibility. Once there, he makes a rapid dismounted reconnaissance to locate exact outpost positions for each squad.

b. The outposts are placed on the best defensive ground available covering likely avenues of enemy approach. In selecting these positions, consideration is given to fields of fire, observation, cover and concealment, and the presence of natural obstacles.

c. Squad leaders select alternate and supplementary positions and reconnoiter satisfactory routes to them. Range cards are prepared for each automatic weapon. Roadblocks and obstacles may be improvised from felled trees, farm implements, abandoned vehicles, or mines. Roadblocks should be covered by fire. Two or more sentries should be posted at each roadblock, to warn friendly troops of the location of any mines employed in its defense and to halt and apprehend suspicious persons. These sentinels learn the mission of any friendly reconnaissance units passing through the roadblock and, if necessary, explain the local situation to them.

d. The platoon leader establishes observation posts (listening posts at night) to the front of each of his outposts. He also establishes contact with the friendly units outposting the sectors on his right and left.

e. As soon as his sector is organized, the platoon leader reports his exact dispositions to his company commander, submitting a sketch of them whenever possible. He requests artillery and mortar concentrations to cover routes the enemy may use and any unavoidable gaps in his front.

f. If the enemy attacks, the observation posts give warning and maintain contact if forced to withdraw. The platoon leader relays this report, calls for supporting fires, and holds his position. If the enemy force is small, he may ambush it, or counterattack. He holds his outpost position until relieved or ordered to withdraw.

57. Employment of Patrols

a. Patrols are small tactical units employed to gain information and to insure security (FM 21–75). Armored infantry units are capable of performing both mounted and dismounted patrol missions in combat. In some fast-moving, fluid situations, armored infantry units in conjunction with tanks can be used to advantage in patrols: for example, when it is necessary to establish physical liaison with an adjacent unit and the area to be moved through contains enemy forces. Armored

infantry units participating in patrol actions should be tactically self-sufficient and prepared to engage in combat operations to accomplish their mission.

b. Vehicular patrols must not become roadbound. Crew members should be prepared to dismount and reconnoiter critical areas on foot. Crew members are trained to perform all types of patrol missions; they are better qualified than anyone else for their route and terrain reconnaissance, since they are the most familiar with the characteristics of their own vehicles.

c. In relatively static situations, such as the position defense, dismounted armored infantry may be required to conduct patrol operations. In such a case, these patrols are organized and employed as explained in FM 21–75. Whenever possible, a dismounted patrol carries a radio and operates with artillery support. A series of artillery concentrations are prearranged to cover the area in which the patrol is to operate and are fired on call from the patrol. If for some reason no radio is available for a small patrol, pyrotechnics, though less satisfactory, may be substituted.

CHAPTER 3

OFFENSIVE OPERATIONS

Section I. GENERAL

58. General

Offensive operations by combined formations of armor units are covered in FM 17–1; therefore, this chapter is abbreviated in scope and concentrates primarily on the armored infantry aspects of armor operations. For discussion of logistical support of offensive operations, see FM 17–50.

59. The Armored Infantry Battalion in the Offense

a. The normal employment of the armored infantry battalion in offensive operations is as the nucleus of a battalion task force. The composition of the armored infantry battalion task force normally includes a variable number of organic armored rifle companies with one or more attached tank companies (par. 46, FM 17–1). Frequently, the battalion will be employed as a pure armored infantry battalion when conducting a deliberate river crossing or when operating on terrain completely unsuitable for the employment of tanks. At other times, the battalion or major elements thereof may be employed directly under combat command control if the combat command commander decides to integrate units at combat command rather than battalion level.

b. The companies organic to the battalion are normally committed to offensive action as part of an armored infantry or armor battalion task force. When so committed, the armored rifle company may—

(1) Constitute an armored rifle company team, with one or more tank platoons attached.

(2) Be retained intact without tank attachments as part of a battalion task force.

(3) Be attached to an armor battalion task force, further detaching one or more rifle platoons to comprise the armored infantry element of tank company teams. If all the rifle platoons are detached to tank company teams, the armored rifle company headquarters and 81-mm mortar platoon may be retained under task force control or may also be attached to a tank company team.

c. The commander's capability of formulating a variety of tank-armored infantry forces of varying proportions at battalion and company level is the fundamental factor in armor's flexibility.

60. Distribution of Forces in the Attack

Armored infantry battalion task forces and rifle company teams in the attack are distributed and organized to obtain the depth of formation necessary for sustained effort, and to apply the principle of fire and maneuver. Such attacking forces usually employ two elements: the maneuvering force, which closes with and destroys the enemy; and the base of fire, which aids the maneuvering force by pinning down the enemy with fire. A third element, the reserve, may be designated under certain circumstances. Paragraphs 240 through 243, FM 17–1, cover in detail the principles of organization and employment of these elements.

61. Methods and Techniques of Employing Tanks and Armored Infantry

a. There are three fundamental methods for the employment of the tank-armored infantry force. These methods are—

(1) Tanks and armored infantry attack on the same axis.

(2) Tanks and armored infantry attack on two converging axes.

(3) Tanks support by fire only.

b. The techniques of employing these methods are covered in detail in paragraphs 286 through 289, FM 17–1, and should be thoroughly understood by commanders at all echelons. This manual covers the application of these methods and techniques by the armored infantry elements of tank-armored infantry formations.

62. Selection of the Leading Element in the Attack

The determination as to which element of the tank-armored infantry force should lead the attack is based upon the consideration of several factors. These factors include the weather and visibility, composition of the enemy force, observation, the terrain, and obstacles to the movement of armored vehicles. Tanks will lead the attack whenever possible, particularly when the armored infantry are mounted. In general, the following may be used as guides:

a. Dismounted armored infantry lead—

(1) Against emplaced crew-served antitank weapons (par. 116).

(2) Through heavy woods.

(3) Across defended river lines (mounted in carriers when possible).

(4) Across rough or broken terrain.

(5) Through defiles or suspected ambush areas.

b. Tanks and dismounted armored infantry advance together—

(1) Within heavily fortified areas.

(2) Within towns and cities.

(3) During periods of restricted visibility.

63. Coordination and Control During the Attack

See paragraphs 244 through 258, FM 17–1.

64. Offensive Action in Atomic Warfare

a. General. The basic doctrine for the employment of the armored infantry battalion or battalion task force under conditions of atomic warfare is essentially the same as that for conditions of nonatomic warfare. The command considerations required in the tactical employment and training of armored infantry units under conditions of atomic warfare are contained in chapters 1 and 6, FM 17–1.

b. Control of Tactical Employment of Atomic Weapons. The control of tactical atomic weapons, and the authority to employ them, will normally be vested in commanders of echelons higher than battalion. The armored infantry battalion or battalion task force engaged in offensive operations will be closely associated with the employment of tactical atomic weapons, both through the exploitation of friendly employment and the production of combat information in the process of target acquisition.

c. Unit and Individual Protective Measures. The commanders of armored infantry units at all echelons must be continually concerned with the vulnerability of their units to the effects of an enemy atomic attack. The armored infantry unit, by virtue of the protection afforded by its equipment and the characteristic mobility of its operations, is a target difficult to fix and destroy, provided it is well trained in the principles of defense against the effects of an atomic explosion. This training extends from the training of the individual soldier to the establishment of sound standing operating procedures. The training of the individual soldier includes the effects of such an explosion on himself and his equipment, and the measures he can take to minimize these effects. Unit procedures include increased emphasis on concealment and camouflage, and greater stress on night operations. Though the mobility of armor operations is not compatible with extensive construction of fortifications and shelters, increased consideration must be given to the protection of personnel and installations not afforded the protection of an armored vehicle. See paragraphs 184 through 190, FM 17–1.

d. Troup Safety Considerations. The employment of tactical atomic weapons in support of offensive operations requires that stringent measures be taken to insure the safety of friendly units. The establishment of acceptable levels of probability of inflicting casualties on

friendly forces will be the responsibility of commanders above battalion. These troop safety criteria will be the basis for the establishment of atomic safety lines by the headquarters controlling the atomic attack. These atomic safety lines represent the minimum distances from ground zero that friendly troops can be located without exceeding these troop safety criteria. Atomic safety lines are normally established for various degrees of protection: i.e., troops warned and protected (in tanks or foxholes), troops exposed but warned, and troops exposed and unwarned. Dissemination of precise information as to the time of attack, location of ground zero, and location of atomic safety lines will usually be made just prior to the attack. Battalions must establish procedures to insure that this information is immediately passed on to all units and individuals.

Section II. PREPARATION FOR THE ATTACK

65. Armored Infantry Battalion—General

The general principles of preparing and planning for the attack contained in paragraphs 259 through 275, FM 17–1, can be readily applied by commanders of armored infantry units or commanders of forces of which armored infantry are a part. However, armored infantry units take longer to prepare for an attack than do tank units. This is true because armored infantry have a variety of weapons, which must be integrated; they form several types of units—platoon, squad, fire team; and they will normally start the attack mounted, dismounting during the course of the action. All this will require more detailed planning and more extensive orders.

66. Battalion Task Force Reconnaissance Prior to Attack

a. Reconnaissance within the armored infantry battalion task force is conducted jointly by the armored infantry and attached unit commanders. The commander makes a personal reconnaissance and allows enough time for reconnaissance by his subordinates. Through his reconnaissance and terrain analysis he seeks—

(1) Positions for supporting weapons and carriers.

(2) Routes of attack in the assigned zone suitable for use of armored vehicles.

(3) When such employment is necessary, position areas for tanks supporting by overhead or flanking fire.

(4) Location of obstacles likely to hinder the advance of vehicles and dismounted troops.

(5) Location of an assembly area, preferably in or near the attack position, for carriers not used for fire support in a dismounted action.

(6) Location of the attack position.
(7) Location of vehicular and foot routes of approach.

b. Though not organic to the battalion, Army aircraft, either fixed or rotary wing, should be requested and used by the battalion commander, his staff, and, if possible, the company commanders in the conduct of this reconnaissance.

c. A detailed discussion of the conduct of reconnaissance is contained in paragraphs 142 through 160, FM 17–1.

67. Battalion Plan of Attack

Upon receipt of the plan of attack, or attack order, from higher headquarters, the battalion commander begins to formulate his plan of attack. The plan of attack includes the *plan of maneuver* and *fire-support plan* (par. 260, FM 17–1).

68. Battalion Formation for the Attack

The armored infantry battalion and its companies may be committed to offensive action using either the basic line or column formation. These formations are discussed in paragraph 271, FM 17–1.

69. Battalion Attack Order

Depending upon the time available for preparation, the battalion attack order may be issued either orally by the battalion commander or as an overlay-type operation order. Combat orders are covered in detail in paragraphs 94 through 96, FM 17–1.

70. Coordination With Other Units Prior to Attack

a. Coordination begins as soon as the composition of the force is announced, usually in the order from higher headquarters. The attachment to an armored infantry battalion of nonorganic units, particularly one or more tank companies, introduces new operational and logistical considerations for the commander and staff. Frequently the attachment of such units requires an extended movement to effect the physical joining of forces. Such movements should be fully coordinated between the staffs of the unit providing the attached unit and the organization to which the unit is attached. As a minimum, this coordination should include combat-readiness information pertaining to the attached unit, routes to be used in effecting the attachment, and the assignment of an assembly area to the attached unit.

b. Upon arrival, the commanders of the attached unit must be fully oriented as to the local situation, the larger unit's mission, and, if possible, the proposed or anticipated employment of the attached unit. The commanders of attached units are to be considered as advisors in the employment of their units and should be consulted during the planning phases to determine their capabilities, limitations, and recommendations.

c. Staff officers concerned with logistical and communication functions are responsible that attached units are immediately made aware of the procedures employed within the unit to which these forces are attached. All members of the staff must be alert to recognize problems peculiar to attached units and must be aggressive in their solution. Similarly, when organic elements of the armored infantry battalion are detached for employment with another task force, staff officers of the parent battalion must insure, within their capabilities, that the procedures outlined above are followed by the unit to which their organic units are attached.

d. Cordination at company or company team level begins with the announcement of team organization. In general, the procedures outlined above, though somewhat less in scope, are followed when elements organic to the armored rifle companies are detached or when nonorganic forces are attached.

e. Further coordination is accomplished during the reconnaissance. If the attack is to be made through friendly infantry, the armored infantry commander contacts the front-line commander in his zone and arranges, through his own higher commander, for passage through the infantry position. This operation is referred to as *passage of lines.* See paragraphs 307 through 309, FM 17–1, for further details.

71. Armored Rifle Company—Preparation for Attack

a. The armored rifle company may attack without attachments or as part of a tank-heavy or armored-infantry-heavy battalion task force. The battalion operation order assigns the company mission and designates the supporting units and any attached or detached units, along with other pertinent details that the company commander must know in order to accomplish his mission.

b. Detailed preparations for an attack are normally accomplished upon receipt of a warning order within an assembly area (par. 245, FM 17–1). Normally, while the company is preparing for the attack, the company commander joins the battalion commander to receive the attack order. He usually takes with him his mortar platoon leader, artillery forward observer, attached tank unit commander, and a messenger. The executive officer normally remains with the company and makes certain that the unit is ready for combat. All vehicles and weapons are inspected, company radio nets are checked (unless listening silence is in effect), and the necessary resupply of ammunition, fuel and lubricants, and rations is accomplished. If the company is attached to another unit, the company commander contacts the commander of that unit. Commanders of any units or elements attached to the armored rifle company will contact the company commander. It must be borne in mind, however, that the application of these techniques to all attacks is limited by the time available for preparation and planning the attack.

72. Company Commander's Actions Prior to Attack

The armored rifle company commander's preparations for the attack normally consist of coordination with units of other arms, planning and making a reconnaissance, making an estimate of the situation, forming a plan of attack, issuing his oral attack order, and moving the company to the attack position. At all times, he actively supervises the execution of preparations and orders.

73. Company Reconnaissance for Attack

a. Planning the Reconnaissance. After receiving the attack order, the company commander initiates and coordinates reconnaissance within his unit and attached units. The reconnaissance is planned from a map in order to save time and to insure covering critical terrain features during the actual ground reconnaissance. The company commander makes this map study in conjunction with the attached unit commanders and his artillery forward observer.

b. Making the Reconnaissance. The company commander, platoon leaders, and artillery forward observer reconnoiter together whenever the situation permits. They select a vantage point from which they can observe the area over which the team is to attack. They also pay particular attention to their attack position and the routes from the attack position to the line of departure.

74. Estimate of the Situation for Attack

See paragraphs 91 through 93, FM 17–1.

75. Company Plan of Attack

Following the ground reconnaissance and the estimate of the situation, and having decided his course of action, the armored rifle company commander develops his plan of attack in conjunction with the platoon leaders and the artillery forward observer. In developing the plan of attack, he should consider exactly how he will organize and maneuver his force to accomplish the mission, and also how he can best use the available supporting fires. The plan of attack will include the *who, what, when, where,* and possibly *how* and *why* details of the company's actions in carrying out the assigned mission (par. 260, FM 17–1).

76. Organization of the Company Team for Attack

a. In developing his plan of attack, the company commander should insure that his company team is organized to maintain the tactical integrity of units to the maximum degree. As an example, when a tank platoon is attached to an armored rifle company, it should operate as a complete unit under its commander. The attached tank platoon leader will, in this case, take his orders from the armored rifle company commander, and then will issue orders to his platoon.

b. Normally, it is undesirable to reduce elements of the team to below platoon size. This applies to both tank platoons and armored rifle platoons. Thus, an armored rifle company reinforced with a tank platoon generally should not be divided into subteams of armored rifle platoons and tank sections. However, terrain conditions and the tactical situation may require such a division; for example:

(1) When operating in extremely close country, such as thick woods or jungle, where visual contact between dismounted personnel and tanks is extremely difficult and the ability to support each other is thereby affected.

(2) When forming march outposts or similar small security teams.

c. For additional discussion of organization for combat, see chapter 2, this manual, and paragraphs 47 and 48, FM 17–1.

77. The Company Attack Order

See paragraph 273, FM 17–1.

78. Armored Rifle Platoon Preparation for the Attack

a. General. The armored rifle platoon normally is committed to offensive action as part of its parent company, which may or may not have attached tanks, or as part of a tank company to which it has been attached. The preparations required of the platoon and its key personnel will vary, depending on the composition of the force of which it is a part. Generally, the platoon's preparation will be made in a defiladed and relatively secure area, such as the assembly area of the company or battalion. It is from this location that the platoon leader, accompanied by the platoon sergeant and a messenger, goes to receive the company attack order, which assigns the platoon a mission, normally as part of the maneuvering force.

b. Platoon Leader's Planning. Upon receipt of his order, the platoon leader issues a warning order and begins his detailed planning for the employment of his platoon. The plan of the platoon leader is based upon his mission, his estimate of the situation, and the result of his reconnaissance. Though in considerably less detail, the platoon leader follows generally the same sequence of planning as the company and battalion commanders. His plan should include the assignment of a mission to each element of the platoon, the selection of a formation, coordination with adjacent units, security and control measures during the attack, and means of making maximum use of the fires of the platoon as well as other supporting fires. Platoon plans should be simple but should cover all essential details.

c. Platoon Attacking With Tanks. When the armored rifle platoon mission requires close integration of effort with tanks, more preparation and planning are necessary. Communication between the tanks and

armored infantry must be thoroughly coordinated and, if possible, checked. A tentative location for dismounting the armored infantry is selected, as well as the tank-armored infantry formation to be employed before and after the armored infantry have dismounted. Supporting fires must be coordinated to insure that the responsibility for lifting or shifting these fires is firmly established, so that the armored infantry may dismount and join the tanks in the assault without danger from their own supporting fires. The fires of the armored personnel carriers must be coordinated with those of the tanks, both before and after the armored infantry have dismounted.

d. Platoon Attack Order. The platoon attack order is habitually issued orally, preferably to key personnel of the platoon at a vantage point from which the area over which the platoon will operate and the objective can be seen. The format and content of the order are similar to those of a company order. After issuing his attack order and insuring that it is understood, the platoon leader supervises the platoon preparation for the attack.

79. Preparation for Attack, 81-Mm Mortar Platoon

a. General. While the platoon is preparing for the attack under the supervision of the platoon sergeant, the platoon leader, accompanied by a messenger, goes forward with the company commander to assist in planning the attack. The company commander may order the mortar platoon to occuply firing positions to protect the assembly area. This decision depends on the tactical situation, the length of time the unit will remain in the assembly area, and the availability of battalion and other supporting weapons for protection of the assembly area.

b. Company Commander's Orders. Based upon recommendations from the mortar platoon leader, the company commander uses the mortar platoon to further the plan of attack. His decision is issued as a part of the company atack order. The order gives specific missions, platoon position areas, targets or sectors of fire, attachments to assault platoons, time of opening fire, and plan of reorganization. It may give the conditions governing displacement, and provisions for ammunition resupply.

c. Tactical Employment. The fires of the mortar platoon are coordinated at first by the company attack order. The 81-mm mortars are usually placed in a platoon firing position where they can engage targets that are holding up the advance of the assault platoons. The mortars usually are displaced by squad in order to provide continuous close support. After capture of the objective, the 81-mm mortars are positioned to protect the consolidation and reorganization of the company and assist in breaking up hostile counterattacks.

80. Control of 81-Mm Mortar Platoon in Attack

The amount of control the platoon leader exercises over the platoon depends on the time available to reconnoiter and to issue orders, on the number of elements of his platoon detached to assault elements, on his ability to observe the zone of action and to contact his units, and on the speed and intensity of the action. In the attack, the platoon is best employed in general support of the company to increase the flexibility of fires and to insure continuity of supporting fires during displacement. When required by limitations of terrain and difficulty in maintaining control, the squads of the 81-mm mortar platoon may be placed in direct support of or attached to the assault platoons. When the mortar squads are attached to rifle platoons, control passes to the leaders of the platoons to which they are attached. The mortar platoon leader helps the rifle platoon leaders by using his platoon headquarters personnel to locate firing positions and targets, by obtaining firing data, and by handling ammunition supply.

81. Employment of 81-Mm Mortar Platoon in Attack

a. Observation. When 81-mm mortar squads are in direct support of or attached to rifle platoons, the squad leaders establish the necessary observation posts. Each observation post must provide observation of friendly troops and observation of the target area or sector of fire. Communication between the mortar squad leader and the supported rifle platoon leader is by radio. When the platoon is in general support of the company, its fires are controlled, observed, and adjusted by the platoon leader from a platoon observation post that provides observation of the company zone of action. Communication between the platoon observation post and the mortar positions is by voice, visual signal, radio, or sound-powered telephones.

b. Conduct of Fire. The 81-mm mortar platoon normally is given point or small area targets. When the platoon is used by squads, definite targets are assigned to each squad. The fire of each squad is conducted by its squad leader, in coordination with the supported rifle platoon leader. Each 81-mm mortar usually is located within voice distance of the squad leader (observer). When the platoon is used in general support, the squads are assigned target areas by the mortar platoon leader. Fire is conducted as explained in FM 23-90. The mortar platoon leader also adjusts fires as necessary and appropriate.

c. Selection of Firing Positions. Desirable characteristics of firing positions for the 81-mm mortars include—

(1) Locations within effective range of targets or target areas.

(2) Mask clearance of hills, trees, buildings, and similar obstacles to high-angle fire.

(3) Cover and concealment from enemy observation and fire. Fully defiladed positions furnish protection from enemy flat-trajectory fire. Holes and ditches offer some protection from high-angle fire.

(4) When in a platoon position, dispersion between guns to prevent two from being hit by one enemy shell. Dispersion is limited by the available control methods.

(5) Covered routes to the position for occupation and ammunition resupply.

(6) A covered and concealed observation post for the mortar observer within communication range of the firing position.

When missions are being fired in support of an attack from march column, the primary consideration should be the delivery of rapid and effective fire. The positions selected should be immediately available and may not include the characteristics enumerated above.

d. Targets. Primary targets for 81-mm mortars are point targets, such as crew-served weapons and small groups of enemy personnel—particularly those in defilade. The 81-mm mortars are effective against small area targets but are not used to search large areas. The white phosphorus shell may be used to screen specific points (embrasures of pillboxes or street barricades).

82. Movement to the Attack Position

See paragraph 274, FM 17–1.

83. Company Actions in the Attack Position

In armor offensive operations, units normally occupy the attack position for the shortest possible time; they preferably move through, deployed in combat formations, without halting. However, if events force the unit to remain in the attack position for an appreciable period, the following should be accomplished under supervision of the company commander and platoon leaders.

a. Establish local security and make maximum use of cover and concealment.

b. Make final check of platoons, to include formation.

c. Make last-minute changes, if required.

d. Issue last-minute orders.

e. Report readiness.

Section III. EMPLOYMENT OF THE ARMORED PERSONNEL CARRIER IN ATTACK

84. Carriers in Mounted Action

a. In the attack, the speed, mobility, and armor protection of the armored personnel carrier must be utilized to the utmost. This is best accomplished when tanks and armored infantry are employed together, each supporting the actions of the other. In order to make full use of the common combat characteristics of tanks and armored infantry, armored infantry should remain mounted in their carriers as long as possible so that—

(1) Elements of the attacking force of tanks and armored infantry can move forward at about the same speed.
(2) The battlefield mobility of both elements of the attacking tank-infantry force is retained.
(3) Casualties occurring in areas swept by small-arms, mortar, and artillery fire are reduced.
(4) Both tanks and armored infantry can move forward closely supported by artillery air bursts.
(5) A degree of protection is afforded against the effects of atomic weapons.
(6) The energy of the armored infantry is conserved so that they are able to fight effectively when needed.

b. In fast-moving situations, the advance of tanks and mounted armored infantry can be coordinated by combining the combat formations of each into one mutually supporting formation, with the entire attacking force moving forward together. The selection of the attack formation for the tank and armored infantry elements will be based on considerations of the mission, enemy situation, and terrain, as well as on the firepower, security, and control desired by the commander during a given action. Normally, tanks will lead to best utilize their greater firepower, armor protection, and shock action. The armored personnel carriers should be employed so that their vehicular caliber .50 machine guns can be used to assist the advance whenever possible.

c. In slower-moving situations, when the tanks are advancing from one covered position to another, the mounted armored infantry may be moved by bounds behind the tanks. Movement by bounds increases the security of the armored infantry and reduces the time they are exposed to direct-fire weapons. In such movement, the armored infantry must regulate their speed of advance to that of the tanks, and must be in a position to join the tanks in the assault on the objective. The armored infantry utilize the protective fires of the tanks by selecting bounds behind the rear tank element firing upon the objective. The vehicular caliber .50 machine guns should be employed to assist the advance.

d. The distance between tanks and armored personnel carriers must not become great enough to let enemy forces move into the gap, thereby separating the tank and mounted armored infantry units; also, it must not be so great as to deny the tanks rapid infantry support when needed. In determining the position of his armored personnel carriers in relation to his tanks, the commander must continuously evaluate the relative importance of the availability of his armored infantry and their vulnerability to enemy fire.

e. Tanks and mounted armored infantry should arrived on an enemy-occupied objective simultaneously in order to afford each other close mutual support. The use of artillery air bursts on and to the flanks of the objective will assist in neutralizing enemy personnel equipped with individual antitank weapons, thus better permitting the mounted armored infantry to follow the tanks up close to, or onto, the objective before dismounting.

85. Carriers in Dismounted Offensive Action

a. When armored infantry are required to dismount in the attack, armored personnel carriers should follow as close as possible behind the dismounted infantry so that they will be readily available to continue the attack mounted, or to assist in the consolidation of the objective. Armored personnel carriers may be moved forward by bounds, or may be moved with the attacking force, using their vehicular machine guns to augment the fires of tanks and dismounted infantry. Conditions might dictate that they be used along one or both flanks of the attacking force with the mission of protecting the flank or flanks.

b. When terrain, obstacles, or antitank weapons hold up the forward movement of armored vehicles, but permit dismounted armored infantry to move forward, armored personnel carriers should, whenever possible, be employed to support the dismounted attack by fire.

c. While the firepower of the carriers should be employed to support a dismounted attack whenever possible, and to provide antiaircraft protection, every effort must be made to preserve their mobility. It is sometimes necessary to designate an individual to man the vehicular caliber .50 machine gun during dismounted action in order to leave the driver free to move the vehicle. Each rifle and machine-gun squad may leave a man to perform this mission, or men from the machine-gun squad of each platoon may be designated to man the weapons on each of the platoon vehicles if the dismounted action requires a maximum number of riflemen.

d. When the carriers are located or employed some distance from the dismounted attacking force, coordination and control of their fires and movements must temporarily be made the responsibility of one individual at company or platoon level, depending upon the situation.

e. It must be recognized that, with the exception of the driver and vehicle commander, the armored infantry within the carrier cannot see when all hatches are closed. It is essential, therefore, that unit standing operating procedures cover the procedure of dismounting personnel while under fire so that—

(1) Maximum protection is afforded the squad as it dismounts, by orienting the vehicle in proper relationship to the enemy and terrain. In this connection, the armored personnel carrier is usually stopped head-on to the enemy position to further assist in orienting personnel in the vehicle.

(2) When required, portions of the squad are dismounted at various points to facilitate deployment.

(3) The squad is briefed quickly *before* it dismounts as to the direction of the enemy threat (par. 29, app II). This may be done in relation to the direction the vehicle is facing when it stops.

(4) The proper dismounted battle formation can be adopted without delay.

f. When the battlefield situation does not permit the carriers to be held closely available to support the dismounted attack by fire or to permit the infantry to remount on short notice, they may be used to evacuate casualties or to resupply the attacking force with ammunition, grenades, demolitions, etc. as required. When they are used in this manner, vehicle commanders must be designated.

86. Carriers in Consolidation of the Objective

In the consolidation of the objective, armored infantry, as part of the tank-armored infantry team, will be required primarily to protect the tanks by covering avenues of approach for dismounted enemy infantry which cannot be covered effectively by tanks of the team. When terrain, cover, and concealment permit, the carriers should be kept with the dismounted armored infantry to provide added firepower and to permit rapid mounted movement in continuation of the advance. When adequate cover and concealment do not exist in the forward positions of dismounted infantry, the carriers should be kept in defilade, where they can be used to protect the flanks and rear of the position and to provide antiaircraft protection, and yet be readily available on call. After the objective has been consolidated, the carriers may be used in the evacuation of casualties and in resupply.

Section IV. CONDUCT OF THE ATTACK

87. Command and Control in the Attack, General

a. General. Control by commanders at all echelons is essential to coordinated and effective action. Control is achieved through thorough

planning and effective orders. Paragraphs 276 through 285, FM 17–1, contain a discussion of the application of the principles of command and control in offensive action.

88. Actions of Battalion Commander in Attack

An armored infantry battalion may be committed to action as a battalion without attachments or detachments or as a battalion task force with a variable number of armored rifle and tank companies. This flexibility of armor organization requires that the armored infantry battalion commander be proficient in the tactical employment and control of tanks as well as armored infantry.

a. The mobility and responsiveness to command of mounted armored infantry are essentially the same as of tanks; hence mounted armored infantry as well as tanks are subject to effective centralized control by the commander. Upon entry into dismounted action, the armored infantry's mobility and responsiveness to command are greatly reduced, with their control necessarily being decentralized to numerous small-unit commanders. While this is a normal condition, it creates a slower response to the will of the battalion or battalion task force commander.

b. The absence of a command tank for the use of the commander of an armored infantry battalion task force containing a relatively large number of tanks frequently restricts the commander in his movement with his attached tank element. Under certain tactical conditions, the armored infantry battalion task force commander may find it necessary to temporarily borrow an attached tank for command purposes or, less desirably, to ride in the tank of his senior tank unit commander.

c. Regardless of the organization of his force, the commander best exercises command by placing himself where he can best influence the action through the control he has retained. In the case of an armored infantry battalion task force, this may frequently be best accomplished when the commander is located with his attached tank elements rather than with his organic armored rifle companies. The use of available Army aircraft, both fixed and rotary wing, by the commander and his staff is an excellent means by which command and control may be exercised.

89. Actions of Staff Officers in Attack

The staff, through the production of information, records, and reports, and the transmission of orders and the supervision of their execution, greatly assists the armored infantry battalion or battalion task force commander in the execution of his command and control. As with the commander, movement of certain members of the staff of an armored infantry battalion task force (i.e., S3, artillery liaison officer, and forward air controller) will possibly be restricted through the absence of

tanks for their use. In the great majority of cases it will be necessary for them to use vehicles with which they are normally provided; only in rare circumstances will they be able to use a tank.

90. Actions of Company Commanders in Attack

When serving as the commander of the armored infantry element of an armor battalion task force, the armored rifle company commander must actively advise the commander of that force on the proper employment of his unit and on the problems, operational or logistical, that confront him. Likewise, when the force he commands includes attached tanks, he must solicit and consider recommendations by the commander of his attached tanks. When the armored rifle company or company team attacks dismounted, the commander exercises command and control from a position well forward, either just behind or in the immediate vicinity of the leading platoon. When the armored infantry are in their carriers, working with tank units, the company team commander places his vehicle in the formation where he can best control his team, or under certain conditions may even ride with the commander of the tank unit. During exploitation, his location is near the head of the column or immediately behind the assault platoons when the team deploys for the assault. He keeps his battalion commander advised of all changes in the situation. He obtains artillery and mortar support through the artillery and mortar forward observers with his company.

91. Actions of Rifle Platoon Leaders in Attack

The rifle platoon leader with the maneuvering force controls his unit in the attack. While maintaining his platoon's place within the maneuvering force, he varies the platoon formation to meet changes in the situation confronting him. His major concern is to push the attack and position himself within the platoon where he can best control and influence the action.

a. The platoon leader observes in all directions, noting any evidences of enemy activity and the progress of other friendly units. When moving dismounted with a force containing tanks, he is particularly attentive for enemy weapons or obstacles which might impede or restrict the movement of the tanks.

b. He keeps his company commander informed of the terrain and enemy resistance encountered, reporting any change in the situation.

c. He requests supporting fires through his company commander upon meeting strong resistance or upon locating targets which cannot be engaged or neutralized with his organic platoon weapons. He adjusts artillery fire if a forward observer is not available.

92. Movement to the Line of Departure

The movement from the attack position to the line of departure is in a deployed formation that permits maximum use of cover and concealment. This formation places the maneuvering elements on the line of departure in the relative position from which they will start the attack. When the force contains both tanks and armored infantry, close coordination between the tank and armored infantry commanders is essential. This is particularly true if the movement is to be made during the hours of darkness. It is sometimes necessary to provide guides and markers to insure that the tanks and armored infantry are properly integrated into the attack formation as the unit crosses the line of departure.

93. Technique of Fire and Movement in the Attack

Fire and movement is a technique employed by and within the maneuvering force to advance on the objective (par. 278, FM 17–1). Armored infantry units fight by fire and movement. Fire neutralizes, demoralizes, and destroys those enemy forces it can reach. Movement brings this firepower into new and more advantageous positions, from which it extends and completes its work of destruction.

94. Battle Reconnaissance

a. General. Battle reconnaissance is made by all elements of the command. All commanders are alert to report information concerning—

(1) Location of antitank weapons, mines, and other obstacles.
(2) Changes in location of friendly troops.
(3) Progress of the attack.
(4) Avenues of approach to the objective.
(5) Changes in enemy dispositions.
(6) Arrival of enemy reinforcements.
(7) Enemy air and tank attacks.
(8) Probable direction of enemy counterattacks.

b. Reconnaissance by Fire.

(1) An attacking unit is frequently able to develop the situation and obtain a degree of security and protection from surprise by using reconnaissance by fire. Leading elements fire into the general areas where enemy positions may be suspected, in an attempt to cause the enemy to disclose his presence by movement or return fire.

(2) Reconnaissance by fire is not conducted until the attack has been launched; otherwise the attacking unit would prematurely disclose its position together with its probable intention of attacking. However, during the attack, both assault and support elements make liberal use of reconnaissance by fire to locate and neutralize suspected enemy weapons.

c. Army Aircraft. Air observers can report the progress of the attack, hostile reactions to the attack, location of obstacles and antitank weapons, and indications of hostile tank counterattacks. They must be particularly alert for hostile counterattacks during reorganization. By monitoring the aircraft radio channel, the commander immediately gets current information.

95. Methods of Movement in Attack

a. Movement in Mass. Whenever possible, all armored infantry units, supporting or supported by tanks, advance simultaneously. They proceed to the objective as rapidly as possible. Rapid movement to the objective and continuous supporting fire on the objective shorten the time of exposure to enemy fire and lessen the vehicle and personnel casualties.

b. Movement by Bounds. When direct movement to the objective cannot be made in mass, and the terrain and enemy dispositions require that movement of one element be covered by another, the advance is made by bounds. Within the armored rifle company, these bounds normally are made by platoons, and within platoons they are made by squads. For a detailed discussion of the two types of bounds, successive and alternating, see paragraph 278, FM 17–1.

96. Employment of the Maneuvering Force in the Attack

a. A discussion of the employment of the maneuvering force is contained in paragraph 277, FM 17–1.

b. Armored infantry advance mounted as far as possible, dismounting when forced to by enemy fire or when dismounted action is required. During such a movement, machine guns of the armored personnel carriers reinforce the tank fires and support the assault of the dismounted infantry (par. 84–86).

c. Armored infantry designate targets to the tanks according to a prearranged system. Radio, the external tank interphone, flares, smoke grenades, and tracer fire are common methods. Whenever possible, an armored infantryman mounts a tank and personally points out the target to the tank commander.

d. The armored infantry press their advance with determination. They advance through the tanks to clear buildings and areas of antitank weapons, and to mop up any enemy personnel not destroyed by the tanks. See paragraphs 286 through 289, FM 17–1, for a discussion of methods and techniques of employing tanks and armored infantry.

e. Appendix II covers the formations employed by the rifle squad and platoon when engaged in dismounted action.

97. Employment of Supporting Fires in the Attack

a. The base of fire continues to fire on the objective as long as necessary. Supporting fires are lifted or shifted as soon as the maneuvering force arrives on the objective, unless specifically requested and adjusted by forward observers with the armored infantry. Artillery air bursts may be placed over tanks and mounted armored infantry for their protection until the armored infantry are required to dismount.

b. The employment of armored infantry and/or tank elements in the base of fire is undesirable; however, when conditions of terrain or the enemy require their use in this manner, the commander makes certain that they are ready to displace forward as soon as the maneuvering force masks their fires.

98. Reserve in Attack

a. The commander of an armored infantry battalion task force engaged in offensive action may consider uncommitted or unengaged forces as reserves as well as combat forces specifically designated as such (par. 49, FM 17–1).

b. When the armored infantry battalion task force is engaged in *mounted* offensive action, the function of the reserve is normally performed by unengaged or uncommitted forces; only on rare occasions will a portion of the force be withheld as a formally constituted reserve.

c. When the armored infantry battalion attacks *dismounted*, or when tanks and armored personnel carriers cannot be employed or maneuvered, combat forces may be specifically designated as reserves. Additionally, such reserves may be constituted when, in the opinion of the commander, the situation is sufficiently fluid or obscure to warrant their establishment.

b. The establishment of reserves at company level follows generally the same principles as those discussed for the battalion. The armored rifle platoon, however, does not designate a reserve but rather employs an uncommitted or lightly engaged squad as such.

99. Employment of Uncommitted Elements in Attack

a. A primary means by which the armored infantry commander influences the action of his command is through the employment of his uncommitted forces. The size and composition of these uncommitted elements varies with the factors of METT (mission, enemy, terrain and weather, and troops available). Uncommitted elements may be assigned one or more of the following missions:

(1) Provide flank security by means of combat patrols.
(2) Maintain contact with adjacent elements.
(3) Envelop or attack the flanks of enemy forces holding up the assault echelon.

(4) Assume the mission of assaulting elements in the event they become disorganized or lost, or suffer excessive casualties.

(5) Mop up objectives overrun by the assault echelon.

(6) Provide supporting fires to the assault echelon.

(7) Protect the reorganization of the assault echelon.

b. The uncommitted element, unless it has been assigned a mission which would prevent such employment, is normally directed to follow the assault echelon by bounds from one covered position to another, always within supporting distance but not merged into the assault echelon. In slow-moving operations, the uncommitted element may be directed to remain in one location awaiting instructions from the commander before displacing forward. Except for security elements and those supporting the assault echelon by fire, the uncommitted armored infantry element remains mounted in its carriers. When committed, it displaces in its carriers as far forward as terrain and combat conditions permit. This element should be committed as a complete unit rather than as a piecemeal or replacement force. Except to repel an enemy counterattack, the uncommitted element is ordinarily not used until all elements of the assault force have been committed.

100. Security During the Attack

The armored infantry commander adjusts his flank security measures throughout the attack to meet changes in the situation. He modifies the combat formation to fit changing conditions, uses flank security forces when necessary, and shifts his uncommitted elements in the direction of danger.

101. Assistance to Adjacent Units During the Attack

The armored infantry unit assists adjacent units when directed by the next higher commander, or when the company or platoon commander estimates that such assistance will further the overall mission. Assisting a stalled flank unit to advance is generally a good way to protect the unit's flank. An attack using fire and maneuver is usually more effective than assistance by fire alone. Such maneuver is strongly supported by the fire of all available weapons, including those of the unit being assisted. Maneuver is not used if it will deprive the assisting unit, for an extended period, of elements needed for its own progress.

102. The Assault

a. In preparation for the assault, the assaulting elements work their way to the objective by keeping as close as possible to the supporting fires and taking maximum advantage of the effect of these fires on the enemy. Just before the assault begins, armored infantry in the assaulting elements normally dismount if they have not already done so. The

supporting fires now lift or shift, and the fires of assault infantry weapons, the carrier weapons, and tank weapons replace these supporting fires (fig. 22). See paragraph 110 for employment of the machine gun squad and 111 and 112 for employment of the organic mortar platoons.

b. If tanks are included in the maneuvering element, the assault may be made with tanks and dismounted armored infantry on line together, or with tanks followed by dismounted armored infantry (par. 281, FM 17–1). Whichever method is used, the tanks destroy enemy personnel, defensive works, weapons, and emplacements by direct fire. The riflemen close with and destroy the enemy in close combat and protect the tanks from individual antitank weapons. One member of the rifle squad is selected by the squad leader to walk behind the tanks and watch for signals from both the commander of the tanks and the squad leader. As soon as the assault starts, the tanks advance rapidly onto the objective, firing their machine guns. Whenever possible, armored personnel carrier machine guns are used to support the assault until masked by advancing riflemen. The riflemen and automatic riflemen use marching fire to close with the enemy. Dismounted men fire from the hip or shoulder, walking forward as fast and steadily as the terrain permits. Each man fires at least one shot every two or three paces at any rise in the ground, bush, tree, or point that might possibly conceal an enemy, as well as at visible enemy soldiers. Assault fire is characterized by volume more than by accuracy. Its purpose is not only to kill and wound the enemy but also to terrify and demoralize him. The effect of the supporting fires makes the enemy hug the ground with his weapon idle. Assault fire keeps him there or forces him into a hurried and disorderly retreat. The enemy is given no time to recover from the shock of the assault. All weapons, including hand grenades, are used to confuse and destroy him. The assaulting forces clear the objective, then prepare for possible counterattacks and, if necessary, for the continuation of the attack.

c. The assault may initially progress with all elements mounted, in order that the leading elements may move onto the objective under artillery air bursts. When this is the case, the infantry remain in their carriers until the artillery ceases firing, then dismount rapidly and complete the mopping up of the objective in coordination with tanks. If no tanks accompany the assault, the assault rarely is made mounted.

103. Battle Drill

Battle drill is a technique employed in training rifle squads and platoons in basic combat formations used in offensive action. Such training facilitates smooth, aggressive, and successful application of these formations in combat without the need for lengthy oral orders. The combat formations described in appendix II are used as a starting point

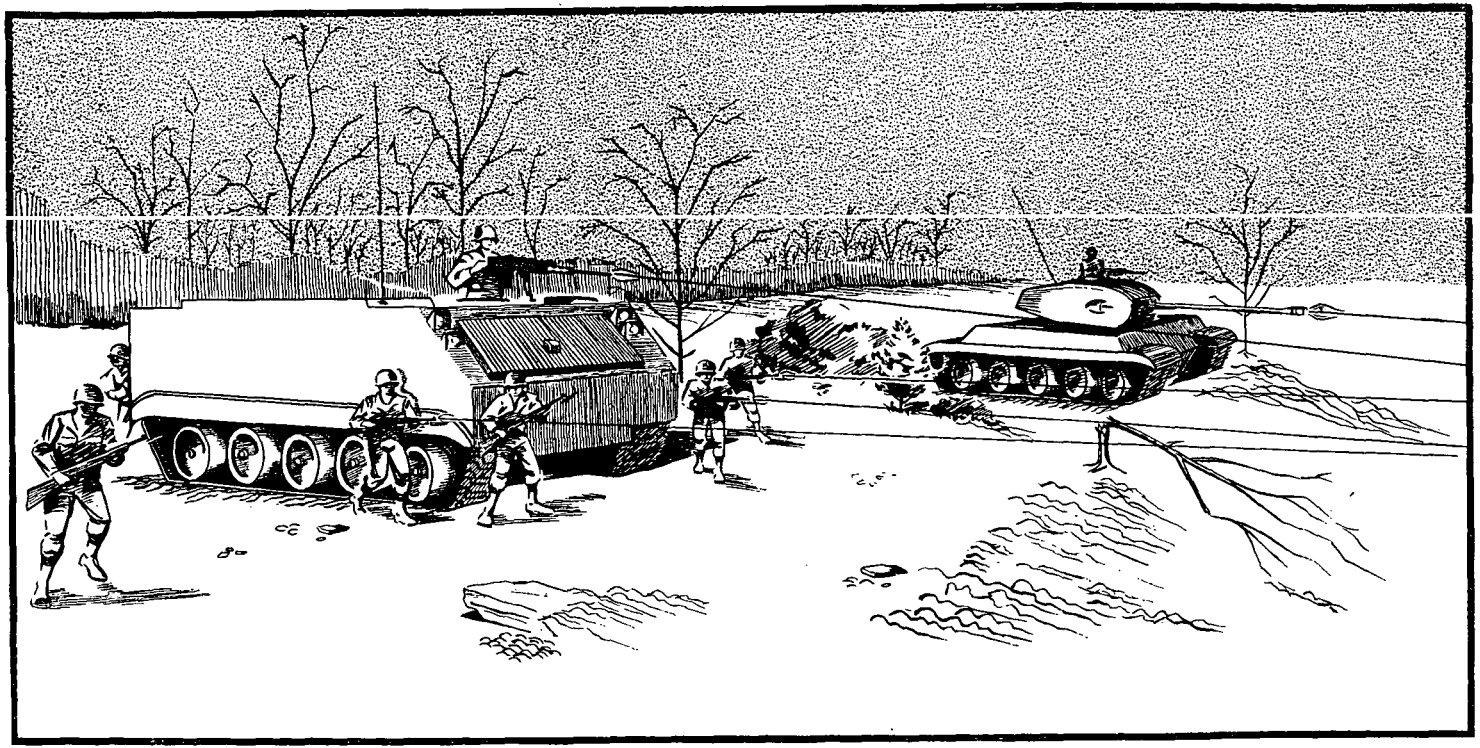


Figure 22. Rifle squad dismounting from its armored personnel carrier to participate in the assault on foot. One man has remained in the carrier, in addition to the driver, to fire the caliber .50 machine gun.

in the execution of battle drill maneuvers. FM 7–10 covers in detail the conduct of battle drill training.

104. Rifle Platoon Attacking With Tanks

a. Advancing Mounted. When tanks and mounted armored infantry are advancing to the objective, they advance as rapidly as terrain conditions permit, firing all machine guns upon coming within effective range of the enemy. When possible, movement is continuous; otherwise, movement is by bounds. Extended gaps which might result in prolonged separation of the armored personnel carriers and tanks are avoided. The main tank gun is employed on point targets such as antitank gun positions, embrasures of pillboxes, and enemy tanks. Machine gun fire of tanks and carriers is not withheld until definite targets are located; it is placed on every known and suspected enemy position. This massed fire pins down the enemy, denies him observation and movement, neutralizes his weapons, and breaks his will to resist. Armored infantry ride the carriers as far forward as possible in each situation. The caliber .50 guns on the carriers should be used to support the attack. The mission, the type of weapons employed by the enemy, and the terrain govern the time and place for the infantry to dismount to fight. The rifle platoon normally dismounts to launch the assault. Due to the possibility of excessive exposure to residual radiation following an atomic attack, armored infantry assaulting into the immediate area of ground zero may remain mounted, dismounting only for brief periods of time to eliminate isolated enemy defenders. Squads are briefed just before dismounting as to the immediate situation and the location and direction of the objective. The vehicle is positioned so that the exit ramp is away from the enemy.

b. Advancing Dismounted. Conditions of the terrain, the enemy situation, or the mission may require that the armored infantry element of the maneuvering force advance dismounted. Enemy resistance or obstacles may require that all or a portion of the armored infantry element of a mounted maneuvering force dismount during the advance and prior to the assault. When possible, these elements remount after reduction of the resistance or obstacle and continue the advance mounted. In average terrain, tanks normally precede the dismounted armored infantry, supporting their advance by fire and taking part in the assault unless obstacles prevent it (fig. 23). The fires of the vehicular weapons of the armored personnel carriers should be used to support the attack, either from defiladed positions behind the line of departure if the vehicles are not employed in the advance, or by advancing by bounds from one defiladed position to another closely behind the dismounted elements. The fires of the carriers may also be used in securing the flanks of a dismounted force.

Figure 23. Armored infantry advancing dismounted with tanks.

105. Rifle Platoon Attacking Without Tanks

a. As a general rule, terrain that will permit the maneuver of armored personnel carriers will also permit the employment of tanks. Therefore, a mounted armored infantry assault without tanks in the area is rarely used. The initial maneuver phase of an attack without tanks, however, may be made with the armored infantry mounted in their carriers.

b. The platoon moves across the line of departure using available cover and concealment. If personnel are dismounted, the armored personnel carriers, where possible, follow close behind the platoon, furnishing fire support. Enemy fire and observation are neutralized by supporting fires and smoke. Mortar and artillery fires cover the movement of the assault rifle platoon to within assaulting distance (usually 50 to 100 yds) of the objective. The advance is as rapid as possible. When the advance rifle units are within assaulting distance of the objective, the supporting fires are lifted on call by the company or battalion commander, and the units start their assault immediately under cover of their own direct-fire weapons.

c. During the platoon's advance to the objective, it avoids long-range machine-gun, mortar, and artillery fires by using defilade to by-pass impact areas, or by moving as fast as possible through the danger area. When the terrain or the size of the enemy concentration permits by-passing, this method is the best. Fires that cannot be by-passed must often be crossed. This is done rapidly, since defensive fires usually increase in intensity and accuracy nearer the defensive position. Halts usually result in unnecessary casualties because of the increased time of exposure to enemy fire. When the platoon is halted by enemy action, the platoon leader immediately reports his position, the enemy action that caused his halt, and any other pertinent information, to his company commander. The platoon resumes the advance as soon as possible.

d. When the platoon receives short-range fires from enemy weapons within effective range of the platoon weapons, the platoon immediately opens fire on the enemy weapons. Advance in this phase of the attack is made by fire and movement. Specific targets holding up the advance are reported to the company commander, and supporting fires are requested from accompanying forward observers, both artillery and mortar. At the same time, the platoon leader advances his platoon by pinning down the enemy with the fire of one platoon element while the remainder of the platoon moves forward under cover of this fire. Then the moving element of the platoon occupies firing positions and covers the advance of the other element. Maneuver in the zone of an adjacent platoon may be necessary, and is made after coordinating with the adjacent platoon.

e. If permitted by the terrain and enemy resistance, the carriers follow the platoon by bounds from defilade to defilade. When possible, they provide overhead machine-gun fire support and are controlled by an individual designated by the platoon leader. Under certain conditions, one individual of each squad may remain with its carrier to man the vehicular weapon in order to leave the driver free to move the vehicle. Carriers are sometimes retained under company control when personnel dismount—for example, in crossing a river the armored personnel carriers cannot negotiate. In such situations, carriers would be left in the attack position or in the assembly area. They will be left in the assembly area if a high degree of secrecy is desired. They will be left in the attack position if protection by the carriers is more desirable than secrecy.

106. Actions on the Objective—General

See paragraphs 282 through 284, FM 17–1.

107. Company Actions on the Objective

a. Immediately upon taking an objective, the company disposes itself to repel a counterattack according to plans announced in the company attack order. The company commander makes prompt adjustments to fit the circumstances. He orders forward the mortar platoon and any attached weapons, and places them to cover possible enemy avenues of approach to the front and flanks of the captured objective. He uses supporting fires to further reinforce his position against hostile counterattacks.

b. How the carriers are disposed depends upon the length of time the objective is to be occupied. If the company is to defend for some time, the carriers of the assault platoons are placed in covered and defiladed positions immediately behind the objective. If the attack is to continue, carriers remain under squad control. Tanks and carriers are resupplied without delay. The company commander requests necessary supplies from the combat trains.

c. After the elements of a company have been placed to repel a counterattack, reconnaissance is begun for a continuation of the attack. At the same time, the company commander has each platoon leader reorganize his platoon. Casualties among key men are replaced, and the unit situation, strength, and vehicle and ammunition status are reported through channels. Casualties are evacuated. Identification of enemy units is reported, and prisoners are sent to collecting points. After reorganization, the company is again an effective team with control re-established, enough ammunition and fuel on hand, and plans completed to continue the attack.

108. Platoon Actions on the Objective

a. Preparation To Defend Against Counterattack. The platoon leader's first consideration after capture of an objective which must be physically occupied is to dispose the platoon quickly to repel a counterattack. So that each squad leader may know the position of his squad on the objective, the attack order divides the objective into tentative squad sectors. This may be done by the clock system, superimposing an imaginary clock on the objective with the center of the clock on the center of the objective (fig. 24). The direction of the enemy to the front is 12 o'clock; squad sectors are then assigned by hour numbers. (Example: 1st Squad defend and reorganize from 9 o'clock to 11 o'clock; 2d Squad from 11 o'clock to 1 o'clock; 3d Squad from 1 o'clock to 3 o'clock.) Immediately upon capture of the objective, the squads move, without further orders, to their assigned locations. The platoon leader inspects the platoon area as soon as possible and makes adjustments to take advantage of the terrain and to meet enemy resistance. If the platoon is attached to or supported by tanks, the commanders of the armored infantry and tank elements must rapidly but carefully coordinate their reorganization. The armored infantry are generally positioned where they can best provide protection for the tanks and counter dismounted enemy efforts to dislodge them. The tanks are positioned where they can best repel enemy armor attacks and still provide fire support for the armored infantry. Carriers are brought forward and placed in defiladed firing positions or under cover in the platoon area.

b. Preparation To Continue the Attack. As soon as positions are secured to repel possible counterattack, the platoon leader prepares to continue the attack. A report is sent to the company commander stating the effective strength of the platoon, the condition of vehicles and weapons, and the status of ammunition. Orders for a continuation of the attack are usually issued by the company commander. The platoon leader makes a brief reconnaissance to the front and flanks. He looks for available routes forward, makes an estimate of the situation, formulates a plan for the continuation of the attack, and issues an attack order.

109. Continuation of the Attack

See paragraph 285, FM 17–1.

110. Employment of the Machine-Gun Squad in the Attack

a. Mission. The primary mission of the machine-gun squad is to provide additional organic automatic fire support for the balance of the rifle platoon. When the rifle platoon is operating dismounted in close coordination with tanks, the fires of the tanks and the platoon's armored personnel carriers' vehicular weapons may be sufficiently effective that it will not be necessary to initially employ the machine-gun squad in

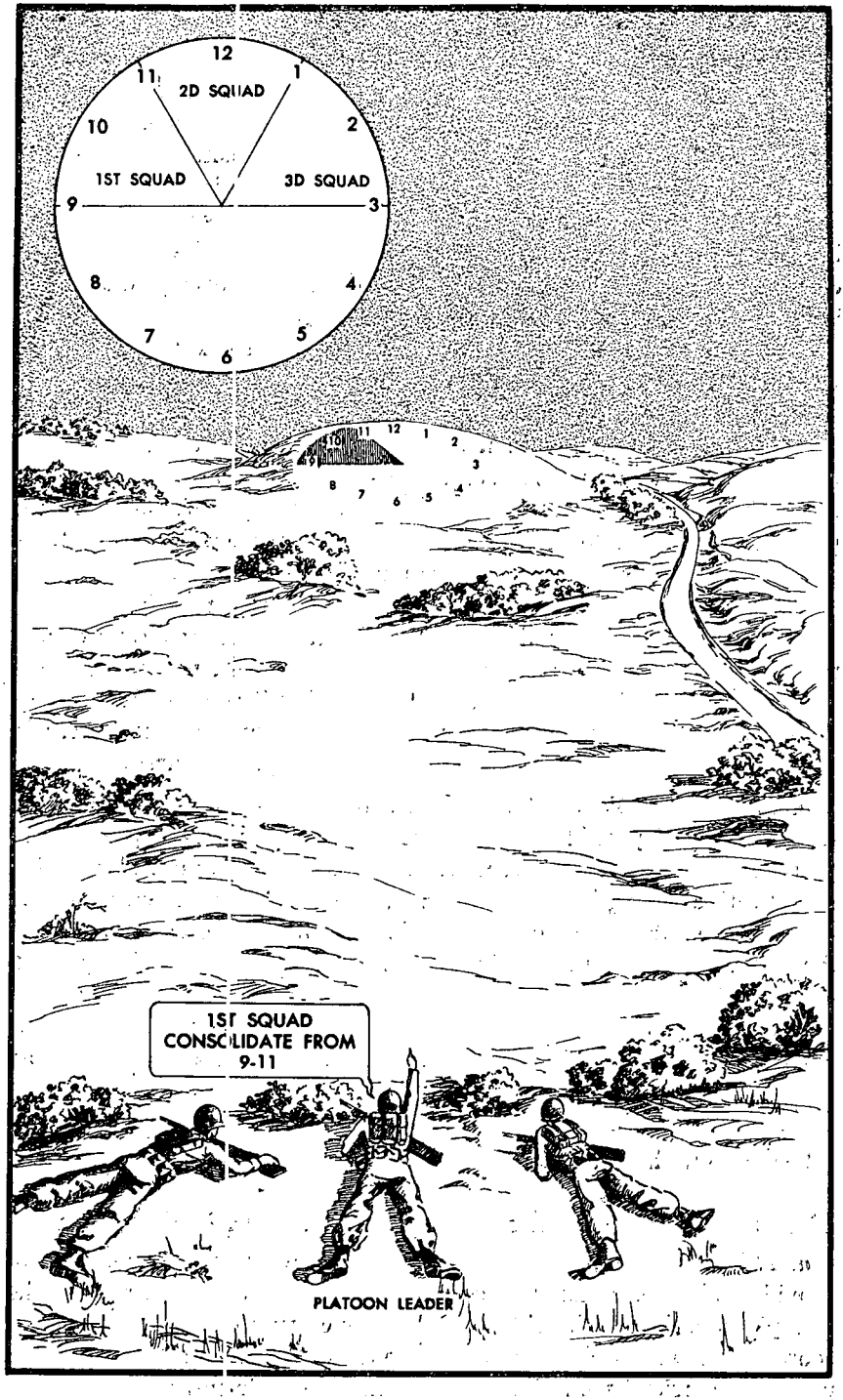


Figure 24. Planning consolidation of the objective.

its primary role. Under such circumstances, the rifle platoon leader may direct the squad to follow the balance of the platoon, prepared to engage targets not otherwise covered or to perform other missions as he may direct. Frequently, during the assault phase of a rapidly moving dismounted attack, the terrain will not offer intermediate firing positions from which the machine guns can provide effective support. When this is the case, the gunners of the machine-gun squad may advance along with the riflemen, using marching fire technique, while the balance of the squad use their individual weapons. Missions of the squad may include—

(1) Supporting by fire the units of the platoon or units of adjacent platoons. The squad may be directed to follow a specified rifle element, or it may follow a general route along a flank of the platoon, occupying successive firing positions.

(2) Protecting the platoon flanks.

(3) Covering the platoon actions on the objective.

(4) Breaking up hostile counterattacks.

(5) Acting as a rifle squad (par. 14, app II).

b. Selection of Firing Positions. The platoon leader assigns a general position area, and the squad leader selects exact primary and alternate firing positions. Firing positions with desirable characteristics provide—

(1) Observation of the assigned targets or sector of fire.

(2) Observation of friendly troops.

(3) Direct fire without interference from friendly troops, trees, or other obstacles.

(4) Maximum protection against hostile observation and fire.

(5) Covered routes for occupation and supply.

c. Targets. Appropriate targets for the machine gun are crew-served weapons, small groups of enemy, pillbox embrasures, lightly armored vehicles, and tank vision slits. Enemy whose general location is known may be effectively engaged with short bursts of machine-gun fire. In built-up areas, machine guns are used against definitely located targets in buildings.

d. Support by Machine-Gun Squads. The machine-gun squad supports the advance of the platoon rifle elements. The squad leader observes advancing riflemen, as well as the objective, so that his squad's fire does not endanger friendly troops. He looks for positions from which the team may deliver oblique, flanking, or enfilade fire on enemy groups holding up the advance of his platoon or adjacent units. His squad may employ additional vehicular weapons as directed by the platoon leader (par. 85c).

111. Employment of the 81-Mm Mortar Platoon in the Attack

a. Movement into Firing Positions. The 81-mm mortar platoon, upon arriving at its first position area, has its squads move into firing positions selected by the squad leaders. The squad leaders supervise the preparation and occupation of the firing positions. Ammunition bearers are dispersed near the firing position when not engaged in the resupply of ammunition.

b. Supporting Fires During the Attack. Before the attack, the 81-mm mortars may fire prearranged concentrations. During the attack they engage targets as directed by the company commander, the platoon leaders, or the squad leaders. During the assault, the 81-mm mortars fire on targets on the flanks or beyond the objective. The platoon is normally employed as a unit in direct support of the company; however, under certain conditions, the squads of the platoon may be attached to rifle platoons (par. 80).

c. Displacement. The platoon and squad leaders continuously make plans for displacement. When the mission assigned can no longer be accomplished from initial positions, displacement is made with a minimum interruption in fire support. The 81-mm mortars ordinarily displace by squads. Whenever possible, displacement of weapons and ammunition is made by carrier. When the platoon is operating under platoon control, and displacement is anticipated, the platoon leader makes a personal reconnaissance and designates a new general position area to the squad leaders. The squad leaders move their squads forward, using covered routes, and select the exact firing positions for their squads. When not operating under platoon control, a squad leader advances his squad to a new position when the progress of the attack makes it impossible to continue firing on the assigned mission or sector from the old position. Forward displacement is made aggressively, the squad frequently moving close behind a rifle platoon from one point of observation to another.

112. Employment of the Battalion 4.2-inch Mortar Platoon in the Attack

a. The 4.2-inch mortar platoon is the primary indirect fire support weapon immediately available to and directly under the command of the battalion commander. The mortar platoon is habitually employed in the base of fire in support of offensive operations in which the battalion or any of its elements may be engaged. The fires of its weapons are closely integrated and coordinated with those of supporting artillery and the mortars of the rifle companies.

b. The employment of the 4.2-inch mortar platoon is covered in appendix IV, FM 17-1.

113. Employment of the Battalion Scout Platoon in the Attack

a. The battalion scout platoon is primarily employed on reconnaissance and security missions in offensive operations.

b. For detailed discussion of the employment of this platoon, see FM 17–35.

114. Attacking Enemy Armor

a. General. Success in attacking enemy armor is often obtained by gaining surprise with the first aimed shot in the encounter. Tanks resupplying for the attack, in march column, or reorganizing after an attack, are vulnerable to surprise attack by a tank-armored infantry force. Surprise may also be obtained by speed, concentration of fire, and proper timing in the attack, and by attacking from an unexpected direction.

b. Ambush. In some situations it is possible for the armored infantry battalion task force to ambush enemy tanks with flanking fire from attached tanks and organic rocket launchers, from covered or concealed positions. On such an occasion, each tank is given a definite target. Tanks fire the first round only on order of the ambush commander, in order to gain complete surprise. Following the initial surprise fire, the tanks use fire and movement to destroy any enemy tanks left.

c. Armored Infantry Tank-Hunter Teams. During the hours of darkness or periods of limited visibility, small, well-trained and aggressive armored infantry tank-hunter teams can be extremely effective against enemy armor. These teams, equipped with organic rocket launchers, demolitions, and improvised antitank weapons or grenades, attempt to seek out and destroy enemy armor in assembly areas or to take positions along a defile or area restrictive to the movement of armored vehicles and engage enemy vehicles at close range. The operations of such forces should be well planned, based on thorough reconnaissance, and, if possible, well rehearsed.

115. Attacking Antitank Guns—General

a. Antitank guns, both self-propelled and towed, form part of all defenses and will be encountered in most tank actions.

b. Enemy gun positions may be expected to have good fields of fire, observation, cover, and concealment and to be protected by obstacles. Guns encountered in open terrain may be dug in in hedgerows, open fields, clumps of brush, or farm buildings. Guns in rolling or broken terrain may be in partial defilade, on reverse slopes, or on hill crests. Both towed and self-propelled guns may have one or more alternate positions.

c. Antitank guns seldom operate alone. The organization of their positions usually provides for flanking fire, mutual support, and defense

in depth. Infantry with machine guns and rocket launchers protect their position from surprise, while mines and obstacles may be used to canalize attacking tanks into the antitank guns' fields of fire.

(1) Flanking fire must be expected, since the enemy usually attempts to locate his guns in positions from which they can fire on the lightly armored sides and rears of passing tanks.

(2) Mutual support by the antitank guns in the defensive position makes it difficult to attack any one of them without coming under the fire of one or more of the others. Their combined fire covers all logical approaches, and they are placed so that they can protect one another. Each gun usually is able to fire at the side or rear of a tank attacking another gun.

d. The antitank defense is flexible. Self-propelled guns shift from position to position, maneuvering around the emplaced towed guns.

e. Deception is an essential part of the antitank defense. A light gun in the rear of the position may open fire first to draw the tanks into the flanking fire of heavier forward guns. Guns on the reverse slopes fire into the rear of tanks which have passed their position. Dummy positions may be employed.

f. The introduction to the battlefield of enemy antitank guided missiles will result in the additional mission for armored infantry of not only the destruction of the launching equipment but also the neutralization of the observation and control posts essential to the effective employment of these weapons.

116. Attack of Enemy Antitank Weapons

Direct fire is employed against enemy antitank gun positions whenever possible. Although it is desirable to attack antitank weapons by maneuver to their flanks or rear, care is taken to keep the maneuvering element from becoming engaged with other mutually supporting hostile antitank weapons. Smoke is used to blind hostile gun crews, and high explosive and machine gun fire is used to destroy or neutralize them. Since enemy antitank-guns are often protected by mines, tanks normally do not overrun the guns, but destroy them with short-range, high explosive fire. When covered approaches permit the dismounted armored infantry to get close to the hostile gun, rocket launchers and other infantry weapons are used. The armored infantry also assist by locating the enemy tanks and self-propelled guns and designating them as targets to friendly tanks. When the location of unarmored antitank guns is such that tanks cannot destroy them, the dismounted armored infantry move in, supported by tank fire, and destroy the crews with infantry weapons.

117. Exploitation—General

The exploitation, a phase of offensive action, is the followup of success of battle, taking full advantage of the enemy's disorganized state to

drive deep into his rear and complete his destruction and defeat. The exploiting force pushes vigorously to reach the objective with the maximum force in the shortest possible time. Objectives deep in the enemy rear normally are assigned to exploiting forces. Pursuit is a phase of exploitation which has as its object the destruction or capture of enemy forces. See paragraphs 294 through 306, FM 17–1.

118. Composition of an Armored Infantry Battalion Task Force on an Exploitation

The armored infantry battalion task force must be so organized as to permit rapid deployment into attack formation from march column. Elements in the column must be so grouped that appropriate companies or company teams are ready for the type of employment expected. The task force commander bases the task organization and order of march on the troops available, the enemy situation, the terrain, and the road space required for each subordinate element. The order of march must correspond to the order of anticipated employment (fig. 25).

119. Conduct of the Exploitation by Armored Infantry

a. The conduct of the exploitation is characterized by movement on a broad front in multiple columns, attacks from march column, independent actions, speed of movement, bypassing of strong resistance when necessary, successive attacks, and freedom of action for commanders.

b. The armored infantry battalion task force is responsible for providing its own security during the conduct of an exploitation. Leading battalion task force provide for the security of a larger force in column by furnishing the advance guard. Each battalion furnishes advance, flank, and rear guards for itself as appropriate. Army aircraft, due to their high degree of mobility and excellent communication facilities, provide a considerable measure of security through surveillance.

120. Employment of Armored Infantry in Exploitation

a. In exploitation, tanks destroy much of the enemy resistance. The armored infantry are used to—

(1) Clear towns, wooded areas, and difficult terrain.

(2) Clear obstacles and breach minefields.

(3) Establish bridgeheads.

(4) Provide security for tanks at night.

(5) Protect tanks from individual antitank measures.

(6) Handle prisoners of war.

b. Armored infantry in exploitation normally ride in their armored personnel carriers; however, if the tactical situation so dictates, certain armored infantry elements may ride on tanks.

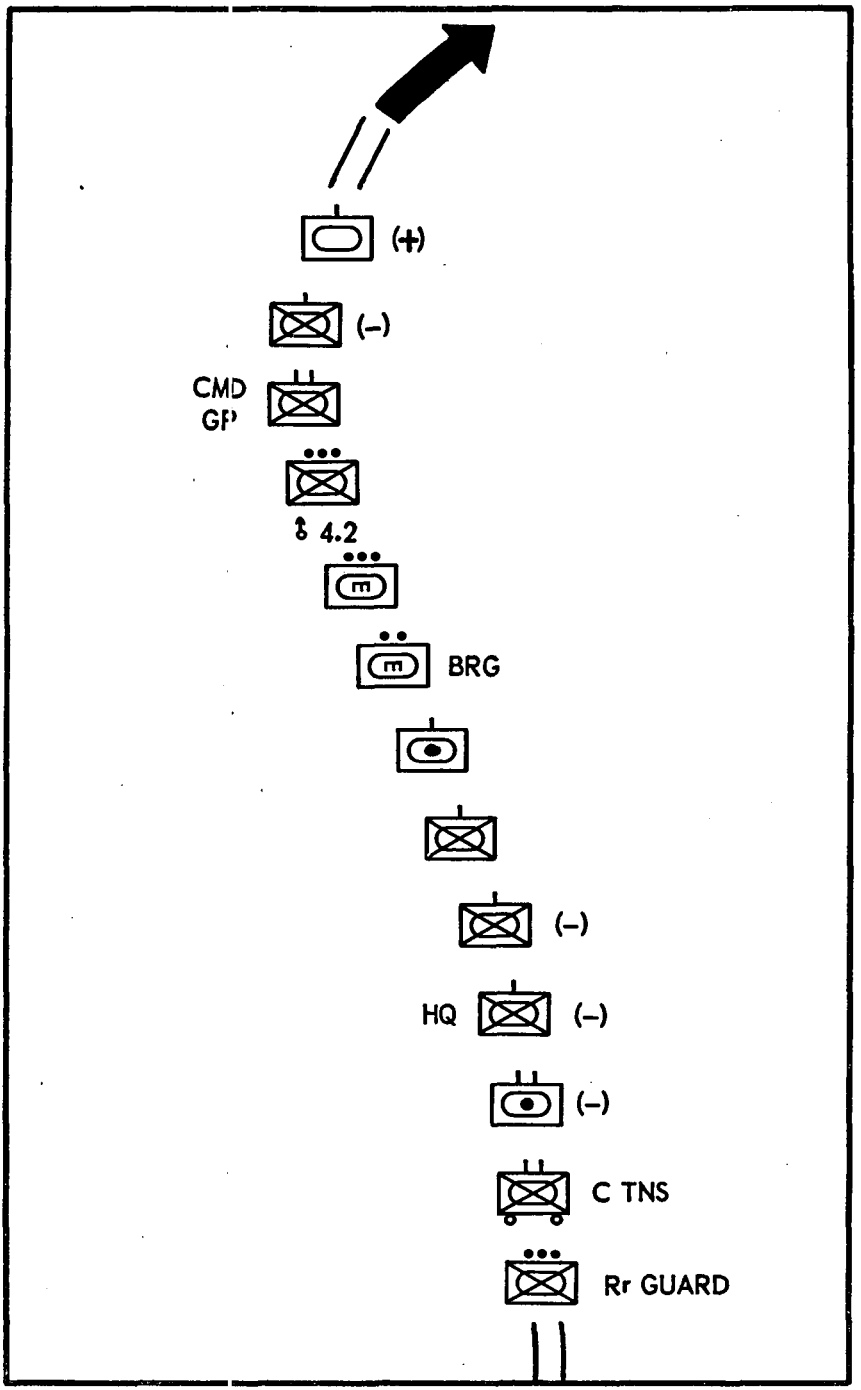


Figure 25. Typical organization and order of march of an armored infantry battalion task force on exploitation.

121. Armored Rifle Company as Part of Exploiting Force

a. The armored rifle company normally is used as part of a larger exploiting force. However, when organized as a company team with supporting tanks, it is capable of limited independent action, such as reducing isolated resistance, seizing and holding critical defiles or key bridges, or acting as a flank guard. The armored rifle company team may be used as the advance guard for an armored infantry battalion task force on exploitation. Attacks by the advance guard normally are launched from march column. Advance, flank, and rear guards are discussed in paragraphs 52 through 54.

b. The company must expect—

(1) *Opposition by enemy delaying forces at defiles and other favorable terrain features.* These forces may be improvised hastily from service troops in the vicinity or may consist of small detachments of selected personnel, specifically trained for such a mission. Enemy civilians may take part in this fighting.

(2) *Obstacles.* This includes destruction of roads, bridges, and overpasses by demolition, flooding of low areas, felling of trees across roads, construction of various tank traps and antitank obstacles, and booby-trapping of buildings and installations. Generally, under exploitation conditions, enemy minefields will be prepared hastily.

(3) *Guerilla activity and sabotage.* Initially, this will be scattered, directed principally against supply vehicles and stragglers.

(4) *Attacks by mobile enemy forces.* These forces will contain a high proportion of armored or motorized troops and may attack from any direction. Frequently, they coordinate their actions with those of the forces described in (1) and (3) above.

c. The resupply of an exploiting force may be difficult. Therefore, company commanders and platoon leaders must emphasize supply discipline. Locally captured supplies must be inspected before use, since they may have been sabotaged or contaminated by the retreating enemy. Supply vehicles frequently will require tank and armored infantry escorts. In certain circumstances resupply by air may be required.

d. Maps or map substitutes may be in limited supply, and sketches or other map substitutes may have to be made by the armored infantry battalion staff.

122. Attack From March Column—General

a. The attack from march column differs from the coordinated attack in that there is no time for detailed reconnaissance and planning. Instead, the lead elements must attack swiftly and in mass, getting full effect of shock action with a minimum of delay. An attack from march

column demands speed and aggressiveness. The initiative must be seized and kept. Lacking specific orders, the company commander or platoon leader takes whatever action is required to carry out his assigned mission.

b. For speed and aggressiveness, and to keep the initiative, elements are placed in the column in the order of their expected employment. The tank and armored rifle platoons are distributed throughout the column in positions to lead the attack, maneuver to the flanks, and secure the column against hostile counterattacks. A tank platoon normally leads an armored rifle company team which is an advance or flank guard for a larger unit.

c. The company commander places himself well forward in the column. He is accompanied by the artillery forward observer, the 81-mm mortar platoon leader, and the commanders of any attached units. By following the leading platoon, the company commander is in a position to keep abreast of the situation, to make prompt decisions, and to issue orders that quickly implement his decisions.

d. The 81-mm mortar platoon normally stays under company control, but may be attached to a platoon on a separate mission out of supporting distance. It is placed in the column where it can give immediate fire support to the leading platoon. Usually it follows the company commander, who is normally just behind the leading platoon.

e. Engineer units supporting the company normally are placed immediately behind the company commander or behind the 81-mm mortar platoon, depending on the anticipated enemy use of obstacles and the ruggedness of the terrain. If the terrain is especially difficult, or if obstacles and minefields are numerous, a squad of engineers and an engineer vehicle may follow the lead platoon.

f. The company maintenance section marches behind the company. If more than one company headquarters is included in the company team, the maintenance section of each company marches behind the last unit containing elements of its company.

123. Attack From March Column Against Light Resistance

a. Against light resistance, tanks lead, using their speed, firepower, and shock action to confuse, overrun, and destroy the enemy. Though tank-armored rifle *platoon* teams are seldom organized in offensive combat, the platoon leaders of the leading tank and armored infantry elements work together, each commanding his own platoon, as part of the company team.

b. When initial contact is made, the lead elements deploy, with the armored infantry normally remaining mounted while the tank and armored infantry vehicular weapons take the enemy under fire. The team commander, normally immediately behind the lead platoon, makes

a quick estimate and decision, usually resulting in an immediate maneuver of both tank and armored infantry elements. The base of fire in support of this maneuver should, whenever possible, consists of organic and supporting indirect fire weapons. Only in rare instances—when the terrain will not permit their employment, or when the enemy force contains tanks that must be engaged and there are sufficient tanks for employment in the maneuvering force—will tanks be withheld for employment in the base of fire.

c. Tanks and armored infantry conducting the maneuver in an attack from march column function together the same as in any offensive action, with the exception that there is little time for planning and reconnaissance, since speed and aggressiveness of attack are of prime importance. The manuevering armored infantry element moves mounted as far as it possibly can. The leading elements either overcome the resistance with their organic and supporting weapons or develop the situation and report to the team commander in order that the remainder of the team may be employed if necessary to overcome the resistance.

d. When an advancing enemy column is observed that apparently is not aware of the presence of the company team, the company team commander may deploy an ambush. A successful ambush usually inflicts severe losses on the victims with relatively few losses to the attacker. Ambush tactics require extensive training in rapid movment to ambush positions, fire control, and tactical control for the assault on the disrupted enemy formation.

124. Attack From March Column—Reduction of a Roadblock

Roadblocks consisting of abatis, craters, or other obstacles emplaced by the enemy normally will be covered by small arms and antitank fires. These obstacles normally will be located at defiles or other areas which severely restrict the maneuver of full-track vehicles. The most desirable action upon encountering a roadblock is to report its location and attempt to bypass it; however, this will seldom be possible, and its reduction will normally require a dismounted armored infantry action. Tanks move into the best available covered positions from which they can deliver direct fire on the obstacle and/or its defenders. All available organic and supporting indirect fires are brought to bear on the forces defending the obstacle. Under cover of this direct and indirect fire, dismounted armored infantry move by covered routes to a position from which they can assault the defenders of the obstacle (fig. 26). Upon the signal of the maneuvering armored infantry element, the supporting fires are lifted or shifted and the assault is launched. Due to the danger of antitank mines located forward of the obstacles, care must be taken not to move full-track vehicles too close to the obstacle prior to its clearance. Attacks of roadblocks are primarily armored infantry mis-

sions with the tanks supporting by fire. After elimination or withdrawal of the defenders, the obstacle is cleared by armored infantry personnel, supporting engineers, and if necessary the crews of tanks.

125. Attack From March Column Against Heavy Resistance

Strong hostile forces that are positioned on good defensive terrain and that do not threaten the accomplishment of the mission should, if permitted by the mission, be reported and bypassed. The commander authorized to bypass such resistance immediately initiates aggressive reconnaissance to the flanks of the enemy position in an effort to locate an acceptable bypass route. In the event an attack of the enemy position is necessary or directed, it must be deliberately planned and executed before the enemy can reinforce or improve his position at the threatened point. Depending upon the results of his reconnaissance, the lead team commander may launch such an attack with the forces immediately available to him (fig. 27). If, in his opinion, the force opposing him is beyond his capability to dislodge, his team may participate as part of a coordinated tack by his parent task force. Such attacks are normally combined-arms efforts and are conducted as previously discussed (fig. 28).

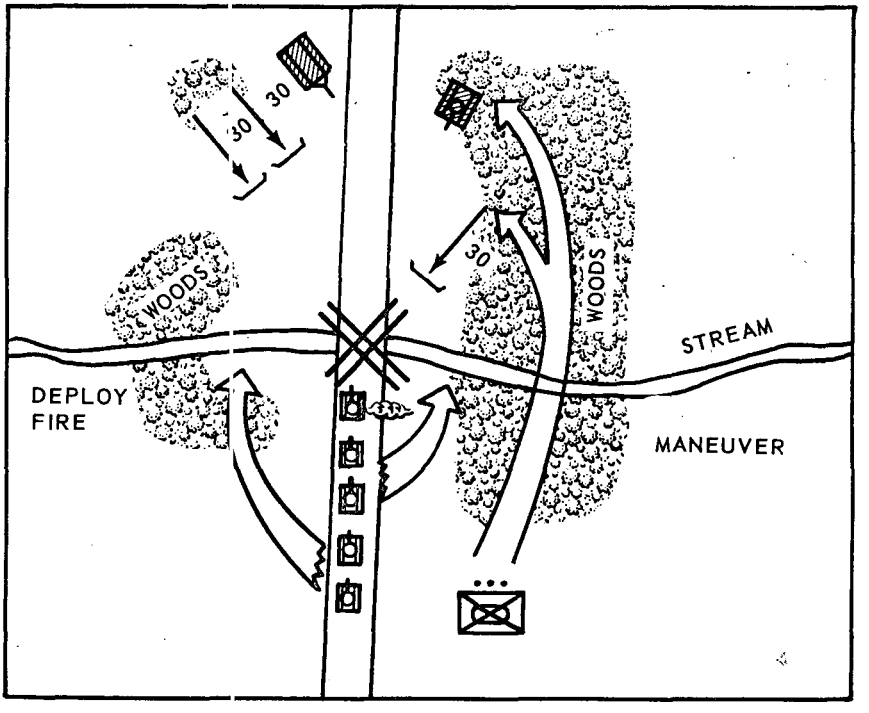


Figure 26. Attack from march column to reduce a roadblock.

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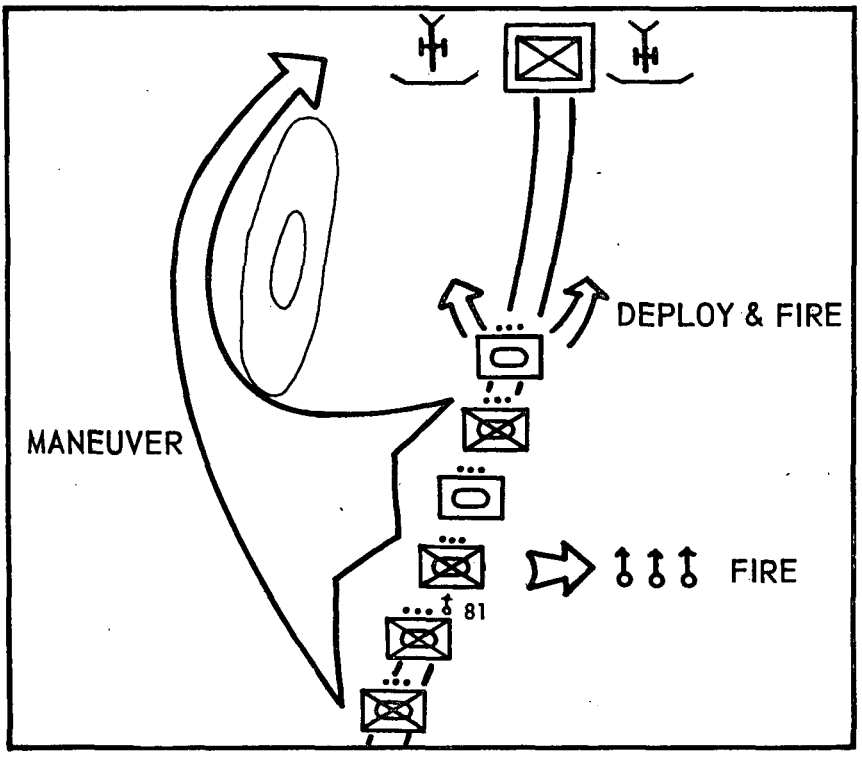


Figure 27. Company team attack from march column against heavy resistance.

126. Night Attacks—General

The increased necessity of passive defense against the enemy employment of atomic weapons, and under conditions of enemy air superiority, requires that a greater stress be placed on night offensive operations. Paragraphs 310 through 318, FM 17–1, cover in detail the principles of night offensive action.

127. Planning and Preparation for Night Attacks

The successful conduct of a night attack, particularly when conducted by an armored infantry battalion task force, is dependent upon detailed prior planning. Night attacks should be characterized by simplicity, secrecy, and surprise. The issuance of orders for a night assault of an organized position should be accomplished sufficiently in advance to permit company team and platoon commanders to reconnoiter attack positions, routes to the attack positions, and the line of departure, as well as the area over which the attack will be conducted. The use of Army aircraft in the conduct of the reconnaissance forward of the line of departure should be encouraged or directed when the enemy situation

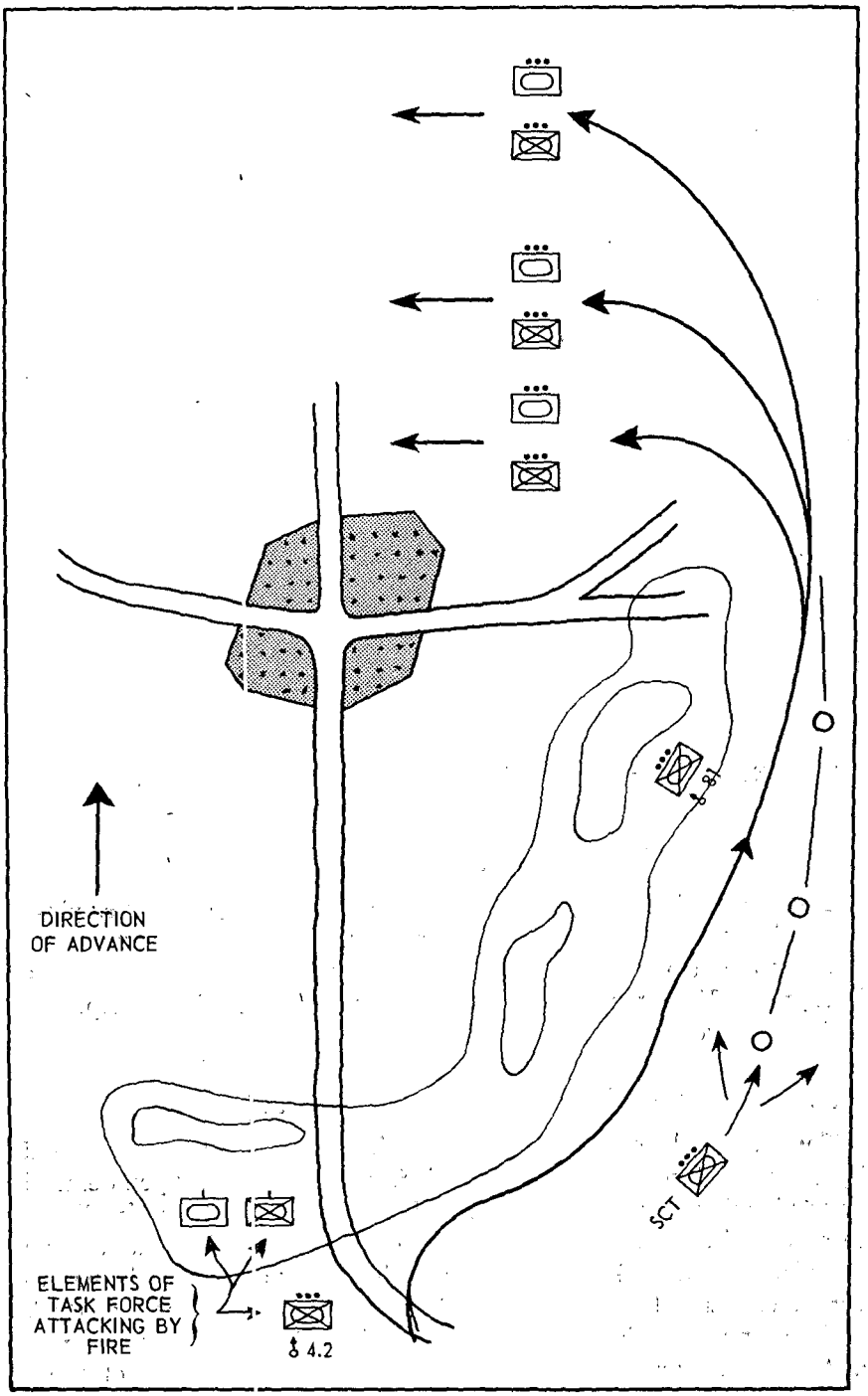


Figure 28. Armored rifle company team in a coordinated battalion task force attack from march column against heavy resistance.

will permit. Artillery may be used to illuminate the area of the organized position under attack should this be considered necessary. The coordination between the tanks and armored infantry comprising company teams should be accomplished during daylight, as should the physical joining of the elements comprising the team. The reconnaissance forward to the attack position and the line of departure should be conducted jointly by the tank and armored infantry commanders. If a passage of lines of units in contact is required, the company team commander, accompanied by his organic and attached platoon leaders, personally visits the unit through which he will pass. Specific items of information desired include—

a. Precise route to be used through the front-line position.

b. Location of known enemy positions, particularly tanks or antitank weapons.

c. Location of obstacles, both natural or emplaced.

d. Mortar and artillery target information.

e. Location of critical friendly installations to the rear of the force through which passage will be made (including wire lines, reserves, etc.).

f. Availability of guides and markers to assist in the passage.

g. Fire support that will be made available by the passed-through unit.

128. Formation for the Night Attack

At best, the control and conduct of a night attack are difficult. Except under extremely favorable conditions of visibility, when a line formation may be used, the initial formation is normally a line of platoon columns. An armored rifle company team with one tank platoon may advance with the tank platoon in line, followed by the rifle platoons, mounted in their carriers, in a line of platoon columns. The armored rifle platoon attached to a tank company team will normally be in column, closely following the advance of the tanks. The column formation is retained until further deployment is required by enemy action. The armored infantry remain mounted until they reach their assault position or until required to dismount to assist the advance of the tanks by the removal of obstacles or the elimination of enemy defenders prior to arrival on the objective. All vehicles advance buttoned up, preferably under cover of artillery air bursts as they approach the objective area. The vehicular weapons of the armored personnel carriers are employed to augment the fire of the tanks.

129. Dismounted Assault in Night Attack

Once the armored infantry have dismounted from their carriers, control is extremely difficult to maintain and, if lost, more difficult to regain. For this reason, the armored infantry advance as far forward as possible,

preferably just short of or onto the objective, prior to dismounting. The advance onto and over the objective is conducted with the tanks leading, closely followed by dismounted armored infantry, who clear the remaining resistance. The advance of the tanks across the objective should be at such rate that an excessive gap will not develop between tanks and dismounted armored infantry. A limit of advance is normally designated in the attack order, to prevent loss of control if elements should advance too far beyond the objective area.

130. Security of the Objective in Night Attack

Immediately upon seizure of the objective, measures similar to those employed in a daylight attack are taken to give early warning of an enemy counterattack. Security forces, predominantly armored infantry, are positioned far enough out to give warning of enemy forces within assaulting distance of the objective.

131. Continuation of the Attack During Hours of Darkness

In fast-moving operations, particularly during the exploitation, a daylight offensive may continue through the night. Depending upon the visibility and the availability of artificial illumination, these attacks may be conducted in a manner similar to an attack from march column. Under such conditions, daylight reconnaissance of the area over which the attack is to be conducted is not possible; consequently, dismounted armored infantry may be used to lead and direct maneuvering tanks over difficult and strange terrain. To expedite this movement, a portion of the armored infantry may ride on the tanks to be readily available, while the balance of the armored infantry follow in their carriers. The assault of the position should be accomplished in the manner described in paragraph 129.

132. Night Attack Without Tanks, General

A dismounted armored infantry battalion or rifle company may be employed to conduct a limited-objective attack during the hours of darkness without tank support. Such an attack, for example, may be conducted when attacking across an obstacle impassable to tanks.

a. Probable Line of Deployment. The probable line of deployment is a line on which the commander desires to complete deployment for the assault of the objective. It is the assault position in a night attack. It must be a terrain feature definitely recognizable at night and within assaulting distance of the objective. This distance varies according to the type of position being assaulted, the type and intensity of the supporting fires preceding the assault, the expected hostile reaction, and the terrain. When no suitable natural line of deployment is available, a line may be marked by guides using improvised means or equipment such as luminous buttons or infrared equipment. The use of release points and

a probable line of deployment assists the assault echelon in covering the objective uniformly.

b. Limit of Advance. To retain control and to prevent the assault echelon from being endangered by friendly protective fires, the commander establishes a limit of advance, both in depth and to the flanks of the objective, beyond which troops do not advance. This limit should follow terrain features that are recognizable at night. Protective fires planned just beyond this limit isolate the objective.

133. Advance in Night Attack Without Tanks

a. Method and Rate of Advance. The commander times the rate of advance of the assault echelon to insure a simultaneous assault on the objective by the leading elements. Night attacks made over difficult terrain may require the units to cross the line of departure on a staggered time schedule to insure their reaching the objective together. During the advance, leaders and commanders are constantly alert to insure close control over the movement. The commander may prescribe that halts be made at phase lines—usually at well-defined terrain features—or on a time schedule. At halts, leaders verify direction and contact and alinement with the base unit. The commander may prescribe that the advance be resumed only on his order. If this is done, the order is transmitted from the base unit by messengers or passed through from column to column. In an unsupported, nonilluminated night attack, the rate of advance is normally slow because of the need for stealth. The rate of advance depends on the visibility and the terrain. Control and maintenance of direction are more difficult in this type of night attack. In a supported night attack, either illuminated or nonilluminated, surprise is gained by the time and direction of attack; stealth is normally subordinated to speed in the advance. The assault on the final objective is made as quickly as possible.

b. Advance to Line of Deployment. Except in highly illuminated attacks, the advance beyond the line of departure is made in compact columns until close to the enemy, unless deployment is forced by enemy action. A silent, stealthy attack is essential to secrecy. When the assault units reach the successive release points behind their assigned portion of the line of deployment, they leave the column formation and fan out to form skirmish lines on the line of deployment. They prepare to assault at the prearranged time or on a given signal (fig. 29).

c. Action on Premature Deployment. Action of enemy patrols or outguards may force all or part of the assault echelon to deploy as skirmishers before the time planned. If possible, elements forced to deploy re-form in column after the resistance has been reduced. The remaining elements of the assault echelon are halted during such periods or continue movement to the next planned halt and await orders. Units that lose

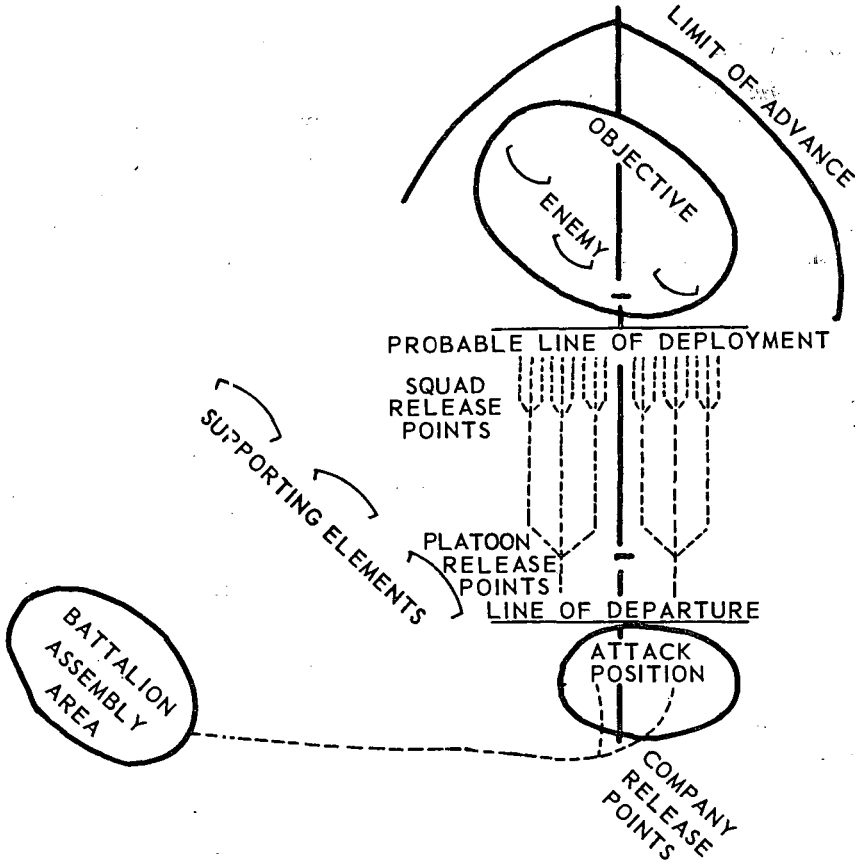


Figure 29. Armored infantry battalion in night attack.

contact with adjacent units regain contact while continuing to move forward toward their own objectives.

134. Control and Security in Night Attack Without Tanks

a. Control. The commander of each column moves at its head. An officer or noncommissioned officer moves at the rear of each platoon to assist in control. Column commanders constantly check on direction and contact, and control their units to prevent premature assault.

b. Security. Each column is preceded by security elements at the limit of visibility. Lateral contact is kept by connecting files operating within visual distance. If an enemy outguard is encountered, the leading elements of the column assist the security elements in disposing of this outguard by closing in while the rest of the unit takes cover.

135. Assault and Actions on the Objective in Night Attack Without Tanks

a. Assault. Deployment may be forced by enemy action, or it may be done upon arrival at the line of deployment. The deployment on the line of deployment is completed rapidly and silently; any prolonged halt at this stage of the attack increases the chance of detection. Precautions are taken to prevent a premature assault caused by desultory enemy firing. After deployment, the advance is continued at a walk until hostile resistance is met, at which time the final assault begins. At this stage all assaulting troops press on as quickly as possible, regardless of enemy action. Flares may be fired to allow the assaulting troops to take aimed shots and to move at a more rapid rate. Noise and tracer fire may be used to demoralize the enemy. Every effort is made to maintain the skirmish line and prevent it from breaking up into isolated groups. Aggressive leadership is essential.

b. Action After Capture of Objective. Consolidation and reorganization begin as soon as the objective is captured. Leaders organize the men in their immediate vicinity into groups and dispose them to resist hostile counterattacks. Rifle company mortars are moved promptly to cover likely avenues of enemy approach. Artillery forward observers adjust defensive fires as soon as they arrive on the objective. Adjustment by sound may be necessary. Security elements are sent out far enough to prevent the enemy from forming for counterattack within assaulting distance of the captured position. If they must go beyond the established limit of advance, their locations are carefully coordinated with the protective fires of artillery and mortars. Armored personnel carriers and tanks not participating in the assault are moved forward to assist in defense of the objective. By daylight all elements should be in position, with the reserve in supporting distance of the objective. At dawn, final adjustments are made in positions of machine guns and other weapons.

Section V. ADDITIONAL CONSIDERATIONS IN OFFENSIVE ACTION

136. General

See chapter 8, FM 17–1, paragraphs as indicated, for a discussion of considerations peculiar to the following:

a. Attack of a fortified area (pars. 320–322).
b. Attack of a built-up area (pars. 323–329).
c. Attack of a defile (pars. 330 and 331).
d. Attack in woods (pars. 332–337).
e. Attack of a river line (pars. 338–342).
f. Minefield breaching (pars. 343–345).

CHAPTER 4

DEFENSIVE OPERATIONS

Section I. GENERAL

137. General

a. There are two basic types of defense: *mobile defense* and *position defense.* In addition, armor units frequently employ *perimeter defense,* in which they use techniques of both the basic types. See chapter 9, FM 17–1. This chapter covers only those aspects of defense peculiar to armored infantry units. For logistical considerations, see FM 17–50.

b. The commander organizes and conducts the defense through application of the following basic considerations, which are discussed in paragraph 350, FM 17–1:

(1) Proper utilization of terrain.
(2) Security.
(3) Mutual support.
(4) Defense in depth.
(5) All-round defense.
(6) Fire-support plan.
(7) Strengthening of defensive area.
(8) Flexibility.
(9) Maximum use of offensive action.
(10) Maximum dispersion against atomic attack consistent with the mission.

c. Mobile defense is the normal and preferred type of defense for armor units. The position defense is less desirable for armor units because it does not make maximum use of the inherent characteristics of armor. Selection of the type defense to be used depends on the relative importance of the basic elements which determine defensive deployment as discussed in paragraph 353, FM 17–1.

138. The Armored Infantry Battalion in the Mobile Defense

The armored infantry battalion normally will be part of a larger unit in the conduct of the mobile defense. When organized for combat as a battalion task force, it is well suited to be employed as part of a

fixing force in the forward defensive area. Properly reinforced, it may act on occasion as part of the security force. Armored rifle platoons and companies often reinforce tank units in the striking force; an armored infantry battalion seldom will act alone as the striking force.

139. The Armored Infantry Battalion in the Position Defense

The armored infantry battalion normally will be part of a larger unit in the conduct of the position defense. This type defense is usually employed when ordered by a higher commander to fit his overall scheme of defense. In the conduct of mobile or perimeter defense as part of a larger force, the battalion may employ the techniques of position defense.

140. The Armored Infantry Battalion in the Perimeter Defense

The purpose of perimeter defense is primarily self-protection. It normally is conducted by armor units acting independently, or when separated from friendly forces. The armored infantry battalion may participate in perimeter defense as part of a larger command. When operating as a battalion task force on a semi-independent mission, it may be required to assume the perimeter defense for self-protection during temporary halts or while awaiting the arrival of other forces after seizing an objective.

Section II. ORGANIZATION OF THE DEFENSE

141. General

In either the mobile or position defense, armored infantry units may be required to organize the defense of specific terrain in accordance with the overall scheme of defense of the higher commander. Armored infantry may participate in mobile defense as part of a security, fixing, or striking force. When an armored infantry unit is employed as part of a fixing force, it may organize one or more strongpoints within its sector of the forward defensive area. In the position defense, the unit may be assigned a sector to defend as part of the forces in the battle area. Techniques in organizing the defense of the ground in these cases are basically the same and are discussed in this section. Particular emphasis is placed on techniques applicable to armored infantry units. They include reconnaissance, planning, organization of the ground, fire planning, security in general, and orders. Additional discussions on these subjects and on command, control, surveillance, and the employment of supporting troops are contained in paragraphs 355 through 366, FM 17–1.

142. Reconnaissance for Defense

In addition to those items listed in paragraph 355, FM 17–1, the battalion task force commander determines during his reconnaissance

the general trace of the forward edge of the battle area (FEBA). The FEBA is delineated by the forward edges of the platoons of the forward companies and intersecting boundaries at limiting points. Additionally, he determines the following:

a. Boundaries and limiting points between subordinate units.

b. Initial planning for defensive supporting fires.

c. Locations for antitank weapons.

d. Locations for obstacles to be constructed or emplaced.

e. Locations for observation posts (OPs).

f. Counterattack routes and objectives (initial planning).

143. Plans for Defense

a. The defense plan includes distribution and missions of subordinate units and organic weapons. It provides for security, coordination of fires, use of the striking force or reserve, use of attached units, communication, and administration.

b. If the defense is undertaken while the battle area is subject to enemy ground observation and fire, the commander indicates defense areas, makes attachments directly to the subordinate units, and designates the priority of supporting fires. As soon as he can, he readjusts these initial dispositions into a coordinated defense.

c. As in the attack, the plans for fires of organic and supporting weapons are combined in a fire-support plan, which is part of the defense plan.

d. For further discussion of planning for defense, see paragraph 365, FM 17–1.

144. Organization of the Ground for Defense

a. General. Measures for increasing the effects of fire and movement take precedence over all other work in the defense. Normal priority of work for the armored infantry element of a battalion task force is—

(1) Preparation of defensive positions, to include alternate positions.

(2) Preparation of counterattack routes.

(3) Strengthening the defensive position.

(4) Preparation of routes for resupply and evacuation.

(5) Establishment of a communication system, with emphasis on warning of enemy approach.

(6) Preparation of dummy positions (in accordance with the overall plan of higher headquarters).

b. Supervision. The commander and his subordinates supervise the work to insure that the terrain is used to the best advantage, that concealment and camouflage measures are carried out, and that the work progresses without loss of time or effort.

145. Preparation of Battalion and Company Defensive Positions

The battalion commander assigns defensive positions to his companies. Each company commander then reconnoiters his assigned sector and, on the basis of the reconnaissance and all available additional information, locates his platoons in such a manner as to cover avenues of approach into his sector. Successive reconnaissances by lower unit commanders finally result in fixing the exact distribution of the smallest units and their weapons.

146. Preparation of Platoon Defensive Positions

a. The front-line rifle platoon distributes its fire to cover its front and flanks and part of the fronts of adjacent platoons. Each rifle squad is assigned a sector of fire. These sectors overlap so as to provide complete coverage of the target area. The automatic rifles of the squads are assigned firing locations, principal directions of fire, and sectors of fire to best implement the squad fire plan (fig. 30). Nearby riflemen provide protection for the automatic riflemen. The platoon leader coordinates with the commanders of tank units which may be operating in or near the platoon position in order to insure coverage of the most likely avenues of enemy armor approach. This coordination may include provision of close-in protection of tanks by the armored infantry.

b. There are five caliber .30 machine guns in the platoon. Two of these machine guns are located in the machine gun squad, and there is one in each of the rifle squads. The TOE designates personnel to man the machine guns in the machine-gun squad; however, no specific individuals are designated to man the machine guns in the rifle squads. Consequently, in determining how they will use these weapons in any defensive situation, the platoon leader and rifle squad leader must realize that to man these weapons will mean the loss of two individuals as riflemen. All squad members should be qualified to fire these machine guns. The specific individuals who man these weapons must be covered by the unit SOP or by directive of the platoon or squad leader. Often the fires of the machine guns organic to the 81-mm mortar squads of the company are integrated with the machine-gun fires of the rifle platoons in a defensive situation. In general, the machine guns are normally employed in pairs and are sited where they can furnish maximum protection to the platoon defense area, exchange mutually supporting fires with adjacent units, and deliver final protective fires. In a defensive

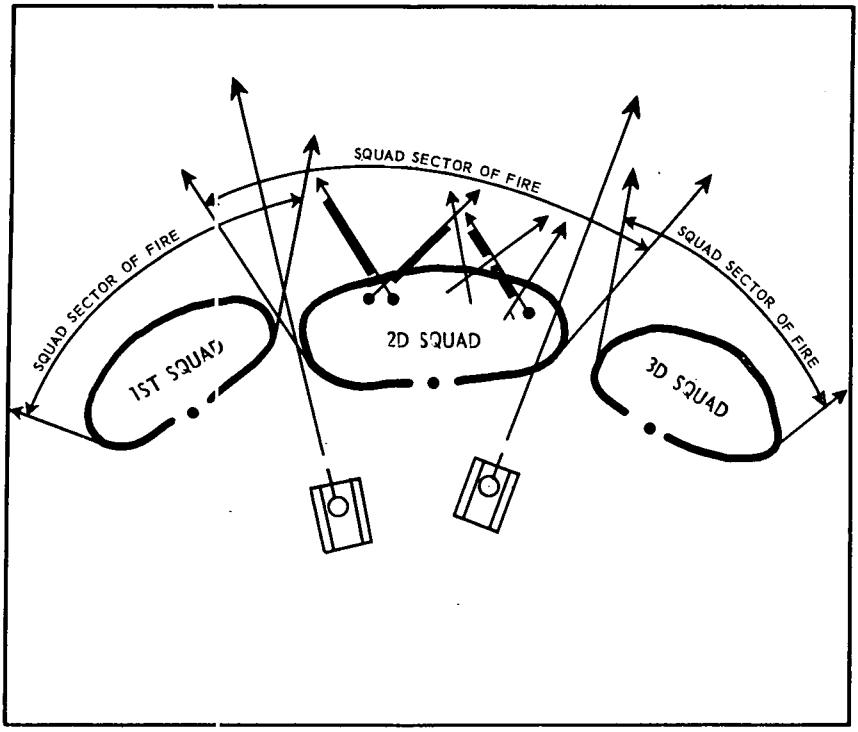


Figure 30. Weapons of the front-line rifle platoon are sited so as to provide interlocking bands of fire (machine-gun squad in the 2d squad position).

situation, the platoon leader has several choices for employment of his machine guns. All these weapons may be employed under platoon control covering the most dangerous avenue of enemy approach. He may leave the rifle squad machine guns under squad control, leaving to the squad leaders the determination of their locations in the squad areas as well as the control of their fire. Or, the platoon leader may direct that only one or two of the rifle squad machine guns be employed in positions he selects. When the situation permits, the weapons of the machine-gun squad are placed near the center of the platoon position to enable coverage of as much of the platoon front as possible.

c. The rocket launchers are assigned sectors of fire and principal directions of fire. They are placed where they can give maximum antitank protection to the platoon defense area. Their principal direction of fire is coordinated with nearby tanks.

d. Platoons, occupying positions of depth in the battle area, assign squad sectors of fire that complete the all-round, integrated defense of the area. They cover unit flanks and gaps between units, and are prepared to fire on an enemy penetration or envelopment. Their machine

guns are assigned principal directions of fire to cover any gaps between forward defense positions, and to cover likely routes of hostile approach within the battle area. The rocket launchers are used as in front-line platoons.

147. Security During Occupation and Organization of Defensive Position

Patrols, observation posts, and outposts commence operations during the occupation of the position and its organization. The activities of these security elements are planned to coincide as far as possible with the subsequent security operations planned for the position and the area. This permits work to start on the security positions at once and avoids, as far as possible, unnecessary shifting of security forces. In addition, available Army aircraft are used to the maximum on surveillance missions to further insure the security of the unit.

148. Employment of Armored Personnel Carriers in Defense

a. The armored personnel carriers may be integrated into the all-round defense of the unit. Since the mission of the unit requires that it remain mobile and be prepared to move on short notice, a major factor in the employment and placement of the carriers is that they be readily available to their armored infantry for rapid movement. Techniques discussed in this paragraph apply to both mobile and position defense.

b. If possible, armored personnel carriers should be employed in the squad areas. Their vehicular machine guns can be used to increase the long-range, close-in, and final protective fires of automatic weapons and dismounted armored infantry. Sectors of fire are assigned to their caliber .50 machine guns. However, because of their high silhouette and vulnerability to certain types of enemy fire, it is usually necessary to place the majority of the carriers in defilade to the rear of the strongpoints, with provision for moving them, as the situation requires, to previously selected firing positions. When the carriers are used in this manner, the fires of their vehicular machine guns can be employed at medium ranges against an advancing enemy and to augment final protective fires. While in defilade they can provide flank and rear protection. With proper training and equipment, the caliber .50 machine gun can be used in an indirect-fire role to cover area targets.

c. When positioned for fire, the carrier should be placed in full hull defilade to provide maximum protection and concealment, because the caliber .50 machine gun must be fired from an exposed position.

d. In the defense, the armored personnel carriers are particularly useful for resupply and evacuation.

149. Strengthening the Defensive Position

a. In the mobile defense, some elements of a defending force may employ techniques of position defense, while other elements conduct a counterattack. An armored-infantry-heavy unit may be assigned the mission of defending or denying specific critical terrain to help divert the enemy into a killing ground for counterattack by a tank-heavy force. When such employment is contemplated, the armored-infantry-heavy unit will improve and strengthen its position as long as time permits.

b. Obstacles are located to stop or divert the hostile approach. Barbed wire entanglements, mines (when authorized), and other obstacles are located to break up the enemy's attack formation and hold him in areas which are covered by defensive fires. Obstacles are placed to be inconspicuous from ground or air observation, and so that direct fire can prevent their removal or neutralization by the enemy.

(1) Protective obstacles—such as barbed wire entanglements, trip flares, noise makers, and antipersonnel mines (when authorized)—are located to prevent surprise assaults from points close to the defense area. They are close enough to the defense area for day and night observation and far enough away to keep the enemy beyond normal hand-grenade range. Depending on the terrain, 50 to 100 yards fulfills these requirements.

(2) The use of antitank mines is coordinated with the use of other obstacles and antitank weapons. Antitank mines are laid forward of the defensive position to connect and extend other obstacles and to canalize hostile armor into areas where antitank fires are most effective. To guard against removal or breaching by the enemy, these mines are covered by small-arms fire of the armored infantry and by any attached tanks. When minefields and barrages of mortars and artillery are planned in the same general area, the mines are located at the near edge of the barrage areas.

c. Mines and other obstacles must not be placed where they may hamper the movements of the reserve or the striking force. Engineers, normally controlled and coordinated at combat command level, may assist in laying of mines and in the construction of obstacles. Units occupying the defensive area, however, must expect to do most of this and other construction work. Advantage is taken of all natural obstacles to delay and harass the enemy.

d. Dummy works, planned in accordance with an overall scheme of a higher headquarters, may be used to mislead the enemy and disperse his fire. To be effective, they must closely resemble genuine works. Dummy works should be at least 150 yards from any actual position so that fire directed at them will not include occupied localities. For further decep-

tion, dummy works may be very lightly manned with armored infantry during preliminary phases when the enemy tries to locate defensive positions by air reconnaissance and ground patrolling. Examples of deceptive techniques that armored infantry may employ include—

(1) Installing phony minefields, including some booby traps and live mines, to inflict casualties and to force the enemy to make a cautious and thorough search of the area.

(2) Spreading canvas strips, straw, foliage, or similar material to cover sections of roadway leading into the defensive position. Some of these may conceal ditches, mines, or booby traps; others are harmless.

(3) Concealing antitank mines in trees feeled across a road. A tank which attempts to crash through is stopped within the obstacle, thus making the block more effective.

150. Fire Planning in Defense

a. General. Fire planning provides for bringing the enemy under fire as early as practicable, for increasing the fire as he nears the defensive position, for breaking up the enemy's assault, and for limiting possible penetrations of the defensive area. Defensive fires must be carefully planned to insure that they will be effective during both darkness and daylight.

b. Armored Infantry Battalion Task Force. The battalion fire-support plan includes detailed plans for coordinating fires of automatic weapons, attached tanks, the battalion mortar platoon, and all other fire-support means (par. 364, FM 17–1). As soon as the battalion commander has determined his scheme of defense, a fire-support plan is prepared which will include long-range fires, close defensive fires to support the defensive positions, and fires to support the counterattack. The battalion commander determines the areas in which artillery and mortar fires will be used. The concentrations and barrages of the battalion mortar platoon are planned in accordance with the directives of the battalion commander. Particular attention for the use of these high-angle fire weapons is given to defiladed areas. Normally, the mortar platoon is assigned one platoon barrage during the execution of final protective fires. However, the platoon is capable of firing from two to four squad barrages. Also, the battalion commander, in conjunction with the artillery liaison officer, will request the supporting artillery fires he needs to accomplish his mission. Each battery of artillery has the capability of firing only one barrage. Barrages are allocated to the battalion task force by the combat command commander. In addition, any number of concentrations may be planned by the battalion task force. Both artillery and mortar fires are integrated into the overall battalion fire-support plan, and should be planned on critical areas such

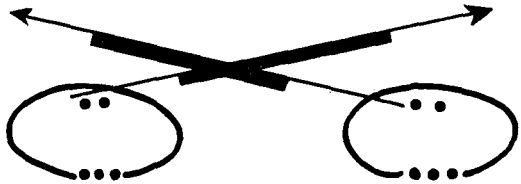
as likely avenues of approach, possible assembly areas and attack positions, and known or suspected enemy locations. Each of the preplanned concentrations and barrages is identified so that it can be called for easily by any member of the command.

c. Armored Rifle Company Team. The company commander assigns areas of responsibility to each platoon. Normally, the company commander will employ the 81-mm mortar platoon under company control. He plans the fires of the mortars after consideration of the requests from the platoon leaders. He designates barrages and concentrations to insure complete coverage of the company sector. Upon execution of final protective fires, the 81-mm mortar platoon can deliver three squad barrages. The company team commander coordinates the organic fires of the company by consolidating the platoon fire plans. Attached tanks within the company defensive area will fire at targets of opportunity. In addition, the company team commander requests supporting artillery fires through his artillery forward observer.

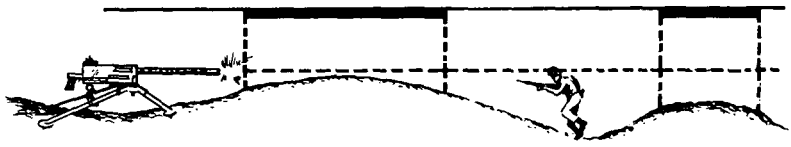
d. Rifle Platoon. The rifle platoon fire plan includes the assignment and coordination of sectors of fire for each rifle squad and for weapons under the direct control of the platoon, to include, usually, all crew-served weapons. Machine guns are assigned sectors of fire. A machine gunner engages any enemy within his sector, subjecting him to fire as he approaches, and finally forcing him to pass through interlocking bands of grazing fire before he can deliver his assault (fig. 31). Except when other targets are being engaged, the gun is habitually laid on the final protective line. The platoon leader requests artillery and mortar barrages and concentrations to cover those areas in his defensive sector which cannot be covered by his direct-fire weapons. The rifle platoon leader tells his men how the fires will be controlled. Measures to control platoon fires normally include designation of terrain features over which the enemy must pass before the platoon opens fire, signals for shifting fires or moving to supplementary positions, and signals for final protective fires. Where possible, vehicular machine guns of the armored personnel carriers are integrated with the other platoon fires.

151. Use of Range Cards in Defense

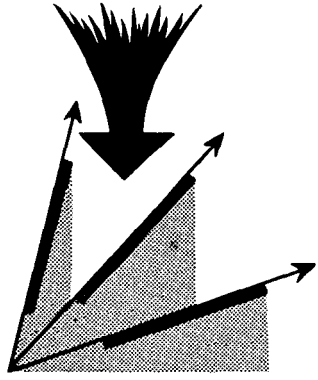
a. General. In order to be prepared to deliver fire promptly on likely targets in any situation, data which will facilitate the laying of the guns during hours of both good and limited visibility must be determined. This data must cover key points near likely targets. Typical key points are crossroads, ridges, stream junctions, woods, and other landmarks and areas which may be occupied by the enemy. The data must be recorded in a form which will serve as a guide to the leaders and gun crews. Time permitting, especially during the conduct of position defense, a range card for each automatic weapon is prepared in the



FLANKING–INTERLOCKING–GRAZING



GRAZING



FLANKING FIRE

Figure 31. Final protective fires of machine guns are flanking, interlocking, and grazing.

form of a sketch of the sector, showing only the probable locations of targets and the data as to direction and range or elevation necessary to place fire on them.

b. Preparation of Range Cards. In the preparation of range cards, the following should be used as a guide (fig. 32):

(1) Notation should be made on the range card of the designation of the squad, platoon, and company, the accurate location of the gun position, and the date of occupation.

(2) North, south, east, and west lines are drawn, as applicable, to permit orientation of the card.

(3) All data and instructions should be legibly printed.

(4) Landmarks or targets should be indicated by conventional signs and sketches in perspective, naming them where necessary to prevent misunderstanding.

(5) Targets should be numbered from left to right.

(6) For machine guns, the final protective line (FPL), which usually forms one limit of the sector of fire, should be taken as a zero line. That part of the line which provides fixed grazing fire should be shown in heavy black. The directions to all targets should be indicated by the proper traversing bar reading from the FPL (zero line). The individual preparing the card should determine and record the range, elevation, and angle of shift from the FPL (zero line) for each target or terrain feature.

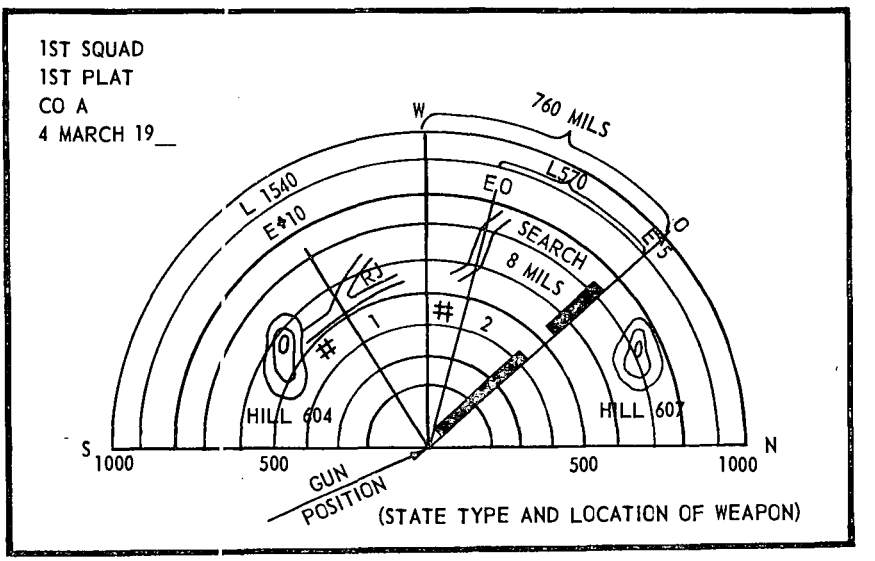


Figure 32. Sample range card, machine gun.

152. Surveillance Plan for Defense

a. To assist in the protection of the intervals between units and of rear areas, and to guard against infiltration, the battalion task force commander prepares a surveillance plan (par. 365, FM 17–1). The company team commander coordinates the company's observation posts and patrols to fit them into the battalion surveillance plan and to avoid duplication of effort. The location of several observation posts in the same area is avoided. When terrain features that offer good observation are limited, observers are spread across the front so that overlapping observation is obtained over the defense area and approaches to it. Their activities are coordinated with any Army aircraft operating in the area on surveillance missions. Communication facilities are coordinated and used to the maximum, so that any observer can call for and control the fires of any supporting weapon.

b. Contact points are established between adjacent units, and patrols are dispatched at irregular intervals in accordance with the plan of the higher commander or as established by the unit SOP. The battalion scout platoon, when not employed on an outpost mission, may be integrated into this plan. Company teams may dispatch tanks and armored personnel carriers on these patrol missions, depending on the nature of the enemy activity. On occasion, patrols may be mounted in ¼-ton trucks or on foot.

153. Local Security in Defense

All units establish local security for their own close-in protection. This consists of sentinels, observation posts, and listening posts within the unit defense areas and covering the immediate approaches to these areas from all directions. The platoon leader determines requirements for these security elements based on instructions from his company commander and the requirements of his particular area. Sentries should be relieved at least once every two hours. Local security for the battalion is provided by the local security of each company, of the command post, and of the trains.

154. Defense Orders

a. General. Defense orders are operation orders and, as such, follow the same format as attack orders. However, they usually contain greater detail. For examples and discussion of operation orders, see paragraph 95, FM 17–1.

b. Company Defense Order. The company commander bases his defense order on the battalion order, his own reconnaissance, and recommendations from his platoon leaders. The platoon leaders, attached unit commanders, liaison personnel, and artillery forward observers usually receive the order. When practicable, key noncommissioned officers are

present. The defense order is issued verbally in the 5-paragraph operation-order sequence.

c. Platoon Defense Order. Whenever practicable, the platoon defense order is issued from a vantage point overlooking the platoon defense area. The defense order is an oral order; it follows the same 5-paragraph form as the platoon attack order, with the following additional instructions in paragraph 3:

(1) Location and sector of fire for each rifle squad.
(2) Location, mission, and sector of fire for each automatic rifle, rocket launcher, machine gun, and attached weapon.
(3) Organization of the ground, including type of emplacements, auxiliary defenses to be constructed, and priority of work.

Section III. MOBILE DEFENSE

155. General

Elements of the mobile defense consist of *security forces, fixing forces,* and *striking forces.* Armored infantry may participate in mobile defense as part of any element.

156. Armored Infantry in the Security Force

a. Security forces include covering forces, observation posts, local security elements, and other surveillance forces. When an armored division is conducting a mobile defense, the division's armored cavalry squadron normally is assigned the covering force mission. An armored infantry unit may participate in a covering force action as part of a combat command or an armor battalion task force, or it may be attached to an armored cavalry unit. However, if the situation requires, an armored infantry battalion task force may be assigned this mission. To accomplish a covering force mission, the battalion must be reinforced with tanks and engineers and must be supported by artillery and Army aviation. The battalion organizes company teams in order to effectively operate across the broad front required by this type mission. Once organized for combat, the armored infantry battalion task force conducts a security force mission as discussed in paragraph 369, FM 17–1.

b. Armored infantry platoons or companies may be attached to other units executing a security force mission. This usually is the case when the situation requires that an armor battalion task force be designated as the security force.

157. Armored Infantry Battalion Task Force as Part of a Fixing Force

a. General. In the mobile defense, the armored infantry battalion may be assigned a sector to defend in the combat command defensive

area. When so employed, the battalion normally is reinforced with tanks. It may be either an armored-infantry-heavy or balanced task force.

b. Reconnaissance of the Battalion Sector. As soon as he is given his mission and assigned a defensive sector, the armored infantry battalion task force commander immediately reconnoiters his area as completely and thoroughly as time and the situation permit. He makes a map reconnaissance and, if possible, a ground and air reconnaissance. He determines the likely avenues of approach available to the enemy and the terrain which dominates these avenues.

c. Coverage of Avenues of Approach. Normally, an armored infantry battalion task force is assigned a sector covering the most likely avenues of hostile infantry approach. Within that sector, any attached tanks are used to cover the most likely avenues of hostile armor approach and to add depth to the battalion position. The armored infantry must provide close-in protection for the tanks.

d. Assembly Areas. Company-size assembly areas may be designated for initial movement into the forward defensive area and may be used as a base from which company teams organize and prepare assigned strongpoints and initial defensive positions. Armored infantry may be employed to provide security for these assembly areas, using the techniques discussed in paragraph 55.

e. Battalion Mortar Platoon. The 4.2-inch mortar platoon is normally retained under battalion control and positioned to provide fire support for the entire battalion sector.

f. Battalion Scout Platoon. The battalion scout platoon normally is assigned the mission of establishing the observation posts to the front of the forward defensive area. The conduct of this type security mission is explained in FM 17–35. Local security elements of forward company teams must maintain contact with elements of the scout platoon.

g. Control. The primary means of control is radio. However, time permitting, wire is laid to and within company defensive areas by battalion communication platoon or company communication personnel as appropriate (pars. 27 and 29). Messengers and visual signals may also be used for control.

h. Counterattack Plans. Depending upon the scheme of defense announced by the combat command, the battalion task force commander makes plans for limited spoiling attacks to the front against likely enemy attack positions, or counterattacks designed to divert the enemy into preselected killing grounds. These plans may require one or all of the companies to participate in the attack. Depending upon the scheme of maneuver of the striking force, the battalion commander may plan for one or more company teams to make a limited-objective attack

against the flank and rear of the enemy to force him into a killing ground. These counterattacks are offensive in nature and are conducted as explained in chapter 3.

158. Company Team Positions in Fixing Force Operations

a. Within the sector designated for the battalion task force to occupy, the task force commander selects company team positions. In selecting these positions the commander considers critical terrain, observation and fields of fire, cover and concealment, natural obstacles, possible avenues of enemy approach, the overall width of the battalion task force sector, and the killing grounds selected by the next higher headquarters.

b. After determining the sectors of the forward defensive area which the company teams will be assigned, the commander may designate strongpoints for them to occupy either initially or on order. These strongpoints are selected to deny critical terrain to the enemy, to canalize the enemy into the selected killing grounds, and to facilitate the attack of the striking force. The size of the strongpoint will dictate the strength of the unit thereon. In certain situations, the battalion commander may order one of his companies to initially occupy one of more strongpoints (fig. 33).

c. Based on the scheme of defense, the company team may be required to occupy one or more strongpoints as the action develops. In some instances the company team commander may be ordered to occupy a strongpoint with his entire force; at other times a number of smaller strongpoints may be required. These strongpoints may or may not be mutually supporting, depending on the nature of the terrain.

159. Platoon Positions in Fixing Force Operations

a. Terrain will normally be the primary factor that influences the method of utilizing platoons of a company within a company sector along the FEBA. A company commander may be able to organize his entire company on one terrain feature, or he may be forced to assign platoons to separate terrain features. Thus, a company could have three separate platoon positions within the company position. Further, it may have one platoon occupying one terrain feature while the remainder of the company occupies another terrain feature.

b. In some instances, due to the nature of the terrain and width of sector, platoon positions may be out of immediate supporting range of other elements of the company. Mutual support between platoon positions is desirable, however. To be considered as mutually supporting by fire, each platoon must be able to give some assistance by the fire of its weapons to an adjacent platoon which is under attack. This does not mean that it must fire across the entire front of the adjacent platoon. In order that the rifle platoons within a company sector can be mutually

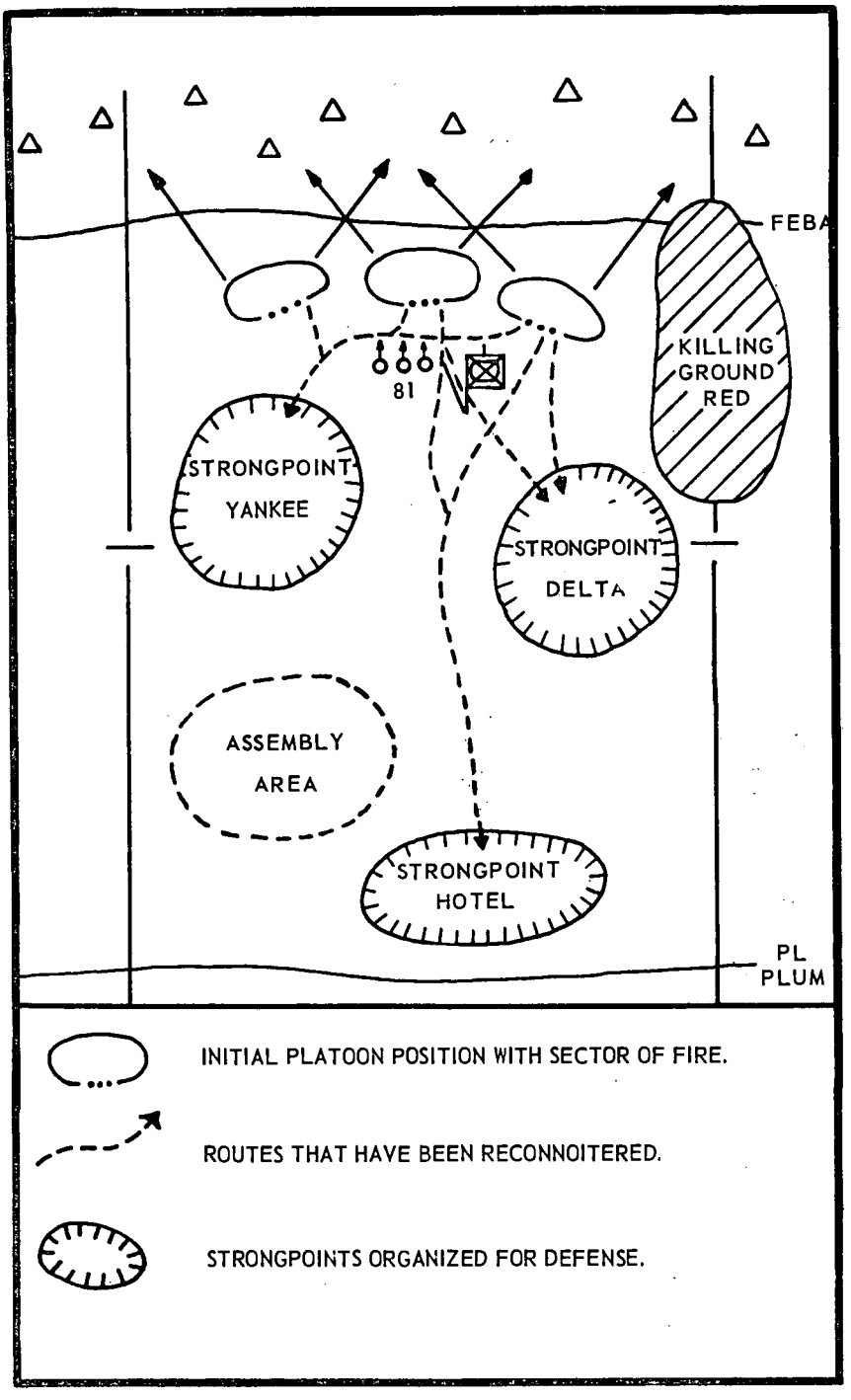


Figure 33. Example of organization of armored rifle company team defensive sector.

supporting by fire, they cannot be separated by more than 750 yards. This figure is based on the ability of machine guns, with a maximum effective range of about 750 yards (grazing fire), to fire into the area of an adjacent platoon.

c. All platoon positions will be organized for all-round defense.

160. Conduct of the Mobile Defense by an Armored Infantry Battalion Task Force as Part of a Fixing Force

See paragraphs 373 and 377, FM 17–1.

161. Armored Infantry Battalion Task Force as Striking Force

a. General. An armored infantry battalion task force may constitute the striking force for the combat command. As such, it will be prepared to attack and destroy an enemy force that has penetrated the forward defensive area or may be threatening to penetrate that area. When the battalion is employed as a striking force, its actions will be offensive in nature; therefore, the preparation for, and conduct of, its operations will be generally similar to those of normal offensive operations. To accomplish the striking force mission, the armored infantry battalion must be heavily reinforced with tanks.

b. Reconnaissance. Formulation of the attack plans should be preceded by a thorough reconnaissance of the attack areas designated by the higher commander. The attack by the striking force should take place over terrain which favors the attacker. Every effort should be made to plan the attack to strike the enemy from the flanks or rear and to pin him against an obstacle. The striking force may attack the enemy within, to the rear of, or in front of the battle area.

c. Plans.

(1) When the armored infantry battalion task force is the striking force for a larger force, the higher commander will direct the battalion commander to prepare plans for the employment of the striking force. The commander conducting the mobile defense will outline his concept and prepare the overall counterattack plans for the entire defense. Plans for the employment of the striking force will include attack positions where necessary and routes thereto, line of departure, scheme of maneuver, objectives, supporting fires, and necessary coordination.

(2) Final approval of the striking force attack plans rests with the combat command commander. After plans have been approved, key personnel of the armored infantry battalion task force should be made familiar with the plan and given an opportunity to reconnoiter the attack area. Enemy action will seldom permit the striking force to execute its attack exactly as planned. The task force commander must be prepared to quickly modify

any attack plan so as to insure success regardless of what course of action the enemy follows.

d. Initial Locations of the Striking Force. An armored infantry battalion task force which is designated as the striking force for a combat command usually is positioned so that it can add depth to the forward defensive area. The task force commander, as a matter of second priority to the completion of counterattack plans, organizes a task force blocking position and covers likely avenues of enemy approach. No action is taken, however, which would interfere with the rapid movement of the task force in implementation of any of its counterattack plans. Although the initial location of the task force as a striking force will be determined by the combat command commander, the task force must be so located as to fully utilize the best routes to any threatened point or killing ground.

e. Decision to Commit the Striking Force. The decision to commit the battalion task force when it is the striking force will be made by the combat command commander. When committed, the striking force will attack swiftly, using previously reconnoitered routes, to hit the enemy with the maximum surprise and shock effect possible.

f. Conduct of the Counterattack. When the striking force is committed, the striking force commander will assume command of the area between his line of departure and his objective. In addition to the elements in his striking force, the commander will assume command of any other elements, particularly those occupying strongpoints, that can directly affect or contribute to the success of the attack. Units not attached to the striking force may be directed to support the attack by fire. When committed, the striking force will be given priority of supporting fires and close air support.

162. Armored Rifle Company and Platoon as Part of a Striking Force

An armored rifle company or platoon that is part of an armor battalion task force or tank company team in the striking force normally is located in the area of the striking force. It may be used to assist in blocking a hostile penetration, to reinforce an existing strongpoint, or to participate in a counterattack as a part of the striking force.

163. Armored Infantry Battalion Task Force as Part of a Larger Striking Force

The armored infantry battalion may be employed as part of the striking force of a larger command. In such a case, the battalion should be reinforced with tanks. Actions of the battalion will be offensive in nature. Preparation of counterattack plans will be as outlined in chapter 3, this manual, and in paragraph 373, FM 17–1.

Section IV. POSITION DEFENSE

164. General

Armored infantry units may assume the position defense as part of a larger force in the defense. Although this type defense does not utilize to the maximum the mobility and shock action inherent in an armored infantry unit, the battalion may frequently adopt the techniques of position defense in executing phases of the mobile defense or the perimter defense.

165. Distribution of Forces in the Position Defense

In the position defense, three tactical groupings are organized: a *security force, forces in the battle area,* and a *reserve.*

a. Security ecehelons for the battle area may include aviation, covering forces, a general outpost, combat outposts, and local security. The armored infantry battalion, when acting alone, should not be assigned a covering force or general outpost mission. When organized for combat as a battalion task force, it may perform either of these functions. Armored infantry units may be attached to armored cavalry or tank units performing these missions.

b. The armored infantry battalion normally participates in position defense as part of the forces in the battle area. When so employed, it should be reinforced with tanks.

c. Armored infantry units should not be employed alone as the reserve for a larger unit in position defense. They normally are used to reinforce tank units in the reserve.

166. The Armored Infantry Battalion Task Force on a Covering Force Mission

A covering force is employed in front of the general outpost whenever practicable. The mission of this covering force is to inflict the maximum delay on the enemy. The covering force should be highly mobile. Armored infantry alone should not be assigned this task. However, the armored infantry battalion task force, as part of a larger unit, may be employed in this role. The covering force normally has attached engineers and may have attached artillery. It fights by delaying action and avoids decisive engagement with the enemy unless its mission makes such engagement necessary. For details concerning a covering force mission, see paragraph 382, FM 17–1. See also chapter 5, this manual, for discussion of a delaying action.

167. The Armored Infantry Battalion Task Force on a General Outpost Mission

The general outpost is normally organized and controlled by the division or higher commander. It is located approximately 6,000 to

12,000 yards forward of the forward edge of the battle area. The mission of the general outpost is to obtain timely information with respect to the location, strength, and activities of the enemy, to disorganize and delay his advance, and to deceive him as to the true location of the battle area.

a. The armored infantry battalion, heavily reinforced with tanks and supported by engineers, artillery, and Army aviation, may be employed to form all or part of the general outpost for the division. The location of the general outpost is normally prescribed by the division commander.

b. When given a general outpost mission, the armored infantry battalion commander makes a personal reconnaissance of the position, supplemented by a map and aerial photo study. Based on the mission and reconnaissance, he makes his plans, to include security measures, frontages, the disposition of troops on the position and on advantageous delaying positions in the rear, the organization and coordination of fires, the organization of the ground, means for deception and disorganization of the enemy throughout the action, and movement to successive positions in the rear. Extended frontages are covered by increasing the intervals between units; these intervals are covered by observation and fire.

c. Battalion actions during conduct of a general outpost mission are essentially the same as for a covering force mission (par. 166). It begins its withdrawal before becoming decisively engaged. The action upon each successive delaying position is designed to create as great a change as possible in the direction of the enemy attack, and to bring about the deployment of the maximum number of hostile units.

168. Combat Outpost

a. The combat outpost is normally located from 1,500 to 3,000 yards in front of the forward edge of the battle area. It is normally far enough forward to deny the enemy close ground observation of the battle area. The elements of the combat outpost are furnished by the forces in the battle area; usually it is a company which is positioned in depth in the battle area.

b. The mission of the combat outpost is to provide early warning of the advance of the enemy and to deny the enemy close observation of the battle area. It aids in securing the battle area, gains timely information of the enemy, and inflicts maximum casualties on the enemy without engaging in close combat. The combat outpost coordinates closely with security echelons to its front. When there are no friendly troops to the front, the combat outpost sends out patrols to gain and maintain contact with the enemy. It brings the enemy under long-range artillery and mortar fires. Army aircraft help the combat outpost locate the enemy and adjust fires. As the enemy approaches, outpost weapons open fire at long ranges. As he advances, the enemy meets continuous and

increasing resistance by fire. Before dark, the combat outpost may be strengthened to increase patrols during darkness and to keep close contact with the enemy.

c. The combat outpost withdraws on order of its battalion commander. If out of communication with the battalion commander, the combat outpost commander withdraws his troops when necessary to prevent their capture or destruction by the enemy. The outpost uses previously reconnoitered routes of withdrawal that give maximum cover and concealment and that permit fire by flat-trajectory weapons from within the battle area. Routes are selected to deceive the enemy as to the true location of the battle area. Several plans for withdrawal are made so that the unit is prepared for any changes in the situation. Normally, the least-engaged units are withdrawn first. The first units withdrawn may, by establishing a delaying position, assist other units in breaking contact. Less-engaged units may be used to increase the fire in front of the most-engaged unit preparatory to its breaking contact. Units within the battle area and adjacent battalions are notified immediately of the start of the withdrawal. Front-line units are notified when all elements of the combat outpost have cleared the forward edge of the battle area.

169. Forces in the Battle Area

a. General. Forces in the battle area include those elements charged with the immediate defense of the forward edge of the battle area (FEBA). For a discussion of a battalion task force as part of the forces in the battle area, see paragraph 383, FM 17–1.

b. Frontages and Depths.

(1) *Armored infantry battalion task force.* The frontage assigned to a front-line armored infantry battalion task force in the position defense is influenced by the terrain and the number of companies operating with the task force. A task force with two companies on the forward edge of the battle area can cover from 1,200 to 3,000 yards of frontage. Similarly, a task force with three companies on the FEBA can cover a frontage of 1,800 to 4,500 yards. The depth of a front-line battalion task force area varies with the terrain. The area must have enough depth to permit proper disposition of all task force units. Normally a depth of 700 to 1,400 yards will suffice (fig. 34).

(2) *Armored rifle company team.* The task force commander assigns frontages to his front-line company teams according to their natural defensive strength and the relative importance of the defense areas. An armored rifle company team occupying a defense area on the forward edge of the battle area may be given a frontage of 600 to 1,500 yards. A company team occupying a vital area having poor observation and poor fields of fire,

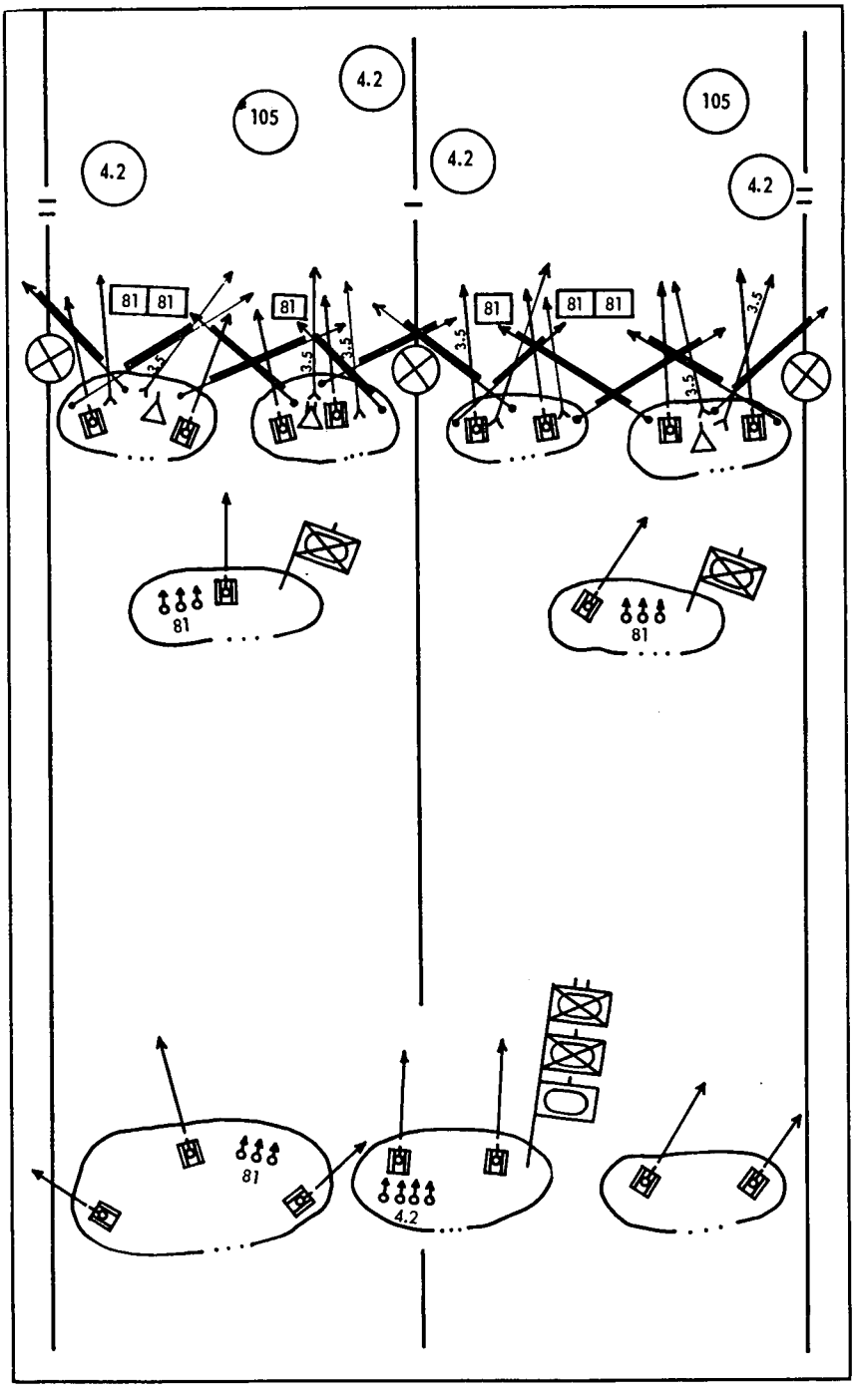


Figure 34. Armored infantry battalion task force in position defense, schematic. For clarity, only a few barrages and concentrations are shown.

as in heavily wooded or broken terrain, is given a frontage near the minimum figure. Where the terrain is more open and provides longer fields of fire and better observation, the frontage approaches the maximum figure. In unusually open and flat terrain, or where natural obstacles across the front greatly strengthen the defense, the team may be assigned a frontage greater than 1,500 yards. The strength and combat effectiveness of a team are considered in assigning its frontage. The depth of a company team area from the forward edge of the battle area to the rear generally does not exceed 700 yards. The area of responsibility in front of the forward edge of the battle area includes local security and seldom exceeds 500 yards.

(3) *Rifle platoon.* The company commander assigns frontages to his rifle platoons according to the natural defensive strength and relative importance of their defense areas. If a platoon occupies an area which has poor observation and poor fields of fire, or heavily wooded and broken terrain, the frontage assigned usually does not exceed 300 yards. If the area is open and provides longer fields of fire, a frontage of 750 yards may be assigned. If the terrain is open and flat, or if an obstacle across its front makes an enemy attack in strength very difficult, the frontage assigned the platoon may exceed 750 yards. The frontage physically occupied by the platoon is determined by the intervals that can be left between foxholes without jeopardizing the effectiveness of the defense, and by the number and type of supporting weapons within the area. These intervals depend upon observation, fields of fire, and obstacles. In general, they vary from 5 to 20 yards. In close terrain, the interval may be 5 yards between single foxholes and 10 yards between double foxholes. In open terrain, single foxholes may be as much as 10 yards apart and double foxholes 20 yards apart. Under normal conditions, a 25-yard interval is allowed for each crew-served weapon in the platoon area. The platoon covers by fire any portion of its front that is not physically occupied. If a rifle platoon has good fields of fire to the flanks and rear from its front-line foxholes, it may use a depth of only 50 yards. If elements of the platoon must move from the forward positions to get adequate fields of fire to the rear, a depth up to 200 yards may be used.

170. Distribution of Forces Within an Armored Infantry Battalion Task Force

In the position defense, the armored infantry battalion task force normally furnishes part of the forces in the battle area, a task force reserve, and a security force. The task force reserve should be a com-

pany team where the bulk of the attached tanks are concentrated; it furnishes depth to the position and will counterattack when necessary. The security force is composed of observation posts, patrols, and the combat outpost.

171. Distribution of Platoons Within the Armored Rifle Company Team

a. Upon receipt of a mission to defend a portion of the battle area, the company team commander makes a reconnaissance of his sector. Platoon positions are selected covering the major avenues of approach into the company sector. These positions are located to provide mutual fire support. If the width of sector and terrain permit, the platoon positions are organized in depth, with a rear or supporting platoon considered as a reserve. Boundaries normally are not designated between platoons; however, they may be designated if required for coordination. Normally, the team commander indicates to the platoons their assigned sectors of fire, and the points on the ground where their fires with adjacent platoons will be coordinated. Supplementary positions are designated to meet an attack from the flanks and to contain a penetration. Each platoon prepares alternate and primary positions for its weapons. Attached tanks are used to cover the most likely avenues of hostile armor approach. The organization of the defense is conducted as explained in paragraphs 141 through 154.

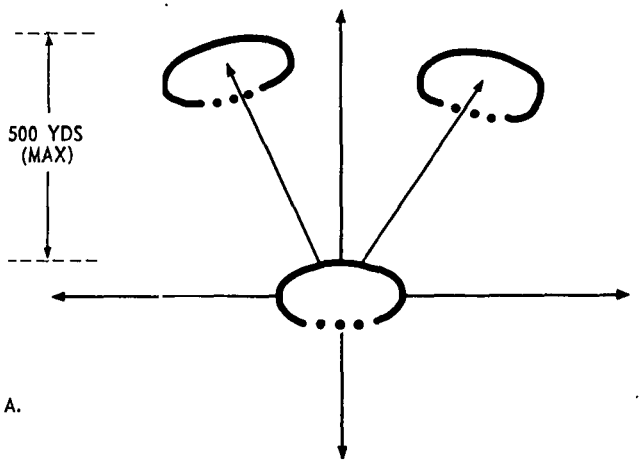
b. Elements of the mortar platoon are located within the company team defense area where they are protected by rifle elements and where they can best accomplish their fire missions. Usually they are located within the rear platoon defense area.

c. The armored personnel carriers may be integrated into the all-round defense of the position. Their vehicular machine guns may be used to increase the long-range, close-in, and final protective fires of other automatic weapons and dismounted infantry. They also may be used for resupply and evacuation during long periods of occupation of a position.

172. The Reserve Platoon

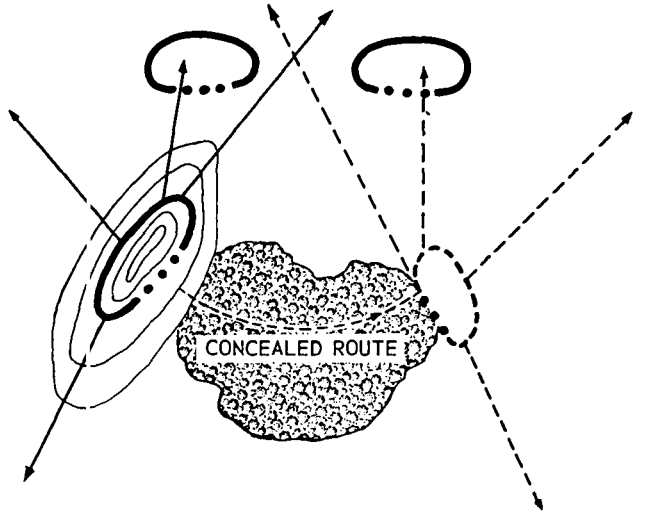
a. The reserve platoon is located behind the front-line platoons and within the company defense area, on terrain which gives the best observation and fields of fire for accomplishing its missions. The position is organized within effective rifle range (500 yds) of the forward platoons.

b. If the terrain permits, the platoon organizes a single position to accomplish its mission (A, fig. 35). If the terrain does not allow the platoon to accomplish its mission from a single position, and if concealed routes for movement within the area are available, more than one position may be organized (B, fig. 35). The platoon then occupies the position that covers the most dangerous area. It is prepared to move to other positions on order.



A.

Platoon located in a reserve position (schematic). Arrows indicate directions of fire.



B.

Platoon located in a reserve position, occupying one of two prepared positions (schematic).

Figure 35. Rifle platoon in reserve (schematic).

173. Distribution of Squads in the Rifle Platoon

a. The three rifle squads of a front-line platoon are placed to deliver their heaviest volume of fire forward of the forward edge of the battle area, both immediately in front of the platoon defense area and across part of the fronts of adjacent platoons. When gaps exist between platoons, the flank squads are disposed to cover them. Rifle squad positions are adjusted to place supporting weapons in the platoon area at points where they can get their best fields of fire.

b. The rifle squads of a platoon in a reserve position, and of the platoons of the reserve company, are disposed to deliver their heaviest volume of fire forward of their platoon defense areas. They cover gaps between the forward platoons and are mutually supporting. They are disposed as are front-line platoons.

c. Unless the elements of the platoon can fire to the flanks and rear from their primary individual emplacements, supplementary positions are prepared for all-round defense. Plans are made for shifting part of the platoon to these positions. Natural cover, drainage lines, ditches, trenches, and other defilade are used for movement to supplementary positions (fig. 36).

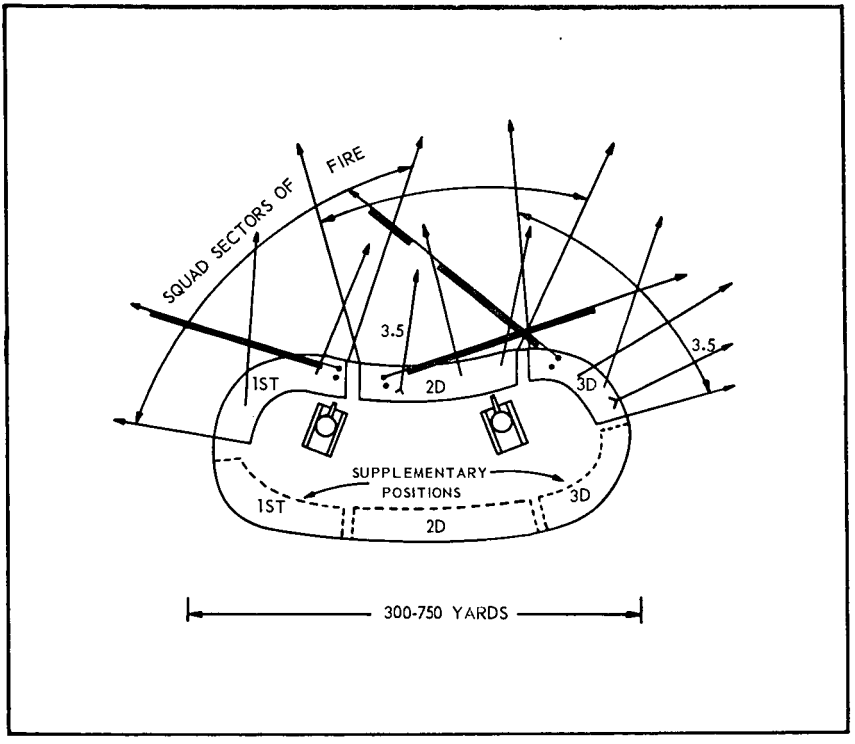


Figure 36. Rifle platoon in defense (one machine gun attached from mortar platoon).

174. Dispositions of Company Elements During Periods of Poor Visibility

a. The probability of the enemy attacking across open areas increases when visibility is reduced due to weather conditions or nightfall. Poor visibility may require adjustments within defense areas, to include minor shifts of weapons, change in location of the platoon in a reserve position, use of security detachments to cover intervals between defense areas, and strengthening the local security detachments. Nightfall will require adjustments within the defense area. These adjustments include, but are not limited to—

(1) Laying machine guns on final protective lines, and 81-mm mortars on barrages.

(2) Shifting troops and weapons to block areas, usually open and exposed, which favor night attack but which are covered solely by fire during periods of good visibility.

(3) Changing local security to night dispositions (from OPs to listening posts).

b. Any company adjustments in fires or troop dispositions are coordinated with the battalion commander. Infrared equipment may be used to assist in overcoming conditions of poor visibility, or artificial illumination may be used if warranted by the situation.

175. The Armored Infantry Battalion as the Reserve in Position Defense

The armored infantry battalion may be used to provide part of the combat command or division reserve. Armored infantry participation usually is limited to units of platoon or company size; however, when this is the case, these units are attached to tank units. The combat command or division reserve normally is tank-heavy.

176. Armored Rifle Company Team as the Battalion Task Force Reserve in Position Defense

The company team selected for employment as the battalion task force reserve is given more tank strength than the teams in the battle area. The ratio of tanks to armored infantry in the task force reserve should be fairly large. Part of the tanks of the reserve may be employed initially in the battle area; part or all of these tanks revert to control of the reserve when the reserve executes a counterattack. For these reasons, the battalion reserve should be a tank company team.

177. Employment of Tanks in the Position Defense

a. General. Tanks attached to a front-line armored infantry battalion are used to provide antitank defense in depth, to reinforce the battalion fires, and, supported by armored infantry elements, to make counter-

attacks. The tanks are positioned to cover the more dangerous avenues of enemy armor approach. They must be able to move rapidly into the counterattack or into areas that are threatened. Some of the attached tanks occupy a position of readiness from which they can move to firing positions in the front-line company areas and engage hostile armor as soon as it comes within effective range. The fires of some tanks may be withheald initially to gain surprise. Most of the tanks with the front-line armored infantry battalion task force are used with the task force reserve. Firing positions are reconnoitered and improved when necessary so that the tanks with the reserve unit can support front-line units by fire and can block and contain a hostile penetration. When the task force reserve counterattacks, all tanks not engaged, or that can be disengaged, take part in the counterattack. Initially, part of the tanks may be used with the combat outpost. Tanks so used usually revert to the reserve upon withdrawal of the combat outpost.

b. Front-Line Companies. Tanks attached to front-line armored rifle companies ordinarily occupy firing positions in or near platoon defense areas during daylight. At night they occupy positions inside the nearest platoon defense area. In some situations, the tanks attached to front-line armored rifle companies may occupy positions in the rear of platoon defense areas, staying alert to move into previously selected forward positions. These tanks provide the main antitank protection for the front-line armored infantry units. The rifle platoon leader coordinates closely with tank unit leaders in or near his area.

c. Battalion Task Force Reserve. A tank company team may be designated as the battalion task force reserve.

d. Attachment. For maximum coordination, flexibility, and control in position defense, tanks are not attached below company level.

178. Conduct of Position Defense—Battalion

a. The defense of a battalion area combines secrecy, surprise, deception, aggressiveness, mobility, and flexibility of fires. As the attacker comes under the observation of patrols, air observers, or combat outposts, he is subjected to long-range artillery and mortar fires, and to fires from combat outposts. The intensity of these fires increases as he advances and comes within range of other weapons.

b. Before having to engage in close combat, however, the combat outpost is withdrawn to prepared locations within the battle area. Preplanned artillery and mortar fires support the withdrawal of the combat outpost. When the combat outpost has withdrawn, fires against targets of opportunity usually are opened on the initiative of weapon commanders or observers.

c. Liaison personnel from supporting weapons units usually stay with the battalion commander at the battalion observation post. Through them, the battalion commander concentrates fires on desired target areas.

d. The success of the position defense depends upon each unit holding its assigned area. Each unit entrusted with the defense of a tactical locality defends it at all costs, unless otherwise ordered by higher authority. Local commanders hold their positions and close gaps by fires or by use of their reserves. Troops are made to realize that hostile groups will work to their rear, that they must therefore be prepared to fight in any direction, and that by successfully holding their positions they form the basis for successful counterattacks by units to their rear.

e. If the enemy penetrates the battalion defense area, the battalion commander first seeks to destroy or eject him by fire alone. If this fails, then prearranged fires are used to neutralize and contain him within the penetration area. The battalion commander decides whether to countrattack, to block, or to do both. His decision to use the reserve must be made before the reserve becomes committed in place or otherwise immobilized by the penetration. The known disposition of friendly troops in both higher and lower echelons, the terrain, the characteristics of the enemy, and the intensity of the enemy build-up affect the decision to use the reserve.

179. Conduct of Position Defense—Company and Platoon

a. During the hostile preparatory fires, the front-line company's platoons take cover in prepared positions; but as soon as the fires cease, all weapons are readied to meet any hostile ground attack. The 81-mm mortars and long-range weapons fire on targets within range. Tanks located on the forward edge of the battle area engage the enemy. They engage targets of opportunity, especially hostile armor. Observers in each forward defense area keep the front under continuous observation to adjust the fires of their weapons. As the enemy draws closer to the forward edge of the battle area and delivers heavy fires in preparation for the assault, men in the front-line defense areas take cover in their foxholes or emplacements.

b. When the massed fires of the enemy are lifted, all weapons in the forward platoon defense areas open fire to inflict maximum casualties and to stop the hostile attack before it reaches front-line positions. Supporting fires are requested directly from the nearest artillery or mortar forward observer. The company commander also requests supporting fires from the battalion commander.

c. If enemy attackers reach the area to be covered by final protective fires, machine guns shift their fires to final protective lines, mortars and artillery fire their barrages, and other weapons increase their rates of fire against the most threatening targets. Normally, front-line com-

pany commanders and platoon leaders are authorized to call for final protective fires to block approaches to their respective defensive areas. When these fires are called for, they are delivered without delay. Higher unit commanders immediately verify the need for these fires and call for reinforcing fires if necessary. If the enemy assaults, he is met by fire, grenades, and close combat. Men in the threatened area do not withdraw except upon order of their commander.

d. The reserve platoon assists the front-line platoons by fire. The terrain seldom permits this platoon to fire in front of the front-line rifle platoons; therefore, it fires in the gaps between front-line platoons, within forward areas in case they are overrun, and to the flanks and rear of the company defense area. This platoon adds depth to the defense of the company area and protects the flanks and rear of the company area.

e. When enemy attacking forces include tanks as well as infantry elements, the primary targets for all company weapons, except antitank weapons, are the hostile foot troops or other exposed personnel. Fires are directed so as to separate foot elements from the tanks and to cause the enemy to concentrate, thereby causing him to present a lucrative atomic target. Exceptionally, when hostile infantry or exposed personnel do not provide a target, small-arms fire is directed against the open hatches and vision devices of enemy tanks. Fire is continued until the defenders are forced to take cover to protect themselves and their weapons from crushing action of the tanks. They return to their firing positions as soon as the tanks have passed; they then fire on the rear of the tanks, on approaching foot troops, and on men riding, or closely following, other attacking tanks.

f. If the enemy succeeds in overrunning forward platoon defense areas, the advance is resisted by fires from adjacent and reserve platoon defense areas and from supporting weapons. If a minor penetration has been made by a small enemy group and the forward edge of the battle area has not been jeopardized, the company commander may order the reserve platoon to counterattack. Such a counterattack is a quick assault and mopping-up action.

g. If the company is surrounded, the company commander shifts troops and weapons in his area as necessary for a continued all-round defense.

180. The Rifle Platoon Leader in Defense

a. The platoon leader's duties during the conduct of the defense include—

(1) Fire control, including the opening of fires and the shifting of fires to the most dangerous targets.

(2) Requests for additional supporting fires as required.

(3) Shifting of men within the platoon area to defend it.

(4) Keeping the company commander informed of the situation.

b. Platoon leaders control the fires of their units and direct them against the most threatening targets. The platoon leader maintains fire control by continuous observation and well-timed orders. If an adjacent defense area is penetrated, fire is directed against the enemy to keep him from widening the break and enveloping nearby platoons. If the platoon is threatened with envelopment, the platoon leader changes the disposition of his men to get all-round defense of his area.

c. The platoon leader selects a position from which he can best observe the front and flanks of his area and control his troops. His position preferably has cover for messengers and concealed routes to the company command post. The platoon sergeant is placed where he can best assist the platoon leader, and controls that part of the platoon most difficult for the platoon leader to control directly. Forward observers and commanders of supporting weapons located in the area usually station themselves within easy communicating distance of the platoon leader.

Section V. PERIMETER DEFENSE

181. General

Small armored infantry units normally participate in perimeter defense as part of a larger force. Often, however, small armor units of company, or even platoon, size must adopt the techniques of perimeter defense for self-protection at halts. As part of a combined-arms team, armored infantry may be a portion of the striking force, organize strongpoints, or operate with the security elements. Armored infantry are best employed when organizing a sector of the perimeter defense, manning strongpoints covering the most likely avenues of hostile dismounted approach, and providing local security for tanks.

182. Conduct of Perimeter Defense by an Armored Infantry Battalion Task Force Operating Independently

On occasion the armored infantry battalion task force may be required to execute a perimeter defense for self-protection (fig. 37). For example, an armored infantry battalion task force on an exploitation or pursuit may be required to halt temporarily pending the arrival of supplies or additional instructions. Or, after securing an objective, it may be required to hold until other forces are able to close up and consolidate the gains that have been made. In such situations, the battalion will

normally employ a perimeter defense following the procedures discussed in paragraphs 389 through 392, FM 17–1. In executing the perimeter defense, the armored infantry elements of the battalion task force may employ the techniques of the mobile or position defense.

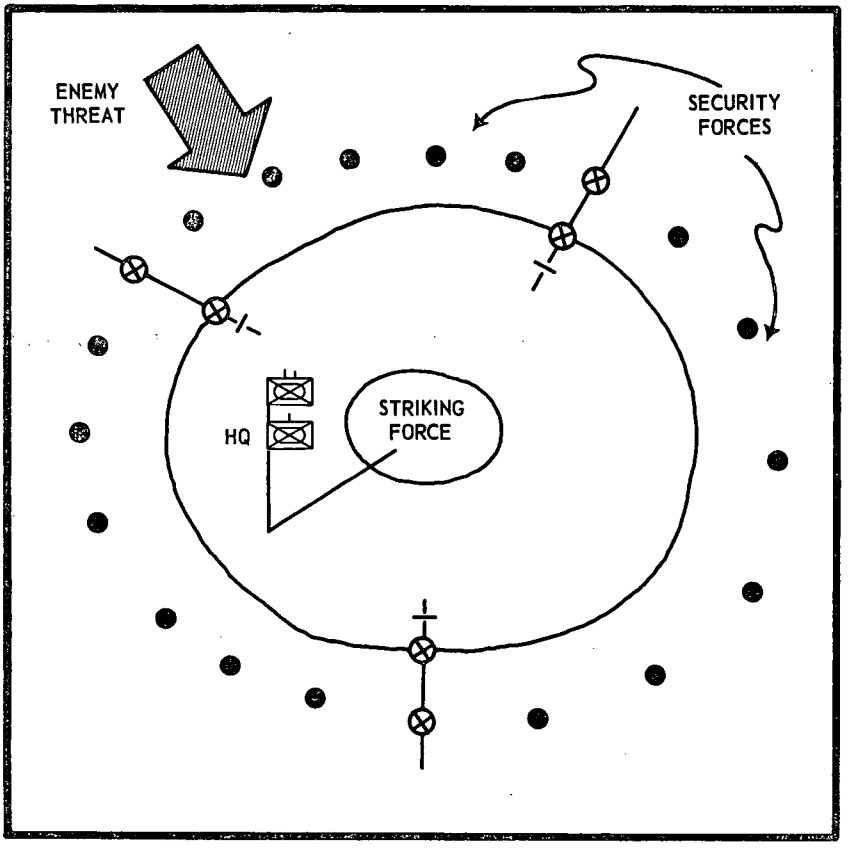


Figure 37. Battalion task force perimeter defense.

Section VI. 81-MM MORTAR PLATOON IN THE DEFENSE

183. Tactical Employment of Mortars in Defense

a. The 81-mm mortars are used to assist the rifle platoons in the defense of their areas. Normally, the 81-mm mortars are used by platoon. In the conduct of the mobile defense, a portion of the command of which the mortars are a part may be engaged in normal offensive operations. In this event, the mortars are employed in accordance with the techniques discussed in paragraphs 79 through 81. The discussion contained in this section is oriented to the use of mortars in support of those units employing position defense techniques, regardless of whether the overall defense of the larger force is mobile or position.

b. The missions of the 81-mm mortars of a front-line armored rifle company in position defense are to—

(1) Cover the assigned sector. The mortars give close support to the forward defensive areas by firing on targets of opportunity —particularly those in defilade—to break up a hostile attack before it reaches the forward edge of the battle area.

(2) Participate in final protective fires. Mortar barrages fill gaps in the final protective fires. If no gaps exist within the company area, barrages strengthen the final protective fires in the most dangerous areas of enemy approach within the company sector.

(3) Assist in limiting penetrations. Concentrations are planned within the company defense area to limit an enemy penetration of the forward edge of the battle area.

(4) Support counterattacks. Concentrations are used to block off the penetrated area or to give close support to a counterattack force.

184. Firing Positions for 81-Mm Mortars in Defense

a. If practicable, the platoon leader accompanies the company commander on his reconnaissance and makes recommendations for the use of the mortar platoon. Based on his own reconnaissance and the recommendations of the platoon leader, the company commander's defense order assigns missions and the general locations of the mortar platoon, to include supplementary positions.

b. Firing positions selected for the mortars must—

(1) Be defiladed from hostile view.

(2) Permit the accomplishment of the assigned mission.

(3) Provide observation close to the mortar position.

c. The mortar is emplaced within approximately 100 yards of the observer. The firing positions are well forward and are included in or directly protected by the rifle platoon defense areas. Ammunition bearers armed with rifles afford close protection. Communication (voice or telephone) is established between the mortar observers and the company commander or platoon leader, depending upon which is controlling the fire.

d. After receiving the company commander's order, the platoon leader issues his order and directs the squads to move to their firing positions. The platoon leader precedes the rest of the platoon to the defense areas to coordinate the use of the mortars and the selection of firing positions. Firing positions selected for the 81-mm mortars in defense have the same general characteristics as those selected in the attack.

185. Sectors of Fire and Target Areas for Mortar Platoon in Defense

Each 81-mm mortar squad is assigned a sector of fire, one barrage, and any number of concentrations. The three squad sectors overlap to cover the entire company front. The sector of fire assigned to an 81-mm mortar should not exceed 1,500 mils. The company commander normally uses the barrages to close small gaps in the machine-gun sectors of fire. The barrages are 100 yards forward of the front-line elements. The platoon leader assigns concentrations and sectors of fire according to the company plan of defense. These concentrations are planned both forward of and within the battle area. Concentrations are approximately 100 yards in diameter.

186. Orders for Mortar Platoon in Defense

a. The platoon defense order is based on the company order and the reconnaissance of the platoon leader. It is issued to the squad leaders and other key members of the platoon. When practicable, the platoon leader issues his order from a position where he can point out to each squad leader the selected firing positions, sectors of fire, and locations of adjacent troops. The platoon leader supervises the coordination and execution of his orders. The defense order follows the general form for the platoon operation order and contains the following additional instructions:

(1) Barrage and concentration areas, and sectors of fire for the mortars.
(2) Instructions for final protective fires, to include the method of calling for these fires, a location from which visual signals for fires are given, and the rates and duration of fire.
(3) Organization of the ground, including types of emplacements to be constructed.
(4) Provisions for local security of mortar positions.

b. The squad leaders base their orders on the platoon order and on their own reconnaissance. The squad leaders select exact positions for the mortars, check for mask and overhead clearance, and issue orders for preparing and camouflaging primary, alternate, and supplementary positions.

187. Location of Mortar Leaders in Defense

a. The *platoon leader* places himself where he can best observe and control the units of his platoon. His position should permit easy communition with the company commander. Normally, the platoon leader is at or near the firing position of the mortars. When observation is restricted near the mortar positions, he may establish an observation post for better observation of the company sector.

b. Mortar squad leaders act as forward observers, with their observation posts within the rifle platoon areas where they can best observe their assigned sectors. A squad leader who is not acting as an observer assists in the control of fire at the mortars.

188. Occupation and Organization of Mortar Firing Positions in Defense

a. Arrival at the Position. When squads arrive at their assigned locations, the firing positions and sectors of fire of the weapons are shown to the squad leader. Each squad leader at once places his mortar carrier in a temporary firing position, prepared to open fire to cover his assigned sector. As soon as the mortar carriers are placed in their temporary positions, the primary firing positions are selected, camouflaged, and stocked with ammunition. The mortar carriers are then placed in their primary firing positions.

b. Priority of Work. First, the primary mortar positions are selected and observation posts are constructed. Foxholes for the ammunition bearers and riflemen are prepared. Alternate and supplementary positions are then selected. If the situation permits, each mortar is registered on its barrage and on as many concentrations as necessary. Before such registration, coordination with security elements, reconnaissance parties, and work details forward of the battle area is necessary. Firing data are recorded by the squad leader. He keeps one copy of each firing data sheet and gives one copy to the platoon leader. The platoon leader then gives the company commander a firing data sheet showing the prepared mortar fires. After the company commander has approved these planned fires, or has made necessary changes, he has copies of the firing data sheet distributed to designated personnel of the company and to the battalion commander. The platoon leader prepares, and provides the company commander with, a sketch showing the prepared mortar fires.

c. Camouflage. Camouflage is constructed concurrently with the other defensive works. Spoil not used in construction is disposed of immediately. Parapets are tramped down and sodded. Men avoid making new paths to installations.

d. Ammunition Storage. Dry, concealed ammunition shelters are constructed within or near the mortar emplacements.

189. Mortar Platoon Actions During Conduct of Defense

a. The mortars are first laid to fire where suitable targets are most likely to appear. If the enemy succeeds in driving back friendly security elements, the mortars are then laid on their barrages when not firing other missions. As the enemy advances, observers call for fires on suitable targets within their sectors. Mortars located behind front-line platoon areas open fire as soon as targets are within range. Mortars

located within front-line platoon areas may withhold fire until the front-line platoons open fire. If final protective fires are called for, the mortars fire their barrages. If the barrage of any mortar is not within the area where the final protective fires are needed, that mortar fires the concentration that most effectively reinforces the final protective fires. If the enemy penetrates any portion of the battle area, the mortars fire in the area of penetration, to disrupt and destroy the enemy and prevent a widening of the penetration.

b. The mortar platoon may be required to move by platoon or by squads during any stage of the defense to supplementary positions or to new, unreconnoitered positions. This movement is accomplished rapidly. The platoon leader or platoon sergeant precedes the platoon when it displaces, in order to reconnoiter the new position.

190. Resupply of Mortar Platoon in Defense

a. Resupply during a *position defense* normally is done at night. Ammunition and other needed supplies are carried as far forward in cargo trucks as the tactical situation permits. They may be carried by ¼-ton truck and trailer to the mortar positions. If the tactical situation prohibits the use of the ¼-ton truck, hand-carry is used. In exceptional situations, resupply may be needed during daylight. The same procedure is used, but supply vehicles may not be able to come as close to the mortar positions as during darkness, thereby requiring longer hand-carrying.

b. In a *mobile defense*, ammunition is not stored in large quantities at the positions. However, in mobile defense the carriers are readily accessible to their squads. The bulk of the ammunition is kept on the carriers and unloaded as needed. Resupply is accomplished by refilling the ammunition compartment of the carrier. Cargo trucks from the combat trains carry ammunition and other supplies, during daylight or darkness, as close to the mortar positions as possible. The ¼-ton truck and hand-carrying are used to move supplies from this point to the mortar positions. If enemy action makes it necessary, armored personnel carriers may be used for resupply.

Section VII. ADDITIONAL CONSIDERATIONS IN DEFENSE

191. General

See chapter 9, FM 17–1, paragraphs as indicated, for a discussion of considerations peculiar to—

a. Defense of a river line (pars. 393–396).

b. Defense of a wooded area (par. 397).

c. Defense of a defile (pars. 398–400).

d. Defense of a built-up area (pars. 401–405).

e. Defense at night and during periods of poor visibility (pars. 405 and 406).

f. Defense against airborne attack (par. 408).

g. Defense against guerrilla action and infiltration (par. 409).

h. Defense against air attack (pars. 410 and 411).

CHAPTER 5

RETROGRADE MOVEMENTS

Section I. GENERAL

192. General

Retrograde movements may be classified as delaying actions, withdrawals from action, or retirements. See paragraphs 412 through 414, FM 17–1, for a complete discussion of the types and purposes of retrograde movements. For discussion of logistical support of retrograde actions, see FM 17–50.

193. Armored Infantry in Retrograde Movements

a. In retrograde operations, the armored infantry battalion may be used as a battalion task force. On occasion, it may be employed without tank attachments when combined-arms teams are formed at combat command level and the attached battalions are employed as pure battalions. An armored infantry battalion may be employed without attachments, for example, when the combat command commander's scheme of operation in a delaying action utilizes an unfordable water obstacle. The armored infantry battalion in this case could be used initially forward of the obstacle and could take advantage of the amphibious characteristics of the carrier to cross the obstacle when forced back by enemy action.

b. The armored infantry battalion normally participates in a retirement as part of a larger force. The battalion actions in a retirement are essentially the same as for armor marches, since a retirement does not begin until the bulk of the command is formed into march columns. The armored infantry battalion makes retrograde movements only in conjunction with an overall plan or on specific orders from higher authority.

Section II. DELAYING ACTION

194. General

a. A delaying action is a retrograde movement by which a force seeks to delay the advance of an enemy force. A unit engaged in a delaying action inflicts maximum punishment on the enemy without becoming

decisively engaged in combat. An armored infantry battalion task force may conduct a delaying action alone or as part of a combat command; also, armored infantry units may be attached to tank or armored cavalry units conducting a delay. When such a mission is given, the battalion task force delays on successive positions, employing techniques of both mobile and position defense (chp 4). Delay on successive positions consists of organized resistance on an initial position and the continuation of this resistance through successive delaying positions (fig. 38). See paragraph 418, FM 17–1, for a discussion of the fundamentals of delaying actions.

b. Delaying positions normally are not organized in depth. They are strong in firepower, with the bulk of the force concentrated at likely avenues of enemy approach. An armored infantry battalion task force conducting a delaying action is divided into two major echelons, the delaying force and a reserve. Company teams normally do not designate reserves. The execution of a delaying action is decentralized to company team level.

c. Intermediate delaying positions are selected between those delaying positions specified by higher headquarters. These positions should be on dominating terrain which, if occupied, would provide control of the likely avenues of enemy approach. If the depth of the area for the entire operation permits, the battalion delaying positions should be far enough apart to force the enemy to renew his advance and reconstitute his attack at each position.

195. Disposition of Forces in an Armored Infantry Battalion Task Force Conducting Delay

a. The battalion task force commander assigns company team zones corresponding to the most likely avenues of approach available to the enemy through the battalion task force zone. Boundaries are designated between company teams to indicate zones of responsibility. Each avenue of approach and the terrain which dominates the avenue are assigned to one company team; avenues of approach are not split between company teams. Boundaries extend forward of the first delaying position to the range of the weapons of the companies or the limit of ground observation, whichever is greater. Boundaries extend rearward to include at least the next battalion delaying position. Each company team zone should include at least one good route of withdrawal. For an armor unit, a route of withdrawal may be terrain over which the vehicles of the unit can move unimpeded from the delaying position. It need not be a road; however, maximum use should be made of any existing trails or roads which may be along the designated route of withdrawal. It is desirable to avoid using main highways for withdrawals unless necessary, as these routes will generally receive heavy enemy artillery fire and attacks by enemy aircraft.

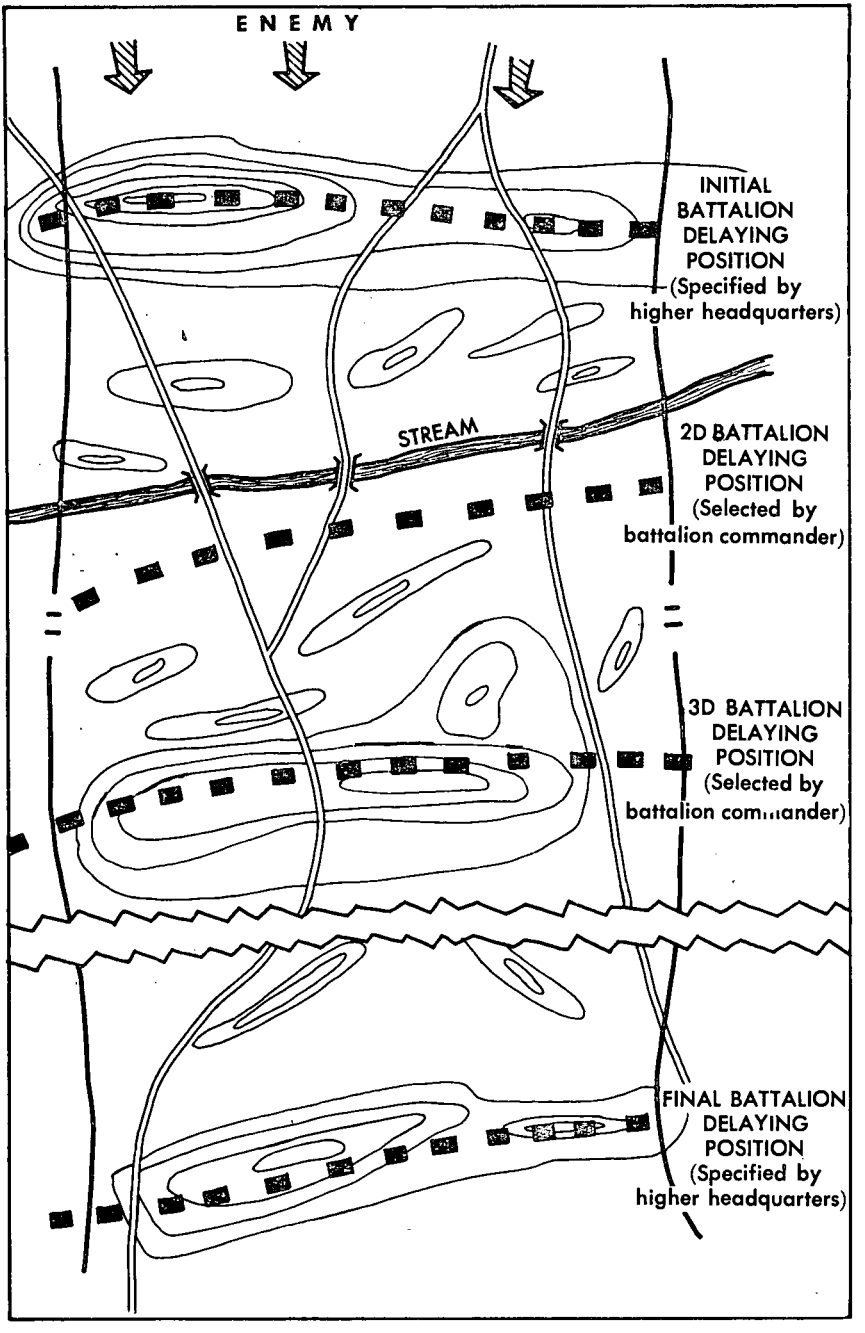


Figure 38. Successive delaying positions.

b. Task organization of the company teams is based on an analysis of the enemy situation and the terrain. In general, a company team covering the best avenue of enemy armor approach should be organized with a preponderance of tanks. Similarly, armored infantry should compose the bulk of a team covering a likely avenue of dismounted infantry approach. The battalion task force reserve is normally tank-heavy but has sufficient armored infantry to enable it to operate effectively anywhere in the battalion zone. The reserve is initially located in an assembly area from which it can move rapidly to any threatened point.

c. The battalion command post and battalion combat trains are located well to the rear to avoid the necessity of frequent displacement and to avoid interference with the actions of the combat elements of the battalion. The command group, however, should remain well forward with the engaged elements and should be among the last to withdraw.

d. Tank platoons attached to armored rifle companies should be employed intact under control of the armored rifle company commanders.

e. The armored rifle company 81-mm mortar platoon is normally employed under company control and is positioned to support the company zone. Employment of the 81-mm mortar platoon is the same as discussed in paragraphs 183 through 190.

f. When assigned a wide zone with several good avenues of approach, the armored rifle company team may employ all platoons on line. Whenever possible, however, one platoon should be positioned to provide some depth to the delaying position. Attached tanks are located to cover the most likely avenues of hostile armor approach, while the armored infantry elements are located where they can best support and protect the tanks and cover portions of the zone not covered by other fires.

g. The battalion scout platoon may be retained under battalion control for the execution of missions such as flank guard. Sections of the platoon may be attached to companies in the delaying force to conduct observation or light patrol missions or to assist in the reconnaissance of the next company delaying position to the rear.

h. The battalion mortar platoon normally is retained under battalion control. In accomplishment of its mission, the platoon must be so positioned as to best provide support for company teams of the battalion delaying force.

196. Use of Armored Infantry in Occupation of a Delaying Position by a Battalion Task Force or Company Team

a. General. The occupation of a delaying position by armored infantry operating as part of a battalion task force or company team is generally the same as the occupation of a defensive area in the mobile defense. However, the commander places greater emphasis on engaging

the enemy at maximum effective range and on disposing his forces so that he can efficiently execute the planned withdrawal to the next delaying position. Terrain selected for a delaying position should have the following desirable characteristics:

(1) Good observation and long fields of fire.
(2) Concealed routes of withdrawal.
(3) Unfordable streams, swamps, lakes, and other obstacles on the front and flanks.
(4) Maximum concealment for the forces on the delaying position.
(5) A series of parallel ridges across the lines of hostile advance.

b. Actions by Armored Infantry Unit Leaders. Armored infantry unit leaders advise the commanders of tank units to which they may be attached as to the best employment of the armored infantry in the position to be occupied. In general, the armored infantry may be employed best to cover avenues of hostile dismounted approach, to provide local security for tanks, and to perform limited pioneer work on the initial and successive delaying positions.

c. Siting of Weapons. Initially, all weapons of an armored infantry unit acting as part of the delaying force are placed well forward. Armored personnel carriers are placed in hull defilade and concealed; their caliber .50 machine guns are integrated into platoon fire plans along with the caliber .30 machine guns and automatic rifles. Rocket launchers are sited in zones assigned to the armored infantry where enemy armor is most likely to appear. Coordination is effected with the commanders of tank units in the area to insure that avenues of hostile armor approach are adequately covered. Concurrently, provision is made for the local protection of tanks by dismounted armored infantry.

d. Nonessential Vehicles. Vehicles of the unit which are not needed on the delaying position should be placed under cover or concealment to the rear of the position.

e. Strengthening the Position. The armored infantry as part of a company team or battalion task force is used to perform the bulk of the tasks required to strengthen a delaying position. Depending on time available and the enemy situation, armored infantry may be used to prepare demolitions, prepare and improve routes of withdrawal, install mines, and construct roadblocks and other obstacles to impede the advance of hostile troops. Techniques which may be employed by dismounted armored infantry to strengthen a position are discussed in paragraph 149. Supporting engineers may provide assistance and technical advice.

f. Mortars. The 81-mm mortars should be located in the first defiladed area behind the company team delaying position. If the mortar squads

are equipped with carriers, which enable the mortars to be fired on vehicle, the mortars should not be dismounted. The 4.2-inch mortars are also placed in defilade as far forward as possible, to bring maximum effective fires onto an advancing enemy at the greatest possible range.

g. Security. Armored infantry units must provide for their own local security in addition to providing security for any tanks with which they may be operating. When contact with the enemy has not been made, the armored infantry establish observation posts to the front of delaying positions during daylight. These become listening posts at night. Their activities must be tied in with any armored cavalry units on security force missions and Army aircraft flying surveillance missions in the area.

197. Use of Armored Infantry in Preparation of Successive Delaying Positions

Armored infantry elements of a battalion task force or company team which can be spared from the defense of a delaying position may be used to move to the next succeeding delaying position to initiate preparation of that position. Often this mission may be performed in conjunction with elements of the battalion scout platoon It is emphasized, however, that the defensive strength of any delaying position should not be depleted by withdrawing armored infantry prematurely to perform this work. Such action should be taken only after careful analysis of the existing situation by the commander concerned. For example, if the terrain is relatively open, there may be little requirement for armored infantry with the tanks, and the commander might decide he could spare a portion of the armored infantry to start organizing the next delaying position. Armored infantry so employed may also assist in guiding incoming elements of the delaying force into the new position. Thereafter they join in the defense of that delaying position.

198. Action of Armored Infantry in the Conduct of a Delaying Action—General

In the conduct of a delaying action, the techniques of both mobile and position defense may be used in various situations. The conduct of a delaying action by an armored infantry battalion task force or company team is the same as discussed in paragraphs 424 through 429, FM 17–1. Paragraphs 199 through 203 are oriented toward those techniques applicable to the armored infantry element of a battalion task force or company team as a delaying force.

199. Use of Mortars in Delay

The mortars will normally be the first armored infantry elements to deliver long-range harassing fire on the enemy. The 81-mm mortar has a maximum effective range of approximately 3,300 yards, and the 4.2-inch mortar a range of approximately 6,000 yards.

200. Fires of Individual and Crew-Served Weapons in Delay

Individual and automatic weapons of armored infantry elements are used to protect any tanks in the area from dismounted enemy patrols and infiltrators as well as to cover obstacles in accordance with plans. The rifle squad withholds its fire until the enemy is within effective range of small arms. Maximum use should be made of the caliber .50 machine gun because of its long-range capability in comparison with other small arms. Rocket launchers and rifle grenades are fired at targets of opportunity. In general, every effort is made to inflict maximum casualties and to force the enemy to deploy as far from the delaying position as possible.

201. Counterattacks in Delay

If the combined fires of the delaying force are not sufficient to prevent the enemy's continued advance, a limited-objective attack may be launched forward of the delaying position on order of the commander conducting the delaying action. In this event, armored infantry elements may be required to participate in the attack. Armored infantry actions in such an attack are offensive in nature and are conducted as explained in chapter 3.

202. Disengagement Techniques in Conduct of Delaying Action

a. Once the order for withdrawal to the next delaying position has been issued, armored infantry techniques of disengagement are based mainly on the actions of the tanks with which they are operating. As a general rule, the least heavily engaged unit is withdrawn first. Tanks and armored infantry habitually work together; however, when the terrain provides good observation, the armored infantry elements of a company team generally withdraw before the tanks. If the terrain is heavily wooded, or observation is otherwise restricted, the armored infantry will cover the withdrawal of the tanks.

b. Dismounted armored infantry elements begin their withdrawal before becoming decisively engaged. In general, as long as a delaying force retains the ability to move, it has the ability to disengage. The ability to move is lost when—

(1) Fires, either direct or indirect, confine the armored infantry to foxholes.

(2) The enemy can close with the armored infantrymen as they move from the foxholes to the carriers.

(3) The route of withdrawal can be subjected to enough fire to prevent its use.

(4) The delay is on successive positions and the enemy can attack a succeeding position before the armored infantry is prepared to defend it.

c. Those squads or platoons which are least heavily engaged will withdraw under protection of increased fires of remaining units and tanks. If the remaining rifle squads have covered the departure of the tanks with which they are operating, their carriers are moved back to defiladed positions under increased fires of the squad and of supporting mortars and artillery. During the withdrawal, the mortars displace by echelon in order to insure that a portion of the unit is capable of delivering fires at any time. The carriers drop their ramps and face in the direction of withdrawal along previously reconnoitered routes. The machine guns are next taken out of action and moved quickly to their carriers. Riflemen and automatic riflemen then start falling back under direction of their squad and fire team leaders, pausing periodically to fire aimed shots toward the enemy. The squad members then quickly mount and move to their next designated delaying position in accordance with whatever overall technique (leapfrogging or rapid withdrawal) the company team of which they are a part may be using.

203. Maintaining Contact With the Enemy in Conduct of a Delaying Action

Normally the commander conducting the delaying action takes steps to maintain observation over the advancing enemy once a successful disengagement has been accomplished. The battalion scout platoon often is used for this purpose. Armored infantry, operating with tanks, may be assigned this mission. When so employed, armored infantry use techniques essentially the same as when participating in any delaying action. They generally operate from successive vantage points to the rear as the enemy advances, but avoid close combat. These activities must be closely integrated with any aerial surveillance missions being flown in the area.

204. Use of Atomic Weapons and CBR in Delay

The armored infantry unit commander generally will not be involved directly in the planning for employment of atomic weapons and CBR. However, he is vitally concerned with the effects that friendly employment of these weapons may have on the actions of his unit in a retrograde action as well as the protective measures his unit must take when the enemy has such a capability. Additionally, his employment of long-range organic fires may be considerably restricted in atomic operations. For example, improper use of long-range fires might establish his own position as a potential enemy atomic target, or he might alert the enemy formation to its own situation as an atomic target.

205. Use of Armored Infantry in a Battalion Task Force Reserve, Delaying Action

A battalion task force conducting an independent delaying action normally designates a reserve. Company teams normally do not desig-

nate reserves. Armored infantry alone should not be designated as a battalion task force reserve. The reserve is normally tank-heavy but must have sufficient armored infantry to enable it to operate effectively anywhere in the task force sector. When the reserve is employed, its actions are offensive in nature.

Section III. WITHDRAWAL FROM ACTION

206. General

A withdrawal from action is classified as either a daylight or a night withdrawal. In either case, contact is maintained with the enemy forces to prevent a rapid enemy advance, to deceive the enemy, and to provide for security. A standard pattern should be avoided; the procedure should vary enough so that the enemy is kept in doubt as to the intent of the unit. Generally, a withdrawal is accomplished in two phases: a *disengagement* from action, followed by the *formation of march columns* for continued movement to the rear.

207. Daylight Withdrawal From Action

a. An armored infantry unit which is operating with tanks, and which is given a security force mission for a battalion task force, conducts its actions in essentially the same manner as explained for the covering force of the mobile defense (par. 156).

b. Disengagement actions are similar to actions of units conducting a withdrawal from an initial or subsequent delaying position (pars. 194–205). Units not engaged with the enemy are the first to withdraw. When contact with the enemy is broken, they withdraw rapidily. However, when the enemy strength is not concentrated in any particular area, all units may be ordered to withdraw simultaneously. Thereafter, march columns are formed for further movement as required. Frequently, the commander conducting the defense may decide to conduct a counterattack to assist the more heavily engaged units to break contact with the enemy.

208. Night Withdrawal From Action

a. It is normally preferable to conduct a withdrawal from action at night, because of the lack of danger from enemy air attacks and because enemy fire will not be as effective. In addition, it is much easier to gain deception. Generally, in withdrawing at night, control is more difficult and movement is slower. Also, if the night is dark and the terrain rugged, the speed of withdrawal may be greatly reduced if a majority of the tracked vehicles must be guided out.

b. Troops left in contact use whatever deceptive measures are available to create the impression that a much larger force is on the position.

Such deceptive measures include firing artillery (company requests for fires being transmitted through the forward observer), moving armored personnel carriers so that their engines can be heard, and maintaining normal sounds usually associated with a completely manned position, such as digging and movement of equipment.

c. Withdrawing units move to the rear at night in generally the same manner as in daylight withdrawal. All platoons of a company team should move simultaneously, if possible. Formations are closer, and movements are made with greater emphasis on secrecy and security, than in daylight withdrawals.

d. It is sometimes possible to withdraw so rapidly that the enemy is unable to interfere with the movement. If a commander is *certain* that this is possible, he may execute a night withdrawal without the use of a covering force. However, each platoon is responsible for maintaining its own security during the move.

APPENDIX I

REFERENCES

FM 6–20	Artillery Tactics and Techniques.
FM 7–10	Rifle Company, Infantry Regiment.
FM 7–40	Infantry Regiment.
FM 7–100	The Infantry Division.
FM 17–1	Armor Operations, Small Units.
FM 17–12	Tank Gunnery.
FM 17–33	Tank Battalion.
FM 17–35	Reconnaissance Battalion Armored Division.
FM 17–50	Logistics, Armored Division.
FM 17–70	Signal Communication in the Armored Division.
FM 17–77	Crew Drill, Armored Infantry Vehicle, Full-Track, M75.
FM 17–100	The Armored Division and Combat Command.
FM 20–100	Army Aviation.
FM 21–6	Techniques of Military Instruction.
FM 21–30	Military Symbols.
FM 21–60	Visual Signals.
FM 21–75	Combat Training of the Individual Soldier, and Patrolling.
FM 22–5	Drill and Ceremonies.
FM 23–55	Browning Machine Gun, Caliber .30 M1917A1, M1919A4, M1919A4E1, M1919A6, and M37.
FM 23–90	81-mm Mortar M1 and M29.
FM 31–50	Combat in Fortified Areas and Towns.
AR 750–5	Maintenance Responsibilities and Shop Operations.
DA Pam 39–1	Atomic Weapons Employment.
DA Pam 39–3	The Effects of Nuclear Weapons.
DA Pam 108–1	Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings.
DA Pam 310–5	Index of Graphic Training Aids and Devices.
DA Pam 310-series	Military Publications Index (as appicable).
SR 320–5–1	Dictionary of United States Army Terms.
AR 320–50	Authorized Abbreviations.
TM 21–301	Driver Selection, Training, and Supervision, Half-Track and Full-Track Vehicles.
TM 21–306	Manual for the Full-Track Vehicle Driver.
TC 3–2	Radiological Surveys.

APPENDIX II

DISMOUNTED COMBAT FORMATIONS, CREW DRILL, AND BATTLE DRILL

Part One. DISMOUNTED COMBAT FORMATIONS

Section I. GENERAL

1. General

Combat formations are groupings of individuals and units for efficient tactical employment. The combat formation selected may have the following characteristics in varying degrees: *security*, *control*, *flexibility*, and *firepower* in the desired direction. The formation to be employed is selected after a consideration of the factors of METT (mission, enemy, terrain and weather, and troops available).

2. Purpose and Scope

This appendix is a guide for the armored rifle company commander, platoon leaders, and squad leaders in the training of the squad and the platoon in dismounted combat formations. It covers the various types of squad and platoon formations and prescribes a uniform method of conducting drill in these formations over open ground and varied terrain.

3. Relationship to Mounted Formations

Dismounted platoon formations are similar to mounted formations. When going from a mounted platoon formation to a dismounted one, the mounted formation should be the same as the anticipated dismounted formation; this will avoid undue delay and unwarranted movement by the armored infantry on foot from the armored personnel carriers to the dismounted formation. Similarly, when going from a dismounted to a mounted formation, the armored personnel carriers should be brought forward to their squads in the same formation that the platoon is using on the ground. Tactical considerations and terrain, of course, may prevent the application of this technique.

4. Training

Training in dismounted squad and platoon formations should be conducted first on open terrain similar to a parade ground. When individuals

and units have become proficient in assuming these formations, they are practiced on varied terrain to obtain practical training in the application of the formations to the terrain. Finally, squads and platoons practice integrated mounted and dismounted formations with tank units. On completing this training, units progress to tactical exercises involving Aggressor forces, either actual or simulated.

5. Legend

The symbols used in this appendix are shown in figure 39.

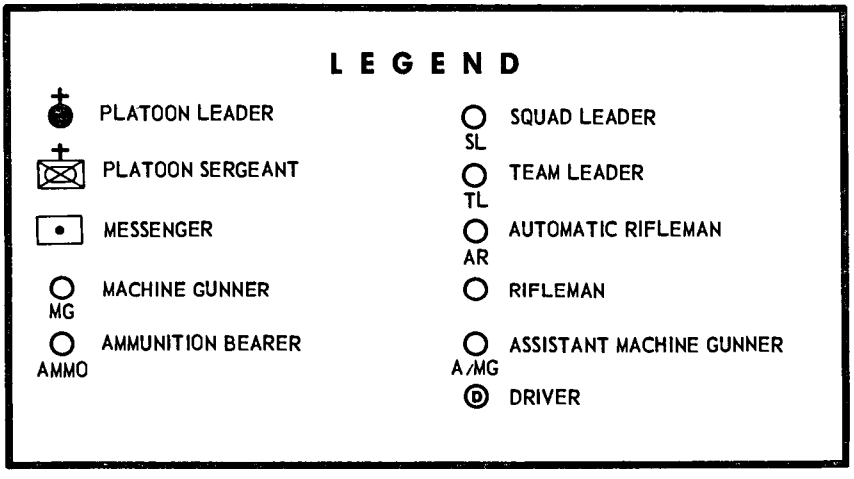


Figure 39. Symbols used in appendix II.

Section II. DISMOUNTED RIFLE SQUAD FORMATIONS

6. Organization

The rifle squad (fig. 40) consists of the squad leader (number 1), the driver (not shown), and two fire teams. The driver of the squad carrier remains with his vehicle and does not take part in dismounted drill. The two fire teams include two fire team leaders (numbers 2 and 7), six riflemen (numbers 3, 4, 6, 8, 10, and 11), and two automatic riflemen (numbers 5 and 9). The squad leader and the two fire team leaders are armed with M1 rifles an carry grenade launchers. The number 11 rifleman is armed with the M1D (sniper's) rifle. The other riflemen are armed with M1 rifles. Numbers 6 and 10 carry additional ammunition for the automatic rifles. The squad leader is equipped with a hand-carried radio. In addition, the squad is armed with a machine gun with tripod. To use it in dismounted action, the squad leader makes necessary adjustments in the basic formations. Also, the rifle squad may be given the 3.5-inch rocket launcher authorized the platoon headquarters; its employ-

ment in dismounted action also requires adjustments in the basic formations.

7. Conduct of Squad Drill

a. Combat drill stresses precision and discipline. Initial training should be conducted at a walk on open terrain; as soon as individuals understand the formations, the training tempo is increased progressively until movements can be executed at a run. As the training becomes more advanced, it progresses to more varied terrain.

b. For drill purposes, the normal interval between men is about five paces, but this distance may be varied. Throughout the instruction, the squad leader issues oral commands accompanied by the appropriate arm-and-hand signals. Team leaders repeat commands only when there is a question of their teams hearing or understanding the squad leader's command. Once the soldier is thoroughly familiar with his primary position in the team, duties within the team are rotated often to promote interest and to teach each man the various team positions. The two teams may then be rotated within the squad formation to teach each man the various positions within the squad.

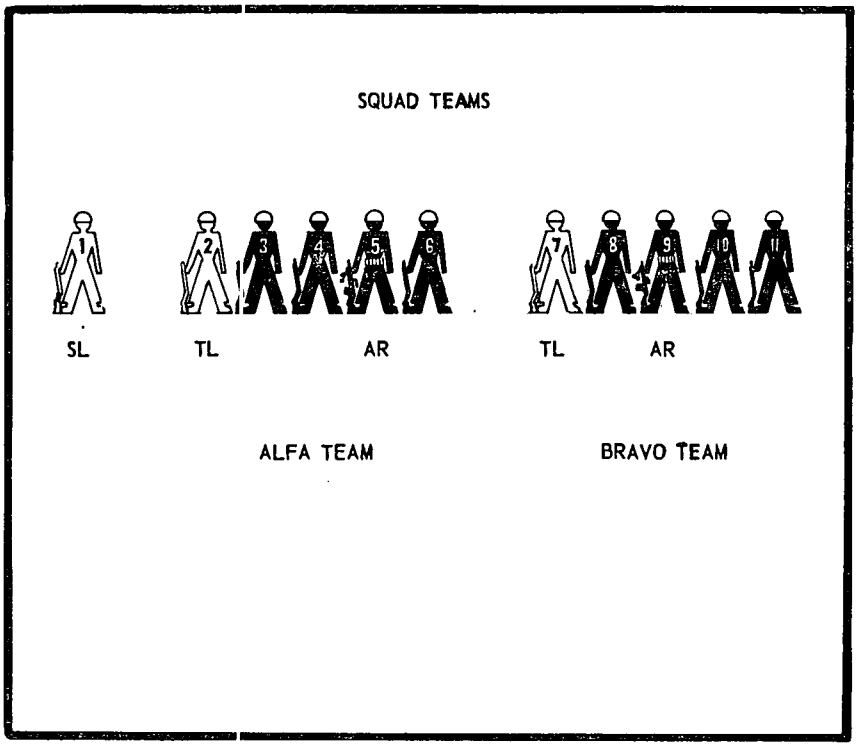


Figure 40. Rifle squad team organization.

c. When movements are being executed, the rifle and automatic rifle are carried at port arms. When the squad halts, the men bring their weapons to order arms and stand at ease. As the training becomes more advanced on varied terrain, marching fire technique of movement is integrated with the squad advance. For example, as the men advance in a particular combat formation, they simulate firing. The squad leader may leave his normal position in the formation to go where he can best control his unit. The men base their positions and movements on the number 3 man, unless directed otherwise by the squad leader.

8. Observation and Control

The squad must always observe to its front, flanks, and rear. While moving, the men observe in the directions indicated in figures 41 and 43. When halted, they observe in the same direction. The squad leader controls his squad by oral commands or arm-and-hand signals. He prescribes the volume of fire for specific targets, keeping in mind ammunition resupply and fire discipline. Individual sectors of observation conform to the man's position in the formation and should be standard. Whether halted or moving, individuals of the squad frequently look toward the squad leader for instructions.

9. Squad Formations, General

Three basic formations are used in tactical movement by the squad: *squad column, squad diamond,* and *as skirmishers.* A simplified column formation, the *single file,* is used mostly for administrative movement. Discussions of each of these basic formations include considerations affecting adoption of a particular formation when the squad is operating alone as well as considerations which the squad leader must take into account when he is operating with tanks. Armored infantry habitually work with tanks. During an attack, the armored infantry normally remain mounted in their carriers until the assault phase of an attack is commenced or until resistance is met which requires dismounted armored infantry action to assist the continued advance of the tanks. When his squad is dismounted and operating with tanks, the squad leader, in deciding which combat formation to adopt, must consider the basic combat formation of the tanks and the resultant protection his squad gains, the nature of the enemy resistance, his mission, the terrain, and the overall requirement for the armored infantry to provide protection for and assist in the successful advance of the tanks. Also, he must anticipate that the tank formation as well as his own may require frequent change to meet varying situations in the conduct of the assault.

10. Squad Column

a. To form squad column, the squad leader commands and signals SQUAD COLUMN, MOVE. At the command MOVE, the squad forms as shown in figure 41.

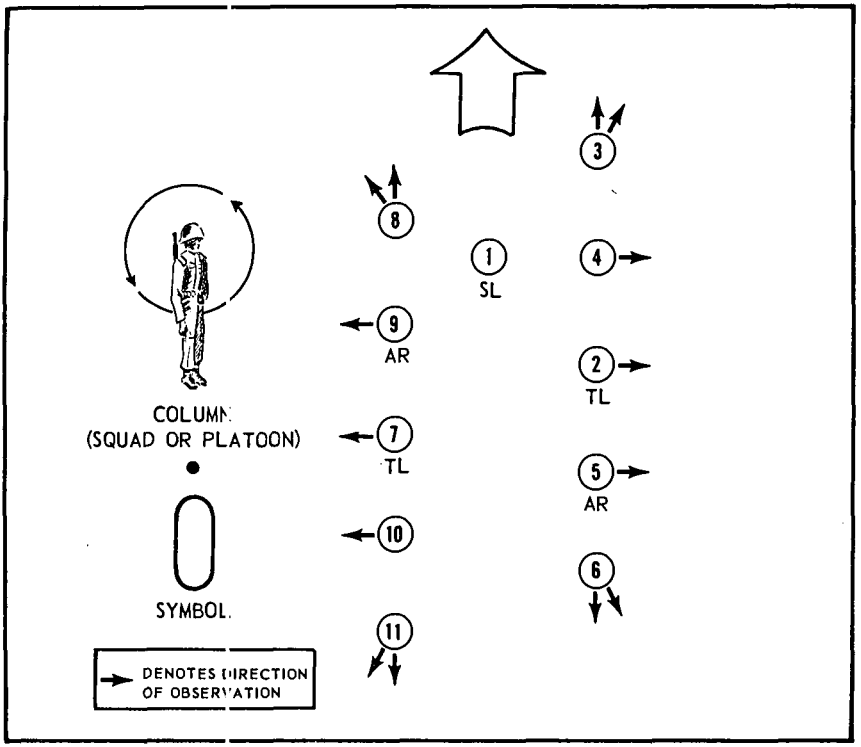


Figure 41. Squad column, rifle squad.

b. This formation is used when moving in woods, fog, smoke, or darkness, through defiles, along trails or roads, and under conditions when control and speed are the governing factors. The all-round security of the squad column is not as good as that of the diamond formation, but numbers 3 and 8 men provide a degree of forward security. Enemy fire from the front can enfilade the column. Friendly fire to the front is limited, but fire to the flanks is good. The men are staggered front to rear, and laterally if possible; they may be in a single file in certain situations. Distance between men, front to rear, is approximately five paces. The squad leader may designate riflemen other than numbers 3 and 8 as lead men. He also may vary the distance between men.

c. When operating with tanks, the squad leader may on occasion adopt a squad column formation to take advantage of the tank's firepower and the protection of the tank itself. Figure 42 depicts a situation in which intense enemy small arms fire is coming directly from the front. The squad leader (his squad being part of a rifle platoon) has decided to adopt the squad column formation until he gets close enough to the enemy to move into an as skirmishers formation for the final phase of the assault. In this case the squad is close enough to protect the tanks, the

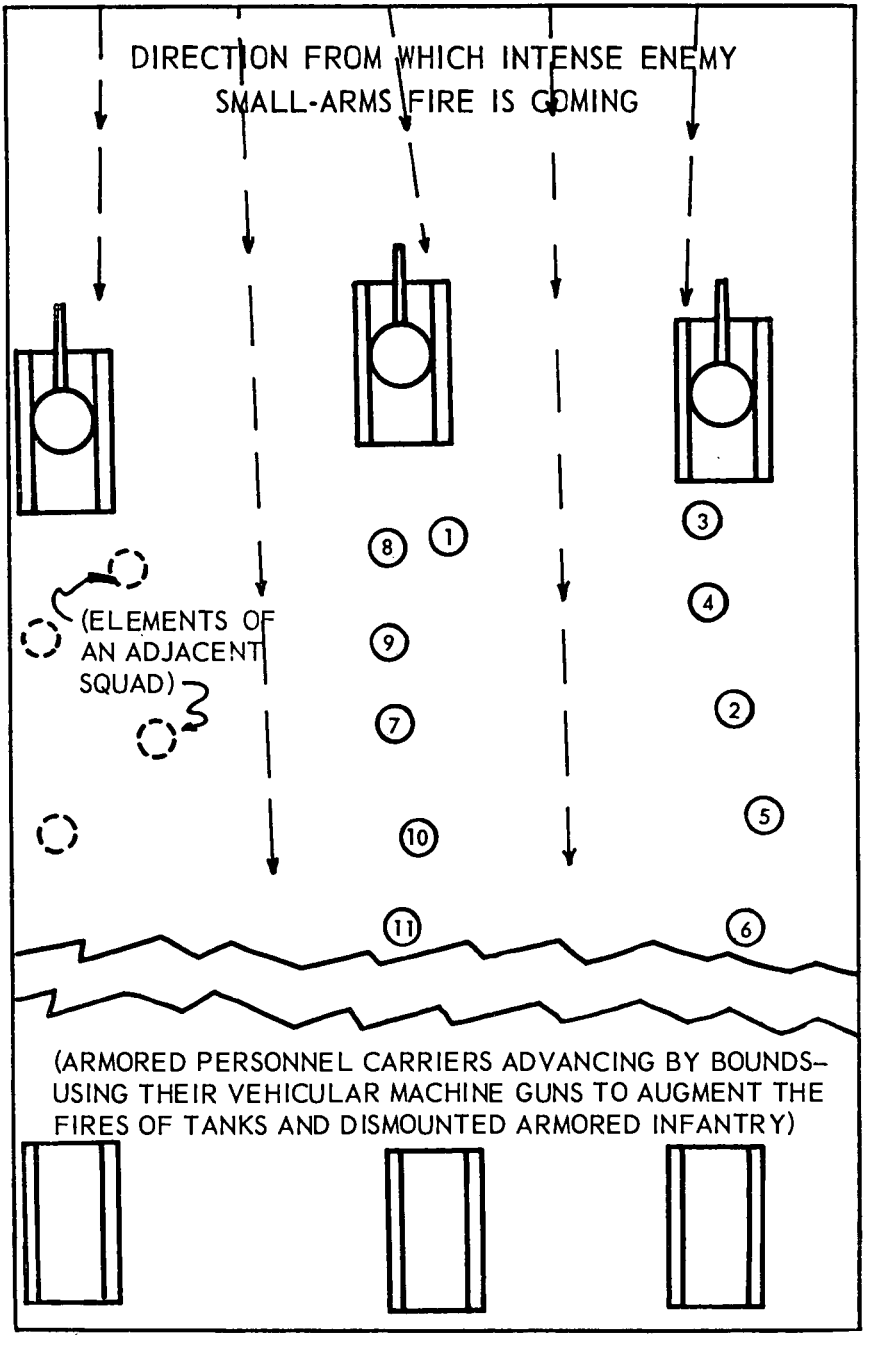


Figure 42. Example of squad column formation adopted to take advantage of protection provided by tanks from intense enemy small arms fire (schematic—only a portion of tank platoon line formation shown).

squad leader may easily contact the tank commanders, and the infantry derive a degree of protection from the tank formation. If the squad were attacking alone in this situation, it probably would have adopted the as skirmishers formation for the entire distance from the dismount point to the objective.

11. Squad Diamond

a. To form squad diamond, the squad leader commands and signals SQUAD DIAMOND, MOVE. At the command MOVE, the squad forms as shown in figure 43.

b. The diamond formation is used when the terrain and visibility do not limit the deployment of the squad. This formation provides good dispersion and all-round security, and is especially adapted to situations where readiness for action in any direction is required. Each automatic rifleman is placed to deliver a large volume of automatic fire to the front, flank, and rear, providing the squad leader with flexibility of fire. By varying the distance between individuals, this formation can be modified to adapt it to the terrain and visibility without losing the advantage of all-round security and flexibility.

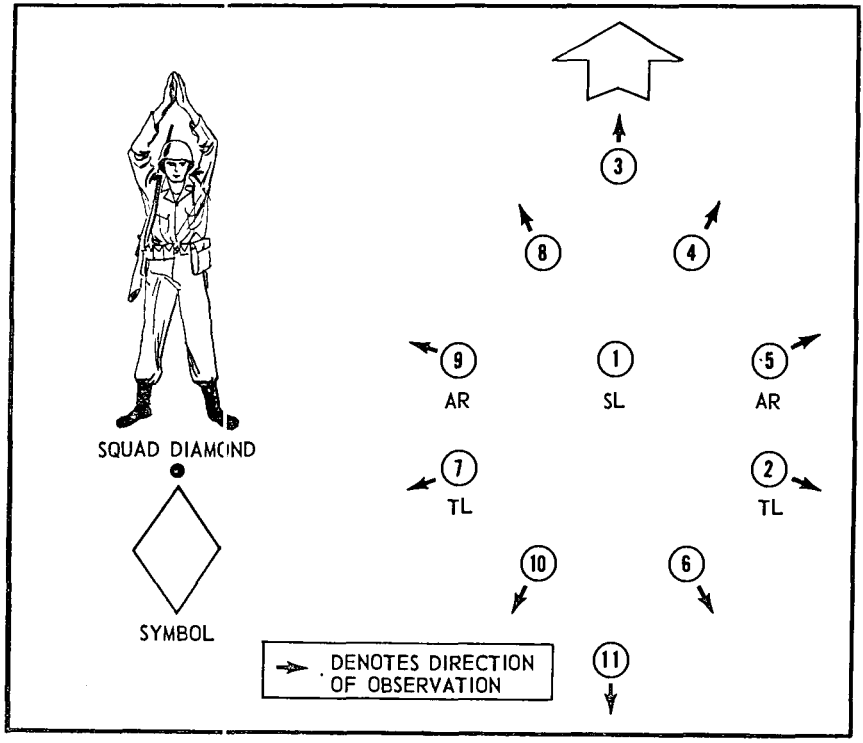


Figure 43. Squad diamond.

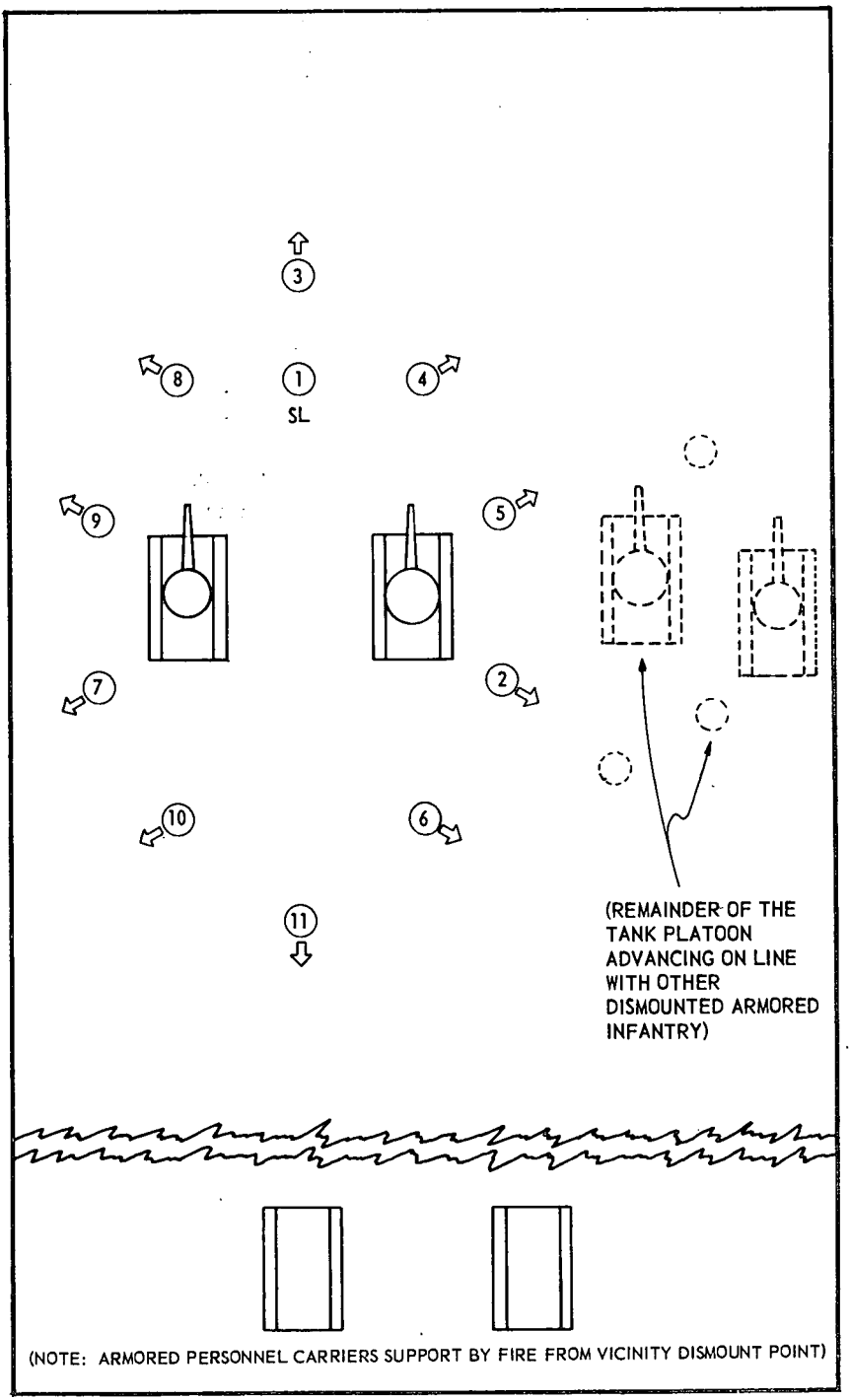


Figure 44. Example of squad diamond formation adopted to provide all-round protection for part of a tank platoon.

c. This formation is especially useful when enemy tank hunters are active and the tanks with dismounted armored infantry are moving through wooded areas or high grass, or when moving over broken terrain. Figure 44 shows a section of a tank platoon advancing in line with a dismounted rifle squad protecting it by use of the diamond formation. In this situation armored infantry should be careful not to mask the fire of the tanks.

12. As Skirmishers

a. To form as skirmishers, the squad leader commands and signals AS SKIRMISHERS, MOVE. At the command MOVE, each man takes his position as shown in figure 45.

b. Initially, the team leaders move to the immediate rear of their teams, where they can assist the squad leader in controlling fire and the rate and direction of movement of the squad. However, as the assault progresses, they may move up on line as fighter-leaders of their teams and participate in the assault fire (fig. 46). This will depend on whether the need for additional firepower or for continued control is predominant.

c. This information provides maximum fire to the front and is the basic assault formation for the rifle squad. It is difficult to control and

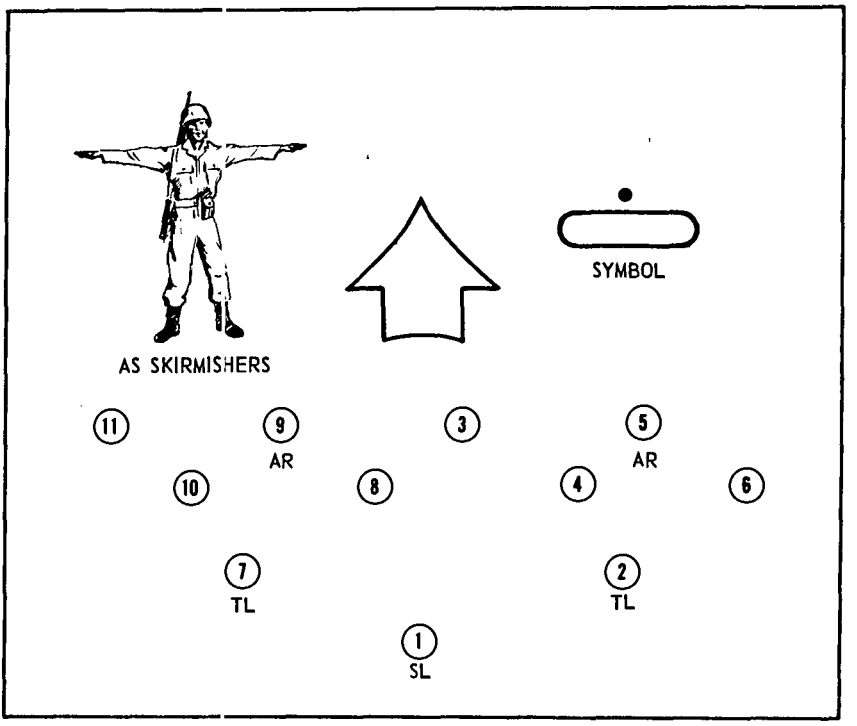


Figure 45. As skirmishers (fire team leader to the rear).

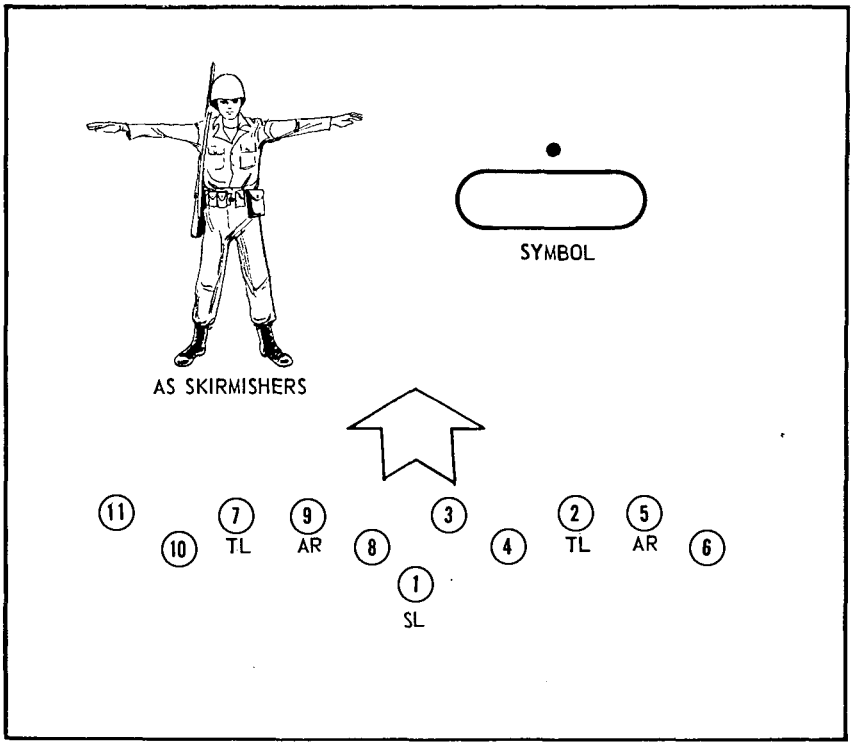


Figure 46. As skirmishers (fire team leaders on line).

has limited flexibility and security. It is adopted, however, for crossing small open or exposed areas.

d. When armored infantry are operating with tanks in the final phases of an assault, this formation is normally adopted. It conforms to the basic assault formation employed by the tanks—the line—and it enables dismounted armored infantry to move in an integrated formation with tanks. The armored infantry are in positions to provide close-in protection for the tanks; at the same time, the armored infantry derive the advantages of the firepower of the tanks in assisting their own advance (fig. 47). Individual armored infantrymen often gain protection of the tank's armor by seeking cover from small arms fire on the side of the tank away from the enemy fire—often when no other cover is immediately available. Also, the squad leader may be advancing in a direction generally parallel to a nearby advancing tank platoon which is echeloned to counter an enemy threat as shown in figure 48. In such a case, the squad leader might well adopt an as skirmishers formation to take advantage of the physical protection which the tanks on his flank provide. Without the tank protection the squad leader might have adopted a diamond or squad column formation to minimize the effects of the enfilade fire which the enemy would be able to bring onto his squad.

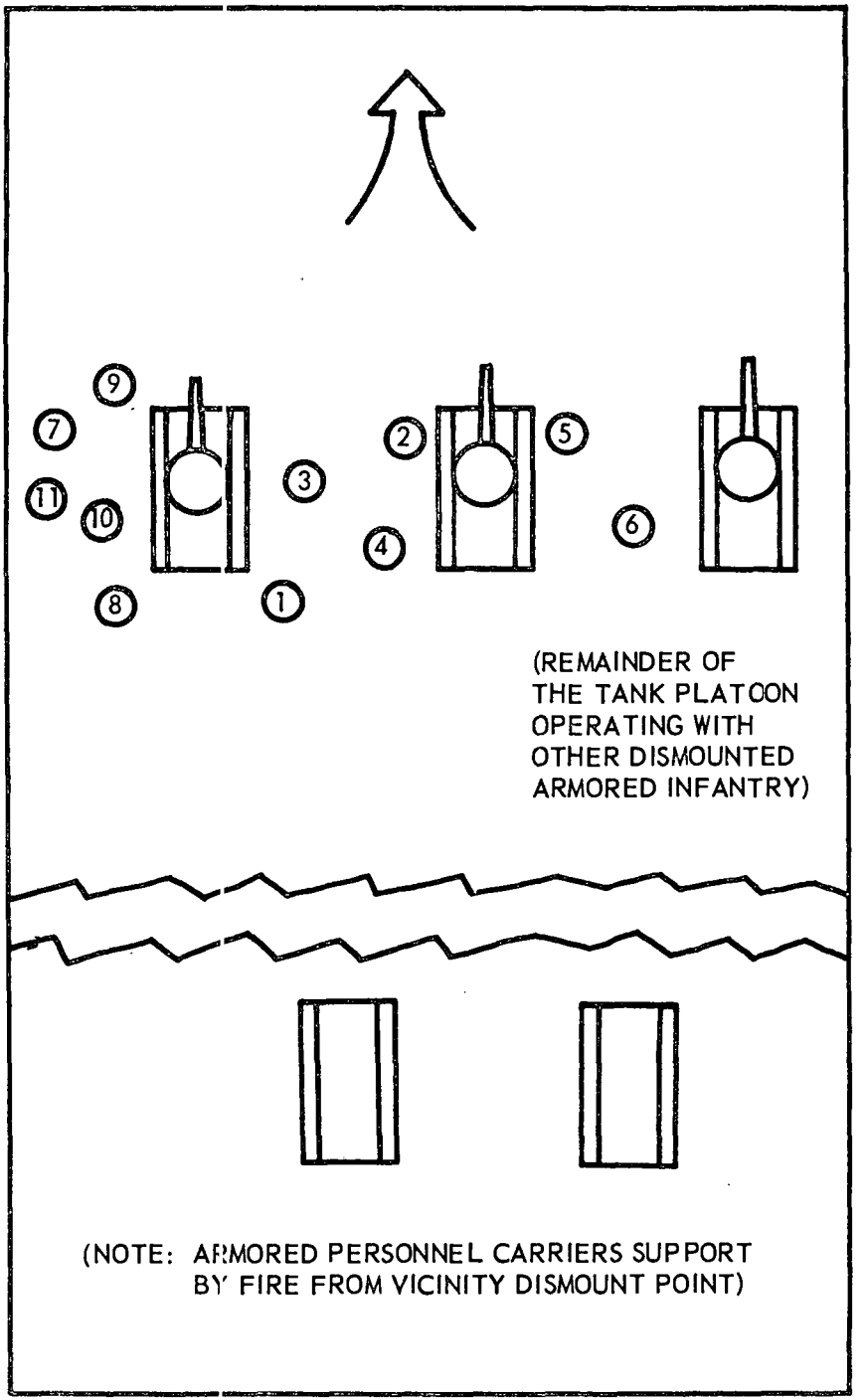


Figure 47. Squad in as skirmishers formation operating with a portion of a tank platoon in line.

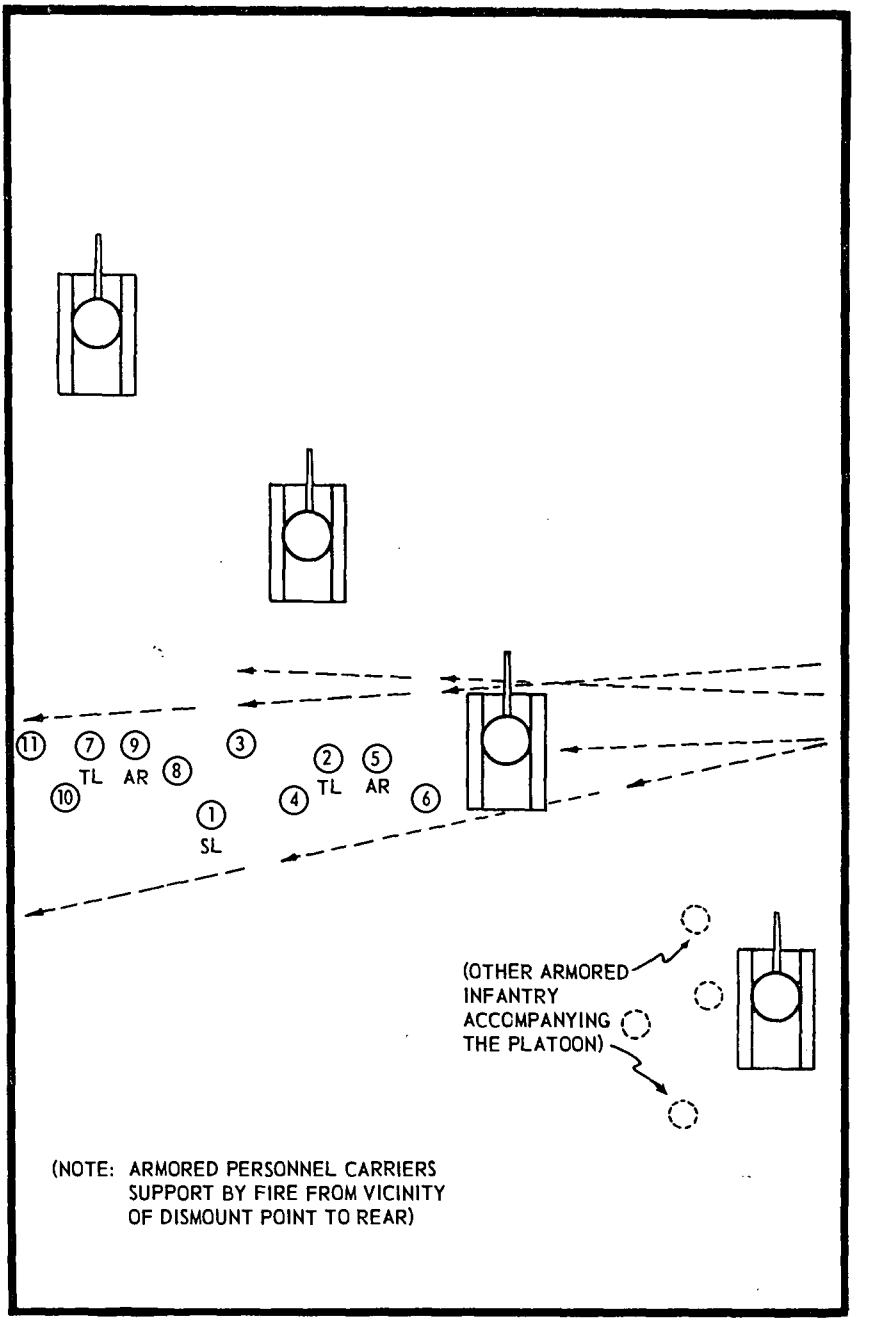


Figure 48. Example of as skirmishers formation adopted to take advantage of a tank platoon formation echeloned to counter an enemy threat from the right front.

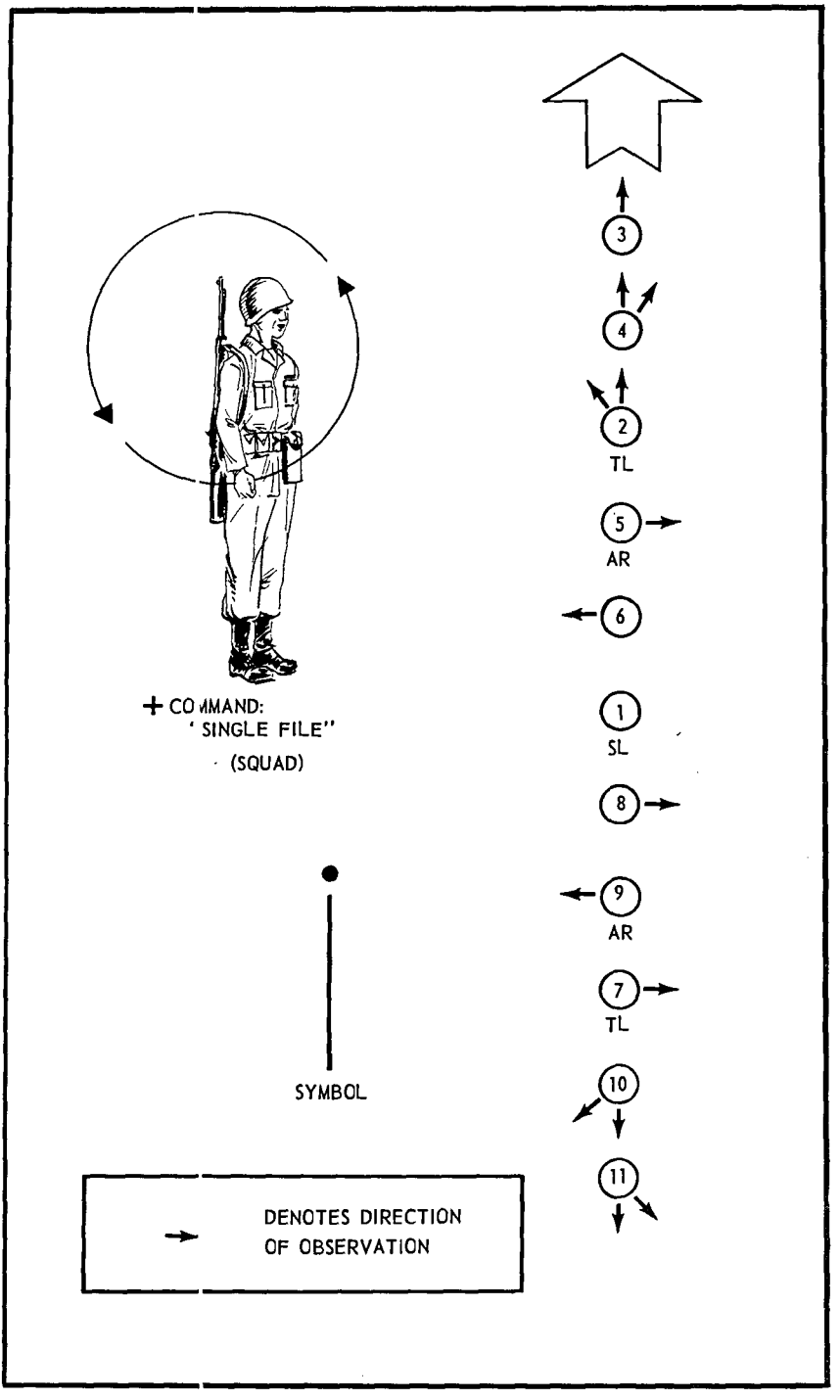


Figure 49. Single file, rifle squad.

13. Single File

a. To form single file, the squad leader commands and signals SINGLE FILE, MOVE. At the command MOVE, the squad forms as shown in figure 49.

b. The single file is used for moving over terrain so restrictive that the squad cannot adopt the column formation, and when visibility is so reduced that control becomes extremely difficult. This formation offers the same advantages and disadvantages as the squad column, with less security to the front. This formation is commonly used in administrative marches.

Section III. DISMOUNTED MACHINE-GUN SQUAD FORMATIONS

14. General

a. General. Conduct of drill, tactical considerations, and observation and control for the machine-gun squad are generally the same as for the rifle squad.

b. Organization. The machine-gun squad (fig. 50) of the rifle platoon consists of a squad leader (number 1), a driver (not shown), two machine gunners (numbers 3 and 6), two assistant machine gunners (numbers 4 and 7), and two ammunition bearers (numbers 2 and 5). The squad leader and the two ammunition bearers are armed with rifles. The machine gunners and assistant machine gunners are armed with pistols; the gunners carry the tripods and their assistants carry the machine guns. The ammunition bearers carry ammunition for the machine guns. The squad leader also has a hand-carried radio. In addition, the squad has a 3.5-inch rocket launcher; if used in dismounted action, it is operated by the two ammunition bearers or by the assistant gunners. In tactical situations requiring little or no movement, the squad may also be provided machine guns from the rifle squads of the platoon. The machine-gun squad leader assigns personnel to man these weapons based on the existing situation. In this connection, platoon and squad SOPs should be developed to indicate which personnel are to man these additional weapons in various tactical situations. Also, on occasion, when the rifle platoon is operating with tanks, and the platoon leader determines that the need for automatic weapons is fulfilled by the weapons of the tank platoon, the machine gun squad may be used dismounted, basically as a rifle squad. In such a case, the squad leader will adopt a formation (squad column, as skirmishers, or diamond) essentially the same as discussed for the dismounted rifle squad.

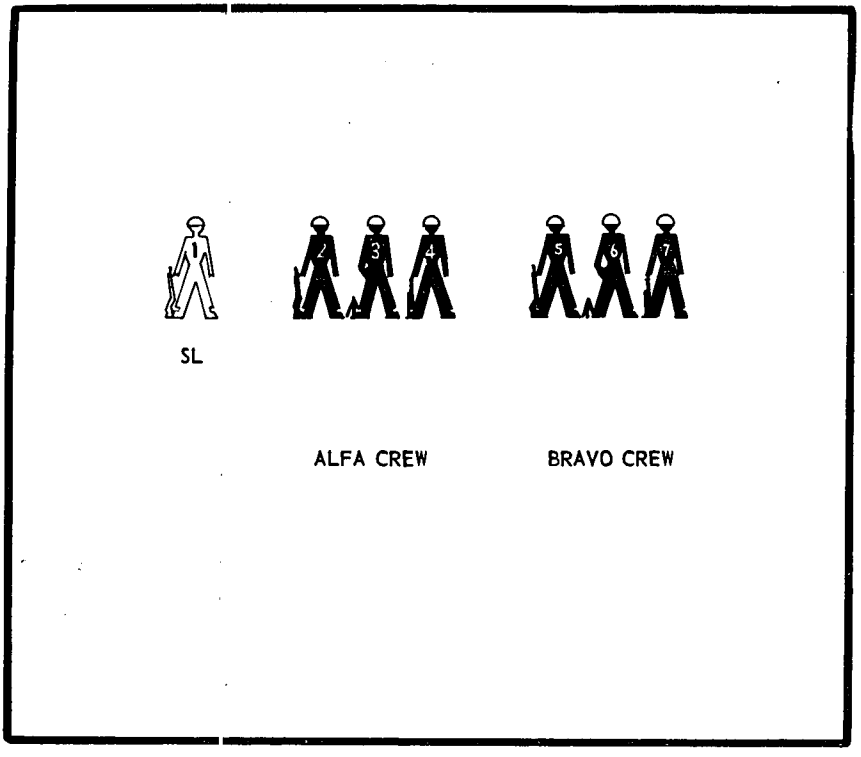


Figure 60. Machine-gun squad organization.

15. Machine-Gun Squad Formations

The *squad column* is the formation most commonly used in tactical movement when the squad is dismounted and operating with its machine guns. The *single file* may be used for administrative movement.

a. Squad Column.

(1) To form squad column, the squad leader commands and signals SQUAD COLUMN, MOVE. At the command MOVE, the squad forms as shown in figure 51.

(2) The characteristics and general description of this formation are the same as of the rifle squad column. The men are staggered front to rear, and laterally if possible; they may be in single file in certain situations. Distance between men, front to rear, is approximately five paces.

b. Single File.

(1) To form single file, the squad leader commands and signals SINGLE FILE, MOVE. At the command MOVE, the squad forms as shown in figure 52.

(2) The characteristics and general description of the single file are the same as of the single file when executed by the rifle squad.

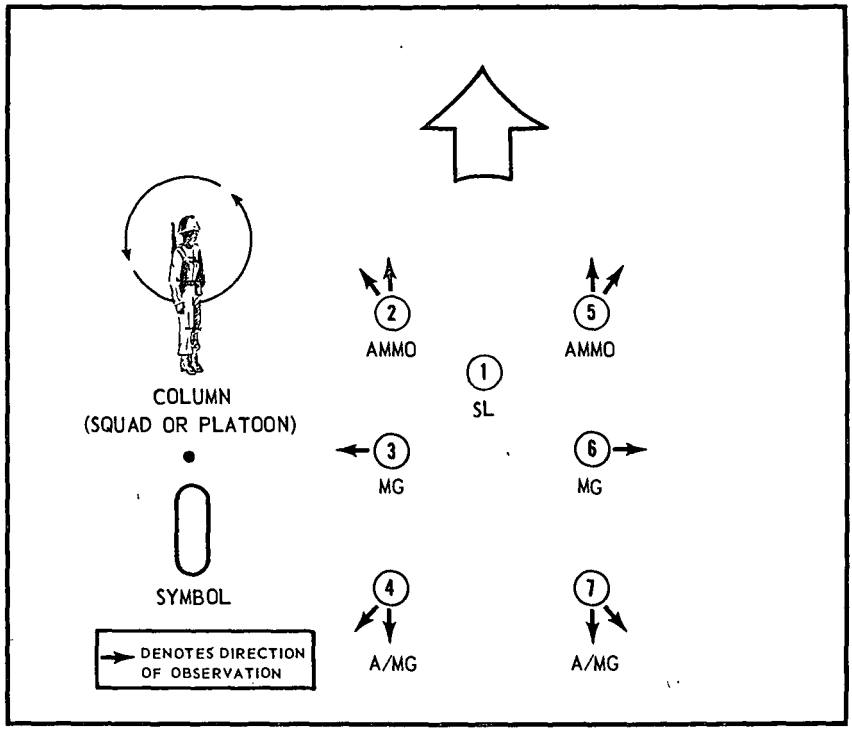


Figure 51. Squad column, machine-gun squad.

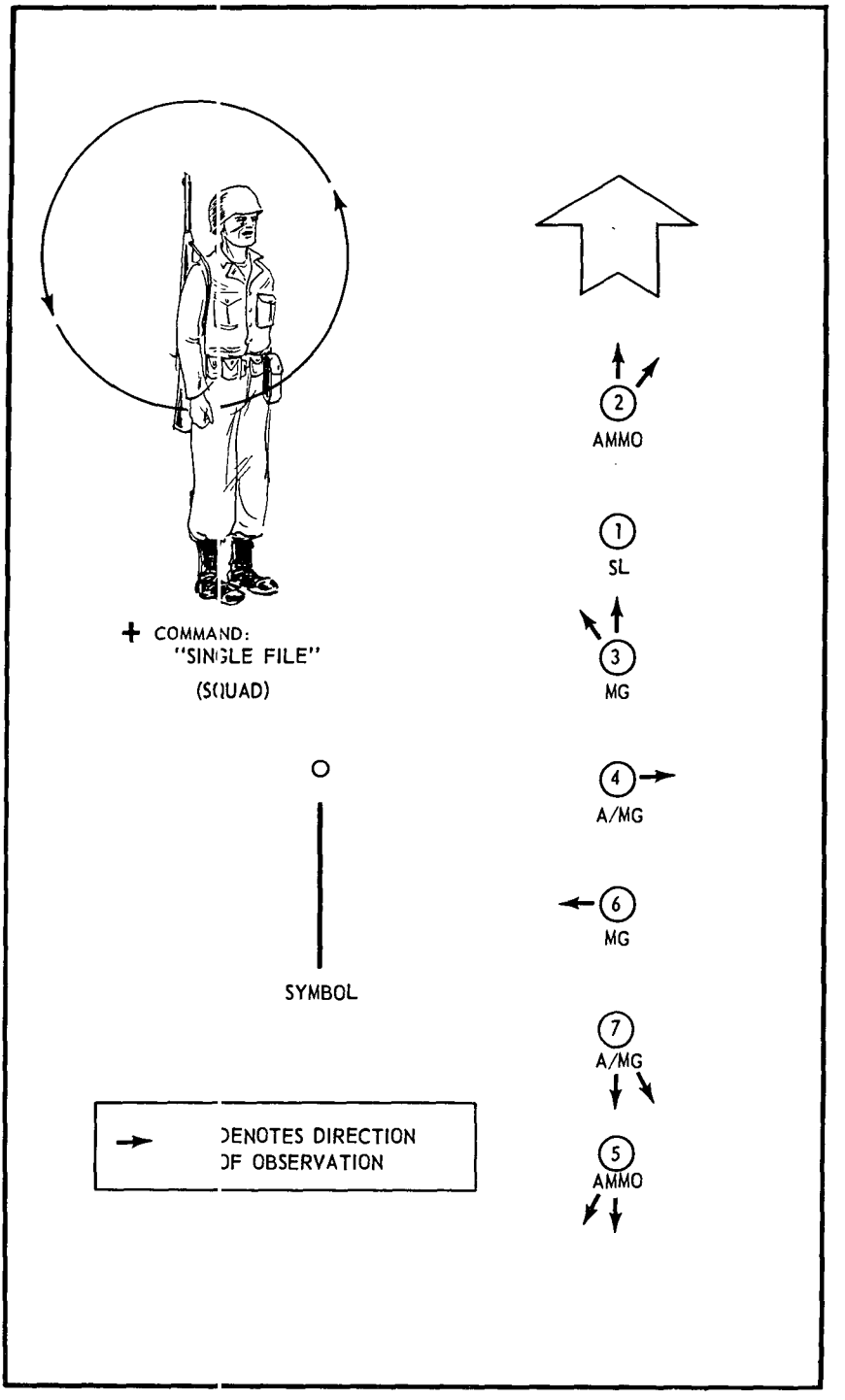


Figure 52. Single file, machine-gun squad.

Section IV. DISMOUNTED ARMORED RIFLE PLATOON FORMATIONS

16. General

a. Organization. The armored rifle platoon consists of a platoon headquarters, three rifle squads, and a machine-gun squad. The platoon headqaurters includes the platoon leader, the platoon sergeant, and a messenger. The platoon leader is armed with a pistol and a carbine and has a hand-carried radio. The platoon sergeant and messenger are armed with rifles; the platoon sergeant has a grenade launcher. In addition, the platoon headquarters is equipped with a 3.5-inch rocket launcher. When the rocket launcher is used in dismounted combat, it usually is given to a rifle squad.

b. Observation and Control. In platoon drill, as in squad drill, each squad within the platoon observes to its front, flanks, and rear. Squad leaders observe and control their squads; they stay within sight of the platoon leader if possible. The leader of the last squad is responsible for keeping the formation closed up. The platoon leader goes where he can best control the platoon. The platoon sergeant assists the platoon leader in the control of the platoon. His position is not fixed.

17. Conduct of Platoon Drill

a. Traning in rifle platoon combat formations teaches the relative positions of the squads in the platoon formations. It may be conducted at first on open terrain, such as a parade ground, progressing to more varied terrain as the training becomes more advanced. Platoon drill resembles that of the squad. The platoon deploys with sufficient distance between squads to permit movement. Oral commands, accompanied by appropriate arm-and-hand signals, are used throughout the instruction. For drill purposes, the distances between squads are fixed for each formation, although they may be altered to conform to the size of the drill field. In tactical situations, the distances between squads are varied according to the terrain, visibility, and enemy situation. The squads move at a run when changing formations.

b. Unless otherwise specified, the base squad for the platoon formations is determined as follows: When three squads are abreast, the center rifle squad is the base squad; in all other formations, the leading or right leading rifle squad is the base squad. The squad formations within the platoon formation may vary. The platoon leaders places the machine gun squad where it can best accomplish its mission of close fire support.

18. Platoon Formations, General

Four basic formations are used in dismounted tactical movement by the platoon: the platoon column, platoon wedge, platoon echelon, and platoon line.

19. Platoon Column

a. To form platoon column, the platoon leader commands and signals PLATOON COLUMN, MOVE. At the command MOVE, the platoon forms as shown in figure 53.

b. When the platoon is operating alone, the platoon column formation is used when moving in woods, fog, smoke, or darkness, through defiles, along trails or roads, and under other conditions when control and speed are the governing factors. This formation is used principally for movement. It is flexible, affords excellent control, and favors action to the flanks. It provides less all-round security than the platoon wedge. The distance between men may be increased or decreased, and the men may be staggered, according to the orders of the platoon leader.

c. When the platoon is operating with tanks in the assault phase of an attack, the platoon column normally should not be employed. However, on occasion, the enemy situation and the formation and relative location of accompanying tanks may enable the platoon leader to adopt a platoon column formation. For example, in figure 54, a situation is depicted in which the dismounted armored infantry have adopted a platoon column

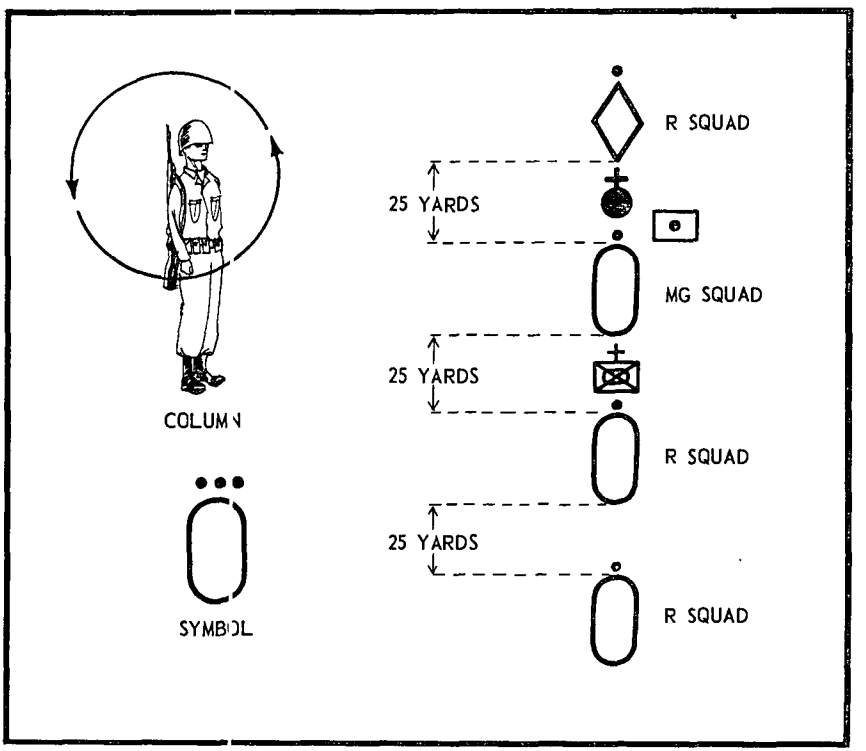


Figure 53. Platoon column.

formation to take advantage of the speed and control this formation offers because of the echelonment of a tank platoon to meet an enemy threat from the right front. Otherwise, the platoon leader would have been forced to take up the echelon formation to meet this threat. When moving with tanks along wooded trails or roads, the platoon leader may often adopt the column formation, his squads integrated with the tank column, in order to provide close-in protection from infiltrators and tank-hunter teams.

20. Platoon Wedge

a. To form platoon wedge, the platoon leader commands and signals PLATOON WEDGE, MOVE. At the command MOVE, the platoon forms as shown in figure 55.

b. The platoon wedge formation may be used for movement across small open areas between the line of departure and the objective, and when commitment of the platoon is imminent. It provides good dispersion, flexibility, and all-round security.

c. When operating with tanks which are assaulting in a wedge formation, the platoon leader usually also adopts the dismounted wedge formation to achieve better integration of tanks and armored infantry.

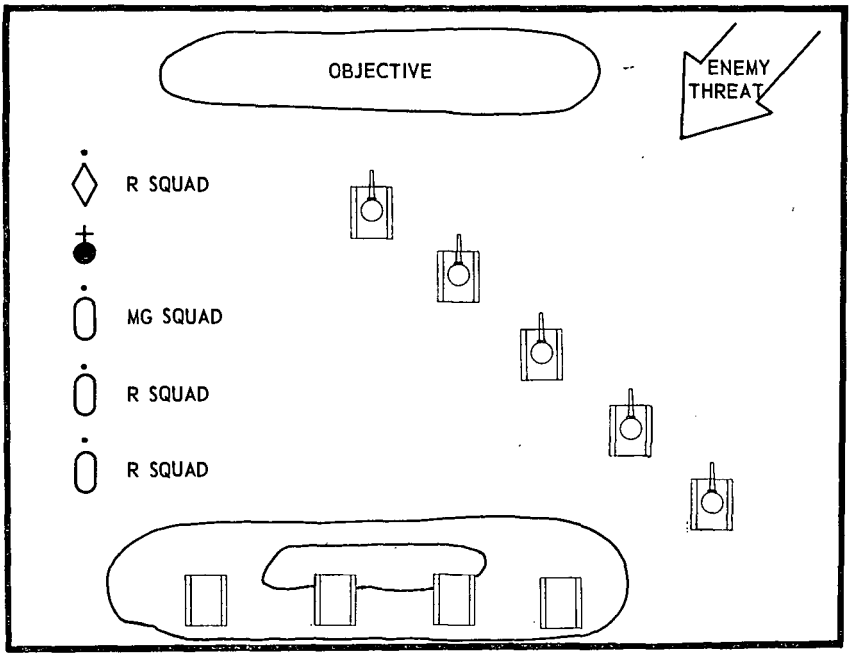


Figure 54. Example of situation (schematic) in which platoon leader is able to take up column formation because of echelonment of tanks to his flank.

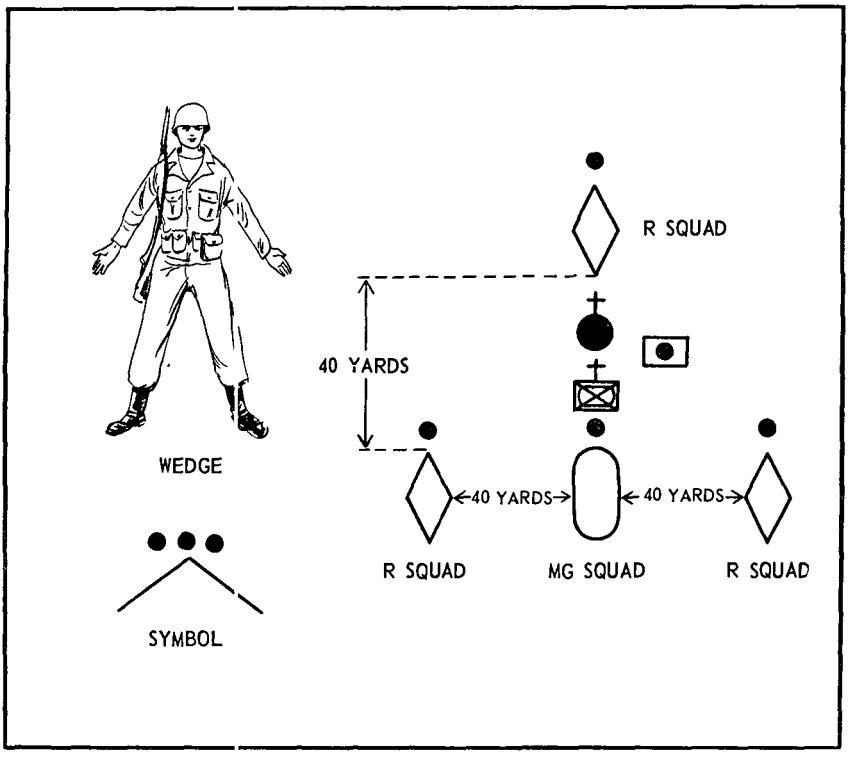


Figure 55. Platoon wedge.

The squad leaders in turn adopt a squad formation after a consideration of the factors discussed in paragraph 9 (fig. 56).

21. Platoon Echelon

a. To form platoon echelon right (left), the platoon leader commands and signals PLATOON ECHELON RIGHT (LEFT), MOVE. At the command MOVE, the platoon forms as shown in figure 57.

b. The platoon echelon formation is used to protect an open or exposed flank. It permits heavy fire to the front and in the direction of the echelon. It is especially useful for employment by a flank rifle platoon which may be operating with tanks in a wooded area or over broken terrain (fig. 58).

22. Platoon Line

a. To form platoon line, the platoon leader commands and signals PLATOON LINE, MOVE. At the command MOVE, the platoon forms as shown in figure 59.

b. The platoon line formation is used during the assault; it may be used in other situations where maximum firepower to the front is desired. It is normally employed with tanks in the final phases of an assault when tanks and armored infantry are advancing together. The formation provides maximum concentration of fire to the front, but it is difficult to control and has limited flexibility and security. In this formation there is a change in the base men within the squads. The number 3 man in the center (base) squad is still the base man for that squad, but in the flank squads the base man will be the man nearest the base squad (number 11 in the right squad and number 6 in the left squad).

23. Platoon Formation Changes

After the platoon learns to move into each of the basic formations, it then practices moving and changing from one formation to another while advancing. The methods for moving and halting are similar to those for the squad. In changing from one formation to another, the designation of the base squad sometimes changes to conform to the methods explained in paragraph 17. Some suggested methods of changing platoon formations are shown in figures 60, 61, and 62.

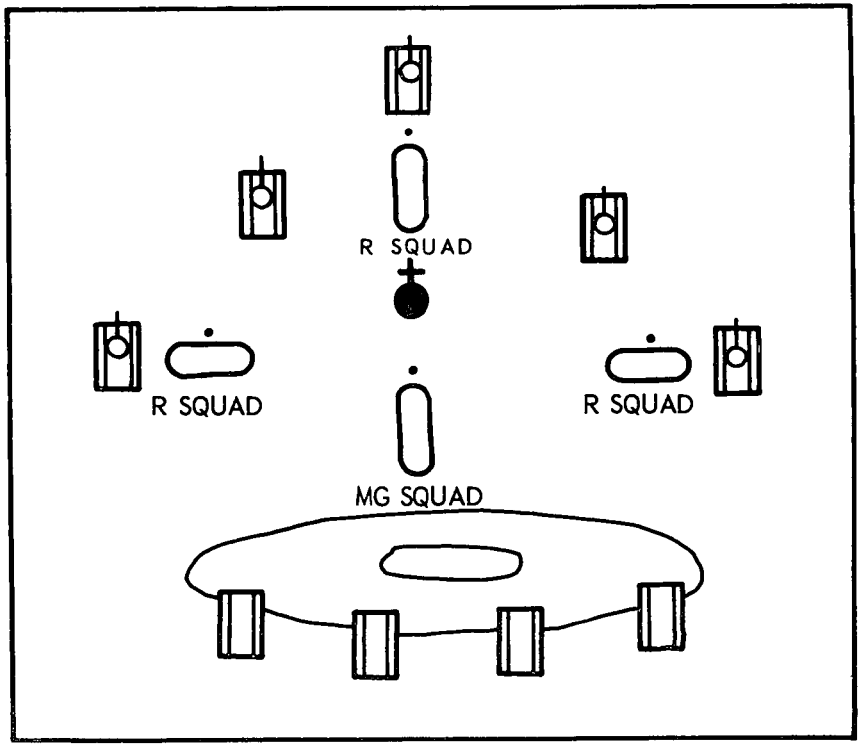


Figure 56. Tank platoon in wedge formation attacking with dismounted rifle platoon which has also adopted a wedge formation for better coordination with tanks.

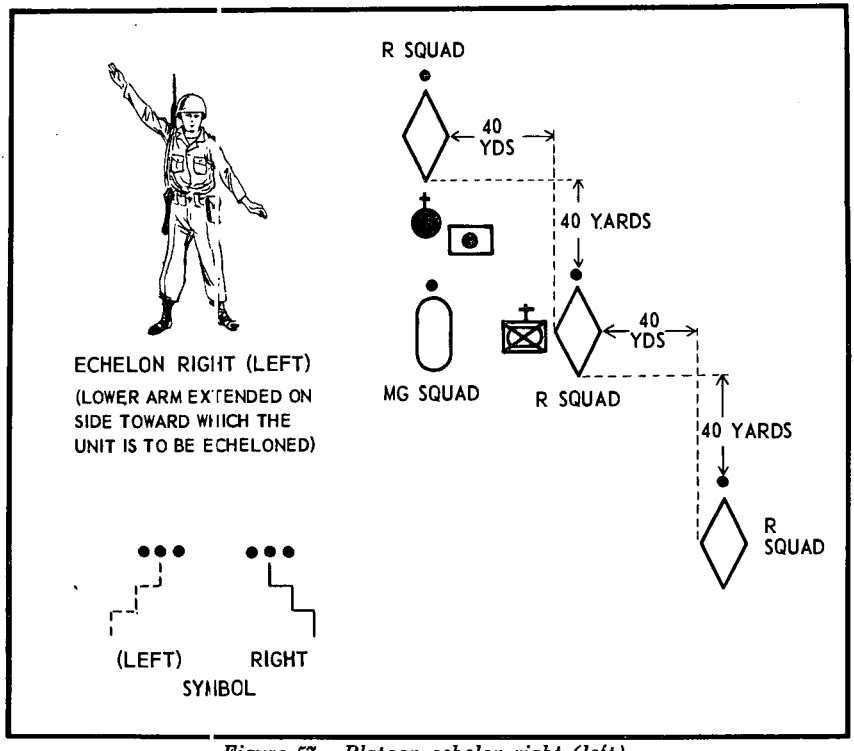


Figure 57. Platoon echelon right (left).

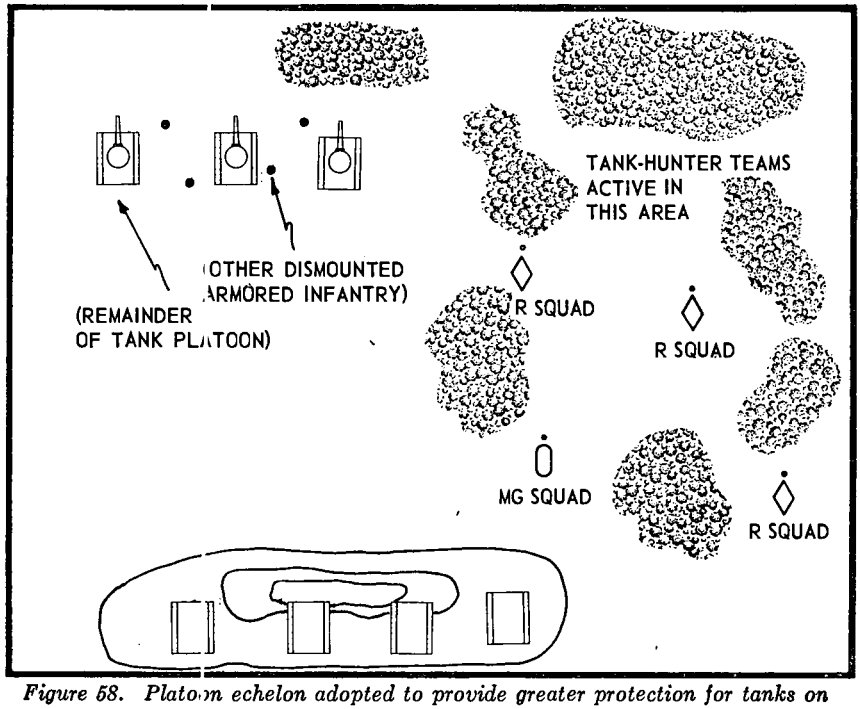


Figure 58. Platoon echelon adopted to provide greater protection for tanks on flank of a larger formation.

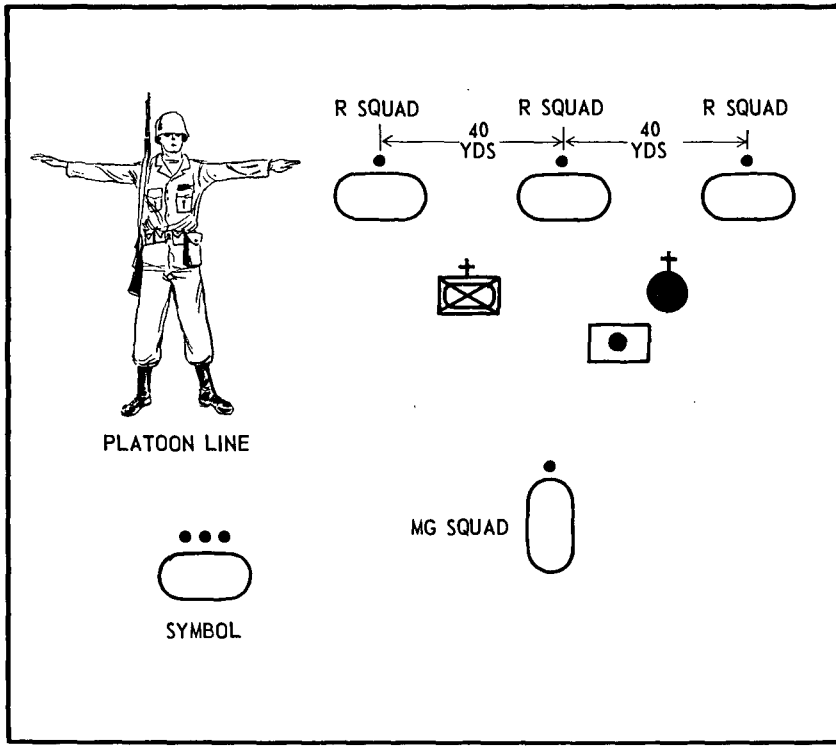


Figure 59. Platoon line.

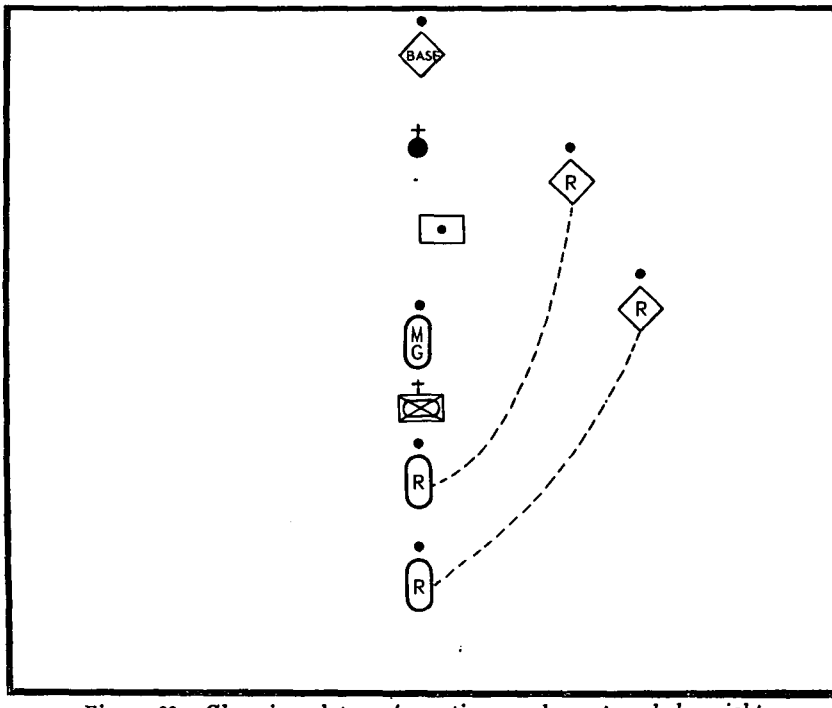


Figure 60. Changing platoon formations—column to echelon right.

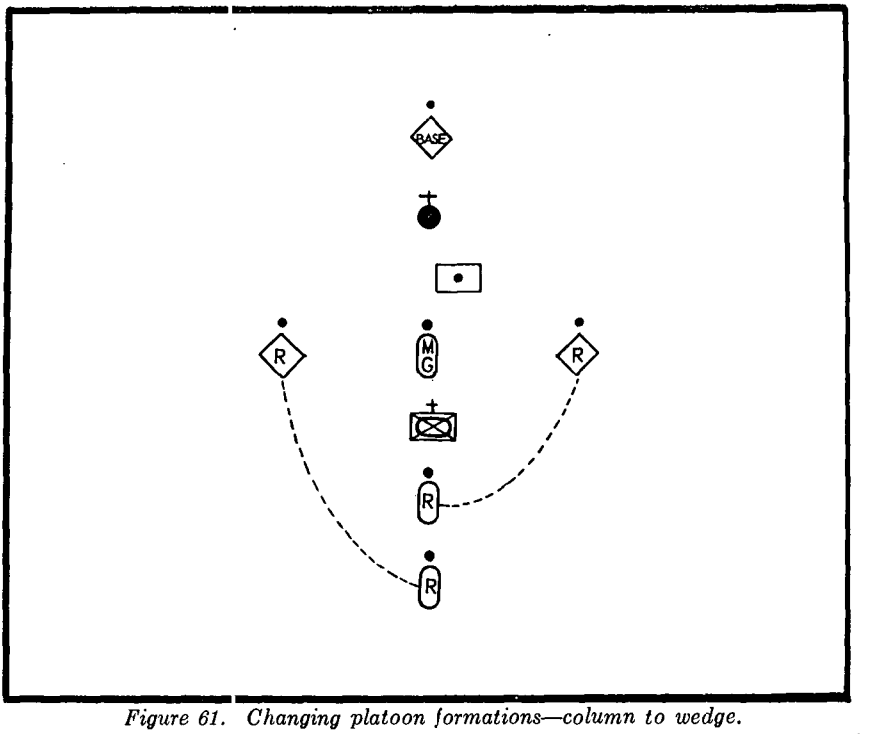


Figure 61. Changing platoon formations—column to wedge.

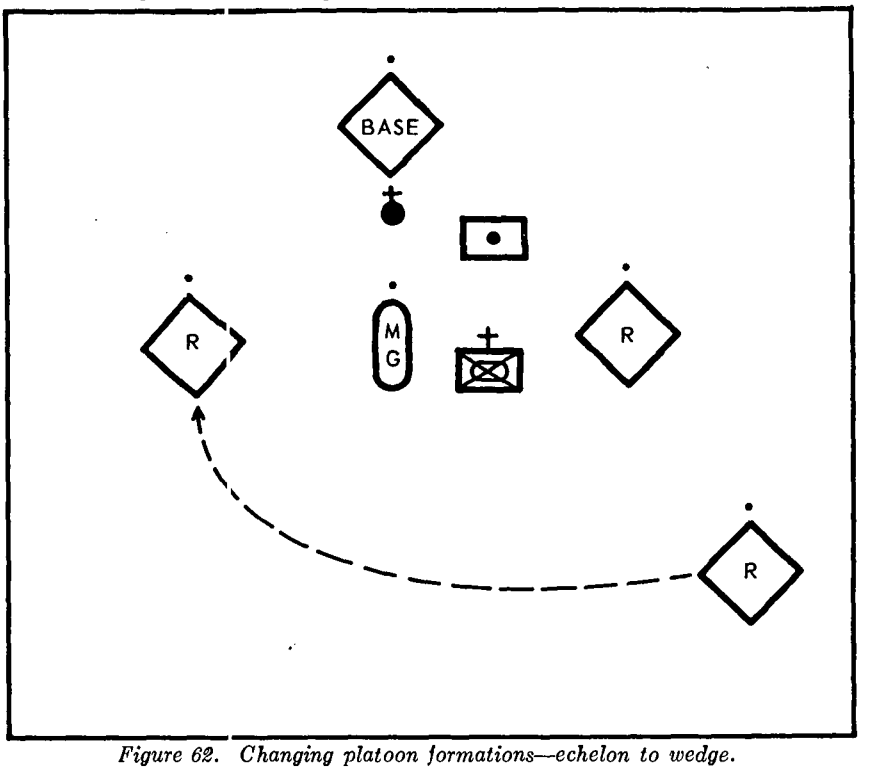


Figure 62. Changing platoon formations—echelon to wedge.

Section V. DISMOUNTED FORMATIONS, 81-MM MORTAR PLATOON

24. General

a. Organization. The 81-mm mortar platoon consists of a platoon headquarters and three 81-mm mortar squads.

(1) The platoon headquarters includes the platoon leader, the platoon sergeant, the fire direction computer, and a light truck driver. The platoon leader is armed with a pistol and is equipped with a hand-carried radio. The platoon sergeant and fire direction computer are armed with rifles, and each has a grenade launcher. In addition, the platoon headquarters has a 3.5-inch rocket launcher.

(2) Each 81-mm mortar squad includes a squad leader, a mortar gunner, an assistant mortar gunner, an ammunition bearer, and a driver. The squad leader is armed with a rifle, has a grenade launcher, and has a hand-carried radio. The gunner and his assistant are armed with pistols; the ammunition bearer is armed with a rifle. The mortar tube, base plate, and bipod are carried by three members of the squad. The squad is also equipped with a 3.5-inch rocket launcher and a machine gun; however, these are rarely, if ever, carried in dismounted movement, although they may be used in static positions.

b. Observation and Control. Same as for the rifle platoon (par. 16).

c. Conduct of Drill. Same as for the rifle platoon (pars. 18–22).

d. Use of Vehicles. Because of its heavy equipment and ammunition loads and requirements, the 81-mm mortar platoon is moved to firing positions mounted whenever possible. When the situation does not permit mounted movement, one or more of the armored personnel carriers or the platoon leader's ¼-ton truck should follow closely behind the platoon with ammunition.

25. 81-Mm Mortar Platoon and Squad Formations

When forced to execute dismounted movement, the platoon moves in platoon column, similar to the rifle platoon column (par. 19). Squads within the platoon are in squad column or in single file, similar to the formations of the rifle squad (pars. 10–13).

Part Two. SQUAD AND CREW DRILL

26. General

a. Training by a squad (or vehicle crew) includes drills for attaining efficient teamwork. Speed and precision in the execution of duties by

each member of the squad are developed through constant practice. As traning progresses, these functions become automatic.

b. A recommended sequence of training is—

(1) Squad compositions and formations.

(2) Squad control.

(3) Mounted action.

(4) Dismounted action.

(5) Technique of mounting and dismounting from the carrier.

(6) Inspections and maintenance of the personnel carrier and its equipment.

(7) Stowage.

(8) Destruction of equipment.

c. In squad or crew drill, the unit commander instills snap, precision, and discipline in the squad members. Familiarization with duties and quick responses to commands develop the spirit of teamwork. Such exercises as dismounted drill, mounting and dismounting, and pep drill are scheduled periodically thruout all phases of training.

d. Every man in the squad must become proficient in the duties of all other squad members and with the use of all the weapons in the squad. Duties are rotated so that the effect of casualties in action will be minimized. As soon as possible, crew drill is held in the field under simulated combat conditions so that squad members will learn to perform their duties in all situations and on every type of terrain.

e. Precision in execution is not practicable for all formations and movements of crew drill, but it should be sought wherever possible.

27. Mounting and Dismounting Technique, General

As training becomes more advanced, particular stress is placed on the ability of the squads to mount and dismount without confusion and in minimum time. Especially during the final stages of an assault, the rifle squad must be able to quickly dismount, adopt a suitable combat formation in an appropriate direction, and continue the assault in conjunction with tanks. Training in the technique of mounting and dismounting should be concurrent with the conduct of crew drill and battle drill. This training should vary from drills requiring squads to mount from, and dismount to, simple close-order formations in front of their vehicles, to more varied combinations of dismounted and mounted platoon combat formations.

28. Mounting Technique

a. Each of the four armored personnel carriers in the rifle platoon carries a squad, with such additional personnel of platoon headquarters

as may be required. In mounting, tactical integrity of the fire teams is maintained to facilitate control upon dismounting. In turn, individuals are seated in the vehicle to facilitate their deployment upon dismounting. One fire team (or machine-gun team) sits on the left side of the vehicle, while the other sits on the right. The fire team leaders of the rifle squad should sit nearest the ramp. Other members of the fire teams may sit in any order established by the unit SOP (fig. 63). When the platoon leader or platoon sergeant is in the carrier and acts as vehicle commander, the squad leader joins either of the fire teams, seated near or next to the ramp.

b. When directed to mount, the fire teams move directly to the rear of the vehicle, preceded by their leaders. Upon reaching the ramp, team leaders stand aside and permit team members to move directly to their seats. The squad leader may enter through the rear or over the vehicle side, directly into the commander's cupola.

29. Dismounting Technique

a. The rapid dismounting and deployment of the rifle squad, and the immediate establishment of control by the squad leader, are essential.

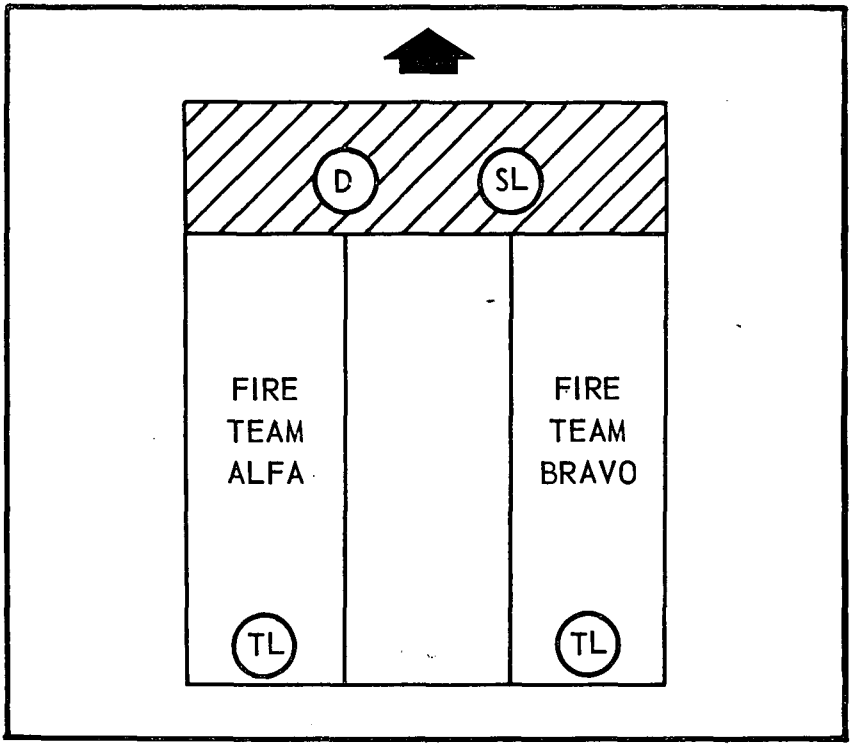


Figure 63. Relative locations of elements of mounted rifle squad (one fire team may occupy either side).

With the exception of the vehicle commander and driver, personnel within the carrier are unable to see the terrain over which they are moving. Consequently, upon dismounting, a degree of confusion and disorganization will exist unless personnel are properly oriented prior to dismounting. The vehicle commander therefore must plan to orient members of his squad immediately before they dismount.

b. Upon reaching the planned dismount area, the armored personnel carriers halt, utilizing such cover as is available. At this time the leader lowers himself in the commander's cupola so that all personnel can hear him. Then, using short, carefully chosen phrases, he covers the following: enemy direction, direction each fire team will move when dismounting, the dismounted combat formation which will be adopted, and the relative location of tanks with which the armored infantry are operating. An example of such an orientation follows:

(1) Alert	PREPARE TO FIGHT ON FOOT.
(2) Direction	ACTION FRONT.
(3) Enemy	ENEMY TANKS AND INFANTRY.
(4) Formation	AS SKIRMISHERS.

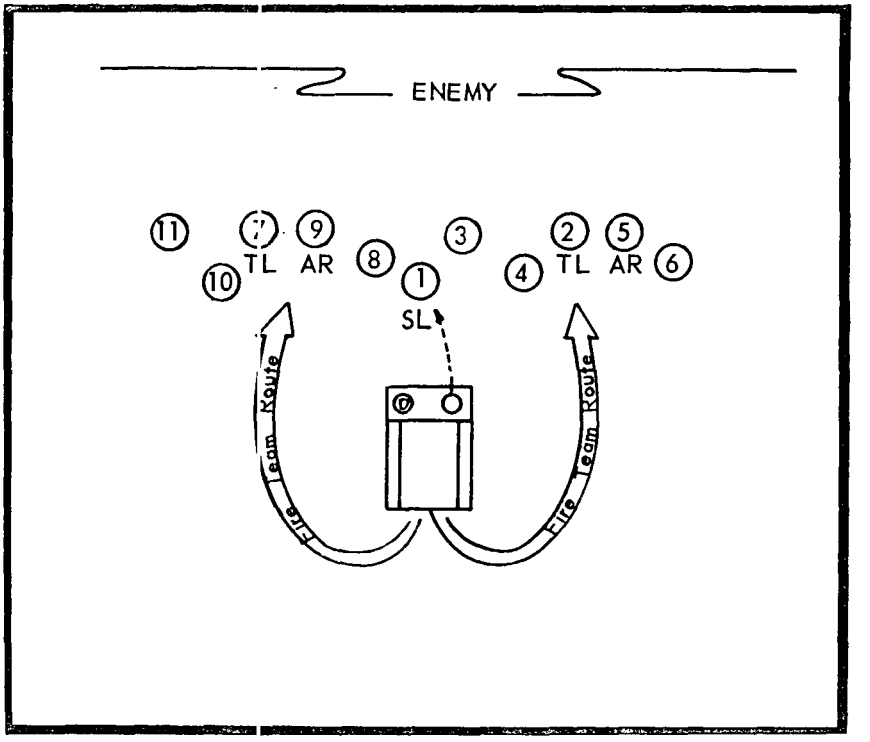


Figure 64. A method of dismounting—fire teams move rapidly around each side of the carrier to take up dismounted combat formations.

(5) Friendly forces FRIENDLY TANKS FRONT; FRIENDLY TROOPS BOTH FLANKS.

(6) Execution DISMOUNT.

In this example, as soon as the ramp is lowered, one fire team moves around the vehicle to the left, the other fire team goes to the right (fig. 64). The squad leader is then free to move directly to the point at which he can best control the dismounted formation and insure that the momentum of the attack is not delayed.

c. There are many variations to this technique. The carrier of course may not be facing directly toward the enemy. In some instances the situation may require the squad to move at right angles to the axis of the carrier (fig. 65). In this instance, the squad leader in his brief orientation has indicated that the squad will take up a diamond formation and move to the right flank.

d. In conduct of crew and battle drills, squad and platoon leaders should be allowed freedom to practice dismounting and movement into various combat formations with many assumed enemy directions in relation to the axis of the armored personnel carrier. Emphasis should be placed on the ability of the vehicle commander to issue brief, easily

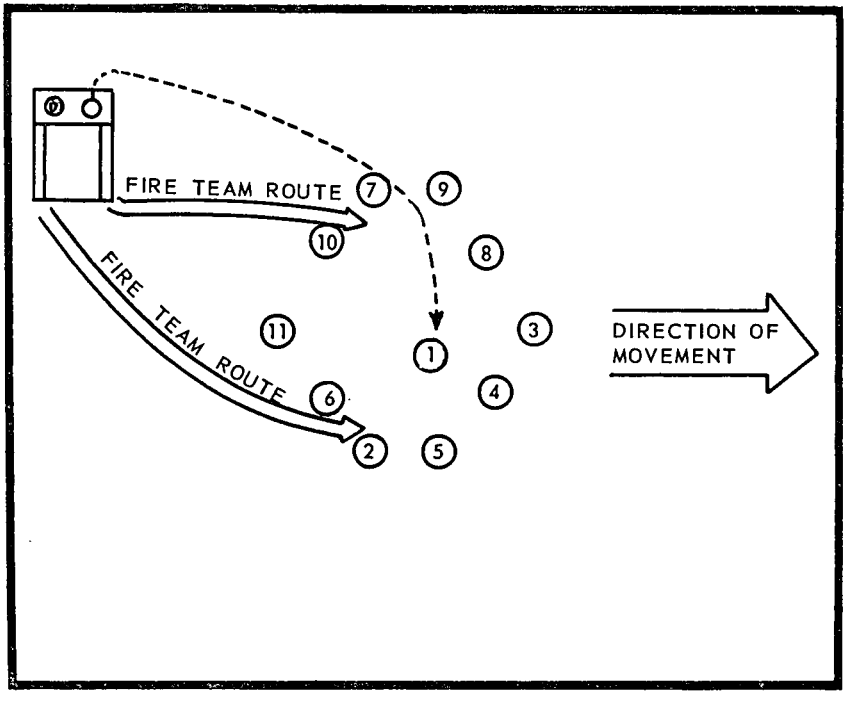


Figure 65. Variation in technique of dismounting.

understood instructions and on the execution of those commands rapidly and without confusion.

30. Crew Drill

Crew drill for rifle, machine-gun, and 81-mm mortar squads is discussed in FM 17–77. Minor adjustments must be made due to differences in tables of organization and equipment.

Part Three. BATTLE DRILL

31. General

a. Battle drills are single-situation tactical exercises for squads and platoons. They consist of movement toward, and assault of, specific objectives. The purpose of battle drills is to practice movement in combat formations and changes of formations. They go further than ordinary practice of formations in that there is a physical objective of a specific type to be assaulted. The objective may be a terrain feature, a dummy position, or a position manned by troops posing as Aggressor. Blank ammunition may be used as the unit progresses through training. Live ammunition may be used when the unit has become proficient in its training. Prescribed safety precautions must be observed when ammunition is used.

b. When the squad becomes proficient in dismounted battle drill, dismounted battle drill practice should be combined with crew drill. Stress should be placed on tank-infantry coordination and cooperation during these training periods. All armored infantrymen should realize that their ultimate participation in combat will be as part of a team of combined arms, with tanks and armored infantry as the nucleus. Stress should be placed on coordination with tanks by dismounted armored infantry. The armored infantry should, in general, be taught to use the fastest and most convenient means available to designate targets for tanks. They may designate targets by pointing; by firing smoke grenades, streamers, flares, or tracers; or by using the radio or external tank interphone. Stress should also be placed on the protection that tanks receive from the armored infantry.

c. Mounted battle drill is not considered a separate subject; it consists merely of practice of mounted formations, changing mounted formations, and practice of mounted formations in simulated tactical exercises. Practice of mounted formations in simulated tactical situations may be based on the tactical principles discussed in this manual.

32. References

a. Dismounted battle drills, battle courses, and proficiency tests for the dismounted rifle squad and platoon are contained in FM 7–10.

b. Drills and tests for dismounted machine gun squads are contained in FM 23–55 and 22–5; minor adjustments must be made due to differences in tables of organization and equipment.

c. Drills and tests for dismounted 81-mm mortar squads are contained in FM 23–90; minor adjustments must be made due to differences in tables of organization and equipment.

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[AG 322 (6 Aug 57)]

By Order of *Wilber M. Brucker*, Secretary of the Army:

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General, United States Army,
Chief of Staff.

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HERBERT M. JONES,
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AAA Btry
Abn Co
USMA
CGSC
Armor Sch
Army Air Def Sch
Arty & Msl Sch
Inf Sch
Ord Sch
PMST Sr Div Unit
MAAG
Mil Mis
Units org under fol TOE:
17–17, Tk Co, 76-mm Gun, Sep (Sp)
17–27, Tk Co, 90-mm Gun
17–37, Tk Co, 120-mm Gun or 90-mm Gun
17–51, Armd Cav Regt
17–52, Hq&Hq Co, Armd Cav Regt
17–55, Armd Cav Recon Bn
17–57, Recon Co

NG: State AG; units—same as Active Army.

USAR: Same as Active Army.

For explanation of abbreviations used, see AR 320–50.

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