CGSC STUDENT TEXT 100-7

OPFOR Battle Book

U.S. ARMY COMMAND AND GENERAL STAFF COLLEGE
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OPFOR BATTLE BOOK

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CHAPTER 1

ARMOR AND MECHANIZED OFFENSE

1-1. THE OFFENSE

The opposing force (OPFOR) believes the offensive is the primary means to achieve decisive victory. The goal of the offense is to strike key points and to strike into the full depth of an enemy defense. The OPFOR conducts an offensive with all available resources, at high speed and without pausing. The defense may have tactical advantages in the choice of terrain and time to prepare, but the OPFOR feels the attacker can seize the initiative and impose his will on the defender.

1-2. SURPRISE AND CONCENTRATION

In order to seize the initiative, the attacker ensures surprise by concealing the time, location, and strength of his attack. OPFOR doctrine emphasizes the importance of concealment and deception to disguise the location of the main effort.

The key to success is the concentration of sufficient combat power to overwhelm the enemy defense in the strike sector (penetration sector/sector of the main effort). Once the penetration has been achieved, it must be exploited, without pausing, until the mission is accomplished.

1-3. COMBINED ARMS TACTICS

The essence of the offense is combined arms cooperation. The basis for this cooperation is close and uninterrupted interaction of all forces to best exploit their capabilities. Each arm provides strength and protection where another arm is weak or vulncrablc. The tank is a critical element for combined arms cooperation in the attack, but the tank can be successful only if the OPFOR can protect it from air attack and, using fire support, neutralize enemy antitank systems.

Concern for the enemy antitank threat is the chicf factor in coordinating the combined arms effort. The bulk of responsibility for neutralization of antitank weapons falls on artillery. Massive, continuous artillery tires in the attack are extremely intense. Even if these fires do not destroy, enemy antitank weapons, they force the enemy gunners to keep their heads down.

Consistent with the principle of doing the uncxpectcd to surprise the enemy, the OPFOR attacks through difficult terrain against lightly defended or undefended areas. An OPFOR commander considers an undefended wooded area a better avenue of approach than an open area dominated by enemy antitank guided missiles. Attacks by motorized rifle subunits along forest trails or ridge lines arc likely, particularly if OPFOR reconnaissance identifies no resistance along these routes.

After penetrating the forward edge of an enemy defense, the OPFOR continues to attack further into the depths of the defensive position. It bypasses enemy strongpoints that it cannot reduce immediately. If it cannot bypass them, it would attack them preferably from the flanks or rear. The OPFOR uses massed fires to provide close and continuing fire support. and can use smoke and flame weapons against the strongpoints.

This Chapter is adapted from Training and Doctrine Command (TRADOC) Pamphlet 350-16, Heavy Opposing Force (OPFOR) Tactical Handbook, September 1994. chapter 5.

1-4. FORMS OF TACTICAL MANEUVER

Maneuver is a basic component of combat. It is an organized movement during combat that puts troops in a more advantageous position than the encmy. From this position, they can deliver a decisive attack. Maneuver has a significant role in the OPFOR concept of the combined arms battle.

However, maneuver ground forces alone do not achieve victory. The OPFOR expects that an effective fire strike can make maneuver possible. Unlike many other armies where tire strikes support maneuver, OPFOR ground maneuver capitalizes on gains achieved by fire strikes. The "maneuver of fires" is also important in OPFOR tactics.

The commander uses maneuver to seize and hold the initiative and defeat enemy plans. Maneuver achieves the essential superiority of tire. forces. and equipment in the crucial sector, and increases the force of the strike, The most common forms of maneuver are **close, deep, and double envelopments.** The frontal attack, once one of the most frequently employed forms of offensive maneuver, has fallen into disfavor.

a. Frontal attack. The frontal attack is directed against the enemy's front line forces. Its goal is to penetrate his defenses along single or multiple axes Its success depends on superiority of forces and firepower, the presence of sufficient reserves. and thorough planning. A unit conducting a frontal attack attempts to create openings for subsequent exploitation. The frontal attack, by itself, is the least preferred form of maneuver. Normally, it is used in combination with a close or deep envelopment.

b. Envelopment.

(1) A close envelopment is a flanking maneuver that strikes enemy forces in their flank or rear at a relatively shallow depth. The goal of the close envelopment is to attack the enemy from the flank, avoiding a frontal attack. It normally is initiated through gaps or breaches in enemy formations. Forces conducting the close envelopment and those conducting a simultaneous frontal attack coordinate fire support (fig 1-1).

(2) A deep envelopment is a flanking maneuver executed at a greater depth. The goal of deep envelopment is either to attack the enemy from the rear or to seize key blocking positions; preventing the enemy's withdrawal and ensuring his destruction The deep envelopment is conducted in tactical coordination with the forces advancing from the front (fig l-2)

Forces assigned to conduct a deep emvelopment receive additional fire support. This is because the depth of the envelopment exceeds the range of friendly, fire support advancing from the front. The strength of the deep enveloping subunits can vary. In an attack against a defending enemy, a battalion- or regiment-sized forward detachment (FD) could conduct a deep envelopment for a regiment or division; the FD would be inserted through a gap in forward enemy defenses after first-echelon forces in the main attack achieve a penetration. The depth of a deep envelopment for a motorized rifle or tank battalion can be more than 15 kilometers. A regiment may conduct a deep envelopment to a depth of up to 50 kilometers. That depth can be significantly greater in a meeting battle or in a pursuit of the enemy. A tactical commander may also employ airborne or heliborne forces for the deep envelopment.

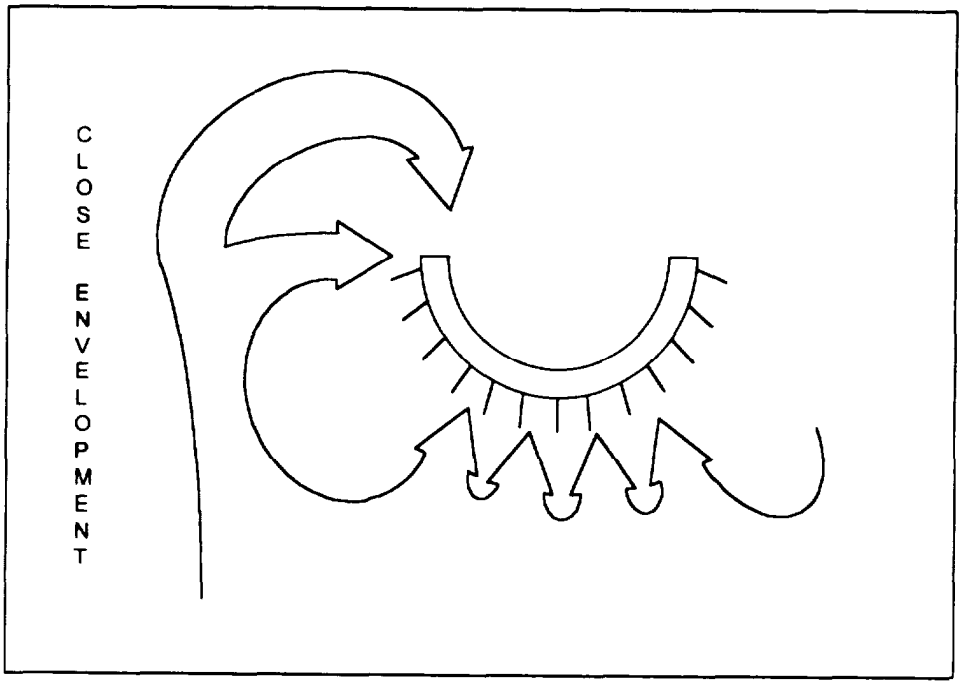


Figure 1-1. Close envelopment combined with frontal attack.

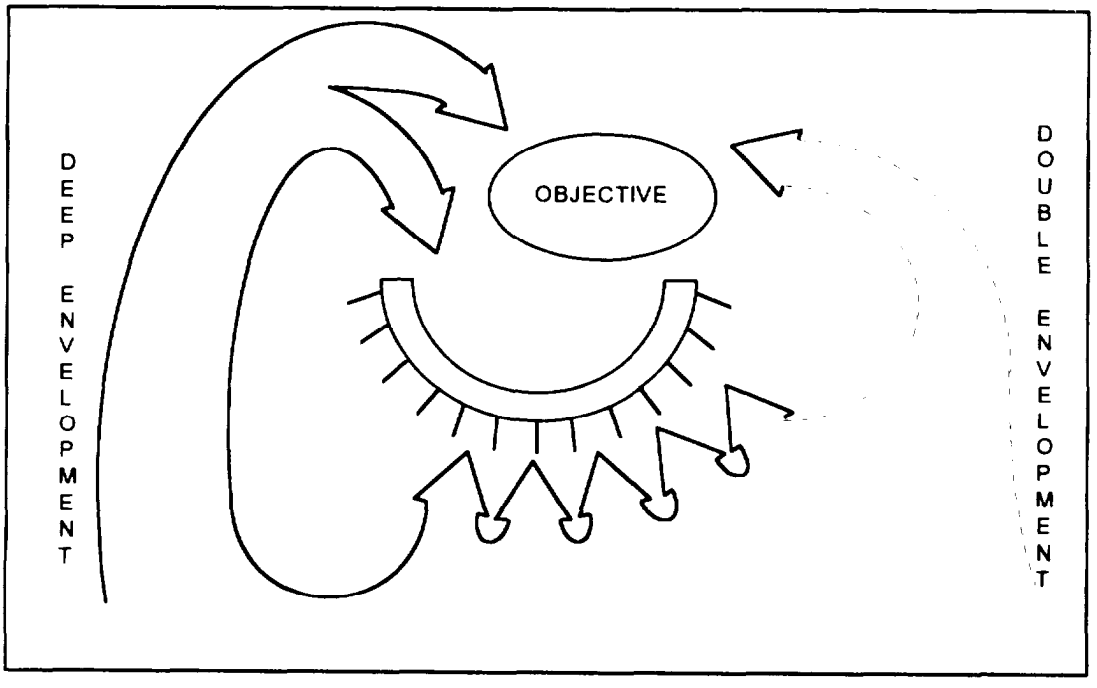


Figure 1-2. Deep envelopment combined with frontal attack.

(3) Double envelopment. The OPFOR prefers a double envelopment, which can be a combination of two deep envelopments, two close envelopments, or a deep and a close envelopment. It expects to achieve the most success with a deep envelopment of both flanks, encircling the enemy rear. Combining envelopments creates favorable conditions for attacking the enemy's flanks and rear. The OPFOR goal is to encircle enemy groupings, split them. and then destroy them Heliborne assault troops can also land simultaneously in the enemy rear. These troops can then assist in accomplishing a double envelopment. Forces carrying out close, deep, or double envelopments ordinarily maneuver in a march or prebattle formation when enemy resistance is light enough not to require the use of battle formation. The enveloping force can transition from march to prebattle to battle formation as the situation dictates.

1-5. ELEMENTS OF COMBAT FORMATION

OPFOR tactical commanders organize for combat by assigning units and subunits to function as elements of the combat formation. The combat formation corresponds to the situation and facilitates attaining the goal of battle. It should ensure-

- Successful destruction of the enemy
- Achievement of the assigned mission
- A combination of fire, movement, and maneuver in the course of the attack
- Continuous troop control

The following paragraphs describe the various elements of this OPFOR organization for combat.

a. Reconnaissance. Each maneuver division has an organic reconnaissance and radioelectronic contact (REC) battalion, each maneuver regiment has an organic reconnaissance company, and motorized rifle battalions have an organic reconnaissance platoon. The location of the reconnaissance objectives and the enemy disposition determine how far in front of their parent organization these reconnaissance assets move. In an attack against a defending enemy, they would typically reconnoiter the enemy force whose destruction is the parent organization’s immediate mission: then they would move on toward the depth of the subsequent mission. In the march, their purpose is to give the senior combined arms commander maximum warning of enemy forces, in terms of time and distance and to establish the strength and disposition of enemy forces. They also identfy terrain features that could slow the OPFOR rate of advance or hinder the accomplishment of the parent organization’s mission

b. Forward detachment. An FD is a combined arms force based on a reinforced maneuver regiment or battalion. Divisions commonly establish a regiment-sized FD, or more than one battalion-sized FD. to maneuver ahead of the lead regiments of an advancing division. Although any maneuver regiment can be assigned as an FD, OPFOR commanders prefer to use BTR-equipped regiments/battalions as FDs (and advance guards), thus keeping the higher combat power of BMP and tank regiments for the main force. If the situation requires, a battalion or regiment from another unit/formation (e.g., from a second-echelon regiment/division or an adjacent division) may be temporarily attached as an FD.

In the march, the FD normally, moves ahead of or parallel to the march security elements (advanced guard) of the lead regiments but behind the division's reconnaissance patrols. The commander of the FD can also dispatch his own reconnaissance patrols.

There is no set distance between the FD and the main body. A regiment-based division FD moves 2 to 4 hours ahead of the parent division's main body: in European terrain conditions, this may translate to a distance of up to 80 kilometers. A battalion-based division or regimental FD moves 1 to 2 hours ahead of the parent organization's main body; this translates to 20 to 40 kilometers. There could also be a reinforced company working as an FD for a brigade.

The regimental FD works for the division or regimental commander. Its mission is based on the location of its objective(s)--key terrain it is to seize and/or enemy groupings it is to destroy. After achieving its objective, the FD may be ordered to defend the 0bjcctive until its parent organization's main body links up with it, or it may assume a new offensive mission. FDs ensure the unhindered advance of the division or regiment. Elements of FDs can also conduct raids against key targets en route to their objectives.

Unlike advance guards, FDs do not have to follow a specific axis of advance; but they do attempt to avoid enemy contact while moving to their objective. Passes, defiles, road junctions, and water-crossing sites can be FD objectives. They may link up with airborne or helibome forces that have landed on these objectives, FDs conduct reconnaissance as they move.

c. Echelons. OPFOR tactical combat formation in the offense is a response to increasing depth and preparedness of enemy defenses, and is intended to build combat power continuously on the line of contact. OPFOR commanders at divisional. brigade. regimental or battalion levels organize forces either in two echelons or in one echelon with a combined arms reserve. In normal terrain, companies and platoons always attack in a single echelon, without a reserve.

When attacking unprepared or partially prepared enemy defenses. divisions, brigades, regiments. and battalions are likely to attack in a single echelon with a small reserve. As the enemy defense tends from partially to fully prepared, the OPFOR is more likey to USC a two-echelon formation. Within the division. the pattern of echelonment can vary at different levels of command. A division might deploy its regiments in two echelons, but some of the regiments might deploy their battalions in one echelon. The OPFOR does not consider a three-echelon combat formation to bc normal, but sometimes use it when advancing in the mountains, when maneuver is restricted in an advance along a narrow valley.

(1) Single-echelon formation. When attacking defenses that are weak, lacking in depth, or not well-prepared, divisions, brigades, regiments. and battalions normally deploy in a single echelon with a small combined arms reserve. They would also use a single-echelon formation when attacking on a secondary axis. When using a single-echelon formation. the commander must keep a combined arms reserve; thus, he retains the ability to influence the battle. If he commits his reserve, he must create another one immediately. If the enemy has hurriedly assumed shallow defenses, he will not have a well-prepared defense in depth or strong reserves; and under these conditions, a single echelon may be sufficient to defeat him.

(2) Two-echelon formation. A two-echelon combat formation is usual when attacking a defense prepared or at least partially prepared in depth and on the higher commander's main axis. The first echelon normally contains the majority of the combat power. Its mission is to destroy the enemy's forward defenses and achieve the immediate mission of the fomation/ unit/ subumit. The commander's concept of the battle would then call for commitment of the second echelon to achieve the subsequent mission.

At the same time the commander issues missions to first-echelon forces, he assigns the second-echelon force a mission, a route of advance, and a likely line and time for its commitment. During commitment, the second echelon normally passes through gaps or at flanks to avoid passage of lines and intermingling of forces. Specific second-echelon missions can includc-

- Conducting pursuit.
- Destroying bypassed enemy elements
- Defeating a counterattack
- Achieving the subsequent mission.
- Completing the missions of successful first-echelon forces which have been rendered combat-ineffective.

Once he commits the second echelon, he forms a combined arms reserve from elements of the first echelon; the remainder of the first echelon continues its attack to the degree that it is still able.

Although the commander pre-plans deployment lines and time for committing the second echelon. he retains flexibility in implementing them, depending on the progress of the battle. It is important to remember that a second echelon is an application of additional force, not a reinforcement for the first echelon. With the OPFOR view of only reinforcing success. the commander does not commit the second echelon to complete an unsuccessful portion of the first echelon's attack. However, the second echelon could be a replacement for a first-echelon force that has been successful. but at the cost of its own combat effectiveness. The second echelon's attack may be on an axis different from the one originally, planned.

d. Combined arms reserve. Divisions, brigades, regiments. and battalions can form a combined arms reserve, but only if attacking in a single echelon. The combined arms reserve is small, and is directly subordinate to the commander. The commander does not assign the combined arms reserve a specific mission, but only a route and method of advance. The combined arms reserve is a contingency force used to meet unanticipated events and to deal with tasks such as exploiting unexpected success, repelling counterattacks, and covering the flanks of the parent organization.

e. Antitank reserve. The commander employs the antitank reserve as a blocking force against an enemy counterattack during the offense, and it also can cover threatened areas and open flanks. It can be reinforced with engineer assets, usually in the form of a mobile obstacle detachment (MOD).

f. Special reserves. A division or regiment can form special reserves depending on the tactical situation. These may include chemical protection or engineer reserves. Their primary roles are to reinforce efforts on the main axis and/or to cope with unforeseen problems requiring specialty skills.

g. Artillery groups. In highly mobile. fluid battles. a significant proportion of the available artillery may be decentralized to lower commanders. With organic artillery and additional assets allocated from higher levels, tactical commanders form division artillery groups (DAGs), brigade artillery groups (BrAGs), regimental artillery groups (RAGS). lndividual maneuver battalions can also receive up to a battalion of artillery in an attached or supporting role.

h. Air defense grouping. Priorities in deploying air defense assets are usually to protect command posts, then artillery groupings and first-echelon forces.

i. Raiding detachment. At the tactical level, a raiding detachment is a highly mobile combined-arms unit or subunit, usually a reinforced battalion. Its primary mission is to destroy or capture important military targets; such objectives can include an artillery battalion, tactical missile batteries, elements of a

reconnaissance-strike complex, a fire support helicopter forward base, a supply base/depot, or a river-crossing site. Its secondary missions can include seizing Important terrain and blocking enemy reserves.

Like a forward detachment, a raiding detachment also sends out its own combat reconnaissance patrol(s) and seeks to avoid contact en route to its objective(s). Although its organization, movement methods, and objectives are similar to those of an FD, a raiding detachment differs in that it usually (but not always) has orders to rejoin its parent unit/formation after completing its mission. If not ordered to rejoin its parent organization, a raiding detachment could receive a new offensive mission or defend its objective until the parent organization links up. Reinforced companies and platoons can also conduct raids.

j. Enveloping detachment. An enveloping detachment is a unit or subunit whose mission is to penetrate through gaps in the enemy's defense striking at enemy forces on their flanks or in their rear. The OPFOR stresses the importance of enveloping detachments in offensive battle in mountainous areas where typical missions include seizing important terrain features. In mountains, an enveloping detachment often acts in coordination with a tactical airborne or heliborne landing; in coastal regions, it could cooperate with an amphibious landing. It could also be used in conjunction with a nuclear, high-precision weapon, or chemical strike.

Within maneuver battalions and companies. the OPFOR may use an armored group as a smaller-scale enveloping group. The armored group is a temporary grouping of 4 to 5 tanks, BMPs, BTRs, or any combination of such vehicles. In this role. BMPs or BTRs would deploy without their normally assigned infantry squad on board and fight away from their dismounted troops. The armored group can thus act on an independent axis to attack the enemy flank or establish a blocking force to his rear. It has significant direct-fire capability and serves as a mobile reserve attack force for the battalion or company commander.

1-6. TACTICAL FORMATIONS

Within each element of the combat formation. an attacking force can deploy into any of the three types of tactical formation-march, prebattle, or battle--depending on its mission and the combat situation. The OPFOR employs a standard drill for deployment into battle. This drill can be incorporated in almost any form of attack, but is most common in the attack from the march and the meeting battle. The drill proceeds from march formation (regimental and battalion columns), through prebattle formation (company and platoon columns), into battle formation (platoons deployed on line). The sequence of deployment and the distances of the lines of deployment from the enemy are determined by tactical considerations. Figure 1-3 illustrates this process, using the example of a reinforced motorized rifle battalion deploying for an attack from the march.

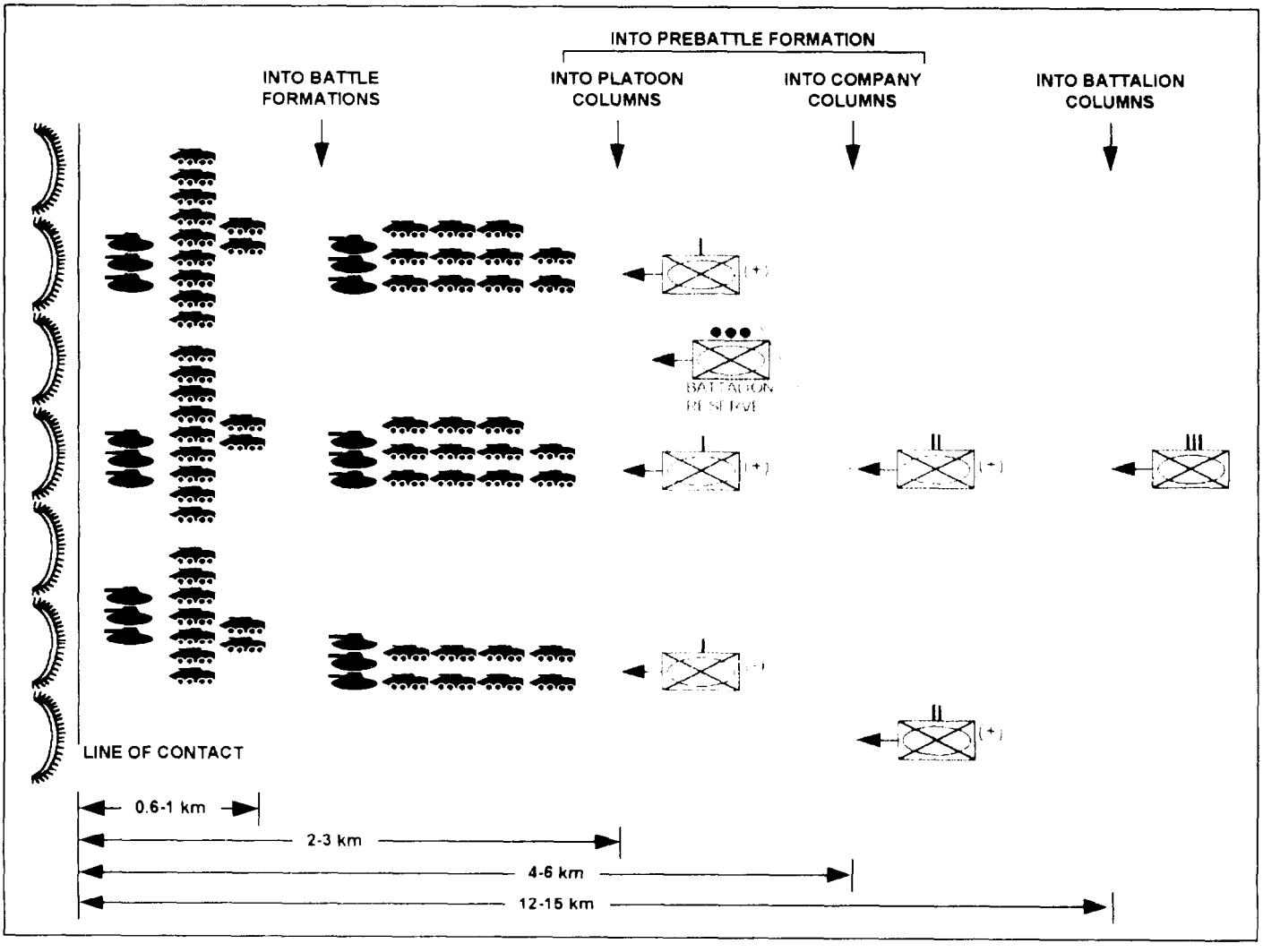


figure 1-3. MRB deployment for attack from the march

a. March formation. The OPFOR prefers to remain in column or march formation as long as possible for the sake of speed. It resorts to lateral deployment only by necessity, such as when combat is imminent. up to that point, the maneuvering force is in some sort of tactical march formation. Chapter 5 focuses on division and regimental tactical marches, the following section narrows the focus to battalion and company level.

b. Prebattle formation. When nearing the enemy's defensive line, the OPFOR uses prebattle formation as a transitron between the march and battle formations. Prebattle formation focuses on speed, dispersion, flexibility. and firepower in an anticipated direction. When entering prebattle formation, the OPFOR deploys into successively smaller unit and subunit columns. These multiple columns increase forward combat power until forces reach the attack line and assume the battle formation. In prebattle formation, the columns have greater lateral dispersion, but less depth than in the march formation. The OPFOR uses prebattle formation when:

- Approaching the battlefield.
- Developing the attack into the depth of the battle area.
- Pursuing the enemy.
- Attacking a defending enemy whose defenses are weak or effectively suppressed.
- Crossing nuclear, biological. and chemical (NBC)-contaminated zones rapidly.
- Crossing areas with natural or artificial obstacles.
- Crossing areas that are burning.

Prebattle formation minimizes troop vulnerability to enemy artillery and air strikes as well as high-precision weapons or tactical nuclear strikes. It allows for rapid maneuver and quick deployment into battle formation. By remaining in a column. the OPFOR maximizes its speed, presenting a minimum number of targets for the enemy's forward direct-fire weapons systems. The disadvantage of remaining in columns is the OPFOR's inability to USC all its fire systems against enemy positions directly to its front. Forces in prebattle formation either deploy into battle formation or return to march formation, depending on the tactical situation. A force might remain in this formation for a lengthy period of time. It normally would pass through some form of prebattle formation when moving from the march into full deployment for an attack.

(1) Division. The division does not have an actual prebattle formation. Its formation results from the maneuver regiments assuming their own prebattle formations. Forward detachments and advance guards assume a prebattle formation when the chance of enemy contact increases or when they are about to attack an objective. Not every element in a division, regiment, or battalion assumes a prebattle formation at the same time. The main bodies of each respective clement of the march remain in march formation until required to deploy into a prebattle formation. This applies to second-echelon forces as well. It helps maintain these forces' speed of advance, allowing rapid maneuvcr and subsequent employment.

(2) Regiment. The regiment assumes a prebattle formation by deploying from a single regimental column of battalions in its main body into individual battalion columns. The number of battalion columns depends on the tactical situation and the choice of echelonment that the situation dictates.

Deployment into battalion columns should begin beyond the range of the bulk of the enemy's artillery, at a line approximately 12 to 15 kilometers from the enemy forward edge. The artillery preparation of the attack is usually timed to begin as the attacking force reaches this line.

(3) Battalion. In a similar manner, a battalion assumes prebattle formation by deploying from a single battalion column of companies into individual company columns. Figure 1-4 illustrates variations of battalion prebattle formations.

Within the battalion prebattlc formation, each company moves in march column. In relation to one another, the company columns may be configured in a line, in a forward or reverse wedge, or echeloned left or right. To control both the movement and the battle, the battalion commander normally travels directly behind the lead company/companies in the prebattlc formation. (An exception would be in the reverse wedge formation, in which he may travel at the head of the trailing company, because of its central location.)

Subunits from battalion down to platoon rehearse and drill to ensure that they can rapidly deploy from the march to the prebattle formation, then to the battle formation, and back. Movement in these formations serves as a battle drill for the subunit commander. It provides the basis for a rapid reaction attack from the march or a planned attack against a defending enemy.

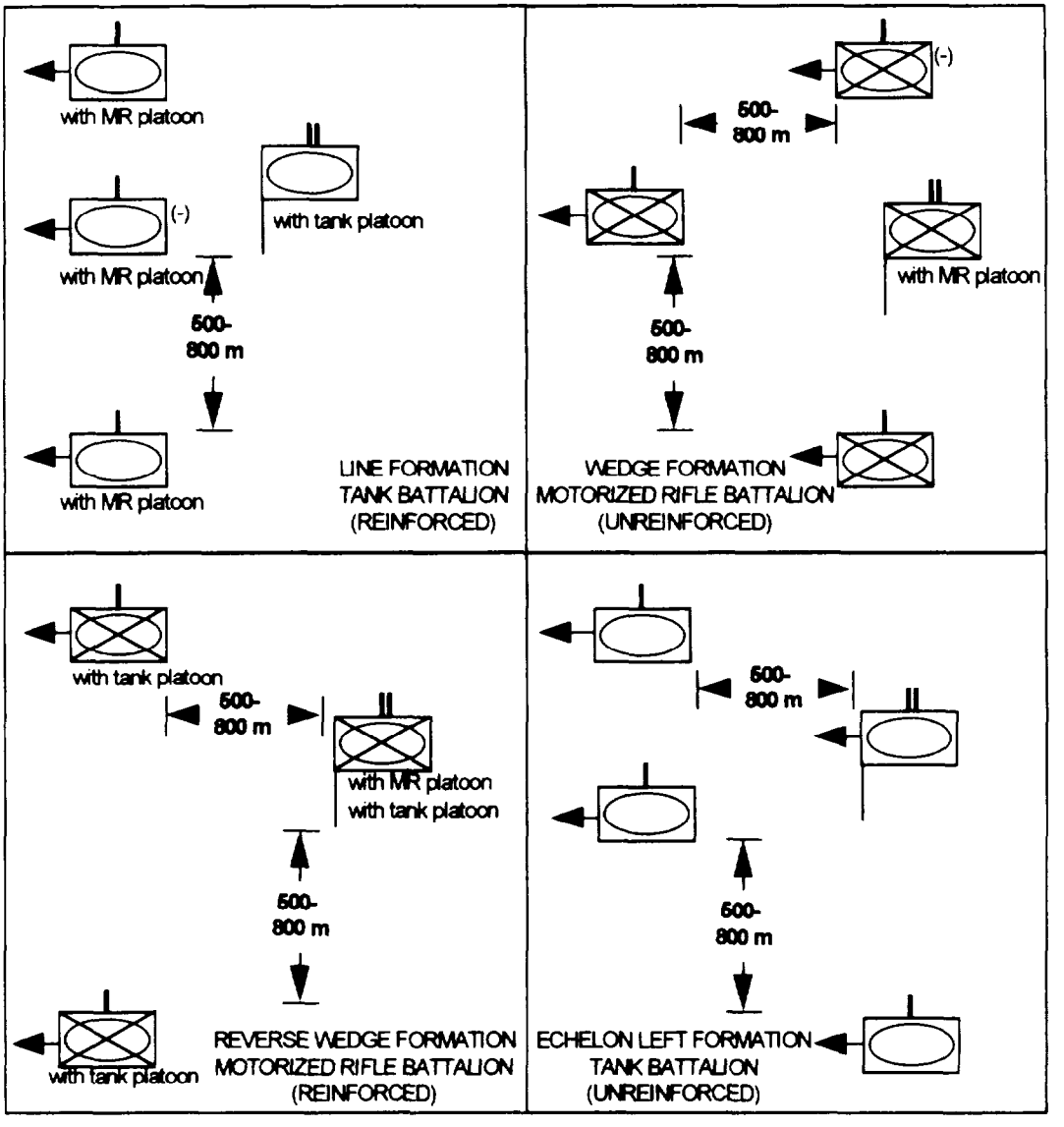
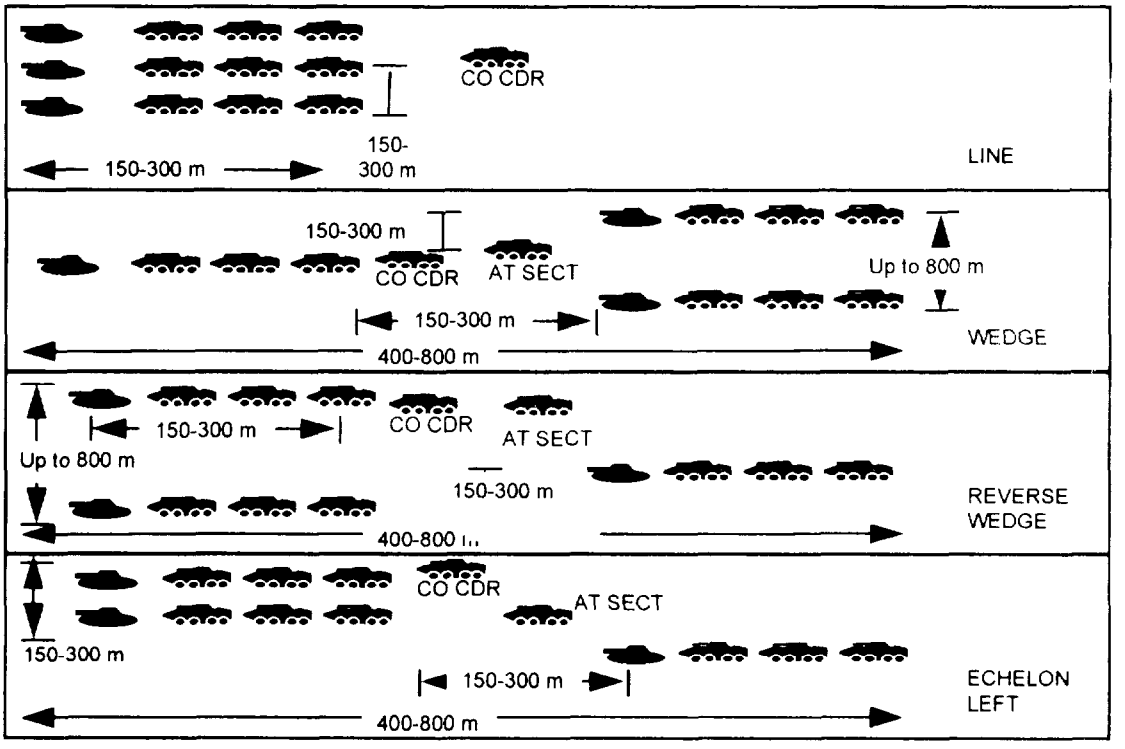


Figure 1-4. Battle prebattle formations

The line of deployment into company columns is set outside the maximum range of the defender's antitank weapons, tanks, and other direct fire systems. This is usually 4 to 6 kilometers from the enemy forward edge, depending on the terrain,

(4) Company. The company prebattle formation is the final stage of deployment before battle formation. A company in prebattle formation does not laterally deploy beyond platoon columns. The intervals between company and platoon columns in prebattle formation should allow full deployment of the subunit into battle formation without further lateral expansion of the entire formation. To facilitate control, the company commander travels directly behind the lead platoon in the prebattle formation. Figure l-5 shows the variants of prebattle formations for a motorized rifle or tank company.

MOTORIZED RIFLE COMPANY (BTR) WITH ATTACHED TANK PLATOON



TANK COMPANY

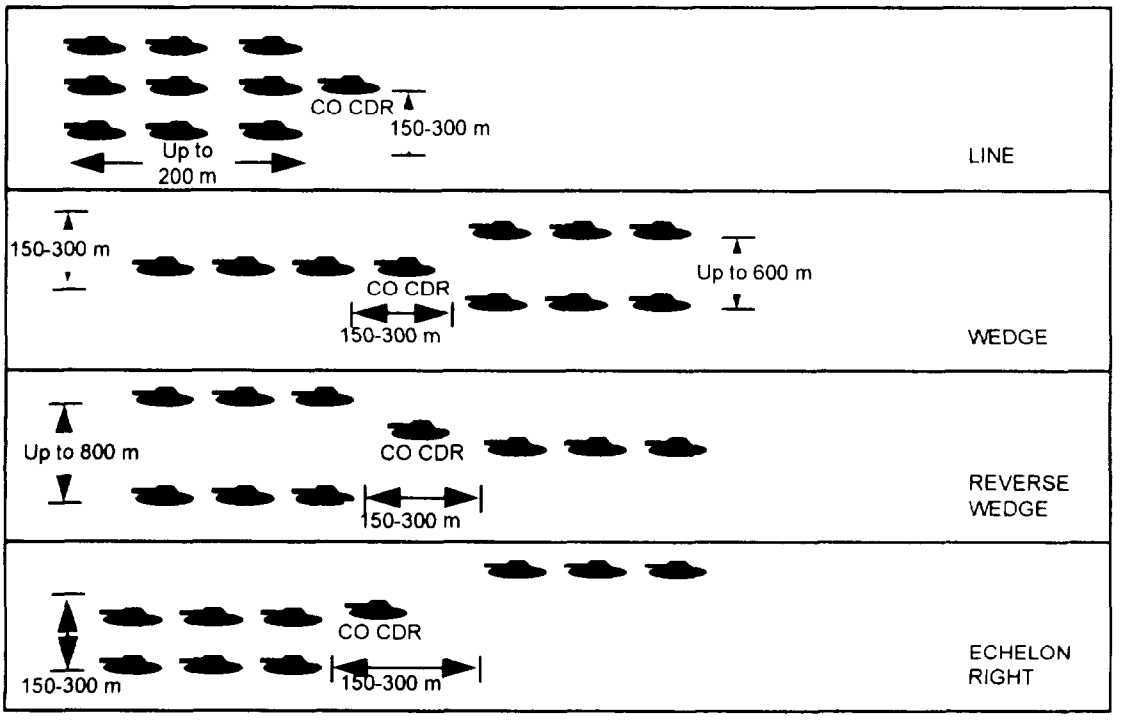


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Figure 1-5. Company prebattle formations.

The deployment line info platoon columns is ideally located in terrain that screens the deployment, particularly from the defenders' short-range antitank weapons. It would normally be 2 to 3 kilometers from the enemy forward edge.

Unlike higher-level organizations, the company does not necessarily have to use a prebattle formation. It can go directly from the march into battle formation, if the situation requires.

c. Baffle formation. The OPFOR uses battle formation (attack formation) when encountering strong enemy resistance during-

- The meeting battle.
- The attack against a defending enemy.
- The pursuit.
- The counterattack.

Only those elements in contact with. or respecting immediate contact with, the enemy deploy into the battle formation. Therefore, divisions and regiments do not have actual battle formations, but their subunits do.

(1) Battallion. A maneuver battalion reaches battle formation when its firs first-echelon companies deploy on line. Its second-echelon companies remain in march or prebattle formation until they are actually committed. OPFOR maneuver battalions are reinforced with several combat and combat support subunits prior to contact with enemy forces. Reinforcement usually takes place in assembly areas or before reaching the start line for the march. These reinforcing subunits deploy to become part of the supported maneuver battalion's battle formation. Figure 1-6 shows two variations of a motorized rifle battalion (MRB) battle formation.

(2) Company. An OPFOR company assumes battle formation immediately before combat. When the company's platoons and any reinforcing subunits disperse laterally info line formation, the company is in battle formation. Within the company platoons do not have to be formed on line but can be arrayed in wedge or echelon formations, based on the situation. However, an array of platoons on line is most common. Figure 1-7 gives examples of possible company battle formations.

Battle formation maximizes the firepower of the subunit by bringing to bear the greatest number of weapons systems. Conversely, it is the slowest moving and least controllable of all tactical formations. As a result, an OPFOR subunit would assume battle formation only when necessary.

The line of transition to the attack is the line by which the attackers deploy into battle formation, with platoons on line and tanks in front of the infanty vehicles. Its location depends on the preparation of the enemy defense and the degree of destruction inflicted by the attackers' artillery. The line should be outside the range of enemy antitank weapons and small arms and permit a rapid advance into the enemy positions. It is usually at least 600 meters from the enemy forward edge, but can be farther out (up to 1,000 meters). In any event, it is farther forward than the supporting RAG (or BrAG), but still beyond the range of the enemy's short-range antitank guided missiles (ATGMs).

d. Dismount line. When the terrain is unfavorable for vehicular movement or when enemy antitank defenses are too strong, the motorized rifle squads dismount and advance on line. The regulation dismount line is never more than 1,000 meters from the forward edge of enemy troops; it should be as close to enemy positions as the terrain allows. If possible, it is in an area of some cover from enemy small arms and short-range antitank weapons, usually 300 to 400 meters from enemy defenses.

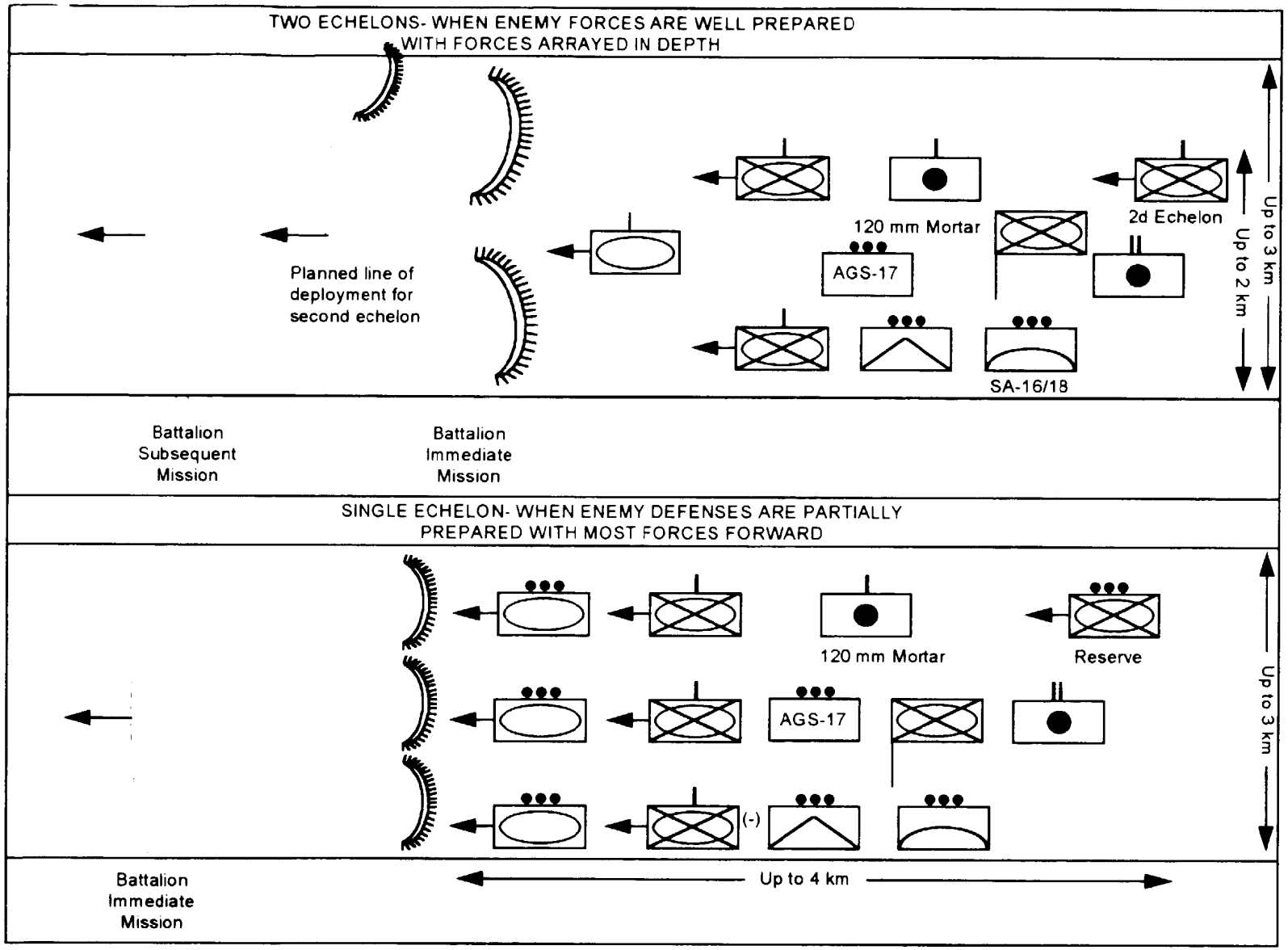

Figure 1-6. Battalions battle formations (reinforced MRB).

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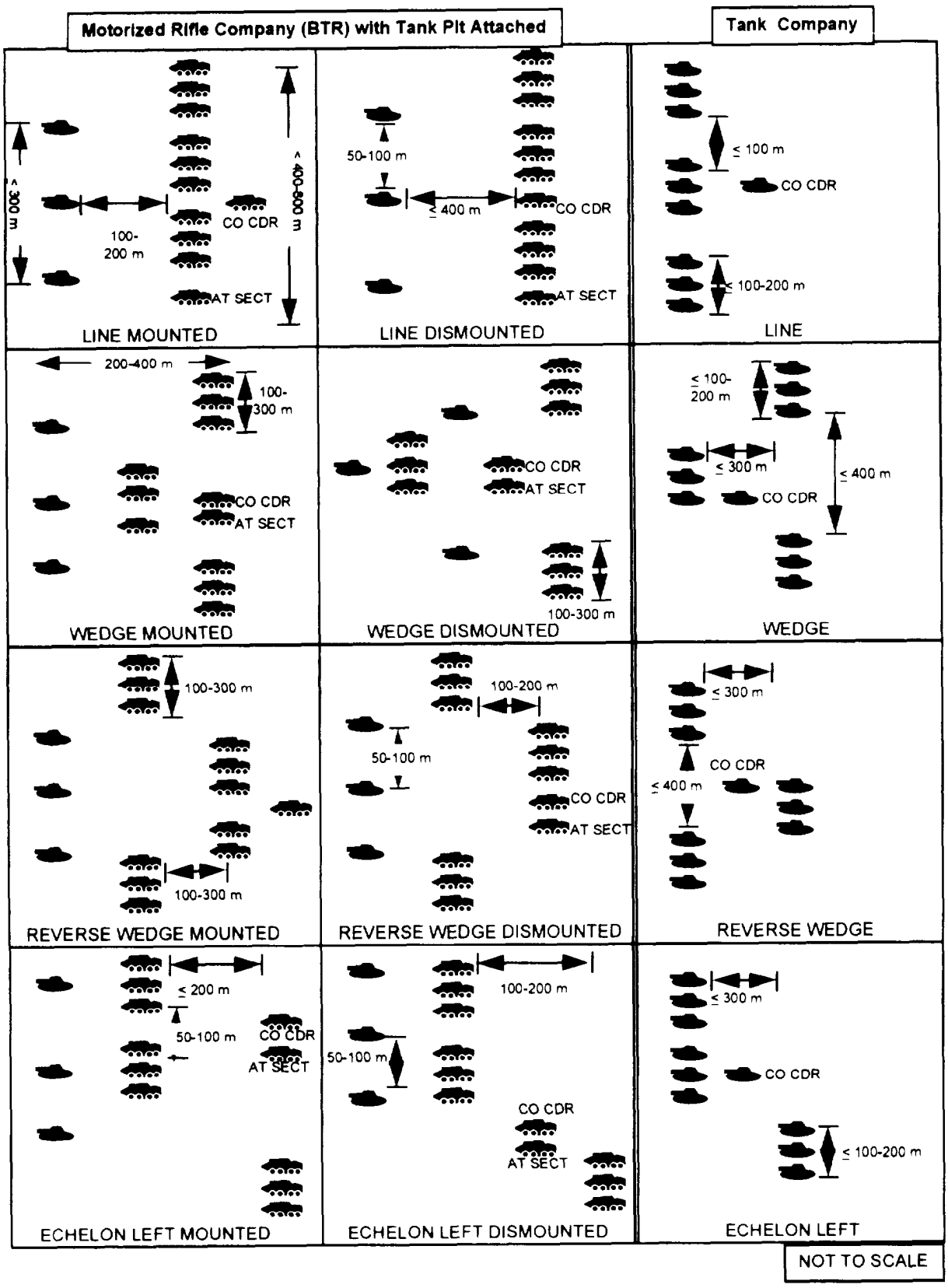

Figure 1-7 Company battle formations

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If troops dismount, they follow as closely as possible behind the tanks. Their BTRs or BMPs follow 100 to 200 meters behind the infantry, providing supporting fire. The vehicles may move on the flank of, or within, the skirmish line, depending on terrain conditions and intensity of enemy fire.

e. Safety distances. The location of the dismount line also is closely related to the minimum safety distance from friendly artillery fire. The reason for this is that the final fires of the OPFOR artillery preparation for the attack would concentrate on the most forward enemy defensive positions, just in front of the advancing attackers. The safety distance from gun and howitzer fire is only 200 meters for tanks, but 300 meters for BMPs and BTRs and 400 meters for dismounted infantry. These distances may be reduced significantly if the OPFOR artillery uses air-burst flechette rounds. If the OPFOR uses multiple rocket launchers, the safety distance in creases to 1,000 meters; for air strikes, it is 200 to 700 meters.

1-7. TYPES OF OFFENSIVE ACTION

OPFOR military art defines three basic types of tactical offensive action, distinguished by the enemy situation. If the OPFOR is attacking and the other side is defending, it is an attack against a defending enemy. If both sides are advancing and trying to attack, it is a meeting battle. If the enemy is trying to retreat and the OPFOR is attacking, it is a pursuit. In all cases, the method of launching an attack must ensure concealment of its preparation and the delivery of surprise and powerful strikes against the enemy.

1-8. ATTACK AGAINST A DEFENDING ENEMY

At the tactical level, the attack against a defending enemy is the basic form offensive combat. An OPFOR commander employs the attack against a defending enemy when the enemy is in a defensive position and his location is known. The attack plan is based on available intelligence on enemy deployment and the factors of mission, terrain, troops, and time available.

It is incorrect to interpret the attack against a defending enemy as a “breakthrough” or “deliberate attack.” These terms do not fully describe all the situations in which an OPFOR commander may conduct such an attack. As the OPFOR term states, the attack is executed against an enemy in a defensive position. It can occur in a variety of situations: envelopments, supporting attacks, penetrations of the enemy defense, and exploitation. The OPFOR uses two methods to transition into an attack against a defending enemy:

- Attack from the march (also called advance from the depths).
- Attack from a position in direct contact with the enemy

Figure 1-8 illustrates the difference between the two methods, using examples of a reinforced motorized rifle battalion performing each type of attack. For further examples, see the following sections.

a. Attack from the march. The attack from the march is the preferred OPFOR method of attacking a defending enemy. The attacking force is not in tactical contact with the defender beforehand. It prepares its attack in an assembly area, hidden from the enemy and out of range of his artillery. It moves out of the assembly area, toward the enemy, and deploys into battle formation under cover of artillery and air support. The deployment takes place in territory held by friendly forces in contact.

This method of attack limits the enemy's capability to maneuver and helps to achieve surprise. Advancing in march formation, subunits deploy laterally at designated control lines. They assume battle formation within approximately 1,000 meters of enemy defenses. The attack from the march is usually conducted through a friendly defending force. This defending force supports the attack providing security for the artillery buildup.

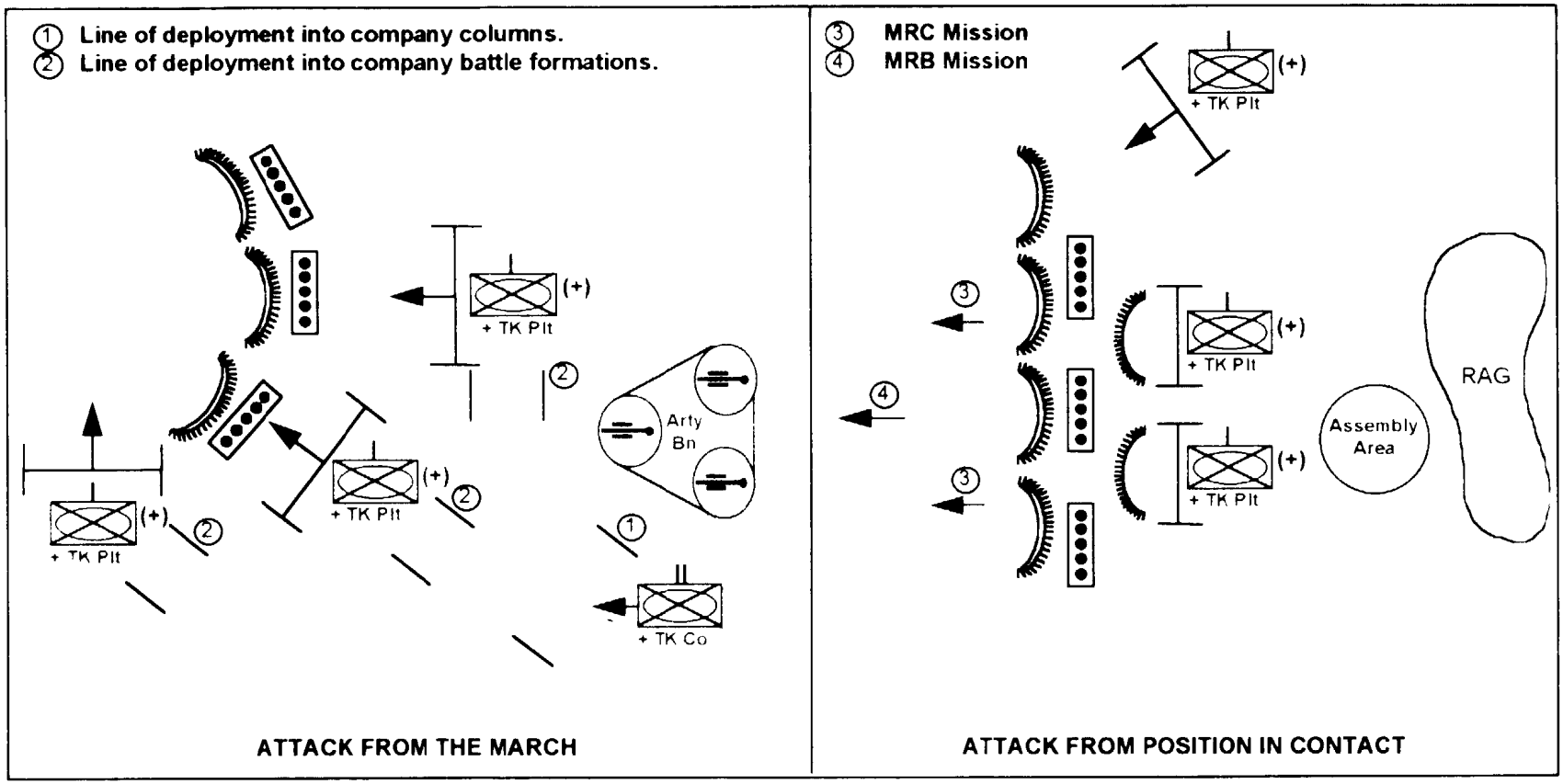

Figure 1-8. Attack against a defending enemy (reinforced MRB).

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The OPFOR sees these advantages in an attack from the march:

- The unit is not committed before attack.
- The attack increases the chance of surprise.
- It allows greater flexibility
- The vulnerability to enemy artillery decreases.
- Momentum is enhanced.
- Preparation for combat takes place out of contact with the enemy

The OPFOR realizes that an attack from the march also has disadvantages:

- Commanders may not be familiar with terrain and enemy dispositions.
- Coordination of fire, maneuver, and simultaneous combined arms efforts is more difficult.

b. Attack from a position in direct contact. An attack from a position in direct contact occurs when the attacking force is already in contact with the enemy, typically with both sides holding defensive lines. The OPFOR launches this less preferred attack from a position that may be part of the OPFOR frontline defensive position, or an assembly area immediately behind it. It uses this form most often when changing over to the offense from the defense. It may also include maneuver of reserves from the depth.

An attack from a position in direct contact begins with the attacker in tactical contact with the defender. Such a position might occur as the result of an earlier unsuccessful attack, after which the OPFOR unit or formation had to go over to the defense on the line achieved.

The OPFOR feels there are certain advantages from an attack from a position in direct contact:

- It allows more thorough study of terrain and enemy disposition.
- It permits more refined organization of battle.
- It facilitates coordination of fire and maneuver.

The OPFOR also recognizes disadvantages in using this type of attack:

- The unit may already be committed.
- The unit is under threat of attack during preparation and is vulnerable to enemy observed fires.
- The unit has less chance of achieving surprise.
- The unit has less chance of building up momentum and of overcoming inertia.

c. Combination of types of attack. Obviously it is possible to combine the two types of attack against a defending enemy. After an unsuccessful first attack from the march, a regiment or division might try again, using first-echelon troops in an attack from a position of direct contact and new, second-echelon forces in an attack from the march.

d. Axes. In planning an attack, an OPFOR commander always selects an axis of main effort. He concentrates the bulk of his resources on the main axis, to ensure he obtains the ratio of forces required for success. An OPFOR commander never has more than one axis of main effort. Once they have chosen the main axis, OPFOR commanders make every effort to achieve overwhelming superiority on that axis. This superiority can best be secured if the main effort is made where the enemy least expects it.

Resources are never shared equally among subordinates; the OPFOR considers it a waste of resources to allocate to a secondary axis more than the minimum resources required there. If, during the course of the battle, the force on the main axis is not achieving the expected result, OPFOR commanders would not hesitate to strip assets away to support a secondary axis that appears to be achieving a greater success. In some types of terrain, such as mountain areas, secondary axes can receive more combat and service support than they would in normal terrain.

e. Attack zones and strike sectors. Figure 1-9 lists average widths of attack zones (frontages) and strike sectors (penetration sectors/sectors of main effort) at the tactical level. These are no more than rules of thumb, and it is wrong to think that an OPFOR commander applies these to his map as a rigid template. The actual distances are determined by the calculation of superiority ratios and, to a lesser extent, by the terrain over which the attack is conducted.

	Attack zone (km)	*Strike sector (km)*
Division	15-25	4-18
Regiment	5-10	2-4
Battalion	Up to 3	0.4-1

Figure 1-9. Typical attack zone and strike sector widths.

f. Missions and objectives. The OPFOR focuses more on the destruction of enemy forces than on key terrain when it assigns missions and objectives. In nonlinear combat and deep battle, OPFOR commanders may give subordinates objectives in the form of "goose eggs." Unlike his U.S. counterpart, however. the commander does not place this goose egg on key terrain, but rather on the area occupied by a particular enemy force. In combat that is basically linear, OPFOR commanders assign their subordinates immediate and subsequent missions, in terms of the rear boundary of an enemy force they are to destroy. The depth of the immediate or subsequent mission depends on a number of factors, the numerical strength and combat capabilities of both OPFOR and enemy forces, their assigned mission, and the terrain. One of the most significant factors is the level of preparedness of the enemy's defense.

(I) Enemy preparedness. To the OPFOR, any defense with less than 8 hours' preparation is unprepared, since the enemy has had time to emplace only part of his covering force. Preparation in the first 6 to 8 hours is probably limited to basic primary fighting positions for individual soldiers, crew-served weapons, fighting vehicles, and artillery. The OPFOR defines a fully prepared defense as one with over 48 hours of preparation, with all defenses in place and fully engineered. This can include-

- Completion of trench lines (including communications trenches).
- Construction of overhead cover for portions of the trench line, especially for weapons positions.
- Improving primary fighting positions for vehicles and artillery (normally by the units themselves, rather than engineers).
- Construction of alternate fighting positions.

Anything in between these two extremes is partially prepared.

While the OPFOR would prefer to attack an unprepared defense, it realizes that such opportunities will probably be rare. Likewise, it does not expect routinely to encounter and have to attack fully prepared positions. Therefore, under what the OPFOR considers -'normal" conditions, it expects to surprise the enemy

in a partially prepared defense. These are the conditions under which it hopes to conduct the majority of its attacks. In exceptional cases, the OPFOR may have to attack under less likely and less favorable circumstances; when it must attack a well-prepared enemy, it would have to reduce the depth of assigned missions.

OPFOR missions are related to the ratio of forces in the attack zone and the strike sector. This makes it possible to express their depth in terms of enemy deployments, rather than a fixed number of kilometers. For example, the immediate mission of a first-echelon battalion attacking through a filly prepared, heavil engineered defense (over 48 hours preparation) in a strike sector is the rear of an enemy first-echelon company. Its subsequent mission is the enemy first-echelon battalion's rear boundary. Against a partiall prepared enemy defense, the normal immediate mission of an attacking battalion is the enemy battalion rea and its subsequent mission is the rear of the enemy brigade reserve. This should also be the attacking regiment's immediate objective. These are guidelines that can be modified in light of the density and quality of the defense. These planning factors are common to both forms of attack on a defending enemy.

(2) Linear missions. An OPFOR commander usually assigns a subordinate a mission that is graphically represented by a line. This line often corresponds to the rear boundary of an enemy unit. The mission includes two elements: destruction of the enemy within a zone and seizure of the assigned line. subordinate must achieve both of these by a specified time. This kind of mission is most common when combat is basically linear.

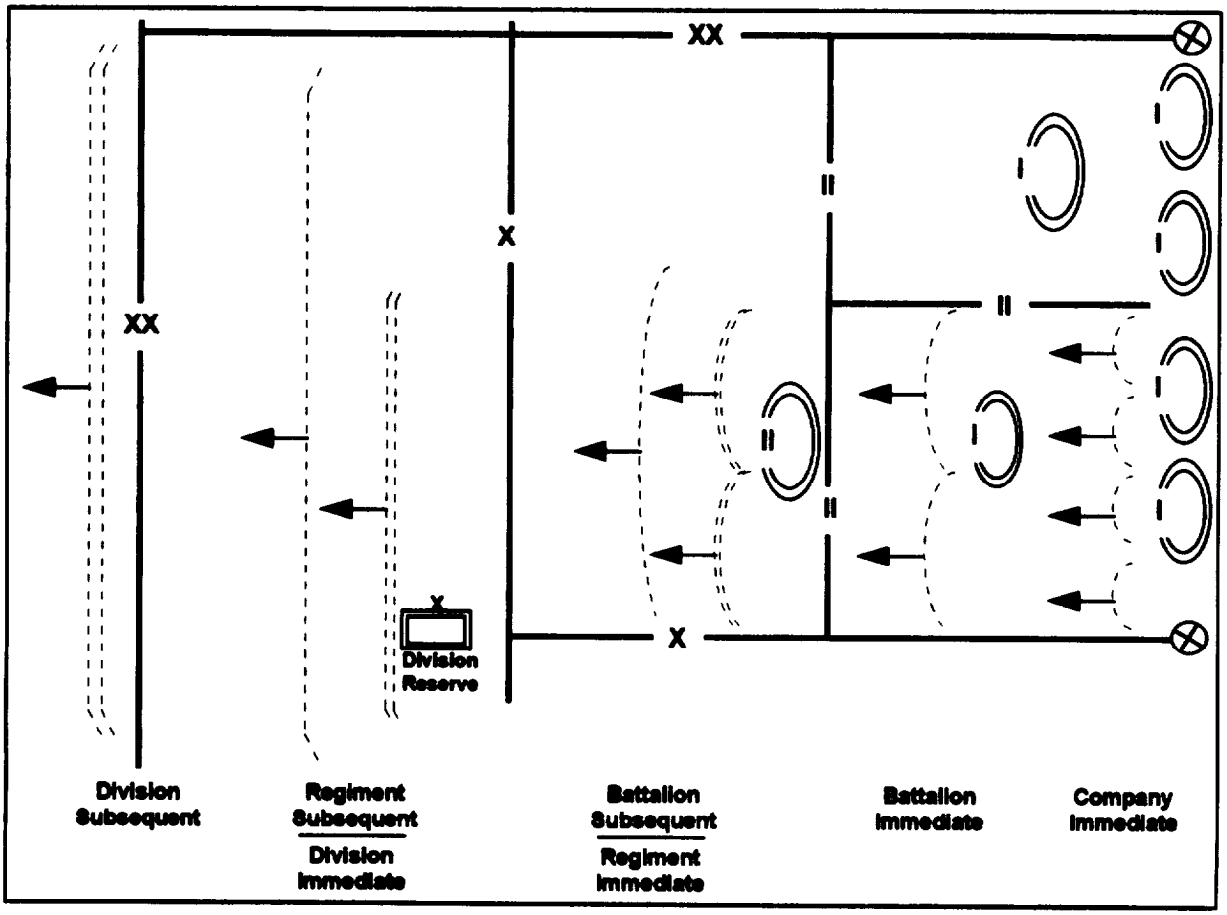
(3) Nonlinear objectives. In nonlinear combat and deep battle, commanders may give subordinates objectives in the form of "goose eggs." The goose egg is normally force-oriented, rather than terrain-oriented, Second echelons usually are committed against lines, whereas reserves are committed against goose eggs. Forward detachments and heliborne or amphibious landings usually have goose-egg objectives.

(4) Continuation of attack. After accomplishing the assigned mission or objective, the attacking force continues its attack as long as it remains combat effective. The OPFOR commander could consider a temporary halt to the offensive, to reorganize his force, when his combat potential drops to 60 percent. Historically, however, OPFOR commanders have continued to fight the offense at 45 percent strength and defensively at 20 percent. The surviving enemy combat potential is a large determinant of whether or not the OPFOR commander can continue the mission, in its present form. It also depends on the length of time over which losses have occurred. In isolated combat. should the mission dictate, the OPFOR might continue to fight to the bitter end.

(5) Types of missions. The OPFOR breaks down a combat mission into immediate and subsequent missions. The immediate mission involves the destruction of the enemy's main forces and seizure of a line that the OPFOR can use to start an exploitation and begin completing the destruction of the enemy. The subsequent mission should result in the complete destruction of the enemy force, including his reserves, and it should include the seizure of another specified line deep in the enemy rear.

An OPFOR commander can assign a **subsequent direction of advance** to a subordinate, either in addition to or instead of a subsequent mission. This assignment depends on the size and function of the subordinate's force, The subordinate will follow this direction to assist in achieving his superior's subsequent mission. By setting the direction of further advance. the commander ensures his subordinates maintain a high tempo of advance.

Figure 1-10 illustrates the depth of immediate and subsequent missions an OPFOR commander can assign when attacking a partially prepared enemy defense. Figure 1-11 illustrates the shallower missions he might assign if he must attack a fully prepared defense.



OPFOR First Echelon	Immediate	Subsequent	
	Destroy/Take positions of	*Complete destruction of*	*Destroy/take positions of*
Division (day 2-4)	Rear of division	Rear of division	Corps
Division (day 1)	Reserve brigade of division	Reserve brigade of division	Rear of division
Regiment/ brigade	Rear of 1st-echelon brigade	Rear of 1st-echelon brigade	Reserve brigade of division
Battalion	Rear of 1st-echelon battalion	Rear of 1st-echelon battalion	Rear of 1st-echelon brigade
Company	Rear of 1st-echelon company	Direction of advance (Toward battalion immediate mission)	
Platoon	Rear of 1st-echelon platoon	Direction of advance (Toward company immediate mission)	

Figure 1-10: Probable mission depths against partially prepared defense.

OPFOR first echelon	Immediate	Subsequent	
	Destroy/take positions of	*Complete destruction of*	*Destroy/take positions of*
Division (day 2-4)	Rear of 1st-echelon brigade	Rear of 1st-echelon brigade	Rear of division
Division (day 1)	1st-echelon brigade reserve	1st-echelon brigade reserve	Rear of 1st-echelon brigade
Regiment/brigade	Rear of 1st-echelon battalion	Rear of 1st-echelon battalion	1st-echelon brigade reserve
Battalion	Rear of 1st-echelon company	Rear of 1st-echelon company	Rear of 1st-echelon battalion
Company	Rear of 1st-echelon platoons	Direction of advance (toward battalion immediate mission)	
Platoon	1st-echelon squads, tanks, and other assault objectives	Direction of advance (toward company immediate mission)	

Figure 1-11. Probable mission depths aganist fullv prepared defense.

At the tactical level, each organization‘s immediate mission corresponds to its subordinate’s subsequent mission. Companies and platoons do not receive a subsequent mission. They receive a subsequent direction of advance to help achieve the battalion’s immediate mission. First-echelon regiments and battalions also receive a subsequent direction of advance to follow after they have achieved their subsequent missions. Divisions receive immediate and subsequent missions.

Even under favorable conditions. the subsequent mission for a first-echelon division falls far short of the army’s/army corps’ immediate mission. This is an exception to the pattern indicated above. It probably means that the OPFOR expects its first-echelon divisions to light for 2 to 3 days and they may receive new missions each day until they achieve the army’s/army corps’ immediate mission. At that point, the army/army corps commits its second-echelon division(s) to achieve its subsequent mission.

Against a fully prepared defense, the OPFOR anticipates a major effort to reach the enemy’s brigade rear boundary once it has destroyed the brigade’s reserve. It is not only trying to reach its mission line, it is also trying to destroy the enemy forces within its zone of advance. The OPFOR expects that some enemy elements will have fallen back to subsequent positions within the zone in an attempt to reestablish a stable defense. Likewise, the OPFOR will have bypassed other enemy elements within the zone that may be fully capable of combat action. The destruction of these remaining enemy forces will require continued action even after the destruction of the enemy’s reserve. This effort will probably require the commitment of the second-echelon forces.

Second-echelon units and subunits also receive missions. Against a partially prepared defense,27 for example, a first-echelon regiment’s second-echelon battalion may receive an immediate mission to complete the destruction of an enemy first-echelon brigade. This battalion would act in conjunction with first-echelon battalions, who have that as their subsequent mission. The second-echelon battalion would then have a subsequent direction of advance instead of a subsequent mission. This direction of advance would support the accomplishment of its parent regiment’s subsequent mission.

First-echelon units and subunits that have accomplished their original immediate and subsequent missions and are still combat effective may receive new missions. In this case, however, they would receive only one (immediate) mission and a subsequent direction of advance.

g. Division. A division normally conducts an attack as part of its parent army's/army corps' offensive. In some circumstances, it may conduct an attack under control of a corps or front. The organization, concept, and conduct of a OPFOR division attack vary with the division's mission and the commander's estimate of the situation. Figure 1-12 shows the typical deployment of divisional elements in an attack. The sequence of action in the basic concept for an attack is:

- To strike enemy defenses with intensive fires.
- To find or create a gap.
- To slip through the gap.
- To drive deep at top speed.

An attacking division's mission contributes to the accomplishment of the army's/army corps' mission. Achievement of a division's mission is the culmination of fires and attacks by all its organic and attached elements

Element	Deployment
Division first echelon	Concentrated to attack on main and supporting axes.
Division second echelon or combined arms reserve	Moves by bounds 15-30 km behind the first echelon until committed.
Regimental artillery groups	1 to 4 km from the forward edge.
Division artillery groups	3 to 6 km from the forward edge.
Division antitank reserve	Between first and second echelons on the axis of the main attack or a threatened flank.
Division main CP	Up to 15 km from the forward edge.
Division forward CP	Up to 5 km from the forward edge.
Division rear CP	Up to 30 km from the forward edge and located near the rear service elements.
Regimental main CPs	Up to 5 km from the forward edge.
Logistics units	The divisional medical, repair, and evacuation elements move behind the first echelon. The rest of the divisional logistics units move some 5 to 10 km behind the second echelon.

Figure 1-12. Deployment of divisional elements in an attack

(1) Planning the attack. Division-level planning for the attack depends on the missions assigned by the army commander. The division commander first assesses the situation, then outlines his concept and intentions, specifying preliminary actions and missions, and directs the preparation of required information

and planning. Finally, he passes preliminary instructions to subordinate and attached units, specifying where, when, and by what means to conduct the attack.

A strict timetable regulates the commander's preliminary actions; so, the less time available, the more rigidly it regulates his work. The OPFOR emphasizes concurrent or parallel planning and action at all levels. Even when less time is available for planning, it works out attack plans in great detail. On receipt of an order, the division commander and his chief of staff immediately assess the assigned tasks, calculating available and required time. They decide what information they need, what they already have, and what is lacking. Their analysis of the assigned mission centers on the role of the division in the attack. The commander determines where to concentrate his main effort, if it has not been determined by the higher commander. The division commander determines what combat formation to use and what rates of advance are possible during the attack.

The division commander reviews the army's/army corps' offensive plan and reviews the allocation and procedures for employment of nuclear and chemical weapons and the role of the division in the army's/army corps' scheme. He notes the axes, missions, and groupings of flanking division(s). The basis for his attack planning stems from consideration of-

- Missions or objectives.
- Enemy dispositions.
- The army's/army corps' fire plan and the allocation of artillery.
- The terrain in the assigned attack zone.
- The weather and light conditions.
- Time of the attack.
- Combat effectiveness and supply-situation of all elements of the division.

To the OPFOR timing is critical when planing an attack from the march and the movement of troops to the line of attack. The next higher commander specifies the start point and routes for the march, lines of deployment, and the line and time of attack. Planners measure the length of the routes and distances from a start point to other control lines breaking them down by 5-kilometer segments. The OPFOR determines sector speeds based on the condition of the routes, the weather, the composition of the columns, and possible enemy action during movement. It then calculates average speeds developing schedules for troop movements.

The OPFOR stages an attack aganist a defending enemy from assembly areas. Forces stay in the assembly area only long enough to assign tasks to subordinate units/subunits, to check preparations, and to organize combat formations. The assembly, area is far enough forward for first-echelon regiments to move to their lines of deployment and close enough that they can reach their attack lines during the artillery preparation.

Units disperse by battalions in assembly areas with their attached reinforcements. Their movement routes have prescribed control and deployment lines. These routes permit rapid, effective movement to the attack line. The combat order designates the attack line. This line should be as near as possible to the forward positions of the enemy defense. When a division occupies an assembly area, it is usually 60 to 75 kilometers from the enemy's forward positions, covering an area of 300 to 600 square kilometers. First-echelon regiments could occupy assembly areas as close as 20 to 30 kilometers from the enemy's forward edge.

(2) Preparation of the attack. Preparation of the attack begins in the assembly area. Some engineer preparation of the assembly area is desirable, to improve routes and provide protection for equipment and personnel. Logistics assets may be deployed in the assembly area by the senior commander prior to its occupation by the attacking force. Final maintenance and resupply are conducted and units and subunits will be regrouped tactically, in accordance with their commanders' plans. Strict maskirovka discipline is enforced and radio silence maintained.

Air defense resources are fully deployed. Each unit and subunit provides its own local protection against ground attacks, including static posts and mobile patrols, both on foot and in vehicles. Reconnaissance elements, including commanders conducting their ground reconnaissance, move forward to observe the enemy position. Final orders are given and detailed planning completed.

(3) Reinforcements. The type and number of reinforcements the division receives depends on the mission the division will be required to complete. A first-echelon division may receive the following reinforcements from army/army corps and front resources:

- Additional artillery battalions.
- Engineer companies or battalions.
- Air defense elements.
- Communications assets.
- Reconnaissance assets.
- Medical assets.
- Chemical protection assets.
- Material support assets.
- Direct air support sorties.

(4) Attack zone The army/army, corps assigns the division an attack zone for which that division is responsible. This attack zone is generally 15 to 25 kilometers wide, with its width varying with the situation. The OPFOR can attack with forces massed across a strike sector as narrow as 4 kilometers for a division, but it considers this a less desirable option, especially given a nuclear threat. The strike sector can be as wide as 18 kilometers. Within the attack zone, the division commander designates a main attack on an axis normally assigned by the army/army corps. He designates one or more secondary axes for supporting attacks in the rest of the division's attack zone Each first-echelon regiment attacks on one of these axes. Spaces between regiments vary with the situation. Therefore, there would probably be no distinct, continuous division "attack frontage" within the attack zone.

(5) March into attack. Engineers arc likely to be the first to move out of the assembly area. Working in concert with any additional engineer assets provided they, clear routes and may begin to breach obstacles. Units in contact are responsible for clearing routes through minefields they have laid. Traffic control elements move out at the same time. Next to move would be the artillery. The DAG and the RAGS must occupy their tire positions at least 1 to 2 hours (6 hours at night) before they are due to open tire. Their positions have been reconnoitered beforehand and may have been prepared by the engineers. Some air defense assets also deploy in advance of the main body for route security and to protect the artillery groups. First-echelon units move from the assembly area in accordance with a timetable designed to bring them to the line of attack at H-hour

(6) Combat formation. The division commander determines the combat formation of his forces based on his assigned mission and the preparedness and depth of the enemy's defenses. A division normally attacks with most of its combat power in one or two echelons, but a three-echelon formation is possible in

restrictive terrain. If the division attacks in a single echelon, it would normally form a combined arms reserve. The main difference between a second-echelon force and a combined arms reserve is that the former has an assigned mission while the latter does not. A combined arms reserve exploits developed or developing success, reacting to contingencies. The remaining forces form an antitank reserve (in motorized rifle divisions) and/or special engineer or chemical protection reserves.

(a) Against covering force. If the enemy has established a covering force, first-echelon regiments can send out advance guards. These advance guards attempt to defeat the enemy's covering force and disrupt the establishment of the enemy's main defense positions. If successful, the main bodies of these regiments try to complete the destruction of these positions from prebattle formation. The division can also send out one or more forward detachments if the situation requires it. The forward detachment's mission is to seize key objectives and to disrupt enemy defenses, facilitating the division's attack. It tries to avoid enemy contact until it reaches its objective.

(b) Against main defense. Within the division's attack zone, one or two first-echelon regiments attack along the division's main attack axis. The massing of forces for the main attack is vulnerable to tactical nuclear strikes and other means of deep attack. To decrease these vulnerability, forces and fires must concentrate rapidly, creating a breach. Forces must disperse just as rapidly on the other side of the breach. Another first-echelon regiment conducts a supporting attack.

A second-echelon regiment continues the attack to the division's subsequent mission along the main attack axis. Commitment of a second-echelon regiment takes place after the division has achieved its immediate mission. The time of commitment depends on the success of first-echelon forces and how the enemy uses his reserves. The OPFOR division commander commits the second echelon when and where it best contributes to overall success.

(c) Againist fully prepared defense. The OPFOR tends to array the motorized rifle divisions (MRDs) and tank divisions (TDs) in a two-echelon formation against a fully prepared defense. A combat formation with two regiments up and two regiments back is normal when the division is conducting a main attack. A division conducting a supporting attack is more likely to be echeloned with three regiments up and one back. The first-echelon units are likely be motorized rifle, since they are more balanced and better suited than tank units for penetrating a deep, prepared defense. The second echelon consists of motorized rifle regiments (MRRs) in the MRD or tank regiments (TRs) in the TD. These units are committed on axes into gaps opened by first-echelon forces.

(d) Against partially prepared defense. Against a partially prepared defense the OPFOR attempts to deploy forces farther forward than if the enemy were in fully prepared defenses. It tries to establish greater initial momentum, denying the enemy targets in the OPFOR rear area. The MRD or TD typically has three of the four maneuver regiments in the first echelon with the remaining regiment in the second. (See figures 1-13 and 1-14 for two examples of possible combat formations.) By concentrating a larger amount of combat power in the first echelon, the OPFOR hopes to exploit some of the weaknesses (gaps) in the defense. A division can also use a forward detachment to exploit gaps in the enemy defense.

(e) Against unprepared defense. The offensive situation the OPFOR prefers is an attack against an unprepared defense. In such a defense, the enemy has had time to emplace only part of its covering force. Attacks under these conditions quickly take the form of an extended meeting battle. The division establishes a single echelon that includes all its maneuver regiments and forms a small combined arms reserve. It also makes extensive use of forward detachments.

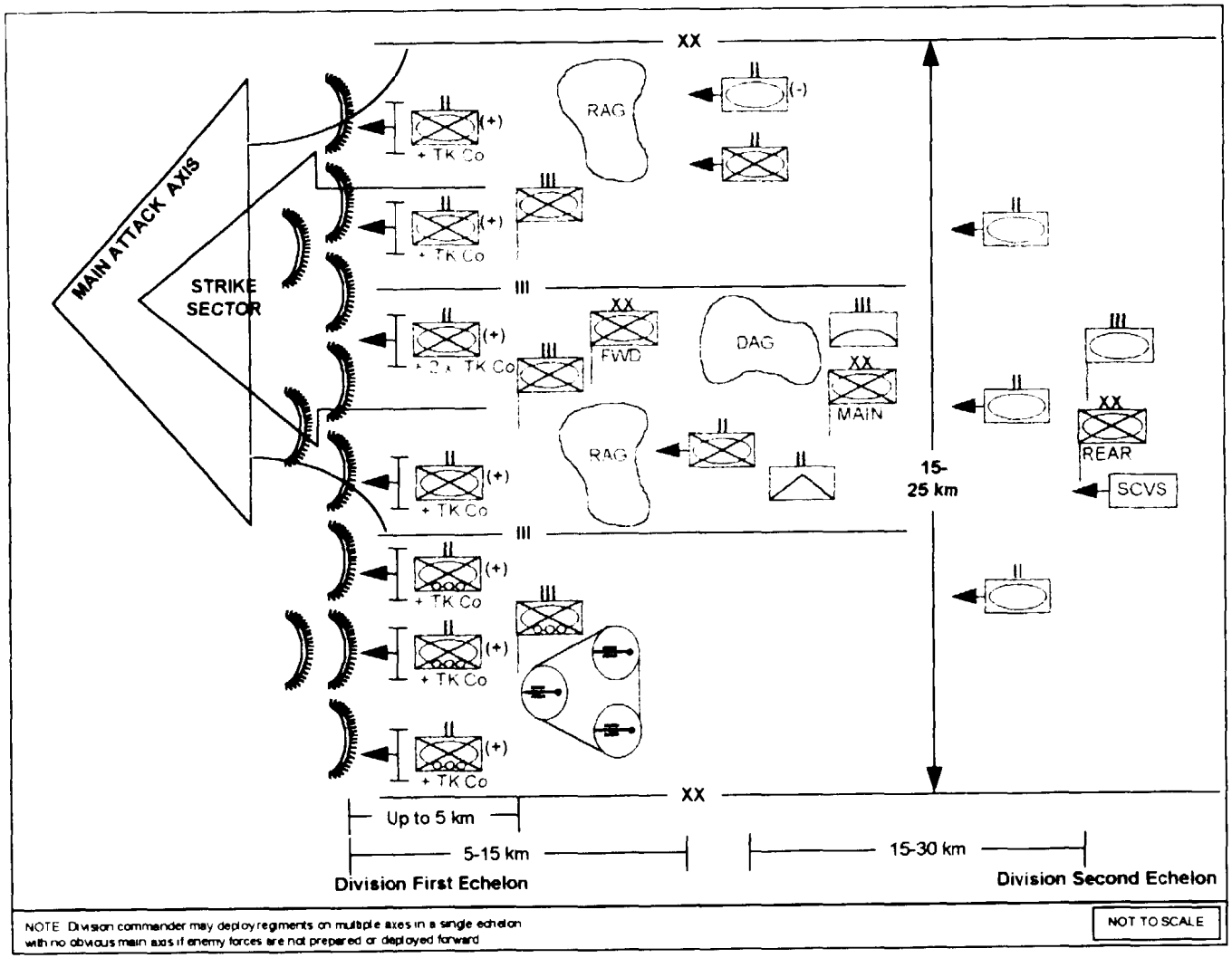


Figure 1-13. MRD combat formation for attack from position in direct contact against partially prepared defense (example 1).

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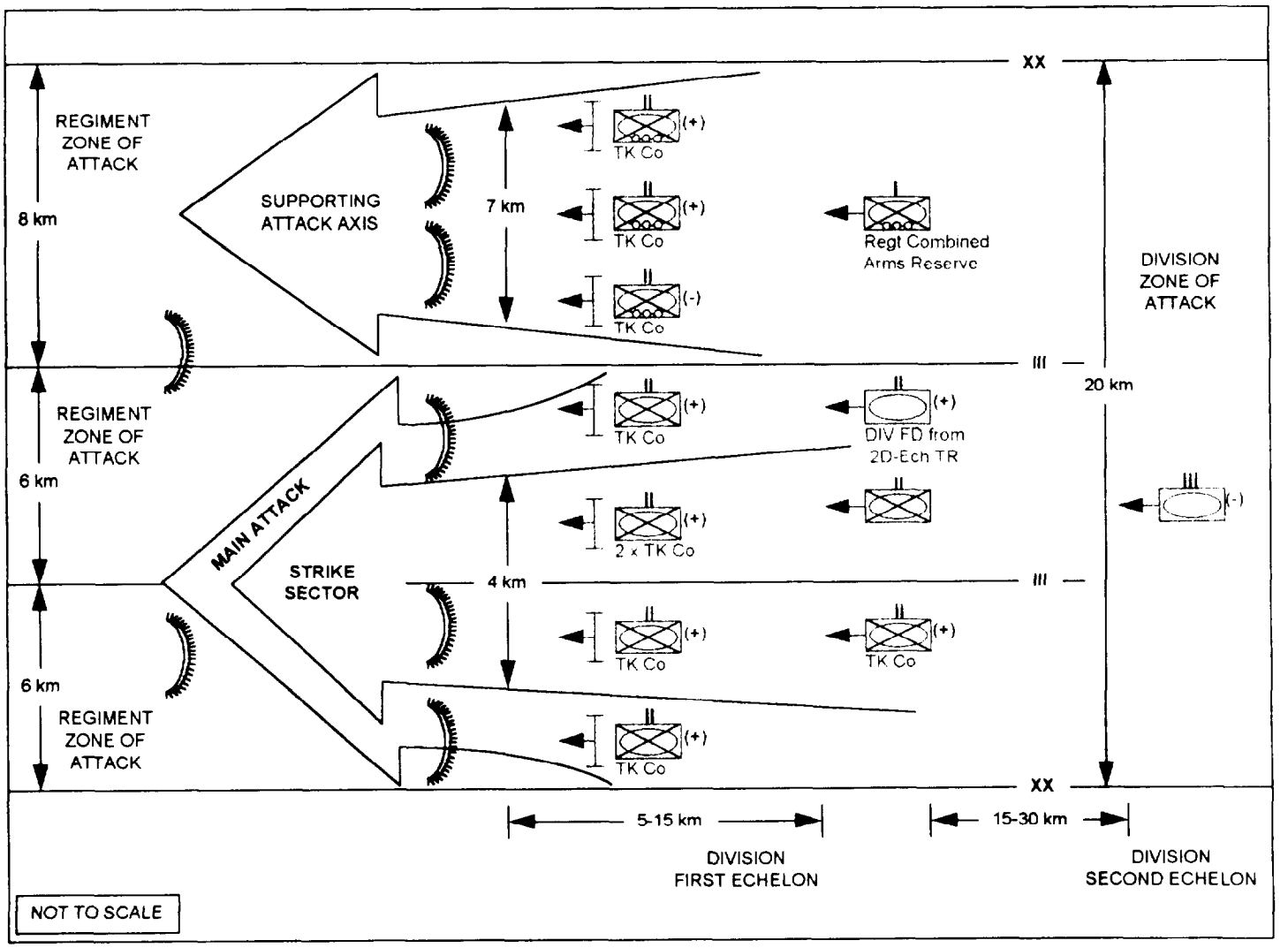

Figure 1-14. MRD combat formation for attack from position in direct contact against partially prepared defense (example 2).

(7) Combat formation (example), Figure 1-15 shows one example of how an MRD might deploy for an attack from the march. In this example, an MRD has deployed to attack a main defensive position in two echelons, with three regiments in the first echelon and one in the second. A single-echelon formation is unlikely against such a defense, except on a secondary axis. This division is attacking on the army's main axis and additional artillery and other assets have been given to the division. The army artillery group (AAG) is also engaging targets within the division's sector of attack. Two regiments are concentrated on the main axis, each attacking in two echelons. The regiment on the secondary axis attacks in one echelon, this enables it to cover a wider frontage.

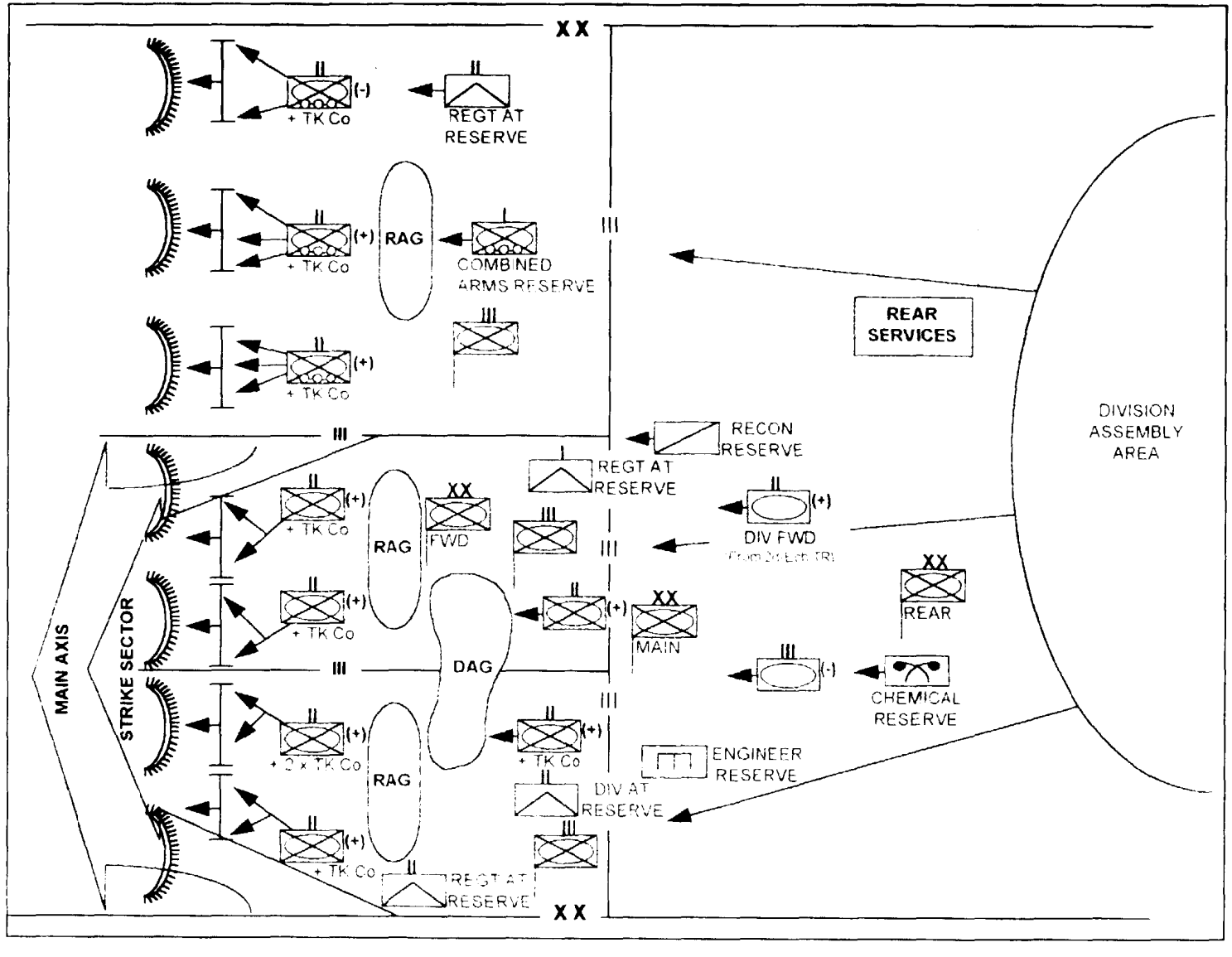

Figure 1-15. MRD combat formation for attack from the march (example).

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(a) Division artillery deployment. In this example, each first-echelon regiment is supported by a RAG, with the DAG located on the main axis. The RAGs on the main axis have three battalions each, one organic to the regiment and two allocated from division. The RAG on the secondary axis has only two battalions. (The typical size or a RAG can vary from 2 to 4 battalions.) The DAG consists of the organic rocket launcher battalion and three tube artillery battalions. (The typical size of a DAG varies from 2 to 4 battalions; a division on the army/army corps main axis could conceivably have as many as 6 to 8 battalions, in which case it would form two DAGs.) The additional artillery required by the division to achieve the grouping outlined is drawn from army/army corps and even front resources. The army/army corps may use artillery assets of its second-echelon division(s) to supplement first-echelon DAGs.

(b) Other division assets. In this example, the surface-to-air missile (SAM) regiment is deployed to cover the division sector, possibly with a battery in each first-echelon regiment's sector and the remaining battery/batteries covering the flanks in depth.

The MRD's antitank battalion forms the antitank reserve operating in conjunction with a MOD from the division's engineer battalion. If the division has an open flank, the antitank reserve and MOD can deploy to cover that flank. Otherwise they may be assigned a more central position with the primary role of covering a flank of the penetration against a possible enemy counterattack, or they could cover a boundary between regiments, where an enemy counterattack is likely, to occur. Engineer assets not allocated to regiments or directly tasked in support of the penetration are kept in an engineer reserve.

A similar policy applies to the chemical protection battalion, which would form the basis for a chemical protection reserve. However, all available smoke-generating assets, including those with a dual decontamination capability, are employed in direct support of the attack or in a deception role. Some part of the reconnaissance and REC battalion is also likely, to be held in a reconnaissance reserve until the penetration has been achieved.

(8) Commitment of second echelon or reserves. The division commander plans to commit his second echelon or combined arms reserve upon achievement of the division's immediate mission. This commitment must take place before the momentum of the advance decreases. The commitment of the division second echelon or reserve involves the intensification of reconnaissance activity, artillery fire, air strikes, and the use of smoke to screen the force from enemy observation.

A second-echelon regiment or a divisional reserve converges in battalion march columns toward the penetration. It may remain in battalion columns for the sake of speed if enemy resistance is minimal. Otherwise, battalions assume prebattle formation or, if required by enemy actions, they assume battle formation. Ideally, the regiment passes through developed penetrations to drive swiftly into the enemy rear to achieve deep missions.

The division commander establishes a combined arms reserve from first-echelon forces or uncommitted combat assets as soon as he commits the original follow-on force. He attacks any surviving pockets of resistance with elements of the follow-on forces or destroys them with concentrated fires of artillery and aviation, including attack helicopters.

The OPFOR may encounter enemy' defenses that are stronger than it had anticipated. If it cannot penetrate them with the first echelon, it may commit second-echelon or reserve forces earlier than it had planned. The OPFOR would not use the second echelon to reinforce failure but seek to employ it on another, more favorable axis. If, however, first-echelon forces succeed in penetrating enemy forward defenses and

are able to continue toward deeper missions. the OPFOR commander may not commit second-echelon or reserve forces until much later in the battle.

The division commander commits his second echelon or reserve on the axis of the most successful penetration. A division's second echelon begins the attack with an assigned mission, which is normally to continue the attack on the division's designated main attack axis. However, that axis could change during the course of the battle, and the commander can commit his second echelon on the new main axis. A division's combined arms reserve does not have an assigned mission at the beginning of an attack, but is prepared to attack along the most opportune axis at a time the division commander determines. If the attack continues successfully, this could lead to the parent army's/army corps' commitment of its own follow-on forces to develop the penetration further. The commitment of additional divisions would result in a widening and ever-deepening rapid penetration and exploitation.

The antitank reserve in a motorized rifle division moves with a MOD. This combined force travels between the first and second echelons on the axis of the main attack. Planned commitment lines for the antitank reserve and MOD are across the most likely, enemy counterattack routes.

Before their commitment, second-echelon or combined arms reserve units and subunits advance in march or prebattle formation. They move by bounds approximately 15 to 30 kilometers to the rear of the first echelon. This distance varies with the situation. The commander keeps second-echelon or reserve forces far enough forward to influence the battle in a timely manner, but far enough to the rear to protect them from the bulk of enemy direct fire and direct support weapons

(9) In depths of defense. To assist in an attack against a defending enemy, a division attack could include a vertical envelopment by a heliborne force of up to a battalion in size. An organic motorized rifle battalion, stripped of its combat vehicles and reinforced with air-transportable combat support, could conduct such an assault. This battalion (or company) could come from the division's second-echelon regiment or, if the heliborne landing is directed by the army/army, corps commander. possibly from a second-echelon division. Heliborne assaults using motorized rifle troops can extend out to 20 kilometers beyond the forward edge. Likely objectives are key locations such as bridges. or river-crossing sites. The OPFOR routinely discusses using heliborne forces in coordination with forward detachments and enveloping detachments. A division could employ a forward detachment up to a reinforced battalion in strength to link up with a heliborne assault.

(10) Forward detachments. The OPFOR uses FDs throughout an offensive operation, particularly after penetrating the enemy main defense area. A division or regiment may dispatch a forward detachment of reinforced battalion size on a swift. independent penetration into the enemy depths. A division can employ a regiment-sized FD in situations when-

- The FD must take immediate action (in a pursuit, for example), without time for reinforcement.
- The FD must maneuver and fight without support for an extended time.
- The force-oriented objective is an enemy battalion or larger.
- The size and duration of combat dictate a larger force.

Thus, the decision to use a regiment rather than a remforced battalion as a division FD depends primarily on the depth of the objective and enemy strength.

The FD's primary mission is to seize and hold a tactical objective until the main forces arrive. In addition, the FD has a secondary mission of reconnaissance; it can also conduct tactical raids. The OPFOR intends missions of FDs to speed the advance of main forces and the dissolution of the enemy defense. An FD is a deep-attack force detailed to achieve an independent mission. It is not restricted to the route of its main force. Typical objectives for an FD can include road junctions, bridges, command posts, tactical reserves, and withdrawing forces.

Divisions and regiments employ FDs as tactical maneuver forces. Division FDs function during all types of offensive action: attack against a defending enemy, meeting engagement, or pursuit. The same applies to regimental FDs, except that employment in an attack against a defending enemy is normally only against an unprepared defense. Divisions serving as army operational maneuver groups (OMGs) can use a battalion-sized FD of their own, plus a battalion-sized FD for each of their subordinate regiments. Whatever the level, FDs are tailored forces. reinforced to allow independent operation. Depending on the enemy and the terrain. their nucleus can be either tank or motorized rifle forces; however, tank battalions and tank regiments are the most likely.

(a) Against unprepared defense. The characteristics of the offensive are surprise, speed, and attempts to preempt or forestall the enemy FDs from first-echelon divisions may attempt to strike deep into the enemy tactical zone of defense (main defense area) before enemy defenses are fully organized and solidified. Reinforced battalions (or sometimes entire regiments) given such missions receive full support from artillery and direct-support aviation.

Against an unprepared defense, where the enemy has deployed only his covering force, FDs at all levels may initiate the attack. If the enemy has advanced during the night before the offensive, they would then attack on multiple axes across the OPFOR division's attack zone to penetrate enemy covering forces rapidly. They would then drive at top speed in prebattle or march formation to seize and hold key terrain within the enemy division's main defense area. thus preempting enemy occupation of positions there. There may also be battalion-sized heliborne landings, designcd for linkup with the FDs. The purpose of such tactics in support of an operation would be to disrupt or preempt enemy defensive structure while opening multiple avenues for swift attacks by, larger first-echelon forces. Figure 1-16 shows typical depths of FD missions against an unprepared defense.

(b) Against partially prepared defense. More often, the OPFOR would find the enemy defense partially prepared, with the covering force in place and the tactical zone of defense partially occupied. A regimental FD would not attack under these conditions. but a division FD could, if provided heavy fire support. Its mission would be to overcome the covering force and penetrate into the tactical zone of defense to prevent the enemy from establishing a firm, continuous defense; it could also facilitate the commitment of main force (first-or second-echelon regiments). Figure 1-16 shows typical mission depths under such conditions, which would be one step shallower than for an unprepared defense.

During the attack, FDs use reconnaissance to detect gaps in enemy defenses occurring naturally or created by artillery fire. If a gap exists, or in fire support has neutralized sectors of the defense, the FD moves quickly through the gap to secure objectives in the enemy brigade or division rear.

(c) Against prepared defense. If the OPFOR encounters a prepared, fully occupied defense, FDs would not participate in operations until first-echelon regiments have completed the penetration of enemy first-echelon brigades (the front of the tactical zone of defense). (In rare instances, a division FD could assist the main forces in penetrating the covering force or initiate subsequent attacks into the tactical zone of defense; however, it is unlikely that it would emerge still capable of further operations.)

Once the penetration operation is complete, FDs at all levels of command would lead the operational exploitation or pursuit, helping to envelope and destroy enemy forces. In this role, they would normally advance 30 to 60 kilometers ahead of the main force.

Throughout the operation, strong FDs would probably continue to press the advance into the enemy rear on several axes. Numerous deep penetrations by FDs early in the battle would result in an intermingling of enemy and friendly forces. This situation would complicate or forestall enemy use of tactical nuclear weapons. The OPFOR would probably accept heavy losses in such deep-penetration forces, if it could cause an early collapse of the enemy's defensive structure before he could resort to use of nuclear weapons.

AGAINST UNPREPARED DEFENSE

FD Subordination	Mission	Depth (km)
Division	Rear of tactical zone of defense	30-50
Regiment	Front of tactical zone of defense	20-30

AGAINST PARTIALLY PREPARED DEFENSE

FD Subordination	Mission	Depth (km)
Division	Front of tactical zone of defense	20-30

Figure 1-16. Forward detachment missions.

(11) Fire support. OPFOR fire planning is highly centralized It Integrates conventional artillery and air strikes, missile strikes, and possible nuclear or chemical fires The fire plan includes details specifying the time of assignments, groupings. and displacement of artillery. Combat instructions specify the missions of designated artillery subunits and idcntify the location of observation posts and firing positions. The orders specie the time for artillery to be ready to fire.

Fire planning for the attack is methodical and highly quantitative. This reflects the need to determine ammunition requirements and to distribute plannned fires effectively. The chief of artillery must determine the availability of artillery and its organization. Then he weighs these against the numbers and types of targets and the commander's decision for coordinated action in the attack. He also allocates targets to artillery, tanks, aircraft, and nuclear or chemical weapons. When time permits, he bases fire planning on thorough, detailed reconnaissance and careful study of the attack plan. In any attack, a systematic targeting effort underlies the fire plan at all levels.

(a) Assets. OPFOR MRDs and TDs have organic artillery regiments. A first-echelon division receives additional artillery allocated from army/army corps and/or front. The division commander weights the main attack with artillery. He allocatcs additional artillery to the regiment(s) in the main attack. He also forms one or more DAGs. The division chief of artillery ensures that the division's fire plan coordinates the fires of the division's organic and reinforcing artillery, with the army's fire plan and with fire support from armed helicopters or ground support aircraft.

(b) Deployment. Artillery subunits are among the first combat forces to deploy. Artillery allocated by higher headquarters joins the designated attacking force in the assembly area or links up on the march. Artillery designated to support or reinforce the attack occupies firing positions early enough to cover the advance of the division several hours before the: attack is launched. Artillery, attached to maneuver regiments moves at or near the head of the regimental main forces.

(c) Phases. Fires in support of a division attack follow this sequence:

Phase I, fire support of the movement forward, consists of long-range fires. This phase is normally employed only when it is necessary to protect elements of the division as they move forward. This is primarily in an attack from the march and when any force must move up from an assembly area more than 20 kilometers from the forward edge.

Phase II, fire preparation of the attack, normally begins when the first-echelon regiments deploy into prebattle formation (battalion columns). The fire preparation consists of concentrated fires to neutralize or destroy the enemy's main defense positions. These fires protect the attacking units during their deployment into prebattle and battle formation.

Phase III, fire support of the attack, begins at the same time as the attacking maneuver units begin their assault on the enemy forward defenses. As the attacking units advance, fires shift progressively deeper into the enemy's defenses. The time lapse between the shifting of tire and the attack by ground troops should not exceed two minutes. This phase attempts to maintain fire superiority, assisting the attacking maneuver forces as they advance to their immediate mission.

Phase IV, fire accompaniment, consists of fires throughout the depths of the enemy's defenses to support achievement of the attacking unit's subsequent mission.

h. Brigade. Since the primary function of an independent motorized rifle brigade (IMRB) is deep battle, it would rarely conduct an attack against a defending enemy[1]. Within an army/army corps offensive, it is most likely to serve in a special role, such as a forward detachment or a combined arms reserve. If the brigade finds itself in the first echelon of the army/army corps, it would most likely occupy a secondary sector.

(1) Reinforcements. The IMRB is larger than a standard motorized rifle regiment, but smaller than a standard MRD. In addition to its organic assets, an IMRB may receive additional support assets (including artillery, antitank, and engineer battalions) from its parent army/army corps. The IMRB must task organize all organic and reinforcing assets to best fight the tactical battle.

As an example, the brigade commander could create four reinforced MRBs by breaking up his tank battalion (TB) and attaching a tank company to each of the MRBs; this would leave one tank company for a brigade reserve. Alternatively, he could opt to stay with five maneuver battalions--four MRBs and one TB. Neither of these organizations is necessarily, the preferred type, since the brigade commander must choose his task organization based on the tactical situation.

(2) Combat formation. Normallly, an IMRB would deploy in either one or two echelons in offensive battles. If a single-echelon combat formation is chosen, the brigade would deploy the preponderance of its combat power forward. If deploying in a single echelon, the brigade would establish a combined arms reserve of company strength (or perhaps two companies).

The IMRB's primary form of offensive combat is the mecting battle.

In the offense, the IMRB attempts to maneuver deep inside enemy-held territory. These independent missions (as an army/army corps-level forward detachment) force the brigade to fight at greater depth than would a regiment, and with exposed flanks. for extended periods of time.

An IMRB employs standard OPFOR regimental tactics both in normal and special conditions. Because of the brigade's unique organization. however, some modifications may be necessary. These involve increasing the size of the offensive area of responsibility for the subordinate battalions. Also, the distance between subunits could be expanded. The increased width of the battalion avenue of approach and battalion and company attack sectors allows for deceptive, high-speed maneuver forward of enemy positions and the employment of flanking and enveloping maneuvers.

(3) Transition to the attack. A IMRB can transition to the attack against a defending enemy either from the march or from a position in direct contact. The attack from the march is the preferred option.

(4) Attack zone. A IMRB's zone of attack can vary depending on the attack concept and the situation. The attack zone of the brigade is typically 5 to 12 kilometers. The distance between echelons within the brigade can vary from about 5 to 15 kilometers.

(5) Mission depth. The IMRB's first-echelon battalions should be expected to reach the same depth as those in a motorized rifle regiment. However, they, could achieve this on a broader frontage (attack zone), since the IMRB has more battalions to possibly deploy in its first echelon. Therefore, the brigade's immediate mission depth should be the same as that for a regiment. (See figures 1-10 and 1-11.) With a second echelon/reserve potentially stronger than that of a regiment. the brigade could achieve a somewhat greater depth for its subsequent mission. or reach the same mission in shorter time.

In the initial period of war, conflict may start before either side is fully mobilized and prepared. Under such conditions, an IMRB held in a high state of readiness could strike quickly. Thus, against an unprepared or partially prepared enemy defense, it could possibly achieve mission depths that would normally require the forces of an OPFOR division.

(6) Forward detachment. An IMRB serving as an army/army corps FD can use a battalion-sized FD of its own. The actions of that reinforced battalion would help retain the momentum of the entire brigade force.

(7) Fire support. With its two organic artillery battalions and additional battalions allocated to it by its parent army/army corps, the IMRB may form one or two BrAGs. A BrAG would locate 1 to 4 kilometers from the forward edge of first-echelon troops. The brigade commander can assign up to a battalion of artillery to each of his first-echelon battalions

An IMRB fighting as part of an army corps could also receive support from the corps artillery group (CAG), if in the corps main effort; when fighting as part of an army, the IMRB would be less likely to receive support from the army-level artillery, groups, since the latter would most likely support divisions in the army's main effort.

The IMRB has its own antitank battalion and may receive an additional antitank battalion as reinforcement. This would allow it to form two antitank reserves, in order to protect both its flanks when performing independent, deep missions in the enemy rear.

i. Regiment. A maneuver regiment is a fully combined arms ground force element.[2] It is capable of limited independent action, but normally attacks as part of a parent division. The regiment receives an immediate mission, a subsequent mission, and a direction of further advance.

(1) Transition to the attack. A regiment transitions to the attack against a defending enemy either from the march or from a position in direct contact. The attack from the march is the preferred option.

(2) Attack zone. A regiment's zone of attack can vary depending on the attack concept and the situation. The attack zone frontage of the regiment is typically 5 to 10 kilometers. Within that zone, one or two battalions could attack on a strike sector of 2 to 4 kilometers.

(3) Combat formation. A regiment usually organizes for combat in three reinforced battalions advancing in one or two echelons. The commander determines the appropriate echelonment based primarily on the status of the enemy's defense. The regiment may also form one or more of the following reserves:

- A company-sized combined arms reserve, particularly in a single-echelon attack.
- An AT reserve in the MRR. based principally, on the AT battery or battalion.
- Special engineer and chemical protection reserves.

On a main axis, a regiment normally deploys in two echelons. The distance between echelons within the regiment can vary from about 5 to 15 kilometers. In a tank regiment, the MRB is likely to be split among the three TBs; in a motorized rifle regiment attacking with two MRBs forward, the TB can be allocated to the first-echelon battalions (two companies to the battalion on the main axis, one company to the second battalion). Alternatively, each first-echelon battalion can receive a tank company with the third company and battalion headquarters remaining directly subordinate to the regimental commander. Figure 1-11 shows an example of regimental deployment in an attack from the march.

(4) Conduct of the attack. In an attack from the march, the regiment advances out of assembly areas placed out of range of the majority of enemy indirect fire assets. This movement takes place during the fire support of the movement forward or fire preparation phases of artillery support. Subunits deploy into successively smaller march columns at the following distances from enemy forward defenses: 12 to 15 kilometers in battalion columns, 4 to 6 kilometers in company columns, and 2 to 3 kilometers in platoon columns.

The regiment can conduct the attack in company columns. This facilitates speed and control if it has encountered poorly prepared enemy defenses, or if it has neutralized defenses sufficiently with fire. The OPFOR deploys laterally only when necessary. It reverts to prebattle or march formation if it encounters only light enemy resistance. The regiment deploys into battle formation against well-prepared enemy positions. Battle formation provides the maximum firepower forward and the regiment assumes it before reaching a designated line of attack, from about 600 to 1,000 meters from the forward edge of the enemy's defense. Ideally, all first-echelon subunits of a regiment cross the line of attack simultaneously, but this is not necessarily the case.

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[2] Battalions normally fight as combined arms teams, but need reinforcement to do so.

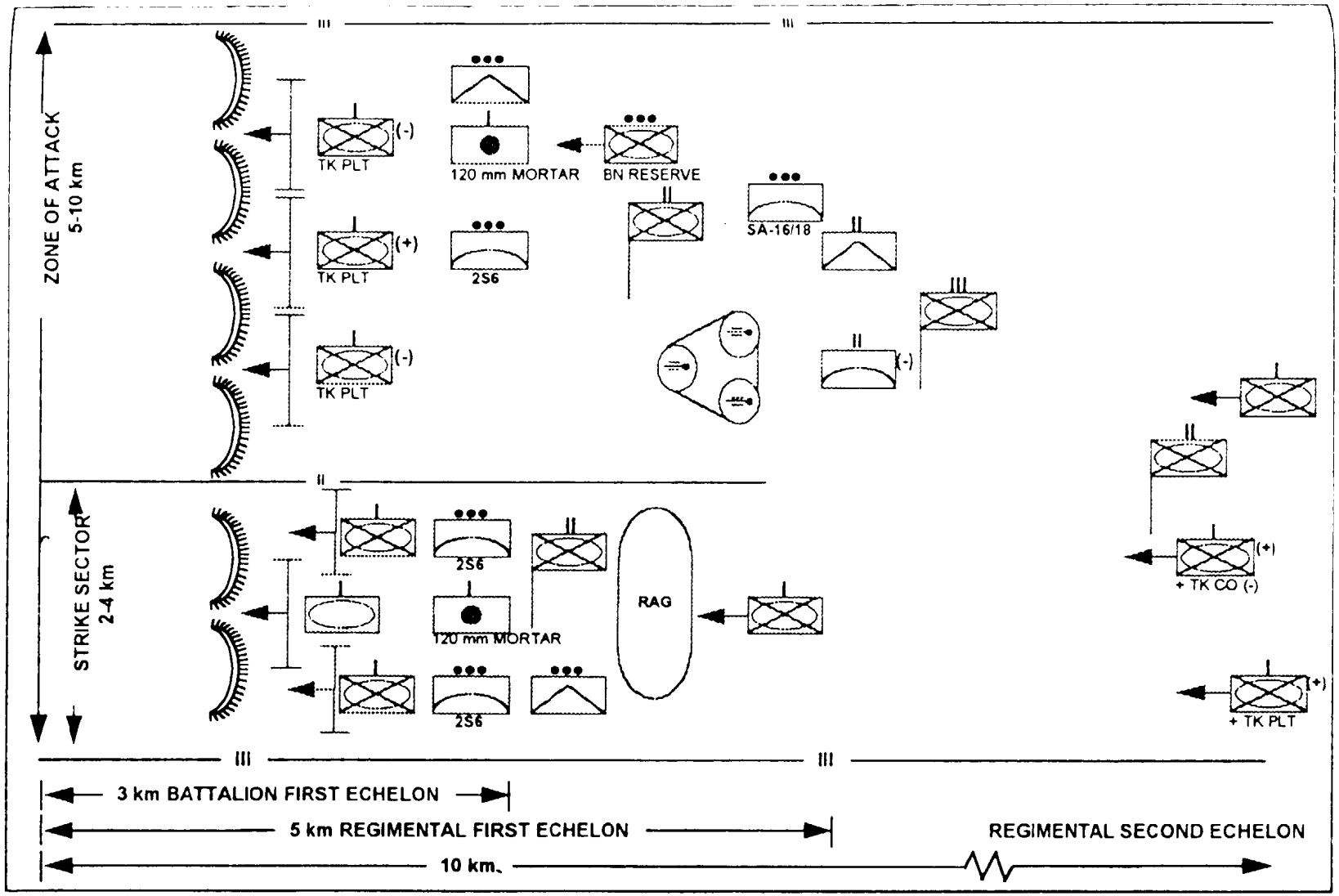

Figure 1-17. MRR deployment for attack from the march (example).

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A first-echelon regiment can conduct an attack from a position in direct contact with the enemy. In this case, the regiment directs its first-echelon battalions to occupy assembly areas just behind the forward defensive positions with a portion of their forces. Unit boundaries adjust to concentrate fires and maneuver for the attack. Elements remaining in direct contact support the attack with direct fire. Artillery preparation fires support the battalions moving from the assembly areas and the regiment's second-echelon battalion(s) as they deploy to the final coordination line for the assault on the enemy defenses.

A first-echelon regiment that has successfully penetratcd the enemy forward defenses may establish and secure the gap through which the division follow-on force subsequently attacks. The first-echelon regiment also could form a battalion-sized forward detachment to move ahead of the division to seize important objectives in depth. Such actions often take place in coordination with heliborne forces. (Alternatively, if the division commander has planned the use of his own battalion-sized forward detachment, he may commit it at this time.)

A regiment in the second echelon of an attacking division moves in march formation 15 to 30 kilometers behind the first echelon. The division commander defines the mission of the second echelon prior to the attack and refines it during the battle He designates lines of commitment, preferably on the flanks, through gaps, or between two first-echelon units. This way he avoids the difficulties of passing through a first-echelon unit.

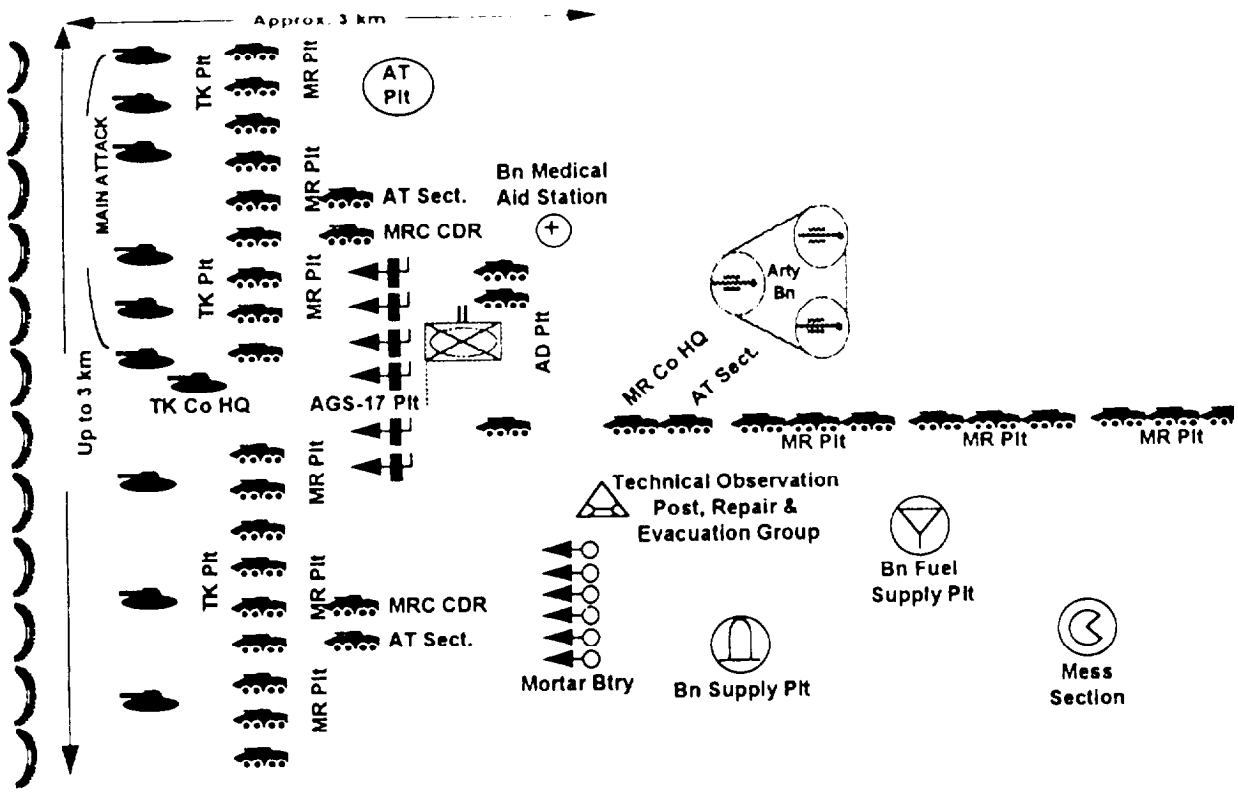
(5) Fire support. Each OPFOR motorizcd rifle and tank regiment has an organic howitzer battalion. When attacking in a division first echelon, a rcgimcnt receives additional artillery from division. The regimental commander can assign up to a battalion of artillery to each of his first-echelon battalions. The remaining artillery forms a RAG located 1 to 4 kilomctcrs from the forward edge of first-echelon troops. A first-echelon regiment can also receive support from attack helicopters from army or army corps level. The regimental chief of artillery plans the regiment's organic and supporting fires. He ensures coordination with the division fire plan. Fires in support of a rcgimcntal attack follow the same sequence as those for the division attack described earlier in the chapter.

j. Battalion. A battalion attacks as part of its parent regiment. It does not have the organic combat support or combat service support required for independent action, cxcept when dcploycd as a security or enveloping detachment, an advance guard. a raiding detachmcnt, an FD, or a heliborne or amphibious landing force. Under these circumstances. the battalion receivcs the neccessary reinforcements to sustain it for the duration of its mission. Further, when attacking as part of the regimcnt, the battalion is normally augmented to provide the capability for more independent actions. This will become more common on the nonlinear battlefield.

(I) Missions. A first-echelon battallion receives an immediate mission, a subsequent mission (in coordination with adjacent battalions), and a subsequent direction of advance (toward the regiment subsequent mission). A second-echelon battalion receives an immcdiate mission (in coordination with first-echelon battalions. to complete the latter's subscquent mission) and a subsequent direction of advance (toward the regiment subsequcnt mission). OPFOR subunits normally do not stop on objectives or mission lines and consolidate; thcy continue the attack deeper into the enemy rear.

(2) Combat formation. An MRB or TB usually attacks in two echelons. If it attacks in a single echelon, the commander retains a small reserve, at least a platoon. When two echelons are employed, a normal distance between echelons is 1 to 3 kilometers.

(3) Attack zone. A normal strike sector for an attacking battalion is 400 to 1,000 meters, within an attack zone of up to 3 kilometers. Figure 1-18 shows an example of an MRB deployed for an attack from the march.



NOTES: 1. The battalion is shown attacking in two echelons. Against weak defenses and on secondary axes, one-echelon attacks are common. In a one-echelon attack, one MR platoon would be kept as a reserve, near the battalion headquarters.

2. A platoon of the reinforcing tank company may be kept directly under the battalion commander and deployed near battalion headquarters.

3. When attacking on a secondary sector, the battalion would probably not have a reinforcing artillery battalion, and the mortar battery would probably be deployed on the main axis.

4. The diagram is not to scale, and equipment symbols do not necessarily indicate the precise location of individual equipment.

5. The company headquarters and the antitank section each have one BTR.

Figure 1-18 MRB deployment in the attack (example).

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(4) Conduct of attack. A tank company (TC) attached to a MRB for an attack usually operates as a whole. It leads the attack by the first-echelon motorized rifle companies (MRCs). Under special conditions, such as restrictive terrain or urban combat, tank platoons may be attached to the MRCs. Conversely, an MRC attached to a TB is usually attached by platoon to the first-echelon TCs.

An MRB usually employs its antitank platoon as a whole. The antitank platoon can support the attack by the first echelon, support the commitment of the second echelon or cover the battalion's flanks. The battalion does not create special engineer or chemical reserves because of its limited assets.

In an attack from the march, an MRB or TB often serves as an **advance guard** for the parent regiment (or brigade). Advance guards are normally reinforced battalions, configured very much like FDs. Unlike FDs, however, advance guards do not avoid contact; rather, they seek to defeat all enemy forces encountered on their regiment's/brigade's axis, using only their own combat power. Figures 1-19 and 1-20 illustrate the sequence of attack by a reinforced TB acting as an advance guard. Its goal in fighting through all opposition is to free the regimental/brigade commander from deploying his main body, which would slow the advance.

When enemy defenses are suppressed or weak. the battalion can attack in prebattle formation (company or platoon columns) or march formation, maintaining a rapid tempo. A battalion commander does not necessarily attack an enemy frontally with all three companies. The OPFOR stresses maneuver and the need to attack the enemy's flanks. The battalion commander may employ his companies so that one or two attack from the front and one or two attack from the flanks.

When first-echelon battalions of a first-echelon regiment have achieved a major penetration, they widen the area of penetration for exploitation by second-echelon forces. If they are still able, first-echelon battalions continue the attack into the enemy depth. Battalions revert to prebattle formation and advance rapidly to prevent the enemy from deploying his reserves and organizing a defense in new positions.

(5) Fire support. A battalion attacking in a regiment's first echelon may have up to a battalion of artillery reinforcing it. This artillery is under the operational control of the maneuver battalion commander and can employ direct fire. An MRB's organic fire support is concentrated on the main axis. The mortar battery deploys up to 500 meters behind the first echelon. The antitank platoon moves behind a first-echelon company on the flank most exposed to enemy armor. The air defense platoon moves behind the first-echelon companies and is usually not far from the battalion command observation post (COP).

k. Company. As a rule, an MRC or TC fights as part of an MRB or TB. However, it can also act independently as a reconnaissance detachment, a forward security element or flank security element, a heliborne landing force (raiding detachment), or an enveloping detachment.

(1) Attack zone. A typical OPFOR company attack frontage varies from 400 to 1,000 meters for an MRC and from 400 to 800 meters for a TC. Tank platoons attack on a frontage of 100 to 200 meters, with 50 to 100 meters between vehicles. Motorized rifle platoons attack on a frontage of up to 300 meters; dismounted squads attack on a frontage of up to 50 meters each, with 50 to 100 meters between squads.

(2) Missions. First-echelon companies receive an immediate mission and a subsequent direction of advance (toward the battalion immediate mission). Second-echelon companies receive an immediate mission (usually to work together with first-echelon companies to complete the latter's mission) and a subsequent direction of advance (toward the battalion subsequent mission).

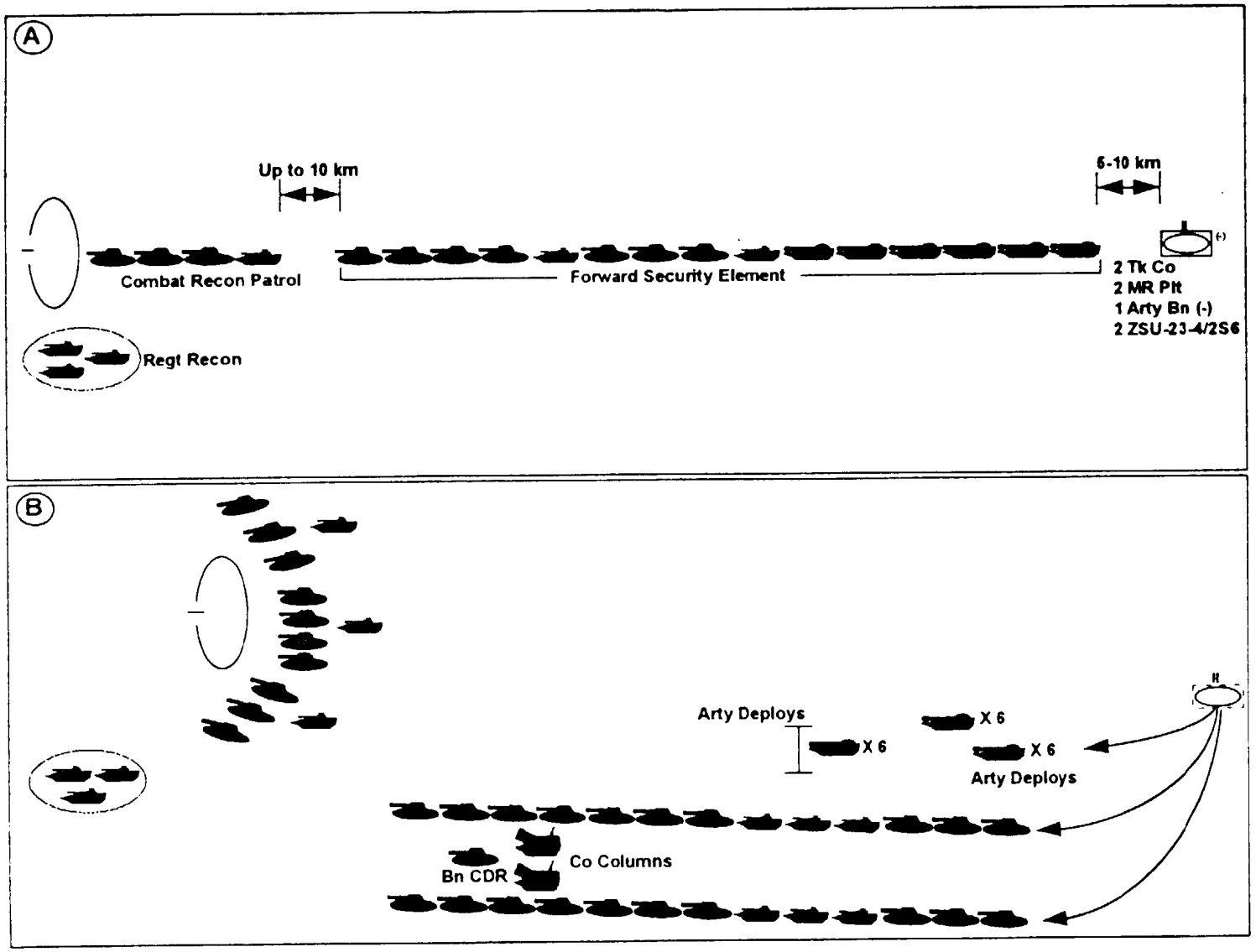

Figure 1-19. Sequence of attack from the march of TB acting as advance guard (part 1).

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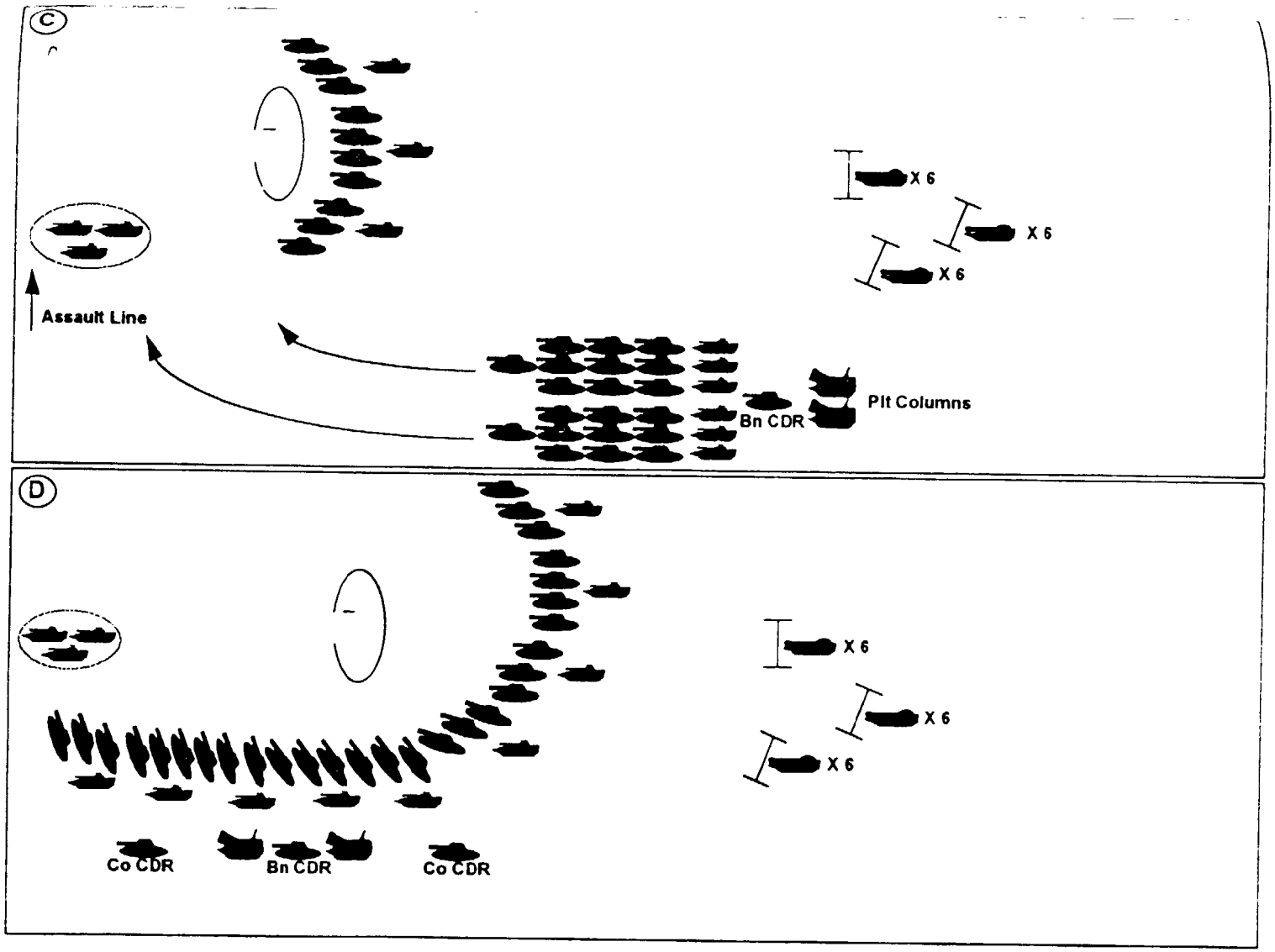

Figure 1-20. Sequence of attack from the march of TB acting as advance guard (part 2).

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There is little maneuver evident in platoon and company tactics. These subunits normally attack on line, in unison. The OPFOR considers this a strength, not a weakness. The battalion commander relies on his companies to act according to battle drills. This allows him more time to concentrate on maneuvering them and coordinating their actions rather than on giving them detailed instructions.

l. Assault against enemy positions. The OPFOR conducts attacks on the enemies first positions by either mounted or dismounted assault. The OPFOR prefers motorized rifle subunits to conduct mounted assaults. Several factors favor use of the mounted assault:

- NBC-contaminated battlefield.
- Open terrain.
- Reduced enemy AT capability.
- Weak enemy defenses.

If an OPFOR commander plans a dismounted assault, he designates a dismount line within 300 to 400 meters from the enemy's forward edge. If possible, the dismount line is on terrain that allows his vehicles to be in defilade. This protects riflemen from machine gun fire and vehicles from antitank fires. Factors that favor use of the dismounted assault are as follows

- Strong enemy AT capability.
- Well-prepared enemy defenses.
- Fords or bridges.
- Obstacles or minefields.
- Rough terrain with no high-speed avenues of attack.
- Need for maximum firepower.

(1) Minefield breaching. The OPFOR breaches minefields with a combination of tanks with mine rollers/plows, line charges, sappers, and possibly fuel-air explosives. Cover for the mine clearing effort includes smoke and intense fire on enemy defensive positions. Ideally, the OPFOR creates one lane per attacking platoon through an obstacle or minefield. One tank per tank platoon normally has a mine plow. In addition, each tank company may have a mine roller/plow. Mobile mine clearing vehicles hurl line charges out to several hundred meters to clear lanes several meters wide. Combat vehicles cover each other's passage through the minefield. If dismounted, riflemen follow in column behind tanks.

(2) Fire Support. The artillery preparation should end just before first-echelon elements reach the enemy's forward positions. Fires normally shift on the maneuver commander's orders when the lead elements are ready to begin the assault on the enemy forward defenses. While fighting through enemy defenses, maneuver elements follow in the path of intense artillery and mortar tires. Fixed-wing air strikes normally engage targets beyond artillery range. Attack helicopters provide direct air support for ground units in contact with the enemy.

(3) Fire and movement. In the assault on the enemy's first positions, there is little scope for fire and movement at the lowest levels. The emphasis is on generating and maintaining momentum, and even the briefest pause is forbidden. As the battle develops in depth, however, greater flexibility is expected. and fire and maneuver tactics may be employed within squads.

m. Action following penetration. The OPFOR expects a defending enemy to attempt rapid assessment of the direction and weight of the main attack; it also expects allocation of all available enemy forces to defeat the attack. Therefore, as the first-echelon battalions move to deeper missions, the regimental commander stays particularly alert for enemy counterattacks.

(1) Action against counterattacks. Since enemy counterattacks are expected, an OPFOR commander must provide for their defeat in every plan of attack. The goal is to defeat the counterattack and maintain the advance of the main body. Antitank assets concentrate on the threatened axis, and at regiment and division level the mobile obstacle detachment can surface-lay a minefield in the enemy's path. The force assigned to defeat the counterattack can fight from hastily occupied firing positions or may conduct a meeting battle.

If the counterattacking force is superior in strength, OPFOR commanders prefer to fight from a firing line on favorable ground, but they would rather fight an equal or weaker enemy in a meeting battle. In the former case, it is important to engage the enemy with artillery and mortars at the longest possible ranges. Every attempt is made to strip the infantry away from the enemy tanks and to destroy each element separately. Once the counterattack has been stopped, the blocking force would try to advance and complete its destruction.

(2) Action on success. When an attack has succeeded, the primary consideration is to keep up the momentum. If the enemy has been destroyed, units reform into march or prebattle formation. If the OPFOR detects an enemy withdrawal, it would send out additional reconnaissance and launch a pursuit.

(3) Action on failure. If the attack fails, there are two options available to the OPFOR commander. First, he can try to bypass the opposition and continue the advance, leaving the enemy to be dealt with by follow-on forces. This possibility assumes that the unit remains a viable fighting force. Alternatively, he could direct his subordinates to defend in contact pending a change in the situation that will enable them to again transition to the offense. In the latter case, he would probably request reinforcement.

1-9. MEETING BATTLE

The OPFOR defines a meeting battle as an encounter between opposing sides both trying to fulfill their mission by offensive action.[3] Figure 1-21 illustrates the circumstances under which a meeting battle may occur-

- When enemy forces are deploying forward.
- When the OPFOR encounters an enemy counterattack.
- When the OPFOR develops the attack into the depths of the enemy's tactical zone.
- During a pursuit.

The meeting battle is the basic form of offense used to meet and destroy enemy tactical reserves. In the defense, a meeting battle may occur during the conduct of a counterattack against an attacking enemy force.

The following conditions and requirements characterize meeting battles:

- Continuous and intense combat to seize and maintain the initiative.
- Rapid troop deployment from march or prebattle formation to battle formation.
- Rapid and sharp situation changes.
- Development of battle on a wide frontage with open flanks and great emphasis on maneuver.
- Speedy decision making and bold action to allow an inferior force to defeat a superior one.

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[3] Meeting battle is the tactical term. At the operational level, the OPFOR calls this type offense a meeting engagement

- premium on deploying and firing first.
- Initiative and creativity by battalion, company, and platoon commanders.

The goals of the meeting battle are to destroy the enemy force and to continue developing the offensive. The side that seizes the initiative first through rapid deployment into battle or prebattle formations and through delivery of indirect and direct fires is most likely to win even in the face of superior enemy forces. For the OPFOR commander, the correct decision is to take the initative and execute a battle formation drill that will destroy, the enemy first.

a. Characteristics. In the OPFOR view, the chief characteristics of the meeting battle are-

- Both sides are attacking from the march, leading to a close-quarter battle in which speed and surprise are the crucial factors.
- There is an intense struggle to seize the initiative, with each side trying to impose its will through offensive action.
- The battle is one of maneuver, with both sides accepting open flanks and gaps in their deployment as the action spreads over a wide area. Since neither side enjoys the advantage of having chosen and prepared the ground, everything is to be gained from bold maneuver.
- For most or all of the time, the situation remains fluid and obscure. Intelligence is limited and dates rapidly. Commanders cannot always wait until the situation is clear, but should attack vigorously into the gaps and flanks of the enemy deployment.
- Given that there may be sudden and dramatic developments, special reserves and, in particular, antitank reserves are needed to meet the unexpected.
- Only a commitment to the offensive ensures that most of the surprises happen to the enemy.
- The time available for decision making and deployment is limited. Victory goes to the side that attacks first and builds up its combat power in the decisive area fastest. Thus, there is a premium on simple deployment drills.
- Meeting battles are expected to be decisive. The defeated side, outflanked and penetrated deeply from the front, with no prepared positions to fall back on, should find it difficult to go over to the defensive or withdraw. His force may very well cease to exist as a coherent combat grouping.

b. Planmng. The OPFOR does not look upon the meeting battle as a purely chance occurrence. It trains commanders to anticipate such a battle, to identify a likely point of contact, to choose advantageous terrain, and to take the initiative. The OPFOR believes that the side that aggressively seizes the initiative with fire and maneuver wins the meeting battle. Figure 1-22 lists the phases of the meeting battle and the tasks the OPFOR associates with each element. The commander anticipating a meeting battle must consider the following factors in his planning and decisionmaking:

- Continuous and thorough reconnaissance from his assets and the correct interpretation and use of reconnaissance information furnished from higher levels.
- The requirement for speed in his troop control procedures and the making and transmitting of decisions.
- Anticipation of enemy air and artillery. strikes, and using that information in gaining fire superiority.
- Achievement of the initiative through immediately responsive deployment of maneuver forces.
- Adequate flank and rear security.

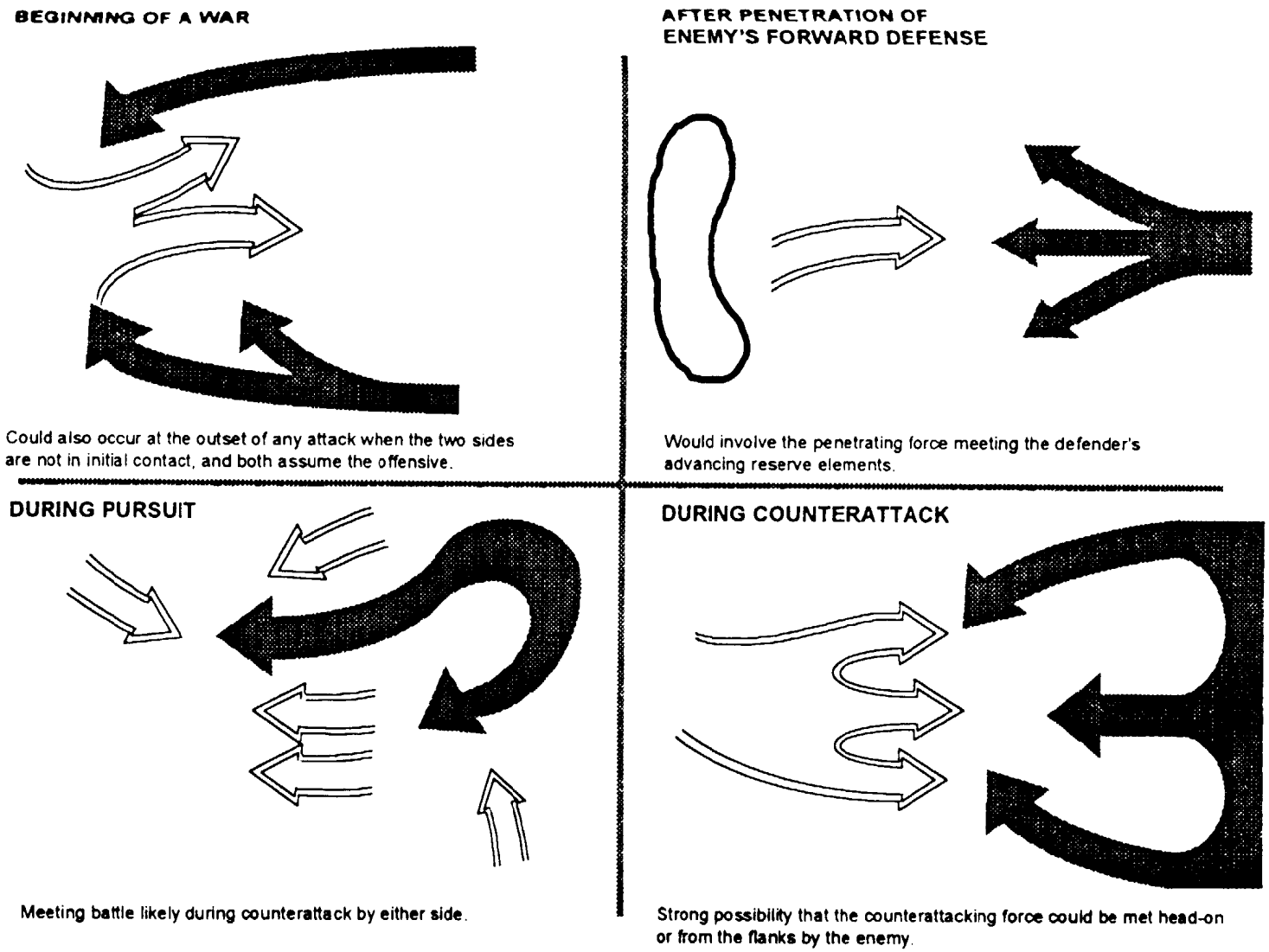

Figure. 1-21. Circumstances under which a meeting battle may occur.

Phase	Element in March	Basic task	Actions on contact
Initial Phase	Reconnaissance patrols and groups	Obtain data on enemy disposition and terrain along main routes of advance.	● Disengage when possible. ● Report and/or continuously monitor the situation. ● Bypass enemy, continue to penetrate enemy positions, particularly nuclear-capable and high-precision weapon systems ●In favorable conditions (or out of neccessity). may attack advancing subunits, take prisoners, disorganize/disrupt enemy forces, and destroy enemy nuclear and high-precision weapons and systems.
	Forward Detachmcnt	Seizc key terrain to facilitate the advance of the main body. May conduct raids en route to objective against key targets (nuclear and high-precision weapon systems, C'I centers)	●Avoids contact as much as possible, moving rapidly to its objective. ● If necessary, conducts meeting battles like a battalion acting as an advance guard.
	Advance guard	Move along route of main body to ensure uninterrupted advance of main body, overcoming enemy seurity/ reconnaissance force and obstacles.	●Reports enemy contact/disruption ● FSE deploys and attempts to overcome enemy force based information from CRP(s). ● If the FSE is not able to overcome the enemy, it assumcs a defensive overwatch position to support maneuver of main body of advance guard. ● Main body of advance guard attempts a close envelopment or double envelopment to defeat the enemy unless his force is overwhelming in size. ● If successful, subunits reform and resume march or initiate pursuit. ● If unsuccessful. subunits hold positions/block enemy/ continue attacking to support the subsequent maneuver and attack of the main body of the parent unit.
Actions of main body	Main body	Deploy rapidly for the attack an defeat of the enemy. generally from the flanks.	●Based on information From forward elements, commander maneuvers his forces and attempts to envelop. ● Subunits march rapidly to assigned sectors and deploy in prebattle/battle formations as needed to assault enemy forces.
Conclusion	Main body	Develop the attach into the depths of the enemy rear	● If enemy withdraw, it initiates pursuit. ● If it decisively defeats the enemy, it resumes direction of march and overall mission. ● If it does not defeat the enemy, it continues to develop the attack and holds postions aggressively until higher headquarters can conduct its maneuver. ● If it is unsuccessful. it may go over to the defense in the course of the offense.

Figure 1-22 Phases of meeting battle

c. Division. An MRD or TD enters a meeting battle in march formation with a zone of attack 15 to 25 kilometers wide. Within the division zone of attack are two, or possibly three, regimental axes. Subunits of the division reconnaissance and REC battalion scout all potential routes of advance for the division's lcad regiments. The division's FD uses data from these reconnaissance subunits to seize terrain critical to the division's advance, To reach this objective at the earliest opportunity, the FD normally avoids combat en route to its objective. It fights only to seize its key terrain objective.

d. Brigade. For an IMRB, the meeting battle is the primary form of offensive combat. Compared to a regiment, the IMRB can advance on a broader frontage. and the commander has more options of how to take on the approaching enemy force. He can maneuver in depth and engage the enemy column at much greater distance.

e. Regiment. Regiments are the maneuver units of a division; they actually fight meeting battles, The first-echelon regiments of the division main body conduct the meeting battle using their advance guard/main body march formation.

f. Battalion. A motorized rifle or tank battalion is most likely to become involved in a meeting battle when acting as the advance guard of a regiment. (See figure 1-23.) This is also true of a battalion acting independently as a forward detachment of a division or regiment. When performing such a role, a motorized rifle battalion is normally reinforced with tank, artillery, and engineer troops and possibly with antitank, air defense, or chemical protection elements. A tank battalion would be similarly reinforced, but with motorized rifle troops rather than tank or antitank elements.

Deploying through the successive stages of prebattle formation (company to platoon columns) is the norm, but there are occasions when a battalion's main body could conduct a simultaneous flank turn in the direction of the enemy, thus transitioning from battalion column directly into battle formation. Such a maneuver would require adequate terrain and an overriding need to develop combat power quickly.

g. Company. OPFOR maneuver companies tight meeting battles and defending enemies in the same manner. A motorized rifle or tank company normally lights as part of a battalion. However, it can also act independently as a forward security element of an advance guard or a forward detachment, or when its parent regiment has sent it out as a forward security, element instead of an advance guard. A company in such a role receives reinforcements from NBC reconnaissance, artillery, and a subunit of the other maneuver arm (tank or motorized rifle). It still executes one or more drill-like maneuvers to bring its combat power to bear on the encountered enemy.

h. Sequence of meeting battle. As the OPFOR regiment advances in tactical march formation. the action in a meeting battle usually follows the sequence described below. (See also figure 1-19.)

(1) *Location and identification of approaching enemy.* First reports of an approaching enemy and the possibility of a meeting battle are likely, to come from higher headquarters. An OPFOR commander's first reaction is to direct his reconnaissance assets to provide more detail of the enemy's location, movements. and intentions. For example, a regiment might be warned of the approach of an enemy force by its parent division and send out additional independent reconnaissancc patrols to contact the enemy. Similarly, a battalion might learn of an advancing enemy battalion from its regimental command post, and the commander could decide to send out at least an additional combat reconnaissance patrol. In the worse case, a battalion acting as an advance guard or forward detachment might learn of an approaching enemy from a contact report from its own combat reconnaissance patrol or forward patrol

(2) *Decision to initiate meeting battle.* A commander may be ordered to undertake a meeting battle or may have to make the decision on his own Initiative. Meeting battles often arise in the course of a march, and a commander who has not considered the possibility of a meeting battle in planning his march formation can be at a disadvantage. The mission to conduct a meeting battle can be received while waiting in an assembly area, allowing time for more detailed planning.

(3) *Selection of point of contact* The OPFOR commander assesses the locations of the opposing forces and their speed of advance. Using a nomogram or a mathematical calculation he can plot the line of likely contact on his map. From a map assessment, he determines the location of the key terrain in that area. It is vital to seize this ground before the enemy. and this task may be allocated to leading march security elements.

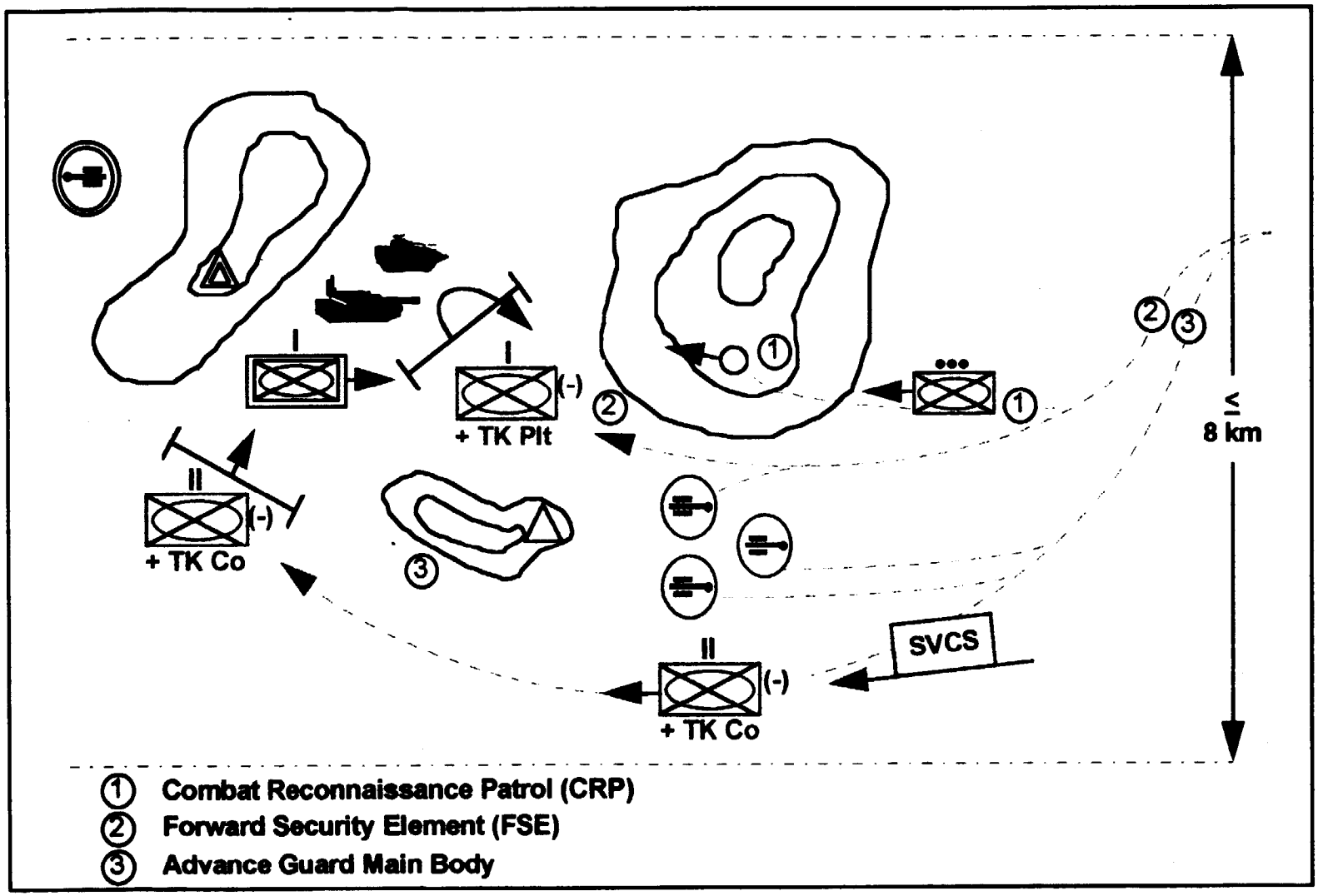

Figure 1-23. Reinforced MRB as advance guard in meeting battle.

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(4) *Engagement of enemy*. The intention is to assault the enemy's main body and destroy or disorganize his force. Speed of actions and shock are paramount. The forward security element can occupy a blocking position and begin engaging the approaching enemy. Attached artillery deploys as rapidly as possible and opens fire. Antitank elements should be well forward in the march formation, so that they may join in the task of engaging the enemy force.

The commander is likely to join his forward element to judge the situation for himself. The main body deploys to the selected assault position without delay and strikes the enemy's main body as it advances to support its forward elements. Ideally, the enemy is assaulted while he is on the move or deploying, preferably from a flank or even both flanks. If flank attacks are impossible, a frontal attack can be launched, but the commander would still try to introduce an element of surprise. The main body should act together; this ensures an effective attack is delivered. A mounted attack is the rule in meeting battles.

(5) *Facing a superior enemy.* The attacking force is not expected to attain the degree of force superiority over the enemy that is required in attacks against a defending enemy. A force that has parity with the enemy, or is even slightly inferior, can achieve victory if it holds the initiative. If the enemy is significantly superior in strength, or preempts the OPFOR unit in seizing the key ground, the OPFOR tries to deploy on a favorable firing line and stop the enemy advance. It then continues to disrupt the enemy's deployments, trying to create favorable conditions for a senior commander to introduce new forces into the battle,

i. Initial phase. The initial phase of the meeting battle is that period of combat from the time of enemy encounter by the leading element--normally, a combat reconnaissance patrol (CRP) or forward patrol up to the commitment into battle of the main body. Elements of the advance guard carry out the initial phase. The subsequent employment of the regimental main body depends on the outcome of the initial phase.

With current reconnaissance capabilities, the initial enemy encounter by the CRP or forward patrol should not be a complete surprise. The use of reconnaissance reporting permits employment of long-range fires. both artillery and air, to inflict damage on the enemy and to delay his advance

As the forward elements of the advance guard encounter the enemy, the regimental commander is at or near the head of the regimental main body, 20 to 30 kilometers to the rear of the advance guard. This calculated spacing should give the commander about two hours to plan and execute his battle.

(1) *Combat reconnaissance patrol.* If it makes the initial contact with the enemy, the CRP immediately reports the contact to advance guard commander. It then attempts to penetrate to enemy main force, bypassing his advance elements. It may also perform chemical and engineer reconnaissance, if specialized troops are attached. Most importantly, the CRP collects information on the enemy to expedite the commander's decision.

(2) *Forward security element.* The forward security element (FSE) movies in column up to IO kilometers behind the CRP and 3 to 5 kilometers behind its own forward patrols. Based on information from those patrols, it advances at maximum speed and engages the enemy with all weapons. It develops the fight, attempting to seize and hold a position until the advance guard main body arrives.

(3) *Advance guard main body.* At the time of initial contact, the advance guard main body is moving in march column 5 to 10 kilometers behind the FSE. The advance guard commander defines the plan for engagement and issues orders to the commanders of the CRP and FSE. Then, the main body commander moves forward, with the commander of the reinforcing artillery subunit, at maximum speed to an observation point. After assessing the situation, he issues orders for the deployment of the advance guard main body and launches the attack.

j. Regimental (brigade) main body. While the advance guard engages the enemy, the regimental (or brigade) main body continues its forward movement. The deployment of the main body depends on the outcome of advance guard action. The advance guard action could have the following outcomes:

- The attack by FSE/advance guard is successful.
- The advance guard achieves no immediate succcss.
- The enemy forces deny further offensive action by advance guard.
- The advance guard is unable to hold the enemy.

(Figure 1-24 illustrates these possible outcomes.)

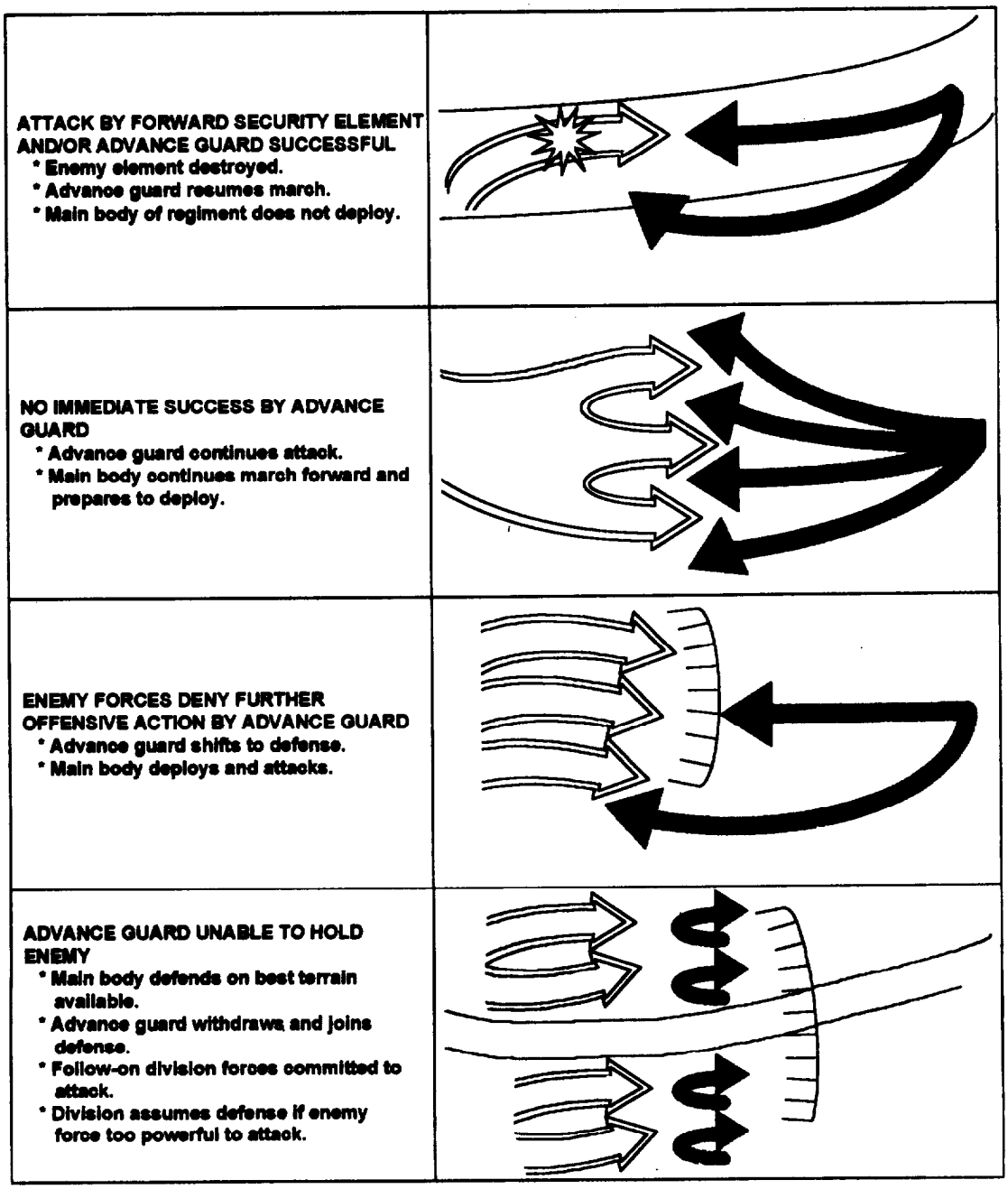

Figure 1-24, Possible outcomes of advance guard action in meeting battle.

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When the outcomes of the advance guard action require deployment of the main body. the regiment (or brigade) commander decides what form of maneuver to use. The *close and deep envelopments* are the favored forms of maneuver. The OPFOR prefers to attack the enemy's flank or rear whenever possible; however, when maneuver is not possible, a frontal attack may be necessary.

The time available to execute a maneuver can be a major factor in the commander's selection of a form of maneuver. Space could be the controlling factor for an envelopment. Terrain must be trafficable, providing covered or concealed routes for the enveloping force, open ground for deployment, and good fields of fire. The area adjacent to the original route of advance must allow for the concealed or unimpeded maneuver of the advance guard. Envelopment by a regimental (or brigade) main body requires enough space for the concealed maneuver of one or more battalions to a point along the flank of the enemy force.

k. Forward detachments. Tactical maneuver forces are particularly useful for securing maneuver in the open, fluid environment of a meeting battle. An OPFOR regiment (or brigade) that has engaged lead enemy elements with its advance guard may send out *forward detachment* from its main body--

- To block enemy follow-on forces.
- To assist in fixing/blocking the lead enemy force.
- To ensure favorable conditions for the commitment of the rest of the main body.

The *division forward detachment* is extremely important in the meeting battle. If the enemy defenses are weak, the FD can penetrate the enemy,'s combat formation. avoiding contact. The detachment then seizes key terrain to hinder the enemy's maneuver or aid the movement of friendly forces. If the enemy defenses arc strong, another force may have to effect the penetration for the FD. When a lead regiment has committed an FD in the course of maneuvering its main body,. the division FD already, in the enemy rear might change missions. It could either join in the attack on the flanks or rear of the enemy force, or become a reserve, depending on the situation. In the rapidly changing conditions of a meeting bank. an OPFOR commander may assign and withdraw FD missions on short notice. as appropriate for the conditions at the time.

l. Division follow-on forces. The preceding description of the meeting battle focused on the actions of a brigade or a firstt-echelon maneuver regiment Unless the regiment has received an independent mission to pursue or to act as an FD, it marches as part of a division force. Consequently. the development of battle might require the commitment of the follow-on elements of the division. The procedures arc essentially the same as those discussed in the example of the lead regiment

Before his lead regiment is fully, engaged. the division commander's forward command post is near the head of the division main body, most likely, with the next following regiment. He monitors the action of the lead regiment and. after its commitment, he moves his command group to the best location to control subsequent deployments. The employment of division follow-on forces depends on the progress of the initial actions of the lead regiment. Figure 1-25 illustrates the employment of division follow-on forces under the various possible conditions

m. Subsequent action. The division's actions in a meeting battle appear here generally as a sequential, front-to-rear unfolding of combat. Many *other possibilities* can occur as formations move on a fluid battlefield and encounter one another. The meeting battle may not always unfold in the sequence of encounters by reconnaissance elements, advance guards. and main bodies, nor does it always begin with a head-to-head meeting. Whatever the patterns and conditions. the OPFOR formula for a successful meeting battle requires surprise, rapid and decisive maneuver. and concentrated preemptive fires against the enemy. Fire support is vital to the successful outcome of a meeting battle

SUCCESSFUL ATTACK BY LEAD REGIMENT

- Led regiment exploits success or resumes march.
- Follow-on regiment(s) initiate pursuit or resume march on one or multiple routes.
- Depending on the assigned mission and degree of success, regiments could consolidate positions and await orders, or resume march in new direction.

ENEMY GOES OVER TO DEFENSE

- Lead regiment attacks enemy defenses and, by fixing enemy force, facilitates commiment of division follow-on forces.
- Depending on availability of maneuver space and size of enemy force, follow-on regiment(s) flank and envelop the enemy.
- If follow-on forces succeed, exploitation or pursuit occurs.
- Alternatively, OPFOR may consolidate and regroup, then resume the march.

LEAD REGIMENT MUST GO OVER TO DEFENSE

- Lead regiment holds pending arrival of follow-on forces.
- Follow-on forces counterattack and attempt to envelope enemy; if successful, subsequent actions are as above.
- If follow-on forces are insufficient to mount counterattack. they may augment the defense.

LEAD REGIMENT UNABLE TO CONTAIN ENEMY ATTACK

- Follow-on forces conduct counterattack. If successful and enemy withdraws, exploitation or pursuit begins; alternatively, they may consolidate, regroup, and resume the attack.
- Follow-on forces establish defensive positions to or through which the lead regiment withdraws.
- Division holds pending commitment of army/army corps follow-on forces.

Figure 1-25. Employment of division follow-on forces.

The meeting battle ends when one side is destroyed or adopts a new tactic, such as establishing a defensive position or withdrawing. An attack from a position in direct contact could then be mounted or, depending upon the situation, a pursuit or withdrawal.

1-10. PURSUIT

The OPFOR defines *pursuit* as a type of offensive conducted against a *withdrawing enemy.* The goal of a pursuit is to complete the destruction of, or capture the enemy force. The OPFOR considers pursuit as one of the principal forms of exploitation. Exploitation is the development of the attack into the tactical and operational depth of the enemy. Pursuit slows down the enemy force. permitting the maneuver of forces and fire to complete the destruction of the enemy.

Pursuit offers swift and deep movements of forces to strike the enemy's most vulnerable areas. The basic requirements for a successful pursuit include planning and organization, detection of withdrawal, and maintenance

of high tempo An enemy can withdraw as a result of a meeting battle, or after a penetration of his defensive position. An enemy may deliberately withdraw when threatened with envelopment, making a redistribution of forces, attempting to draw the OPFOR into an engagement area (kill zone) or withdrawing for safety before launching a nuclear strike.

At the first indication of an enemy withdrawal, the OPFOR expects the commander at any level to initiate the pursuit without waiting for orders from higher headquarters This helps ensure that the OPFOR does not allow the enemy to break contact and to conduct an orderly withdrawal. The scale of a pursuit depends on the size of the forces involved. Even though a lower-level commander can make the decision to initiate a pursuit, he must inform his higher commander that he is doing so.

a. Planning. An OPFOR commander anticipates an enemy withdrawal when he plans his offensive. His tentative planning for pursuit is part of the initial attack plan. The amount of detail that the commander includes in such planning depends on the anticipated actions of the enemy, the combat formation of attacking troops. and the amount of planning time available. He must also consider:

- Possible enemy routes of withdrawal
- The scheme of maneuver.
- Availability and condition of pursuit routes.
- Forces available.
- critical terrain features.
- The use of forward detachments and helibome landing forces.
- Allocation of nuclear weapons and delivery systems, high-precision weapons and aviation support.
- Combat support and combat service support resources.

To detect enemy withdrawal, the commander relies on active reconnaissance, an understanding of enemy tactics, and knowledge of the current tactical situation. He must pay special attention to the following signs of enemy preparation for withdrawal:

- Increased movement to the rear, especially artillery and reserves.
- Increased fires in individual sectors of the line of contact,
- Conduct of heavy fire concentrations in separate areas, not in accord with the developing situation.

These concentrations may occur at a time when there appears to be a general reduction of fires

- Intensified reconnaissance.
- Preparations for demolition and/or destruction of facilities. installations, and equipment
- Limited local counterattacks.

OPFOR doctrine stresses that the decisive defeat of an enemy force can only be achieved by vigorous and continuous exploitation of tactical advantages. All OPFOR commanders have a duty to maintain contact and are expected to take up the pursuit without further orders

b. Forms.

Once the OPFOR initiates pursuit, its SUCCESS depends on the maintenance of a high rate of advance with continuous application of force. The forms of pursuit are *frontal, parallel,* and *combination frontal* and *parallel.* The OPFOR prefers the combination form and considers it to be the most effective. Figure 1-26 outlines the forms of OPFOR pursuit.

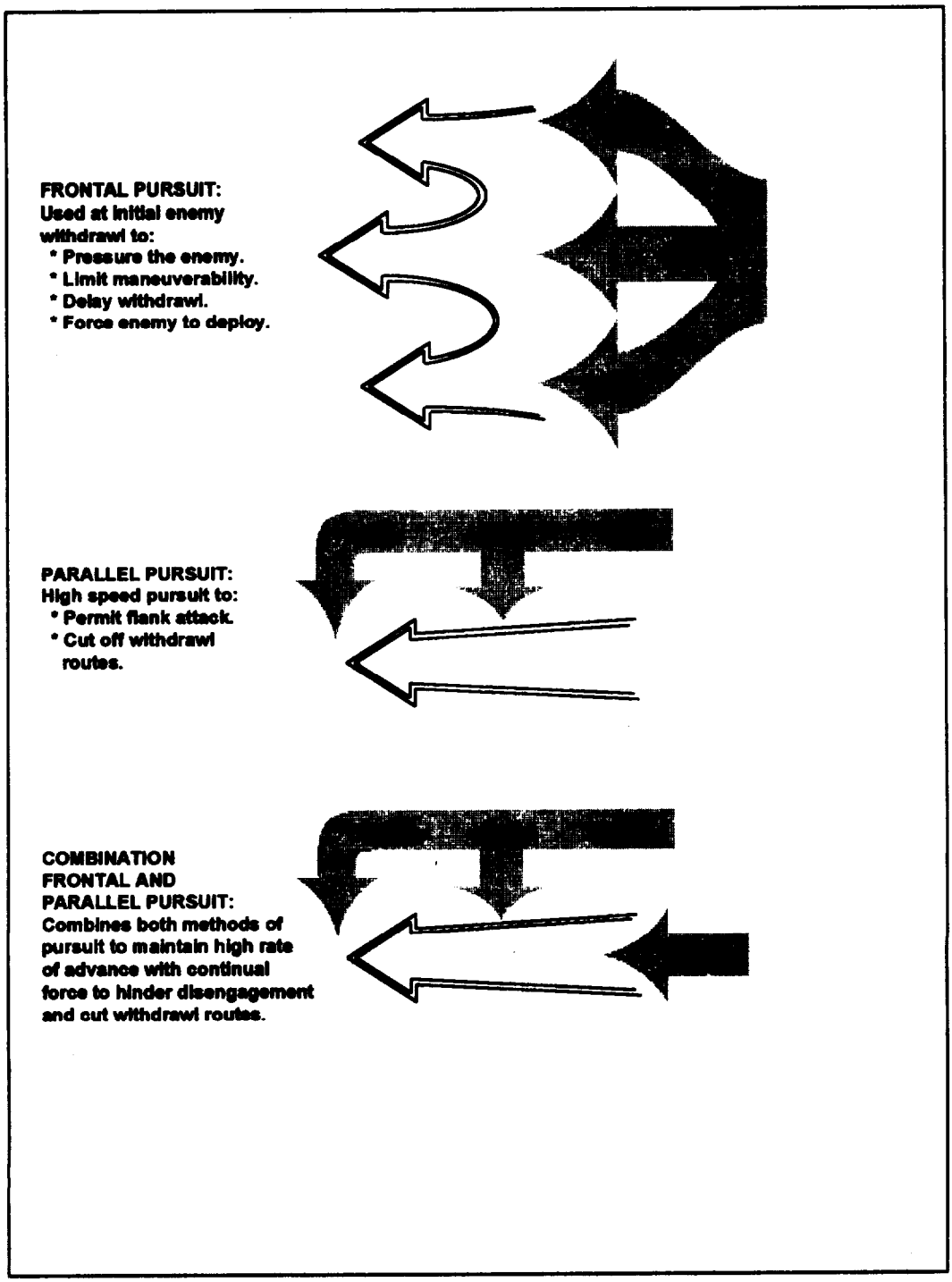

Figure 1-26. Forms ofpursuit.

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(1) *Frontal.* A *frontal pursuit* is an attack that the pursuing force conducts along the same withdrawal route that the enemy is using. The frontal pursuit can help fix the enemy force by delaying enemy withdrawal, defeating the enemy's rear covering force and maintaining constant pressure on the enemy, restricting his ability to disengage and to move away rapidly in march formation.

(2) *Parallel.* A *parallel pursuit* involves forces moving rapidly in march, or prebattle, for-matron along one or two axes parallel to the retreating enemy. Their goal is to outdistance the enemy and to conduct a close/deep envelopment, decisively encircling and attacking the retreating enemy force. Using a parallel axis permits the pursuing force to move rapidly in march formation to overtake the enemy force and surprise it with an enveloping maneuver. A parallel pursuit alone risks the loss of contact and the race with the enemy since reduced pressure permits the enemy to reorganize and regroup.

(3) *Combination.* The most decisive results in the pursuit come from combining the frontal and parallel forms. In the combination pursuit, part of the attacking first echelon initiates a frontal pursuit immediately upon discover-y of the enemy's withdrawal-

- To destroy the enemy's covering force.
- To slow the enemy.
- To maintain constant pressure.
- To support the main envelopment.

Other forces initiate a parallel pursuit on one or two axes of advance to overtake and envelop the enemy, Figure 1-27 depicts the combination of pursuit methods against a withdrawing enemy.

c. *Conduct.* The OPFOR believes that a timely and correct decision to initiate pursuit is critical to success. If the enemy is able to begin an undetected withdrawal, he can avoid the constant pressure that would disrupt his action. The OPFOR expects the enemy to attempt withdrawal at an advantageous time, usually at night; so it takes timely actions to maintain contact. Artillery fire and air strikes harass and disrupt the enemy's withdrawal. In the initial phase, tank and motorized rifle pursuit forces take up routes parallel to enemy withdrawal routes to help establish the combination frontal and parallel method of pursuit.

Forces in contact initiate frontal pursuit immediately on detection of withdrawal, moving in whatever formation they are in at the moment. As the situation permits, they reform into prebattle or march formation, deploying into battle formation only when necessary. The actions of the frontal pursuit force should facilitate the commitment of a parallel pursuit force, which is preferably tank-heavy. The parallel force, with security elements in the lead, also uses march or prebattle formations unless deployment for the attack is necessary,

The commander employs the maximum number of available combat troops in a pursuit, The pursuit occurs across a wide zone, up to 30 kilometers for a division. The commander retains the tactical options to converge on the most important axis or to redirect the effort on a new axis. This flexibility is also necessary when engaging advancing enemy reserves or counterattack forces.

Centralized planning and decentralized execution characterize the pursuit. Preservation of control is a primary concern in such a fast-moving situation. At the same time, the OPFOR attempts to disrupt the enemy's command and control as an integral part of destructive pursuit. It achieves continuity in its own control by-

- Designating pursuit axes, phase lines, and objectives
- Fixing times for completion of specific missions.

- Altering missions as subsequent developments require.
- Using two command groups. The commander would be at an observation post behind the leading combat elements. The second group, headed by the chief of staff, would be with the main body.
- Designating the phase lines from which the artillery must prepare to fire by specified times.

(1) *Reconnaissance.* The reconnaissance effort during a pursuit is intensive, concentrating on enemy withdrawal routes. As the pursuit develops, reconnaissance elements provide information on the disposition of retreating enemy formations and on the forward movement of his reserves. Because of the potential depth of the operation, aerial reconnaissance may be the primary means of identifying significant threats to pursuit forces. This intelligence is vital at the stage when a pursuit force faces the risk of becoming over extended, and it can be the basis for termination of the pursuit.

(2) *Forward detachments.* Before or during the course of pursuit, commanders may designate FDs to move ahead of the main pursuit. They may direct the detachments to operate independently to outdistance withdrawing enemy forces These detachments avoid combat until they reach their assigned objective area. Their missions may include-

- Concurrent reconnaissance reporting.
- Seizure of critical points on withdrawal routes.
- Destruction of the enemy's means of nuclear attack.
- Linkup with tactical airborne or heliborne landings.

Heliborne or airborne forces may receive missions similar to those described for FDs. Vertical envelopment permits operations much deeper into enemy territory.

FDs of regimental or reinforced battalion strength can be widely used. In a division, up to a regiment might be sent out as an FD ahead of the main body. Regiments might send out reinforced battalions ahead on each pursuit axis. FDs have a limited combat power and seek to avoid becoming heavily engaged, pressing on to their designated objectives

(3) *Main forces.* Main forces advance in tactical march formation, moving as fast as possible. After a penetration, gaps between divisions and regiments are likely to increase, and each is given an axis of pursuit rather than a zone of advance. OPFOR commanders are very conscious of the vulnerability of their open flanks in this situation and, therefore, deploy antitank reserves and mobile obstacle detachments to the flanks. Regiments act with considerable tactical independence, and the division commander does not expect a uniform rate of advance on all axes Some units may launch a pursuit while others are still engaged in a penetration battle, or meeting enemy counterattacks

d. Division. Figure 1-27 illustrates an example of a combination pursuit conducted by a maneuver division. In this case, a lead regiment of the division executes a frontal pursuit. Other regiments then move on a parallel axis to envelop the enemy. When possible, these regiments move in march formation to facilitate rapid movement, The division can dispatch a forward detachment to seize key terrain or occupy a blocking position. It could also conduct a heliborne landing (or request an airborne landing), but this requires support from higher headquarters. When the situation is favorable, the pursuing forces conduct coordinated attacks in prebattle or battle formation against the enemy force. After it has captured, annihilated, or fixed the enemy force, the bulk of the division resumes the march formation continuing to develop the attack.

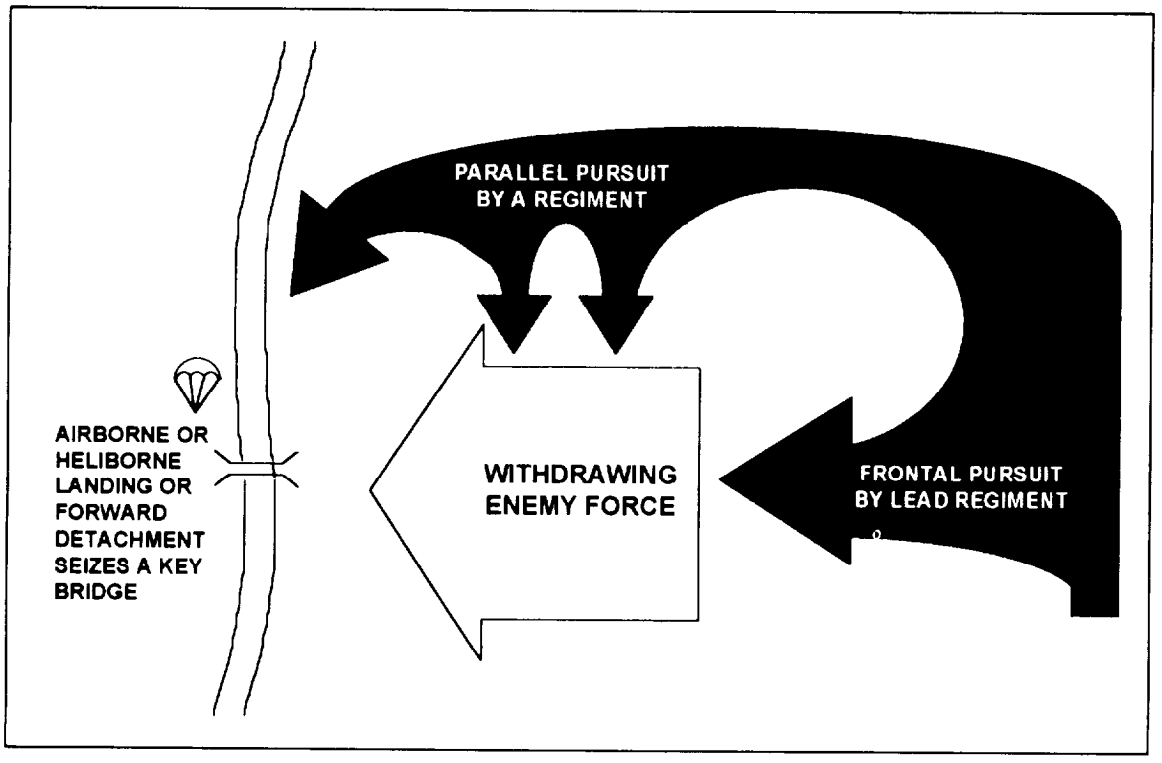


Figure 1-27. Division conducting combination pursuit (example).

e. Brigade. An IMRE would conduct a pursuit in much the same manner as a division. The main difference would be the scope.

f. Regiment. The regiment may participate in the pursuit independently or as part of a division pursuit. The regimental pursuit would follow the divisional pattern on a smaller scale. Elements of the advance guard could conduct a frontal pursuit while the battalions of the main body march on one or two parallel routes. The regiment is not likely to dispatch a heliborne landing force; however, it may attempt a deep envelopment with a forward detachment to block the enemy withdrawal.

g. Battalion. The battalion generally acts as part of a regiment or division in the pursuit. There may be an occasion, however, where it would independently pursue a relatively small enemy force.

h. Fire Support. When an OPFOR commander initiates pursuit, he often forms the parallel pursuit force from uncommitted second-echelon or reserve elements. These are not normally marching with any fire support assets other than those organic to them. The commander must redistribute the fire support he had assigned to support the preceding combat actions.

(1) Artillery. The commander of a maneuver regiment may decentralize the control of artillery to his maneuver battalions. During pursuit, artillery missions include tire on columns and concentrations at road junctions, defiles, bridges, and crossings. They also include the repulse of enemy counterattacks, destruction or delay of enemy reserves, and destruction of enemy means of artillery support.

(2) *Air support.* Air support complements other fire support assets in the destruction and disorganization of the retreating enemy, particularly mobile targets. The situation during the course of a pursuit may become obscure. Air reconnaissance is an important factor in ensuring the success of the pursuit. It can determine-

- The beginning of the withdrawal of rear area forces.
- The composition of withdrawing forces and direction of movement
- The composition and direction of reserve forces moving forward.
- The nature of obstacles and intermediate defensive positions.

i. Other support. Obstacle-clearing groups, movement support detachments (MSDs) and MODs provided by engineer troops are instrumental in sustaining the rate of advance. In the initial phase, an MSD prepares the line of march and supports lateral dispersion of units transitioning into the attack and the commitment of the second echelon or reserve. First-echelon maneuver battalions, supported by engineers, form obstacle-clearing groups to breach enemy minefields and other obstacles during the attack. In the course of the pursuit, an MSD's mission is to provide bridging and road repairs. The MOD's mission in the pursuit is to block withdrawal routes of bypassed units with mines. demolitions, and obstacles.

Requirements for fuel and maintenance increase with maximum commitment of forces. Priority of logistics goes to those units having the greatest success. The depth of pursuit depends on the capability for logistics support.

j. Termination of pursuit. An OPFOR commander does not terminate pursuit on his own initiative, but only on the order of the next higher commander Conditions under which the OPFOR may terminate pursuit include the following:

- The pursuing force has captured, destroyed, or fixed the enemy for follow-on forces.
- The pursuing force has outdistanced its logistics support
- The pursuing force has overextended itself and IS in danger of being cut off by the enemy
- The pursuing force no longer has the advantage.

CHAPTER 2
ARMOR AND MECHANIZED DEFENSE

2-1. THE DEFENSE

OPFOR rnilitary doctrine considers defense the basic combat operation required to repel possible invasion inside the State border. The OPFOR sees the offensive as the decisive form of military maneuver, but recognizes conducting the defense is, at times, a necessity on the combined arms battlefield. Under these conditions, the goal for defense is to repel an attack by enemy forces. inflict maximum losses on him, hold important terrain and objectives creating favorable conditions for launching an attack.

Despite its preference for the offensive. the OPFOR accepts that there are times when it may have to conduct defensive operations. Such circumstances might occur-

- Before the outbreak of a war. or in its early stages to cover the mobilization and deployment of the main forces
- In the face of overwhelming superior enemy forces
- During an offensive, to economize force in one sector. and achieve superiority on the main axis,
- To defeat a counterattack during an OPFOR offensive
- To consolidate lines or positions that forward detachments or other advanced forces have captured to facilitate the advance of the main forces
- When a unit or formation has suffered serious losses and can no longer conduct offensive actions

2-2. NATURE OF THE DEFENSE

The OPFOR can assume the defense on a forced or deliberate basis when an attack is impossible or inadvisable The defense can be prepared in advance or organized in the course of battle, in the absence of direct contact or in contact with the enemy. During the defense, the OPFOR attempts to engage an attacking enemy when he is moving forward and taking up an attack positron. or when he is assaulting the forward edge. However, the OPFOR may also conduct defensive battle to hold defensive positions and lines deeper in its own rear

As a rule, defending forces arc numerically inferior to an attacking enemy. So the possibility of repelling an attack is determined by the ability of commanders and troops to exploit the advantages of being on the defense. Whenever possible, defending subunits choose the place of battle so they can USC the terrain's protective features. To accomplish this, the OPFOR selects defensive positions behind natural obstacles and in other terrain sectors that provide a good field of view and fire toward the enemy to maximum range of available weapons. OPFOR commanders tend to avoid defending from "commanding terrain." since they, could become easy targets for massed enemy fires. nuclear strikes. or high-precision weapons.

This chapter is adapted from TRADOC Pamphlets 350-16, chapter 6.

The OPFOR defenders also have long-range artillery, aircraft, and missiles capable of delivering preemptive strikes against the most important enemy targets, on routes of advance and on lines of deployment for an assault. These strikes can inflict considerable personnel and equipment losses on the enemy even before he arrives at the line of contact. The OPFOR realizes that, with the introduction of high-precision weapons, the traditional distinctions between offense and defense have become blurred.

The OPFOR's use of various obstacles, especially minefields, is an important advantage in the defense. They reduce the rate of forward movement, deployment, and assault of enemy tanks and mechanized vehicles. They increase the effectiveness of both antitank weapons and artillery fire by canalizing attacking enemy forces into fire sacks and ambushes and/or preventing their escape from them. Mines and obstacles are also placed to protect the flanks of OPFOR positions. The OPFOR may attempt last-minute laying of minefields (by minelaying vehicles, helicopters, or MRLs). As a rule, minefields and obstacles are covered with direct and indirect fires.

The OPFOR defense can be positional or mobile. The form used depends on the mission received. the combat power of the two sides, the nature of the terrain, and the extent of engineer preparation.

Positional defense is the basic form It meets the requirements of most defensive missions and inflicts maximum losses on the enemy. Its goal is to hold multiple subunit strongpoints within a defended area for a specified time. The OPFOR would use positional defense on most axes, but especially on those where it can least afford to lose ground.

In other cases, the OPFOR could use *mobile defense* to inflict losses on the enemy and gain time. It can preserve forces by fighting successive defensive battles at pre-planned lines at various depths in its defenses. Thus, mobile defense involves giving ground and abandoning some areas. It can be used to repel an enemy invasion or when defending a security zone.

2-3. PRINCIPLES OF DEFENSE

The general principles of OPFOR defensive tactics are as follows:

a. Tenacity. An OPFOR unit ordered to hold a position must do so with the utmost stubbornness. It can give ground or withdraw only with the permission of the commander who gave it the original mission to defend.

b. Aggressiveness. The more aggressive the defense, the more stable it is. OPFOR commanders at all levels seize every opportunity to take local offensive actions during a defensive battle.

c. Maneuver. Tenacity in defense does not mean immobility. The OPFOR can maneuver forces and firepower from less threatened sectors to meet the enemy's main attack and disrupt his concept of battle. It can maneuver in front of the main defense and counterattack

d. Firepower. The OPFOR deploys all available fire support assets at maximum ranges. It attempts to start engaging the attacker's forces from the earliest opportunity. Given the range of modem artillery. it is possible to concentrate the tires of dispersed weaponry on key sectors and so break up the enemy attack.

e. Concealment andsurprise. The OPFOR places emphasis on concealment of its own forces in order to mislead the enemy about the disposition of the defense. It also uses ambushes, obstacles, and any other tactical means available to surprise the enemy.

2-4. TRANSITION TO DEFENSE

To the OPFOR conditions are understood to mean the entire diversity of the tactical situation in which subunits shift to a defense. These conditions depend on the enemy combat capabilities, nature of terrain, and weather conditions. The enemy is the determining factor dictating the method of shifting to the defense. Depending on enemy proximity and the nature of the battle, an OPFOR unit or subunit can shift to a defense before battle occurs or in the course of battle, and under conditions of direct contact or in the absence of contact. Figure 2-1 illustrates the two methods of transitioning to the defense, using a reinforced MRB in the examples.

a. In direct contact. The OPFOR transition to he defense *in direct contact* occurs most often in the course of an attack. It can also occur when repelling counterattacks, consolidating captured lines and securing flanks of attacking troops, or with an unsuccessful outcome of a meeting battle. (See the section on "Defense in Direct Contact" later in this chapter for more detail.) The defense is organized under enemy fire in a short time period, not always on a favorable line, and often on a line with no engineer preparation. The OPFOR considers this transition to the defense as the most difficult

When transitioning to the defense in direct contact. the OPFOR faces a situation in which subunits may have to perform several missions simultaneously-

- Conduct a firelight against a defending or counterattacking enemy.
- Repel strikes by air.
- Take measures to recover from enemy use of nuclear. chemical. high-precision weapons and fire strikes.
- Realign the combat formation
- Replenish ammunition, fuel and other supplies

The situation is complicated by a shortage of personnel. combat equipment and supplies due to losses suffered during the attack.

b. Out of direct contact. The OPFOR can assume a defense before the battle begins, *out of direct contact* with the enemy. (See the section on "Defense in Direct Contact" later in this chapter for more detail.) The main difference between defense in contact and defense out of contact is the absence of a *security zone* in the former, Under the latter condition, the transition to a defense is made to cover areas of possible contact, in order to repel a possible enemy strike or support the deployment of additional forces. Transition to a defense can occur where an attack is inadvisable or impossible for a number of reasons. Follow-on forces shift to a defense in the absence of contact.

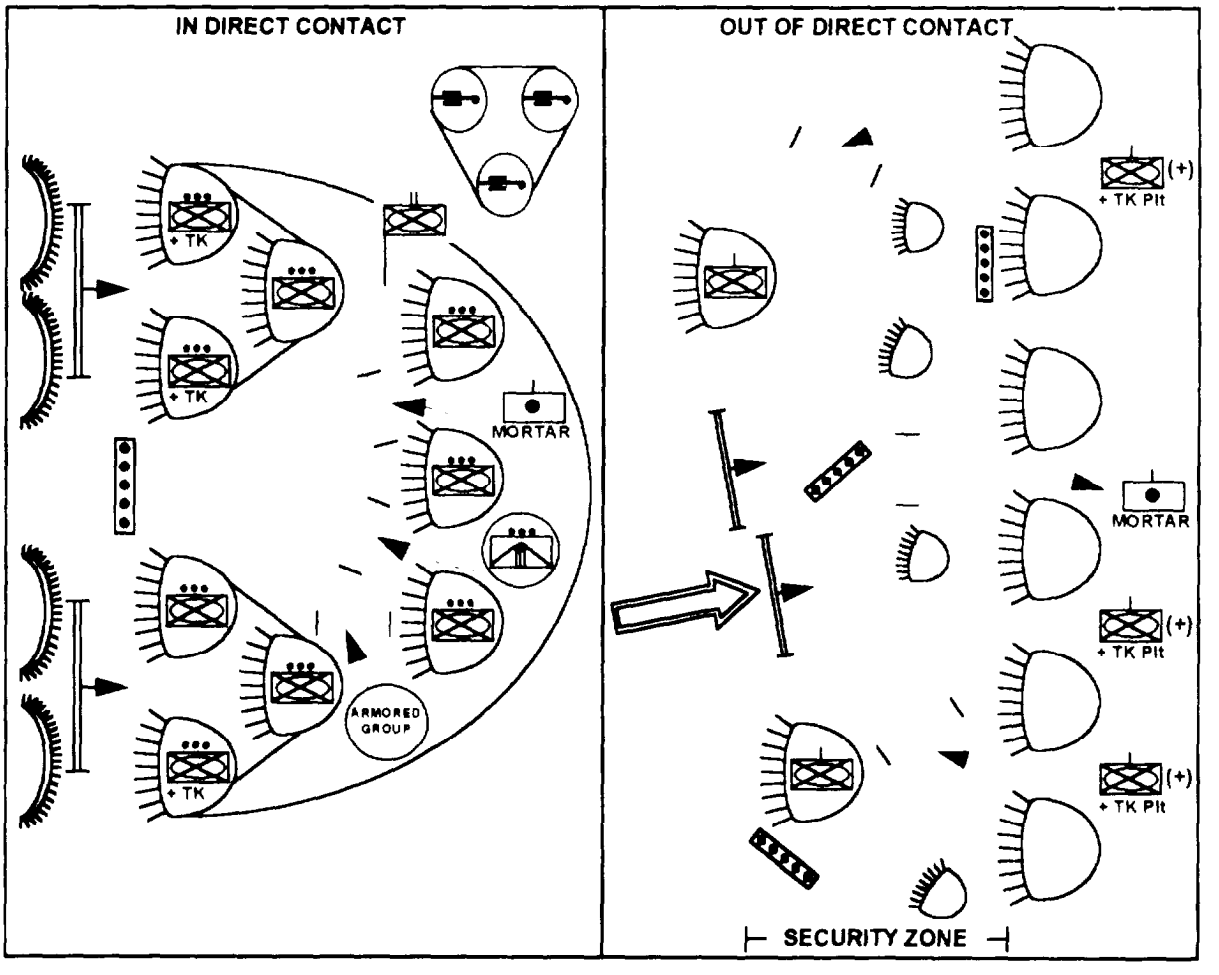


Figure 2-1. Transition to the defense (reinforced MRB).

2-5. DECISION-MAKING PROCESS

In the defense, the commander's decision is based on essentially the same process as in the offense. The main elements of this process are as follows:

a. Analyzing the mission. In organizing and establishing the defensive battle, an OPFOR commander first analyzes the mission. He must understand the concept of his higher commander to determine his mission, timetable, and support from higher headquarters. The commander, or his chief of staff, then determines the time available for planning. The commander issues the necessary instructions to his staff and subordinate commanders and continues with his estimate of the situation.

b. Estimate of situation. Once the commander has analyzed the mission, he conducts his estimate of the situation. In the defense, much of this estimate IS accomplished using the map. If time permits, the commander conducts personal reconnaissance to help him reach a decision. First. he examines the enemy situation, since the enemy and his weapons systems influence the mix of weapons the OPFOR must use and the preparation needed. Whether or not the enemy is in contact determines the form the defense takes. Next, the commander examines

his forces available, including attached and supporting troops and the mission and disposition of adjacent friendly units.

The OPFOR commander then examines the terrain and vegetation. He determines the effect of terrain on preparation of the defense and the movement of the enemy. He looks at how natural obstacles can be enhanced to lend stability to the defense. Finally, the commander examines other factors such as the possible use of chemical, nuclear and high-precision weapons or smoke.

c. Commander's concept. On the basis of the mission analysis, the time available, and the estimate of the situation, the OPFOR commander determines his concept of the defensive battle. The result of this will be the commander's battle plan for the defense. The following paragraphs discuss factors included in his concept.

(1) *Combatformation.* The commander decides how to organize the organic, attached, and supporting forces. He determines how he will situate them throughout the depth of the defense and how he will employ them.

(2) *Critical terrain.* The commander selects the terrain upon which the stability of the defense depends. When possible, he uses manmade obstacles to enhance the terrain. Desirable terrain can canalize and impede and even stop the enemy's movement. It also provides friendly troops with the advantage of fire and maneuver.

(3) *Destruction of enemy.* The commander determines how best to engage the enemy. He plans long- and short-range fires and fire sacks. He plans to defeat the enemy as far forward as possible, continuing through the depths of the defense.

(4) *Direction of counterattack.* The commander plans how best to employ his counterattack forces. He chooses initial positions for them, as well as counterattack routes and deployment lines for the destruction of enemy forces caught in fire sacks.

(5) *Priorities of engineer work.* Given sufficient time, the priority of engineer support goes first to the forward defenses within the main defensive belt and then to the security zone, if one is established. From there, support goes backward through the defensive belt. Within the security zone, the priority of work goes first to the initial positions far forward, then back to the forward positions located nearest the main defenses.

d. Combat orders. The commander issues a combat order containing information about the enemy. the mission the concept of the operation, the location of the forward edge, and the positions his subordinates must occupy. Further detail (in the division commander's combat order, for example) specities-

- For first-echelon regiments: reinforcements, missions, defense sectors, and axes and areas for concentrating main efforts.

- For second-echelon regiments: reinforcements, missions, and either defense sectors or axes and deployment lines for counterattacks.

- The time by which units must occupy their positions.

- Coordination requirements

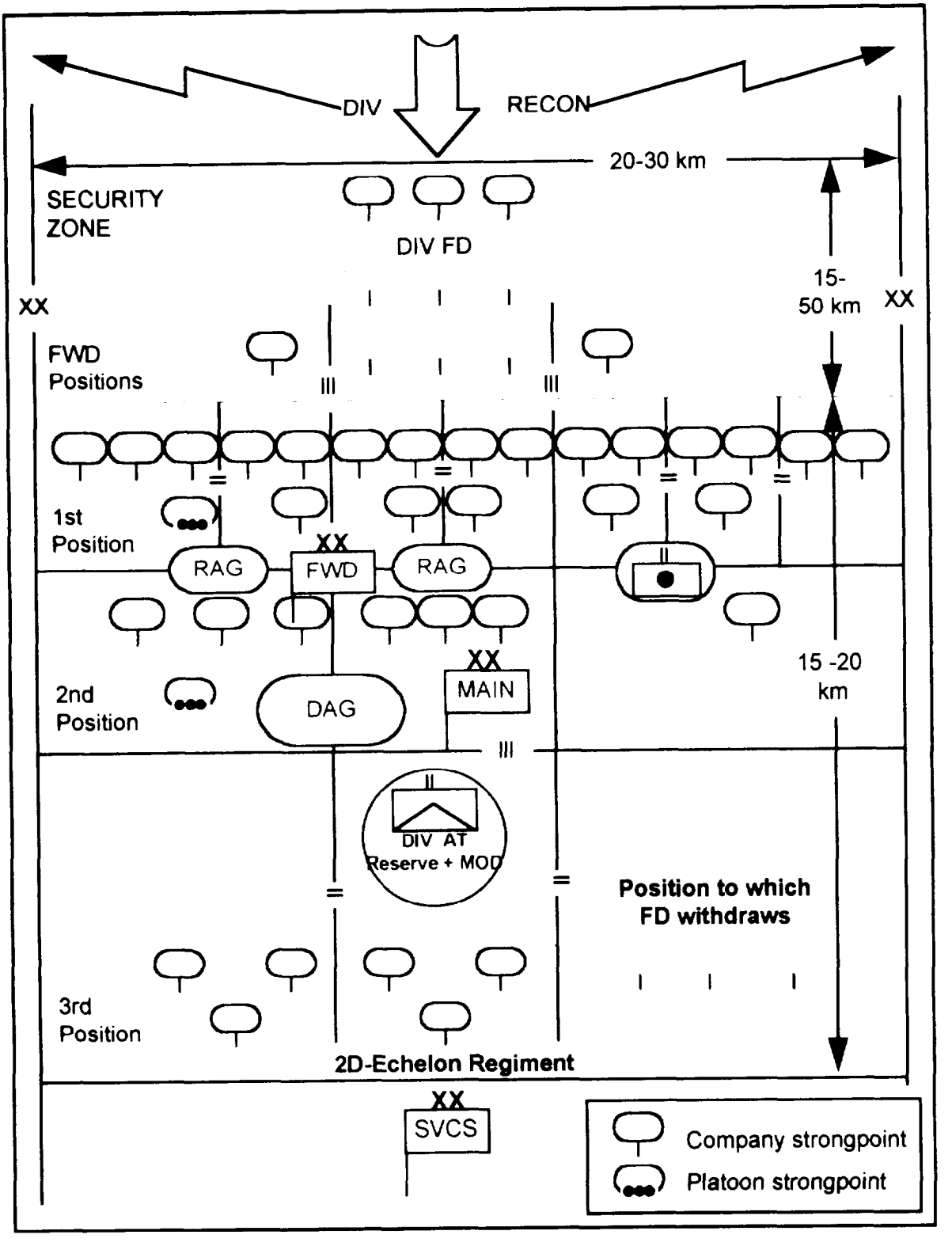


Figure 2-2. MRD in the defense (example)

2-6. ORGANIZATION OF DEFENSE

OPFOR commanders follow the tenets of stability and activeness in planning the defense. The OPFOR achieves stability by the integration and coordination of all combat assets to defend against nuclear, chemical and high-precision weapons, artillery, tanks, aviation, and air insertions. Activeness in modem combined arms defense involves decisive counterattacks, maneuver of forces and fire, continuous operations, and artillery counter preparations. Frontages and depths vary considerably with the circumstances in which defense is adopted. the importance of the sector, the strength of the defending forces, and the assessment of the threat. Figure 2-2 depicts one example of an MRD deployed in the defense. (See figure 2-3 below for another example.)

a. Areas of responsibility. In OPFOR terminology, a division or a brigade defends a *zone,* a regiment defends a sector, and a battalion an area. Companies and platoons defend *strongpoints.* The division defense is constructed from a series of *positions* deployed in depth. Each position consists of company strongpoints with integrated obstacles and a fire plan. The *first position* is the most strongly held. Positions in depth may be only partially occupied, but they provide a Line to which forces defending further forward can be ordered to withdraw.

b. Combat security forces. The type of combat security force the OPFOR uses in the defense depends on the circumstances in which defense is adopted and the level of command involved. A combat security force is not always deployed particularly when a unit goes over to the defensive in contact with the enemy. In this case, the defending force may have to occupy a line while in action and hold it to the best of its ability. Figure 2-3 shows the types of combat security forces the OPFOR can employ. The uses of the various types are described below.

Mission	Deployed When Defending		Command Level			Distance in Front of Forward
	In Contact	Out of Contact	Directed By	Deploying Force	Fighting the Battle	
Forward Detachment in Security Zone	No	Yes	Army/ Army Corps/ Division	Division	Battalion	15 to 50 km
Forward Position	Yes	Yes	Division	Regiment	Company/ Company Plus	4 to 6 km
Combat Security Outpost	No	Yes	Regiment	Battalion	Platoon/ Platoon Plus	2 to 3 km

Figure 2-3. Types of combat security forces.

(1) *Security Zone.* A *security zone* is established when the defense is organized *out of contact* with the enemy. The decision to establish a security zone is made at the army/army corps or division level. It is deployed in front of the first-echelon divisions. If the depth of the army's deployment permits, second-echelon divisions can prepare a security zone between the rear of the first-echelon divisions and their own frontline. The division commander is responsible for the detailed organization of the security zone within his zone of defense. The security zone extends across the entire zone of responsibility. If established by the army/army corps, the security zone boundaries do not necessarily conform to lateral division boundaries. If established by division. however,

it would match the division boundaries. The zone is at least 15 kilometers deep and can extend to a depth of 50 kilometers. It is at least far enough forward to prevent aimed direct fire from being placed on the main defensive belt; however, it normally extends beyond that

When transitioning to the defense *in direct contact*. the OPFOR may not have a security zone. However, it could still have a *covering zone*. This is a smaller, shallower version of the security zone, at least sufficient to keep the defense out of enemy direct observation and fire.

The security force's size and composition depend on the factors mentioned earlier. The security force deploys on the best terrain to inflict maximum damage on the attacking enemy and uses obstacles and barriers extensively. Prior to being faced with envelopment or decisive engagement, the forces in the security zone attempt to withdraw under cover of artillery fire returning to the main defensive belt.

(2) *Forward Positions*. When the separation between the OPFOR and the enemy is not great enough for creating a security zone (or covering zone), *forward positions* are used. They are also used when a security zone is formed, to imitate the main defense, cause the enemy to conduct premature artillery preparations, and aid in the disengagement of the forward detachment. These forward positions are deployed between 4 to 6 kilometers in front of the first position. Forward positions are ordered by division but planned in detail by the first-echelon regiments A forward position is created by each first-echelon regiment and manned by a company from the regiment's second echelon. The primary mission of a forward position is to mislead the enemy about the location of the forward edge of the defense. Forward positions arc sometimes created when going over to the defensive in contact with the enemy. They are held on the line of contact while the main body of the regiment withdraws to a more favorable line for defense.

(3) *Combat securiry outpost*. If forward positions are not deployed, first-echelon battalions can be ordered to organize *combat security outposts.* These outposts consist of a platoon positioned 2 to 3 kilometers in front of the forward edge of the defense. on the most threatened axis. The combat security outpost's primary mission is to prevent enemy reconnaissance and small groups from penetrating to the battalion's position. It is supported by the battalion's mortars and any available artillery and direct fires from the forward edge of the defense. Once the enemy begins to deploy for a major attack, the outpost withdraws, generally under cover of smoke and artillery fire.

c. Main defensive belt. The *main defensive belt* relies on defense in depth. The basic element of *the main defensive belt* is the battalion defensive area. The battalion defensive area comprises company and platoon strongpoints. The OPFOR establishes strongpoints to protect terrain key to the defense. The subunits occupying the strongpoints prepare a defense with alternate and supplementary firing positions for all weapons. These subunits plan their fires to be mutually supporting and plan for the use of fire sacks. Using wire as the primary means of communication, the subunits construct a network of communication trenches linking weapon positions with supply troop control, and fighting positions. Subunits dig in vehicles and other equipment to the maximum extent possible, including provision of overhead protection

(1) *Echelons*. As in the offensive, the OPFOR can deploy in *one or* two *echelons*. A two-echelon deployment is usual on the most threatened axis and a single-echelon deployment is used more on secondary axes. Single-echelon formations are also adopted when the defender has suffered heavy casualties. Within a formation, different levels of command can use different echelonment schemes For example, even if a division deploys in two echelons, one or more of its regiments could be in a single-echelon formation; a regiment could deploy in a single echelon, while its subordinate battalions could have two A second-echelon regiment or battalion may or may not have the same number of echelons as the first-echelon counterpart.

In the defense, second echelons can be used for the following tasks:

- Hold their main position against an enemy penetration.
- Reinforce first-echelon units where the enemy threatens a penetration.
- Maneuver to firing lines or to launch counterattacks.
- Destroy enemy airborne or heliborne assaults

(2) *Combined arms reserve.* Forces deployed in one echelon retain a *combined arms reserve.* Unlike the offensive combat formation, a division or regiment in the defense can form both a second echelon and a small reserve. For a division, the reserve normally consists of at least a battalion, for a regiment a company, and for a battalion a platoon. However, a commander can retain a larger reserve--one-third or more of his combat power-if the situation warrants; this is especially common in very vague situations. Combined arms reserves can be given counterattack or counter-penetration missions, or they can be used to fill gaps in the defense.

(3) *Antitank reserves.* Antitank reserves are kept at every level from battalion upwards. They are generally built around an antitank subunit and operate in conjunction with a mobile obstacle detachment.

(4) *Antilanding reserves.* Because the OPFOR perceives a threat from airborne/airmobile troops, commanders commonly designate an *antilanding reserve.* A commander can designate part of the force's second echelon for this role or create a specific reserve. If the commander designates an antilanding reserve, he usually would not form a combined arms reserve

(5) *Special reserves.* In addition to their mobile obstacle detachments, regiments, brigades, and divisions try to retain an **engineer reserve** of earthmoving and obstacle-creating equipment. This reserve can be deployed to strengthen defenses on a particularly threatened axis during the course of the battle. Divisions, brigades, and regiments may also retain a *chemical protection reserve.*

(6) *Armored groups.* Armored groups are formed at *battalion or company level* as additional maneuver assets in the defense. They are temporary, composite groupings of tanks and BMPs/BTRs, usually formed after the infantry has dismounted in a defensive strongpoint. After the basic work of preparing the position has been completed, the armored group is organized by withdrawing vehicles from their firing positions in strongpoints and concentrating them in concealed areas in dead space. woods or other cover behind the first-echelon positions. A company armored group can consist of one to two tanks and two to four BMPs/BTRs (or vice versa), commander by an assistant platoon leader. A battalion armored group can have two to four tanks and four to six BMPs/BTRs (or vice versa), commanded by a platoon leader from a second-echelon company. Armored group vehicles may be taken from first-or second-echelon subunits that are defending positions away from the most threatened axis.

As a rule, tanks and BMPs/BTRs designated for use in an armored group initially deploy in the strongpoints of their parent platoons, and their crews carry out preparations for the defense according to their platoon leader's plan.

Once formed, armored groups are assigned two or three firing lines to cover gaps between strongpoints and to the flanks. After moving to the concealed area, the fighting vehicle crews camouflage the armored group. and

may establish dummy vehicles or false heat sources away from the position. They prepare routes to the firing lines and firing positions on them, as well as routes back to their original platoon strongpoints.

Once the battle begins, the armored group remains in its concealed area until ordered to occupy a firing line to block a threatened penetration. On receiving the order to move, the armored group forms into a column and moves forward swiftly, often under cover of smoke, to occupy firing positions. Ail or part of the armored group may be returned to its original platoon strongpoints, if that seems a more effective way to use the vehicles. Together with first-echelon subunits, the armored group concentrates fire against the bulk of tanks and other armored vehicles to inflict damage on the enemy ahead of the OPFOR forward edge. Subsequently, it can reposition (possibly to a flank) to destroy enemy forces that penetrate the defense or threaten to envelop the company strongpoint/battalion defensive area.

(7) *Ambushes.* Ambushes are a features of any OPFOR defense. In size, they vary from individual weapon systems to a platoon and are generally formed from second-echelon subunits. Tanks, BMPs, antitank weapons, and helicopters are all used for ambushes. They are sited on likely axes of approach, on flanks and in gaps and between first- and second-echelon positions. The goal of the ambush is to reduce the enemy's strength before he reaches the main position and to slow his advance.

2-7. SYSTEM OF FIRE

An OPFOR commander constructs a *system of fire* bringing all available fires on the enemy as he approaches. The system provides continuous fire at the forward edge, and the flanks, and within the defensive position In addition, it should allow rapid concentration of fire against threatened axes. The goal is to engage the attacker with a growing intensity of fire as he approaches the forward edge of the defense. It begins with artillery concentrations and barrages on likely axes, choke points and deployment lines. The OPFOR recognizes two fundamental considerations of fires in the defense: depth and dispersion.

a. Depth. The first consideration is that the defense must provide sufficient depth for effective fire and maneuver. OPFOR weapons engage the enemy at as great a range as possible, providing an increasing volume of fire as he nears the defensive positions. Fire support weapons are placed in position to shift fires against threatened axes within the defensive position. To counterattack enemy penetrations, units occupying positions in the depth of the defense must be able to maneuver and concentrate rapidly.

b. Dispersion. Conducting a defense under the threat of enemy employment of high-precision weapons and weapons of mass destruction demands dispersion. *Platoon and company strongpoints* are the basis of the OPFOR defense. Increased dispersion between these strongpoints leads to problems in fire support coordination and troop control. An excessively dispersed defense does not offer sufficient resistance to accomplish defensive missions. As a result, the OPFOR cautions its commanders not to achieve dispersion at the price of effective defense.

OPFOR commanders may seek to achieve dispersion within company and platoon strongpoints, tank and BMP/BTR firing lines, and the like. This could be done by increasing intervals between individual vehicles, laterally and in depth, to 200 meters or more when confronted by modem enemy artillery-delivered high-precision and area saturation munitions

c. Fire sacks. The OPFOR ties all available obstacles into an integrated fire plan designed to destroy advancing enemy forces totally. This concept is called the *fire sack.* Fire sacks may be created by a maneuver of fire, weapons, and subunits in the course of a defensive battle. They may be either within the main defenses or forward of them in a security zone, but are always contained physically within the defensive positions. A fire

sack can be up to 1,000 meters in depth, with a frontage of 900 to 1,000 meters when created ahead of the forward edge or 500 to 800 meters when created within the main defenses. They are designed to be entered at cost.

The subunits covering a fire sack first bring direct fire weapons to bear as the enemy advances and then seal the penetration with indirect fires. The defenders attempt to trap the enemy, stop his advance, blunt his penetration, and then destroy him through fires and counterattacks.

The fire plan of direct and indirect fires ties into the existing strongpoints and obstacles. The OPFOR commander carefully chooses suitable natural obstacles that lend stability to the defensive positions. The addition of manmade obstacles, including minefields, enhances these natural obstacles. These obstacles on the edges of the fire sack serve to contain the enemy force, preventing his escape. The defenses in the fire sack are well camouflaged throughout and include the use of dummy weapons and positions to deceive the enemy as to the true locations of the strongpoints. Reserves carefully locate where they can counterattack effectively once the fires have been lifted.

2-8. ARTILLERY SUPPORT

In the defense, as in the offense, the fire planner utilizes all available fire support to carry out the commander's plan. Emphasis is on the integration of artillery, air, and antitank assets into an overall defensive fire plan. Several variations of the plan are produced, based on the approach and deployment options open to the enemy. Maneuvering massed firepower against key groupings at the crucial moment is critical. Primary artillery missions in defense are *counterpreparatory fires* and *fires against an attacking enemy*. Other defensive artillery missions include support of forces in the security zone and at forward positions, as well as covering gaps and open flanks with fire.

a. Counterpreparatory fires. Counterpreparatory fires are rocket, missile, artillery, and air strikes intended to annihilate or neutralize enemy forces preparing to attack. These fires should surprise the enemy and should start before the enemy’s preparation fires. The OPFOR would use all appropriate fire support to reduce the effectiveness of the enemy’s preparatory fires.

b. Fires against attacking enemy. Fires against an attacking enemy consist of four phases. They are as follows:

- Phase I: fire interdiction of advancing enemy troops.
- Phase Ii: fire to repel the enemy attack
- Phase III: fire support of defending troops
- Phase IV: fire destruction of the enemy during a counterattack

(1) *Phase I.* Fire interdiction of advancing enemy troops occurs when the enemy deploys into battalion columns. It continues until the enemy forces reach their line of attack. This may include preplanned fires on choke points, massed fires by artillery groups, and MRLs emplacing minefields. Attached or supporting artillery units may occupy temporary fire positions beyond the forward edge of defense; this allows them to strike the enemy at greater depth and support forward detachments and combat security outposts.

If the defensive is adopted when already in contact with the enemy, this phase would concentrate on the enemy's second echelon. Throughout the period before the enemy's attack, the emphasis is on denying the enemy good target intelligence for his preparation. Much of the artillery remains silent until needed to repel a major attack, and batteries used prior to the main enemy attack fire from temporary fire positions or can be used as roving batteries to confuse enemy intelligence.

(2) *Phase II.* Fire to repel the enemy attack is the most important phase of defensive artillery fire. The phase begins when the enemy crosses the be of attack and ends when he enters the first defensive positions. The OPFOR creates a zone of continuous fires in front of the defense. Fire to repel the enemy attack coordinates artillery fire with antitank weapons and all weapons of the maneuver units. The OPFOR employs fire on individual targets, fire concentrations, and barrage fires.

(3) *Phase III.* Fire support of defending troops occurs when artillery attacks enemy forces that have penetrated the defensive positions of first-echelon on maneuver battalions. Its purpose is to destroy the penetrating enemy and to prevent him from developing the attack further into friendly positions or flanks.

(4) *Phase IV.* Fire destruction of the enemy during counterattack is the fifth, and last, phase. Its goals are to recover lost positions, to destroy the penetrating enemy forces, and to capture a line to launch offensive operations. This phase has three subphases for artillery support

- Support for the forward movement of troops.
- Preparation of the counterattack
- Support of the counterattack.

A successful counterattack requires a stabilized line of contact. This line allows enough time for the second-echelon forces to advance and deploy for the counterattack.

2-9. ENGINEER PREPARATION

The OPFOR divides preparation of the defense into three stages: the first and second stages, and further work. Obstacles, both natural and manmade, play an important role in the defense.

a. First stage. Barbed wire and other obstacles are emplaced in front of the position and fields of view and fire are cleared. Pits or trenches are prepared at the primary position of each fighting vehicle, crew-served weapon, and individual infantryman. Command observation posts and medical posts are dug in. The OPFOR normally allows 5 to 6 hours for this work

b. Second stage. During the second stage of preparation of the position, fighting vehicles and weapons systems are provided with alternate fire positions. Trenches are linked until they run continuously across the battalion frontage. Communication trenches are prepared. The OPFOR allows an additional 5 to 6 hours for this phase.

c. Further preparation. Further preparation of the position includes improvement of existing trenches and positions, laying further obstacles and preparation of firing lines and routes for antitank reserves and second echelons. Communication trenches may be improved for use as fighting trenches. Dummy positions are prepared in intervals between strongpoints.

d. Obstacles. The OPFOR's intent is for obstacles to break up the enemy's assault, strip away the infantry's supporting armor, and force the enemy into areas where concentrated fires of all weapons can destroy him. Obstacles placed within the main defensive area confine the enemy within fire sacks and support the employment of the reserves. Minefields can be emplaced by hand, mobile obstacle detachments with mechanical minelayers, artillery, and rotary- and fixed-wing aircraft.

Natural and manmade obstacles slow, disorganize, and canalize the enemy force, either alone or with preplanned fire concentrations. The OPFOR stresses the use of natural obstacles: lakes, rivers, marshes, escarpments, and densely forested areas. Manmade obstacles may include minefields, antitank ditches, wire entanglements, and abatis. The depth of the obstacle plan depends on the time and engineer resources available.

2-10. ANTITANK DEFENSE

The OPFOR considers the correct employment of antitank (AT) assets essential to the defense. The OPFOR AT defense system comprises the following elements:

- Subunit strongpoints containing well-sited AT weapons.
- Tank ambushes set up throughout the defense
- AT reserves placed to respond to enemy tank penetrations.
- Tanks within the second echelon to bolster the first echelon or to counterattack.
- Mobile obstacle detachments
- Artillery in the direct fire role, in forward positions and from positions in the depths of the defense.
- AT obstacles covered by fire and complementing the maneuver of fires and forces.
- Maneuver by AT forces and weapons

The OPFOR concentrates AT guns and ATGMs by platoon and battery. It plans multilayered crossfires, long-range fires, and fires to the flanks and rear The OPFOR considers cooperation between guns and ATGM systems to be essential for adequate AT defense. An OPFOR commander positions his AT reserve to undertake multiple missions blocking, counterattacking, reinforcing. and providing rear area security.

Attack helicopters mounting rockets and ATGMs provide mobile, quick reaction, AT reserves. The OPFOR emphasizes use of these assets to defeat tank penetrations or flanking maneuvers.

2-11. DEFENSE ASSUMED OUT OF DIRECT CONTACT

When required to defend, the OPFOR prefers to establish a defense when out of direct contact with the enemy. This method of transitioning to the defense offers the OPFOR commander more security and allows him to make better use of the terrain when planning his defense. The primary difference between transitioning to the defense in direct contact with the enemy is the existence of a security zone when out of direct contact. Given time and resources, a defense in direct contact with the enemy can develop into one out of contact with the enemy. This occurs as defensive positions are better prepared in depth and fewer forces are left in contact with the enemy.

a. Division. When a division receives orders to assume the defense, the commander makes his decision based on a map reconnaissance. If time allows he clarifies his mission with a personal reconnaissance on the ground. He determines the following factors:

- Key terrain.
- Enemy avenues of approach and probable main attack axis
- Areas for possible nuclear, chemical and high-precision weapon strikes
- Organization for combat.
- Maneuver requirements.
- Organization of strongpoints
- Probable counterattack axes
- Location of command posts and command observation posts

OPFOR commanders make maximum use of the terrain. They avoid establishing stereotyped patterns that would make enemy templating and targeting easier. A maneuver division typically defends a sector 20 to 30 kilometers in width and 15 to 20 kilometers in depth. The commander organizes the main defensive area in one or two echelons and may create a combined arms reserve.

The first echelon's primary mission is to repel attempted enemy penetrations of the forward defenses. It tries to inflict losses on the enemy, forcing him to concentrate, and canalizing him into fire sacks. The second echelon's primary mission is to stop and destroy enemy penetrations of the forward defenses. It does this by conducting decisive counterattacks. It can also reinforce or replace troops of the first echelon as needed There is no rigid requirement for the composition of echelons Normally, at least two regiments make up the division's first echelon. Figure 2-4 illustrates an *example* of a MRD aligned for the defense.

(1) *Forward detachments.* When assuming the defense out of contact with the enemy, an OPFOR division tights its assigned portion of the security zone. This zone may extend 15 to 50 kilometers forward of the main defensive belt. FDs can be employed in the security zone. along with reconnaissance patrols from the divisional reconnaissance and REC battalion. In the defense, the FD has the mission of delaying, disrupting, or destroying the advancing enemy. A division may employ one or two FDs, up to reinforced battalions in size. Forces for the FD come from the division's second echelon

An FD in the division's portion of the security zone establishes a series of defensive positions sited on enemy main avenues of approach. If the terrain permits. the FD commander positions his companies on a major avenue to provide mutual support Because they must cover a broad frontage, he usually deploys the battalion in a single echelon with a strong combined arms reserve of up to a company'. If there are multiple avenues of approach, he may have to divide the FD to cover them with individual reinforced company positions, He covers gaps or intervening terrain between the company. positions with obstacles, reconnaissance patrols, and tires.

The FD prepares several successive positions. as the terrain and space allow. These positions and the avenues they control receive extensive engineer preparation, including emplacement of obstacles and minefields. Of course, the division commander has to consider the tradeoff in allocating engineer effort. If he allocates more

resources to the security zone; he delays the enemy longer, and gets more time to prepare the main defensive belt. On the other hand, if the- limits the engineer effort in the security zone, he frees assets to prepare the main defensive belt more quickly or extensively.

An FD's initial position is the are at the far edge of the security zone. If possible, it is on a favorable natural line; that is, a natural obstacle or defensible terrain. Subsequent positions to the rear are far enough apart to preclude the enemy from engaging one and then another without displacing his indirect fire weapons. They are close enough to allow the FD to maintain coordinated, continuous fires on the enemy while moving from one to another.

The final position the FD may occupy in the security zone is the, about 4 to 6 kilometers forward of the main defensive belt. Depending on the pressure the FD is receiving from the attacking enemy force, it may occupy a prepared forward position, or it may pass through the forward position. In the latter case, its disengagement and rearward passage of lines may be covered by companies from first-echelon regiments occupying the forward positions. The forward position deceives the enemy about the location of the forward edge of the main defensive area. It receives extensive engineer preparation to assist in this deception.

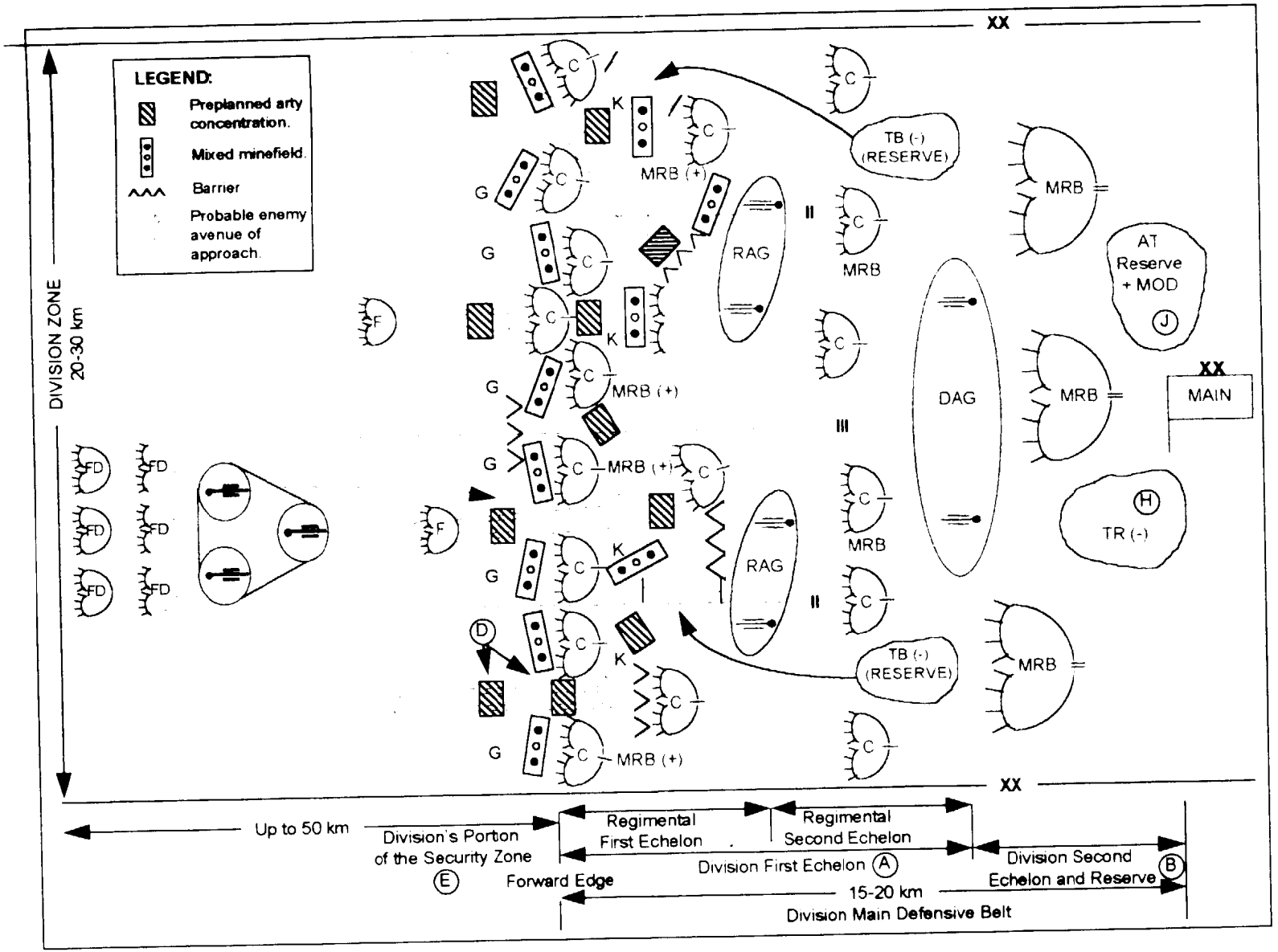


Figure 2-4. MRD in the defense (example 2). (Notes follow.)

Explanatory Notes to Figure 2-4. MRD in defense (example 2).

1. The division main defensive belt is organized into two echelons. The first-echelon regiments form along a defensive line and comprise the main defensive belt (A). Their mission is to stop the enemy in front of their forward edge. The division allocates 1/2 to 3/4 of its combat power to its first echelon. The division second echelon (B), 1/4 to 1/2 of available strength has the mission to destroy or repel any penetration of the main belt.

2. The defense in both echelons is built upon company-sired strongpoints (C) unified into battalion defensive areas. Strongpoints are planned for all-around defense and sited so &liberate, pre-registered gaps (D) exist between them.

3. Divisions form a security zone (E) in front of their main defensive belt when assuming the defense out of direct contact. Reinforced battalions taken from second-echelon regiments are designated as FDs; these establish a series of reinforced company-sized strongpoints sited on enemy main avenues of approach. These security zone strongpoints are to delay, disrupt, and destroy advancing enemy units. First-echelon regiments may establish a forward position (F) 4-6 kilometers from the main defensive belt. This company-sized position imitates the main defense, causes the enemy to conduct premature artillery preparations, and aids the disengagement of the FD. Regiments and battalions deploy combat security outposts (platoon strength) (G) in the security zone forward of their sectors.

4. The division can form a combined arms reserve (H), not more than 1/9 of its total combat power, as the commander's contingency forces. An MRD holds its AT battalion, combined with an engineer mobile obstacle detachment as an AT reserve (J) to block penetrations of the first echelon and support the counterattack with fire.

5. The fire plan is based on antitank tires and integrates ATGM, AT gun, tank, BMP, attack helicopter and indirect and direct artillery fires on accessible terrain in front of and between first-echelon strongpoints and into fire sacks (K) throughout the defensive sector.

The division commander expects the FD to defend aggressively. He retains control over its successive redeployment. Without his specific permission, this FD cannot relocate. The commander may need to gain time to permit the establishment of the main defensive belt. If needed, he can require the FD to continue defending its position, even if this means it becomes decisively engaged or encircled.

If the battle in the security zone is not successful in destroying or halting the attacking enemy, the FD occupies a forward position as a last measure before returning to its parent second-echelon regiment. The OPFOR expects that, even if all goes well, the FD would take losses and would not be at full capability. The FD moves off the enemy main avenue of approach and occupies a forward position in a less-threatened, secondary sector. The enemy, advancing along his main avenue, can still encounter forward positions. These positions are occupied by companies or battalions from the second-echelon regiments and/or combat securitoutposts of the first-echelon regiments instead of the FD.

(2) *Command and control posts.* The OPFOR commander controls the defense through a series of command posts and control posts (both abbreviated CP). At division level, there normally are four types

- Main CP.
- Forward CP.
- Rear CP.
- Alternate CP.

The *main CP* is located in the rear of the defensive area/sector/zone. It contains the bulk of the staff The chief of staff directs its operation.

The division commander establishes a *forward CP* with a small group of selected staff members. The composition of this group varies but usually, includes the operations officer and chief of artillery. This post may be as close as 3 kilometers from the forward edge of the main defensive belt Besides the CPs, the commander can establish CPs. These posts have radio and wire communications and permit the commander and his staff better observation of different sectors of the battlefield. The deputy, commander for the rear establishes and controls a *rear control post.* There is no rigid guidance or structure for the location of CPs. The commander uses terrain to camouflage CPs and locates them according to his mission concept. The OPFOR avoids establishing CPs on distinguishing terrain features.

The OPFOR expects radio commumcations to be difficult and often impossible or undesirable in combat. During training exercises, it drills using radio, wire, visual signals. sound, and courier communications. The standard procedure is to employ wire communications in a defensive position or an assembly area. This means of communication-including quick restoration of destroyed lines-receives heavy emphasis in tactical exercises.

b. Brigade. An IMRB does not routinely defend in a positional defense. but may do so in an emergency. An IMRB normally conducts a mobile defense, in conjunction with frontier forces, immediate reaction forces, and airborne or heliborne forces; its goal is to attrit the enemy force and shape the battlefield. In a positional defense, an IMRB may serve as an army/army corps forward detachment in the security zone or as a combined. arms reserve.

c. Regiment. A regiment normally defends in the first or second echelon of the division defenses. As part of a division's first echelon, the regiment prevents penetration of the main defenses by repelling enemy assaults

with intense fire and counterattacks by its reserve. When defending in the division's second echelon, a regiment attempts to defeat any enemy penetration of the division's first echelon. The OPFOR has always considered tank regiments to be ideal counterattack forces. A tank division often holds at least one of its regiments in the second echelon for this mission. Figures 2-5 and 2-6 show *examples* of regiments in the defense.

(1) *Combat security outposts.* First-echelon regiments on main avenues often form *combat security outposts,* and each forward battalion can establish such an outpost. A combat security outpost for a battalion is normally a reinforced platoon. This platoon occupies a position 2 to 3 kilometers forward of the main defenses. Combat security outposts have the missions to delay, inflict losses on, and to deceive the enemy about the true location of the main defenses. Given time, these outposts form strongpoints forward of the main defenses. They take over the mission to delay the enemy's main effort when the divisional FD shifts to a secondary axis. Ideally, a combat security outpost forces the enemy to deploy in a position short of the main defensive belt, believing it actually is the main defensive belt.

As with the FD, artillery subunits firing in support of the combat security outpost may have to occupy temporary firing positions farther forward than normal, even in front of the forward edge. The combat security outposts described above should not be confused with company or battalion-sized elements placed into forward positions by second-echelon regiments and/or divisions when required by the situation. These forces, too, have a mission similar to that of the FDs in the security, zone.

If the enemy threatens to bypass or overrun the combat security outpost, the regimental commander may order it to withdraw to its position in the main defensive belt. Cover for its withdrawal can include planned fire from regimental assets, fire from the outpost's platoon and fire from tanks in ambush. The withdrawal plan provides the combat security outposts passages through the main defensive belt's obstacle system.

(2) *Securiry zone frontages.* If the *security zone* is defended by a *regiment* the regiment's frontage will usually equate to the division's zone (20 to 30 kilometers). However, if the regiment defends in a security zone established at army/army cups level, the boundaries of the regiment do not necessarily conform to those of the division behind it. When a *battalion* is assigned to fight the security zone battle it will cover only the most threatened axis within the division's zone. A battalion in the security zone can defend an area 5 to 10 kilometers wide; a company defends between 1.5 and 3 kilometers. These larger than normal frontages are achieved by accepting larger intervals between strongpoints, and by slightly increasing the size of individual platoon strongpoints. *Platoons* assigned to defend in the security zone, including combat security outposts, may have frontages of up to 500 meters, rather than the "normal" 300 to 400 meters.

(3) *Dispersion and location.* Regimental subunits normally disperse to the extent that a single low-yield nuclear strike can destroy no more than one company The commander limits dispersion to ensure the stability of the defense and to maintain the capability to mass fires. The defensive frontage for a regiment is normally 7 to 15 kilometers. The depth may vary from 7 to 10 kilometers.

(4) Reserves. A regimental *combined arms reserve* normally occupies a position near the regiment's second echelon. It is usually company-sized and tank-heavy. Its mission is to conduct counterattacks against an enemy penetration.

A regimental *antitank reserve* normally includes-

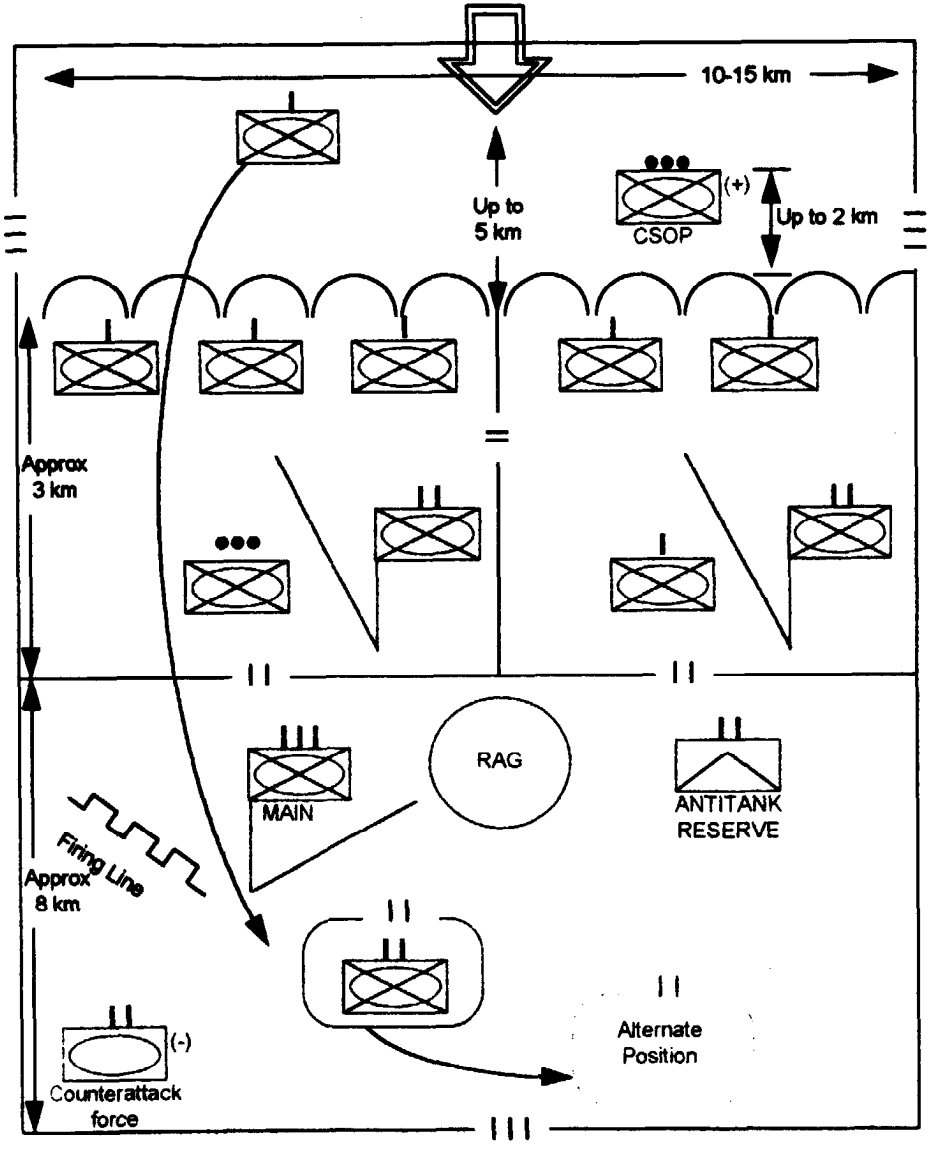
- The antitank battalion or battery (found only in MRRs)
- Part of the engineer company' (mine warfare platoon)

- Possibly either a tank or motorized rifle platoon

The engineers operate as a mobile obstacle detachment, emplacing hasty minefields and obstacles. The antitank reserve occupies an assembly area near the regimental CP.

(5) *Command and control posts*. A regiment in the division's first echelon locates its *main CP* centrally, between its first and second echelons. A regimental *forward CP* may be farther forward, in the area of one of the subordinate battalions. Regimental logistics units and the rear CP occupy positions to the rear of the regimental second echelon. The regiment establishes communications between the CPs. Wire is the primary means, supplemented by messengers, signals. and radio.

(6) *Regimental fire planning.* The regimental fire plan is similar to that of its parent division, but it has more limited resources. Regiments, like divisions, prepare detailed barrier plans. OPFOR commanders site their minefields and fire concentrations to exploit available natural barriers. They supplement nature with antitank ditches and nonexplosive antipersonnel/antitank obstacles. The regiment's organic counterattack assets consist of the combined arms reserve or, occasionally, the second-echelon battalion. Company-level commanders plan for regimental counterattacks and reconnoiter counterattack routes. Counterattacks at this level generally, aim at restoring defensive integrity by destroying the enemy penetration.



Forward positions deceive enemy as to exact position of main defenses, and protect main position from surprise attack. Platoons from first-echelon battalions may deploy as combat security outposts (CSOPs).

First defensive position. First-echelon regiments normally deploy two battalions up. Some companies will be reinforced with a tank platoon.

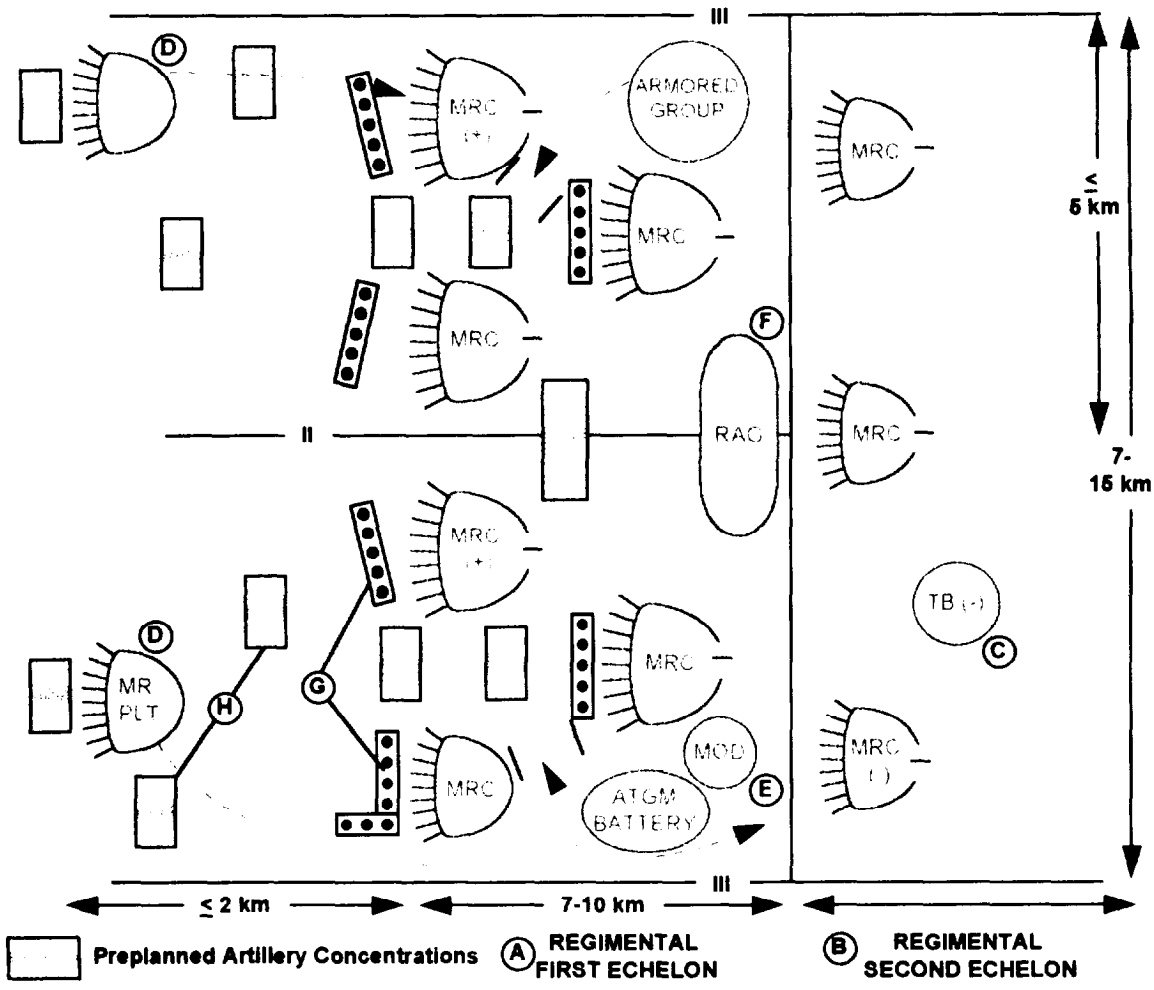
Regimental antitank reserve with MOD between first and second echelons. Up to 4 positions are preplanned.

Firing line dug between first and second defensive position on flank of most likely enemy thrust. Occupied by counterattack force as thrust develops; often used as start line.

Counterattack force will attack when thrust held by antitank reserve; may be reinforced from second echelon MR battalion. Attack can only be launched with approval of divisional commander.

NOTE: Tank battalion may be distributed to MR battalions, in which case the 2nd-echelon battalion provides the counterattack force.

Figure 2-5. Mototized rifle regiment in defense.



1. The commander of a defending regiment normally deploys two battalions in a first echelon (A) and one battalion In the second echelon (B). The tank battalion (C)of a MRR normally attaches one or more of Its companies to forward MRBs.

2. Defending out of direct contact the regimental commander may deploy combat security outposts (reinforced platoons) (D) up to 2 km forward of his leading first echelon strongpoints. These platoons am drawn from first or second echelon battalions. They fight and by scheduler/or on order withdrew to previously prepared positions In the regimental sector.

3. The regimental commander may form a combined arms reserve((reinforced company), not shown. This reserve Is a contingency force, and when formed, is normally taken from the second echelon.

4. The regimental commander may also form an AT reserve (E) from the organic ATGM battery and an engineer mobile obstacle detachment. AT reserves are normally positioned between the two echelons.

5. A regimental artillery group (F), consisting of the organic artillery battalion and any supplemental artillery allocated by the division chief of artillery, may be formed. It is positioned 1 to 4 km behind the forward edge of friendly troops.

6. The barrier plan consists of minefields (G) and preplanned artillery concentrations (H) situated to halt attacks forward of strongpoints, separate Infantry from tanks, and channel penetrations into the sacks.

Figure 2-6. Motorized rifle regiment defending out of direct contact.

d. Battalion. MRBs and TBs perform a variety of missions in the defense. *Company strongpoints* form the basis of battalion defensive positions. Antitank fires are the basis of the fire plan. The OPFOR calculates frontages based on its assessment of the capabilities of a platoon and company in the defense; these frontages dictate regimental and divisional defensive frontages. Within the main defense belt, a typical battalion defensive area is 3 to 5 kilometers wide and 2 to 2.5 kilometers deep. The battalion takes up a narrower frontage. the deeper it defends. Figure 2-7 shows an *example* of a possible defensive area of a motorized rifle battalion

(1) *Organization for combat.* After receiving the mission from his regimental commander, a battalion commander begins organizing his assigned area. The regimental order is as complete as possible. At a minimum, it contains the battalion's mission, location of the forward edge, and battalion boundaries. The commander may use artillery, tanks, engineers, and chemical protection troops attached to the battalion to reinforce the companies. This allocation depends on the number and types of attachments received by the battalion and the importance of the strongpoints the companies are defending. Although it can provide direct fire support to the companies, artillery usually occupies firing positions that provide the best fire support for the entire battalion.

When defending with a single echelon, the battalion commander positions a small reserve, normally a platoon, where it can most rapidly and effectively stabilize the defense in the event of an enemy penetration. Key terrain and likely enemy avenues of attack are factors that determine where the battalion reserve position would be.

The battalion's rear service elements take up covered and concealed positions within the battalion area. Rear service elements are responsible for their own security and change locations frequently to avoid destruction from enemy air and artillery fire.

(2) *Combat security outpost.* Combat security outposts forward of the first-echelon company strongpoints confuse the enemy as to the true battalion defensive position, provide early warning, cause enemy attrition, and force full enemy deployment. The regimental commander chooses locations for his battalions' combat security outposts, but each battalion commander refines his given location These positions are supportable by direct antitank fire from first-echelon strongpoints. Planned artillery and mortar fire concentrations along with barrier fire lines support the outpost in combat and withdrawal. Outpost withdrawal is on order of the battalion commander, with the regimental commander's agreement.

(3) *Defensive area.* A battalion usually defends in *one or two echelons*. Single-echelon deployment permits the greatest concentration of firepower, but also reduces defense in depth. Reserves take up positions behind the first echelon. When a battalion defends on a narrow frontage and/or needs greater depth, it may deploy in two echelons, with two companies in its first echelon and one in its second echelon. As in the offense, a battalion cannot normally field both a second echelon and a reserve. The distance between the first and second echelons can be up to 2 kilometers

A *company* occupies a strongpoint 1,000 to 1,500 meters in width (depending on echelonment) and up to 1,000 meters in depth. Normally, all three platoons of a company defend in one echelon. A reinforced *platoon* defends a frontage of 300 to 400 meters. Gaps between platoons in a company normally do not exceed 300 meters. Distances between *platoon vehicles* normally do not exceed 150 meters. However, in special conditions, such as desert warfare or when the threat of enemy high-precision weapons is high. distances may increase. In every situation, the OPFOR would make every effort to ensure that vehicles within a platoon remain in close visual contact with at least one other vehicle of the platoon strongpoint; this would normally be a distance of no more than 250 meters. Figure 2-8 shows an *example* of a motorixd rifle company strongpoint.

(4) *Battalion fire planning.* The battalion commander conducts centralized planning of defensive fires, beginning as far to the front of the forward edge as possible. He concentrates fires on likely enemy avenues of

approach, using a series of designated fire lines. The distance between these lines is 400 to 600 meters on high-speed avenues; with a smaller distance on less-likely, avenues of approach. The commander plans artillery fire to separate attacking enemy infantry from their tanks approximately 700 to 1,000 meters from the forward edge. He plans final protective fires within 300 to 400 meters of the forward edge, with concentrations to halt the advance of enemy forces that have penetrated the defenses.

Priority targets for the battalion are tanks and other armored vehicles. Antitank weapons engage enemy tanks at an effective range up to 4 kilometers in front of the forward defenses. The normal distance between tanks and antitank weapons in defensive positions is about 100 to 150 meters. On open terrain, 200 to 250 meters may separate tanks in defensive positions, The terrain is a dominant factor in positioning tanks and antitank weapons, with each tank and antitank weapon having a primary and second sector of fire as well as primary and alternate positions.

Barrier plans and the system of fire complement each other. Both antitank and antipersonnel minefields may be in front of the forward edge and throughout the depth of defensive positions. Direct and indirect fires cover antitank obstacles.

The *mortar battery* of an MRB deploys in accordance with the overall fire plan. It assumes a position from which it can provide close-in fires for the company strongpoints

The MRB's *grenade launcher platoon* usually remains under the control of the battalion commander. It normally supports the first-echelon companies as a platoon. It can be assigned to a single company defending on a main avenue of approach into the battalion area. Under certain conditions (broken terrain, critical space in a company strongpoint), individual weapon squads may be assigned to first-echelon motorized rifle companies.

2-12. DEFENSE ASSUMED IN DIRECT CONTACT

They OPFOR realizes there are times when it cannot avoid assuming the defense in direct contact with the enemy The same factors of mission, enemy'. troops available. terrain. and time available considered in a defense out of contact are the primary considerations in establishing a defense in contact. The main differences when in direct contact are the following:

- There is no security zone, or a very small one.
- The mission to defend in contact can last only until the OPFOR IS able to resume the offensive or develop the defense into one out of contact with the enemy
- The enemy situation is likely to be clearer. an enemy attack may be imminent.
- The terrain may be unfavorable for the defense; favoring the attacker.
- Time for preparation can be short

a. Reverse-slope defense. Establishing the defense when in contact with the enemy poses problems, since forces may have to dig in while under enemy fire and observation. For this reason, terrain permitting, an OPFOR commander can use a reverse-slope defense. Part of the force remains in contact with the enemy on the forward slope, while the remainder of the force prepares the position on the reverse slope. The OPFOR recognizes the following advantages of a reverse-slope defense

- It hinders or prevents enemy observation of the defensive position
- Attacking forces are not able to receive direct fire support from following forces
- Enemy long-range AT fires are not effective
- Attacking enemy forces silhouette themselves crossing the crest of the hill
- Engineers can conduct their work out of direct fire and observation from the enemy.

One disadvantage of this type of defense is that all weapon systems cannot exploit their maximum range. When possible, the OPFOR would use both a forward and a reverse-slope defense to take maximum advantage of the terrain.

b. Securiry zone. When the force going over to the defensive is in contact with the enemy, establishing positions within a security zone is difficult. If there is a security zone, its depth is not nearly as great as it is when the force is out of contact. Long-range fires do not play the part they do when out of contact, because the enemy is, for the most part, within direct fire range. Achieving deception is difficult, since friendly forces may be under direct observation of the enemy. The OPFOR may emplace obstacles, but not as extensively as in a defense out of contact with the enemy.

c. Combat and combat service support. For support elements. differences in mission arise from the temporary nature of a defense in contact with the enemy. Combat support *remains configured for continued offensive action.* Artillery groupings may retain an organization designed to support the next offensive phase. This is particularly true if the OPFOR intends to go back on the offensive as quickly as possible.

Engineer mobile obstacle detachments lay minefields across critical avenues of approach. They employ armored minelayers, armored engineer vehicles. and earthmoving equipment to prepare obstacles and firing positions. The sequence of engineer work ensures readiness to repel an enemy attack.

Combat service support also remains configured to support offensive action. Its primary effort is to prepare units for future offensive actions, The priority of support goes to units selected to initiate offensive actions.

d. Division. The defense in direct contact generally, occurs as a result of a stalled offensive. The frontage that the division occupies is initially equal to that division's zone of attack. The most obvious difference in the division battle formation is the absence or shallowness of a security zone. The top priority for elements in contact is the quick assumption of favorable defensive positions. This often requires local attacks to seize these positions. As the situation permits, the division gradually, develops the defensive frontage and depth discussed above (for a defense assumed out of direct contact). Those divisional units not in contact immediately begin constructing second-echelon positions.

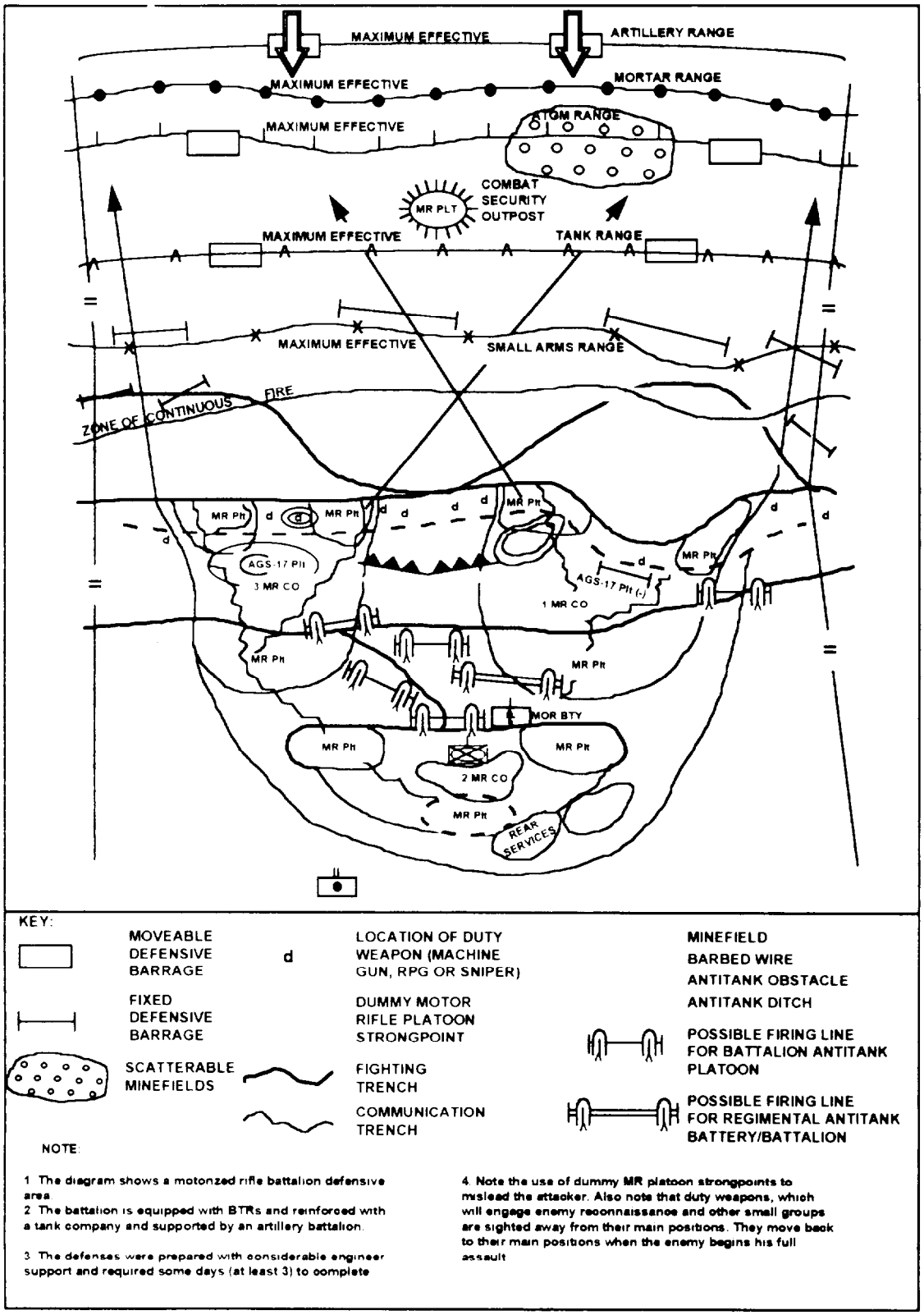


Figure 2-7. MRB defensive area (example)

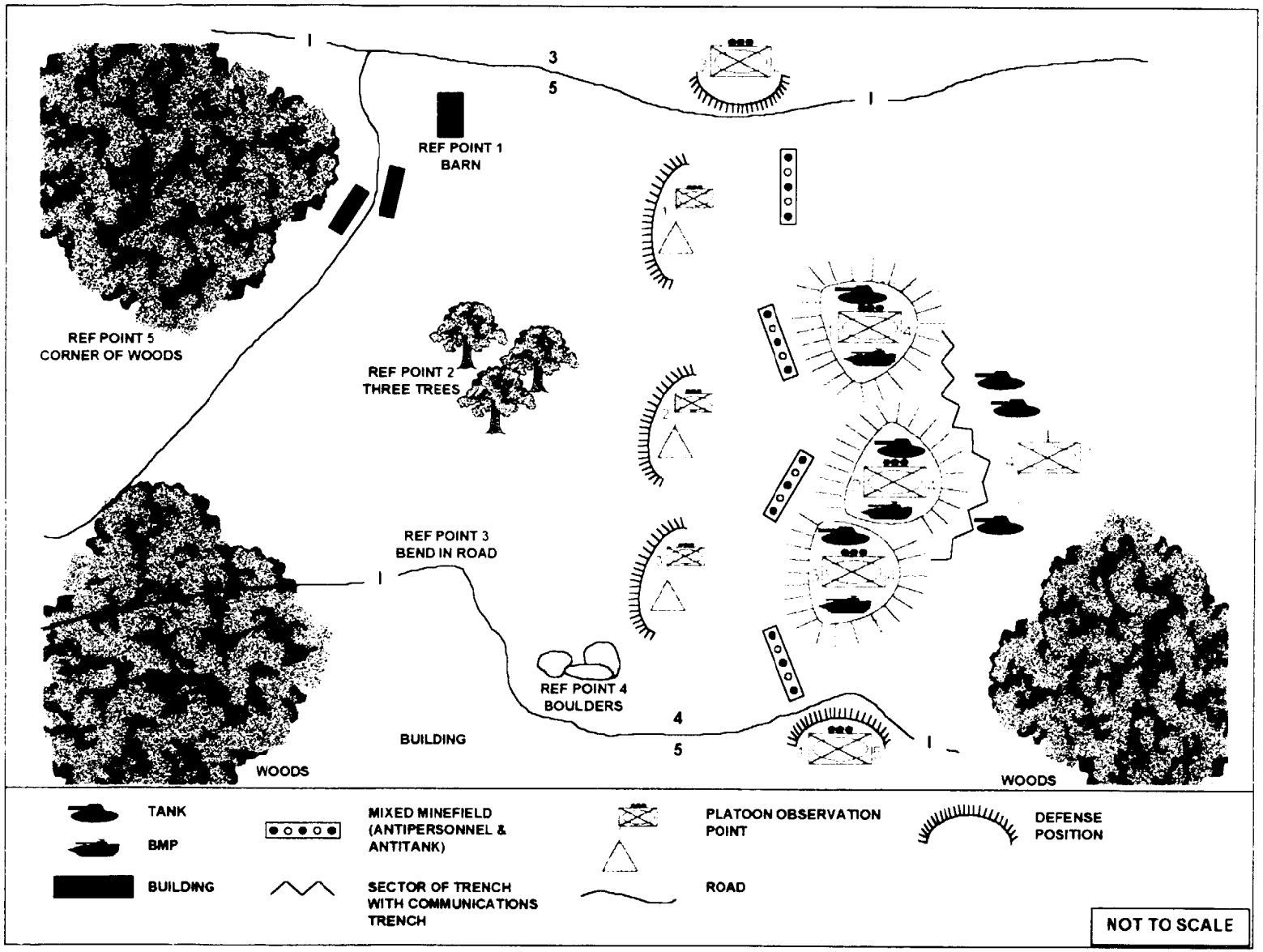


Figure 2-8. MRC (BMP) strongpoint (example).

e. Regiment. Regiments are also likely, to assume a defense in direct contact following unsuccessful offensive action, Local attacks are commonly used to seize the best defensive ground and regroup into a defensive zone from the former narrow zone of advance. Regiments do not form combat security outposts in this type of defense.

f. Battalion. When assuming the defense in direct contact, a battalion initially halts with subunits occupying the positions they occupied when the order to defend was given. Its first priority is to seize favorable terrain. Though the enemy is in close proximity, the battalion would set up local security, if the opportunity occurs. Unless the halt was a temporary holding action, the battalion commander gradually transitions his forces into defensive positions out of direct contact, if the mission and situation permit. Platoons may be left in positions to establish a combat security outpost in front of the new defense.

2-13. COUNTERATTACK

Defending first-echelon battalions are prepared to counterattack under favorable conditions; for example, they counterattack opportunity for a counterattack by forces of when a much weakened enemy stalls in partial occupation of the defensive strongpoints The enemy's forces and fires can overwhelm the OPFOR first-echelon defenses and prevent a counterattack. If this happens. subunits must hold their positions, strike the enemy with all available fires, and create the the next higher command. As the enemy advances into the depths of the OPFOR defense, he may face better-prepared positions. He also encounters a progression of obstacles, second-echelon defenses, and tank-heavy counterattack forces

a. Planning. OPFOR commanders at battalion level and above plan counterattacks to restore the defense, should the enemy succeed in breaching forward defensive positions. Commitment of the counterattack force requires the authority of the next higher commander. This force generally attacks from the enemy's flank. Tanks normally spearhead the counterattacks. following an intense air and artillery preparation, and with the support of fires of adjacent units Against greatly, superior enemy forces, the counterattack would be by fire only, and not by maneuver forces.

b. Conduct. A successful counterattack requires the same superiority ratios as an ordinary attack. The main features of OPFOR counterattacks are as follows:

- The enemy's attack must have been halted or, at the very least, the momentum of the attack must have been broken. Antitank reserves and mobile obstacle detachments are used to achieve this.

- The enemy must be unable to commit a reserve into the penetration, either because it has already been committed, or because it has neutralized by long-range strikes.

The second-echelon company of a battalion, usually in conjunction with regimental counterattack forces, may counterattack enemy forces that have penetrated the forward and rear platoon strongpoints of a first-echelon company. Portions of first-echelon companies (or armored groups) may also participate in the counterattack. If the penetrating enemy force is superior to the counterattack force, the counterattack may be made by fire only. The goal of a counterattack is to destroy the penetrating enemy and restore the original line of the defense

If a counterattack is attempted. lower levels of command join in with all available maneuver elements. Although a battalion might not launch a counterattack independently, it would support a regimental or division counterattack. A battalion can provide direct support on the flanks of the main attack, or act as diversions to confuse the enemy.

2-14. WITHDRAWAL

An OPFOR commander scan use a withdrawal to execute a specific combat task in the rear of his own troops. Examples of this are-

- Withdrawal as a result of an unsuccessful meeting battle
- Withdrawal during breakout from encirclement
- Withdrawal to execute an anti-nuclear or anti-high-precision-weapon maneuver.
- Withdrawal as part of a ruse to draw enemy forces into a trap.
- Withdrawal to return to friendly lines after a raid
- Withdrawal from a superior enemy force
- Withdrawal from a contaminated region
- Withdrawal to a successive position in the security zone

This maneuver could ensure favorable conditions for the main forces to carry out successful, decisive battles against enemy troops.

Within the context of defense, the OPFOR views the withdrawal as a combat action designed to disengage troops from attack by superior enemy forces. It allows them to occupy a more effective defensive line or position. On the modern battlefield, a withdrawal could bring the full application of the enemy's combat power to destroy withdrawing units, Because of this the OPFOR. when withdrawing, resorts to deception and to movement at night and during periods of reduced visibility It also uses covert preparations to avoid alerting the enemy. Figure 2-9 shows the sequence of withdrawal for an MRD.

The OPFOR commander's withdrawal order is detailed. It includes-

- The mission.
- Routes.
- Assembly areas
- Formation to be used
- Delay positions.
- Control measures.
- Information on the new defensive position

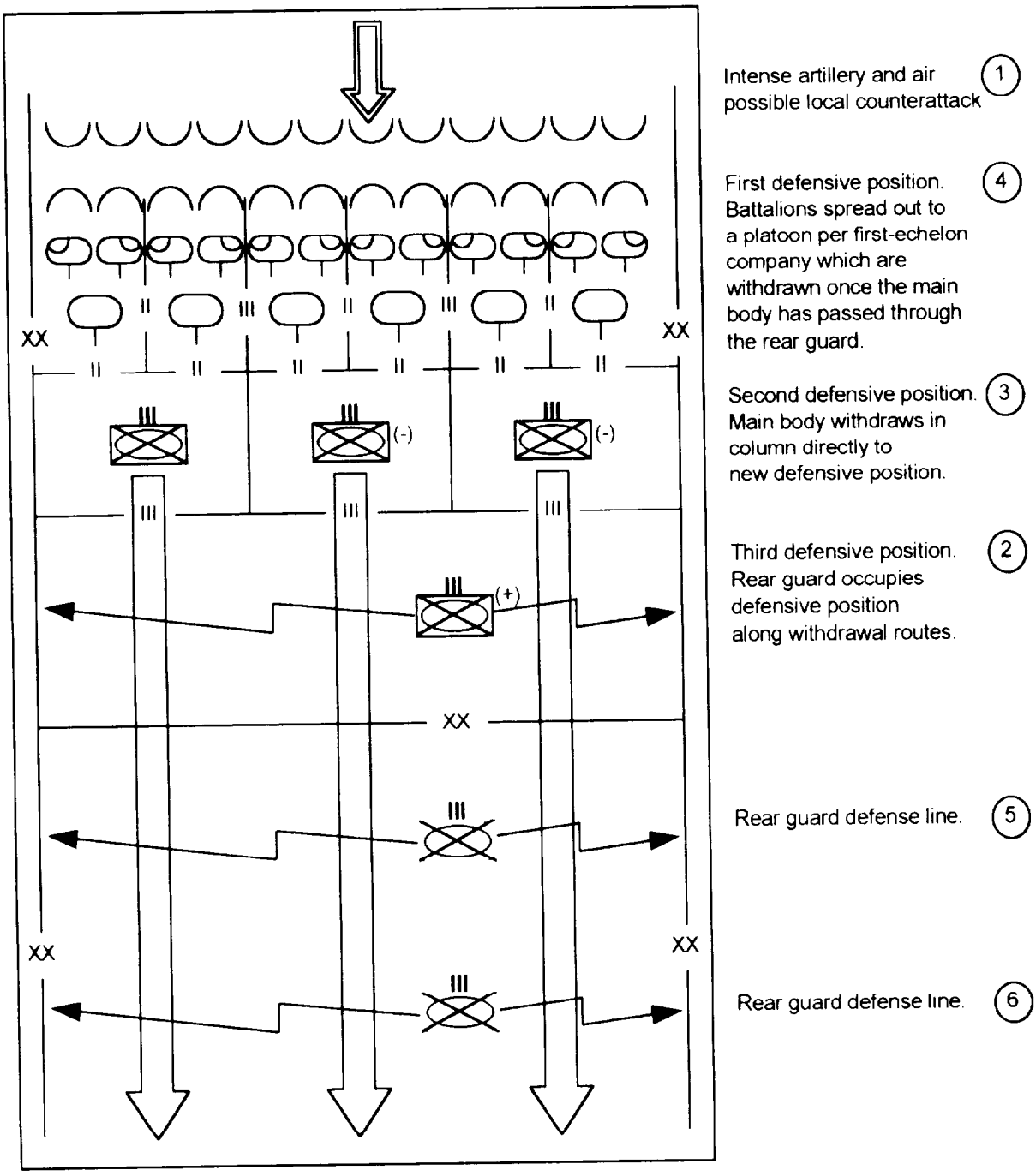


Figure 2-9. MRD sequence of withdrawal.

The OPFOR organizes and executes withdrawals under strict secrecy and security. The mission IS to disengage the force in a timely, organized manner without losing its combat capability. The force executing the withdrawal comprises three groups: the covering force, the rear guard. and the main body.

a. Covering force. The covering force has the mission to deceive the enemy and to cover the initial withdrawal of the main body. This force comes from subunits along the forward edge of the defense. It usually consists of a reinforced platoon from each forward-deployed company.

b. Rear Guard. The rear guard covers movement of the main body. It tights a delaying action if the enemy attempts to maintain contact in the pursuit. Its organization enables it to tight independently of the main body and covering force. It is a combined arms force consisting of tank, motorized rifle, artillery, and engineer elements. A company or smaller force normally performs this duty for the battalion. It makes maximum use of artillery, mortar, and long-range antitank fires. fighting through a series of delay positions and preventing enemy interference in the withdrawal of the main body.

c. Main Body. The main body breaks contact and attempts to withdraw without disclosing its intentions to the enemy. It attempts to deceive the enemy by withdrawing under the cover of darkness or in adverse weather conditions. It may also deceive by using supporting fires to cover noise or by employing a ruse. The main body conducts a route reconnaissance and a reconnaissance of the new positions it will occupy, posting guides to expedite movement. It takes advantage of coordinated and planned air strikes and artillery support to cover its withdrawal.

d. Conduct. A regiment conducts a withdrawal in the following sequence. First-echelon battalions designate platoons to act as covering forces that present a normal defensive posture to the enemy. The regimental commander designates a rear guard. normally a reinforced second-echelon battalion.

On order, the main body. minus covering forces, withdraws through the rear guard in the following order: first, the second-echelon forces and rear services; then, artillery and combat support elements; and, finally, the first-echelon forces. The main body proceeds on multiple routes, all the way back to a new defensive position or assembly area.

Once the main body has passed through the rear guard. the covering force breaks contact on order. It withdraws through the rear guard to join the main body. The covering force conducts minimum radio communications or observes listening silence. The rear guard lights a delaying action and leapfrogs to successive positions, using-

- Smoke
- Mobile obstacle detachments laying minefields and creating obstacles across enemy avenues of approach.
- Artillery fire concentrations.
- Ambushes.
- Attack helicopters.
- Fixed-wing air strikes.

If the enemy does not pursue, the rear guard assumes march formation and joins the main body as quickly as possible.

2-15. RELIEF

OPFOR doctrine stresses the temporary nature of the defense. It emphasizes the need for counterattacks as soon as possible to initiate a renewed offensive The relief can achieve this end.

a. Concept. The OPFOR concept of relief of troops involves an organized transfer of positions, areas. and zones in a combat situation from one unit to another. The units being relieved have usually sustained considerable losses and are on the defense.

A relief can also enable a fresh unit to occupy the defensive positions of the relieved unit in preparation for a renewed offensive. Because units being relieved are usually in direct contact with the enemy, they are subject to enemy fire and ground attacks. Because of this. the OPFOR organizes relief carefully, executing it quickly and secretly. It attempts to preserve as much of the unit's combat capability as possible. As a rule, a relief occurs at night or during periods of reduced visibility

b. Conduct. A *battalion relief* begins with the regimental commander establishing the relief sequence. The battalion commander relieving and the one being relieved conduct a joint reconnaissance of the defensive position. During this reconnaissance. the commanders coordinate routes to and from the relief areas. traffic control posts, locations for guides to meet the relieving units. and the sequence of relief. They, also deter-mine the time to start and complete the relief, security. measures. and actions in the event of an attack during the relief. In addition, the battalion commanders review the present system of fire and observation and obstacles and minefields supporting the position.

Should the enemy attack during the relief. all available subunits, including the relieving battalion, attempt to repel the attack. All of these subunits fall under the control of the commander being relieved. The reserve of the subunit being relieved may counterattack It IS the last element to withdraw from the defensive area.

At the appointed time, the relieving battalion moves to the relief area by concealed routes. It carries out the relief successively by platoons. The first forces to move are motorized rifle and antitank subunits, followed by mortar, artillery, and tank subunits. If the relief involves battalions of the same MRR, tanks may remain in place, transferring their attachment, Once in positron. the relieving subunits establish observation posts and their system of fire.

Relieved commanders transfer their positions and provide information on enemy activities and routines. They acquaint relieving commanders with the locations of obstacles and minefields and with the primary directions of fire. Established communications remain intact. and wire lines remain in place, passed on to relieving subunits. The relieving subunit thoroughly checks and verifies all engineer installations. including minefields and obstacles, with respect to boundaries, passages. and degree of readiness.

The relieving battalion commander checks the locations and weapon positions of his subunits to ensure that his forces are ready for combat. The relieving battalion attempts to maintain the same routine and level of activities that existed before the relief. The relieving commander reports to his superior that the relief is complete. This action officially terminates the relief. The relieved battalion then withdraws to assigned assembly areas to carry out its subsequent assigned mission.

CHAPTER 3

INFANTRY OFFENSE

Offensive actions are the most effective and decisive way to attain a clearly defined objective. This chapter focuses on truck-mounted, motorized infantry *division and below* and how other arms, possibly including tanks, support them. For more detail on mechanized infantry and tank tactics, see the *Heavy OPFOR Tactics Handbook.* Motorized infantry, once it has dismounted, fights the same as light infantry; however, light infantry may be more common in restricted terrain. The focus here is also on the offense within first-echelon divisions and divisional brigades, since military districts without standing divisions (or not in the region serving as the base for the espeditionary army) have the capability to conduct only limited-objective offensive actions. Limited objective attacks are also possible in military regions or districts adjacent to the region from which the expeditionary army bases. Separate brigades conduct the supporting attacks. Separate brigades conduct the offense like divisions, but on a smaller scale.

SECTION I. FUNDAMENTALS OF OFFENSE

Success in the offense depends on-

- The timely commitment of the second echelon or reserves.
- Shifting the unit's axis of main attach to a different direction when resistance is too strong
- Consequently regrouping forces from less favorable axes.

The underlying principle is the continual reinforcement of success and not failure. The continuation of the advance can expose to attack the flanks, the rear and lines of communication (LOCs) of a successful]) defending or counterattacking enemy. Only the commander makes the decision to shift the main attack onto a new axis. The resultant regrouping must be rapid and secret. quite possibly with attacks continuing on the former axis as deception.

3-1. PRINCIPLES OF OFFENSE

There are four general principles of the offense. These arc *initiative, surprise, speed* and *concentration.*

a. Initiative. The goals of a battle and the methods devised for their attainment must reflect initiative. The success of these plans rests with the ability of higher-echelon commanders to make bold decisions, then act resolutely to implement those decisions. Success belongs to the force that boldly seizes the initiative. With the initiative, the force has the freedom of action necessary to dictate the conditions of combat. Initiative allows commanders to shape the battlefield It is the key to the offense.

b. Surprise. Surprise is striking the enemy at a time or place in a manner for which he is not physically or mentally prepared. Knowing the enemy commander's intent and denying his ability to conduct thorough and timely intelligence is crucial. Avoiding predictability and using deception, cunning, and guile also help to gain surprise. The direction. timing, violence. boldness, and force of the attack achieve surprise.

This Chapter is adapted from TRADOC Pamphlet 350-17, Light Opposing Force (OPFOR) Tactics Handbook, April 1995, chapter 5.

Surprise delays enemy reactions, overloads and confuses enemy command and control (C", induces psychological shock in enemy soldiers and leaders. and reduces the coherence of the enemy defense. By diminishing enemy combat power, surprise enables an attacker to succeed with fewer forces than he might otherwise require. Surprise is particularly significant in light of the destructive power of modem weapons systems. It is important to achieve surprise at the tactical level in order to overcome any potential enemy's technological advantage, reduce personnel and equipment losses, and improve the prospects for success.

The attacker ensures surprise by concealing the time, location, and strength of his attack. OPFOR doctrine emphasizes the importance of concealment and deception to disguise the location of the main attack. Achieving total surprise once hostilities have begun is difficult. The proliferation of modem surveillance and warning systems and the presence of global commercial news networks make complete surprise less likely. Nonetheless, surprise is still possible by acting in a manner the enemy does not expect. The enemy may anticipate an attack, but the OPFOR believes it can still deceive him as to its nature, its timing, and its force. Bad weather, seemingly impassable terrain, feints. demonstrations, and false communications can all help to lull the enemy into false expectations. Sudden and violent attacks have a paralyzing effect on the enemy. So do attacks from unanticipated directions Airborne. air assault, and special operations forces inserted deep into the enemy's rear tend to have a disconcerting psychological effect on the enemy force.

Consistent with the principle of doing the unexpected to surprise the enemy, the OPFOR may attack through difficult terrain against lightly, defended or undefended areas An OPFOR commander considers an undefended wooded area a better avenuc of approach than an open area dominated by enemy assets. If possible, the OPFOR will attack along forest trails or ridge lines.

c. Speed. A high rate of advance characterizes the offense. Forces participating in the offense must, therefore, be mobile. While fighting through the enemy defenses. the OPFOR may sacrifice speed initially. Once it achieves a penetration. the rate of advance increases considerably. Consistently, maintaining the i-ate of advance rests on striking the enemy before his defensive preparations arc complete or finding weaknesses within prepared defenses. The OPFOR attempts to bypass major concentrations of forces and cripple the enemy by destroying or disrupting his C^2 facilities, his logistics system, and his ability to reinforce his defense If forced to confront a defending enemy across the entire frontage of the attack zone, the OPFOR will avoid a costly,. time-consuming battle of attrition by developing penetrations and committing highly mobile forces into the enemy rear.

d. Concentration. Concentration is the ability to mass effects without necessarily, massing large formations and IS therefore essential for achieving and exploiting success. However, concentration of any size force is also a vulnerability. Modern technology makes the process of concentration more difficult and dangerous. To overcome these difficulties. commanders manipulate their own and the enemy,'s concentration of forces by some combination of dispersion. concentration, deception. and attack By concentrating forces rapidly along converging axes, the attacker can overwhelm enemy forces at the point of attack by massing the effects of combat power At every level, commanders attempt to conceal the concentration of their forces until it is too late for the enemy to react effectively. Units mask the patterns of their movement and preparatory activity that might reveal the direction or timing of attack Commanders monitor logistical buildups, patrolling activities. communications. and indirect fires to keep the enemy from seeing a visible change in the attacking force's deployment pattern. Speed, security. and deception are essential to successful concentration of forces. Concentration requires careful. prior coordination. After a successful penetration, attacking OPFOR commanders may keep their force concentrated to gain full advantage of its momentum. If the penetrated enemy forces begin to withdraw. OPFOR commanders may choose to disperse their forces across a broader frontage. This allows some forces to conduct pursuits and others to continue the advance into the enemy's rear.

After penetrating the forward edge of an enemy defense, the OPFOR continues, without pausing. to attack farther into the depths of the defensive positions until the mission is complete. It bypasses enemy strongpoints that it cannot reduce immediately If it cannot bypass them, it attacks them from the flanks or rear. The OPFOR uses massed fires to provide close and continuous fire support, and may use smoke and flame weapons against strongpoints.

3-2. COMBINED ARMS TACTICS

Combined arms cooperation is the basis for close and interrupted interaction of all forces to best exploit their capabilities. Each arm provides strength and protection where another arm is vulnerable. The tank is a critical element for combined arms cooperation in the attack. However, the tank can only be successful only if it is protected from air attack and enemy antitank systems.

The OPFOR trains as a combined arms force as often as is practical. It understands the complications of combat actions combining armored vehicles and infantry. It thoroughly plans, coordinates, and rehearses combined arms combat. It uses every opportunity to incorporate combined arms actions into its attack planning process. In this manner, it learns how to employ and support these units.

OPFOR leaders know what heavy and light forces can do for each other. Infantrymen assist heavy forces by finding and breaching or marking antitank obstacles. They detect and destroy or suppress enemy antitank weapons. They may also designate targets for tanks and protect them in restricted terrain. Heavy forces assist infantrymen by leading them in open terrain and providing them a protected, fast-moving assault weapons system. They suppress and destroy enemy weapons, bunkers, and tanks by fire and maneuver.

a. Attacking on converging routes. Tanks and infantry move on separate routes that converge on the enemy position. They each chose routes suitable for their movement. Armored vehicles may first support the infantry by fire, then close on the objective in time to assault it along with the infantry. (See figure 3-1.) This may require the infantry to breach obstacles and destroy enemy antitank systems to assist armored vehicles in reaching the enemy position.

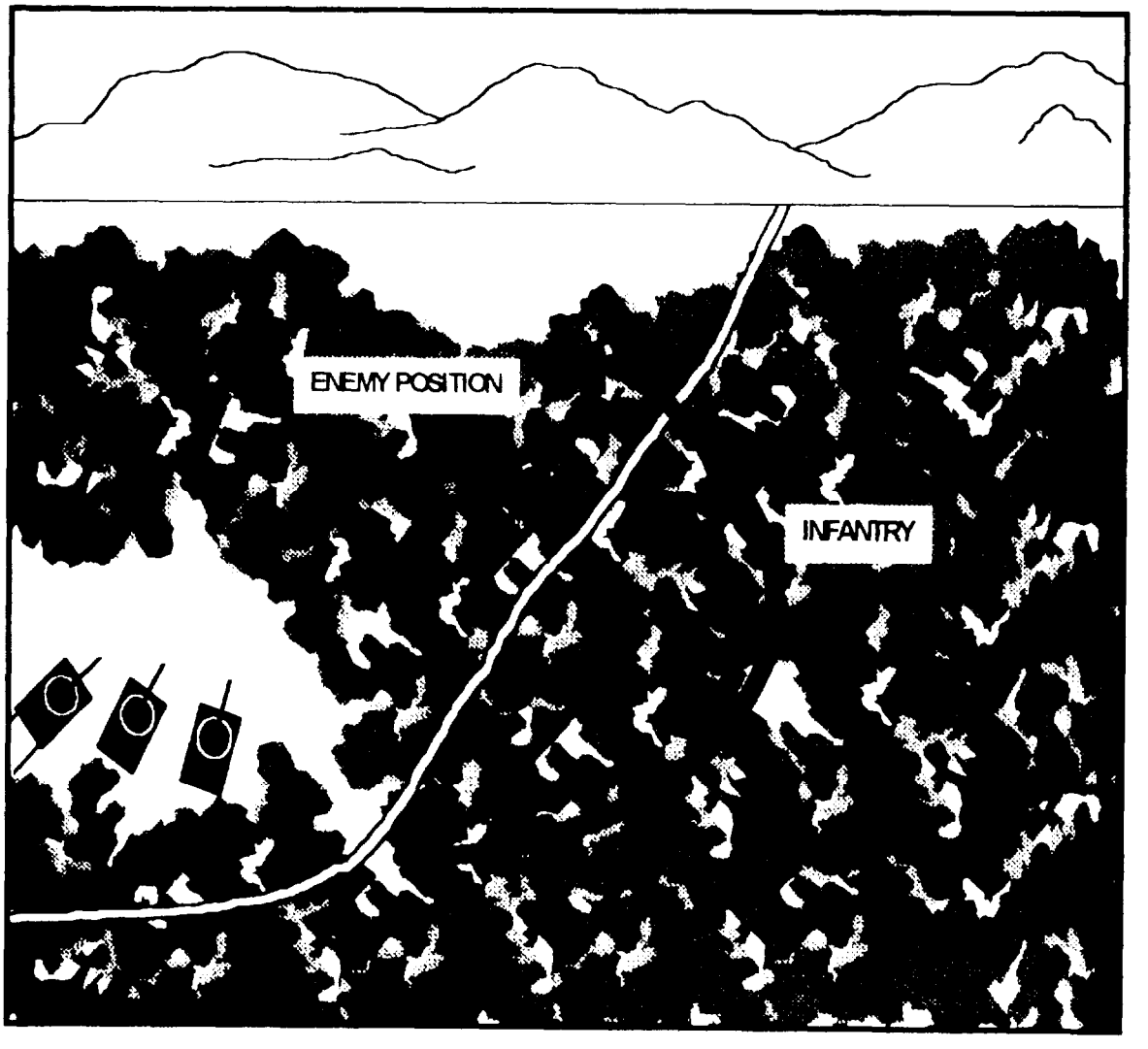


Figure 3-1. Attacking on converging routes.

b. Attacking on same route. When armored vehicles and dismounted infantry attack on the same route, they may move at the same speed or at different speeds (see figure 3-2.) They use the same speed when there are poor positions for the tanks to provide covering fire, or when there IS a need for close, mutual support. They move using different speeds when there are obstacles that the infantry must clear or when the route offers good cover and concealment for the infantry, but not the tanks In these cases, the tanks support by fire while the infantry moves to its assault position The tank then move forward to assault with the infantry. The tanks may, however, lead the infantry against an enemy that does not have well-prepared positions with overhead cover, or does not present a great antitank threat.

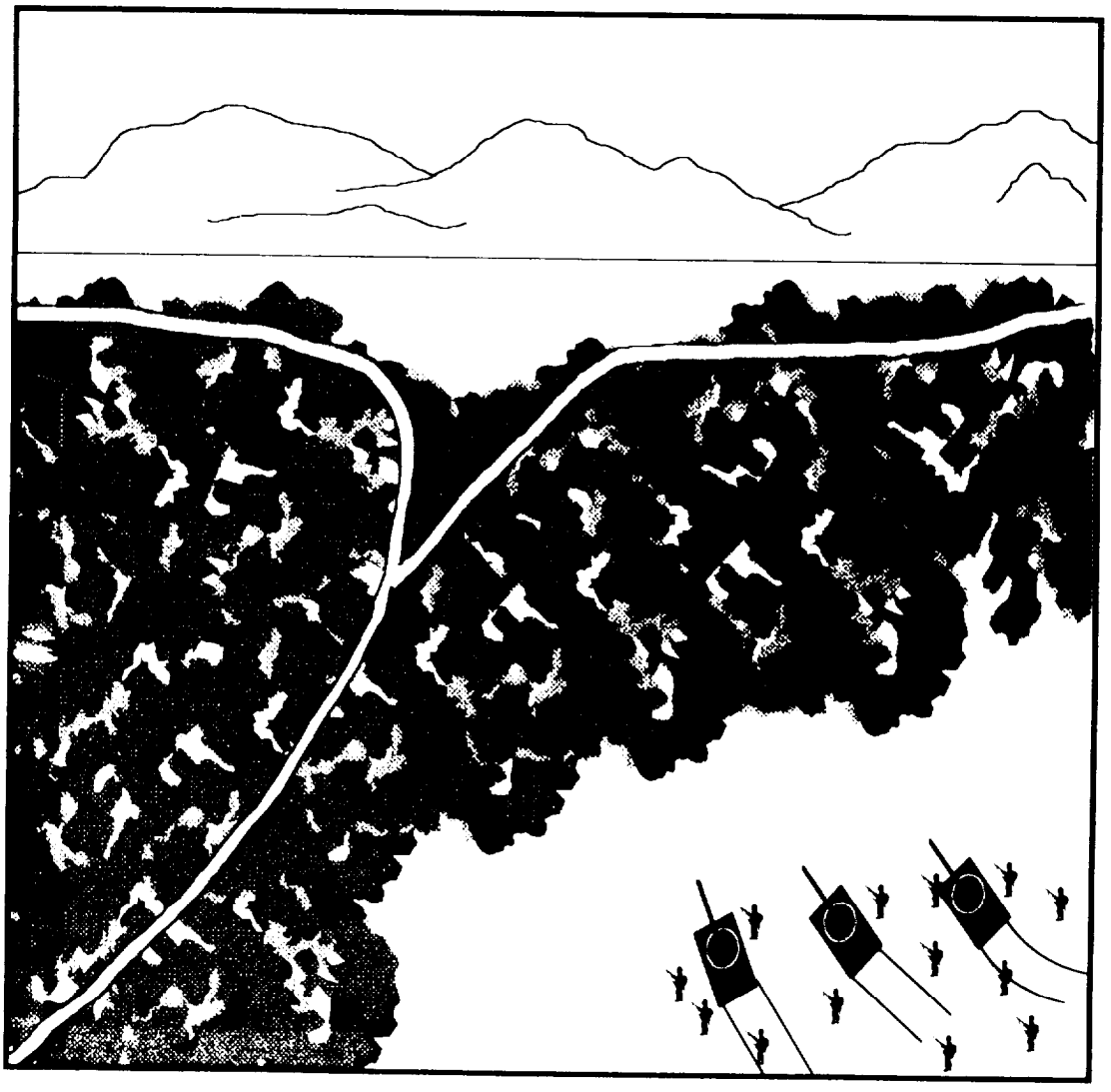


Figure 3-2. Attacking on the same route.

c. Supporting by fire only. When obstacles keep the tanks from closing on the enemy position. the tanks support by fire only. (See figure 3-3.) The armored vehicles occupy positions where they can support the attacking infantry. When the infantry breaches the obstacles or locate a bypass, the tanks rejoin the infantry.

3-3. FORMS OF MANEUVER

Like many aspects of OPFOR doctrine. the forms of maneuver have seen little change in modem history. All of the armies of the world understand them. Offensive success therefore depends less on the choice of forms than on their creative combination and especially on the skill and audacity with which commanders execute them.

Maneuver is a basic component of combat. It is an organized movement during combat that puts troops in a more advantageous position than the enemy. From this position, they can deliver a decisive attack. Maneuver has a significant role in the OPFOR concept of battle

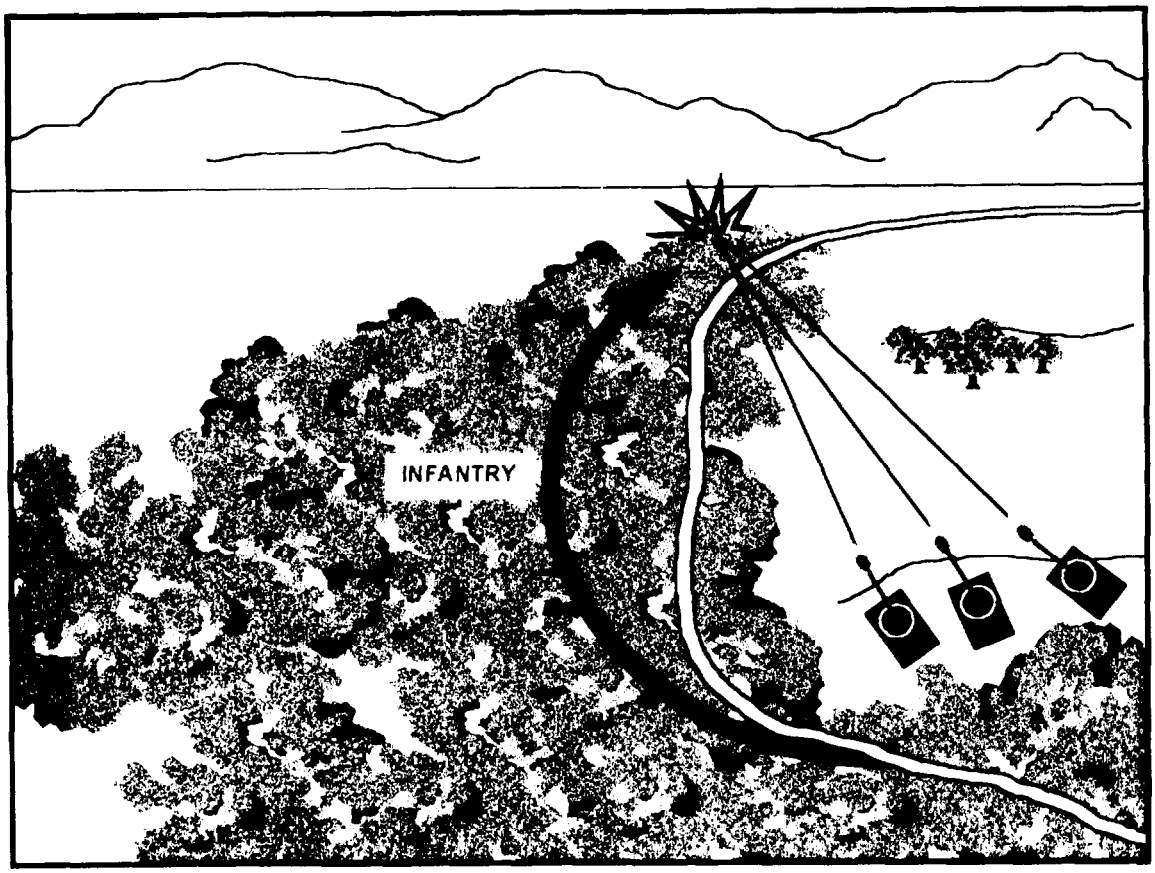


Figure 3-3. Tanks supporting by fire only.

However, maneuver alone does not achieve victory. The OPFOR often needs an effective fire strike to make maneuver possible. Unlike many other armies where fire strikes support maneuver, OPFOR ground maneuver capitalizes on gains achieved by fire strikes. The "maneuver by fire" is also important in OPFOR tactics.

The commander uses maneuver to seize and hold the initiative and defeat enemy plans. Maneuver achieves the essential superiority of fire, forces. and equipment in the crucial sector, and increases the force of the strike. Two principal forms of maneuver form the basis for OPFOR offensive actions. These are *frontal attack* and *envelopment.* The *turning movement, infiltration, and.* and *penetration* are either combinations or derivatives of the two basic forms

a. Frontal attack. The frontal attack strikes the enemy across a *broad frontage* and over the most direct approaches. (See figure 3-4.) The OPFOR normally uses it when commanders possess overwhelming combat power and the enemy is at a clear disadvantage. It pressures all enemy defenses in a given sector simultaneously. *Multiple axes of advance,* intended to achieve a penetration of enemy defenses in one or more places, characterize the frontal attack

The frontal attack may conceal the axis of the main attack by a combination of deception and strong pressure across the entire area of contact. This is the least favored form of offensive maneuver. Frontal attack is also the least economical form of maneuver, since it exposes the attacker to the concentrated fire of the defender while simultaneously limiting the effectiveness of the attacker's own fires

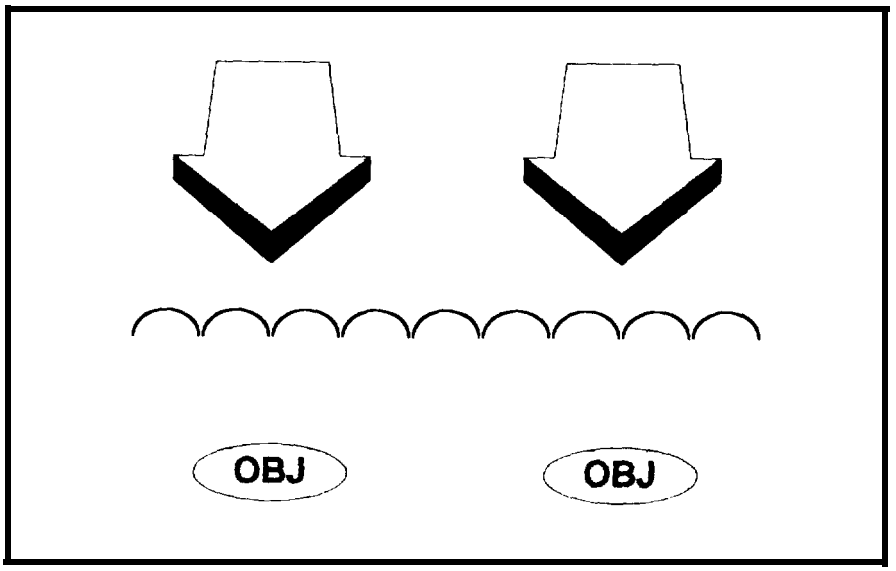


Figure 3-4. Frontal attack.

As the simplest form of maneuver, the frontal attack IS useful for overwhelming light defenses, covering forces, or disorganized enemy forces. At the tactical level. a fixing force as a supporting attack to an envelopment commonly uses this form of maneuver. The frontal attack may also be part of an exploitation or pursuit.

b. Envelopment. Envelopment is the form of maneuver that applies strength against weakness. It avoids the concentration of forces and tires along the enemy's forward edge The attacker maneuvers the bulk of his forces around or over the enemy's defenses in order to strike him in the flanks or rear. Concurrently, supporting attacks along the enemy's forward edge fix enemy forces in their defenses. Success of the envelopment depends on the creation or discovery of an assailable flank. In meeting battles or counterattacks, this may actually be the flank of the enemy forces If the enemy is defending, this is probably a gap or breach of the enemy's defense. There are two types of envelopment. *close envelopment* and *deep envelopment.*

(1) *Close Envelopment.* The close envelopment is a shallow maneuver conducted against the enemy flanks. (Some doctrines, other than OPFOR. call this a flank attack) The goal is to strike the enemy defenses and units from the flank, thereby, avoiding a frontal attack. It is primarily a tactical maneuver, conducted at division level and below. (See figure 3-5.) Forces conducting the close envelopment and those conducting a simultaneous frontal attack coordinate fire support.

(2) Deep Envelopment. The OPFOR directs deep envelopments at the enemy's rear areas. It is a tactical maneuver in which the attacking force maneuvers past the enemy force and attacks from the rear. The attacker is able to sever the defender's LOCs and prevent reinforcement or withdrawal. (See figure 3-6.) The OPFOR coordinates the actions between the forces conducting a deep envelopment and the forces advancing from the front. Forces conducting a deep envelopment may receive additional artillery support. This is because the depth of the deep envelopment may exceed the range of friendly, fire support advancing from the front.

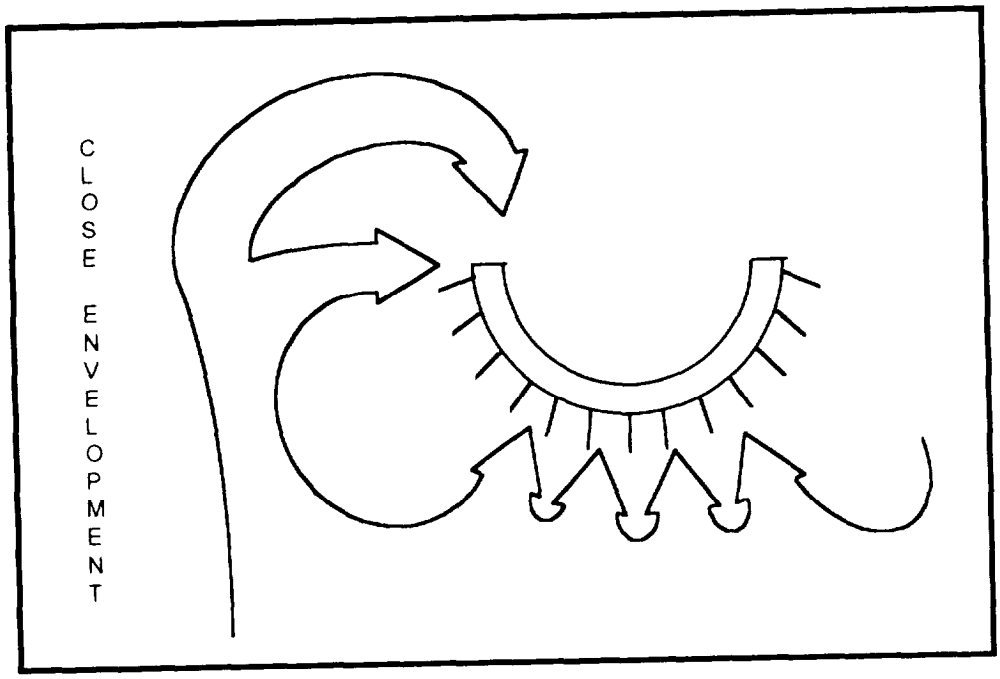


Figure 3-5. Close envelopment.

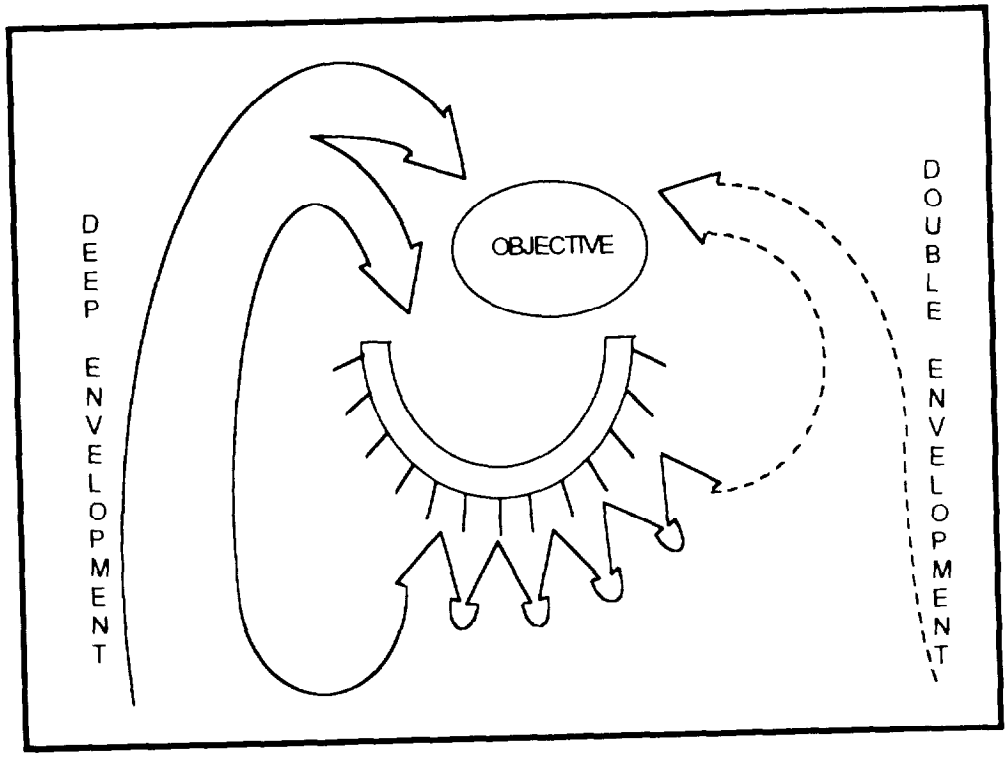


Figure 3-6. Deep and double envelopment.

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An FD could conduct a deep envelopment. The FD goes through a gap in forward enemy defenses resulting from the first-echelon forces penetration. A commander may also employ airborne or heliborne forces for the deep envelopment.

(3) *Double Envelopment.* The OPFOR prefers a double envelopment, which can be a combination of two deep envelopments, two close envelopments, or a deep and a close envelopment. It expects to achieve the most success with an envelopment of both flanks, encircling the enemy rear (See figure 3-6.) Combining envelopments creates favorable conditions for attacking the enemy's flanks and rear The OPFOR goal is to encircle enemy groupings. split them. and then destroy them. Heliborne assault troops can also land simultaneously in the enemy rear These troops can then assist in accomplishing a double envelopment. Forces carrying out close, deep, or double envelopments ordinarily maneuver in a march or prebattle formation when enemy resistance is light enough not to require the use of battle formation. The enveloping force can transition from march to prebattle to battle formation as the situation dictates

c. Turning movement. The turning movement is a variant of the envelopment. in which the attacker attempts to avoid the defense entirely, and seeks to secure key terrain deep in enemy's rear and along his LOCs. Faced with a major threat to his rear. the enemy must "turn" out of his defensive positions and counterattack rearward at a disadvantage. (See figure 3-7.)

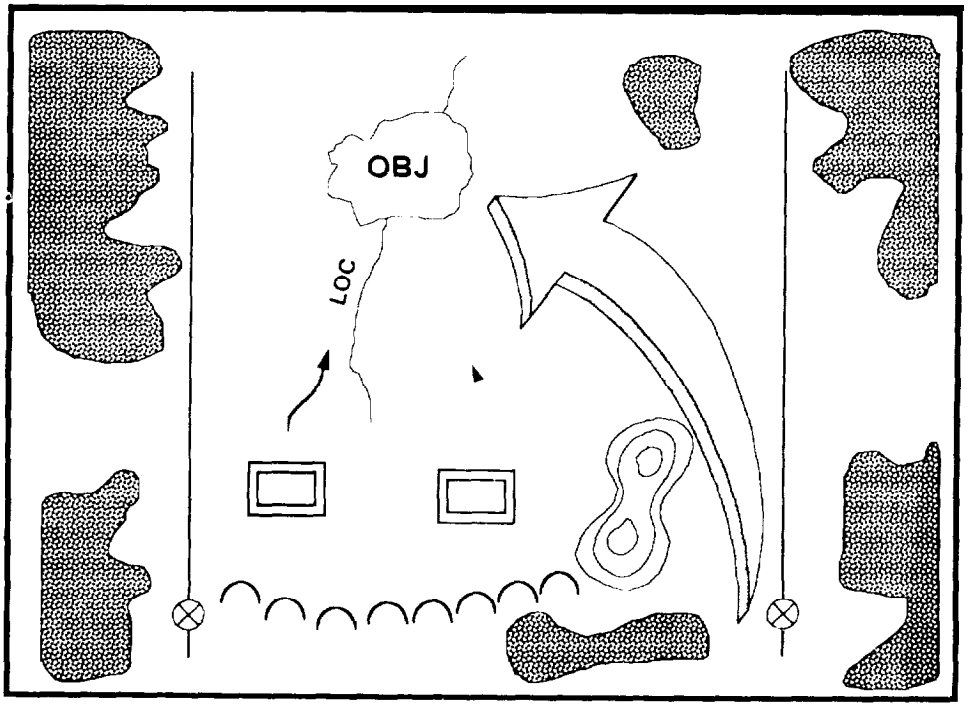

Figure 3-7. Turning movement.

d. Penetration. The OPFOR attempts a penetration when enemy flanks arc not assailable and time does not permit some other form of maneuver It attempts to rupture enemy defenses on a narrow frontage and thereby create both assailable flanks and access to the enemy's rear. (See figure 3-8.) The OPFOR masses sufficient combat power at the point of penetration to overwhelm the enemy and gain the advantage, It also masses tires from all available means at the point of penetration to make the breach. hold open the shoulder, and cripple enemy counterattacks. Second-echelon forces rapidly exploit success of the penetrating

forces. Since it pits the attacker's strength against the defender's, penetration may result in higher casualty rates than other forms of maneuver

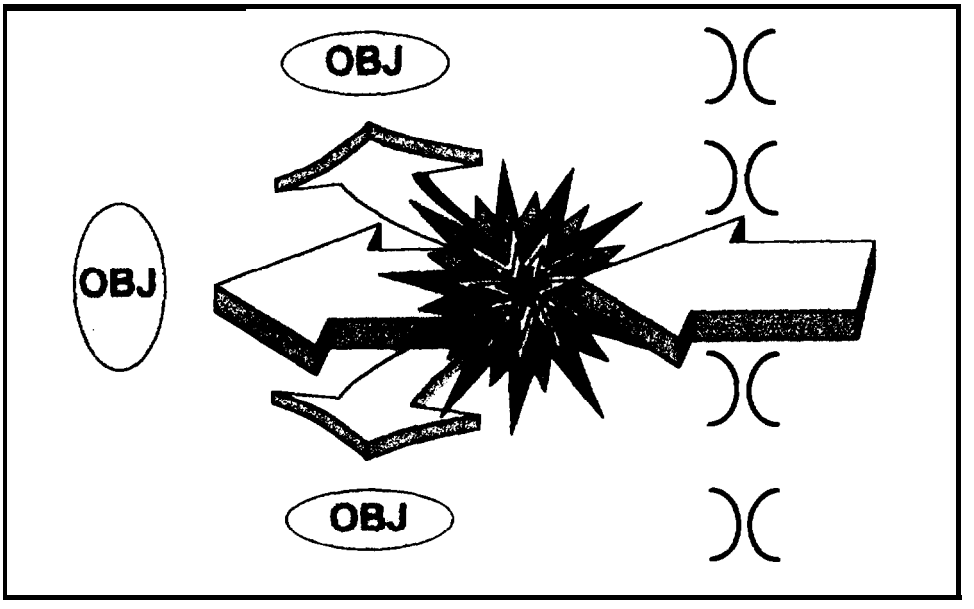

Figure 3-8. Penetration.

e. Infiltration. Infiltration is another means of reaching the enemy's rear without fighting through prepared defenses. (See figure 3-9.) It is the covert movement of all or part or the attacking force through enemy lines to a favorable position in his rear. Light infantry units are especially valuable for infiltration missions. If light infantry is unavailable, dismounted motorized infantry conduct infiltration missions. Infiltration forces may also link up with heavier forces in support of an attack. Other missions include raids and ambushes.

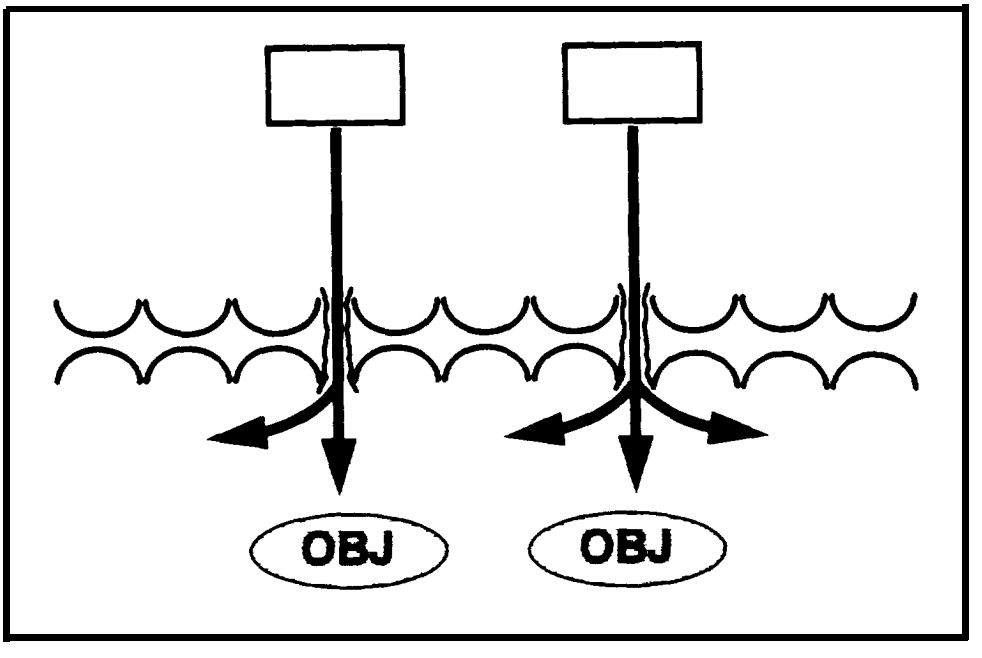

Figure 3-9 Infiltration.

Successful infiltration requires, above all. avoiding detection and engagement. Since that requirement limits the size and strength of the infiltrating force. infiltration can rarely defeat a defense by itself. The OPFOR normally uses it in conjunction with some other form of maneuver. Infiltration is most feasible in rough terrain and reduced visibility. or in areas poorly, covered by observation and fire. The OPFOR uses infiltration to-

- Attack defensive positions from the flank and rear.
- Secure key terrain in support of the OPFOR main attack
- Disrupt the enemy's rear

3-4. ELEMENTS OF COMBAT FORMATION

OPFOR tactical commanders organize for combat by assigning units to function as elements of the combat formation, The combat formation corresponds to the situation and facilitates attaining the goal of battle. It should ensure-

- Successful destruction of the enemy.
- Achievement of the assigned mission.
- Combination of fire, movement, and maneuver in the course of the attack
- Continuous C^2.

The following paragraphs describe the various elements of this OPFOR organization for combat

a. *Reconnaissance*. The location of the reconnaissance objectives and the enemy dispositions determine how far in front of their parent organization the reconnaissance assets move. In the attack against a defending enemy, they typically reconnoiter the enemy force whose destruction is the parent organization's immediate mission. They then reconnoiter to the depth of the subsequent mission. In the march, their purpose is to provide the commander maximum warning of enemy forces, in terms of time and distance. and to establish the strength and disposition of these forces. They also identify terrain features that could slow the OPFOR rate of advance or hinder the accomplishment of the parent organization's mission.

b. *Forward detachments.* A reinforced maneuver battalion that may or may not be a combined arms force is the base organization for an FD. Divisions commonly establish a battalion-sized FD to maneuver ahead of the lead brigades This battalion comes from a second-echelon brigade. If the division is using a single-echelon formation, this battalion is more likely to come from the brigade conducting the supporting attack, but may come from one of the brigades in the main attack. Although a division normally only has one FD, there can be several within the division because each brigade may also form its own company-sized FD.

The FD works for the commander that directed its formation. There is no set distance between the FD and the main body. The FD precedes the parent organization's main body, by 1 to 2 hours. The FD focuses its combat actions on securing key terrain that will facilitate the division's attack or forward movement and conducts raids against important enemy sites. The detachment's actions are preemptive in nature, intended to prevent the enemy from establishing defensive positions. Secondary missions include destroying covering forces and engaging enemy reserves to prevent them from influencing the main battle. The FD does not have

to follow a specific axis of advance, but its objectives are normally on the main axis of advance for the parent organization. After achieving its objective, the commander may order the FD to defend the objective until its parent organization's main body links up with it. or it map assume a new offensive mission. An FD may link up with airborne or heliborne forces that have landed on these objectives. Although the FD attempts to avoid enemy contact white moving to its objective, elements of the FD may also conduct raids against key targets enroute to the FD's objective. FD objectives include passes. defiles, road junctions. and water crossing sites FDs conduct reconnaissance as they advance.

In the march, the FD normally moves ahead of or parallel to the march security elements (advanced guard) of the lead brigades but behind the division's reconnaissance patrols. The commander of the FD can also dispatch his own reconnaissance patrols

(1) *Against unprepared defense.* The characteristics of the offensive are surprise, speed. and attempts to preempt or forestall the enemy. FDs may attempt to strike deep into the enemy tactical zone of defense (main defense area) before enemy defenses are fully organized and solidified. Reinforced battalions (or companies) given such missions receive full support from artillery and direct-support aviation.

Against an unprepared defense. where the enemy has deployed only his covering force, FDs at all levels may initiate the attack If the enemy has advanced during the night before the attack, FDs would then attack on multiple axes across the OPFOR attack zone to penetrate enemy *covering forces* rapidly. They would then drive at top speed in prebattte or march formation to seize and hold key terrain within the enemy division's main defense area. thus preempting enemy occupation of positions there. There may also be company- or battalion-sized *heliborne landings.* designed for linkup with the FDs. The purpose of such tactics in support of an attack IS to disrupt or preempt enemy defensive structure while opening multiple avenues for swift attacks by larger first-echelon forces Figure 3-10 shows typical depths of FD missions against an unprepared defense.

Once the penetration battle IS complete. FDs at all levels of command lead the exploitation or pursuit, helping to envelope and destroy enemy forces. Throughout the exploitation, strong FDs continue to press the advance into the enemy rear on several axes. Numerous deep penetrations by FDs early in the battle would result in an *intermingling of enemy and friendly forces.* This situation would complicate or forestall enemy use of weapons of mass destruction The OPFOR will accept heavy losses in such deep-penetration forces, if it could cause an early collapse of the enemy's defensive structure before he could resort to use of these weapons

(2) Against partially prepared defense More often, the OPFOR will find the enemy defense partially prepared, with the covering force III place and the tactical zone of defense partially occupied. An FD could attack under these conditions if provided heavy fire support Its mission is to overcome the covering force and penetrate into the tactical zone of defense to prevent the enemy from establishing a firm, continuous defense. It could also facilitate the commitment of the main force Figure 3-10 shows typical mission depths under such conditions. which would be one step shallower than for an unprepared defense

During the attack. FDs use reconnnissancc to detect gaps in enemy defenses occurring naturally or created by artillery fire. If a gap exists. or in fire support has neutralized sectors of the defense. the FD moves quickly through the gap to secure objectives in the enemy brigade or division rear.

AGAINST UNPREPARED DEFENSE

FD Subordination	Mission	Depth (km)
Division	Rear of tactical zone of defense	30-50
Brigade	Front of tactical zone of defense	20-30

AGAINST PARTIALLY PREPARED DEFENSE

FD Subordination	Mission	Depth (km)
Division	Front of tactical zone of defense	20-30

Figure 3-10. Forward detachment missions.

(3) Against fully prepared defense. If the OPFOR encounters a prepared, fully occupied defense, their FDs do not participate in the battle until first-echelon forces have completed the penetration of enemy first-echelon positions (the front of the tactical zone of defense). In rare instances, an FD could assist the main forces in penetrating the covering force or initiate subsequent attacks into the tactical zone of defense. However, it is unlikely that it would emerge still capable of further missions.

c. Echelons. The OPFOR tactical combat formation in the offense is a response to the depth and preparedness of enemy defenses. The intent is to build combat power continuously on the forward edge. OPFOR tactical commanders organize their forces in either two echelons or in one echelon with a reserve. The rule of thumb is that, if the enemy defense has a second echelon (or reserve), the OPFOR would employ a second echelon to sustain the momentum of the offensive. The OPFOR does not consider a three-echelon formation to be normal, but sometimes uses it when advancing in the mountains, because of limited maneuver space in an advance along a narrow valley.

(1) Single-echelon formation. If the enemy has not prepared its defenses in depth or has not supported them by a large reserve, the OPFOR would probably attack in a single strong echelon followed by a small reserve. (See figure 3-11 for an example) It could also use this formation when attacking on a secondary axis. When using this formation, the commander should maintain a reserve to retain the ability to influence the battle. If he commits his reserve, he must form another one immediately, normally from an organization not in contact with the enemy.

(2) Two-echelon formation. A two-echelon combat formation is normal when attacking a defense

- Is prepared or at least partially prepared in depth
- Has a reserve.
- Is on the higher commander's main axis.

The first echelon normally contains the bulk of the combat power. It must achieve a penetration of enemy defensive positions in order to achieve its mission. Its mission is to destroy the enemy's corresponding first echelon (immediate mission) and develop the offensive into his depth (subsequent mission). The commander's concept of the battle then calls for commitment of the second echelon to complete the subsequent mission, if the first echelon is not capable of achieving it. (See figure 3-12 for an example.)

At the same time the commander issues missions to the first echelon, he assigns the second echelon a mission, route of advance, and a likely line and time for its commitment. Upon commitment, the second echelon normally passes through gaps or at the flanks to avoid a passage of lines and intermingling of forces. Specific second-echelon missions may include-

- Destroying bypassed enemy elements
- Defeating a counterattack
- Achieving the subsequent mission.
- Completing the missions of the partially successful first-echelon forces that are no longer combat ineffective.

Once the commander commits the second echelon, he forms a reserve from remnants of the first echelon. The remainder of the first echelon continues its attack to the degree that it is able.

Although the commander preplans deployment lines and time for committing the second echelon. he retains flexibility in implementing them. depending upon the progress of the battle. It is important to remember that a second echelon is an application of additional force. not a reinforcement for the first echelon. With the OPFOR view of only reinforcing success. the commander does not commit the second echelon to complete an unsuccessful portion of the first echelon's attack However, the second echelon could be a replacement for a first echelon force that has been successful, but at the cost of its own combat effectiveness. The second echelon's attack may be on an axis different from the one originally planned for it.

d. Reserves, Reserves fall into two categories manceuver, and antitank.

(1) *Maneuver reserve* Tactical commanders can form a maneuver reserve, but normally only if attacking in a single echelon. Initially, the commander does not give the reserve a mission. He dots assign it a route and axis of advance. He holds it as a contingency force to meet unanticipated requirements, such as:

- Exploiting unforeseen success
- Repelling counterattacks
- Covering the flanks of the parent organization.

Ideally, he would commit the reserve to exploit success upon achievement of the formation's immediate mission.

(2) Antitank reserve. Tactical commanders use their AT assets to form an AT reserve. The basic missions of the AT reserves are-

- To cover friendly units advancing to attack
- To repel or block enemy tank attacks or counterattacks.
- To cover the deployment of the second echelon *or* maneuver reserve
- To secure the flanks

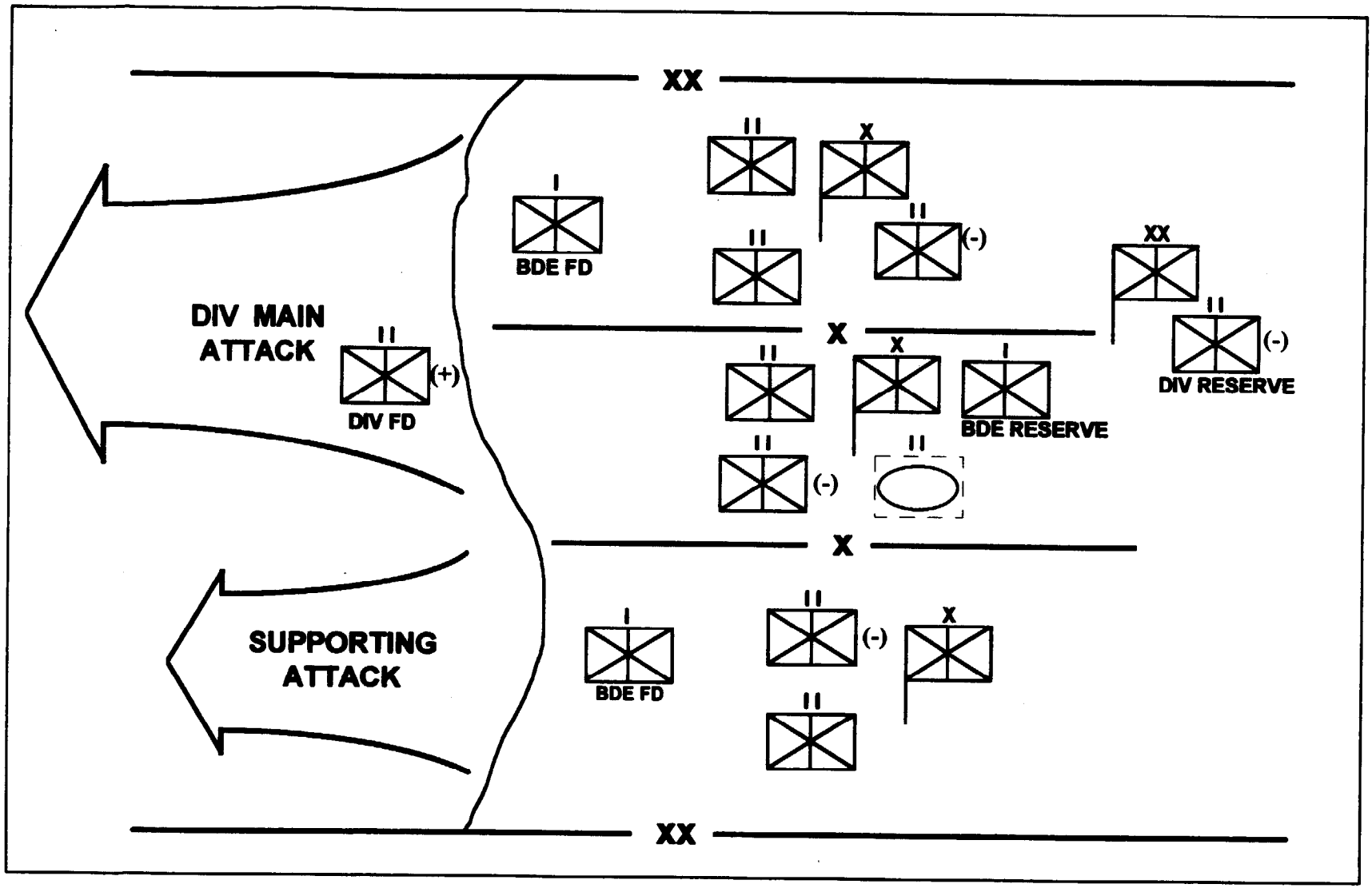

Figure 3-11. Division single-echelon formation (example).

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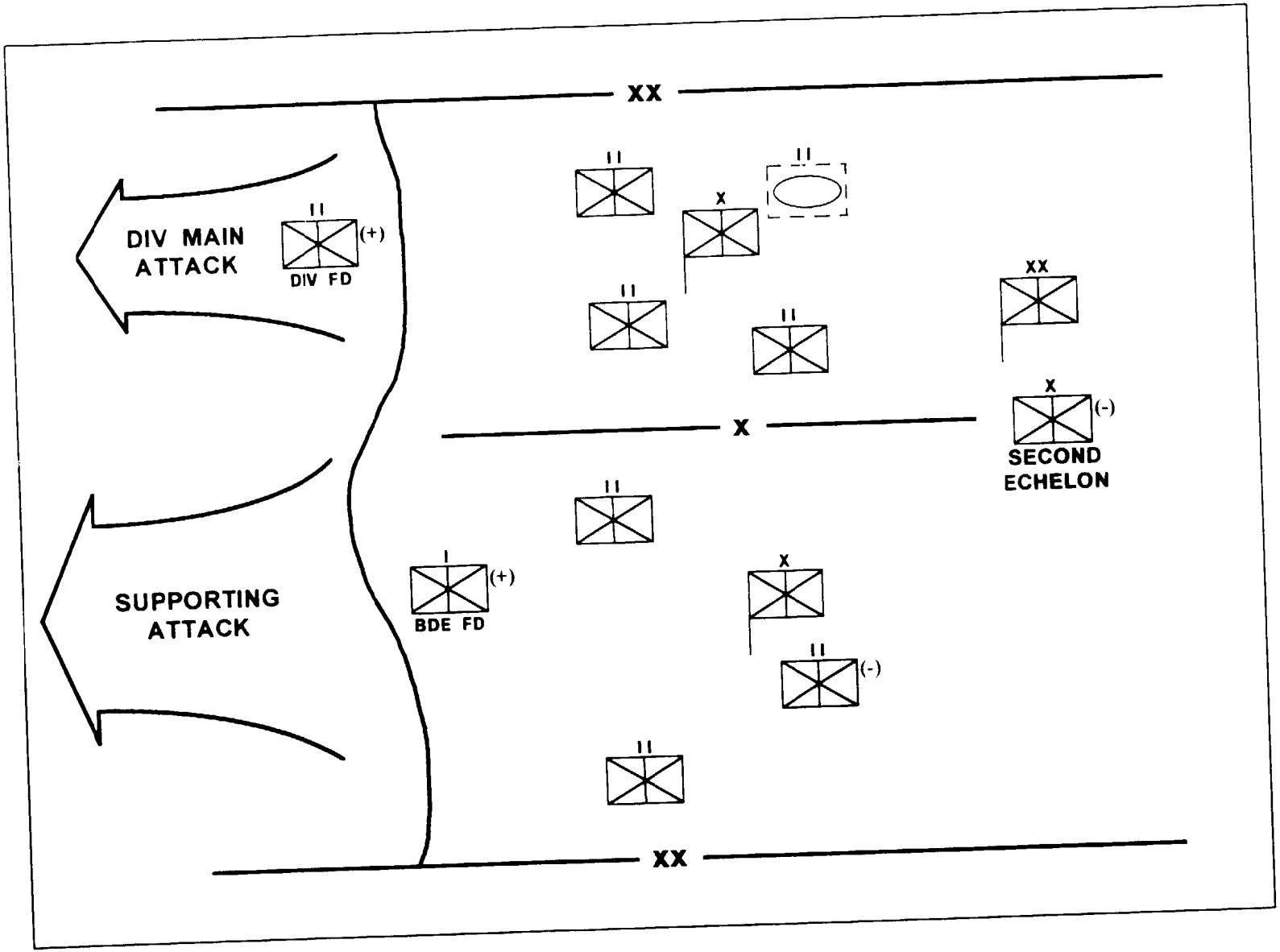

Figure 3-12. Division two-echelon formation (example).

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AT reserves provide a means to defeat armored threats without having to weaken an attack echelon. The antitank reserve moves with an MOD. This combined force travels between the first and second echelons on the axis of the main attack. Planned commitment lines for the antitank reserve and MOD are across the most likely enemy counterattack routes.

e. *Artillery support.* OPFOR uses centralized fire planning. It integrates conventional artillery and air strikes, missile strikes, and possible chemical strikes. The fire plan includes details specifying the time of assignments, groupings, and displacement of artillery. Combat instructions specify the missions of designated artillery units and identify the location of observation posts and firing positions. The orders specify the time for artillery to be ready to fire.

Fire planning for the attack is methodical and highly quantitative. This reflects the need to determine ammunition requirements and to distribute planned fires effectively. The chief of artillery at division or brigade level must determine the availability of artillery and its organization. Then he weighs these against the numbers and types of targets and the commander's decision for coordinated action in the attack. He also allocates targets to artillery, tanks, aircraft, and chemical weapons. When time permits, he bases fire planning on thorough, detailed reconnaissance and careful study of the attack plan. In any attack, a systematic targeting effort underlies the fire plan at all levels.

(1) *Deployment.* Artillery units arc among the first combat forces to deploy. Artillery allocated by higher headquarters joins the designated attacking force in the assembly area or links up on the march. Artillery designated to support or reinforce the attack occupies firing positions early enough to cover the advance of the division several hours before the beginning of the attack. Artillery attached to maneuver brigades moves at or near the head of the brigade main body.

(2) Phases. Fires in support of an attack follow a sequence of four phases:

- Fire support of the maneuver forward.
- Fire preparation of the attack
- Fire support of the attack
- Fire accompaniment.

f. *Air defense.* The mission of tactical air defense is to prevent enemy air action from disrupting the actions of ground forces. It achieves this by destroying enemy aircraft or by forcing them to expend their ordnance before reaching their targets. Unless protected, ground forces engaged in an attack may be subject to intense air attack. As a result, the OPFOR allocates the bulk of its air defense units to maneuver units in areas where it anticipates the greatest air threat. Allocated air defense assets would join the supported unit to which attached in pre-attack assembly areas They provide cover while in the assembly area, on the march, and during the attack.

(1) *Deployment.* Deployment of air defense units supporting the offense depends on an assessment of the air threat, terrain, tempo of supported formations, and mobility of supporting systems In the offense, the exact location of air defense weapons depends on the following factors:

- The mission of the supported unit

- The commander's chosen attack formation
- The terrain, fields of fire and observation

Air defense assets normally deploy at distances of one-third to one-half their effective range behind the troops they support. They set up to provide Interlocking and mutually supportive fields of fire. Spacing between air defense assets should reduce the likelihood of simultaneous destruction of an enemy aircraft.

(2) Priorities. Priorities in deploying air defense assets are to protect command posts, then artillery groupings and first-echelon forces. Priority of air defense shifts to the second echelon or reserve forces upon their commitment.

g. Raiding detachment. A raiding detachment is a highly mobile unit, usually a reinforced battalion. Its primary mission is to destroy or capture important military targets. Some examples are-

- An artillery battalion.
- A tactical missile battery.
- A fire support helicopter forward base
- A supply base or depot
- A river crossing site

Its secondary missions can include seizing Important terrain and blocking enemy reserves.

Like forward detachments. a raiding detachment also sends out its own reconnaissance elements and seeks to avoid contact enroute to its objective. Although its organization, movement methods. and objectives are similar to those of an FD, a raiding detachment differs in that it usually, but not always, rejoins its parent unit upon completion of its mission. Instead of rejoining its unit. a raiding detachment could receive a new offensive mission or defend the objective until the parent unit links up with it. Reinforced companies and platoons can also be raiding detachments

h. Enveloping detachment An enveloping detachment is a unit whose mission is to penetrate through gaps in the enemy's defense, striking at enemy forces on their flanks or in their rear The OPFOR stresses the importance of enveloping detachments in offensive battle in mountainous areas, where typical missions include seizing important terrain features In mountains. an enveloping detachment often acts in coordination with a tactical airborne or heliborne landing. in coastal regions. it could cooperate with an amphibious landing. The OPFOR could also use it in conjunction with a high-precision weapon. or chemical strike.

3-5. TACTICAL FORMATIONS

Within each element of the combat formation, an attacking force can deploy into any of the three types of *tacticalformation--march,* prebattle, or battle--depending on its mission and the combat situation. The OPFOR employs a standard drill for deployment into battle. It can incorporate this drill in almost any form of attack, but this is most common in the attack from the march and the meeting battle. The drill proceeds from *march formation* (brigade and possibly battalion columns), through *prebattle formation* (battalion, company, and platoon columns), into *battle formation* (platoons deployed laterally). Tactical considerations

and terrain determine the sequence of deployment and the distances of the lines of deployment from the enemy. Brigades, battalions, and smaller units transition back and forth between march, prebattle, and battle formation based on the combat situation, not on fixed doctrinal lines.

a. *March formation.* The OPFOR prefers to remain in column or march formation as long as possible for the sake of speed. It resorts to lateral deployment only by necessity, such as when combat is imminent. Up to that point, the maneuvering force is in some form of tactical march formation. (For more detail, see Chapter 5, March.) Battalions and below march in a single column. Even a brigade typically marches in one column until subordinate units begin their deployment into prebattle formations. If terrain permits, a brigade might use two march routes from the onset.

b. *Prebattle formation.* When nearing the enemy's defensive line, the OPFOR uses prebattle formation as a transition between the march and battle formations. Prebattle formation focuses on speed, dispersion, flexibility, and firepower in an anticipated direction, When entering prebattle formation, the OPFOR deploys into successively smaller unit columns. These multiple columns increase forward combat power until forces reach the assault position and assume the battle formation. In prebattle formation. the columns have greater lateral dispersion, but less depth than in the march formation.

Forward detachments and advance guards assume a prebattlc formation when the chance of enemy contact increases or when they are about to attack an objective. *Not every element in a division, brigade. or battalion assumes a prebattle formation at the same time.* The main bodies of each respective element of the march remain in march formation until required to deploy into a prebattle formation. This applies to second-echelon forces as well.

Prebattle formation minimizes troop vulnerability to enemy artillery and air strikes as well as high-precision weapons. It allows for rapid maneuver and quick deployment into battle formation. By remaining in a column, the attacking unit maximizes its speed. presenting a minimum number of targets for the enemy's forward direct fire weapons systems. The disadvantage of remaining in columns is the unit's inability to use all of its own fire systems against enemy positions directly to its front. Forces in prebattle formation can either deploy into battle formation or return to march formation. depending on the tactical situation. A force might remain in prebattle formation for a length! period of time. It normally passes through some form of prebattle formation when moving from the march into full deployment for an attack

c. *Battle formation.* The OPFOR uses battle formation when encountering strong enemy resistance during-

- The meeting battle.
- The attack against a defending enemy.
- The pursuit.
- The counterattack

Only those elements in contact with, or expecting immediate contact with, the enemy deploy into the battle formation.

3-6. TYPES OF OFFENSIVE ACTION

All levels conduct three basic forms of offensive combat action, all of which may occur in the course of the offensive. The OPFOR defines these in terms of the postures of the attacker and the defender. These are: the attack against a defending enemy, the meeting battle, and the pursuit. In all cases, the method of launching an attack must ensure concealment of its preparation and the delivery of surprise and powerful strikes against the enemy.

a. Attack against defending enemy. At the tactical level, the attack against a defending enemy is the basic form of offensive combat. The commander bases his attack plan on available reconnaissance information on enemy deployment and terrain, and the mission assigned. An OPFOR commander attacks when the enemy is in a defensive position and he knows the enemy's location. It can occur in a variety of situations: envelopments, supporting attacks, penetrations of the enemy defense, and exploitation. There are two methods of conducting an attack against a defending enemy: *from the march* or *from positions in direct contact.* Figure 3-13 illustrates the difference between the two methods, using examples of a motorized infantry battalion performing each type of attack.

b. Attack from the march. The OPFOR sees two possible scenarios of the attack from the march, based on whether the enemy has an unprepared defense or a partially or fully prepared defense. In an attack on *unprepared defenses,* the brigades would in essence conduct a series of meeting battles. Motorized or mechanized infantry divisions could rapidly go deep to secure operational or strategic objectives. The OPFOR then brings in light infantry as occupying forces. In an attack on *partially or fully prepared defenses,* the OPFOR will attack, envelop, and destroy the bulk of the enemy force. Then it pursues until it completely destroys the enemy

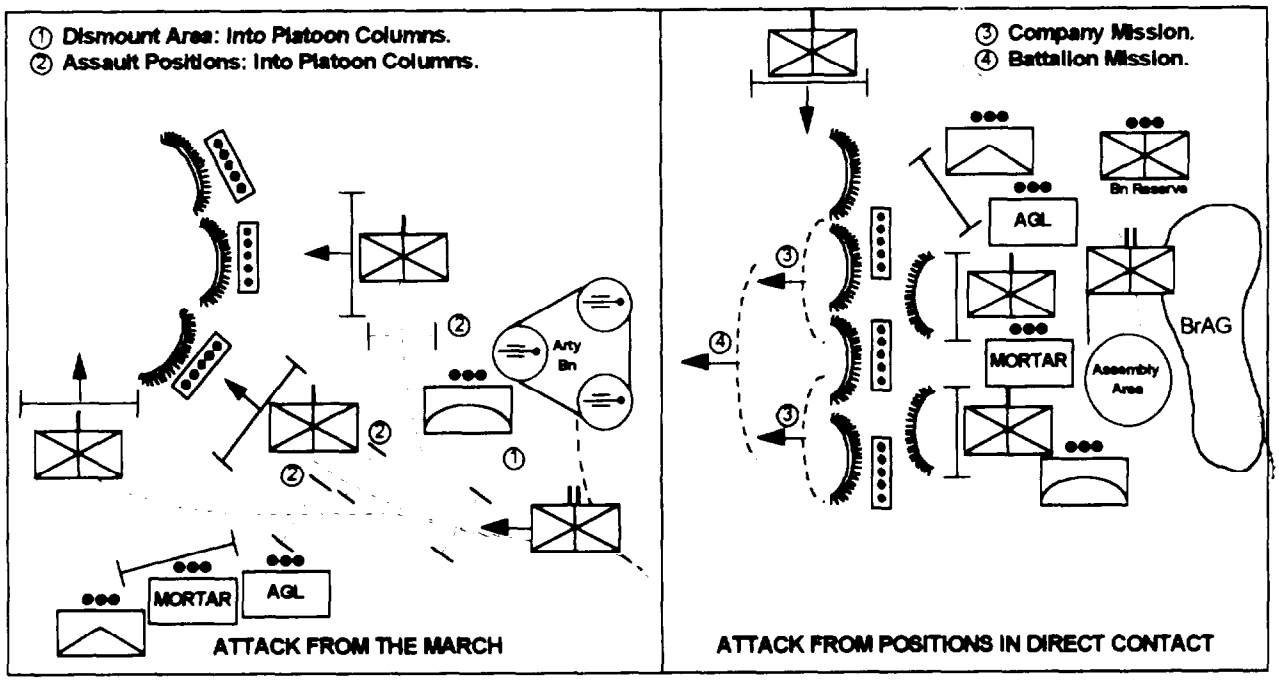

Figure 3-13. Attack against a defending enemy

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The attack from the march is the preferred OPFOR method of attacking a defending enemy. The attacking force is not in close contact with the enemy. It prepares for the attack in an assembly area, hidden from the enemy and out of range of his artillery. It moves out of the assembly area, toward the enemy, and deploys into battle formation preferably under cover of darkness, with artillery and air support, if available. This method of attack limits the enemy's capability to maneuver and helps achieve surprise.

The OPFOR sees these advantages in an attack from the march:

- It does not commit the unit before the attack
- It increases the chance of surprise.
- It allows greater flexibility
- It decreases the vulnerability to enemy artillery decreases.
- It enhances momentum
- It allows preparation for combat to take place out of contact with the enemy

The OPFOR realizes that an attack from the march also has *disadvantages:*

- Commanders may not be familiar with terrain and enemy dispositions.
- Coordination of tire, maneuver. and simultaneous actions is more difficult

c. Attack from positions in direct contact. The OPFOR launches an attack from positions in direct contact. Those positions may be part of or immediately behind defensive positions. It uses this action most often when changing over from the defense to the offense.

The OPFOR feels there are certain advantages from an attack from positions in direct contact:

- It allows more thorough study of terrain and enemy disposition.
- It permits more thorough planning and synchronization of assets.
- It facilitates coordination of fire and maneuver.

The OPFOR also recognizes disadvantages in using this type of attack:

- It may have already committed the unit.
- The unit is under threat of attack during preparation and is vulnerable to enemy observed fires.
- The unit has less chance of achieving surprise
- The unit has less chance of building up momentum and of overcoming inertia

d. *Combination of types of attack.* Obviously it is possible to combine the two types of attack against a defending enemy. After an unsuccessful first attack from the march, the OPFOR might try again, using first-echelon troops in an attack from a position of direct contact and new, second-echelon forces in an attack from the march.

e. Attack zones and strike sectors. In the offense, each first-echelon unit has an overall sector of responsibility, The OPFOR calls this the attack zone. This is the unit's assigned zone of action or overall attack frontage. The width of the zone depends on a number of factors:

- The unit's mission (main attack. supporting attack, or fixing force).
- The relative strengths and combat power of friendly and enemy forces.
- The nature of the terrain.
- Weather conditions
- Enemy disposition
- The number of axes of advance for the OPFOR unit's first echelon
- The presence of an air or high-precision weapon threat

Within this assigned zone, the unit conducts offensive actions. *However, the unit commander does nor distribute his forces evenly across the entire zone.* Instead. he designates main and secondary attack axes and possibly an axis for a fixing attack. In preparation for these attacks, he disperses his forces laterally and in depth, preferably in camouflaged assembly areas At a designated time, forces then leave the assembly areas and conduct rapid marches along their assigned axes.

On the main attack axis. forces of one or two subordinate units converge on a particular portion of the enemy defenses, called the *strike sector*. This is the area the commander has chosen for a major penetration. (Hence, another name for it is "penetration sector.") The strike sector is much narrower than the attack zone. This allows the commander to concentrate superior combat power at this point of attack at the designated time. This concentration appears only, during the actual penetration battle, when it is too late for the enemy to react effectively. If he has sufficient forces. the commander may also designate two strike sectors on separate axes to facilitate a double envelopment

Figure 3-14 lists some of the average widths of attack zones and strike sectors. These frontages could apply to a main attack conducted with two echelons at battalion and above or in a single echelon at company and below. These numbers are no more than examples or a rule of thumb to illustrate the planning process. Actual frontages can vary considerably. as commanders consider the factors listed above. For example, a division could have an attack zone of about 15 kilometers when conducting a supporting attack or 20 kilometers or more, when acting as a fixing force

f. Missions and objectives. The OPFOR focuses more on the *destruction of enemy forces* than on key terrain when it assigns missions and objectives. In nonlinear combat and deep battle, OPFOR commanders may give subordinates objectives in the graphic form of "goose eggs." Unlike his US counterpart, however, the commander does not place this nonlinear objective on key terrain. but rather on the area occupied by a particular enemy force

	Attack Zone	Strike Sector
Division	6-10 km	2-3 km
Brigade	2-3 km	1-1.5 km
Battalion	1-1.5 km	500-750 m
Company	500-750 m	150-200 m
Platoon	150-200 m	50-100 m

Figure 3-14. Typical attack zone and strike sector widths.

In combat that is basically linear, OPFOR commanders assign their subordinates immediate and subsequent *missions,* in terms of the rear boundary of an enemy force they are to destroy. The immediate mission involves the destruction of the enemy's main forces and seizure of a line that the OPFOR can use to start an exploitation and begin completing the destruction of the enemy. The subsequent mission should result in the complete destruction of the enemy force, including his reserves, and it should include the seizure of another specified line deep in the enemy rear. The depth of the immediate or subsequent mission depends on a number of factors, the numerical strength and combat capabilities of both OPFOR and enemy forces. their assigned mission, and the terrain. One of the most significant factors is the level of preparedness of the enemy's defense.

At *the tactical* level, *each organization's immediate mission corresponds to its subordinates' subsequent mission. The commander* assigns *second-echelon* units missions and subsequent directions of advance instead of subsequent missions. These directions of advance support the parent unit's subsequent mission.

(1) Enemy preparedness. To the OPFOR any defense with no more than 5 to 6 hours' preparation is *unprepared,* since the enemy has had time to emplace only, part of his covering force. In the first 5 to 6 hours, the enemy probably has only prepared basic primary fighting positions for individual soldiers, crew-served weapons, fighting vehicles, and artillery. The OPFOR defines a *fully prepared* defense as one with over 48 hours of preparation, with all defenses in place and fully engineered. This can include-

- Completion of trench lines (including communications trenches)

- Construction of overhead cover for portions of the trench line, especially for weapons positions.

- Improving primary fighting positions for vehicles and artillery (normally by the units themselves, rather than engineers).

- Construction of alternate lighting positions.

The OPFOR considers *anything in* between *these* two extremes *as partially prepared.*

While the OPFOR would prefer to attack an unprepared defense, it realizes that such opportunities will probably be rare. Likewise, it does not expect routinely to encounter and have to attack fully prepared positions. Therefore, under what the OPFOR considers *"normal"* conditions, it *expects* to *surprise the ememy in* a *partially prepared defense.* These are the conditions under which it hopes to conduct the majority of its attacks. In exceptional cases, the OPFOR may have to attack under less likely and less favorable circumstances. When it must attack a well-prepared enemy, it would have to reduce the depth of assigned missions.

The OPFOR closely ties its missions to the ratio of forces in the attack zone and the strike sector. This makes it possible to express their mission depth in terms of enemy deployments, rather than a fixed number of kilometers. For example, the immediate mission of a first-echelon battalion attacking through a fully prepared (heavily engineered defense) is the rear of an enemy first-echelon company. Its subsequent mission is the enemy first-echelon battalion's rear boundary. Against a *partially prepared* enemy defense, the normal immediate mission of an attacking battalion is the enemy battalion rear, and its subsequent mission is the rear of the enemy brigade reserve. This should also be the attacking brigade's immediate mission. Since these arc guidelines, commanders *may modify* them in light of the density and quality of the defense. These planning factors are common to both forms of attack against a defending enemy. Figure 3-15 illustrates the depth of immediate and subsequent missions an OPFOR commander may assign when attacking a extra-regional power with a partially prepared enemy defense. Figure 3-16 illustrates the missions he might assign when attacking a regional power with a partially prepared defense.

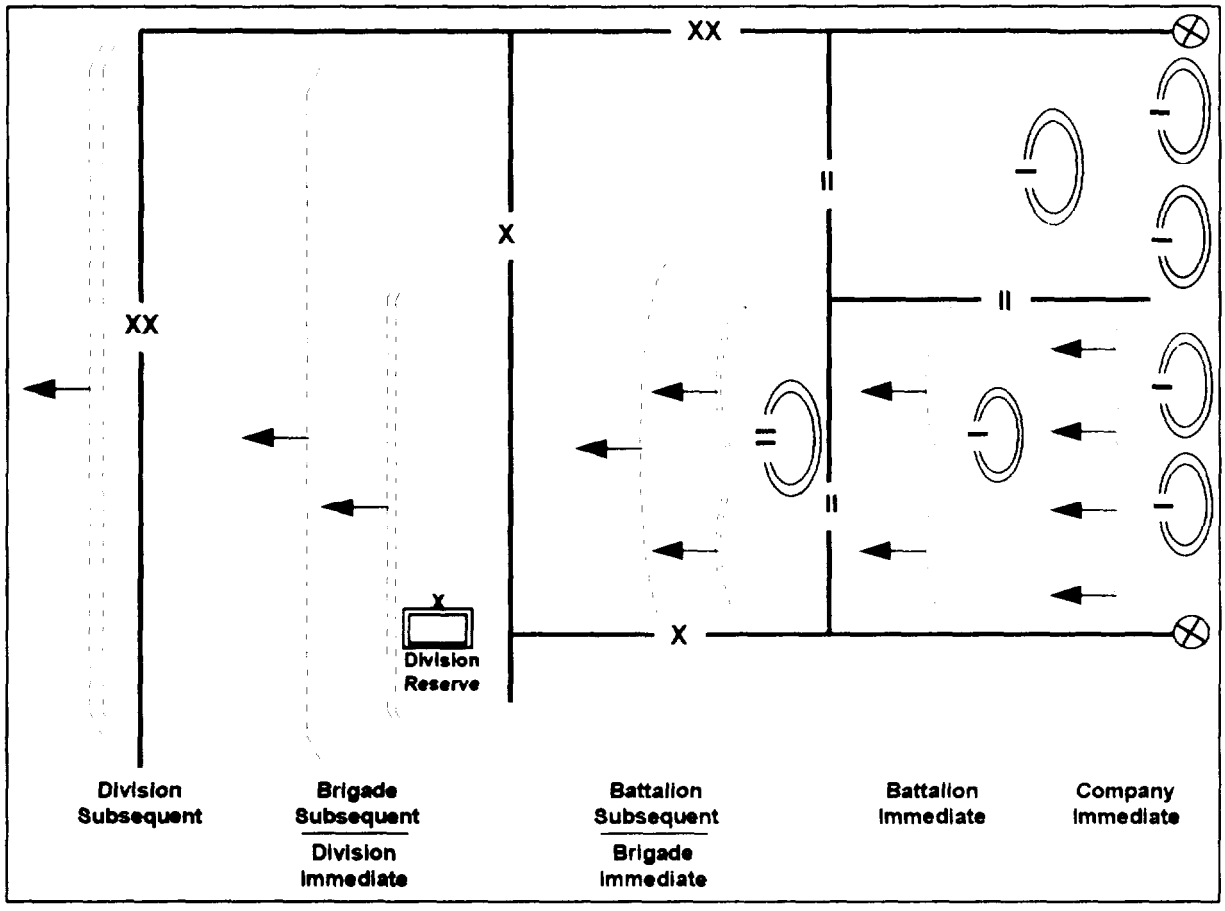
(2) *Linear missions.* An OPFOR commander usually assigns a subordinate a mission that he graphically represents by a line. This line often corresponds to the rear boundary of an enemy unit. The mission includes two elements: *destruction of the enemy within a zone* and *seizure of the assigned line.* The subordinate must achieve both of these by a specified time. This kind of mission is most common when combat is basically linear.

(3) *Subsequent direction of advance.* An OPFOR commander can assign a subsequent direction of advance to a subordinate, either in addition to or Instead of a subsequent mission. This assignment depends on the size and function of the subordinate's force The subordinate will follow this direction to assist in achieving his superior's subsequent mission. By setting the direction of further advance, the commander ensures his subordinates maintain a high tempo of advance.

(4) *Nonlinear objectives.* In nonlinear combat and deep battle, commanders may give subordinates objectives in the graphic form of "goose eggs." The commander normally selects the objectives on the basis of force-orientation, rather than terrain-orientation. Commanders usually commit their second echelons against linear missions, whereas they commit their reserves against nonlinear objectives. Forward detachments and helibome or amphibious landings usually have nonlinear objectives.

(5) *Continuation of attack.* After accomplishing the assigned mission or objective, the attacking force continues its attack as long as it remains combat effcctive. The OPFOR commander could consider a temporary halt to the offensive. to reorganize his force, when his combat potential drops to 60 percent. Historically, however, OPFOR commanders have continued to fight the offense at 45 percent strength and defensively at 20 percent. The surviving enemy combat potential is a large determinant of whether or not the OPFOR commander can continue the mission, in its present form. It also depends on the length of time over which losses have occurred.

First-echelon units that have accom-plished their original immediate and subsequent missions and are still combat effective may receive new missions. In this case. however. they would receive only one (immediate) mission and a subsequent direction of advance.



	Immediate	Subsequent	
OPFOR First Echelon	**Destroy/Take Positions of**	**Complete Destruction of**	**Destroy/Take Positions of**
DIVISION (Day 2-4)	Rear of Division	Rear of Division	Corps
DIVISION (Day 1)	Reserve Brigade of Division	Reserve Brigade of Division	Rear of Division
BRIGADE	Rear of 1st-Echelon Brigade	Rear of 1st-Echelon Brigade	Reserve Brigade of Division
BATTALION	Rear of 1st-Echelon Battalion	Rear of 1st-Echelon Battalion	Rear of 1st-Echelon Brigade
COMPANY	Rear of 1st-Echelon Company	Direction of Advance (Toward Battalion Immediate Mission)	
PLATOON	Rear of 1st-Echelon Platoon	Direction of Advance (Toward Company Immediate Mission)	

Figure 3-15. Probable mission depths against extra-regional power with partially prepared defense.

	Immediate	Subsequent	
	Destroy Integrity & Cohesion of/Capture	**Complete Destruction of/Capture**	**Destroy Integrity & Cohesion of/Capture**
DIVISION (Day 2-4)	District Capital	District Capital	Region 2d Echelon or Reserve
DIVISION (Day 1)	District Reserve	District Reserve	District Capital
BRIGADE	Rear of 1st-Echelon Brigade	Rear of 1st-Echelon Brigade	1st-Echelon Brigade Reserve
BATTALION	Rear of 1st-Echelon Battalion	Rear of 1st-Echelon Battalion	Rear of 1st-Echelon Brigade
COMPANY	Rear of 1st-Echelon Company	Direction of Advance (Toward Battalion Immediate Mission)	
PLATOON	Rear of 1st-Echelon Platoon	Direction of Advance (Toward Company Immediate Mission)	

Figure 3-16. Probable mission depths and objectives against regional power with partially prepared defense.

(6) *Commitment of second echelon or reserve.* Behind his first-echelon forces, the OPFOR commander may have one or two types of follow-on forces: a second echelon or a maneuver reserve. He plans to commit these forces upon achievement of the unit's immediate mission. This commitment must take place before the momentum of the advance decreases The commitment of the second echelon or reserve involves the intensification of reconnaissance activity artillery fire. air strikes, and the use of smoke to screen the force from enemy observation. Figure 3-17 illustrates this process. Before their commitment, second-echelon or reserve units advance in march or prebattle formation to the rear of the first echelon. The distance varies with the situation. The commander keeps second-echelon or reserve forces far enough forward to timely influence the battle. Their placement is far enough to the rear to protect them from the bulk of enemy direct fire and direct support weapons

Although the commander preplans the time and possible lines for commitment of the second echelon, he retains flexibility in implementing them, depending upon the progress of the battle. It is important to remember that a second echelon is an application of additional force, not a reinforcement for the first echelon, The OPFOR may encounter enemy defenses that arc stronger than it had anticipated. If it cannot penetrate them with the first echelon, it may commit second-echelon or reserve forces earlier than it had planned. The OPFOR would not use the second echelon to reinforce failure but seek to employ it on another, more favorable axis. If, however, first-echelon forces succeed in penetrating enemy forward defenses and are able to continue toward deeper missions. the OPFOR commander may not commit second-echelon or reserve forces until much later in the battle.

A second-echelon or reserve converges in *march columns* toward the penetration. The second echelon or reserve assumes prebattle formation or. if required by enemy actions. it assumes battle formation. Ideally, it passes through developed penetrations to drive swiftly into the enemy rear to achieve deep missions,

Once the commander commits the original follow-on force, he must establish a reserve from first-echelon forces or uncommitted combat assets He attacks any surviving pockets of resistance with elements of the original follow-on forces or destroys them with concentrated fires of artillery and any allocated aviation, including attack helicopters

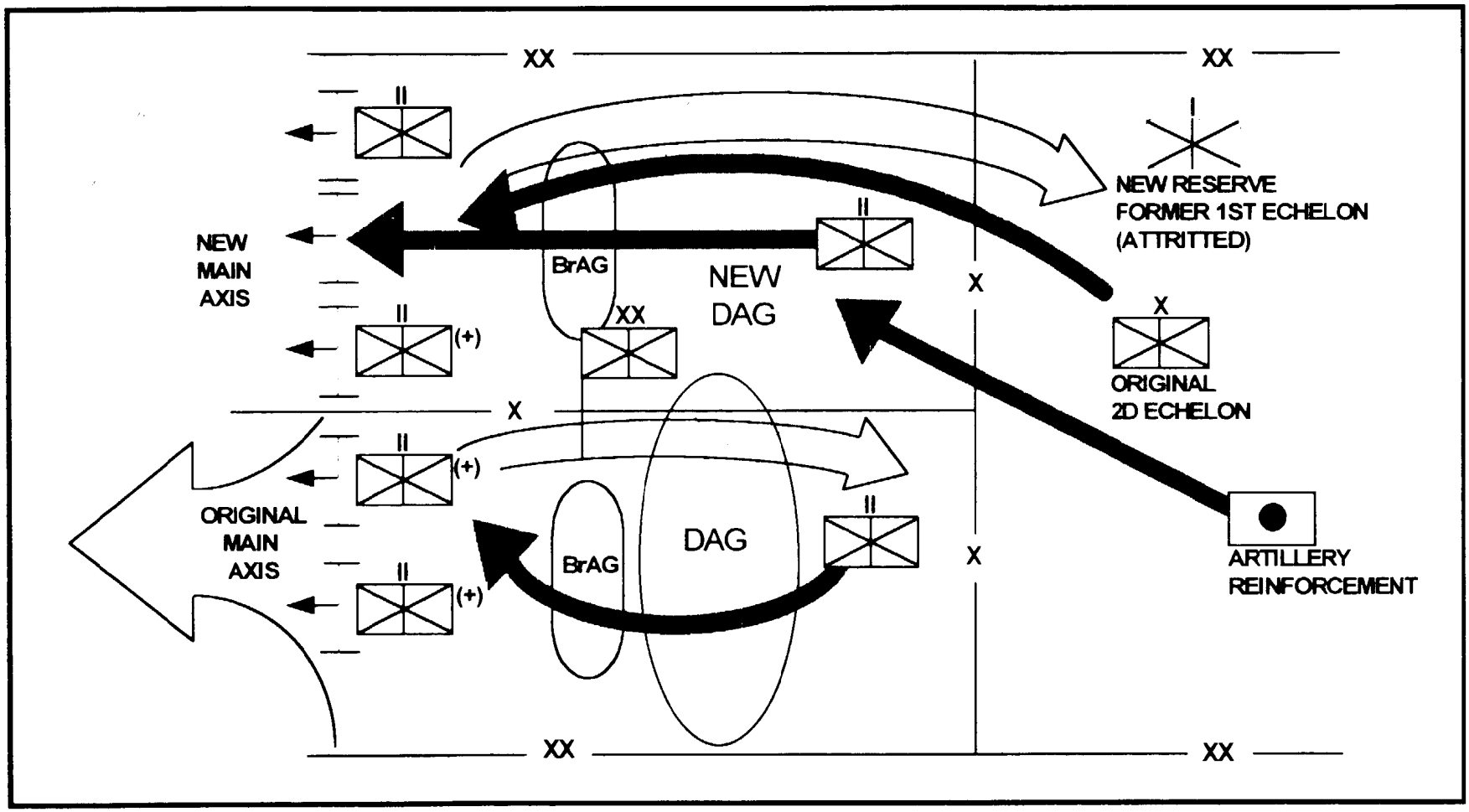


Figure 3-17. Commitment of second-echelon forces.

3-7. MEETING BATTLE

The OPFOR defines a meeting battle as an encounter between opposing sides both trying to fulfill their mission by offensive action. Figure 3-18 illustrates the circumstances under which a meeting battle may occur-

- When enemy forces are deploying forward
- When the OPFOR encounters an enemy counterattack.
- When the OPFOR develops the attack into the depths of the enemy's tactical zone.
- During a pursuit

The meeting battle is the basic form of offense used to meet, destroy enemy forces, and continue developing the offensive. The following conditions and requirements characterize meeting battles:

- Both sides are attacking from the march. leading to a close-quarter battle in which speed and surprise are the crucial factors. There is an intense struggle to seize the initiative, with each side trying to impose its will through offensive action. Only a commitment to the offensive ensures that most of the surprises happen to the enemy. Victory goes to the side that attacks first and builds up its combat power in the decisive area fastest. Thus, there is a premium on simple deployment drills.

- The battle is one of maneuver, with both sides accepting open flanks and gaps in their deployment as the action spreads over a wide area. Since neither side enjoys the advantage of having chosen and prepared the ground, the side that maneuvers boldly, has an Improved prospect of winning. For most or all of the time, the situation remains fluid and obscure. Commanders cannot always wait until the situation is clear. but should attack vigorously into the gaps and flanks of the enemy deployment. Given that there may be sudden and dramatic developments, the OPFOR needs special reserves and. in particular, antitank reserves to meet the unexpected.

- Meeting battles are decisive. The defeated side. outflanked and penetrated deeply from the front, with no prepared positions to fall back on. will find it difficult to go over to the defensive or withdraw. His force may very well cease to exist as a coherent combat grouping.

a . Planning. The OPFOR does not look upon the meeting battle as a purely chance occurrence It trains commanders to anticipate such a battle. to Identify a likely point of contact, to choose advantageous terrain, and to take the initiative. Figure 3-19 lists the phases of the meeting battle and the tasks the OPFOR associates with each element. The commander anticipating a meeting battle must consider the following factors in his planning and decisionmaking:

- Continuous and thorough reconnaissance from all available assets and the correct interpretation and use of reconnaissance information furnished from higher levels.

- The requirement for speed in decision making and transmitting of decisions

- Anticipation of enemy air and artillery strikes. and using that information in gaining tire superiority.

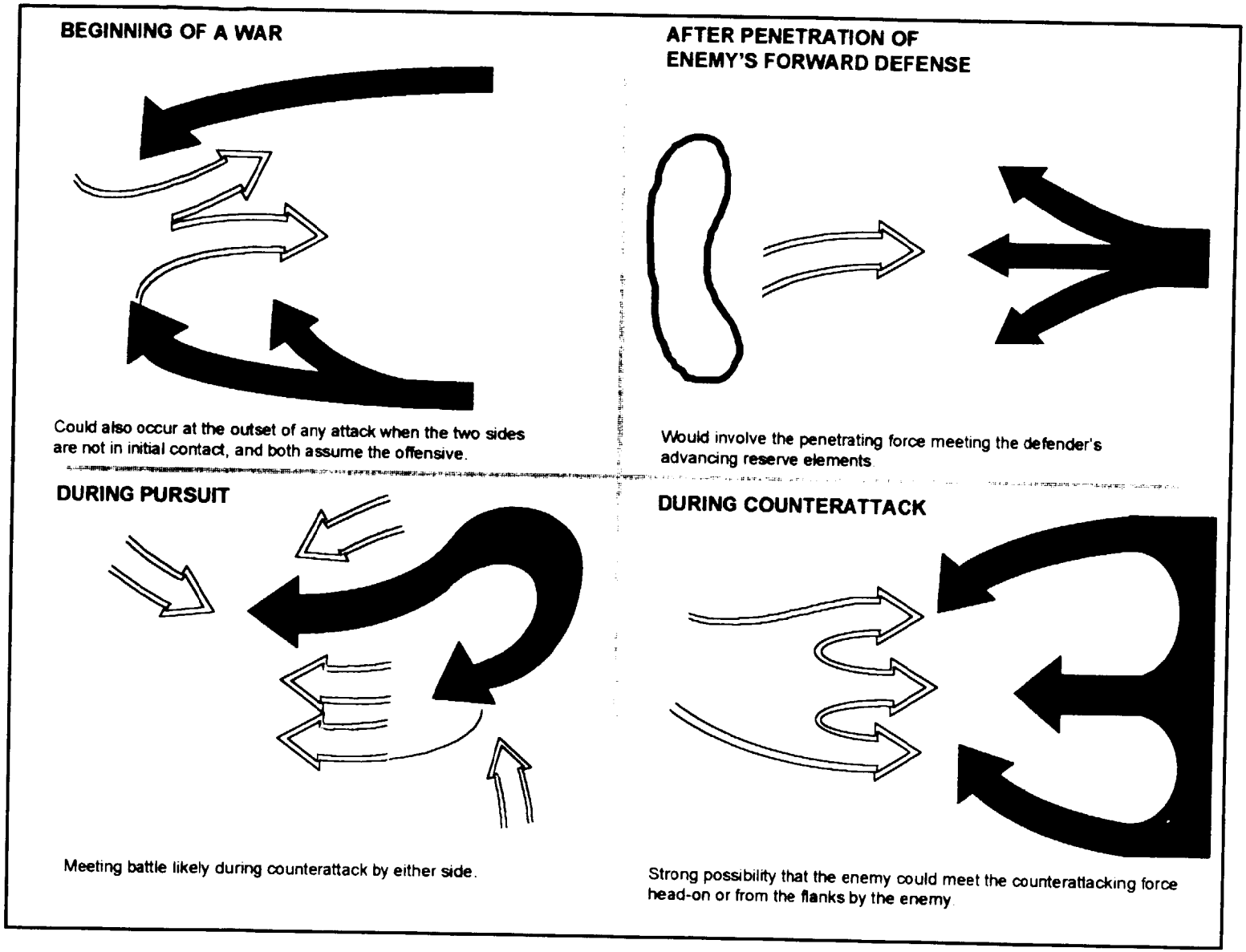


Figure 3-18. Circumstances under which a meeting battle may occur.

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PHASE	ELEMENT IN MARCH	BASIC TASK	ACTIONS ON CONTACT
Initial Phase	Reconnaissance Patrols and Groups, including Combat Reconnaissance Patrols (CRP)	Obtain data on enemy disposition and terrain along main routes of advance.	● Disengage when possible. ● Report and/or continuously monitor the situation. ● Bypass enemy, continue to penetrate enemy positions. ● In favorable conditions (or out of neecssity), may attack advancing units, take prisoners, disorganize or disrupt enemy forces, and destroy enemy nuclear and high-precision weapons and C^2 systems.
	Forward Detachment	Seize key terrain to faciliate the advance of the main body May conduct raids en route to objective against key targets (nuclear and high-recision weapon systems, C^2 centers)	● Avoids contact as much as possible, moving rapidly to its objective. ● Necessary. conducts meeting battles like a battalion acting as an advance guard.
	Advance Guard, including Forward Security Element (FSE)	Move along route of main body to ensure uninterrupted advance of main body. overcoming enemy security and reconnaissance forces and obstacles	● Reports enemy contact and disruption. ● FSE deploys and attempts to overcome enemy force based on information from CRP(s). ● If the FSE is not able to overcome the enemy, it assumes a defensive cover position to support maneuver of main body of advance guard. ● Main body of advance guard attempts a close envelopment or double envelopment to defeat the enemy unless his force is overwhelming in size. ● If successful. units reform and resume march or Initiate pursuit. ● If unsuccessful, units hold positions or block enemy and continue attacking to support the subsequent maneuver and attack of the main body of the parent unit.
Actions of Main Body	Main Body	Deploy rapidly for the attack and defeat of the enemy. generally from the flanks.	● Based on information from forward elements, commander maneuvers his forces and attempts to envelop. ● Units march rapidly to assigned sectors and deploy in prebattle or battle formations as needed to assault enemy forces.
Conclusion	Main Body	Develop the attack into the depths of the enemy rear	● If enemy withdraws, it initiates pursuit. ● If It decisively defeats the enemy, it resumes direction of march and overall mission ● If it does not defeat the enemy, it continues to develop the attack and holds positions aggressively until higher headquarters can conduct its maneuver. ● If it IS unsuccessful. it may go over to the defense in the course of the offense.

Figure 3-19 Phases of meeting battle.

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- Seizure of the initiative through immediately responsive deployment of maneuver forces

- Adequate flank and rear security.

The initial phase of the meeting battle is the period of combat that starts when the leading advance guard element encounters the enemy and ends with the commitment of the main body. Employment of the main body depends on the success of the advance guard. If the advance guard is successful, attack by its subelements destroys the enemy force. the advance guard resumes the march, and the main body never deploys If the advance guard is not initially successful, however, it would attempt to fix the enemy force. The main body would then deploy to destroy the enemy force, using one of two forms of maneuver an envelopment or a frontal attack. The envelopment is the preferred form of maneuver. The meeting battle concludes when one of the following occurs'

- Continuation of the march, due to defeat of the enemy force.

- A transition to the pursuit, if the enemy withdraws

- A transition to the defense, if the OPFOR is unable to overcome the enemy force

b. *Actions on contact.* Commanders at all levels must know their higher commander's intent and concept for actions on contact so that no time is lost waiting for orders. (See figure 3-20.) These meeting battles often occur in small-unit combat and where reconnaissance has been ineffective. Aggressivc offensive actions characterize meeting battles The advance guard pushes back or destroys small enemy units before the enemy can hinder the advance of the main body. When the advance guard encounters large enemy forces or heavily defended areas. it acts quickly, and aggressively to develop the situation and. within its capability, to defeat the enemy Available combat power might be insufficient to climinate the enemy. The advance guard can then identify enemy dispositions and contain the enemy forces until the commitment of the main body elements. The brigade commander must decide whether to order the advance guard to destroy the enemy or continue the movement. He can order a battalion from the main body to fix the force and bypass with the rest of the brigade. Conversely, he can order the battalion to conduct an attack as part of the entire brigade. If the brigade cannot overcome or by pass the enemy, the brigade commander can conduct a defense while the division commander develops the situation

3-8. PURSUIT

The OPFOR defines *pursuit* as a type of offensive action conducted against a withdrawing enemy. The goal of the pursuit is to complete the destruction of the enemy. OPFOR doctrine stresses that it can only achieve a decisive defeat of an enemy force by, vigorous and continuous exploitation of tactical advantages. The OPFOR considers pursuit one of the principal forms of exploitation. Exploitation is the development of the attack into the tactical and operational depth of the enemy. The OPFOR executes the pursuit by blocking the enemy's withdrawal routes and destroying the enemy in a series of attacks. The pursuit phase begins when the enemy attempts to break contact and withdraws The pursuit may end when--

- The pursuing units have destroyed the enemy forces

- Pursuing elements outdistance their support and arc in danger of being cut off

- The enemy successfully establishes a strong defensive position.

Pursuit offers swift and deep movements of forces to strike the enemy's most vulnerable areas. The basic requirements for a successful pursuit include planning and organization, detection of withdrawal, and maintenance of high tempo. An enemy can withdraw as a result of a meeting battle, or after a penetration of his defensive position. An enemy may deliberately withdraw when threatened with envelopment, making a redistribution of forces, or attempting to draw the OPFOR into an engagement area (kill zone).

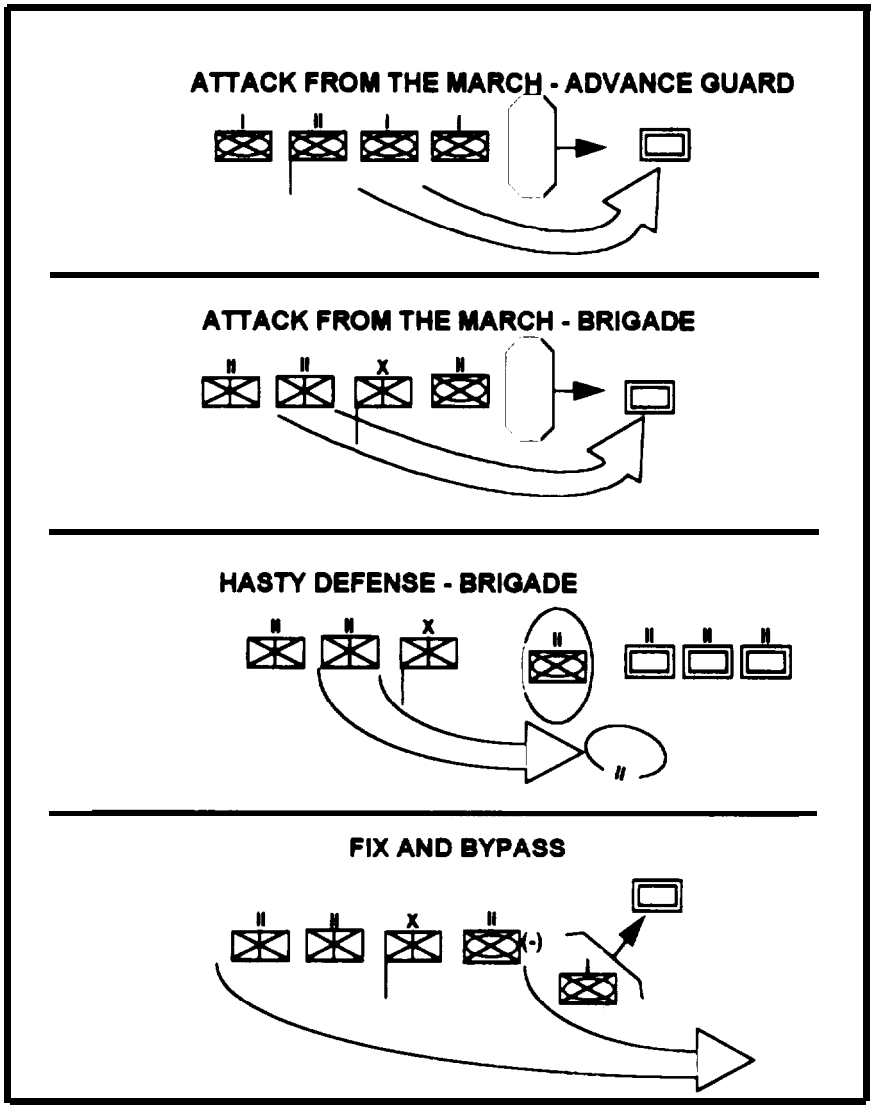

Figure 3-20. Actions on contact

a. Planning. An OPFOR commander anticipates an enemy withdrawal when he plans his offensive. His tentative planning for pursuit is part of the initial attack plan. The amount of detail that the commander includes in such planning depends on the anticipated actions of the enemy. the combat formation of attacking troops, and the amount of planning time available. He must also consider-

- Possible enemy routes of withdrawal

- The scheme of maneuver.
- Availability and condition of pursuit routes.
- Forces available.
- Critical terrain features
- The use of forward detachments and heliborne landing forces.
- Allocation of high-precision weapons and aviation support.
- Combat support and combat service support resources.

At the first indication of an enemy withdrawal, the OPFOR expects the commander at any level to initiate the pursuit without waiting for orders from higher headquarters. This helps ensure that the OPFOR does not allow the enemy to break contact and to conduct an orderly withdrawal. Even though a lower-level commander can make the decision to initiate a pursuit, he must inform his higher commander that he is doing so. Then he can terminate the pursuit only on the order of the higher commander.

To detect enemy withdrawal, the commander relies on active reconnaissance, an understanding of enemy tactics, and knowledge of the current tactical situation. He must pay special attention to the following signs of enemy preparation for withdrawal:

- Increased movement to the rear. especially artillery and reserves.
- Increased fires in individual sectors of the forward edge.
- Conduct of heavy fire concentrations in separate areas, not in accord with the developing situation. These concentrations may occur at a time when there appears to be a general reduction of fires.
- Intensified reconnaissance
- Preparations for demolition and/or destruction of facilities, installations, and equipment.
- Limited local counterattacks.

b. Forms. The three basic forms of pursuit are *frontal, parallel,* and *combination. The* most effective is the combination of the frontal and the parallel.

(1) *Frontal.* Units in contact conduct the frontal pursuit. It is the most likely type of pursuit under the following conditions:

- At the beginning of the enemy's withdrawal.
- In limited visibility.
- When there are no parallel bypass routes
- When strong pressure is necessary to keep the enemy from disengaging from combat.

The aim is to force the enemy to accept combat under unfavorable circumstances and delay his withdrawal. (See figure 3-2 1.)

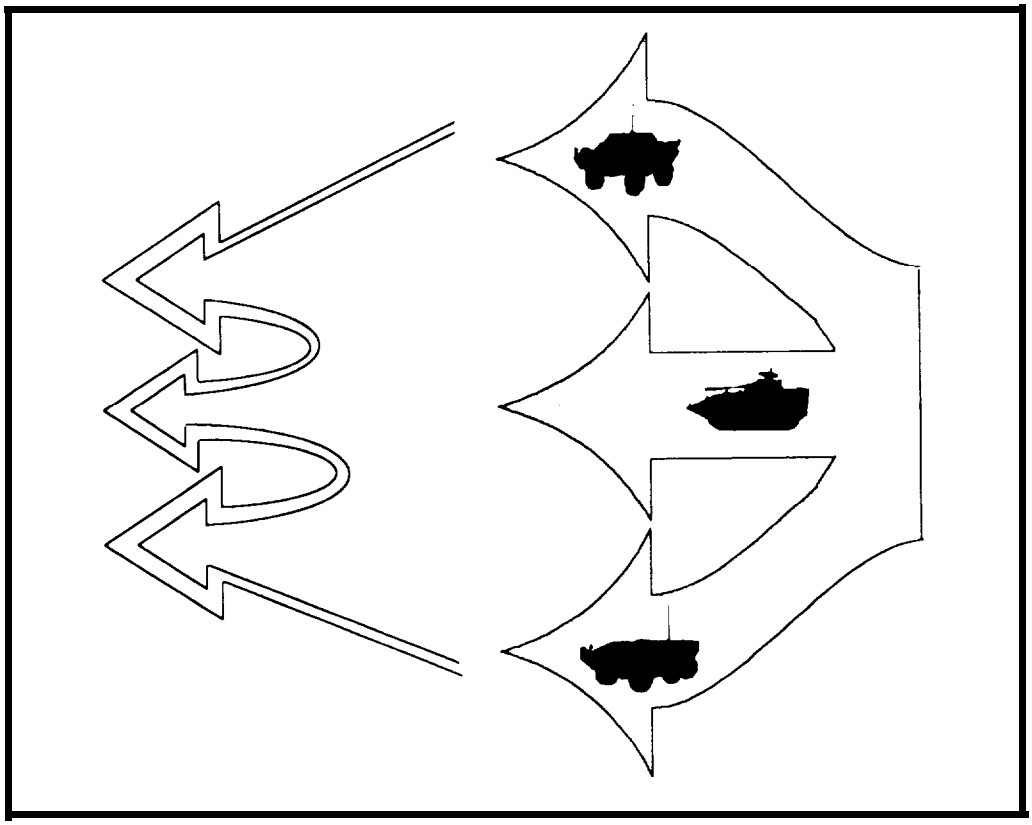

Figure 3-21. Frontal pursuit.

(2) *Parallel.* Using an axis parallel to the withdrawing enemy, the pursuing force can move rapidly in march formation to overtake the enemy. Then it can execute a deep and/or close envelopment. However, the use of a parallel pursuit alone risks loss of contact with the enemy. (See figure 3-22.)

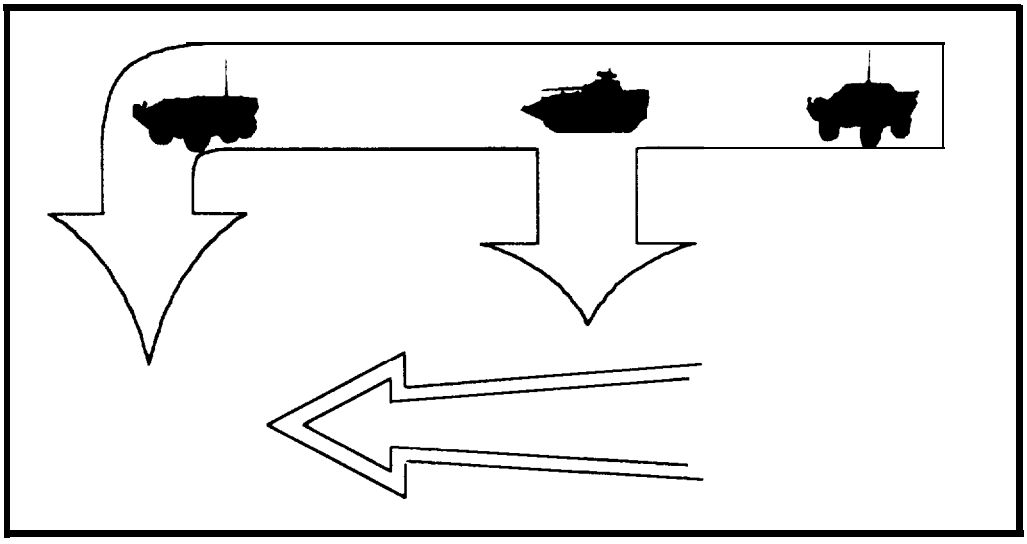

Figure 3-22. Parallel pursuit.

(3) *Combination.* The combination pursuit combines the frontal and parallel methods. This maintains a high rate of advance with constant pressure. It hinders disengagement, leads to flank attacks, and cuts the enemy's withdrawal routes. (See figure 3-23.) The preferred technique is the combination method. Using this variant, a small force pursues the enemy along his withdrawal route, attempting to prevent an orderly withdrawal. At the same time, exploitation forces move along parallel routes and attempt to block the path of the withdrawing enemy. The OPFOR may also insert heliborne or airborne forces to block the enemy's withdrawal.

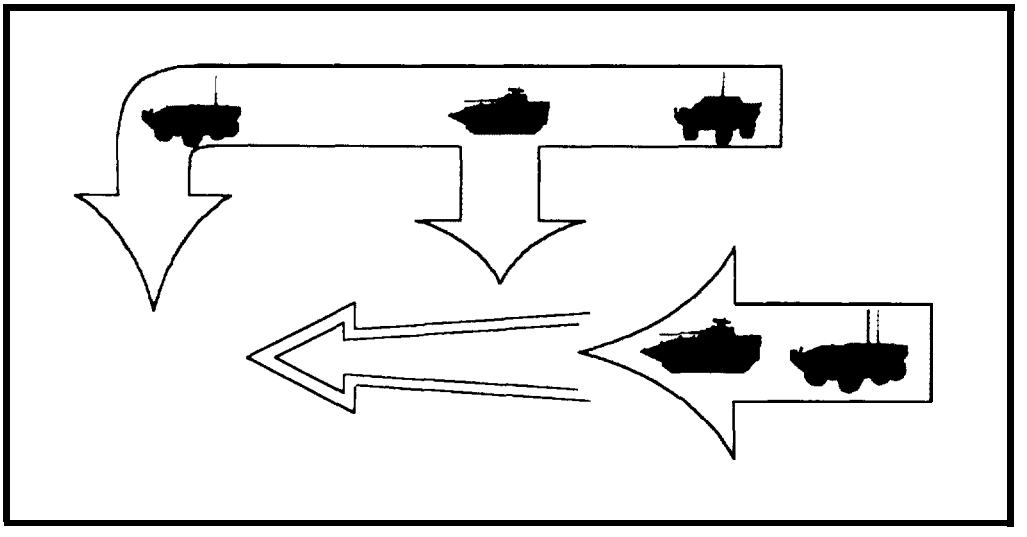

Figure 3-23 Combination pursuit.

Section II. DIVISION AND BRIGADE

A division or separate brigade normally conducts an attack as part of its parent unit's offensive. The organization, concept, and conduct of an OPFOR division attack vary with the division's mission and the commander's estimate of the situation. Achievement of the organization's mission is the culmination of tires and attacks by all its organic and attached elements. Figure 3-24 shows an example of a typical deployment of divisional elements in an attack. The sequence of action in the basic concept for an attack against a defending enemy is:

- To strike enemy defenses with intensive fires.
- To find or create a gap.
- To slip through the gap.
- To drive deep at top speed.

A divisional brigade is capable of limited independent action, but normally attacks as part of a parent division. The unit receives an immediate mission, a subsequent mission, and a direction of further advance. The same applies to a separate brigade.

Element	Deployment
Division first echelon	Concentrated to attack on main and supporting axes.
Division second echelon or reserve	Moves by bounds 15-30 km behind the first echelon until committed.
Brigade artillery groups	1 to 4 km from the forward edge.
Division artillery group	3 to 6 km from the forward edge.
Division antitank reserve	Between first and second echelons on the axis of the main attack or a threatened flank.
Division main CP	Up to 15 km from the forward edge.
Division COP	Up to 5 km from the forward edge.
Division rear CP	Up to 30 km from the forward edge and located near the rear service elements.
Brigade main CPs	Up to 5 km from the forward edge.
Logistics units	The divisional medical, repair, and evacuation elements move behind the first echelon. The rest of the divisional logistics units move 5 to 10 km behind the second echelon.

Figure 3-24. Deployment of divisional elements in an attack.

3-9. ELEMENTS OF COMBAT FORMATION

The division and brigade combat formations are quite flexible. The combat formation may include-

- Reconnaissance
- A forward detachment.
- One or two echelons
- Reserves
- Artillery groups

See the general discussion of these elements of combat formation in Section I.

a. Reconnaissance. Each maneuver division has an organic reconnaissance and electronic combat (EC) battalion, each divisional brigade has a reconnaissance platoon, and each separate brigade has an organic reconnaissance company.

b. Forward detachment. A division can dispatch an FD of reinforced battalion size on a swift, independent penetration into the enemy depths. A brigade could do the same with a company-sized FD. See the discussion in section I for the missions and roles of the FD.

c. Echelons. The maneuver commander determines the echelonment of his forces based on his assigned mission and the preparedness and depth of the enemy's defenses, A division normally attacks with most of its combat power in one or two echelons. but a three-echelon formation is possible in restrictive terrain. Within the division, the pattern of echelonment can vary at different levels of command. A division might deploy its brigades in two echelons. but these brigades, and battalions may use one echelon.

(1) *Single-echelon formation.* When attacking defenses that are weak, lacking in depth, or not well prepared, divisions and below normally deploy in a single-echelon formation. If the division attacks in a single echelon, it normally forms a reserve. The OPFOR would also use a single-echelon formation when attacking on a secondary axis. (See figure 3-11 for an example.)

(2) *Two-echelon formation.* On a main axis or against better prepared defense, a division or brigade normally deploys in *two echelons.* If the higher headquarters allocates a tank battalion to division or if it has one organic, the division commander may allocate the tank battalion to a first-echelon brigade that will conduct the main attack. The motorized infantry brigade commander may in turn allocate a tank company to each of his first-echelon battalions. If the brigade has only two infantry battalions in its first echelon, the brigade commander can allocate a tank company to each first-echelon battalion with the third company and battalion headquarters remaining directly subordinate to the brigade commander, or perhaps allocated to the second-echelon infantry battalion. Alternatively, he may allocate two tank companies to the first-echelon battalion conducting the main attack and one tank company to the first-echelon battalion conducting the supporting attack. The brigade commander may choose to keep the tank battalion intact using it as part of his first echelon, or as part of the second echelon.

The commander may elect to commit the second echelon on an alternate axis. (See figure 3-17.) Before commitment, it advances on multiple axes at the rear of the first echelon where it is close enough for ready commitment. Yet, the second echelon locates far enough away to protect it from the enemy's direct and indirect fire systems.

d. *Reserves.* The division or brigade commander may form various types of reserves. There are two basic types: maneuver and antitank.

(1) *Maneuver reserve.* Divisions and brigades can form a maneuver reserve, but normally only if attacking in a single echelon. The rule of thumb for the size of the OPFOR reserve is that the reserve is normally one-ninth of the commander's force or down two levels of command. This division normally forms a battalion-sized reserve. A brigade normally forms a company-sized reserve. Depending on the situation, the commander may choose to form a smaller or larger reserve. If a division includes a tank battalion, the division commander may use that battalion as his reserve, or he may attach it to an infantry brigade on his main axis. The brigade commander. in turn. could use the allocated tank unit as his own reserve.

The main difference between a second-echelon force and a maneuver reserve is that the former has an assigned mission while the latter does not. The reserve exploits developed or developing success, reacting to contingencies.

(2) *Antitank reserve.* In motorized infantry divisions and separate brigades, the ATGM battery usually forms the AT reserve. To form their own AT reserve, divisional motorized infantry brigades have an ATGM platoon. The maneuver commander may also reinforce his AT reserve with engineers and tanks, if available.

e. Artillery groups. In highly mobile, fluid battles, higher commanders may allocate a significant proportion of the available artillery down to lower commanders. With organic and allocated artillery, tactical commanders form DAGs, and BrAGs. On rare occasions, individual maneuver battalions may also receive up to a battalion of artillery in an attached or supporting role. The motorized infantry division contains an organic towed howitzer regiment. A separate brigade has an organic towed howitzer battalion as well as a mortar battery. The divisional brigade only, has a mortar battalion. The division chief' of

artillery ensures that the division's fire plan coordinates the fire support from all organic and reinforcing artillery assets available to the division and its subordinates.

3-10. TACTICAL FORMATIONS

While both divisions and brigades have march formations, only brigades have a prebattle formation. Neither have battle formations.

a. March formation. A division marches on two to four routes. On normal terrain, a brigade advances on one route until its subordinate units begin their deployment into prebattle formations. (See chapter 1 for more detail on division and brigade march.) March formation helps maintain the speed of advance, allowing rapid maneuver and subsequent employment.

b. Prebattle formation. The brigade assumes a prebattle formation by deploying laterally from a single brigade column of battalions into individual battalion columns. The number of battalion columns depends on the tactical situation and the choice of echelonment that the situation dictates. Deployment into battalion columns should begin beyond the range of the bulk of the enemy's artillery. The artillery preparation of the attack usually begins as the attacking force starts this deployment.

3-11. ATTACK AGAINST A DEFENDING ENEMY

The following paragraphs focus on brigade actions in the two types of attack against a defending enemy. For the brigade's role in a meeting battle or pursuit. see section I of this chapter.

a. Attack from the march. In an attack from the march, the brigade advances out of assembly areas placed out of range of the majority of enemy indirect tire assets. This movement takes place during the tire support of the movement forward or fire preparation phases of artillery support. Subordinate units deploy into successively smaller march columns. Figure 3-25 shows an example of brigade deployment in an attack from the march. This particular example includes tank and artillery reinforcements from division level.

The brigade can conduct the attack in company columns. This facilitates speed and control if it has encountered poorly prepared enemy' defenses, or if it has neutralized defenses sufficiently with fire. The OPFOR deploys laterally only when necessary. Therefore, the companies remain in prebattle or march formation if they encounter only light enemy resistance The companies deploy into battle formation against well-prepared enemy positions Battle formation provides the maximum firepower forward and a company assumes it upon reaching a designated assault position. Figures 3-26 and 3-27 illustrate this process, using two variations of a motorized infantry battalion deploying for an attack from the march. Ideally,, all first-echelon companies of a brigade attack simultaneously, but this is not necessarily the case.

b. Attack from positions in direct contact. The battalions of a first-echelon brigade or separate brigade can conduct an attack from positions in direct contact with the enemy. In this case, the brigade directs its first-echelon battalions to occupy assembly areas just behind the their own forward defensive positions with a portion of their forces Unit boundaries adjust to concentrate fires and maneuver for the attack. Elements remaining in direct contact support the attack with direct fire Artillery preparatory fires support the battalions moving from the assembly areas and the brigade's second-echelon battalion or reserve as it deploys to the final coordination line for the assault on the enemy defenses.

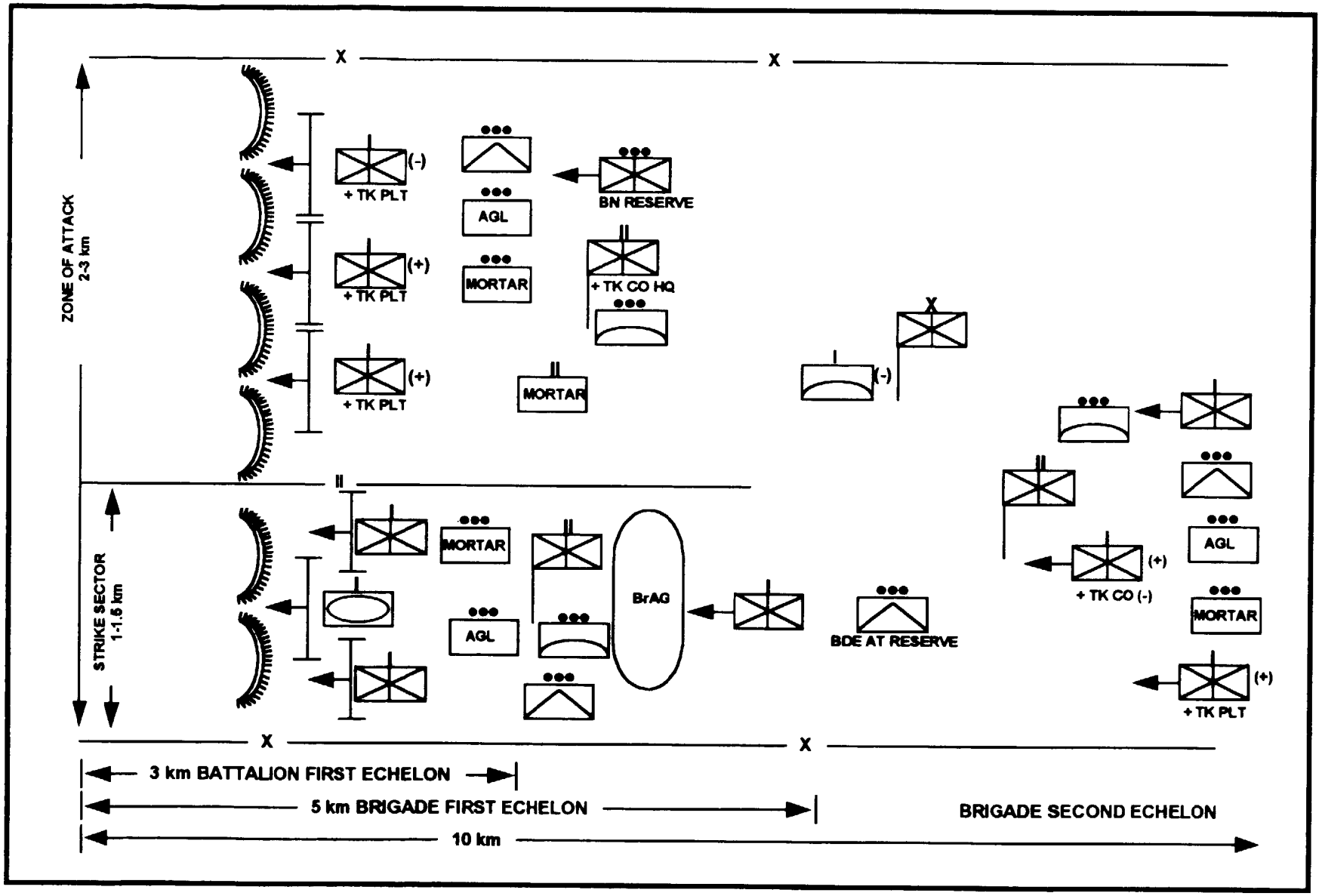

Figure 3-25. Motorized infantry brigade deployment for attack from the march, with tank and artillery reinforcements (examples)

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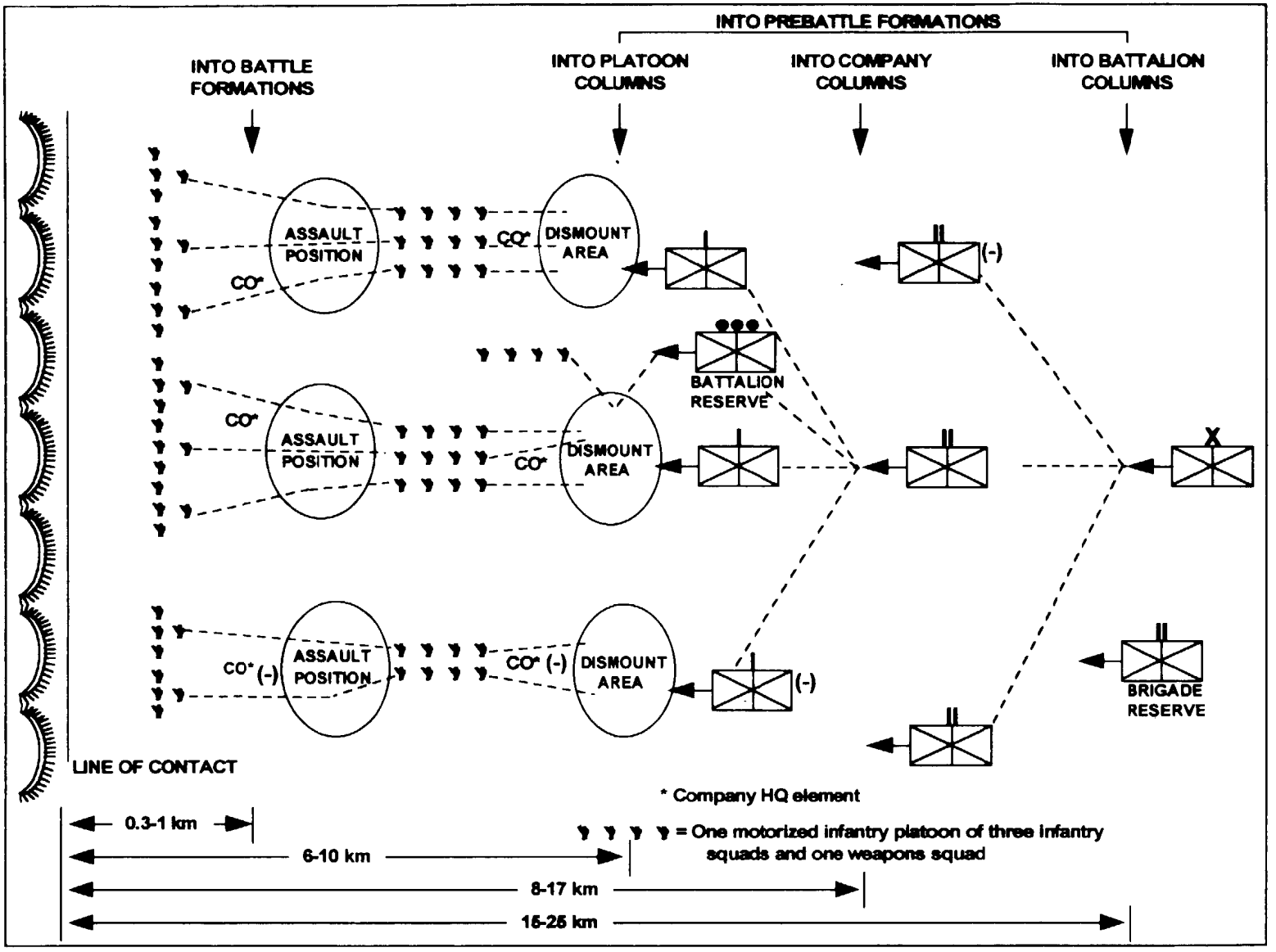

Figure 3-26. Motorized infantry brigade deployment for attack from the march (example).

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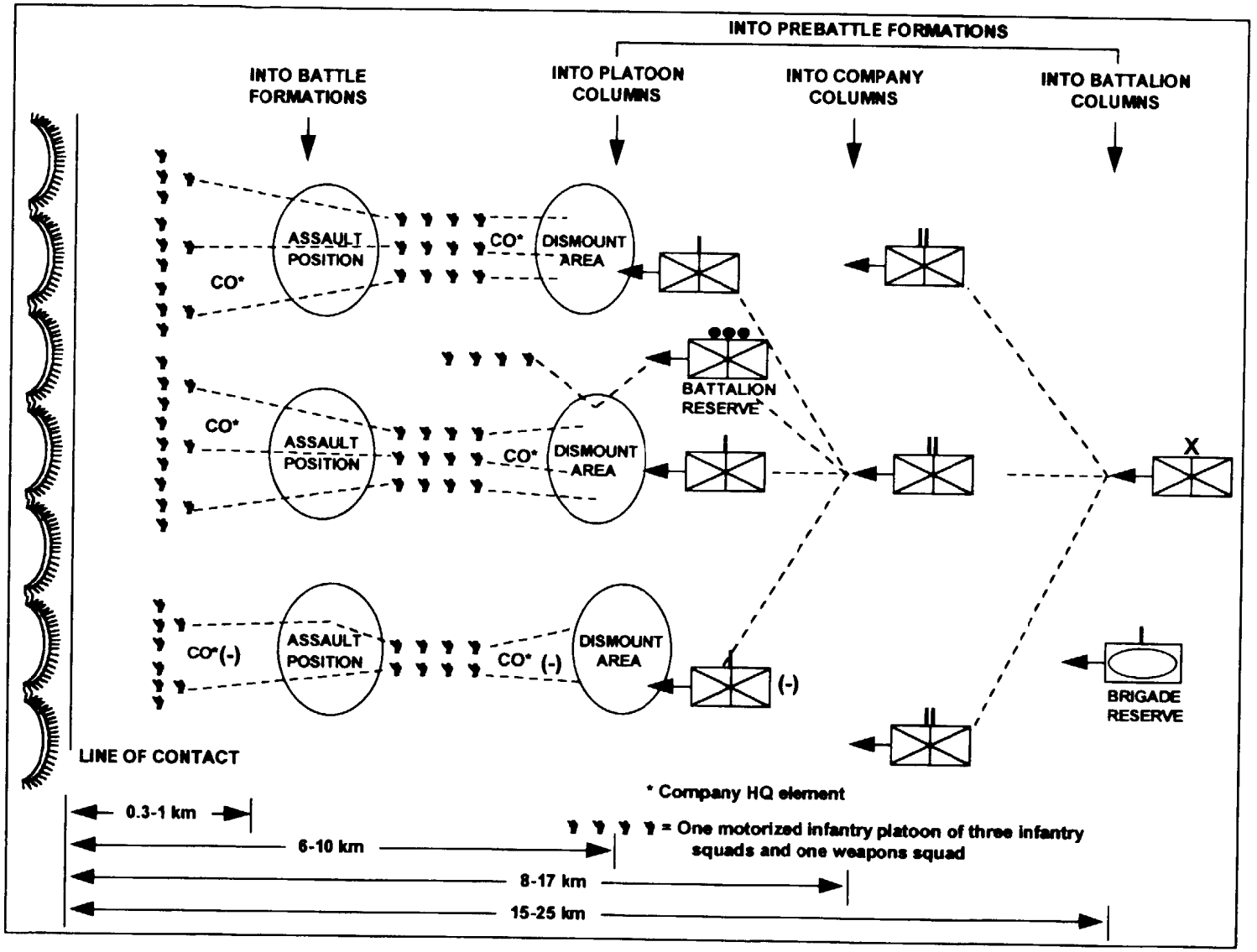

Figure 4-27. Variant of motorized infantry brigade deployment for attack from the march with tank battalion as brigade reserve.

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When first-echelon battalions of a first-echelon brigade have achieved a major penetration, they widen the area of penetration and secure the gap for exploitation by second-echelon forces. If they are still able, first-echelon battalions continue the attack into the enemy depth Battalions revert to prebattle formation and advance rapidly to prevent the enemy from deploying his reserves and organozing a defense in new positions.

The first-echelon brigade also could form a company-sized FD to move ahead of the brigade to seize important objectives in depth. Such actions often take place in coordination with heliborne forces. (Alternatively, if the division commander has planned the use of his own battalion-sized FD, he may commit it al this time.)

A brigade in the second echelon of an attacking division moves in march formation behind the first echelon, The division commander defines the mission of the second echelon prior to the attack and refines it during the battle He designates lines of commitment, preferably on the flanks, through gaps, or between two first-echelon units. This way he avoids the difficulties of passing through a first-echelon unit

c. *Attack zone and strike sector.* A normal strike sector for a division is 2 to 3 kilometers within an attack zone of 6 to 10 kilometers The typical brigade strike sector is 1 to 1.5 kilometers in an attack zone of 2 to 3 kilometers (See figure 3-14)

d. Axes. In planning an attack against a defending enemy, an OPFOR commander always selects only one axis of main attack He concentrates the bulk of his resources on the main axis. This ensures that he obtains the ratio of forces required for success Once he has chosen the axis of main attack, he would make every effort to achieve surprise and overwhelming superiority on this axis.

The OPFOR never shares resources equally among subordinate units. It considers it a waste of resources to allocate more resources to the secondary axis than are absolutely necessary to do the mission. If the force on the main axis is not achieving the expected result, the OPFOR commander would not hesitate to reassign main-axis assets to support a secondary axis where forces are having success. In some types of terrain, such as mountain areas. secondary axes can receive additional combat and service support.

e. Planning the attack. Planning for the attack depends on the missions assigned by the higher level commander The OPFOR commander first assesses the situation. then outlines his concept and intentions, specifying preliminary actions and missions. and directs the preparation of required information and planning. The commander and his chief of staff. battalion and above, decide what information they need, what they already have, and what is lacking Their analysis of the assigned mission centers on the role of their unit in the attack. The commander determines where to concentrate his main attack. if the higher commander did not designate it The commander determines what combat formation to use and what rates of advance are possible during the attack. Finally he passes preliminary orders to subordinate and attached units, specifying where, when, and by what means to conduct the attack.

The OPFOR commander reviews the parent unit's battle plan and revieiws the allocation and procedures for employment of chemical weapons and the role of his unit in the scheme. He notes the axes, missions, and groupings of flanking units. The basis for his attack planning stems from consideration of--

- Missions or objectives.

- Enemy dispositions

- The higher headquarter's fire plan and the allocation of artillery.
- The terrain in the assigned attack zone.
- The weather and light conditions
- Time of the attack.
- Combat effectiveness and supply situation of all subordinate elements.

f. Assembly areas. The OPFOR stages an attack against a defending enemy from assembly areas. Forces stay in the assembly area only long enough to assign tasks to subordinate units, to cheek preparations, and to organize combat formations. The assembly area is far enough forward for the first-echelon units to move to their lines of deployment and close enough that they can reach their assault positions during the artillery preparation.

(1) Dispersion. Units disperse by battalions in assembly areas with their attached reinforcements. Their march routes have prescribed control and deployment lines. These routes permit rapid, effective movement to the assault position. The combat order designates the assault position. This position should be as near as possible to the forward edge of the enemy defense. When a division occupies an assembly area, it is usually 60 to 75 kilometers from the enemy's forward edge, covering an area of 200 to 600 square kilometers. First-echelon brigades and separate brigades could occupy assembly areas as close as 20 to 30 kilometers from the enemy's forward edge. Figure 3-28 depicts a typical motorized infantry division assembly area

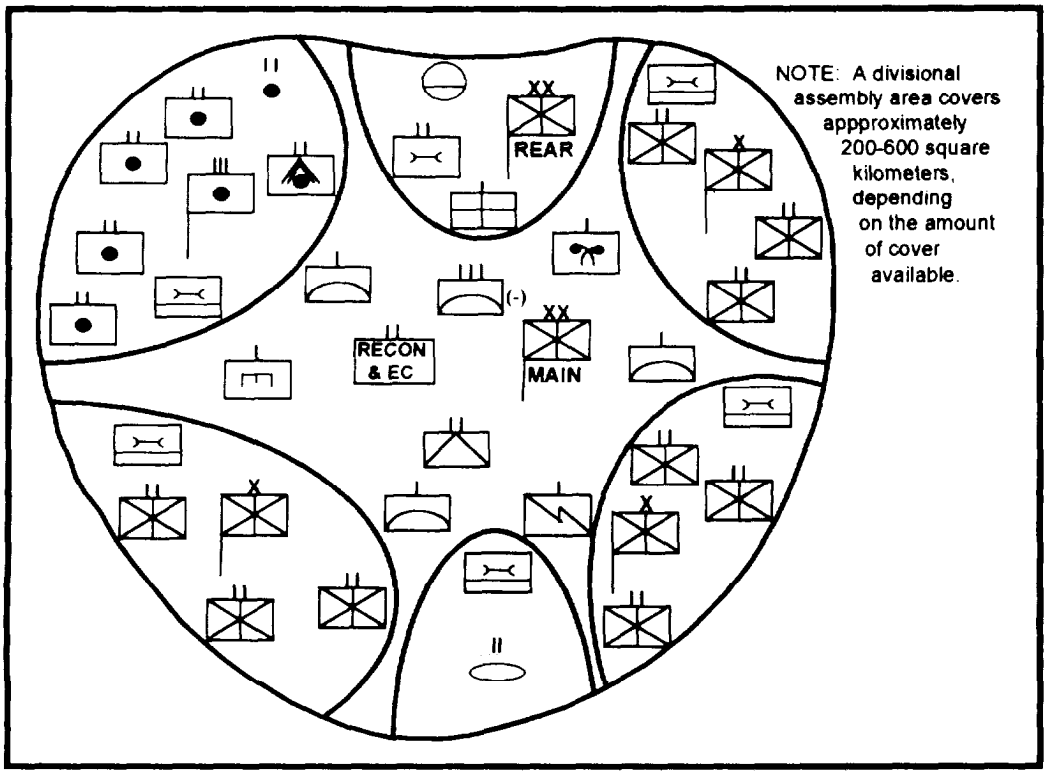

Figure 3-28. Assembly area of a motorized infantry division

(2) *Preparation and planning.* Preparation of the attack begins in the assembly area. Some engineer preparation of the assembly area is desirable, to improve routes and provide protection for equipment and personnel. The senior commander may deploy logistics assets in the assembly area prior to its occupation by the attacking force

Commanders ensure their units complete final maintenance and resupply and regroup subordinate units in accordance with their attack plans. All levels of command enforce strict camouflage, concealment, and deception discipline and maintain radio silence.

In the assembly area, air defense units fully deploy to provide protection from air attack. Each maneuver unit provides its own local protection against ground attacks, including static posts and mobile patrols, both on foot and in vehicles. Reconnaissance elements, including commanders conducting their ground reconnaissance, move forward to observe the enemy position. The commanders give final orders, and the staff completes detailed planning.

(3) *Reinforcements.* Reinforcements usually take place in assembly areas before reaching the start line for the march. These reinforcements then become part of the supported maneuver unit's combat formation. The unit's mission will determine the type and number of reinforcements it receives, A first-echelon division or brigade may receive the following reinforcements from parent unit resources:

- Additional artillery battalions
- Tank battalion.
- Engineer companies or battalions
- Air defense elements.
- Communications assets.
- Reconnaissance assets.
- Medical assets.
- Chemical defense assets.
- Materiel support assets
- Direct air support sorties.

g. March into attack. Engineers are likely to be the first to move out of the assembly area. Working in concert with any additional engineer assets, they clear routes and may begin to breach obstacles. Units in contact are responsible for clearing routes through their own minefields. Traffic control elements move out at the same time. Next to move would be the artillery. The DAG and the BrAGs must occupy their firing positions at least 1 to 2 hours (6 hours at night) before they are due to open fire. Reconnaissance and artillery troops would previously have reconnoitered their Bring positions, and engineers may have prepared the positions for occupation. Some air defense assets also deploy in advance of the main body for route security and to protect the artillery groups. First-echelon units move from the assembly area early enough to arrive at the assault position at a specified time.

h. Deep attack options. To assist in an attack against a defending enemy, an OPFOR attack could include a vertical envelopment by a heliborne force of up to a battalion in size. A motorized infantry

battalion could conduct such an assault. This battalion (or company) could come from the division's second-echelon. Helibome assaults using motorized infantry troops can extend out to 15 kilometers beyond the forward edge. Likely objectives are key locations such as bridges, or river-crossing sites. The OPFOR routinely discusses using heliborne forces in coordination with forward detachments and enveloping detachments. A division could employ a forward detachment up to a reinforced battalion in strength to link up with a heliborne assault.

i. Commitment of second echelon or reserve. The commander commits his second echelon or reserve on the axis *of the most successful penetration.* A second echelon begins the attack with an assigned mission, which is normally to continue the attack on the division's designated main attack axis. However, that axis could change during the course of the battle, and the commander can commit his second echelon on the new main axis. A reserve does not have an assigned mission at the beginning of an attack, but is prepared to attack along the most opportune axis at a time the commander determines. If the attack continues successfully, this could lead to the higher headquarter's commitment of its own follow-on forces to develop the penetration further. The commitment of additional forces would result in a widening and ever-deepening rapid penetration and exploitation. (See figure 3-17.)

Section III. BATTALION AND BELOW

Sections I and II have included some discussion of the roles of battalions and companies in the conduct of the offense by higher organizations This section focuses on offensive tactics within the battalion and company.

3-12. BATTALION

A battalion attacks as part of its parent brigade. It does not have the organic combat support or combat service support necessary for independent action. except when it deploys as-

- An advance guard
- A forward detachment
- A raiding or enveloping detachment
- A heliborne or amphibious landing force

Under these circumstances, the battalion receives reinforcements to sustain it for the duration of its mission. Even when a battalion is attacking as part of the brigade, the OPFOR could augment it with the capability for more independent actions This is more common on the nonlinear battlefield.

a. *Elements of combat formation.* Maneuver battalions have most of the same basic elements of combat formation as higher organizations. However, they occur on a smaller scale and without the benefit of some specialized troops.

(1) *Reconnaissance.* Battalions and below do not have organic reconnaissance troops. The commander must use assigned maneuver forces to fulfill his reconnaissance needs. These elements vary in size from a few troops to a platoon. They may or may not have reinforcements in the form of combat engineers or chemical defense personnel.

(2) *Echelons.* A motorized infantry battalion usually attacks in two echelons. If it attacks in a single echelon, the commander retains a small reserve, at least a platoon. Figure 3-29 shows an *example* of a motorized battalion deployed for an attack against a defending enemy.

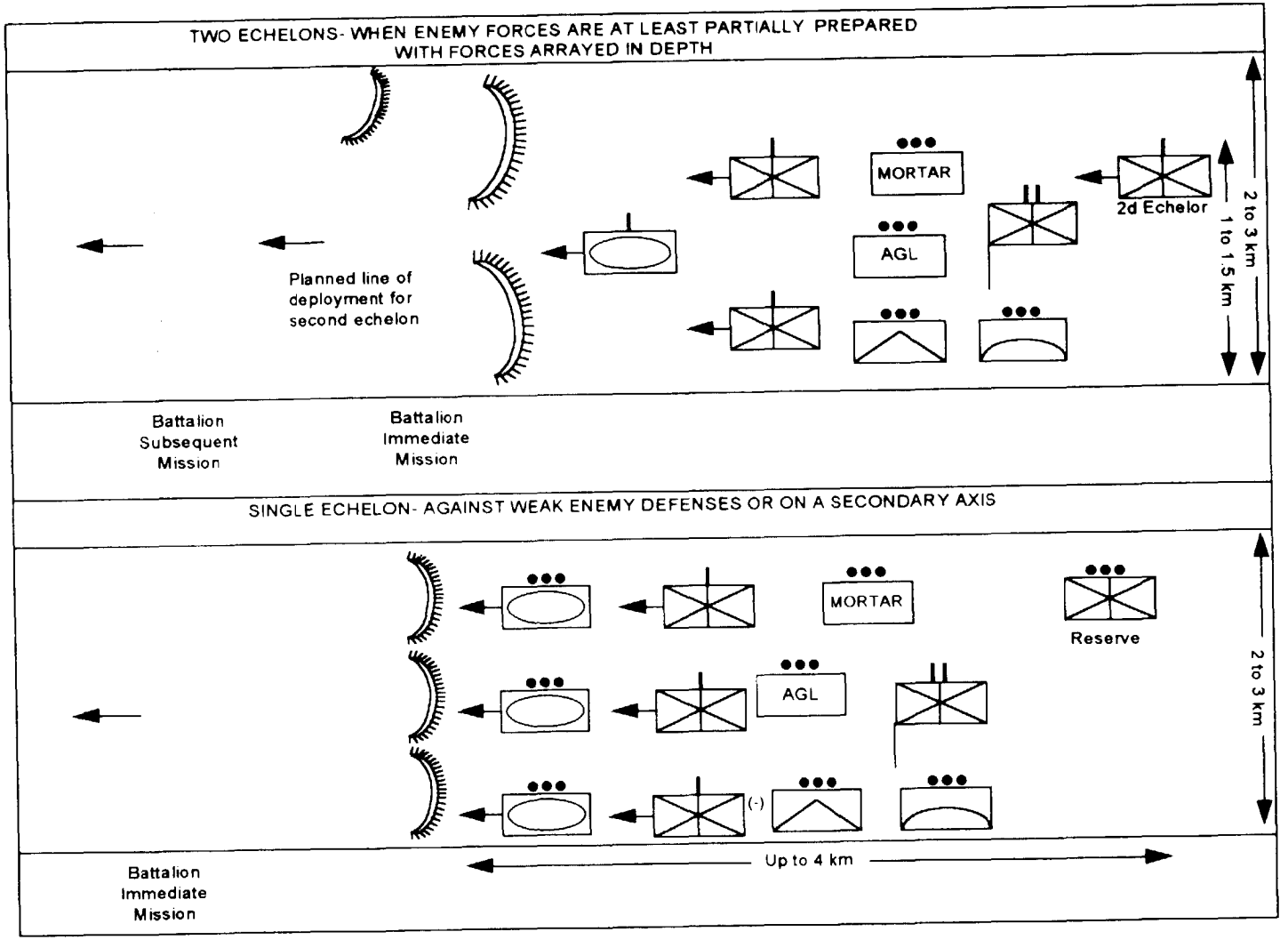

Figure 3-29. Motorized infantry battalion combat formations, reinforced with tank company (examples).

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(3) *Reserves.* The normal battalion maneuver reserve is platoon sized. Again, the commander may choose to form a smaller or larger reserve depending on the tactical situation. The battalion does not have organic chemical defense or combat engineer personnel to form special reserves. The battalion does have an AT platoon available for the commander's use as an AT reserve.

(4) *Fire support.* The only organic indirect tire support at battalion is its mortar platoon. On rare occasions, however, the battalion could receive up to a battalion of howitzers as reinforcement. For additional organic tire support, some infant? battalions have an automatic grenade launcher platoon. Each battalion has an organic air defense platoon to provide its dedicated air defense support.

b. Tactical formations

(1) *March formation.* A battalion marches in a single column until its subordinate units begin their deployment into their deployment into prebattle and battle formations. (See chapter 1 for more detail on the battalion march.)

(2) Prebattle formation. A battalion assumes prebattle formation by deploying from a single battalion column of companies into *individual compony columns.* At a point outside the maximum range of the defender's AT weapons, tanks, and other direct fire systems. the commander establishes a *line of* deployment into company columns.

Within the battalion prebattle formation. each company moves in march column. In relation to one another, the company columns may be in a line, in a forward or reverse wedge, or echeloned left or right. To control both the movement and the battle, the battalion commander normally travels directly behind the lead company or companies in the prebattle formation. Figure 3-30 illustrates variations of battalion prebattle formations.

Units from battalion down to platoon rehearse and drill to ensure that they can rapidly deploy from the march to the prebattle formation, then to company battle formation, and back. Movement in these formations serves as a battle drill for the subordinate unit commanders. It provides the basis for a rapid-reaction attack from the march or a planned attack against a defending enemy'.

(3) *Battle formation.* A maneuver battalion reaches battle formation when its first-echelon companies deploy into battle formation. Until actually committed, the battalion's second-echelon company remains in march or prebattle formation.

c. Attack against defending enemy. The following paragraphs focus on battalion actions in the two types of attack against a defending enemy. For the meeting battle and pursuit, see section I of this chapter. Motorized infantry forces conduct dismounted attacks on the enemy's forward edge. Factors that favor use of the dismounted assault are as follows:

- Strong enemy AT capability,
- Well-prepared enemy defenses
- Fords or bridges
- Obstacles or minefields

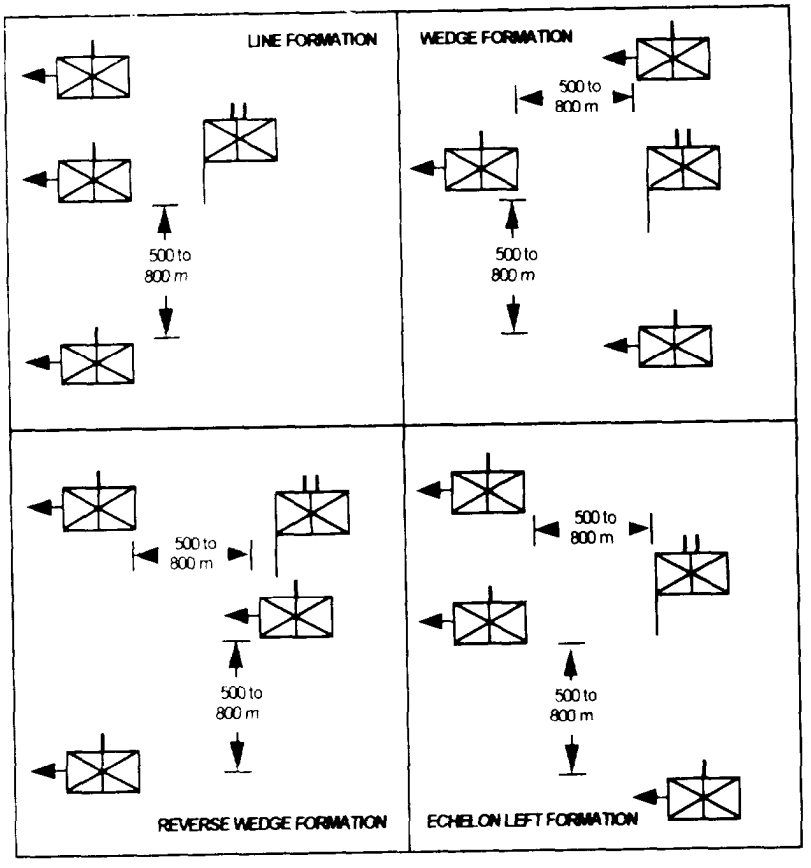


Figure 3-30. Motorized infantry battalion prebattle formotions.

- Rough terrain with no high-speed avenues of attack
- Need for maximum firepower

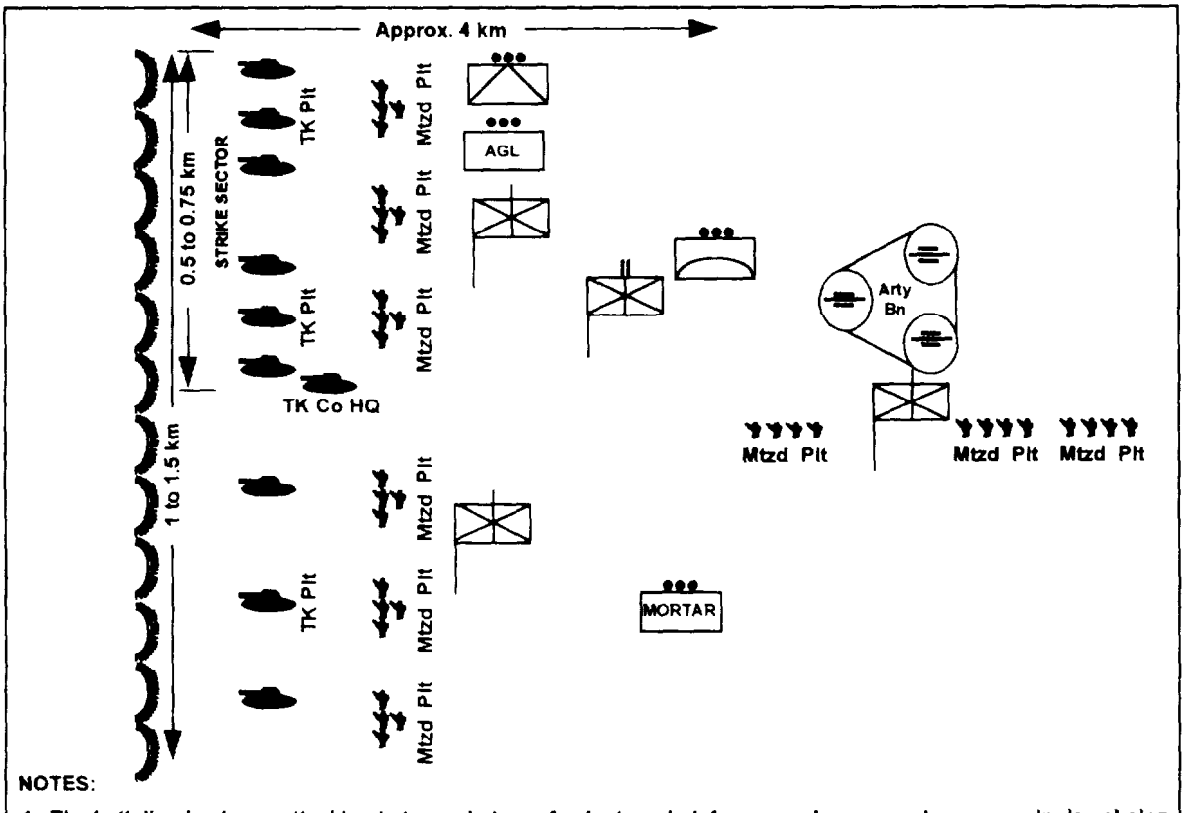
(1) Attack from the march. Battalions fight as part of their parent brigade, which in turn fights as part of a division. A division leaves its assembly area in a column of brigades. Within the brigades are columns of battalions. each battalion a column of companies. The battalion commander designates a dismount area for each company in which the motorized infantry squads dismount from their trucks. The dismount area is normally behind terrain or vegetation that can protect the soldiers and trucks from direct fire and some indirect fire The dismounted squads depart the dismount area in prebattle formatton, dismounted platoon columns. They advance to designated assault positions that are the last covered and concealed positions before the enemy defense positrons. The dismounted motorized infantry platoons of the company depart the assault positrons in battle formation and assault toward the rear of the first-echelon platoons. Once the battalion achieves its immediate mission. it continues toward its subsequent mission (rear of enemy first-echelon battalion)

(2) Attack from positions in direct contact. A first-echelon battalion can attack from positions in direct contact with the enemy. One or two companies maintain contact and support the attack with direct fire. The third company maneuvers and infiltrates around the enemy or through a gap to assault from the flank. A first-echelon battalion that has successfully penetrated the enemy forward defenses establishes and secures the gap through which follow-on forces move to continue the attack.

(3) Missions. The brigade commander assigns a first-echelon battalion an immediate mission, a subsequent mission (in coordination with adjacent battalions), and a subsequent direction of advance (toward the brigade subsequent mission). A second-echelon battalion receives an immediate mission (in coordination with first-echelon battalions, to complete the latters' subsequent mission), and a subsequent direction of advance (toward the brigade subsequent mission). OPFOR units normally do not stop on objectives or mission lines and consolidate. They continue the attack deeper into the enemy rear.

(4) *Attack zone and strike sector.* A normal strike sector for an attacking battalion is 500 to 750 meters, within an attack zone of 1 to 1.5 kilometers, These frontages can vary according to the situation.

(5) Reinforcements. The OPFOR reinforces its maneuver battalions with tanks, if available. and with several combat support units prior to contact with enemy forces. Reinforcement usually takes place in assembly areas or before reaching the start line for the march. These reinforcing elements deploy to become part of the supported maneuver battalion's combat formation. (See figure 3-3 1.)



NOTES:

1. The battalion is shown attacking in two echelons. Against weak defenses and on secondary axes, single-echelon attacks are common. In a single-echelon attack, one motorized platoon serves as a reserve, near the battalion headquarters.
2. A platoon of the reinforcing tank company may remain directly under the battalion commander and deploy near battalion headquarters.
3. When attacking on a secondary sector, the battalion probably does not have a reinforcing artillery battalion. The mortar platoon deploys on the main axis.

Figure 3-31. Motarized infantry battalion deployment in the attack, reinforced with tank and artillery (example).

(6) *Minefield breaching* The OPFOR breaches minefields with a combination of tanks with mine rollers or plows (if available), line charges. combat engineers, and possibly fuel-air explosives. Cover for the mine-clearing effort includes smoke and intense fire on enemy defensive positions. Ideally. the OPFOR creates one lane per attacking platoon through an obstacle or minefield. One tank per tank platoon normally has a mine plow. In addition, each tank company may have a mine roller or plow. Motorized infantry units cover each other's passage through the minefield or any other obstacle.

(7) *Fire support.* The artillery preparation should end just before first-echelon elements reach the enemy's forward edge. Fires normally shift on the maneuver commander's orders when the lead elements are ready to begin the assault on the enemy forward defenses. While fighting through enemy defenses, maneuver elements follow in the path of intense artillery and mortar fires. Fied-wing air strikes normally engage targets beyond artillery range. Attack helicopters can provide direct air support for ground units in contact with the enemy.

(8) *Fire and movement.* In the assault on the enemy's forward edge, there is little space for fire and movement at the lowest levels. The emphasis is on generating and maintaining momentum, and even the briefest pause can be fatal. As the battle develops in depth. however, the commander expects greater flexibility and employs fire and maneuver tactics within squads.

(9) *Action following penetration.* The OPFOR expects a defending enemy to attempt rapid assessment of the direction and weight of the main attack It also expects allocation of all available enemy forces to defeat the attack. Therefore. as the first-echelon battalions move to deeper missions. the brigade commander stays particularly alert for enemy counterattacks

(a) *Action against counterattacks.* The brigade commander expects enemy counterattacks and must provide for their defeat in every plan of attack The goal is to defeat the counterattack and maintain the advance of the main body.

If the counterattacking force is superior in strength. OPFOR commanders prefer to fight from a firing line on favorable ground. but they would rather tight an equal or breaker enemy from the march. In the former case, it is important to engage the enemy with artillery and mortars at the longest possible ranges. The OPFOR attempts to strip the infantry away from the enemy tanks and to destroy each element separately, Once it stops the counterattack. the blocking force would try to advance and complete the destruction of the enemy.

(b) *Action on success.* When an attack has succeeded, the primary consideration is to keep up the momentum. If the attack destroys the enemy, units reform into march or prebattle formation. If the brigade detects an enemy withdrawal. it would send out additional reconnaissance and launch a pursuit.

(c) *Action on failure.* If the attack falls, there are two options available to the brigade commander, First, he can bypass the opposition and continue the advance, leaving the enemy for follow-forces to destroy. This possibility assumes that his unit remains a viabnle fighting force. Alternatively, he could direct his subordinates to defend in contact pending a change in the situation that will enable them to again transition to the offense. In the latter case. he would probably request reinforcement.

3-13. COMPANY

As a rule, a motorized infantry company fights as part of a motorized battalion. However, it can also act independently as a reconnaissance detachment. a heliborne landing force, an eveloping detachment. or a brigade FD.

a. Elements of combat formation. Like battalion, the company uses maneuver troops to conduct reconnaissance as scout patrols and observation and listening posts. Companies normally attack in one echelon with platoons deployed laterally. A normal company maneuver reserve is a squad-sized element.

b. Tactical formations. The company is the highest level organization that actually has all three types of tactical formation. It transitions from march column, directly or through prebattle formation, into battle formation.

(1) *March formation.* In the march, a company travels in a company column. If enemy artillery or aircraft destroyed its trucks or the company has to travel dismounted over rough terrain, it can also use a company file.

The company commander normally specifies which platoon formation he wants used within the company formation. If he does not, each platoon leader selects his platoon's formation The company commander designates one platoon as the lead platoon. When moving in a formation, the company normally orients on the lead platoon, keying the remainder of the company's speed and direction on this platoon. This permits quick changes and lets the commander control the entire company by controlling the lead platoon. The commander normally locates himself within the formation where he can best see and direct the lead platoon.

(a) Column. This mounted formation allows the motorized infantry company to make contact with one platoon and maneuver with the two trail platoons. (See figure 3-32.) It is a flexible formation allowing easy transition to other formations. It provides good all-around security and allows fast movement. It provides good dispersion and aids maneuver and control. especially during limited visibility. The company can deliver a limited volume of fire to the front and rear but a high volume to the flanks.

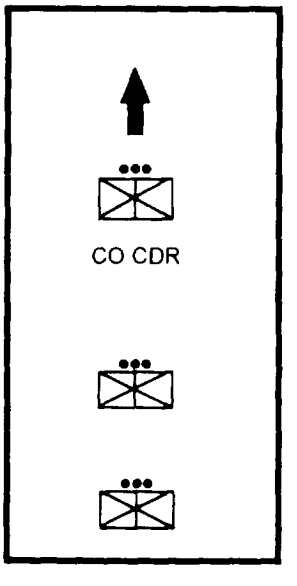


Figure 3-32 Column.

(b) *File.* The commander forms this dismounted formation by arranging platoon files behind the lead platoon. This formation is easy to control and allows rapid movement in close or restricted terrain or during limited visibility. It enhances control and concealment but provides poor security. The file makes transition to other formations difficult. The commander locates forward with the lead platoon headquarters element to increase control and his ability to be in position to make critical desicions.

Any enemy contact can break up the company file and can result in the loss of control. A commander should use a company file only when necessary, and only for short periods of time. In this formation, a company of 100 to 120 dismounted infantrymen can stretch out 500 to 600 meters in length.

(2) *Prebattle formation.* The company prebattle formation is the final stage of deployment before battle formation. A company in prebattle formation does not deploy laterally beyond platoon *columns.* The commander selects the location of a *dismount area* in terrain that screens the dismounting and deployment into platoon columns, particularly from the defenders' short-range AT weapons. The intervals between platoon columns in prebattle formation should allow the platoons to fully deploy into battle formation without further lateral expansion of the company formation.

Unlike higher-level organizations, the company does not necessarily have to use a prebattle formatron. It can go directly from the march into battle formation. if the situation requires.

(3) *Battle formation.* An OPFOR company assumes battle formation immediately before combat. When the company's *platoons and any reinforcing units deploy laterally into battle formation.* the company is in battle formation. Within the company, platoons can array themselves in the reverse wedge, wedge, or echelon formations, based on the situation. However, an array of platoons on line is most common. These formations describe the locations of the company's platoons in relation to one another. (See figures 3-33 through 3-36.) The best formation to use depends on the-

- Mission.
- Enemy situation.
- Terrain.
- Weather and visibility conditions
- Speed of movement desired
- Degree of flexibility desired

Battle formation maximizes the firepower of the company by bringing to bear the greatest number of weapons systems. Conversely, it is the slowest moving and the most difficult to control of all tactical formations. As a result, an OPFOR company *assumes battle formation only when necessary.*

The battalion commander relies on his companies to act according to battle drills. This allows him more time to concentrate on maneuvering them and coordinating their actions rather tan on giving them detailed instructions. When moving cross-count?. the distance between platoons varies according to the same factors that determine the array of the platoon battle formation. The OPFOR soldiers constantly observe their sectors for likely enemy positions and look for the nearest available cover in case of enemy contact.

(4) Line. This formation puts three platoons forward and provides for the delivery of maximum fire to the front, but less to the flanks. It is the most difficult to control. (See figure 3-33.) The company commander designates the center platoon as the lead platoon. The company commander moves close behind that platoon. Flank and rear security are generally poor.

(5) *Wedge.* The wedge has two platoons in the rear that can observe and provide supporting fire to the lead platoon or trail it. It provides for immediate fire to the front and flanks. (See figure 3-34.) The company commander can still maneuver one or two platoons after the lead platoon makes contact. If the enemy attacks the company from the flank, one platoon is free to maneuver. The formation is hard to control, but it allows relatively fast movement.

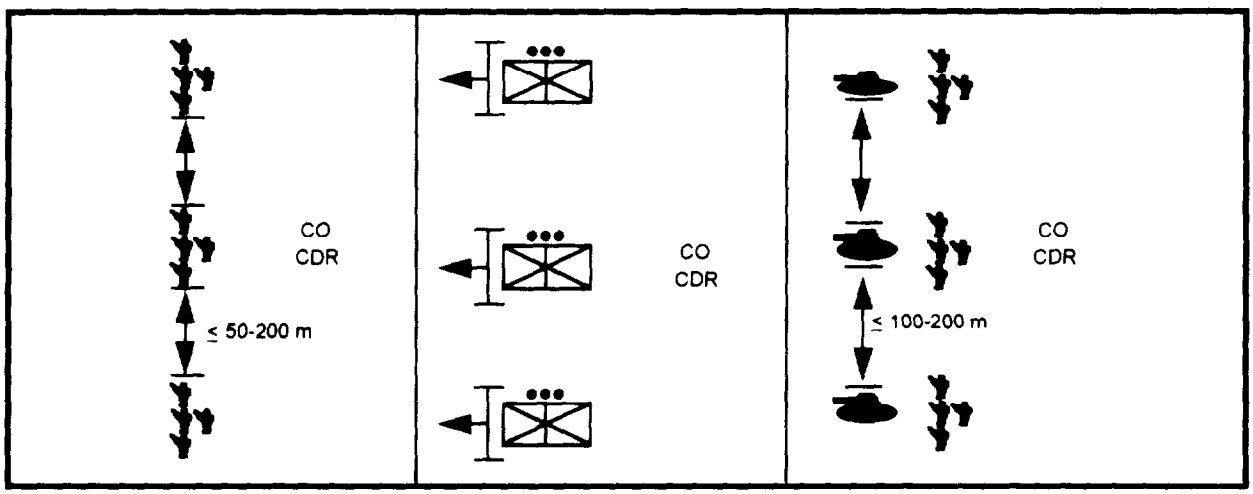


Figure 3-33. Line

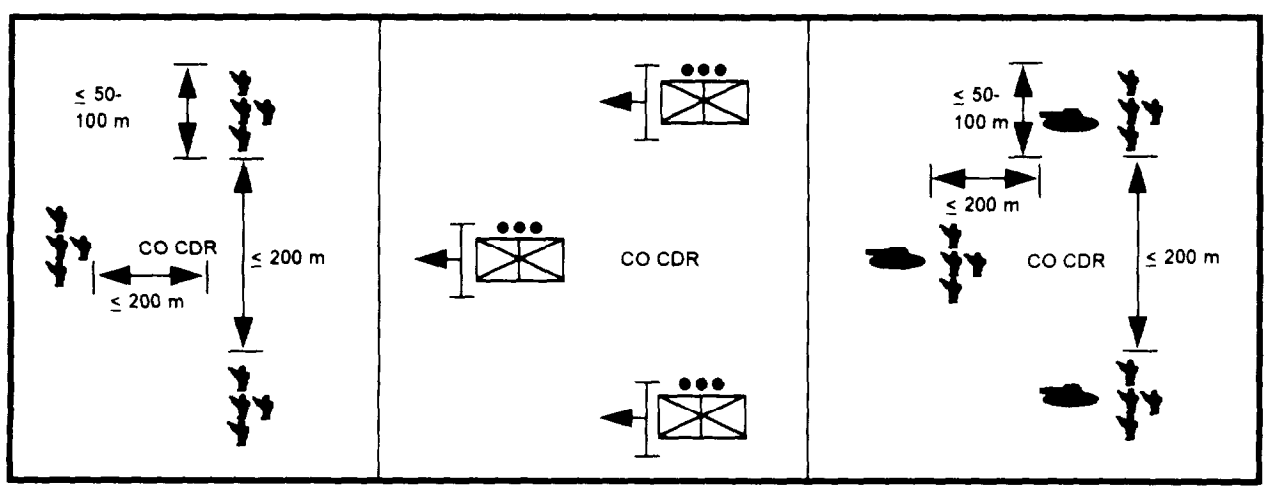


Figure 3-34. Wedge

(6) *Reverse wedge.* This formation has two platoons forward to provide immediate fire contact to the front or to the flank on contact with the enemy. The one platoon in the rear can observe and provide

fire support to the other platoons or trail them. If the enemy attacks the company's flank, two platoons provide fire and one is free to maneuver This formation is difficult to control and slows movement. (See figure 3-35.) The company commander designates one of the forward platoons as the lead platoon. He normally moves close behind that platoon.

(7) *Echelon-left or-right.* If the enemy situation is unclear and enemy contact to the front or on a flank is likely, the company uses this formation. (See figure 3-36.) Normally, the OPFOR places an obstacle or another company on the unprotected flank of the company to prevent enemy contact on that side. The formation provides a good volume of fire and protection to the protected flank but less to the opposite flank

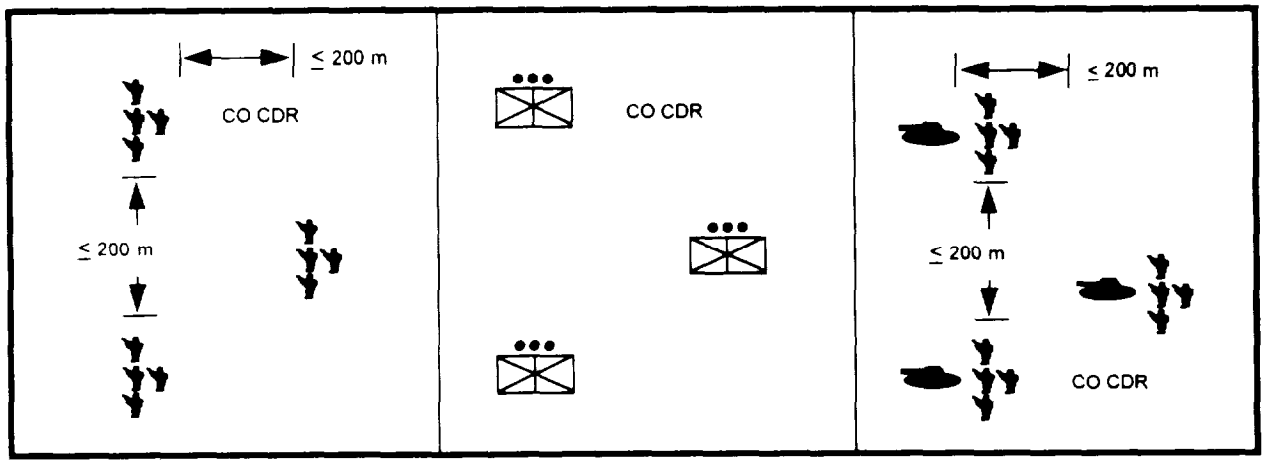


Figure 3-35. Reverse wedge.

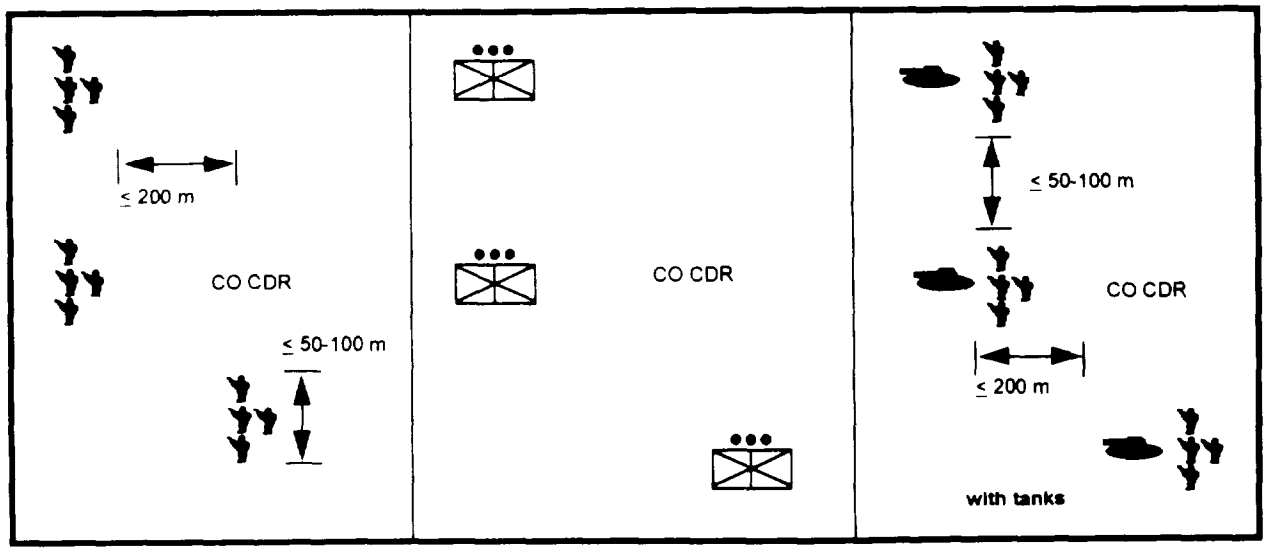


Figure 3-36. Echelon-left.

c. Dismount area.. Motorized infantry always dismounts in a designated dismount area well outside the range of enemy direct fire weapons. usually 6 to 10 kilometers from the forward edge. The motorized

infantry company then moves in platoon columns (prebattle formation) and advances, preferably through terrain that provides concealment from the enemy. to an assault position.

d. Assault position.. The assault position is where the motorized infantry platoons deploy into battle formation with tanks, if available, in front of the infantry. Its location depends on the preparation of the enemy defense and the degree of destruction by friendly artillery. It should be as close to enemy positions as the terrain and friendly tires allow The assault position should be outside the range of enemy short-range AT weapons and small arms and permit a rapid advance into the enemy positions. It is usually at the last covered and concealed position before the enemy's defensive positions (at least 300 meters from the enemy forward edge), but can be farther out (up to 1,000 meters). In any event, it is farther forward than the supporting BrAG. From the assault position. the dismounted infantry conducts its assault on the objective.

e. *Attack against defending enemy.* The following paragraphs focus on company actions in two types of *attack against a defending enemy.* For the meeting battle or pursuit, see section I of this chapter.

(1) *Attack from the march.* Companies fight as part of their parent battalion, which in turn fights as part of a brigade. A brigade leaves its assembly area in a column of battalions. Within the battalions are columns of companies, each company a column of platoons. The battalion commander designates a dismount area for each company in which the motorized infant? squads dismount from their trucks. The dismount area is normally behind terrain or vegetation that can protect the soldiers and trucks from direct fire and some indirect fire. The dismounted squads depart the dismount area in prebattle formation, dismounted platoon columns. They advance to designated assault positions that are the last covered and concealed positions before the enemy defense positions. The dismounted motorized infantry platoons of the company depart the assault positions in battle formation and assault toward the rear of the first-echelon platoons. Once the platoons overcome these defensive positions, they continue along their subsequent direction of advance toward the company's immediate mission (rear of enemy first-echelon company).

Once the company achieves it immediate mission it continues along its subsequent direction of advance toward the battalion's immediate mission (rear of enemy first-echelon battalion). (See figure 3-37.)

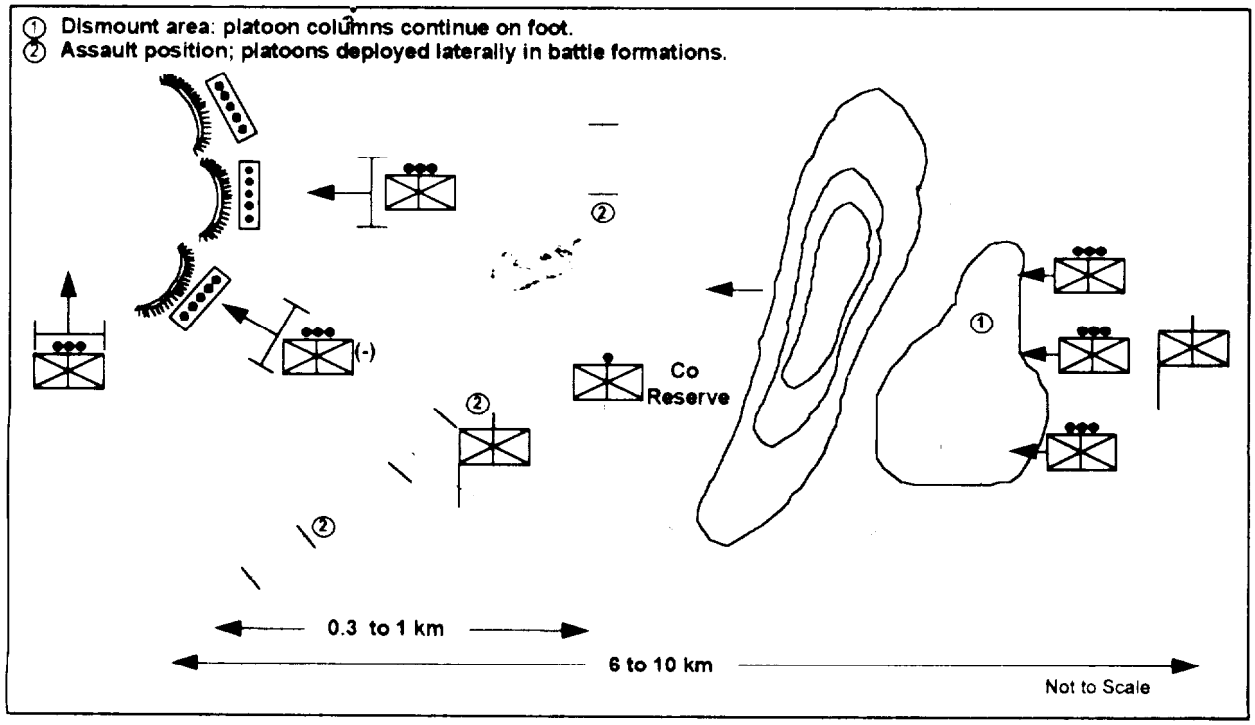


Figure 3-37. Motorized infantry company attack from the march (example).

(2) *Attack from positions in direct contact.* A first-echelon company can attack from positions in direct contact with the enemy. One or two platoons maintain contact and support the attack with direct fire. The third platoon maneuvers and infiltrates around the enemy or through a gap to assault from the flank. A first-echelon company that has successfully penetrated the enemy forward defenses establishes and secures the gap through which follow-on forces move to continue the attack. Figure 3-38 illustrates a company assaulting enemy positions to penetrate the enemy forward defense.

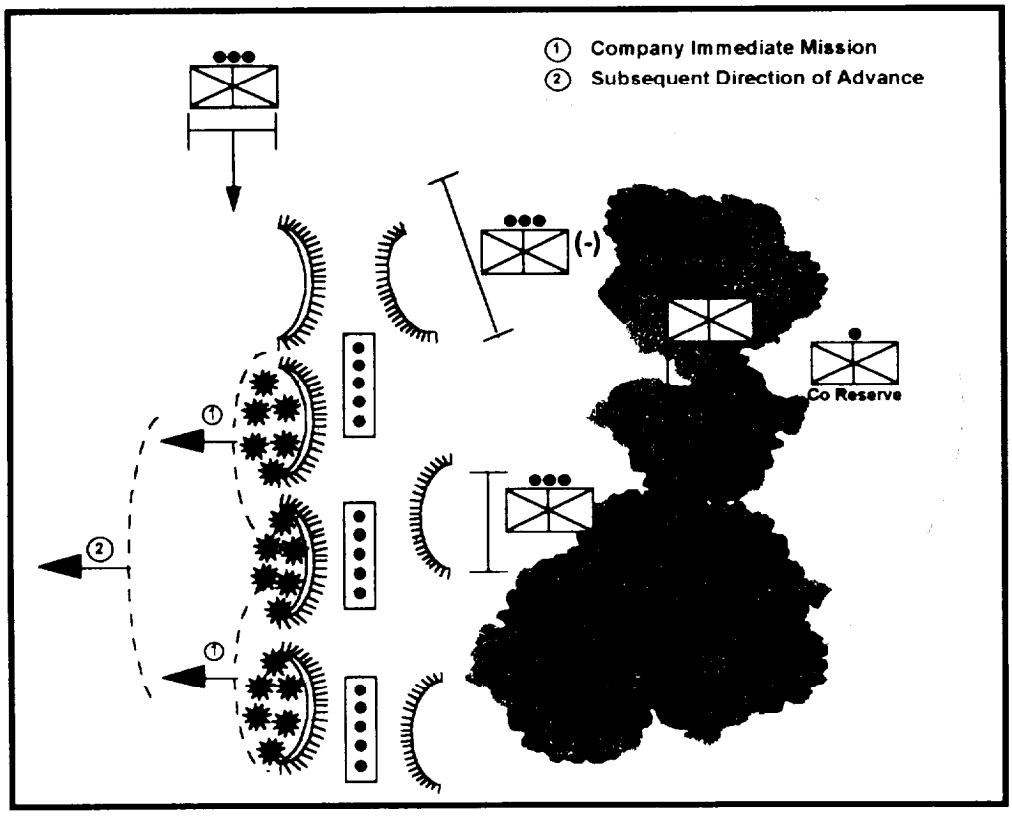


Figure 3-38. Motorized infantry company attack from positions in direct contact (example).

(3) *Missions.* First-echelon companies receive an immediate mission and a subsequent direction of advance (toward the battalion immediate mission). A second-echelon company receives an immediate mission (usually to work together with first-echelon companies to complete their mission) and a subsequent direction of advance (toward the battalion subsequent mission).

(4) *Attack zone and strike sector.* A typical company strike sector is 150 to 200 meters, within an attack zone of 500 to 750 meters A platoon's normal strike sector is 50 to 100 meters, within an attack zone of 150 to 200 meters.

CHAPTER 4
INFANTRY DEFENSE

The focus in this chapter is on truck-mounted. *motorized infantry* and how other arms, possibly including tanks, support it. For more detail on mechanized infantry and tank tactics, see chapter 3. The use of light infantry may be more common in the defense; however, it would tight the same as motorized infantry, once the latter has dismounted. The focus here is also on the defense within *first-echelon divisions* and *military districts.*

Section I. FUNDAMENTALS OF DEFENSE

OPFOR military doctrine considers defense the basic type of combat required to repel possible invasion inside the State border. It sees the offense as the decisive form of military maneuver. Despite its preference for the offense, however, the OPFOR accepts that there are times when it may have to conduct defensive actions. Such circumstances might occur-

- Before the outbreak of a war, or in its early, stages to cover the mobilization and deployment of the main forces.
- In the face of overwhelmingly superior enemy forces
- During an offensive battle, to econimize force in one sector, and achieve superiority, on the main axis.
- To defeat a counterattack during an OPFOR offensive.
- To consolidate lines or positions that FD or other advanced forces have captured to facilitate the advance of the main forces.
- When a unit has suffered serious losses and can no longer conduct offensive actions

Under these conditions, the goal for defense IS to repel an attack by, enemy forces. inflict maximum losses on him, and hold important terrain and objectives. Thereby the defense can create favorable conditions for launching an attack.

As a rule, defending forces are numerically inferior to an attacking enemy. So the possibility of repelling an attack depends on the ability of commanders and troops to exploit the advantages of being on the defense. Whenever possible, defending units choose the place of battle so they, can use the terrain's protective features. To accomplish this, the OPFOR selects defensive c positrons behind natural obstacles and in other terrain sectors that provide good fields of view and fire toward the enemy to maximum range of available weapons. It attempts to engage an attacking enemy when he is moving forward and taking up an attack position, or when he is assaulting the forward edge. The OPFOR defines *forward edge of the defense* as the frontline trace of the division's main defense belt (or line). This corrcsponds to the first trench lines of first-echelon platoon strongpoings. That means that the OPFOR defense often includes combat security forces (FDs, forward positions, or combat security outposts) deployed more forward than the forward edge. In this chapter. the *shortened from forward edge* of the OPFOR defense However, the OPFOR may also conduct defensive battle to hold defensive positions and lines deeper in its own rear. OPFOR commanders tend to avoid defending from "commanding terrain" since they could become easy targets for massed enemy tires or high-precision weapons.

This chapter is adapted from TRADOC pamphlet 350-17, chapter 6.

4-1. PRINCIPLES OF DEFENSE

The execution of a successful OPFOR defense revolves around a few key characteristics. The general principles of OPFOR defensive tactics are as follows:

a. Reconnaissance. The defensive plan begins with reconnaissance, which is the driving force behind a successful OPFOR defense. The OPFOR conducts detailed reconnaissance at all levels to identify the enemy's most likely course of action and how to exploit his vulnerabilities. The OPFOR also must identify enemy strengths and find ways to negate, disrupt, destroy, or avoid them. Effects of terrain and weather, along with enemy capabilities, help the OPFOR select the best terrain to defend. Synchronized intelligence assets can quickly and accurately identify enemy actions in order to focus the counterreconnaissance and disruption forces.

b. Preparation. The OPFOR arrives in the battle area before the attacker, making the most thorough preparation that time allows, If the defense takes place within the State, much of the preparation would have taken place in peacetime. This preparation includes preliminary engineer work and the establishment of caches near planned defensive positions. In the early stages of battle, the OPFOR capitalizes on the advantage of fighting from positions of its selection. and looks for opportunities to take the initiative from the attacker.

Immediately upon occupying its defensive site. the OPFOR begins its priorities of work. The OPFOR believes that attack is always imminent. Therefore, it emphasizes-

- Well-employed primary fighting positions
- Camouflage, concealment, and deception (CCD) techniques
- Use of restrictive terrain. obstacles and minefields
- Integration of fires in the development of kill zones.

The OPFOR rehearses to perfection the commitment of the reserve and local counterattack forces. Preparation ends when execution begins.

c. CCD and Surprise. CCD is the key to surprise. The OPFOR emphasizes concealment of its own forces and the use of deception to mislead the enemy about the disposition of the defense. It also uses ambushes, obstacles, and any other tactical means available to surprise the enemy. Establishing security zones aids in this concealment and deception effort.

Deception confuses the enemy, disrupts his synchronization, and gains valuable time for the OPFOR. During the planning process, intelligence/reconnaissance Identifies the enemy commander's intent and focus. The OPFOR staff plans in excruciating detail a deception "story" that centers around this focus, and lures the enemy commander and his unit astray or into a trap.

The OPFOR combines both passive and active security measures to ensure the integrity of the defensive site. Effective CCD techniques, along with carefully selected terrain. passively deny the enemy the ability to accurately acquire the strongpoint for targeting. Constant and aggressive reconnaissance and counterreconnaissance eliminate enemy ground reconnaissance assets, and forces the enemy to attack "blind." OPFOR soldiers rigidly adhere to security measures; it is extremely rare to find one with any compromising information on his person.

d. Disruption. The OPFOR attempts to disrupt the attacker's tempo and synchronization in order to counter his initiative, and possibly superior firepower. The goal is to prevent him from conducting a coordinated attack and massing the desired combat power at the decisive point. Disrupting the synchronization and integrity of the attack is critical to success, since it allows the OPFOR to fight the attacker one combat system at a time. Keys to this effort are interrupting the enemy's fire support, massed infantry movements, armor forces, logistics support, or C^2. The basis for this characteristic is an extremely aggressive and daring counterreconnaissance effort at every level of the defense.

e. Mass and Concentration. The defense always includes a main effort, with second echelon and/or reserves and all support positioned and prioritized on that basis. The OPFOR seeks to mass the effects of combat power at the key time at the decisive point to destroy the enemy. To obtain this effect, the commander can-

- Limit the options available to the enemy through careful site selection and preparation.
- Economize his own force and accept risk somewhere else
- Always form and retain a reserve at battalion level and above. normally composed of mobile maneuver forces much like an armored group in mechanized forces).
- Shift the mass of his own firepower as required

Mailed intelligence and preparation arc keys to this effort. In order to preserve his force, gain time to mass his forces, or attrit the enemy, the commander may surrender some ground the enemy.

f. Tenacity. An OPFOR unit ordered to hold a position must do so with the utmost stubbornness. It can give ground or withdraw only with the permission of the commander who gave it the original mission to defend. This tenacity allows other units to maneuver.

g. Maneuver. Tenacity in defense does not mean immobility. The OPFOR can maneuver forces and firepower from less threatened sectors to meet the enemy's main attack and disrupt his concept of battle. It can maneuver in front of the main defense and counterattack. The maneuver of forces and fires is the basis of activeness in the defense. A maneuver executed rapidly and covertly can put defending units in position to inflict decisive damage on a numerically superior enemy force Of course. such activeness is impossible without firmly holding defended positions

h. Firepower. The OPFOR deploys all available fire support assets at maximum ranges. It attempts to start engaging the attacker's forces from the earliest opportunity. It is also possible to concentrate the fires of dispersed weaponry on key sectors and so break up the enemy attack.

i. Flexibility. Agile execution and flexible planning are prerequisites for a successful OPFOR defense. All OPFOR planning and execution is mission-focused. however, there is always built-in flexibility that allows the commander to seize the initiative away from the enemy. Although the attacking enemy normally decides the time and place of combat, commanders agile enough to counter or elude the brunt of the enemy main attack can strike back effectively.

Flexibility starts with detailed planning, based on analysis of the enemy's courses of action and a sound understanding of the enemy's intent. Basic plans gain flexibility through the use of-

- Organization in depth (with second echelon or reserves).
- Supplementary positions
- Deception plans.
- Counterattack plans

The key to this is early detection and confirmation of the enemy's main effort. Once the commander controls the thrust of this effort, he can maneuver against exposed flanks, the enemy's rear, and vulnerable logistics and C^2 facilities.

j. Aggressiveness. The more aggressive the defense, the more stable it is. OPFOR commanders at all levels seize every opportunity to take local 0ffensive actions during a defensive battle.

4-2. FORMS AND TYPES OF DEFENSE

When the OPFOR finds it impossible or inadvisable to attack, it can assume an area defense on a hasty or deliberate basis, It can prepare the defense in advance or organize it in the course of battle, in the absence of direct contact or in contact with the enemy.

a. Defensive firms. OPFOR military art recognizes two primary forms of defensive action: the *urea defense* and the *mobile defense.* However, the focus here is on the area defense, since the mobile defense is only practicable at the operational level.

(1) *Area defense. The* area defense *is the principal form of OPFOR defense.* It is the defensive pat tern most commonly used, regardless of the circumstances under which the OPFOR has adopted the defense. Area defenses are particularly well-suited for use in rough terrain, relatively shallow sectors, or when the OPFOR lacks sufficient maneuver potential compared to the enemy'. When defending against more mobile forces in close terrain, area defenses are on high-speed avenues of approach. Most OPFOR maneuver units deploy to retain critical ground; they employ positions in depth and maintain mobile reserves and counterattack forces. At division level and below, however, area defense is most likely to use reserves to block and reinforce than to counterattack. The area defense centers around a relatively static framework of positions, focused on retention of terrain, It seeks to absorb the enemy within an interlocking series of positions and destroy him by fires. (See figure 4- 1,) Aggressive reconnaissance and counter-reconnaissance, employed along with local counterattack forces at all levels, aim to constantly attrit the enemy force as it enters the defense area. A security zone is normally an integral part of the area defense assumed out of direct contact.

(2) *Mobile defense.* Although OPFOR military art recognizes the mobile defense, probably only an expeditionary army would employed it. It requires an army-sized force with a predominance of mobile formations. It also requires space and conditions favoring counterattacks. A mobile defense seeks to destroy the enemy through a combination of offense, defense. and delay. The emphasis is on committing the smallest force possible. The forward-defending force trades terrain for time and diverts the enemy's attention from the main force. This allows the enemy to advance into a position that exposes his flank to counterattack by a large maneuver reserve, which comprises the bulk of OPFOR combat power. Such large-scale counterattacks offer the OPFOR commander the opportunity to gain the initiative and transition to the offensive. However, they are practicable at only the operational level of war.

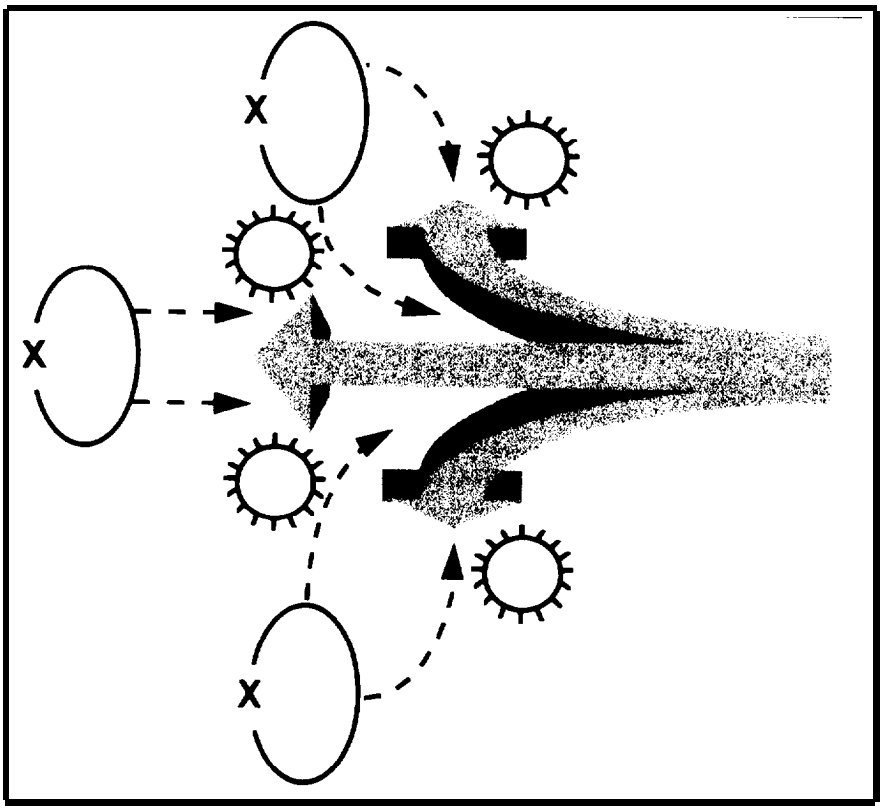


Figure 4-1. Area defense

b. Types of defense. The OPFOR characterizes its defenses based on the amount of preparation time: They are either deliberate or hasty.

It organizes a *deliberate* defense whenever it has sufficient time to prepare its defensive positions; this preparation may take 24 to 48 hours. During this time, the defenders can-

- Conduct reconnaissance.
- Prepare and occupy individual fighting positions and platoon and company strongpoints.
- Organize a security zone and main defenses.
- Fortify the terrain and create obstacles.
- Plan fires.
- organize logistics support
- Rehearse.

The OPFOR adopts a *hasty* defense when it has very little time to organize a defense or when its advance formations have stopped their offensive action. In the hasty defense, the width of the frontage is smaller, with smaller gaps between stringpoints. This means that the OPFOR must accept greater risks in other areas. Because of this, the commander may retain a larger-than-normal reserve

c. *Transition to defense.* The enemy is the determining factor dictating the method of shifting to the defense. Depending on enemy proximity and the nature of the battle, an OPFOR unit can shift to a defense before battle occurs or in the course of battle. Basically, the transition occurs either under conditions of direct contact or in the absence of contact.

(1) *In direct contact.* The OPFOR transition to the defense *in direct contact* occurs most often in the course of an attack. It can also occur when repelling counterattacks, consolidating captured lines and securing flanks of attacking troops, or with an unsuccessful outcome of a meeting battle. The OPFOR must organize the defense under enemy fire in a short time period, not always on a favorable line, and often on a line with no engineer preparation. Thus, this method of transition to the defense is the most difficult.

When transitioning to the defense in direct contact, the OPFOR faces a situation in which units may have to preform several missions simultaneously:

- Conduct a firefight against a defending or counterattacking enemy.
- Repel air strikes. including helicopters
- Take measures to recover from enemy use of nuclear, chemical, high-precision weapons and fire strikes.
- Realign the combat formation
- Replenish ammunition. fuel. and other supplies.

Shortages of personnel, combat equipment and supplies due to losses suffered during the attack can further complicate the situation.

(2) *Out of direct contact.* The OPFOR can assume a defense before the battle begins, *out of direct contact* with the enemy. The main difference between defense in contact and defense out of contact is the absence of a *security zone* in the former Under the latter condition the purpose of transition to a defense is to cover areas of possible contact, in order to repel a possible enemy strike or support the deployment of additional forces. Transition to a defense can occur where an attack is inadvisable or impossible for a number of reasons Follow-on forces shift to a defense in the absence of contact.

4-3. ORGANIZATION OF DEFENSE

OPFOR commanders follow the tenets of stability and activeness in planning the defense. The OPFOR achieves stability by the integration and coordination of all combat assets to defend against nuclear, chemical and high-precision weapons, artillery, tanks, aviation and air insertions Activeness in defense involves decisive counterattacks, maneuver of forces and fire, continuous combat, and artillery counterpreparations. Frontages and depths vary considerably, with the circumstances in which the unit adopts the defense, the importance of the sector, the strength of the defending forces, and the assessment of the threat.

a. *Areas of responsibility.* In OPFOR terminology a division or a separate brigade defends a *zone,* a divisional brigade defends a *sector,* and a battalion an *area.* Companies and platoons defend *strongpoints.* The division defense comprises a series *of positions* deployed in depth. Each position consists of company strongpoints with integrated obstacles and a fire plan. The *first position* is the most strongly held. Positions in depth may be only partially occupied, but they provide a line to which forces defending farther forward can withdraw on order

b. Combat security forces. The type of combat security force the OPFOR uses in the defense depends on the circumstances in which it adopts the defense and the level of command involved. A unit does not always deploy a combat security force, particularly when transitioning to the defense in contact with the enemy. In this case. the defending force may have to occupy a line while in action and hold it to the best of its ability. Figure 4-2 shows the types of combat security forces the OPFOR can employ. The uses of the various types are as follows:

(1) *Security zone.* The OPFOR establishes a *security zone* when organizing the defense *out of contact* with the enemy. The region, army, or division commander makes the decision to establish a security zone in front of the first-echelon divisions. If the depth of the army's deployment permits, second-echelon divisions can prepare a security zone between the rear of the first-echelon and their own frontline. Within his zone of defense, the division or district commander is responsible for the detailed organization of the security zone. The security zone extends across the entire zone of responsibility. If established by the region or army, the security zone boundaries do not necessarity conform to lateral division boundaries. If established by division, however, it would match the division boundaries. The zone is at least 15 kilometers deep and can extend to a depth of 50 kilometers. It is at least far enough forward to prevent aimed direct faire from being placed on the main defense belt (line); however, it normally extends beyond that.

Mission	*Deployed when defending*		*Command levels*			*Distance in front of forward edge of*
	In contact	Out of contact	Directed by	Deploying force	Fighting the battle	Main defense
Forward detachment in security zone	No	Yes	Region/ army/ division	Division/ district	Up to Battalion	Up to 15 km
Forward position	Yes	Yes	Division/ district/ brigade	Brigade	Company	Up to 5 km
Combat security outpost	No	Yes	Brigade	Battalion	Platoon	Up to 3 km

Figure 4-2. Types of combat security forces.

When transitioning to the defense *in direct contact.* the OPFOR may not have a security zone. However, it could still have a *covering zone.* This is a smaller, shallower version of the security zone, at least sufficient to keep the defense out of enemy direct observation and fire.

The security force's size and composition depend on the factors mentioned earlier. The security face deploys on the best terrain to inflict maximum damage on the attacking enemy and uses obstacles and barriers extensively. When faced with envelopment or decisive engagement, the forces in the security zone attempt to withdraw under cover of artillery fire and return to the main defense belt (line).

(2) *Forward detachment.* A district or division commander normally deploys an FD to fight in the portion of the security zone for which he is responsible. The size of this FD can vary, depending on the forces available. However, it is usually a reinforced battalion from a second-echelon brigade The mission of the FD is to-

- Delay, disrupt and destroy the advancing enemy.
- Force him to deploy or attack on unfavorable directions

- Determine his grouping and main effort.

Collectively, these actions allow for the district's or division's first-echelon brigades to deploy into and continue preparation of positions in the main defense belt (line).

A battalion-sized FD established a series of reinforced *company-sized positions* along the enemy's expected main avenue of approach. Faces generally concentrate in the brigade sector anticipated to face the enemy main attack. Defensive terrain is the primary consideration for their positioning, which may be at any depth within the zone. These companies conduct a series of delays, maneuvering back to subsequent positions when endangered by decisive engagement or encirclement.

In a well-developed security zone, each company has multiple fighting positions:

- An *initial position,* which is the most forward in the security zone.

- Several *subsequent positions*

- The *forward position,* which is the closest position to units defending in the first echelon of the main defense belt (line).

The initial position may be up to 15 kilometers in front of the forward edge of the main defenses. From there, companies maneuver in bounds to subsequent positions. These positions are in lines separated from each other by up to 3 kilometers. Forward position are normally 3 to 5 kilometers forward of forces defending in the first echelon of the main defenses. All the above distances can vary, based on the terrain. Ideally, engineers would prepare all three types of positions. Much of the engineer work, especially for forward positions, might take place during peacetime contingency preparations. The intent of the forward position is to emulate main defense positions; it should be outside the enemy's direct fire range. When circumstances do not allow for development of a full security zone, forward positions may be the only fighting positions forward of the main defense.

(3) *Forward positions.* When the separation from the enemy is not great enough for creating a security zone (or covering zone), the OPFOR uses *forward positions.* It also can use these when it does form a security zone, to imitate the main defense, cause the enemy to conduct premature artillery preparations, and aid in the disengagement of the FD. These forward positions deploy up to 5 kilometers in front of the first echelon of the main defenses. The division orders forward positions, but first-echelon brigades plan them in detail. Each first-echelon brigade creates a forward position and mans it with a company from the brigade's second echelon. The primary mission of a forward position is to mislead the enemy about the location of the forward edge of the defense. Forward positions are sometimes useful when going over to the defensive in contact with the enemy. They remain on the line of contact while the main body of the brigade withdraws to a more favorable line for defense.

(4) *Combat security outpost.* If a brigade does not deploy forward positions, it can order first-echelon battalions to organize *combat security outposts.* These outposts consist of a platoon positioned up to 3 kilometers in front of the forward edge of the defense, on the most threatened axis. The combat security outpost's primary mission is to prevent enemy reconnaissance and small groups from penetrating to the battalion's position. It receives fire support from the battalion's mortars and any available artillery and direct fires from the forward edge of the defense. Once the enemy begins to deploy for a major attack, the outpost withdraws, generally under cover of smoke and artillery fire.

c. Main defense belt (line). An expeditionary army calls its main defenses a *belt,* while a region refers to them as a *line.* Creation of a belt connotes the linking of strongpoints across multiple defensive areas. The linearity of the

army defense allows this, whereas the region defense does not. In either case, the main defense belt (line) relies on defense in depth. The basic element of the main defense belt (line) is the battalion defense area; this in turn comprises company and platoon strongpoints. The OPFOR establishes strongpoints to protect terrain key to the defense. The units occupying the strongpoints prepare a defense with alternate and supplementary firing positions for all weapons. These units plan their fires to be mutually supporting and plan for the use of kill zones. Using wire as the primary means of communications, the units construct a network of communication trenches linking weapon positions with supply, C2, and fighting positions. Units dig in vehicles and other equipment to the maximum extent possible, including provision of overhead protection.

(1) *Typical frontages and depths.* There is no "doctrinal" frontage or depth that a given OPFOR unit will defend. These dimensions of the defensive battlefield depend on the specific factors of mission, enemy, terrain, troops, and time available. They also depend on the specific unit's place in the overall combat formation, its echelonment, and its equipment. Figure 4-3 shows some *typical* frontages and depths for motorized and mechanized forces. These represent only generalized guidelines, from which actual defenses can vary considerably according to the situation

At battalion level and above, for example, mechanized units with armored fighting vehicles should be able to defend a larger area, due to their mobility and ability to move under armor protection to alternate positions. At lower levels, however, a dismounted motorized infantry squad or platoon might defend a slightly wider frontage than its mechanized equivalent since all nine squad members would dismount from a truck. Only seven of the nine would dismount from an armored personnel carrier (APC) or infantry fighting vehicle (IFV). (The APC or IFV driver and gunner remain in the vehicle, which occupies its ownfiring position. That position can be in the center or on a flank of the squad defensive position, or up to 50 meters to the rear of the squad trench.)

Motorized unit	*Frontage*	*Depth*
Division	6-12 km	8-10 km
Brigade	3-6 km	3-5 km
Battalion	Up to 3 km	1.5-2 km
Company	Up to 1 km	Up to 1 km
Platoon	400-500 m	50-300 m
Squad	Up to 150 m	N/A

Mechanized unit	*Frontage*	*Depth*
Division	12-20 km	8-12 km
Brigade	6-10 km	3-5 km
Battalion	3-5 km	1.5-2.5 km
Company	1-1.5 km	Up to 1 km
Platoon	Up to 500 m	Up to 200 m
Squad	Up to 150 m	N/A

Figure 4-3. Typical defensive frontages and depths for motorized and mechanized infantry units

(2) *Echelons.* As in the offensive, the OPFOR can deploy in one *or* two *echelons.* A two-echelon deployment is usual on the most threatened axis and a single-echelon deployment is more common on secondary axes. Defenders may also adopt single echelon formations after suffering heavy casualties. Within a formation, different levels of command can use different echelonment schemes. For example, even if a division deploys in two echelons, one or more of its brigades could be in a single-echelon formation. A brigade could deploy in a

single echelon, while its subordinate battalions could have two. A second-echelon brigade or battalion may or may not have the same number of echelons as its first-echelon counterpart. Platoons normally deploy in a single echelon, and a squad always does.

In the defense, second echelons can have the following tasks:

- Hold their main position against an enemy penetration.
- Reinforce first-echelon units where the enemy threatens a penetration.
- Maneuver to firing lines or to launch counterattacks.
- Destroy enemy airborne or heliborne assaults

(3) *Maneuver reserve.* Forces deployed in one echelon retain a maneuver reserve. Unlike the offensive combat formation, a district, division, or brigade in the defense can form both a second echelon and a small reserve. For a district or division, the reserve normally consists of a battalion, for a brigade a company, and for a battalion a platoon. However, a commander can retain a smaller reserve if the situation warrants. In divisions or brigades that lack tank battalions, the commander probably lacks sufficient forces to form both a second echelon and a reserve. Even in mechanized divisions and brigades that normally have a tank battalion, parts of that battalion would probably reinforce first-echelon mechanized infantry units, leaving only a tank battalion (minus) as a reserve. Maneuver reserves can receive counterattack missions. However, more likely missions for reserves at division level or below are to fill gaps in the defense in blocking and reinforcing roles.

(4) *Antitank reserves.* In infantry units, AT reserves are present at every level from battalion upwards. Built around an AT unit, they generally act in conjunction with a mobile obstacle detachment.

(5) *Antilanding reserves.* Because the OPFOR perceives a threat from airbome/airmobile troops, commanders commonly designate an antilanding reserve. A commander can designate part of the force's second echelon for this role or create a specific reserve. If the commander designates an antilanding reserve, he usually would not form a maneuver reserve.

(6) *Special reserves.* In addition to their mobile obstacle detachments, brigades and divisions try to retain an *engineer reserve* of earthmoving and obstacle-creating equipment. This reserve can deploy to strengthen defenses on a particularly threatened axis during the course of the battle.

(7) *Armored groups.* Mechanized infantry or tank units can form armored groups at *battalion or company level* as additional maneuver assets in the defense. They are temporary, composite groupings of tanks and APCs or IFVs, usually formed after the infantry has dismounted in a defensive strongpoint. A company armored group can consist of one to two tanks and two to four APCs or IFVs (or vice versa), commanded by an assistant platoon leader. A battalion armored group can have two to four tanks and four to six APCs or IFVs (or vice versa), commanded by a platoon leader from a second-echelon company. Armored group vehicles may come from first- or second-echelon units that are defending positions away from the most threatened axis.

As a rule, tanks and APCs or IFVs designated for use in an armored group initially deploy in the strongpoints of their parent platoons. Their crews carry out preparations for the defense according to their platoon leader's plan. Once the basic work of preparing the position is complete, the battalion or company commander can organic an armored group. He does this by withdrawing vehicles from their tiring positions in strongpoints and concentrating them in concealed areas in dead space, woods, or other cover behind the first-echelon positions.

Once formed, an armored group has two or three firing lines assigned to it for covering gaps between strongpoints and to the flanks. After moving to the concealed area, the vehicle crews camouflage the armored group and may establish dummy vehicles or false heat sources away from the position. They prepare routes to the firing lines and firing positions on them, as well as routes back to their original platoon strongpoints.

Once the battle begins, the armored group remains in its concealed area until ordered to occupy a firing line to block a threatened penetration. On receiving the order to move, the armored group forms into a column and moves forward swiftly, often under cover of smoke, to occupy firing positions. All or part of the armored group may return to its original platoon strongpoints, if that seems a more effective way to use the vehicles. Together with first-echelon tits, the armored group concentrates fire against the bulk of tanks and other armored vehicles to inflict damage on the enemy ahead of the OPFOR forward edge. Subsequently, it can reposition (possibly to a flank) to destroy enemy forces that penetrate the defense or threaten to envelop the company strongpoint or battalion defense area.

(8) *Ambushes.* Ambushes are a common feature of any OPFOR defense. In size, they vary from individual weapon systems to a platoon and generally come from second-echelon units. They deploy on likely axes of approach, on flanks and in gaps and between first- and second-echelon positions. The goal of the ambush may be to-

- Reduce the enemy's strength before he reaches the main defenses
- Slow his advance
- Deceive or serve as a deco!
- Harass or separate enemy forces

When available, tanks, APCs or IFVs. AT weapons. and helicopters can participate in ambushes

d. System of fire. An OPFOR commander constructs a *system of fjre* bringing all available fires on the enemy as he approaches. The system provides continuous fire at the forward edge, on the flanks, and within the defensive position. In addition, it should allow rapid concentration of fire against threatened axes. The goal is to engage the attacker with a growing intensity of fire as he approaches the forward edge of the defense. Fire begins with artillery concentrations and barrages on likely axes, chokepoints, and deployment lines. The OPFOR recognizes two fundamental considerations of fires in the defense: depth and dispersion.

(1) *Depth.* The first consideration is that the defense must provide sufficient depth for effective fire and maneuver. OPFOR weapons engage the enemy at as great a range as possible, providing an increasing volume of fire as he nears the defensive positions. Fire support weapons deploy in positions that allow them to shift fires against threatened axes within the defensive position. To counterattack enemy penetrations, units occupying positions in the depth of the defense must be able to maneuver and concentrate rapidly.

(2) *Dispersion.* Conducting a defense under the threat of enemy employment of high-precision weapons and weapons of mass destruction demands dispersion. *Platoon and company strongpoints are the* basis of the OPFOR defense. Increased dispersion between these strongpoints leads to problems in fire support coordination and troop control. An excessively dispersed defense does not offer sufficient resistance to accomplish defensive missions. As a result. the OPFOR cautions its commanders not to achieve dispersion at the price of effective defense.

(3) *Kill* zones. The OPFOR ties all available obstacles into an integrated fire plan designed to totally destroy advancing enemy forces. It calls this concept a *kill* zone. *Kill zones* may result from a maneuver of fire, weapons, and units in the course of a defensive battle. They may be either within the main defenses or forward of them in a security zone, but are always contained physically within the defensive positions. The depth of kill zones can vary, generally equating to the range of available direct fire weapons. They can have a frontage of 900 to 1,000 meters when created ahead of the forward edge or 500 to 800 meters when created within the main defenses.

The units covering a kill zone first bring direct fire weapons to bear as the enemy advances and then seal the penetration with indirect fires. The defenders attempt to trap the enemy, stop his advance, blunt his penetration, and then destroy him through fires and counterattacks.

The fire plan of direct and indirect fires ties into the existing strongpoints and obstacles. The OPFOR commander carefully chooses suitable natural obstacles that lend stability to the defensive positions. The addition of manmade obstacles, including minefields, enhances these natural obstacles. Obstacles on the edges of the kill zone serve to contain the enemy force, preventing his escape. The defenses in the kill zone are well camouflaged and include the use of dummy weapons and positions to deceive the *enemy* as to the true locations of the strongpoints. Reserves carefully locate where they can counterattack effectively once the fires have lifted. Figure 4-4 shows an example of the integration of platoon strongpoints, system of fire, and obstacles in a motorized infantry company defense.

4-4. ARTILLERY SUPPORT

In the defense, as in the offense, the fire planner utilizes all available fire support to carry out the commander's plan. Emphasis is on the integration of artillery, air, and AT assets into an overall defensive fire plan. The commander and staff produce several variations of the plan, based on the approach and deployment options open to the enemy. Maneuvering massed firepower against key groupings at the crucial moment is critical. Primary artillery missions in defense are *counterpreparatory fires* and *fires against an atracking enemy*. Other defensive artillery missions include support of forces in the security zone and at forward positions, as well as covering gaps and open flanks with fire.

a. Counterpreparatory fires. Counterpreparatory fires are rocket, missile, artillery, and air strikes intended to annihilate or neutralize enemy forces preparing to attack. These fires should surprise the enemy and should start before the enemy's preparation fires. The OPFOR would use all appropriate tire support to reduce the effectiveness of the enemy's preparatory fires.

b. Fires against attacking enemy. Fires against an attacking enemy consist of four phases. They are as follows:

- Phase I: Fire interdiction of advancing enemy troops.
- Phase II: Fire to repel the enemy attack
- Phase III: Fire support of defending troops
- Phase IV: Fire destruction of the enemy during a counterattack.

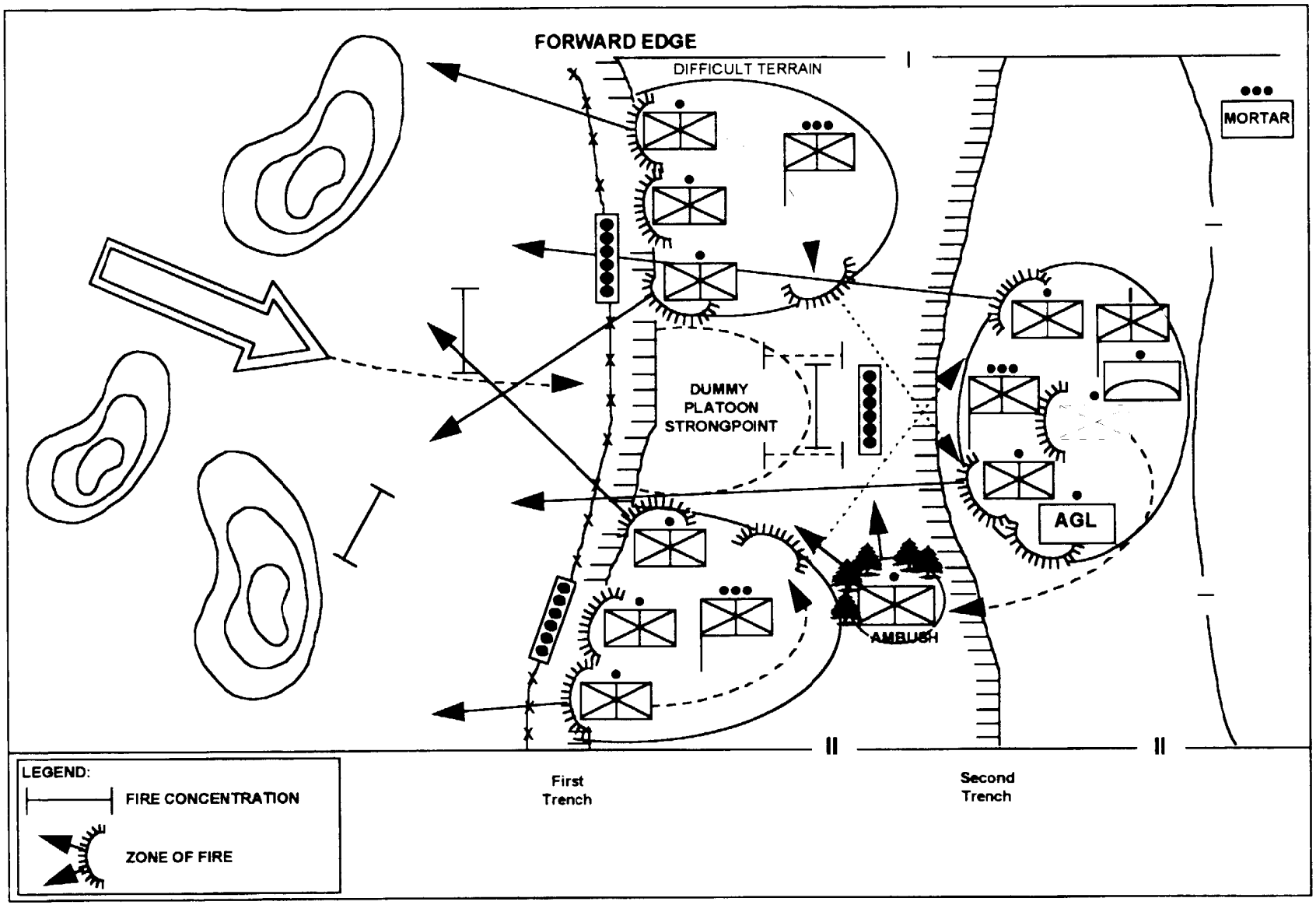


Figure 4-4. Motorized infantry company in defense (example).

4-5. ENGINEER PREPARATION

The OPFOR divides engineer preparation of the defense into three stages. Obstacles, both natural and manmade, play an important role in the defense.

a. First stage. Barbed wire and other obstacles are emplaced in front of the position and fields of view and fire are cleared. Pits or trenches are prepared at the primary position of each fighting vehicle, crew-served weapon, and individual infantryman. Command observation posts and medical posts are dug in. This normally takes 10 to 12 hours.

b. Second stage. During the second stage of preparation of the position, fighting vehicles and weapons systems are provided with alternate fire positions. Trenches are linked until they run continuously across the battalion frontage, Communication trenches are prepared. The OPFOR allows an additional 10 to 12 hours for this phase. By the end of this phase, primary firing positions usually have 18 inches of overhead cover.

c. Third stage. Further preparation of the position includes improvement of existing trenches and positions, laying further obstacles and preparation of firing lines and routes for AT reserves and second echelons, Communication trenches may be improved for use as fighting trenches. Dummy positions are prepared in intervals between strongpoints

d. Obstacles. The OPFOR's intent IS for obstacles to break up the enemy's assault. strip away the infantry's supporting armor, and force the enemy into areas where concentrated fires of all weapons can destroy him. Obstacles placed within the main defense area confine the enemy within kill zones and support the employment of the reserves.

Natural and manmade obstacles slow, disorganize, and canalize the enemy force, either alone or with preplanned fire concentrations. The OPFOR stresses the use of natural obstacles: lakes, rivers, marshes, escarpments, and densely forested areas Manmade obstacles may include minefields, AT ditches, wire entanglements, and abatis. The depth of the obstacle plan depends on the time and engineer resources available.

The OPFOR's use of various obstacles. especially minefields, is an important advantage in the defense. They reduce the rate of forward movement. deployment. and assault of enemy tanks and mechanized vehicles. They increase the effectiveness of both AT weapons and artillery fire by canalizing attacking enemy forces into kill zones and ambushes and/or preventing their escape from them. The OPFOR also places mines and obstacles to protect the flanks of its defensive positions. It may attempt last-minute laying of minefields; means for this include mechanical minelayers. multiple rocket launchers (MRLs), and rotary- and fixed-wing aircraft, Minefields also can be emplaced by, hand. As a rule the OPFOR covers minefields and obstacles with direct and indirect fires

4-6. ANTITANK DEFENSE

The OPFOR considers the correct employment of AT assets essential to the defense. Each maneuver unit from company upward plans AT defenses. which include obstacles and mines. If necessary, field guns and air defense artillery weapons can serve in an AT role. AT defenses and weapons deploy along likely avenues of approach into which the defenders try to canalize the enemy to form kill zones. AT defenses

cover everything from the security zone back through the second defense line, with the majority in the main defense line.

The OPFOR AT defense system comprises the following elements:

- Company and platoon strongpoints containing well-sited AT weapons.
- Tank ambushes set up throughout the defense.
- AT reserves placed to respond to enemy tank penetrations.
- Tanks within the second echelon to bolster the first echelon or to counterattack.
- Mobile obstacle detachments.
- Artillery in the direct fire role, in forward positions and from positions in the depths of the defense.
- AT obstacles covered by fire and complementing the maneuver of fires and forces.
- Maneuver by AT forces and weapons.

The OPFOR concentrates AT guns and ATGMs by platoon and battery. It plans multilayered crossfires, long-range fires, and fires to the flanks and rear. Cooperation between guns and ATGM systems is essential for adequate AT defense. A commander positions his AT reserve to undertake multiple missions: blocking, counterattacking, reinforcing, and providing rear area security.

Attack helicopters mounting rockets and ATGMs provide mobile, quick reaction, AT reserves. The OPFOR emphasizes use of these assets to defeat tank penetrations or flanking maneuvers.

4-7. COUNTERATTACKS

Every level of command, beginning with company, makes counterattack plans. Although reserves normally are the primary counterattack force, other units may receive this mission, particularly those in the second echelon. The approval of the next-higher commander is normally necessary prior to launching the counterattack.

Section II. MILITARY DISTRICT AND SEPARATE BRIGADES

Districts defend as part of the region first echelon in the main defense line or as the region second echelon in the second defense line. This section focuses on the security zone and main defense line. Organizational principles and disposition of forces are generally the same for both the main and second defense lines. A military district may have one or more separate brigades (usually 3 to 4), augmented by organic and allocated resources. These structures and their possible combat support and combat service support organizations vary widely. For the sake of illustration, the discussion below assumes that districts have received everything that they could receive during wartime. It also assumes the most likely case, in which the district assumes the defense while still out of direct contact with the enemy.

4-8. MISSIONS

District missions mirror those of the region defense line of which they are a part, either the main or second defense lines. The primary mission is to protect the territorial integrity of the district and stop the invading enemy from advancing farther into the interior of the State.

4-9. SCOPE

Generally, the overall frontage of a district defending in the main defense line extends across the district. Across this general, irregular line, placement and number of avenues of approach dictate the actual dispersal of forces. Brigades defend on the main avenues of approach leading into the State's interior. Therefore, brigade frontages are more important in determining the scope of the defense. Light and motorized separate infantry brigades normally defend a frontage of 3 to 6 kilometers. Mechanized and tank brigades normally defend a frontage of 6 to 10 kilometers. In mountainous or open terrain, defensive zones are wider with a greater dispersal of forces; in normal terrain containing a key enemy axis, zones are narrower with larger concentrations of forces.

4-10. LINEARITY

Generally, districts within the region's main defense line cannot conduct a linear, contiguous defense. This is due to the amount of terrain they must defend and the dispersal of forces. Thus, a district in the main defense line would probably deploy an irregular disposition of brigade-sized concentrations on key terrain along important avenues of approach. A district in the second defense line may have a more linear defense. This is due to the converging of the avenues of approach leading into the interior of the country and a corresponding concentration of forces along those avenues.

4-11. ORGANIZATION OF DEFENSE

The following are components of the district defense within the region's security zone and the main defense line:

a. Security zone. The security zone is an area in front of the main defense designed to delay, weaken, and deceive the enemy. Although the creation of a security zone is an operational decision made by the region commander, district commanders control the forces contained within their respective areas of responsibility within the zone. (See figure 4-5.) The frontage of the district security zone would match the frontage for the district's portion of the main defense line. Depth can range out to 50 kilometers but varies based on the enemy and the terrain. Basically,. it extends from the main defense line to the border. Specific activities within the zone fall into two general mission categories: reconnaissance and security.

(1) *Reconnaissance.* The primary ground reconnaissance mission within the security zone is to warn of enemy movements. This includes reporting on the size and location of units, troop concentrations, C^2 elements. locations of logistics and reserve elements, and probable main thrusts. The district's ground reconnaissance assets normally come from its reconnaissance and electronic combat (EC) battalion. (See paragraph 4-12.) This battalion's long-range reconnaissance company tends to deploy in single vehicles or small dismounted elements, establishing observation posts on dominant terrain. The other reconnaissance companies deploy in small patrols of three to four vehicles along the enemy's expected avenues of approach.

District-level reconnaissance responsibilities generally include the entire depth of the security zone. If the district has a reconnaissance and EC battalion, those assets tend to cover the most forward portion of the security zone. They also concentrate on the most likely area for the enemy's main attack. Ground reconnaissance assets from the separate brigades in the main defense line cover a band closer to their own forward edge. Based on district reconnaissance reports, brigade reconnaissance could adjust or refocus its efforts. If, however, the district does not have a reconnaissance and EC battalion, brigade assets are responsible for the entire depth of the security zone.

Militia forces located in towns or villages along the enemy's avenues of approach may participate either actively or passively in the reconnaissance effort. Their participation may be point observation-type missions conducted at the request of reconnaissance units in the security zone, or simply reporting what they have seen to patrols from the district or separate brigade reconnaissance companies.

(2) *Security.* All forces conducting security missions within the zone are part of the security echelon. The depth to which security echelon forces deploy depends on the depth of the security zone. the terrain, and the organization and type of force. Security echelon forces established by the district commander cannot withdraw to subsequent positions or from the security zone without his consent. This degree of control is necessary because the district commander may be controlling multiple units in the zone, and he must consider the effect one unit's moving might have on the other units. For example, artillery may deploy forward in the zone to support several units. and the movement of one unit may expose and endanger the artillery forces. Under ideal conditions, units selected to conduct security echelon missions would be motorized or mechanized infantry. Forward detachments and combat security outposts are the two primary types of security echelon forces.

When the region commander establishes the security Lone, the district commander normally forms one *forward detachment* to fight in the portion of the security zone for which he is responsible. The size of the FD, normally a reinforced battalion or a brigade, depends on the forces he has available to conduct his defense. Ideally, the basis of the FD is a motorized or mechanized infantry brigade. These have the needed mobility and organic combat support and combat service support. A "high end" district with three or four brigades can afford to deploy an entire brigade as its FD. Districts with fewer brigades would use only a battalion. The district commander could take this battalion from one of two sources: from a brigade in the district second echelon or from a first-echelon brigade defending along a less threatened approach or series of approaches. The district second echelon is the primary source.

From its *initialposition,* the FD conducts a series of delays, maneuvering to *subsequent positions* when endangered by decisive engagement or encirclement. Its final position forward of the main defenses is called the*forward position.* These delays allow for the district's first-echelon brigades to deploy into and prepare positions in the main defense line.

First-echelon brigades provide local tactical security. As with the district commander's control of the FD, control of combat security forces rests with the commander establishing the force. In the absence of a security zone, or at the direction of the district commander, brigades may man *forward positions* with a company from the brigade's second-echelon battalion. The district commander may direct this action to facilitate withdrawal of the FD from the security zone. There is no difference between these forward positions and those previously addressed In either case, they are up to 5 kilometers in front of first-echelon positions in the main defense line.

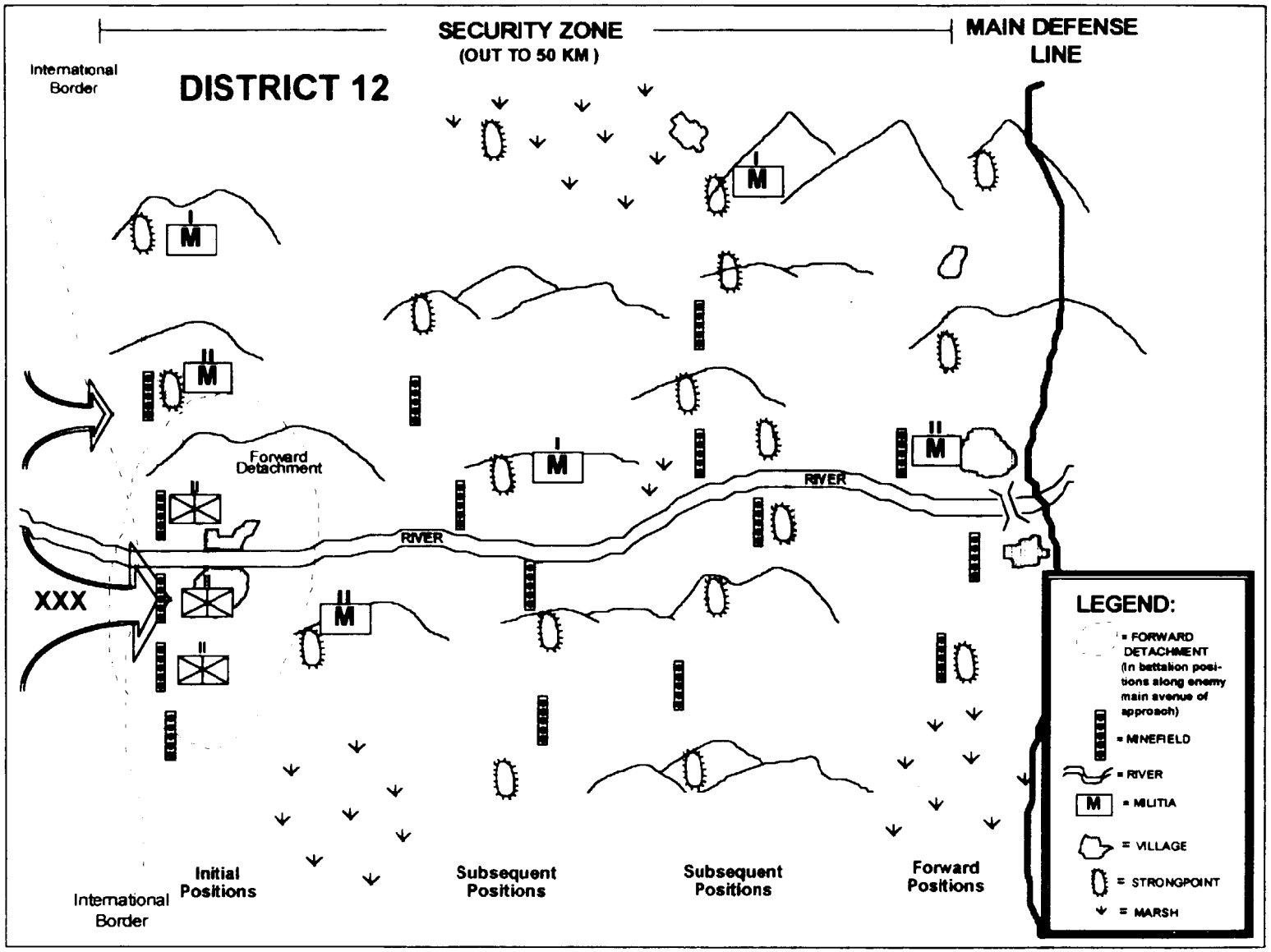


Figure 4-5. Military district security zone (example).

First-echelon battalions may also establish platoon-sized *combat security outposts* up to 3 kilometers forward of their positions. These outposts have the same missions as forward positions. It is normal to establish them in the absence of occupied forward positions or on secondary avenues of approach when forward positions are manned. The brigade commander directs their establishment, but the battalion commander usually chooses the specific location.

Light infantry units, if acting as part of the security echelon, are not able to delay in the same manner, and normally have orders to allow the enemy to bypass them and conduct partisan-type combat. Their most likely employment is within prepared forward positions.

Militia forces in villages or towns encompassed by the security zone conduct normal security echelon missions. The size of the force depends on population of the town. Around large ports and in more populous areas, militia light infantry battalions may have the missions to deny the enemy resources and control of the population. They may also control lines of communications hubs by strongpointing towns along enemy avenues of approach. Even smaller groups are effective for conducting harassing or delaying actions at chokepoints, such as in restrictive terrain or at bridges. Normally, smaller militia forces in the security zone wait until major enemy combat formations pass and then conduct ambushes or raids against C^2 facilities or logistics lines. However. if the invasion occurs before the region can deploy its normal security echelon forces, the militia conducts the above actions to delay, the enemy until those forces deploy. In this role, militia light infantry may use the same types of initial, subsequent, and forward positions as used by company- or battalion-sized elements of an FD. Some militia may aid in the disengagement and withdrawal of defending FD units

b. Main defense line. The main defense line constitutes the region's first echelon. It normally contains the combined forces of 2 to 3 districts. Each district defends in one or two echelons, with various reserves. Two-echelon deployment occurs under the following general circumstances: when facing a stronger extra-regional force, on the most threatened axis. or in restrictive terrain. Single-echelon deployment occurs when facing a weaker regional force, when the geographical layout of districts within the region dictates it, or when the defender has suffered heavy, casualties The tactical formation should be deep enough for flexible maneuver by, second-echelon and reserve forces. and to reinforce resistance against the enemy's attack.

(1) *First echelon.* The primary mission of the first echelon is to prevent penetration of the first-echelon defenses, and to repel enemy attacks with maximum casualties This includes holding vital terrain and supporting counterattacks by second-echelon and reserve forces. Once the enemy overcomes or shatters the integrity of the defense, the collective mission becomes one of partisan warfare.

(a) Command observation post The district commander normally places his COP behind the center of the first echelon of the district This is normally behind the first-echelon brigade expected to face the enemy's main attack. Commanders at all echelons conduct personal reconnaissance, when feasible.

(b) Motorized and mechanized infantry. Two *or* three brigades would compose the district's first echelon. The building block of the defense is the infantry battalion. Each brigade defense consists of *company and battalion strongpoints* at key points along the enemy's avenues of approach. When possible, company or battalion strongpoints link together until they form a brigade defense line, which comprises all maneuver units within the brigade However. this IS not normally possible across the entire district frontage.

(c) Fortified defense As time permits, each unit establishes dug-in, camouflaged, fortified positions with strongpoints capable of 360-degree defense. All units establish obstacles and interlocking

fields of fire with adjacent units. They construct obstacles, including minefields, particularly in front of the forward edge of the defense. They also employ minefields throughout the defensive system and cover them by observation and fields of fire. Mechanized forces, tanks, and artillery pieces of the first-echelon battalions and brigades are normally dug-in; those in the second echelon or reserve are more mobile.

(d) Light infantry. In the gaps between the strongpoints established along the avenues of approach, light infantry *companies or battalions* may conduct screening missions in difficult terrain. They may also conduct company-sized defenses along less probable avenues of approach through that terrain. Once bypassed, they would revert to partisan-type actions.

(e) Militia. Militia forces also defend within the territorial scope of the first echelon. Normally, these company- or battalion-sized units would defend villages and town, bridges, passes, or other key areas from static positions. They may defend strongpoints in the gaps between regular maneuver units. However, they would not become integrated into the defensive pattern of maneuver units. Both regular and militia units usually have orders to engage the enemy decisively and hold at all costs.

(f) Partisan warfare. Any of these defending units may find themselves bypassed, fragmented, or attrited below unit combat effectiveness levels. When this occurs, they would "go to ground" and conduct partisan-type combat against follow-on forces, command and control facilities, and logistical facilities.

(2) *Second echelon.* The primary mission of the forces in the district second echelon is to *contain enemypenetrations* of the first echelon until the OPFOR can launch a counterattack. It may also reinforce the efforts of the first echelon, should the enemy's main attack sufficiently weaken the positions of tirst-echelon defenders. However, reinforcing the first echelon is the least preferred method of employment because it causes forces to abandon prepared positions.

The second echelon, one-quarter to one-half of available district strength, is usually a brigade. Preferably, this is a motorized or mechanized brigade. A battalion from this brigade may fight as an FD in the district's portion of the security zone prior to taking up its position in the second echelon. The brigade deploys in either one or two echelons. normally, positioned behind the first-echelon brigade sector expected to face the enemy's main attack.

(3) Maneuver reserve. Commanders at battalion level and above normally retain a maneuver reserve. Even with a second echelon, the district or separate brigade may form a reserve. Some districts, brigades, or battalions may deploy only a reserve. in lieu of a second echelon. In either case, this is a contingency force. It positions behind the second echelon, on or near the most important or most threatened axis. If there is no second echelon, the reserve may be close behind the first. It is normally a reinforced unit two levels below the parent unit. Thus, for example. a district typically would have a reinforced battalion as a reserve; a separate brigade would have a reinforced company; a battalion would have a reinforced platoon. If the parent unit has a second echelon, the reserve comes from the second-echelon unit. Otherwise, it would come from a first-echelon unit which the commander does not expect to face the enemy's main attack. The district reserve normally consists of mechanized or tank forces, if available.

(4) Antilanding reserves. Military regions may direct subordinate districts to form antilanding reserves, ranging in size from platoon to battalion. The number created depends on-

- The assets available.

- The territorial location of the defense.
- The number of probable landing zones within the defensive sector.
- The location of these landing zones in relationship to key OPFOR facilities and terrain,
- The importance placed on protection of these zones against landings

These reserves locate near probable enemy airborne or air assault landing zones, primarily in the district or region rear area. Units for this mission could come from the regular forces; however, this is a more appropriate mission for the militia located in towns and villages near probable enemy landing zones.

4-12. MILITARY DISTRICT COMBAT SUPPORT

The following paragraphs give a brief overview of how assets controlled at the district level support the defense. Later chapters contain more detailed, comprehensive information on the organization, principles of employment, and missions of these assets.

a. Reconnaissance. Various reconnaissance assets contribute to meeting the intelligence requirements of the military district. These assets include both regular ground reconnaissance units, EC units, and special commando units.

(1) *Reconnaissance and EC battalion.* In addition to the ground reconnaissance assets discussed above, the district's reconnaissance and EC battalion includes EC units. EC systems position themselves so that the baseline they establish can focus on the enemy's main effort. They normally deploy forward within the main defense line on terrain that provides good line-of-sight. *Radio intercept and direction-finding* assets provide some limited targeting for artillery, It is accurate enough, however, for jamming or to cue air or ground force reconnaissance. Radar intercept capabilities primarily target ground-based radars. *Jamming* assets target the anticipated enemy main effort. If the security zone provides sufficient depth. any of these assets may deploy initially on high ground in the security zone within the area occupied by the FD.

(2) Commando battalion. Military districts may have an organic commando battalion. These battalions are identical in composition and mission to the commando battalions within the Special Operations Command Normally. their wartime and peacetime missions are the same: counterinsurgency missions within State territory. However, they may conduct special reconnaissance and direct-action missions against critical enemy facilities. such as C^2 nodes and logistics sites. When conducting special reconnaissance, these teams provide deep targeting data for the district. Teams are either squad- or platoon-sized, and are normally inserted forward of the planned security zone during the transition to the defense. Their use in a special reconnaissance role is relatively rare, given the problems of air asset availability for deep insertion.

b. Fire support. Generally, the aim of defensive OPFOR tire support at district level is to-

- Disrupt enemy preparations for the attack
- Cause maximum attrition to attacking forces before they reach direct fire range.
- Repel attacking forces that reach or penetrate OPFOR defenses

The OPFOR definition of fire support includes all combat support actions provided to ground forces by artillery (including AT) and aviation (fixed- or rotary-wing).

(1) *Artillery.* Districts normally have an *artillery regiment* which includes one howitzer battalion, one or two gun-howitzer battalions, and a multiple rocket launcher battalion. Depending on its mission. the district may receive additional artillery from higher level to form temporary groupings referred to as military *district artillery groups (MDAGs).* If formed, these artillery groups use the artillery regiment described above as a base. Each MDAG usually consists of at least two battalions of field guns, howitzers, gun-howitzers, or multiple rocket launchers.

The number of MDAGs formed depends on the availability of artillery assets and the frontage over which the district must defend. These artillery groups deploy within the *main defense line* behind the first-echelon brigades, along the primary avenues of approach. If the groups cannot cover more than one brigade sector due to the width of the frontage, they split into two smaller groups. If employed in a single group under these same circumstances, the MDAG is in the brigade sector expected to face the enemy's main attack.

The primary *mission* of the MDAGs *is to* provide *general support for the district.* This support includes reinforcing the artillery or mortars of first-echelon maneuver brigades, and targeting the main enemy avenues of approach into defensive positions A brigade receiving additional artillery from the district may have a *BrAG.*

(2) *Antitank.* Some districts with primarily defensive contingency missions have a "standard" AT battalion. Such a battalion consists of two AT gun batteries and one ATGM battery. However, a well-equipped district may have an AT battalion composed entirely of ATGM batteries. Although some "low end" districts have no organic AT unit, they could receive an AT battalion allocated from General Staff assets. This could be either a "standard" battalion or one with three AT gun batteries.

Where present, the AT battalion's primary role IS an *antitank reserve.* When used in a reserve role, engineer groupings with minelaying capabilities work closely with the reserve. The battalion locates near the second echelon (or maneuver reserve) of the main defense line. along the expected main axis of the enemy. It can screen the deployment of the second echelon or maneuver reserves, secure the flank, or repel enemy armor counterattacks. Secondary missions Include reinforcing the AT defense of the first echelon or countering penetrations of the first echelon in the main defense line

(3) *Air Force.* The overall district defensive fire plan incorporates the use of Air Force assets. Most districts have an Air Force control element as part of the staff. even in peacetime, to facilitate support. Otherwise, the region's air control element would allocate an air liaison officer to a district expected to face the enemy's main attack. Brigades receive air liaison officers from the region or district element during wartime, based on mission and the probability of receiving air support Combat support could include fixed-*wing fighters, fighter-bombers, or attack helicopters.*

The primary goal is to disrupt the enemy's attack plans The air fire support plan focuses on the enemy's most probable axes of attack. It includes strikes against targets out of artillery range, as well as against enemy forces that have reached, or penetrated. the foward defensive positions. It also includes an aviation counterpreparation plan, with targets that include enemy armor or mechanized forces preparing to attack, as well as their fire support means

(4) *Air defense.* "High end" districts normally have an air defense regiment composed of one surface-to-air missile (SAM) battalion and one towed antiaircraft (AA) gun battalions. Other districts may have no organic air defense unit, but may receive an air defense regiment of three AA gun battalions allocated from national level. Weapons position to the rear of defending first-echelon maneuver brigades to engage aircraft that penetrate the air defenses of those units. The regimental commander positions them along probable enemy air avenues of approach, based on the district commander's guidance. He may also establish air defense ambushes along probable air avenues in gaps between brigade defensive positions. The district may receive some coverage from national air defense assets stationed within the parent region and controlled by the Air Defense Command.

c. Engineer. Military districts. in peacetime, have organic engineer capabilities ranging from company to battalion. Depending on the enemy's anticipated main effort and the availability of organic engineer resources at the region level, the district could receive more support. Engineer work in the defense falls into the following general categories: reconnaissance, creation of obstacles, fortifying troop positions, camouflaging larger important targets, and supporting counterattacks. Since the majority of district engineer support goes to the first-echelon maneuver brigades expecting the enemy's main effort, these maneuver brigade commanders exercise control of these engineer forces for the duration of their support. If time and resources permit, these engineers prepare positions within the security zone, beginning with the forward position and working outward.

Section III. DIVISION AND DIVISIONAL BRIGADES

A division may defend as part of either a district or an expeditionary army defense. Standing divisions *are* more likely to exist in *districts* along an international border, districts that contain historically threatened avenues of approach, or around strategically Important cities or facilities. In such cases, the district commander is the division commander Standing divisions have subordinate maneuver brigades garrisoned within the district respective to their wartime mission. A military region forming an *expeditionary army* would probably have some standing division already garrisoned within its subordinate military districts. It could receive additional standing divisions from one or more other regions at the direction of the General Staff.

Divisions defend as part of the army's (district's) first echelon in the main defense belt (line) or as the army's (district's) second echelon in the second defense belt (line). Creation of a belt connotes that strongpoints have been linked across multiple defensive areas. The linearity of the army defense allows this, whereas the district defense does not. Units from divisions may also fight in the security zone as part of the security echelon. Figure 4-6 shows examples of division deployment within an expeditionary army defense. This section focuses on the fundamentals of how divisions defend within the *security zone and main defense belt (line).* The organization and conduct of defense depend on whether the division adopts it out of direct contact with the enemy or in contact

4-13. MISSIONS

The primary mission of a division defending in the main defense belt is to *prevent penetration of* the *main defense* by repelling enemy assaults Secondary missions include some or all of the following:

- Hold vital lines or areas.
- Support the development of an attack by an expeditionary army.

Restore the combat capabilities of the division when it has taken such heavy losses that it cannot continue to attack.

4-14. LINEARITY

Divisions defending within an expeditionary army defense tend to conduct a more linear defense, due to the relative concentration of forces at the time the division transitions to the defense from the offense. A division defending as part of an expeditionary army is more likely to conduct a coherent, contiguous defense than a division defending as part of a district. Linearity depends on the circumstances under which a division adopts the defense. If the divisions are in a dispersed, linear formation before the transition to defense, they would continue to be linear in the defense.

4-15. DEFENSE ASSUMED OUT OF DIRECT CONTACT

When required to defend, the OPFOR *prefers* to establish a defense when out of direct contact with the enemy, This method of transitioning to the defense offers the OPFOR commander more security and allows him to make better use of the terrain when planning his defense. The primary difference between this and transitioning to the defense in direct contact with the enemy is the existence of a *security zone* when out of direct contact. Given time and resources. a defense in direct contact with the enemy can develop into one out of contact with the enemy'. This occurs as defensive positions become better prepared in depth and fewer forces remain in contact with the enemy.

When a division receives orders to assume the defense, the commander makes his decision based on a map reconnaissance. If time allows. he clarifies his mission with a personal reconnaissance on the ground. He determines the following factors.

- Key terrain.
- Enemy avenues of approach and probable main attack axis.
- Areas for possible nuclear. chemical and high-precision weapon strikes
- Organization for combat.
- Maneuver requirements.
- Organization of strongpoints
- Probable counterattack axes.
- Location of command posts and command observation posts.

OPFOR commanders make maximum use of the terrain. They avoid establishing stereotyped patterns that would make enemy templating and targeting easier. The following paragraphs address the components of the division defense within the security, zone and the main defense belt (line).

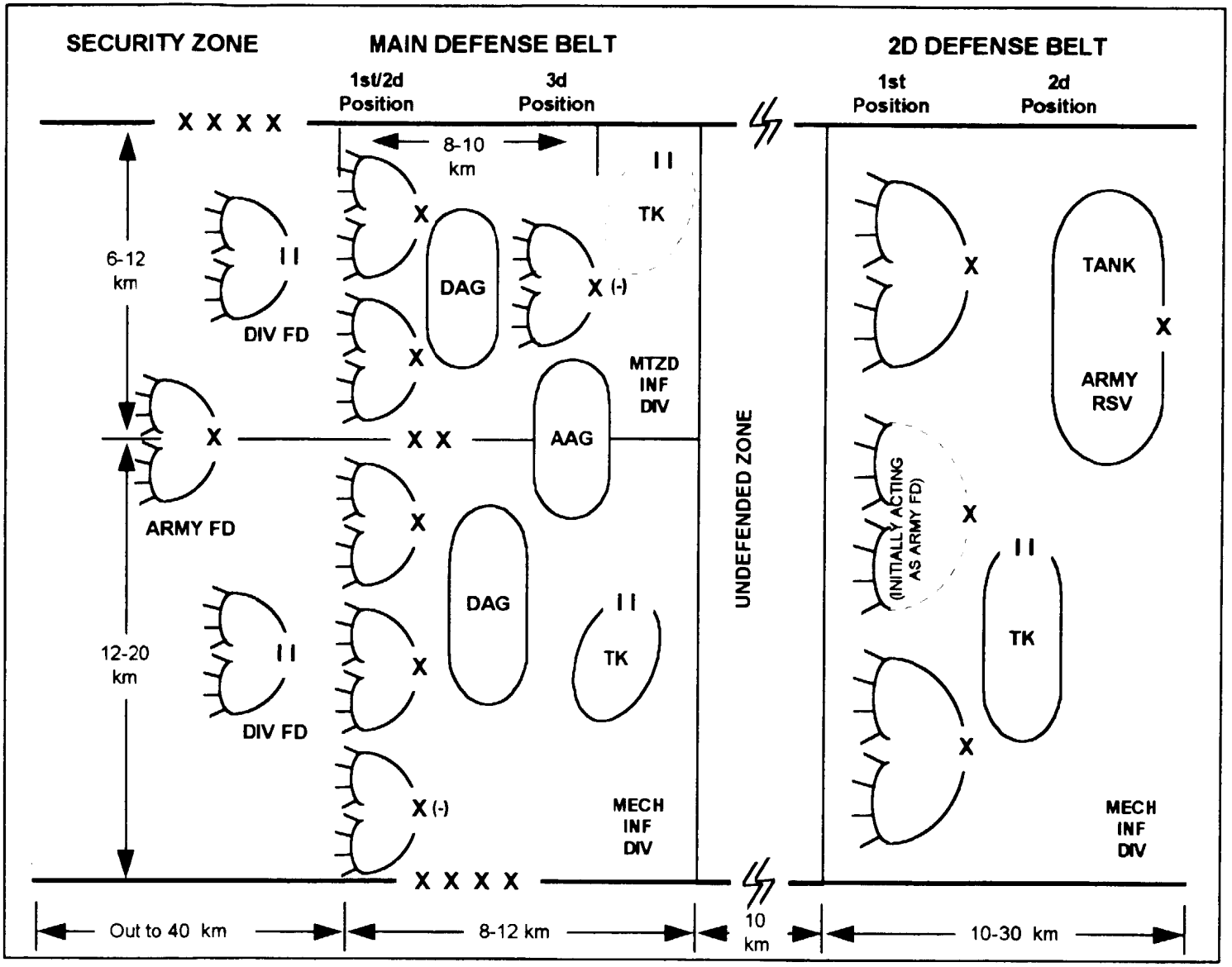


Figure 4-6. Expeditionary army defense (example).

a. *Security zone.* When transitioning to defense out of direct contact, an army normally establishes a security zone *in front of the main defense belt (line).* It would not have the same depth as the security zone established in the defense of a region. Depth depends on the relative positioning of OPFOR and enemy forces at the time of adopting the defense. Although the creation of a security zone is an operational decision made by the army commander, division commanders control the forces contained within their respective areas of responsibility within that zone If the army does not establish a security zone. the division may establish one and perform reconnaissance and security echelon missions with organic resources.

The purpose of the security zone is to delay, weaken, and deceive the enemy. The frontage of the division's security zone would match the frontage for the division's portion of the main defense belt (line). If a division commander establishes the security zone, its depth can range out to about 15 kilometers, but varies based on the enemy and the terrain. If the division is part of an army, the army commander would typically establish a deeper security zone, extending out to as far as 40 kilometers. Specific activities within the zone fall into two general mission categories: *reconnaissance and security.* In this case, missions and responsibilities would mirror those for the districts. as described in Section II above, but on a somewhat smaller scale.

(1) *Reconnaissance.* Division ground reconnaissance assets come from the organic reconnaissance and EC battalion. The primary missions of this battalion's EC assets do not normally place them in the security zone. As with all ground reconnaissance. their primary mission within the security zone is to *warn of enemy movements.* This includes reporting on the size and location of units, troop concentrations, C^2 elements, locations of logistics and reserve elements, and probable main thrusts. The long-range reconnaissance company tends to move in single vehicles or small elements. establishing observation posts on dominant terrain. The reconnaissance companies move in small patrols of three to four vehicles each along the enemy's expected avenues of approach

The depth of reconnaissance missions corresponds to the division commander's area of interest, which can extend far beyond the depth of the sccurity zone Elements from the long-range reconnaissance company, inserted by parachute, helicopter, or on foot. can range out to 100 kilometers ahead of the forward edge of the division's main defenses Patrols from the other reconnaissance companies generally cover the forward portion of the security zone. However, they can reconnoiter well beyond that, out to as far as 40 to 50 kilometers from the forward edge. if conditions permit or demand it.

If the division's parent army has established the security zone. it may extend out as far as 40 kilometers from the division's forward edge. In this case. the army has its own reconnaissance and EC battalion. These army-level assets generally conduct reconnaissance at the extreme edge of the security zone and forward of the zone. Based on army-level reports, division and brigade reconnaissance would adjust or refocus their efforts, as necessary.

(2) *Security.* All forces conducting security missions within the zone are part of the *security echelon.* The depth to which security echelon forces deploy depends on the depth of the security zone. the terrain, and the organization and type of force Compared to the district. shallower security zones are more common with the expeditionary army, given the relative positioning of the enemy and the army at the time the latter adopted the defense. Security echelon forces established by the army commander cannot withdraw to subsequent positions or from the security. zone without his consent. This degree of control is necessary because the army commander may be controlling multiple units in the zone, and he must consider the effect

that moving one unit might have on the other units. For example, artillery may locate forward in the /one to support several units, and the movement of one unit may expose and endanger the artillery forces. Forward detachments and combat security outposts are the two primary types of security echelon forces.

The division commander normally designates a reinforced battalion taken from the second-echelon brigade *as* a *forward detachment* to fight in the portion of the security zone for which he is responsible. The size of the FD can vary, depending on the forces he has available to conduct his defense. Ideally, the basis of the FD is a motorized or mechanized infantry battalion. These have the needed mobility and organic combat support and combat service support. The division commander could take these forces from a first-echelon brigade defending along a less threatened approach or series of approaches. However, the division second echelon is the primary source.

From its *initial position,* the FD conducts a series of delays, maneuvering to *subsequent positions* when endangered by decisive engagement or encirclement. Its final position forward of the main defenses is called the *forward position.* These delays allow for the district's first-echelon brigades to deploy into and prepare positions in the main defense line.

First-echelon brigades provide local tactical security. In the absence of a security zone, or at the direction of the division commander. brigades may man *forward positions* with a company from the brigade's second-echelon battalion, The division commander may direct this action to facilitate withdrawal of the FD from the security zone. There is no difference between these forward positions and those previously addressed. In either case. they arc up to 5 kilometers in front of first-echelon positions in the main defense line.

First-echelon battalions may also establish platoon-sized *combat security outposts* up to 3 kilometers forward of their positions. These outposts have the same missions as forward positions. It is normal to establish them in the absence of occupied forward positions or on secondary avenues of approach when forward positions are manned. The brigade commander directs their establishment. but the battalion commander usually chooses the specific location

b. Division in main defense belt (line). The main defense belt (line) relies on *defense in depth* The basic element is the *prepared battalion defense area.* When possible, the OPFOR links areas together until they form a brigade defense sector or division defense zone.

(1) *Mission.* The primary mission of the main defense belt (line) IS to prevent penetration of the army's first echelon by enemy forces. This includes holding vital terrain. and supporting counterattacks by army or district second echelon and reserves.

(2) *Scope.* The dimensions of the *division defense zone* depend on the base organization of the force, echelonment within the division. and the qualities of the terrain. A division composed of three motorized infantry brigades defends a zone from 6 to 12 kilometers wide and 8 to 10 kilometers deep. A division composed of mechanized or tank brigades defends a sector from 15 to 20 kilometers wide and 8 to 12 kilometers deep.

(3) *Organization of defense.* The main defense line constitutes the *region's first echelon.* Likewise, the main defense belt constitutes *the army's first echelon;* it contains approximately two-thirds of the army's combat power. Figure 4-7 illustrates possible deployment of a motorized infantry division within an army main defense belt. Exact dimensions of the army defense depend on the mix of motorized and mechanized divisions, as well as the echelonment within each of the divisions.

Each of the *divisions* within the main defense belt (line) defends with its *brigades in one or two echelons,* and with various reserves. Two-echelon deployment is usual on the most threatened axis or in restrictive terrain. Single-echelon deployment is more appropriate on secondary axes or when defending on a broader frontage. The division could also adopt single-echelon formation when it has suffered heavy casualties. Normally, the tactical formation must be deep enough to allow for flexible maneuver, especially of second-echelon and reserve forces, and to reinforce the resistance against the main thrust of the enemy's attack.

Terrain also affects division defensive formations. In mountainous regions, nonlinear area defenses are more prevalent, because the predictable enemy avenues of approach within this terrain allow for the creation of strongpoints at key points along those avenues. In restrictive or compartmented terrain, frontages expand. In normal terrain containing a key enemy axis, sectors are narrower.

The brigades have their organic or allocated combat support and combat service support. Within the division, the basis for the defense in both echelons is a series of *company-sized strongpoints* unified into *battalion defense areas.* Strongpoints provide 360-degree defense and deliberately have preregistered gaps between them. Figure 4-7 illustrates an example of possible deployment of a motorized infantry division within the main defense belt (line)

(a) *First echelon.* Two or three brigades compose the division's first echelon. Their mission includes *preventing penetration* of the first echelon by repelling enemy attacks. Failing that, they hold vital terrain and support counterattacks by second echelon and reserve forces.

(b) Second echelon. The primary mission of the division's second echelon is to *contain enemy penetrations* of the first echelon until conditions permit the launching of a counterattack. A secondary mission may be to reinforce the efforts of the first echelon should the enemy's main attack sufficiently weaken the positions of first-echelon defenders. Reinforcing the first echelon is the least preferred method of employment, because it causes forces to abandon prepared positions.

The second echelon, normally about one-third of the division's available strength, is *usually a motorized or mechanized brigade,* depending on division type. It deploys in a single echelon, either centrally behind the first echelon or behind the sector of the first-echelon brigade expected to face the enemy's main attack.

(c) Maneuver reserve. Even if it creates a second echelon, the division may form a *maneuver reserve.* This reserve would make up roughly one-ninth of the division's total maneuver strength. This is a *contingency force.* It positions behind the second echelon (or a single echelon), on or near the most important or most threatened direction Some standing divisions have a tank battalion which they may use as the division reserve.

(d) Antitank reserve. A division would also hold its ATGM battery as an AT reserve to block penetrations of the first echelon and support the counterattack with fire. Some motorized and mechanized infantry divisions may have an entire AT battalion for this purpose It is normal to employ this reserve along with an engineer mobile obstacle detachment.

(e) Antilanding reserves. Armies may direct divisions to form *antilanding reserves, ranging in size* from platoon to battalion. The number created depends on-

- The assets available

- The territorial location of the defense.
- The number of probable landing zones within the defensive zone.
- The location of these landing zones in relationship to key OPFOR facilities and terrain.
- The importance placed on protection of these zones against landings.

These reserves locate *near probable enemy airborne or air assault landing zones,* primarily in the division or army reararea.

(4) *Conduct.* Divisions and their subordinate brigades, battalions, and companies conduct the battle in the main defense belt (line). The key to the defense is the establishment of *battalion-sized defense areas.* For mechanized battalions, these ate 3 to 5 kilometers wide. For other battalions, dimensions are less predictable, but a typical frontage for a motorized can be up to 3 kilometers. Battalions locate these defense areas on key terrain along avenues of approach To completely prepare the area, they dig in with minefields, obstacles, and barriers. The plan is to cover all company strongpoints by fire. When linked together. these strongpoints form the battalion defense area.

c. *Division combat support.* The following paragraphs give a brief overview of how assets controlled by the division support the defense. Since many of the organizations and missions are common at both the district and division levels, the following paragraphs highlight only the differences. Later chapters contain more detailed, comprehensive information on the organization. principles of employment, and missions of these assets.

(1) *Reconnaissance and EC.* Capabilities, missions, and priorities mirror those for the reconnaissance and EC battalions at district level. Its EC units normally position forward within the main defense belt (line). Ground reconnaissance units focus on the most probable axes of the enemy main effort within their sector, as refined based on reports from army reconnaissance assets, However, the focus of ground reconnaissance IS in the security zone or beyond, rather that within the main defense belt (line).

(2) Fire support As with the district, the aim of defensive OPFOR fire support at division level is to-

- Disrupt enemy preparations for the attack.
- Cause maximum attrition to attacking forces before they reach direct fire range
- Repel attacking forces that reach or penetrate OPFOR defenses.

This requires a fire plan based on AT fires. It integrates ATGM, AT gun, tank, helicopter, IFVs, and indirect and direct artillery fires on accessible terrain in front of and between the first-echelon strongpoints and into kill zones throughout the defensive zone.

(a) Artillery. Artillery regiments organic to a division normally include one howitzer battalion, one or two gun-howitzer battalions, and a multiple rocket launcher battalion. *Allocation* methodology is the same as for the district. For divisions, the groupings formed are *DAGs.* If formed, these artillery groups use the artillery regiment described above as a base. Each DAG usually consists of at least two battalions of field guns, howitzers, gun-howitzers, or multiple rocket launchers

The *number of DAGs* formed depends on the availability of artillery assets and the frontage over which the division must defend. These artillery groups position within the main defense belt (line) behind the first-echelon

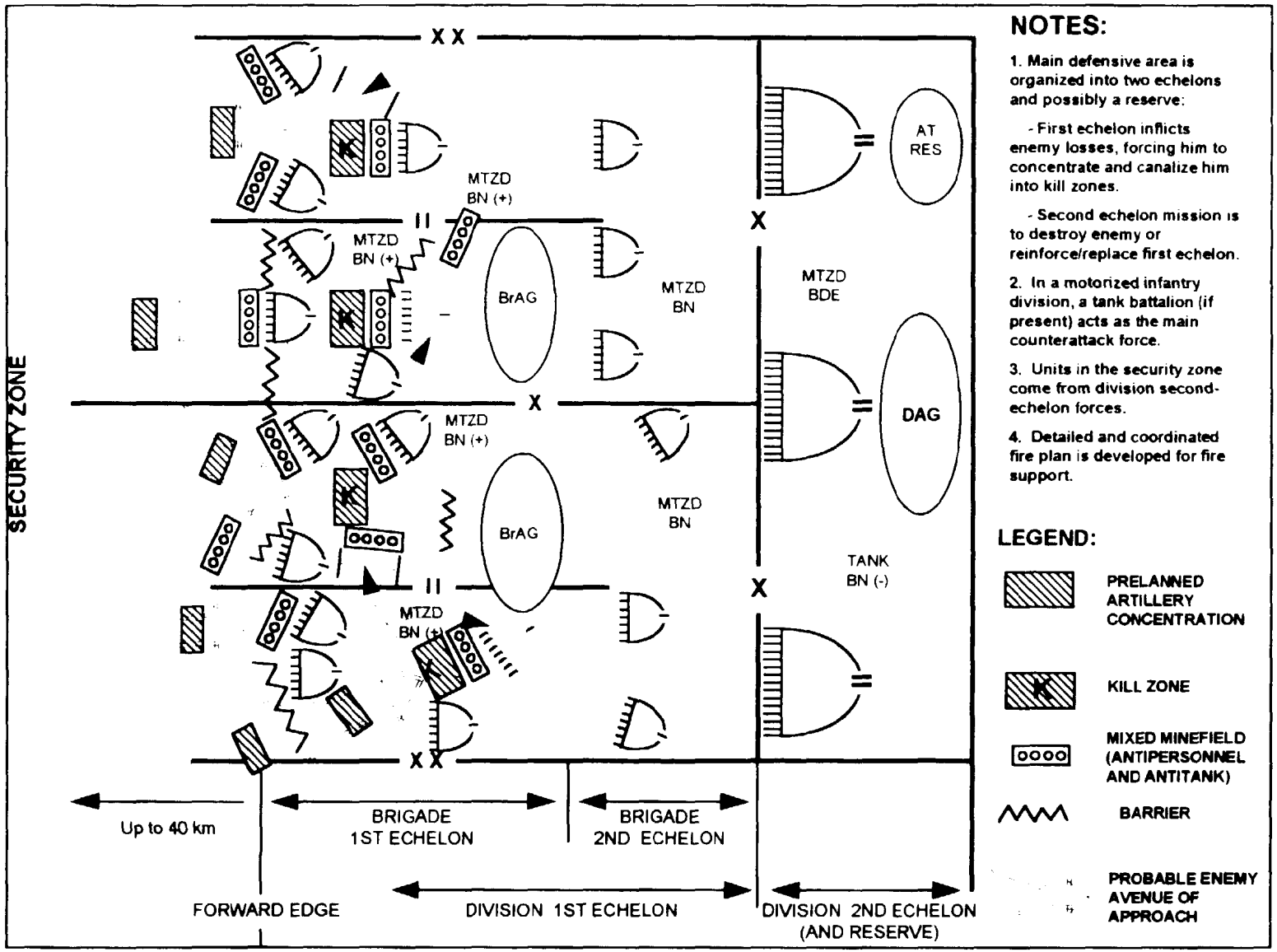


Figure 4-7. Motorized infantry division in defense (example).

brigades. They deploy along the primary avenues of approach If the groups cannot cover more than one brigade sector due to the width of the frontage, they split into two smaller groups. If employed in a single group under these same circumstances, it is in the brigade sector expected to face the enemy's main attack. A brigade receiving additional artillery, from division level may have its own *BrAG*.

The missions for the DAG are the same as for the MDAG in the military district.

(b) Antitank. All infantry divisions typically have an organic ATGM battery to serve as an AT reserve. Motorized and mechanized divisions may in some cases have a "standard" AT battalion like the one sometimes found in a district. Missions arc the same as for the district.

(c) Air Force. Organiztions. missions. priorities, and liaison functions are the same as for the district.

(d) Air defense. A motorized or light infantry division has an air defense regiment composed of four batteries of towed AA guns, A mechanized division has the same type of air defense regiment found at district level, with a total of five batteries in its SAM and towed AA gun battalions. Missions, and priorities are the same as for the district. Weapons position to the rear of defending first-echelon maneuver brigades to engage aircraft that penetrate the air defenses of those units.

(e) Engineer. Divisions have organic engineer capabilities ranging from a company (in motorized and light infantry divisions) to a battalion (in a mechanized infant? division). Depending on the enemy's anticipated main effort and the availability or organic engineer resources at the army or region level, they could receive more support. Missions and priorities arc the same as for the district.

4-16. DEFENSE ASSUMED IN DIRECT CONTACT

They OPFOR realizes there are times when it cannot avoid assuming the defense in direct contact with the enemy. The same factors of mission, enemy, troops available, terrain. and time available considered in a defense out of contact are the primary considerations in establishing a defense in contact. The main differences when in direct contact are the following:

- There is no security zone. or a very small one.
- The terrain may be unfavorable for the defense: favoring the attacker.
- The mission to defend in contact can last only until the OPFOR is able to resume the offense or devclop the defense into one out of contact with the enemy.
- The enemy situation is likely to be clearer. an enemy attack may be imminent.
- Time for preparation can be short

a. Security zone When the force going over to the defense is in contact with the enemy, establishing positions within a security zone is difficult. If there is a security zone, its depth is not nearly as great as it is when the force is out of contact Long-range fires do not play the part they do when out of contact, because the enemy is, for the most part. within direct fire range. Achieving deception is difficult, since friendly forces may be under

direct observation of the enemy. The OPFOR may emplace obstacles, but not as extensively as in a defense out of contact with the enemy.

b. Combat and combat service support. For support elements, differences in mission arise from the temporary nature of a defense established in contact with the enemy. Combat support *remains configured for continued offensive action.* Artillery groupings may retain an organization designed to support the next offensive phase. This is particularly true if the OPFOR intends to go back on the offense as quickly as possible.

Engineer mobile obstacle detachments lay minefields across critical avenues of approach. They employ armored minelayers, armored engineer vehicles, and earthmoving equipment to prepare obstacles and firing positions. The sequence of engineer work ensures readiness to repel an enemy attack.

Combat service support also remains configured to support offensive action. Its primary effort is to prepare units for future offensive actions. The priority of support goes to units selected to initiate offensive actions.

c. Division. The defense in direct contact generally occurs as a result of a stalled offense. The frontage that the division occupies is initially equal to that division's zone of attack. The most obvious difference in the division combat formation is the absence or shallowness of a security zone. The top priority for elements in contact is the quick assumption of favorable defensive positions. This often requires local attacks to seize these positions. As the situation permits, the division gradually develops the defensive frontage and depth discussed above (for a defense assumed out of direct contact). Those divisional units not in contact immediately begin constructing second-echelon positions.

d. Brigade. Divisional brigades are also likely to assume a defense in direct contact following unsuccessful offensive action. They commonly use local attacks to seize the best defensive ground and regroup into a defensive sector from the former narrow zone of advance Brigades do not form combat security outposts in this type of defense.

Section IV. BATTALION AND BELOW

Maneuver battalions defend in basically the same way. whether they are part of a separate or divisional brigade. A battalion's role in the defense depends on its place in the brigade's combat formation. It may be in the first or second echelon of the brigade or serve as an FD or maneuver reserve for the division or district, Under certain circumstances, a battalion can also defend in isolation.

Company strongpoints form the basis of the battalion defense area. The primary focus of the fire plan and overall site selection is to negate the superior enemy air and armor capabilities. The OPFOR tailors its defense to the specific factors of mission, enemy, terrain, troops, and time available. These factors determine-

- Site selection
- Use of obstacles.
- Percentage of force allocated for counterreconnaissance
- Level of deception
- Organization and employment of reserves and counterattack forces

There is no “doctrinal” frontage or depth that the OPFOR will defend. However. Figure 4-3 earlier in this chapter outlines some typical frontages and depths.

4-17. DEFENSE ASSUMED OUT OF DIRECT CONTACT

Units may transition to the defense out of direct contact with the enemy, on the order of a senior commander. This may occur-

- In border areas, to repel a possible enemy attack
- Where an OPFOR attack is inadvisable or impossible (on secondary axes or axes with difficult access).

Follow-on forces may shift to the defense in the absence of contact

a. Battalion area defense. The battalion commander moves his companies to designated strongpoints. There he organizes engineer preparation and other work to create *a attalion defense area.* A unified system of fire, obstacles, and communication trenches interconnects company strongpoints and positions for supporting weapons.

In the defense, a battalion combat formation may have *one or two echelons. (See* figure 4-8.) Thus, it consists of first-echelon companies, a second echelon or reserve and possibly some weapons and reinforcing assets remaining under the direct control of the battalion commander

(1) *First-echelon companies.* In a two-echelon formation. the first echelon comprises two companies. In a single-echelon formation, it includes all three companics Even in the latter case. one company may deploy forward or backward, forming a kill zone On open terrain. one company may adopt an echelon-left or -right. In all cases, company strongpoints deploy where they can intercept probable axes of enemy advance.

The mission of the battalion’s first echelon IS to destroy the enemy ahead of the forward edge and when he penetrates into its depth. It should hold important terrain sectors and prevent penetration into the battalion defense area. If the enemy has gone around its strongpoint. a company shifts to a perimeter defense and continues to hold its position (usually on important terrain). If the battalion’s second echelon or reserve conducts a counterattack, first-echelon companics support it with fire. On the order of the battalion commander. a first-echelon company may participate in the counterattack with a portion of its forces.

(2) *Second-echelon company.* In a two-echelon formation, one company defends a strongpoint in the depth of the battalion defense area. A company in the battalion’s second echelon has the mission of halting the attacking enemy; under favorable conditions. it may also counterattack to destroy an enemy force that has penetrated first-echelon strongpoints

(3) *Reserve.* When a battalion deploys all three companies in a single-echelon combat formation, it forms a reserve made up of at least a platoon. Such an alignment may exist when-

- There is a shortage of forces and assets
- Terrain is difficult for the enemy to access
- The battalion is defending in the brigade’s second echelon or on a secondary axis

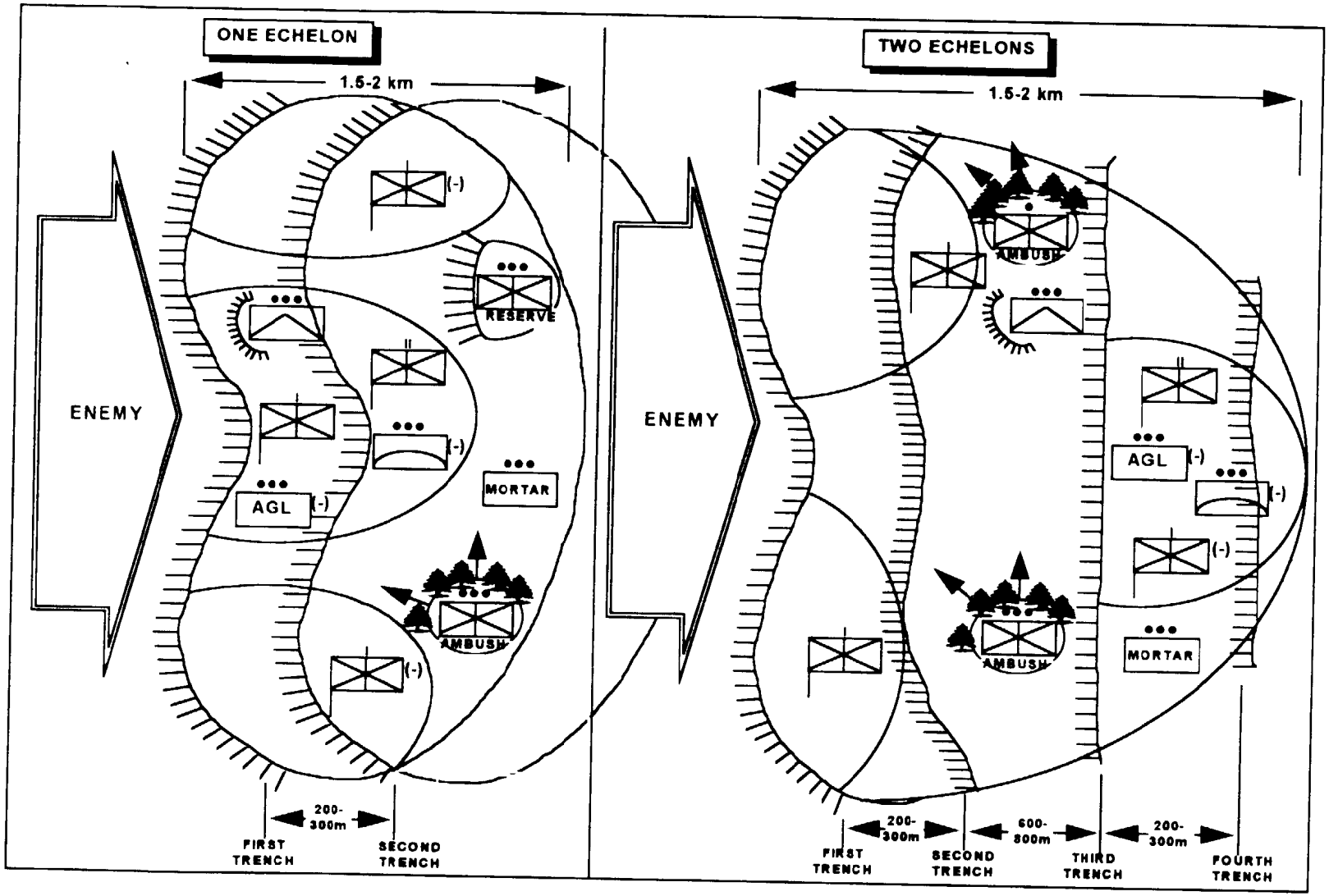


Figure 4-8. Motorized infantry battalion in defense (example).

- The battalion is fighting in the security zone.

The battalion reserve occupies and prepares a strongpoint in the depth of the battalion defense area. Its primary task, in coordination with first-echelon companies, is to inflict maximum losses on enemy forces penetrating into the depth. This may include a counterattack In the course of battle, the reserve may reinforce attrited first-echelon companies that have lost their combat effectiveness. It must also be ready to perform other contingency missions.

(4) *Fire ambush.* Depending on the situation, a battalion may designate a platoon as a fire ambush. (A company may designate a squad for this role.) The assigned platoon normally comes from the battalion second echelon. Its mission is to inflict maximum damage on an enemy force that has penetrated or is trying to bypass the battalion defense area (company strongpoint). It engages the enemy by surprise, close-range, direct fire of all available weapons. If reinforced with engineers, it can also use minefields to create a kill zone or prevent the enemy from withdrawing after receiving sudden fire damage. Concealed fire ambush positions may be on likely avenues of approach within the battalion defense area (company strongpoint), in gaps between them, or on flanks. The most likely positions are on reverse slopes, terrain folds, outskirts of urban areas, tree lines, and bushes. Flank squads of a platoon may deploy somewhat ahead to create a kill zone for cross fires.

(5) *Battalion commander's assests.* The mortar platoon and AT platoon usually remain subordinate to the battalion commander As a rule. he employs them at full strength. rather than dividing them among his subordinate companies He normally deploys the AT platoon on the most likely armored approach, on an exposed flank, or in a position to support a counterattack. In restrictive terrain, he may attach mortar or AT elements to first-echelon companies The shoulder-fired SAM platoon normally remains directly subordinate to the battalion commander. However, its squads can deploy in company strongpoints, as well as near the battalion COP, to provide air defense for the entire battalion defense area. Sometimes the battalion commander may attach the entire automatic grenade launcher (AGL) platoon to an infantry company defending on the enemy's expected main axis. Alternatively, he may attach an individual AGL section to one or more first-echelon companies.

b. Battalion as forward detachment. A battalion can fight in the security zone, as an FD for its parent division or district. Its mission there is to

- Mislead the enemy about the deployment of the first positions in the main defense belt (line)
- Delay the advance of enemy forces.
- Force the enemy to deploy prematurely or in an unfavorable direction.
- Inflict losses on the enemy.
- Gain time for preparation of the main defense belt (line)

A battalion defending in the security zone first deploys at the *initial position,* in one echelon. The three companies in that echelon defend an area up to 7 kilometers wide. In effect. this area is 15 to 20 kilometers deep, depending on the depth of the security zone. From their original strongpoints in the initial position, companies conduct preventive maneuver to a series of *subsequent positions* Deployment in subsequent positions may be in one or two echelons. The distance to each subsequent position is up to 3 kilometers; this allows companies to move by bounds and maintain suppressive fire on enemy forces.

The final defensive position in the security zone (called the *forward position)* should be 3 to 5 kilometers in front of the forward edge of the main defenses. In this forward position, the FD's companies may defend in either one or two echelons, or a mixture of both As much as possible, the forward position must resemble a battalion defense area in the first echelon of the main defense belt (line). Compared to the initial and subsequent positions, the forward position is more likely, to have engineer preparation. with company strongpoints closely interlocked by complex obstacles.

OPFOR commanders expect the FD to lose combat power during the battle in the security zone. Upon maneuvering to the forward position. an attrited FD may not be capable of defeating the enemy in front of the forward position. In that case, it either withdraws from sector or deploys to strongpoints in the forward position that are unlikely to receive the enemy main effort (Companies from first-echelon brigades man strongpoints in forward positions on sectors expecting the main attack.)

c. Battalion in isolation. As mentioned above, a battalion normally defends as part of a larger formation. However, there may be cases where a battalion. by design or by accident, may have to defend in isolation. Intentional defense in isolation occurs when the OPFOR is not in direct contact with the enemy. Unintentional isolation most often occurs in the form of becoming encircled by enemy forces. It would normally be for the purpose of holding key terrain, either ahead of or behind the forward edge of the main defenses. Examples of such key terrain could be a road junction along an enemy axis of advance or a chokepoint in restricted terrain. Figure 4-9 shows an example of a battalion defending under such circumstances on a specific piece of restricted terrain.

A battalion (or company) with a stay-behind mission or on an isolated axis might not have a higher organization's security zone or covering zone in front of it. On an independent mission or in restricted terrain, it might have no adjacent battalions (or companies) on its flanks or to its rear. If defending key terrain in the depth of the OPFOR defenses, it might have no other units defending behind it.

Battalions do not have a deep strike capability. After an OPFOR withdrawal, however, higher commanders may employ platoon- or company-sized stay-behind units to disrupt the enemy's preparation and attack. Fixed- and rotary-wing aviation assets, if available. could aid in this mission

(1) *Covering zone.* A battalion in isolation may have to create a makeshift covering zone of its own. The purpose of this zone is to delay, weaken. and deceive the enemy'. It must extend out far enough to identify the enemy's main effort. Ideally, it would contain both reconnaissance and security forces. The battalion commander may have up to a third of his force dedicated to these missions.

(a) Reconnaissance. Even in the absence of a normal security or covering zone, the parent brigade may have a reconnaissance platoon, or a squad from that platoon, near the battalion's position. Patrols from this reconnaissance unit may deploy in front of or around the battalion defense area. Baring that, the battalion commander may have to use an infantry, platoon or even an entire company in a reconnaissance role. The reconnaissance force can take the form of either mounted or dismounted patrols. Its mission is to conduct reconnaissance by observation in order to-

- Clarify the situation
- Determine the makeup of enemy forces along mounted avenues of approach.
- Identify any dismounted infiltration into the area

Depending on the terrain, it may cover an area up to 2 kilometers in front of the forward edge of the battalion's main defense area when the battalion does not deploy a CSOP. If there is a CSOP, the area of reconnaissance coverage would be forward of the outpost.

Reconnaissance forces can also attack an enemy from the flank or rear as he passes through the covering zone. They may also deploy snipers throughout the zone to kill enemy soldiers as they approach.

(b) Security. Behind the reconnaissance force, the battalion may employ one or more platoon-sized CSOPs to prevent enemy reconnaissance from targeting company strongpoints. In this case, the position of a CSOP would probably be no more than 2 kilometers in front of the forward edge. The security elements normally receive support from the battalion's mortars, any other indirect fire assets available, and direct fires from the forward edge. Once the enemy begins to deploy for a major attack, the security elements may withdraw or continue to fight and degrade the enemy from his rear and flanks.

(2) *Company strongpoints.* The foundation of the main battalion defense area rests with the preparedness and site selection of the company strongpoints. These usually do not defend obvious key terrain, because of the easy acquisition and targeting by enemy systems. In some cases, a company could also establish a strongpoint outside the context of a battalion defense, to defend critical terrain. The OPFOR defines critical terrain as defendable, restrictive, and capable of severely complicating the enemy's ability to conduct a coordinated attack. In either case, companies defend through a series of platoon strongpoints integrated into a company strongpoint defense. The intent is to create a defensive position that has no apparent gaps between units. This forces the enemy to conduct multiple, and costly, forced breaches while receiving coordinated direct and indirect fires.

Company strongpoints can also contain tanks, IFVs or APCs, artillery, air defense, and AT units attached to the battalion, or which ended up in isolation with it. The battalion commander can attach these assets to companies and dispose them in their strongpoints. When available, engineers establish minefields and other obstacles to hamper on canalize enemy maneuver.

Local counterreconnaissance around the company strongpoint increases the complications the encounters as he attempts to conduct a break. If a parent battalion does not deploy a platoon for this role, the company may have to use a squad from one of its own platoons for local reconnaissance.

(3) *Maneuver reserve.* The OPFOR plans for reserves at all levels. Even a small reserve force, committed at the correct time and place, can severely impact on the battle. A company- retains a reserve up to a squad in strength, and a battalion commander assigns up to a platoon and sometimes more as his reserve. In mechanized infantry or tank tits, a battalion or company commander may form an *armored group* to act in this reserve role. In a battalion commander finds tanks, IFVs, or APCs isolated along with his battalion, he can also use them as armored group. Armored vehicles, if available, make the best reserve, due to their mobility, survivability, and firepower. Battalion or company commanders often position reserves in the center of the battalion defense area or company strongpoint. From that central location can maneuver quickly to any threatened axis. However, a battalion commander can also position his reserve to the rear of company strongpoints in a covered and concealed position awaiting orders.

The commander employs his reserve forces as a unit.. One of its primary roles is to counterattack enemy forces that have penetrated the defense or are attempting to envelop a stongpoint or defense area.

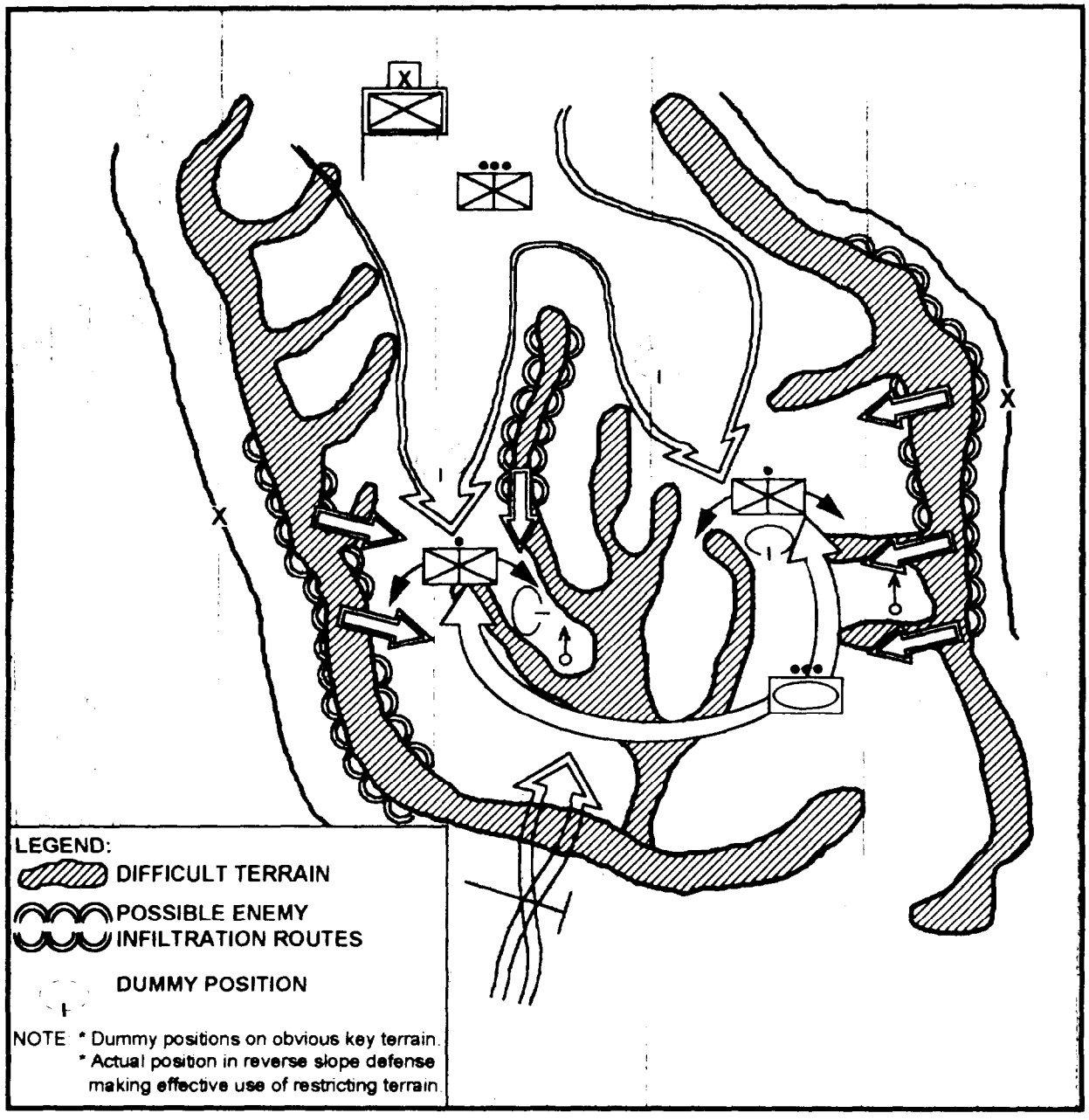


Figure 4-9. Reinforced motorized infantry battalion defense in restrictive terrain (example).

d. Company strongpoint. Most companies defend in strongpoints that comprise the battalion defense area. A company strongpoint is a terrain sector with engineer preparation, adapted for perimeter defense.

Normally, all three platoons of a company defend in one echelon. Depending on the terrain platoons in a company strongpoint may be in a reverse wedge, echeloned (left or right), or other formation. They use the formation that provides the best system of fire to the front and flanks of the strongpoint. Under some conditions, the company may use a two-echelon formation, with two platoons in the first echelon and one in the second. This variety of possible combat formations precludes stereotyping. Figure 4-10 shows examples of one- and two-echelon formations. (See also figure 4-4, which shows an example of a two-echelon company strongpoint in further detail. That diagram includes primary and alternate positions for platoon strongpoints, an ambush position, the system of fire, trenches, and obstacles.)

(1) *First-echelon platoons.* Platoons in the company's first echelon use fires of all available weapons to inflict maximum damage on the enemy ahead of the forward edge. They tenaciously hold important terrain sectors (objectives) on the forward edge. A platoon does this independently or in coordination with adjacent platoons and weapons in the company strongpoint. If the enemy penetrates into the platoon strongpoint, the platoon tries to destroy him by point-blank fire, grenades, and hand-to-hand fighting. If the enemy bypasses or envelops the platoon strongpoint, the platoon shifts to a perimeter defense. It continues to hold occupied positions, destroys the enemy with fire from primary, and alternate. positions, and fights under the direction of the company commander.

(2) *Second-echelon platoon.* If the company uses a second echelon, that platoon would establish a strongpoint in the depth of the company strongpoint (in the second trench). Its mission is to firmly hold that strongpoint and destroy an enemy who has penetrated the first echelon. It prevents the enemy from fanning out laterally and into the depth. Even if it does not succeed in destroying the enemy, it can slow his advance and create favorable conditions for the senior commander to counterattack. Sometimes. on order of the company commander, all or part of the platoon maneuvers to occupy positions reinforcing the first-echelon defense on the most threatened axis.

(3) *Fire ambush.* A company may designate a squad as a fire ambush. The assigned squad would come from the company second echelon, if there IS one Its mission is to inflict maximum damage on an enemy force that has penetrated or is trying to bypass the company strongpoint It engages the enemy by surprise, point-blank fire of all available weapons. (See discussion of fire ambush in subgraph 4-17a(4).)

(4) *Firing positions.* A firing position is a place. with or without engineer preparation, occupied or intended for occupation by an infantry squad a other weapons It should provide good all-around field of view and a field of fire that allows firing to maximum range in given directions A system of firing positions should allow mutual fire support, concentrated fire, and conduct of fire into gaps. from behind flanks, and over the heads of friendly units. Such a system could involve different types of firing position, according to purpose: primary, alternate. temporary', and dummy.

(a) *Primary* firing positions arc for performing assigned missions in the course of battle. The commander can assign each position primary and secondary *zones of fire. The* zones of fire for small arms of the infantry squad and other weapons combine into a zone of continuous, multilayered fire of all kinds of weapons These are the building blocks ofplatoon and company zones of tire. Within these zones, there are *fire concentration sectors* for engaging precisely detected enemy targets or anticipated targets. In the latter case, designated sectors are usually at road junctions, obstacle crossings. defiles. forest openings. and other terrain sectors constraining enemy actions or compacting his combat formation.

(b) Alternate firing positions are for executing maneuver in the course of a defensive battle. They also come into use when it is impossible to perform the mission from the primary position. When possible, each weapon should have one a two alternate positions This permits shifting to a perimeter defense. Shifting to alternate positions

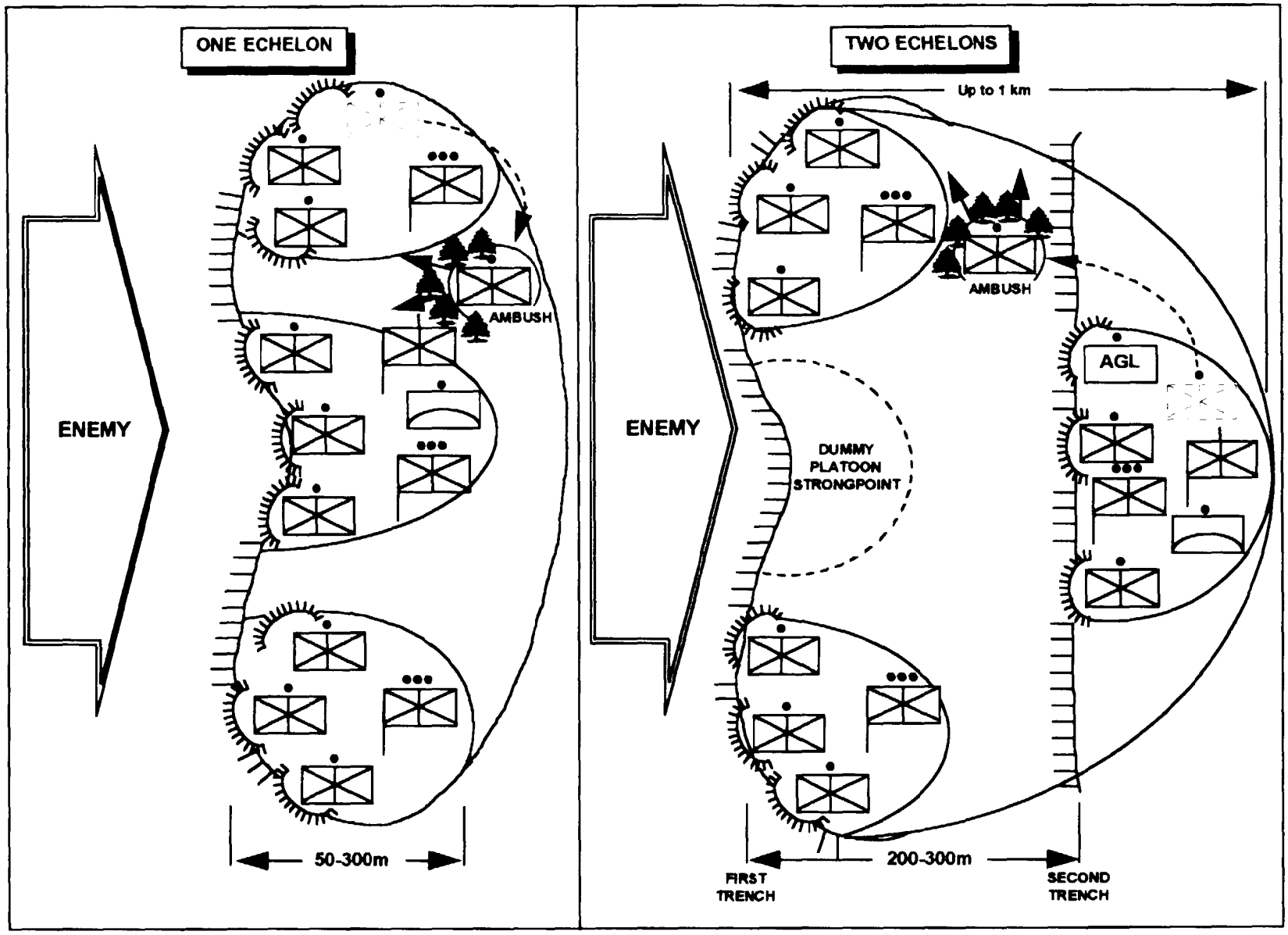


Figure 4-10. Motorized infantry company in area defense (example).

occurs only by order of the commander. With the shift of positions comes a shift in the zone of fire that permits fire concentrations in new sectors. Communication trenches allow concealed movement between primary and alternate positions.

(c) *Temporary firing* positions are for performing individual missions and misleading the enemy regarding the actual alignment of the system of fire. Fire from these positions can destroy an enemy trying to perform reconnaissance, breach obstacles, or penetrate into the depth of the defense. After performing assigned missions, weapons occupy primary firing positions by direction of the company (or battalion) commander.

(d) Dummy firing positions are for misleading the enemy regarding the actual position of weapons. A group of dummy positions can provide the signature for a dummy platoon strongpoint.

(5) *Trenches.* A company strongpoint may have one or two fighting trenches, &pending on echelonment. In a two-echelon strongpoint, the second trench is about 200 to 300 meters behind the first; this allows the second-echelon platoon to support the first echelon with cover fire. Communication benches interconnect platoon strongpoints and positions of organic and attached support units within the company strongpoint. There are one or two communication trenches between the first and second trenches in a company strongpoint; two are ideal, with one for command and communications and one for ammunition supply and evacuation of wounded. When the battalion deploys in two echelons, there is usually one communication trench connecting each first-echelon company with the second-echelon company; the distance to the latter may be about 600 to 800 meters. If a second-echelon company deploys in two echelons, its strongpoint would include the third and fourth trenches of the battalion defense area. (See figures 4-8 and 4-10.)

e. Company in forward position. Even if there IS a security zone, a company from the brigade's second-echelon battalion may defend at a forward position. In this role. its purpose is to-

- Mislead the enemy regarding the trace of the forward edge and the deployment of the first-echelon positions on the main defense belt (line).
- Prevent an enemy surprise attack on first-echelon positions
- Repel enemy reconnaissance in force
- Force the enemy to deploy his main body prematurely

The forward position is normally up to 5 km in front of the forward edge. If forced to withdraw from the forward position, the company maneuvers back to its primary defensive positions within the main defense belt (line).

f. Platoon. As a rule, the platoon defends as part of a company. (See the discussion of first- and second-echelon platoons in subparagraph 4-17d, *Company strongpoint.*) Under certain conditions, however, a platoon may perform independent missions; it may act as a battalion reserve. a combat security outpost, a fire ambush, or a combat reconnaissance patrol.

Creation of a platoon strongpoint begins with emplacement of wire and other obstacles ahead of the platoon forward edge. Platoon personnel dig one- and two-man foxholes. connect them into squad entrenchments, and then prepare a continuous trench to unify the platoon strongpoint. (See figure 4-11.) Next, they improve these positions and emplace additional obstacles to the flanks (and rear) of the strongpoints and in gaps between adjacent strongpoints Within 24 hours after occupation, they usually complete fighting positions with 18 inches of overhead cover. Over time. the continuous trench extends to link platoon and then company strongpoints in the battalion defense area.

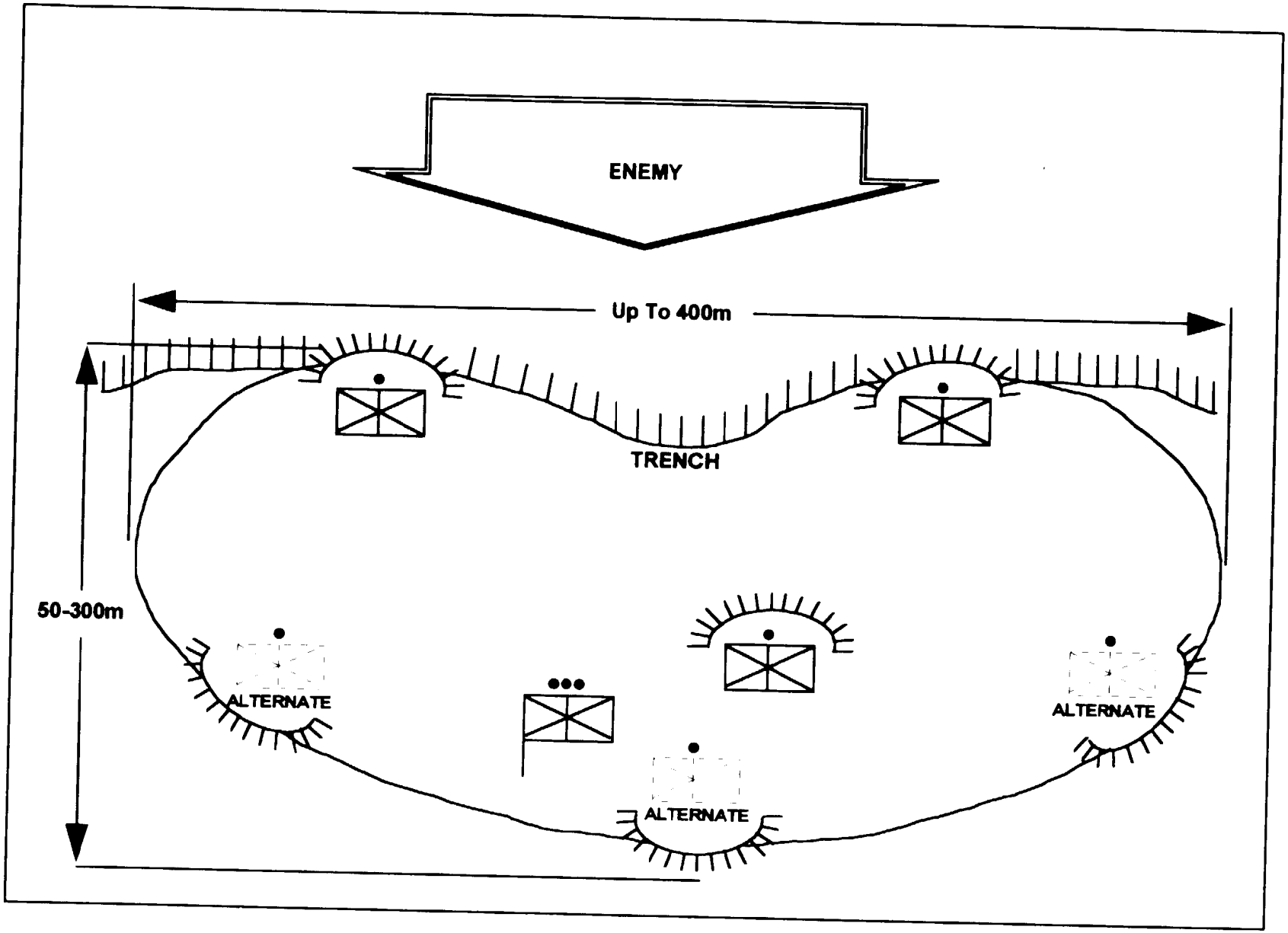


Figure 4-11. Motorized infantry platoon in defense (example).

During preparation of strongpoints, platoons and companies must provide their own local security. Each platoon typically sends out two a three soldiers for this purpose; a company can deploy a squad.

4-18. DEFENSE ASSUMED IN DIRECT CONTACT

Transition to the defense in immediate contact with the enemy most often occurs in the course of an attack against a defending enemy. (This can happen when repelling counterattacks by superior enemy forces, consolidating captured lines, or securing flanks of attacking units.) It can also occur with an unsuccessful outcome of a meeting battle or pursuit In the course of a defensive battle, an encircled unit may have to transition to a perimeter defense while still in direct contact with the enemy. Under each of these conditions, units must organize the defense quickly, under enemy fire. This is not always on favorable terrain and often without engineer preparation. The unit establishing the defense may have suffered losses of personnel and equipment in the course of the preceding battle.

a. Reverse-slope defense. Establishing the defense when in contact with the enemy poses problems, since forces may have to dig in while under enemy fire and observation. For this reason, terrain permitting, an OPFOR commander can use a reverse-slope defense. Part of the force remains in contact with the enemy, usually on the forward slope of the defensive terrain The remainder of the force withdraws and prepares temporary defensive positions on the reverse slope. The OPFOR recognizes the following advantages of a reverse-slope defense:

- It hinders or prevents enemy observation of the defensive position.
- Enemy long-range AT fires are not effective.
- Attacking enemy forces silhouette themselves crossing the crest of the hill
- Engineers can conduct their work out of direct fire and observation from the enemy.

One disadvantage of this type of defense is that all weapon systems cannot exploit their maximum range. When possible, the OPFOR would use both a forward- and a reverse-slope defense to take maximum advantage of the terrain

b. Battalion. When assuming the defense in direct contact, a battalion initially halts with subordinate units Occupying the positions they occupied when they received the order to defend. This is often a linear formation. The first priority is to seize favorable terrain. Though the enemy is in close proximity, the battalion would set up local security, if the opportunity occurs Unless the halt was a temporary holding action, the battalion commander gradually transitions his forces into defensive positions out of direct contact, if the mission and situation permit. Platoons may remain in positions to establish a combat security outpost in front of the new defense.

c. Company. Most companies defend in strongpoints that comprise the battalion defense area In the absence of a security zone, a company from the brigade's second-echelon battalion may defend at a forward position.

d. Platoon. As a rule, the platoon defends as part of a company. Under certain conditions, however, a platoon may perform independent missions; it may act as a battalion reserve or as a fire ambush.

e. Reach on to encirclement. As a rule. encirclement (or envelopment) results from an unsuccessful battle with a superior enemy force, It occurs most often in a defensive battle, when the enemy penetrates the defense of adjacent units and moves to the flank and rear of the unit, A battalion defending as an FD or a company defending in a forward position may also become encircled in the security zone. (Encirclement is also possible as a result of an unsuccessful meeting battle or when the enemy pursuit is faster than an OPFOR withdrawal.)

(1) *Combat in encirclement. The* combat f&nation and missions of a unit in an encirclement are similar to those in an ordinary defense; however, the following paragraphs highlight special features inherent in this situation. Preparation for combat in encirclement can be difficult when a unit has sustained losses. The battalion (company) being encircled must shift to a perimeter defense while still fighting an intense battle with the enemy trying to complete the encirclement.

(a) Combat formation. The battalion (company) commander must consider not only the remnants of his OPFOR units that have ended up in the same encirclement and now become subordinate to him. These units may include tank, air defense, artillery, AT, automatic grenade launcher, or logistics elements previously located in or near the battalion (company strongpoint) or withdrawn to it. As a rule, the battalion commander would attach these assets to companies and deploy them in the company strongpoints. The only exception might be artillery and logistics.

(b) Single-echelon formation. A single-echelon formation best meets the requirements of a circular, perimeter defense. Thus, the battalion (company) formation normally consists of--

- First-echelon companies (platoons).
- A reserve (up to a platoon or sometunes more for the battalion; up to a squad for the company).
- Weapons and reinforcing units remaining directly subordinate to the battalion (company)
- Armored groups and fire ambushes

In perimeter defense, a battalion defense area could be approximately 6 to 8 kilometers in circumference, with an average depth of 2 to 3 kilometers. Each company strongpoint within this defense area would probably have the same dimensions as in an ordinary defense. A company strongpoint (defending in isolation) could be 1.5 to 2 km in cirumference, with an average depth of 500 to 700 meters. These dimensions would allow dispersed deployment of the combat formation within the defense area (strongpoint). The circumference could be smaller if an attrited battalion (company) does not have all three of its original companies (platoons).

Companies (platoons) in the first echelon deploy where they can intercept the most likely axes of enemy attack, split the attacking force, and destroy it in detail. The battalion (company) reserve deploys in the center of the defense area (strongpoint), from where it can quickly maneuver to a threatened sector (axis). Artillery remaining directly subordinate to the battalion commander would occupy firing positions in the center of the battalion defense area, ready to repel enemy attack on any axis.

Besides the circular disposition of company (platoon) strongpoints, the organization of the defense also differs from the ordinary defense in the following aspects:

- Absence of a combat security outpost for the battalion.
- A larger number of alternate firing positions, to ensure fire in all directions
- Less time to prepare trenches, communication trenches, and improved positions.
- Greater reliance on terrain features for protection and concealment.

Both battalion and company would make wide use of armored groups (if the encirclement includes armored vehicles) and fire ambushes.

The battalion (company) *system of fire* should ensure engagement of the enemy around the outside of the entire perimeter and in kill zones for possible penetrations within it. Companies, platoons, and direct fire weapons have assigned zones of fire; the zones of adjacent units and weapons should overlap. The use of roving weapons and fire ambushes can mislead the enemy regarding the true structure of the defense and the system of fire.

(c) Mission and conduct. The mission of the battalion (company) in the encirclement is to-

- Firmly hold the occupied defense area (strongpoint).
- Prevent the enemy from splitting the defending units.
- Inflict maximum damage on the enemy.
- Create conditions for breaking out of the encirclement.

The encircled unit should also contribute to the success of the main body of its parent unit by pinning down as many enemy forces as possible.

The defenders must maneuver forces. weapons, and fires quickly and covertly to a threatened axis and be ready to destroy a penetrating enemy force by fires and counterattacks. If the enemy is unsuccessful in one sector, he can regroup for an attack in another sector. In this situation, OPFOR reconnaissance must discover the transfer of enemy efforts, and the defending battalion (company) commander must quickly maneuver his reserve (and perhaps also first-echelon units from other sectors) to the threatened axis.

(2) *Breakout from encirclement.* Breaking out of encirclement consists of breaking through the encircling enemy force in a selected sector (axis) for linkup with friendly forces. However, it also involves continuing to bold the battalion defense area (company strongpoint) for a certain time. Breaking out in small groups usually leads to heavy losses and destroys the organizational integrity. Therefore, the senior commander in the encirclement must order the breakout, determine the axis for it, and ensure coordination with other subordinate units still conducting the perimeter defense.

(a) Combat formation. Therefore. the battalion (company) combat formation must include-

- Breakout units
- Covering force units assigned to cover the breakout and secure flanks
- A reserve to perform missions that arise suddenly.
- Reinforcing weapons and units remaining directly subordinate to the commander

(b) Breakout units. Breakout *units* are normally the most combat-effective forces available. These normally comprise at least half of the maneuver units. Most available tanks, artillery, AT weapons, and mineclearing equipment would reinforce them. Reinforcements include not only organic battalion (company) assets, but also any other OPFOR units in the same encirclement.

The battalion usually assigns at least a company for a *covering force.* The company would use at least a platoon. Covering force units continuing to hold positions on the rest of the perimeter can divert part of the enemy's forces from the breakout axis.

The battalion *reserve* is usually a platoon the company reserve is a squad. The reserve deploys where it can exploit the success of breakout units or repel enemy penetration of the covering force.

Artillery and other *units remaining directly subordinate to the commander* occupy firing positions behind the breakout units, From there, they can support the breakout and the movement of remaining forces through the breach.

(c) Mission and conduct. To achieve surprise, the breakout often begins at night or under other conditions of limited visibility; it may even forgo an artillery preparation. The battalion's (or company's) *immediate mission* is to destroy the enemy on the breakout axis and penetrate the perimeter of the envelopment/encirclement, When breaking through a perimeter of envelopment based on an enemy battalion or battalion task force, the frontage of the breakout sector may be up to 1 kilometer for a battalion or 500 meters for a company. The battalion also has a *subsequent mission* to link up with friendly units or to seize a position favorable for conducting further combat actions. A company acting as part of a battalion has a *direction for continuing the attack* that should contribute to the battalion's subsequent mission For a company acting independently, this direction could lead to the company's linkup with friendly units or its breakout to an area favoring further combat actions.

The commander normally selects a breakout sector that provides one or more of the following conditions:

- Where he can concentrate forces and fires quickly and covertly,.
- Where the enemy perimeter of envelopment has the least depth
- Where the distance to link-up with friendly units is shortest

The covering force conducts a diversionary action on another axis to divert enemy reserves from the actual breakout sector. A company could use a platoon for this purpose. Smaller elements from the covering force deploy to cover the flanks of the breakout units and then create a corridor through which the rest of the battalion (company) can move to the breach. After penetrating the enemy perimeter, the breakout unit continues nonstop to the linkup with friendly forces. A portion of the breakout force holds the breach until all reserve and covering forces move through it.

4-19. COUNTERATTACK

Defending first-echelon battalions are ready to counterattack under favorable conditions; for example. they counterattack when a much weakened enemy stalls in partial occupation of the defensive strongpoints The enemy's forces and fires can overwhelm the OPFOR first-echelon defenses and prevent a counterattack. If this happens. units must hold their positions. strike the enemy with all available fires. and create the opportunity for a counterattack by forces of the next higher command. As the enemy advances into the depths of the OPFOR defense, he may face better-prepared positions. He also encounters a progression of obstacles, second-echelon defenses, and counterattack forces.

a. Planning. OPFOR commanders at battalion level and above plan counterattacks to restore the defense. should the enemy succeed in breaching forward defensive positions. Commitment of the counterattack force requires the authority of the next higher commander. This force generally attacks from the enemy's flank. when available, tanks normally spearhead the counterattacks, following an intense air and artillery preparation, and with the support of fires

of adjacent units. Against greatly superior enemy forces, the counterattack would be by fire only, and not by maneuver forces.

b. Conduct. A successful counterattack requires the same superiority ratios as a ordinary attack. The main features of OPFOR counterattacks are as follows:

- The enemy's attack must have halted or, at the very least, lost its momentum. Antitank reserves and mobile obstacle detachments are keys to achieving this.

- The enemy must be unable to commit a reserve into the penetration. This can be either because he has already committed it, or being long-range strikes have neutralized it.

The second-echelon companies of a battalion, usually in conjunction with brigade counterattack forces, may counterattack enemy forces that have penetrated the forward and rear platoon strongpoints of a first-echelon company. Portions of first-echelon companies (or armored groups) may also participate in the counterattack. If the penetrating enemy force is superior to the counterattack force, the counterattack may be by fire only. The goal of counterattack is to destroy the penetrating enemy and restore the original line of the defense

If a counterattack occurs, lower levels of command join in with all available maneuver elements. Although a battalion might not launch a counterattack independently, it would support a brigade or division counterattack. A battalion can provide direct support on the flanks of the main attack, or act as diversions to confuse the enemy.

4-20. WITHDRAWAL

Withdrawal is a type of maneuver in which units leave occupied defensive strongpoints and move to new defensive lines in greater depth. It allows units to move out from under attacks by superior enemy forces and occupy more favorable positions for subsequent combat. It can transfer efforts to another axis or draw the enemy into prepared kill zones. (Withdrawal can also occur in the course of offensive battle, as the result of an unsuccessful meeting battle, or when breaking out of an encirclement.) In all cases, the senior commander must authorize the withdrawal. A battalion normally executes a withdrawal as part of the brigade. The mission is to disengage the force in a timely, organizd manner losing its combat capability or exposing the flanks of adjacent units. Figure 4-12 illustrates the basic concept.

a. Components. The force executing the withdrawal divides into three groups:

- Covering force.

- Rear guard.

- Main body.

(1) *Covering force.* The covering force has the mission to deceive the enemy and cover the initial withdrawal of the main body. This element normally comes from units along the forward edge of the defense, and equates to approximately one-third of the defending unit's combat power. For example, each forward-deployed company would designate one reinforced platoon for this mission. In some cases, a first-echelon battalion may designate a company.

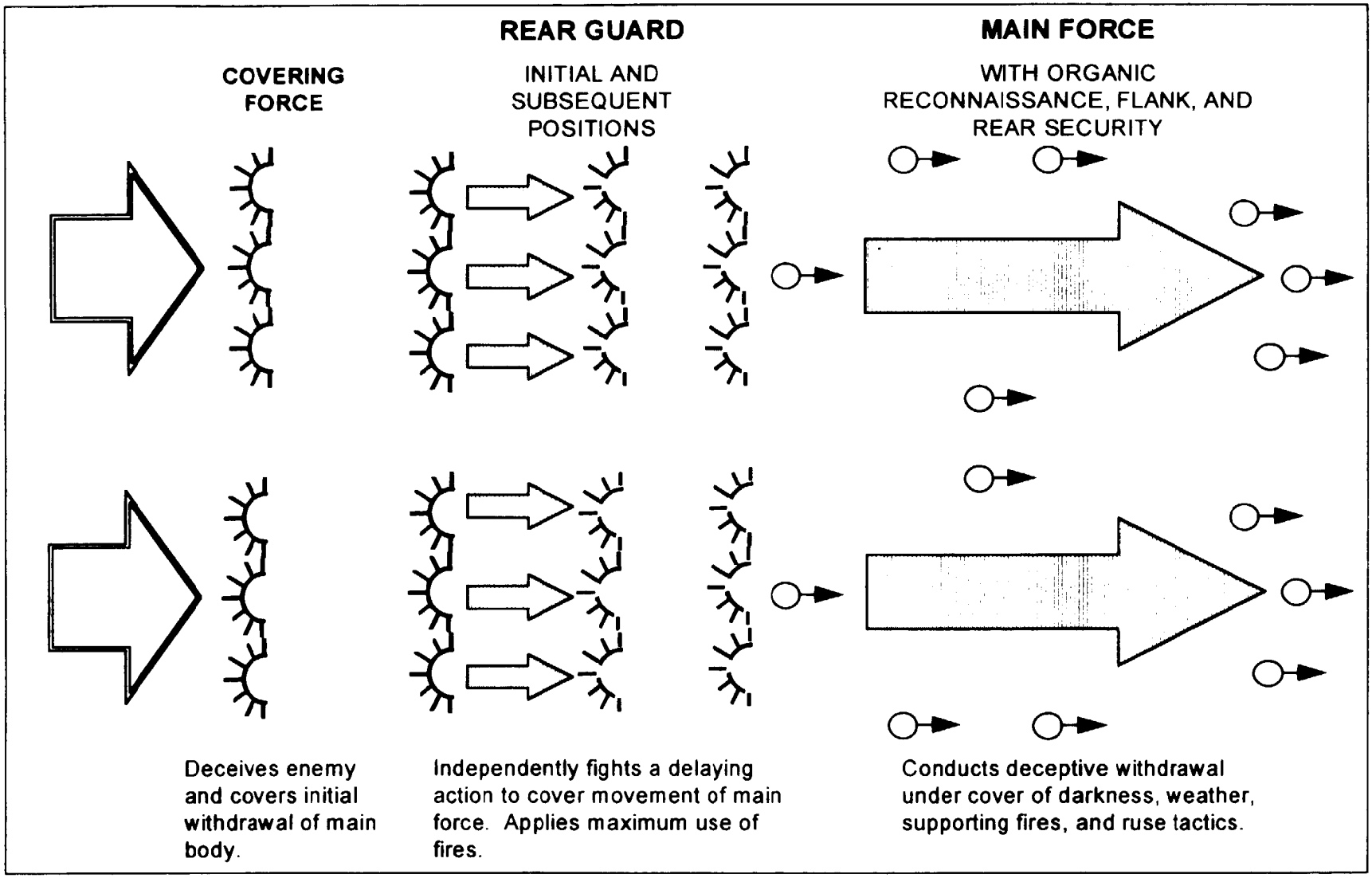


Figure 4-12. Basic concept of withdrawal.

(2) *Rear guard.* The rear guard covers movement of the main body and fights a delaying action if the enemy attempts to maintain contact during the pursuit. It must be able to fight independently of the main body and covering force. A company or smaller force normally performs this duty for the battalion, da reinforced second-echelon battalion would do so for the brigade. Normally, it is a combined arms force consisting of tanks (if available), motor&d or mechanized infantry, artillery, and engineers. Making maximum of artillery, mortar, and long-range ATGM fires, it fights through a series of delay positions to prevent enemy interference in the withdrawal of the main body. The actions taken by the rear guard, both in mission and force disposition are not unlike those of an FD fighting in the security zone.

(3) Main body. The main body is the bulk of the withdrawing force. It breaks contact and attempts to withdraw without disclosing its intentions to the enemy. For deception, it may withdraw under cover of darkness or adverse weather conditions, use supporting fires to cover noise, or employ a ruse. It would also take advantage of the concealing properties of terrain to move successively to platoon company, and battalion assembly areas. On arrival at each assembly area, subordinate units take their places in the parent unit's march formation and continue the **withdrawal.**

b. Conduct. The organization and execution of withdrawal take place under strict secrecy and security. The commander's withdrawal order is detailed and includes-

- The mission.
- Routes.
- Formation to be used
- Delay positions
- Control measures.
- Information on the new defensive position.

A brigade and its subordinate battalions conduct a withdrawal in the following sequence:

First-echelon battalions designate platoons (or companies) to act as the covering forces, which attempt to portray a normal defensive pattern to the enemy. The brigade commander designates a rear guard, normally the second-echelon battalion, reinforced with part or all of the brigade's organic artillery and engineer assets.

On order, the *main body* withdraws through the rear guard in the following order:

- Unengaged maneuver forces, including the second echelon or reserve (less the rear guard), and combat service support elements.
- Artillery and combat support elements (less those attached to the covering force and rear guard).
- First-echelon maneuver units (less covering forces)

The main body proceeds on multiple routes all the way back to either the new defensive position or an assembly area.

Once the main body has completely passed through the rear guard, the *covering forces* break contact on order. They withdraw suddenly, usually all of them simultaneously. If the enemy detects their withdrawal and begins pursuit, covering faces leapfrog their units to the rear in order to be mutually supporting. After withdrawing through the rear guard, they join their parent units within the main body.

The *rear guard* fights a delaying action. It takes up its designated initial positions in advance and holds them until a prescribed time or an order to withdraw. Then it leapfrogs to successive positions, using-

- Smoke
- Engineer-laid minefields.
- Demolitions.
- Artillery fire concentrations
- Ambushes
- Attack helicopters.
- Fixed-wing air strikes.

The distance to subsequent positions should be enough to force the enemy to pause and reorganize before attacking the next line. If the enemy does not pursue. the rear guard assumes march formation and joins the main body as quickly as possible.

4-21. RELIEF

OPFOR doctrine stresses the temporary nature of the defense. It emphasizes the need for counterattacks as soon as possible to initiate a renewed offensive The relief can achieve this end

a. Concept. Relief involves an organized transfer of defensive positions, strongpoints, areas, sectors, and zones in a combat situation from one unit to another The units being relieved have usually sustained considerable losses and are on the defense. A relief can also enable a fresh unit to occupy the defensive positions of the relieved unit in preparation for a renewed offensive.

Because units being relieved are usually in direct contact with the enemy, they are subject to enemy fire and ground attacks. Therefore, the OPFOR organizes relief carefully. executing it quickly and secretly. It attempts to preserve as much of the unit's combat capability as possible As a rule, a relief occurs at night or during periods of reduced visibility. It is important to conceal the timing and sequence of the relief, so that the enemy cannot choose that moment of vulnerability to launch an attack.

b. Conduct. A *battalion relief* begins with the brigade commander establishing the relief sequence The battalion commander relieving and the one being relieved conduct a joint reconnaissance of the defensive position. During this reconnaissance, the commanders coordinate routes to and from the relief areas, traffic control posts, locations for guides to meet the relieving units, and the sequence of relief. They also determine the time to start and complete the relief, security measures, and actions in the event of an attack during the relief. In addition, the battalion commanders review the present system of fire and observation and obstacles and minefields supporting the position.

Should the enemy attack during the relief, all available units, including the relieving battalion, attempt to repel the attack AU of these units fall under the control of the commander being relieved. The reserve of the unit being relieved may counterattack. It is the last element to withdraw from the defense area.

At the appointed time, the relieving battalion moves from its assembly area to the relief area by concealed routes. It carries out the relief successively by platoons. The first forces to move are infantry and AT units, followed by mortar, artillery, and tank units. If the relief involves battalions of the same brigade, tanks may remain in place, transferring their attachment. If the relieved battalion had a platoon acting as a combat security outpost, that platoon would be the last relieved. Once in position, the relieving units establish observation posts and their system of fire.

Relieved commanders transfer their positions and provide information on enemy activities and routines. They acquaint relieving commanders with the locations of obstacles and minefields and with the primary directions of fire. Established communications remain intact, and wire lines remain in place, passed on to relieving units. The relieving unit thoroughly checks and verifies all engineer installations, including minefields and obstacles, with respect to boundaries, passages, and degree of readiness.

The relieving battalion commander checks the locations and weapon positions of his subordinate units to ensure that his forces are ready for combat The relieving battalion attempts to maintain the same routine and level of activities that existed before the relief The relieving commander reports to his superior that the relief is complete. This action officially terminales the relief. The relieved battalion then withdraws to assigned assembly areas to await its nest mission

CHAPTER 5
MARCH

5-1. MARCH

The OPFOR defines march as the organized column movement of troops along roads and cross-country routes to a designated area or line. It uses two main types of march: administrative and tactical (fig 3-1), depending on the probability of contact with the enemy. This chapter concentrates on the tactical march.

5-2. ADMINISTRATIVE MARCH

An administrative march is appropriate in moving where the chance of contact with the enemy is unlikely, or at least confirmed to airborne or heliborne forces. However, tactical considerations still apply. The risks of air and missile attacks and the possibility of enemy forces operating in the OPFOR rear are always present. Even administrative marches must allow a smooth and rapid transition to tactical march formations.

a. Order of March. In the depth of friendly territory, the main purpose for moving in columns is administrative convenience. When a meeting battle is unlikely, common practice is for like types of vehicles to move in separate columns according to their capabilities. This allows high rates of advance and decreases pressure on personnel and combat equipment. Vehicles of similar type, speed, and cross-country capability may move together in packets rather than mixed with other vehicles as they are when prepared for combined arms combat. Tracked vehicles and heavy equipment may move on one route (preferably paved), while wheeled vehicles move on another route (possibly unimproved dirt road). Nevertheless, tactical considerations dictate that certain units (engineer, for example) deploy throughout the various march columns, regardless of vehicle type.

b. Route allocation. Two or three routes arc normally sufficient for a division in an administrative march. A brigade or regiment moves on one or two routes. Within brigades and regiments, each battalion marches on a single route. Where possible, each unit has an alternate route, in the event the primary route becomes unusable. Lateral routes permit maneuver from one road to another. The OPFOR does not limit roads to those with hard surfaces. Secondary gravel or country dirt tracks will suffice.

c. Dispersion. A brigade or regiment main body marching in one column can be up to 50 kilometers long (exclusive of march security elements). Therefore, a division column using two routes is about 100 kilometers long. A division using three routes is about 80 kilometers long. Within an army, an interval of 80 to 100 kilometers separates first- and second-echelon divisions.

d. March security. First-echelon brigades and regiments always deploy some form of march security, even on administrative marches, but a second-echelon brigade or regiment following immediately behind the first could dispense with march security. The number and strength of march security elements increase as a unit approaches its line of commitment. Security patrols and outposts deploy around rest and assembly areas.

e. Support elements. Units conducting administrative marches may receive combat support and combat service support from higher headquarters to supplement their own assets. The positioning of these support elements is as follows:

This chapter is adapted from TRADOC Pamphlet 350-17, chapter 3.

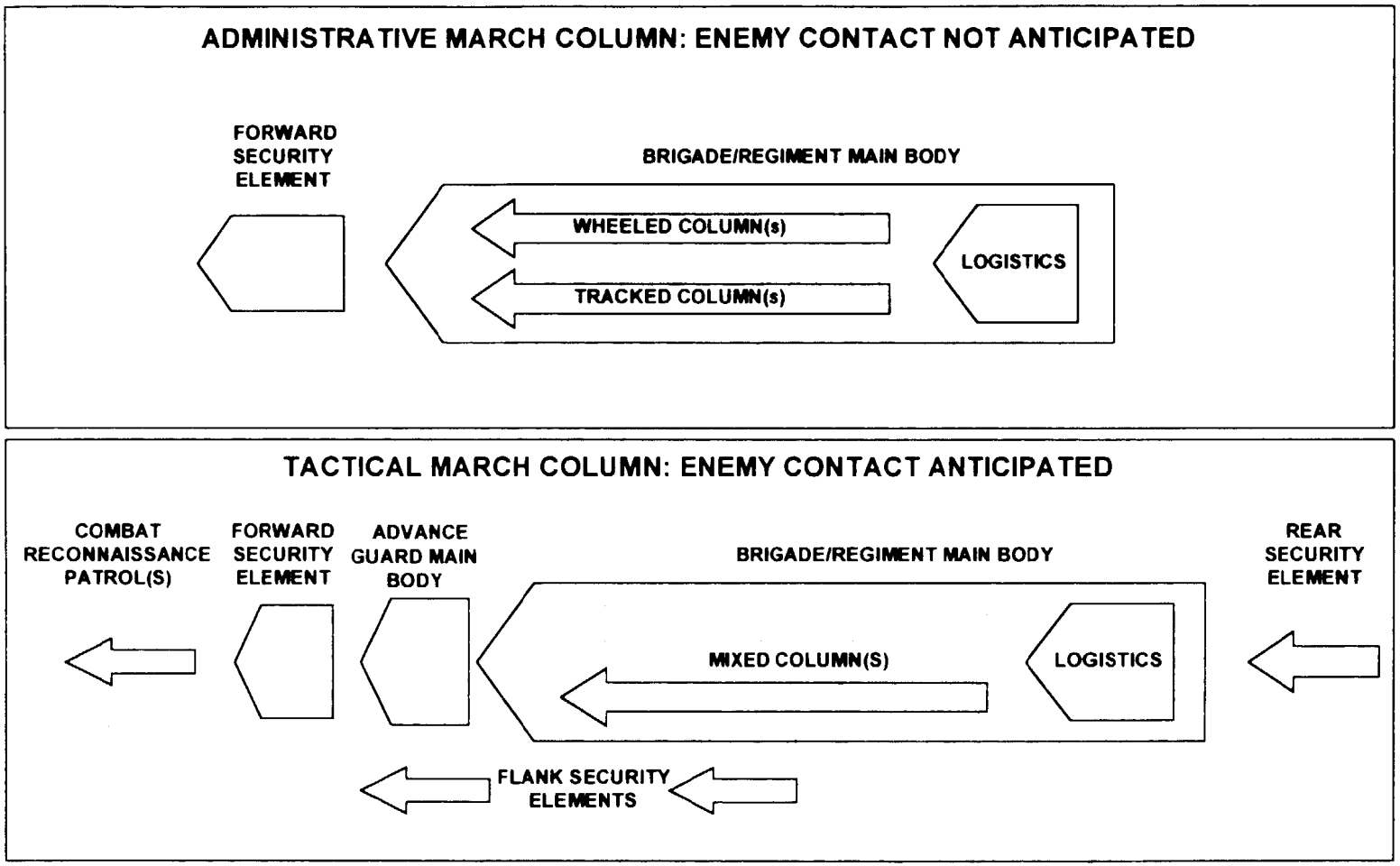


Figure 5-1. Administrative and tactical march columns (brigade or regiment level).

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(1) Primary responsibility for air defense lies with the unit or district through whose rear area the tactical unit is marching. In the division, it rests with the comander of the air defense regiment. The marching unit's organic air defense assets deploy throughout the column. The division or district concentrates resources to cover obstacle crossings and other chokepoints.

(2) Chemical reconnaissance and protection assets also deploy tactically within columns, in case of enemy strikes during the march.

(3) Engineer reconnaissance, route-clearing, and obstacle-crossing units deploy throughout march columns. The primary responsibility for maintaining routes still lies with the higher headquarters.

(4) Higher headquarters are responsible for maintaining, refueling and feeding units marching in their rear areas. This ensures commitment of units from the march into battle at full strength and with their basic combat loads intact.

5-3. TACTICAL MARCH

The OPFOR uses the tactical march when moving into or through a battle area *where contact with enemy groundforces is likely*. It is keenly aware of the importance of tempo and the likelihood of meeting battles on the modem battlefield. Therefore, it emphasizes that, when contact becomes possible, march organization must reflect the desired organization for combat. This ensures the march formation is ready to enter battle with little notice.

A unit may conduct a tactical march when march-

- Moving from a rear assembly area to a forward assembly area or assault position.
- Leaving an assembly area to launch an attack from the march.
- Moving forward in anticipation of a meeting battle.
- Conducting a pursuit.
- Conducting a passage of lines.
- Transferring laterally to a new area or large formation.

Commanders ensure their troops are ready to perform a march with minimum warning and preparation. Units frequently rehearse the march with commanders strictly controlling its conduct. Units accomplish rapid column movement in march formation. Subsequent deployment from march column into prebattle and battle formation involves standard battle drills. These formations and drills allow a rapid transition into combat while maintaining maximum security.

a. Transition from administrative march. Tactical marches begin in an assembly area, where units reorganize themselves from the order in which they completed the administrative march and carry out final maintenance and logistics checks.

(1) *Order of march*. The new march order depends on the mission, the terrain through which the OPFOR must march. and the nature of the enemy threat. There is no time to stop and transition from an administrative march column to a combat formation. The formation must permit a smooth and rapid deployment into battle in accordance with the commander's plan. The formation must also include sufficient march security to prevent the enemy from disrupting that deployment. The commander and his staff conduct march planning in as much detail as time and information permit.

The tactical march formation has units in preformed groupings tailored for combat against the expected enemy in the terrain where battle may occur. This makes it possible to strike first against the enemy in a meeting battle and to surprise a defending enemy through the speed with which the OPFOR can mount an attack The tactical march formation must reflect the potential combat formation in terms of echelonment. Thus, a unit marches in two echelons or a single echelon and a mobile reserve. The nature of the terrain and the enemy threat can determine the echelonment, as well as the number of routes on which a unit marches.

(2) *Route allocation.* The OPFOR applies the following *norms* to tactical march routes:

- A division receives a zone of advance, normally with two to four march routes.
- A brigade or regiment normally receives one or two march routes.
- A battalion receives one march route.

(3) *Dispersion.* Tactical march formations must maintain dispersion laterally and in depth. This dispersion is critical under NBC conditions or when the enemy has high-precision weapons or the capability of achieving local air superiority. The commander balances the requirement for dispersion in depth with the need for timely commitment of his forces in case of enemy contact.

A division normally marches on two to four routes. Separation between routes is 3 to 4 kilometers. The 80- to 100-kilometer internal between first- and second-echelon divisions remains constant; however, reconnaissance patrols and march security elements from a second-echelon division may move within that interval.

The length of a march formation depends on three factors:

- The intervals between units and vehicles in each column.
- The number of march routes.
- The type(s) and organization of the forces on each route.

Moving from the final assembly area to the line of commitment, a first-echelon division can spread out more to observe *tactical intervals*. For example, intervals between first-echelon brigades or regiments and the division's second echelon or reserve grow from 5 to 10 kilometers. There should be 3 to 5 kilometers between battalions in wheeled or tracked vehicles. For dismounted battalions on the same route, the interval may be as little as 500 meters. Figurc 5-2 summarizes typical OPFOR tactical march intervals for movement in vehicles.

Elements Involved	*Normal Intervals*	*Variations*
Vehicles in a company	25-50 m	Increased at high speeds, in contaminated or rugged terrain, or on icy roads. May decrease at night, or increase (to 100-150 m) in open terrain, when threatened by aviation or high-precision weapons.
Companies in a battalion	25-50 m	Up to 300 m or more under threat from aviation or high-precision weapons.
Battalions on the same route	3-5 km	Can vary as contact becomes imminent.
Brigades or regiments on the same route	5-10 km	

Figure 5-2. Typical OPFOR tactical march intervals.

Figure 5-3 illustrates possible variations of column length for the main body of a motorized infantry division marching in vehicles. The typical distances shown there reflect the prescribed tactical intervals between vehicles, battalions, and brigades or regiments and the number of vehicles typically found in each organization. The assumption is that first-echelon brigades and regiments have two battalions in their main body, with the third battalion providing march security. A second-echelon brigade or regiment would probably have three battalions in its main body, with minimal march security. Therefore, the column length for the motorized infantry division's main body could be up to 80 kilometers (excluding march security elements). For a mechanized infantry or motorized rifle division, it could be up to 100 kilometers. In front of the main body, division and brigade or regiment reconnaissance patrols, FDs, and forward march security add to the overall length of a division in the march.

First-echelon bde/regt main body		*Interval* after 1st echelon	*Second-echelon bde/regt*		*Reserve bn*	*Total column length*
(1 route)	(2 routes)		(1 route)	(2 routes)	(1 route)	
15-30 km	-	5-10 km	20-40 km	-	-	40-80 km
15-30 km	-	5-10 km	-	10-20 km	-	30-60 km
15-30 km	-	5-10 km	-	-	3-5 km	23-45 km
-	5-10 km	5-10 km	20-40 km	-	-	30-60 km
-	5-10 km	5-10 km	-	10-20 km	-	20-40 km
-	5-10 km	5-10 km	-	-	3-5 km	13-25 km

Figure 5-3. Typical column lengths for motorized infantry division main body.

For motorized infantry units, the length of march columns also depends on whether or not troops use trucks for transport. For a brigade or regiment to move less than 50 kilometers or a battalion less than 30 kilometers, motor transport may not be necessary. However, battalions or companies can use motor transport even for shorter distances when-

Deploying an infantry unit in a reconnaissance role.

- Conducting a pursuit of enemy troops.
- Moving a reserve unit to a different axis.

- Swiftly maneuvering units to stage flank or rear attacks
- Reacting to an enemy penetration or airborne insertion into the OPFOR rear.

It is possible to use motor transport up to a certain point and then dismount the infantry troops for the final phase of movement.

(4) *March security.* Once in the combat zone, the OPFOR deploys stronger march security to the front and on any open or threatened flank. The types and strengths of march security elements can vary widely according to the circumstances. (See paragraphs 1-3 through 1-5.)

(5) *Average rate of march.* Average rate of march is the ratio of the entire route covered (or planned) to overall movement time, not counting time for halts. Average rate of march is not a constant value. It depends on -

- The combat situation.
- The assigned mission.
- The commander's ability to lead columns.
- Conditions of route and weather.
- Organization and support of the march.
- The mechanical condition of vehicles.
- The march proficiency and physical condition of dismounted troops

On most roads, wheeled vehicles move faster than tracked vehicles or mixed columns (wheeled and tracked). Figure 5-4 illustrates average movement rates of march columns on different surfaces. When forming up columns and moving from the assembly area to the start point of the march, units normally travel at between one-half and three-fourths of the average rate. Columns making contact with the enemy may move at maximum speeds. However, truck-mounted infantry may have to dismount at a safe distance and cover the remaining distance on foot before engaging the enemy.

Column Type	*Paved roads (km/hr)*		*Dry, dirt roads, (km/hr)*		*Muddy, hilly, urban roads (km/hr)*	
	Day	Night	Day	Night	Day	Night
Wheeled	30 to 40	25 to 30	20 to 25	18 to 20	10 to 15	8 to 12
Tracked/mixed	20 to 30	15 to 20	15 to 20	12 to 15	10 to 12	8 to 10
Dismounted	4 to 5	4 to 5	4 to 5	18 to 20	4 to 5	4 to 5
Note: Under normal conditions, dismounted (foot) march rate is 4 km/hr, or 5 km/hr with a light load.						

Figure 5-4. Average rates of march.

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(6) *Length of day's march.* Another measure of march performance is the length of a day's march. This is the distance the troops can cover during the march in a 24-hour period. The daily march distance depends on the speed of march of the columns, the length of the marching distance, and the physical capabilities of the drivers and combat and transport vehicles. OPFOR vehicle drivers can maintain combat effectiveness during a march of 10 to 12 hours. For dismounted infantry, 10 to 12 hours would constitute a forced march; the regular march is 7 to 9 hours. Figure 5-5 gives average daily march performance data for wheeled and tracked or mixed columns, as well as for dismounted infantry.

Thus, the length of the daily march of the motorized infantry troops in motor transport columns can be up to 480 km per day. For tracked or mixed vehicle columns it is up to 350 km. For dismounted infantry, it ranges from an average of 30 km for a regular march up to 45 km for a forced march. These maximum ranges assume optimum conditions. In mountains, jungles, swamps, deserts, and other difficult areas, the average rate of movement and the length of the daily march can decrease sharply

Column type	*Paved roads* (km per day)	*Dry, dirt roads* (km per day)	*Muddy, hilly, urban roads* (km per day)
Wheeled	250-480	180-300	80-180
Tracked/mixed	150-350	120-240	80-140
Dismounted	30-45	30-45	30-45

Notes:

1. For vehicles, calculation is for march of 10 to 12 hours. Distances shown cover the range from 10 hours at night rate to 12 hours at day rate. Remaining 12 to 14 hours spent in—
   - Maintenance: 3 to 4 hours
   - Serving hot meal: 1 to 1.5 hours
   - Deployment and camouflage: 1 to 1.5 hours
   - Movement to line of departure: 1 to 1.5 hours
   - Rest: 4 to 8 hours

   For dismounted infantry, calculation is for a march of 7 to 9 hours per day.

2. Rest halts for vehicles: Short halt of 20 to 30 minutes every 3 to 4 hours (first one after 1 to 2 hours). Long halt of up to 2 hours necessary when conducting a full day's march of 10 to 12 hours.

3. Rest halts for dismounted infantry: Short halt of 10 minutes after 50-minute march (first one after 30 minutes). Long halt of up to 2 hours necessary when conducting a forced march of 10 to 12 hours.

Figure 5-5. Daily march distances.

b. Order of march. The order of elements within a march column depends on the combat situation and on the expectation of enemy contact. In any march, the commander locates combat and support elements within the column to ensure efficient transition into combat. Prior to the march, he establishes the column organization to minimize or preclude any reorganizing before commitment to battle.

The main body of the combat force employs reconnaissance and forward security, forces in most situations. The reconnaissance forces move far ahead of the security force. They try to avoid contact while sending back intelligence to the main body commander. The security force is responsible for ensuring the unhindered movement of the main body. To accomplish this it may engage enemy forces. An engineer movement support detachment often moves in the same area as the forward security force, also supporting the movement of the main body.

Within the main body, infantry units and tanks normally move at or near the head of the column. So do the commander and key staff officers. Attached and organic artillery elements move well forward in the column; occasionally, they travel ahead of the tanks and infantry. Air defense, engineer, antitank, and chemical reconnaissance elements travel dispersed throughout the march column.

The main body is responsible for its own flank security. Combat service support elements normally bring up the rear of the column, followed at a distance by a rear security element.

(1) *Halts.* Commanders plan halts and rests to preserve the strength of personnel and allow for maintenance of equipment. Designated halt areas often coincide with control lines.

For *wheeled* or *mixed columns.* the schedule normally includes *short halts* for every 3 to 4 hours of movement. A short halt may last up to an hour, but 20 to 30 minutes is the norm. The column formation remains intact at the halt, with units maintaining their intervals. A full day's march of 10 to 12 hours necessitates one *long halt,* lasting no more than two hours. (In a forced march of 12 to 14 hours, the long halt can last 2 to 4 hours.) The long halt occurs during the second half of a day's movement. Units disperse off the road in camouflaged positions and the soldiers use the time to perform any needed maintenance, refueling, resupply, or decontamination. They can also receive a hot meal at a long halt. Long halts are not scheduled at night, allowing maximum time for night movement.

Dismounted columns normally halt for 10 minutes after every 50 minutes of movement. The first rest halt is after 30 minutes' march. During the second half of a day's march. they make a *long halt* of up to 2 hours for personnel to eat and rest.

(2) *Communications.* The OPFOR restricts the use of radios during the march to minimize the risk of detection, jamming, and enemy attack. Maneuver units march under radio silence, relying on hand and arm signals, flags, and light signaling devices. They practice these in battle drills. During long halts, they may use wire communications. Specialized traffic regulators may operate separate wire and radio nets to aid movement of the march columns. The OPFOR also employs motorcycle-mounted couriers extensively.

c. Engineer support. Engineer support for the march allows the force to overcome or bypass those areas that would disrupt movement. Engineer units may form movement support detachments and mobile obstacle detachments.

(1) *Movement support detachment.* The MSD moves up to 2 hours ahead of the brigade or regiment main body. This puts the MSD in the same area as the brigade or regiment's advance guard and other forward march security groupings. It tries to clear routes through or around any obstacles so that there is no delay to the brigade or regiment main body. It fills craters or constructs bypasses, bridges minor gaps, and clears and marks lanes through minefields. The work of the MSD is vital to a rapid advance and to security. If engineers do not complete their tasks in time, the main body may have to halt, disperse, and seek another route. Once the first echelon commits to battle, the MSD follows behind it to prepare the route for the second echelon.

MSDs can include various types of engineer equipment for clearing and improving march routes. These can include-

- Bulldozers, cranes, and dump trucks.
- Route-clearing equipment; i.e., IMR and BAT-M.

- Truck-launched bridges.
- Mine detectors and mineclearing equipment.
- Trucks to carry explosives and metal track.

These assets come primarily from engineer companies organic at brigade or regiment and division levels. With these resources, a division can form several MSDs. Their number and strengths depend on the number of routes they must support. A brigade or regiment moving on a single route could have an MSD of company strength, possibly reinforced with divisional engineer assets. If a brigade or regiment moves on two routes, a given route might have only a platoon- or squad-sized MSD. An MSD may have infantry troops attached for protection. Chemical reconnaissance troops open form part of the MSD.

A company-sized MSD can have two or three subgroups. They are the reconnaissance and clearing group (which can be one consolidated group or two separate ones), and the road and bridge construction and repair group. Grouping depends on terrain and the tactical situation and can vary during the course of the march.

(2) *Mobile obstacle detachment.* The MOD protects advancing columns by laying minefields and creating expedient obstacles on likely enemy' approaches. Its primary assets are mechanical minelayers from the mine warfare platoon of a brigade or regiment or division-level engineer company. It may also include combat engineers for demolitions work, ditching machines. or other engineer equipment for creating obstacles. It ordinarily travels behind the march security elements and ahead of the brigade or regiment main body. Once contact with the enemy occurs, it often moves and acts in conjunction with the antitank reserve.

5-4. DIVISION TACTICAL MARCH

The basic formation for achieving maximum rates of advance or maneuver in the attack is the march formation. Mechanized or motorized rifle, motorized. and light infantry, divisions use similar march formations.

a. Order of march. The division order of march depends on the enemy situation, mission, terrain, and the commander's concept for deployment into combat. The division may advance along two to four march routes, with division and brigade or regiment reconnaissance patrols and advance guards and/or FDs preceding the main body. The division's main body may march in two echelons or one echelon and a reserve. Figure 5-6 shows an example of a motorized rifle division's tactical march formation, The division in this example has a single echelon and a reserve. This formation requires the use of at least three routes. Many other variations are possible, and OPFOR march formations do not necessarily follow limited stereotypes.

The choice of echelonment generally depends on the nature of enemy defenses, In very difficult terrain. with poor lateral communications, the division may advance in one echelon, with a strong reserve. The same might be true when the division is marching in anticipation of contact with a weak, unprepared enemy. The division could be advancing against a covering force screening a strong defensive position. In that case, the commander hopes to avoid deploying the main bodies of the first-echelon brigades or regiments during the covering force battle, keeping them available for the penetration battle in the main defensive position.

b. Route allocation. A division normally, has an assigned zone of advance for a tactical march. Within that zone, it advances on two to four routes. Separation between routes is normally 3 to 4 kilometers. The width of the zone of advance and the number of routes vary according to the terrain and the nature of the enemy force the division expects to encounter, The relationship between zone width and the number of routes might typically be as follows:

- 8 to 15 kilometers on two routes
- 10 to 25 kilometers on three routes
- 15 to 30 kilometers on four routes

c. Reconnaissance. In the march, the purpose of reconnaissance is to provide the commander maximum warning of enemy forces, in terms of time and distance, and to establish the strength and disposition of these forces. Reconnaissance also identifies terrain features that could slow the OPFOR rate of advance or hinder the accomplishment of the parent organization's mission.

Tracked and wheeled reconnaissance vehicles from the division's reconnaissance and EC battalion deploy in reconnaissance patrols of three to four vehicles each. Under normal conditions, these patrols cover the division's entire zone of advance out to a distance of about 50 kilometers ahead of the division main body. [1] However. most of the division's reconnaissance patrols typically concentrate on the major axes of advance and the most likely enemy concentrations. Other reconnaissance patrols from division and first-echelon brigades or regiments cover the rest of the division's zone of advance. The brigade or regiment reconnaissance patrols normally move about 25 to 30 kilometers ahead of the main body. In extreme cases, however, a particular brigade or regiment could push its patrols out as far as 40 to 45 kilometers ahead on its march route.

d. Forward detachment. The division commander may dispatch an FD for independent missions forward of the lead brigades or regiments advance guards. The division's FD may have the same size and composition as a brigade or regiment advance guard (a reinforced battalion); however, the FD *is not a march security element.* Unlike the brigade or regiment advance guard, the division's FD does not need to follow a specific route of advance. The purpose of the FD is to speed the advance of the division. Its mission may be to seize key terrain (such as passes, defiles, road junctions, or river-crossing sites). Otherwise, its mission may be to facilitate the division's advance by, disrupting the enemy's covering forces. It may also conduct raids against important enemy sites such as-

- High-precision weapons systems.
- Artillery positions.
- CPs.
- Logistics facilities.

The FD tries to avoid battle before it reaches its objective and before it moves off the main routes of the divisional columns.

If the division is marching in two echelons, its FD is normally a reinforced motorized infantry battalion from the division's second-echelon brigade or regiment. In the example in Figure 5-6, the division has no second echelon. In that case, the FD would have to come from one of the first-echelon brigades or regiments, at the discretion of the division commander. He would probably, take it from a brigade or regiment on a less threatened route.

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[1] In extreme cases, it is possible to insert elements of the division's long-range reconnaissance company up to 100 kilometers ahead of the main body. Inserted elements may enter by parachute, helicopter, vehicle, or foot.

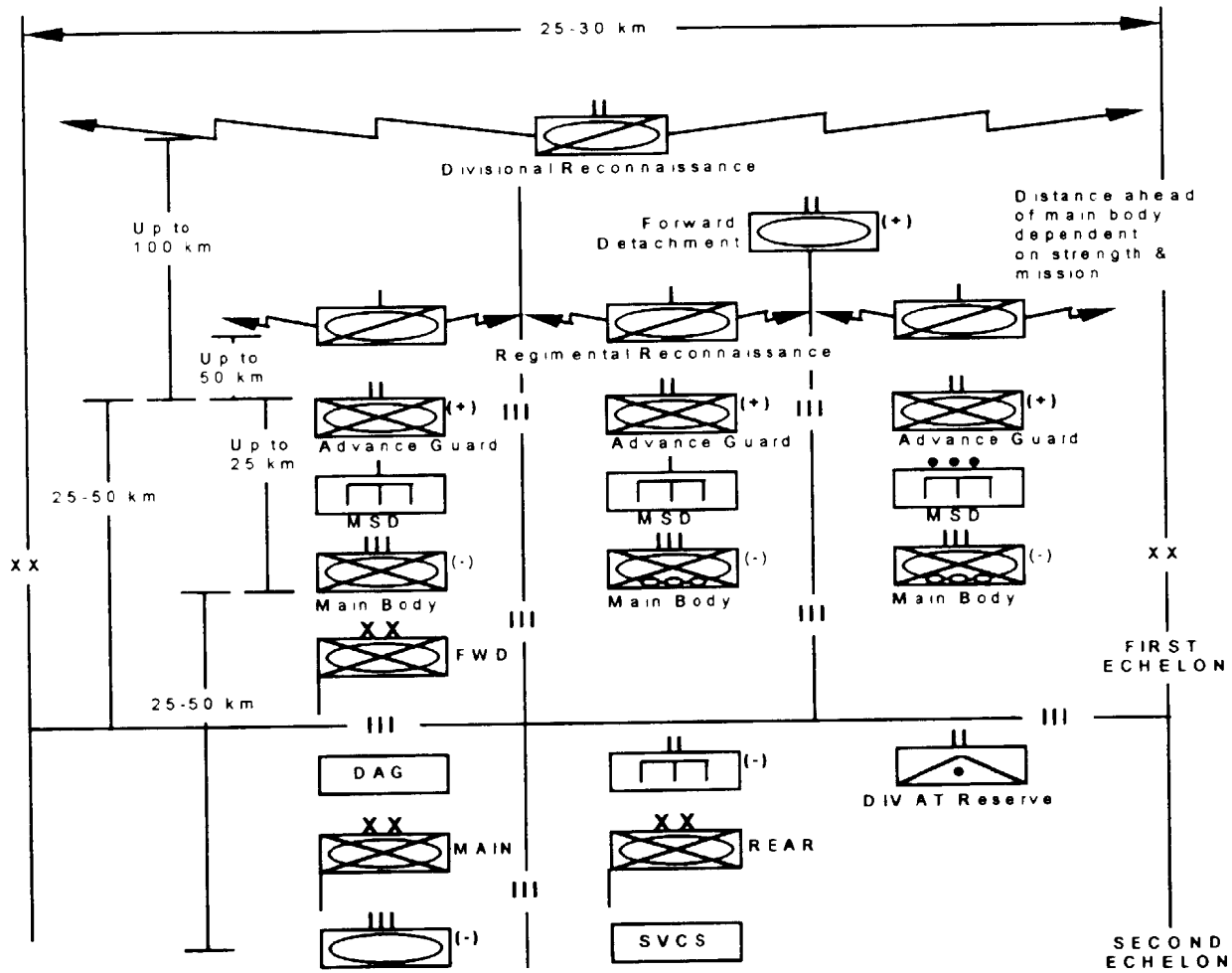

Figure 5-6. Mechanized infantry division in tactical march formation.

In the march, there is no set distance between the FD and the division main body (the main body of the first-echelon brigades or regiments). That distance depends on the strength of the FD and its mission. However, it normally moves 1 to 2 hours ahead of the parent division's main body. This means that the FD normally moves ahead of or parallel to the march security elements (advance guard) of the lead brigades or regiments but behind the division's reconnaissance patrols. The FD commander can also dispatch his own reconnaissance patrols.

e. March security. While reconnaissance units act as the eyes and ears of the division and its brigades or regiments, other units provide security for the main body. The OPFOR categorizes security elements by their position relative to the main body, as forward, flank. and rear. The FSE may be part of a larger march security force known as an advance guard. *The division does not have its own march security elements, but rather relies on those deployed by its subordinate brigades or regiments.*

There is no actual division *advance guard or FSE.* The lead brigade or regiment on each of the routes used by the division forms an advance guard or at least an FSE. The division relies on the advance guards of the brigades or regiments or FSEs for forward march security. Normally, the advance guards consist of reinforced motorized or mechanized infantry battalions. A company- or platoon-sized FSE is part of a first-echelon brigade or regiment's advance guard; a second-echelon brigade or regiment may deploy only a company-sized FSE rather than a battalion-sized advance guard. In each first-echelon brigade or regiment, the advance guard tries to move about one hour ahead of the main body, but this distance may be less if it encounters resistance or obstacles,

Flank and rear security elements complete the all-around security for the march. Each brigade or regiment provides its own flank security element(s). An infantry company from the division's second-echelon brigade (or regiment) or reserve would serve as a *rear security element.* Rear security elements follow 4 to 7 kilometers to the rear of the main body. Thus, the second-echelon brigade (or regiment) or reserve provides rear security for the division, as well as its own local security to the front and flanks.

f. Main body first echelon. Although the brigades or regiments are ready to deploy into battle rapidly, they remain in march formation as long as possible The division commander approves the decision to deploy or to bypass an enemy too strong for the advance guard to dislodge.

g. Division commandposts. The division commander, in his forward command observation post, travels in the column of the main-axis first-echelon brigade or regiment. He is normally close to the brigade or regiment CP, ensuring quick reaction The division's main CP accompanies the second-echelon brigade or regiment, also on the main axis. The rear CP leads the divisional logistics elements.

h. Artillery. The division commander, advised by his chief of artillery, coordinates the movement and fires of all organic and reinforcing artillery. He designates the column(s) in which the artillery assets should travel and their positions in the column and plans firing positions for their employment.

The DAG consists of the organic and any reinforcing artillery of a division. It moves on the main axis immediately behind the first-echelon brigades or regiments so that it can support an attack from the march. If a division is moving on the army's main axis, its columns would include the army and/or corps artillery group (AAG and/or CAG).

Antitank artillery is not part of the DAG. The division antitank reserve may deploy centrally or move to cover the most exposed flank.

i. Air defense. If marching out of contact, the division's air defense regiment and its lower-level assets are likely to maintain radio silence, relying on army or region assets for long-range surveillance and early warning. Otherwise, medium-range surface-to-air missile assets depend on visual detection for early warning. Air defense radars arc normally turned off, or only operated for short periods, to reduce vulnerability to antiradiation missiles.

Radars would become active in the event of a direct threat to the division. In this case, the air defense regiment is on full alert and possibly deployed with a battery accompanying each first-echelon brigade or regiment and other batteries on the flanks of the second echelon or reserve. Another option is for the air defense regiment to move its medium-range assets in a bounding overwatch configuration to keep the march columns under an air defense umbrella.

j. Second echelon or reserve. The second-echelon brigade or regiment or reserve generally moves on the main axis. The commander may designate part of the second echelon as an antilanding reserve.

k. Combat support and combat service support. The distribution of combat support and combat service support assets depends on the terrain and tactical circumstances. If, for example, the division does not have major water obstacles to cross, the bulk of the engineer assets could remain in reserve in the second echelon of the division. The exception would be engineer reconnaissance and route-clearing assets assigned to MSDs. If the division had to cross a water obstacle, bridging elements would accompany the first echelon, or they might be with the forward detachment or advance guards. The chemical defense company provides chemical reconnaissance patrols throughout the division formation. If the NBC threat is high, it may be necessary to split decontamination assets between first and second echelons. The traditional position for the bulk of the division's logistics elements is at the end of the march formation: however, the division may divide its maintenance and medical evacuation assets between the two echelons. In a long march in difficult terrain, it may do the same with resupply facilities as well.

5-4. BRIGADE OR REGIMENT TACTICAL MARCH

Maneuver brigades and regiments have march formations similar to a division. These formations provide reconnaissance and early warning to the brigade/regiment commander. The formation varies according to the situation.

a. Order of march. The brigade or regiment order of march depends on the enemy situation, mission, terrain, and the commander's concept for deployment into combat. The brigade or regiment may advance along one or two march routes, with brigade or regiment reconnaissance patrols and advance guards and/or FDs preceding the main body. The brigade or regiment main body may march in two echelons or one echelon and a reserve.

Many other variations are possible, and OPFOR march formations do not follow limited stereotypes. Brigades or regiments on the division's flanks have to provide their own flank security elements. A brigade or regiment in the division's second echelon needs little or no forward security but must provide rear security for itself and for the division. The same second-echelon brigade or regiment may have lost one of its battalions to serve as a division FD. As part of a single-echelon division march formation, a bridage or regiment on a less threatened axis may have lost one of its battalions to serve as a division FD or reserve. A separate brigade or regiment must provide. its own all-around march security.

b. Route allocation. Each brigade or regiment normally has a primary route and, if the terrain permits, an alternate route. The brigade or regiment could use the alternate route if its primary route becomes unusable or if it splits its forces on two mutes. In normal terrain a brigade or regiment advances on one route until its subordinate units begin their deployment into prebattle and battle formations.

c. Reconnaissance. A separate brigade or regiment's organic reconnaissance company may send out patrols that can advance up to 50 kilometers or more ahead of the brigade or regiment main body. For the reconnaissance platoon of a divisional brigade or regiment, however, 25 to 30 kilometers is move common. Even though division reconnaissance is moving ahead, the brigade or regiment commander has his own independent reconnaissance patrols

reporting directly and immediately to his headquarters. A second-echelon brigade or regiment does not deploy such patrols until receiving comfirmation of its mission and orders for commitment.

The distance of reconnaissance patrols from the brigade or regiment main body also depends on the number and types of march security elements present. Figure 5-7 illustrates the possible relationships. If, for example, a *motorized* brigade deploys all possible match security elements at their maximum strengths and maximum intervals, these may reach up to about 30 kilometers ahead of the main body. For another brigade or regiment requiring only minimum forward security, they may reach to less than 15 kilometers. Ideally, brigade or regiment reconnaissance precedes march security by about 10 to 15 kilometers. Thus, brigade or regiment reconnaissance patrols could be from 25 to 30 kilometers ahead of the brigade main body, or, in the extreme case 40 to 45 kilometers. For a motorized brigade or regiment that elects to complete and an tire march (of 50 kilometers or less) *on foot,* march security could reach out 6 to 10 kilometers. In that case, brigade reconnaissance patrols, also on foot, would be 5 kilometers ahead of the lead march security element.

Specially trained reconnaissance patrols from the brigade or regiment reconnaissance company or platoon collect the following information:

- Nature and location of enemy nuclear and chemical delivery systems.
- Movement axes of enemy columns.
- Strength and composition of enemy forces.
- Deployment lines and routes.
- Location of contaminated areas.

If the situation demands, the divisional brigade or regiment may supplement these with additional reconnaissance patrols based on regular infantry platoons.

	Tank/mechanized	*Motorized*	*Foot*
Max. march security	Up to 50 km	Up to 30 km	Up to 6 km
Recon ahead of security	10-15 km	10-15 km	5 km
Recon ahead of main body	60-65 km	40-45 km	11 km
Min. march security	Up to 15 km	Up to 15 km	Up to 10 km
Recon ahead of security	10-15 km	10-15 km	5 km
Recon ahead of main body	25-30 km	25-30 km	15 km

Figure 5-7. Brigade and regiment reconnaissance in relationship to march security and brigade or regiment main body.

Continuous reconnaissance on the march provides for timely collection of information on the enemy and terrain in the direction of movement and on the flanks. The principal method of reconnaissance on the march is observation. Technical equipment may also collect data on the terrain and enemy. Each unit organizes all-around observation for prompt detection of the enemy.

d. Forward detachment. If necessary, a brigade or regiment may send out a FD to accomplish missions similar to those of the division's FD. but the brigade or regiment deploys only a reinforced company for this mission.

e . March security. The various types of march security elements may include an *advance guard, security elements (forward, flank and rear)* and *patrols.* Figure 5-8 shows these elements in relation to the brigade or regiment main body. March security elements sent out from the brigade or regiment main body, advancing in increasingly larger formations, should encounter the enemy or obstacles well before the main body.

Against an enemy also on the march. security elements can-

- Prevent surprise attacks by the enemy.
- Allow each successive commander to minimize losses in a surprise encounter by meeting the enemy with the smallest possible force.
- Keep the enemy's reconnaissance from penetrating to the main body.
- Assist the main body's deployment into battle.
- Permit the maneuver of follow-on forces.

Against a defending enemy, the mission of security forces is to clear the covering force from the path of the main body. It is unlikely that these forces would assault strong positions frontally, if this is avoidable. The preferred option is to envelop the position, forcing the defender to pull back, and to attempt to destroy the withdrawing force on the move.

The strength and composition of the march security elements depend on the intensity of the enemy threat and the type of terrain. The greater the threat and more difficult the terrain. the stronger the march security required.

The distance of march security elements from the main body ensures time for deployment and organized engagement by the main body. Also, the intervals between march security entities should give the commander of the following element time for-

- Decisionmaking.
- Assignment of missions
- Occupation of firing positions by reinforcing artillery.
- Forward movement and deployment of this unit to engage the enemy.

Figure 5-9 shows typical intervals between the various march security elements in a brigade or regiment. These distances may decrease if security elements encounter resistance or obstacles.

(1) *Advance guard.* The most important of these elements is the advance guard. In anticipation of a clash with the enemy, the advance guard deploys up to 1 hour ahead of the brigade or regiment main body For a mechanized or motorized rifle or tank brigade or regiment, this can be as much as 20 to 30 kilometers. For an infantry brigade on foot, it could be as little as 2 to 3 kilometers. For truck-mounted motorized infantry, it is somewhere between those extremes, typically about 8 to 12 kilometers.

The advance guard precedes the main body on the same route, providing movement security and warning. It can engage and destroy enemy units, but only if that combat does not inhibit fulfillment of its primary task. The advance guards of first-echelon brigades/regiments provide forward security for the division march formation.

For a brigade or regiment, the advance guard consists of a reinforced battalion. It normally comprises about one-third of the brigade or regiment's total combat power. The advance guard of a motorized infantry brigade is a motorized (a possibly mechanized) infantry battalion reinforced with artillery, antitank, air defense, engineer, and chemical defense elements. Reinforcements may also include tanks, if they are available. The advance guard of a tank brigade or regiment is a similarly reinforced mechanized infantry battalion.

If a brigade/regiment marches on more than one route, it deploys an advance guard to ensure the security of its main axis. When exploiting a penetration or in pursuit, each first-echelon brigade or regiment is likely to employ a reinforced infantry battalion as an advance guard.

The advance guard dispatches a *FSE* to its front. The FSE is normally a reinforced company, comprising about one-third of the advance guard's combat power. On a less threatened route, it could be only a reinforced platoon, A brigade a regiment may send an FSE forward for march security even if it does not send forward an entire advance guard.

The advance guard may also send out one or more CRPs. The CRP is a platoon reinforced with engineer and NBC reconnaissance elements that comes from the FSE or from a company in the battalion's main body. It reconnoiters the parent brigade or regiment's primary march route and any key terrain or enemy positions along it and reports intelligence information and makes the initial contact with any enemy forces encountered. The battalion commander dispatches the CRP. Normally,. there is only one CRP, but, if the situation dictates. the battalion commander may use more than one. An additional CRP could reconnoiter alternate routes, areas on the flanks of the battalion, or other areas about which the advance guard commander needs more information.

(2) *Forward security element.* The FSE is normally a reinforced company commonly sent ahead of a first-echelon battalion or a battalion operating away from the main body (for example, an advance guard, a forward detachment, or a raiding detachment). When the threat is weak, however, a brigade or regiment (on a supporting axis a in the second echelon) can use an FSE in lieu of an advance guard. Infantry companies often perform this role, even in tank brigades or regiments. Typical reinforcements include an artillery or mortar element and possibly an antitank platoon. A sapper element may accompany an FSE, or an MSD may be marching in the immediate vicinity. Against a weak threat, or when limited assets are available for march security, a battalion might send out only a reinforced platoon as its FSE.

The distance between the FSE and the battalion (advance guard) main body relates to the speed of movement. It also reflects the length of time the FSE can fight a possibly superior enemy force before the parent battalion arrives. These factors, in turn, relate to the type of unit involved (tank, mechanized, motorized rifle, motorized, or dismounted infantry). For example, the OPFOR believes that time to be 20 to 30 minutes when a tank, mechanized infantry, or motorized rifle unit sends out the FSE. From the time the FSE becomes engaged, that is the time required for both the following actions,

- For the battalion commander to estimate the situation. make his decision, and assign missions to subordinates while on the move.

- For the battalion to deploy into battle formation.

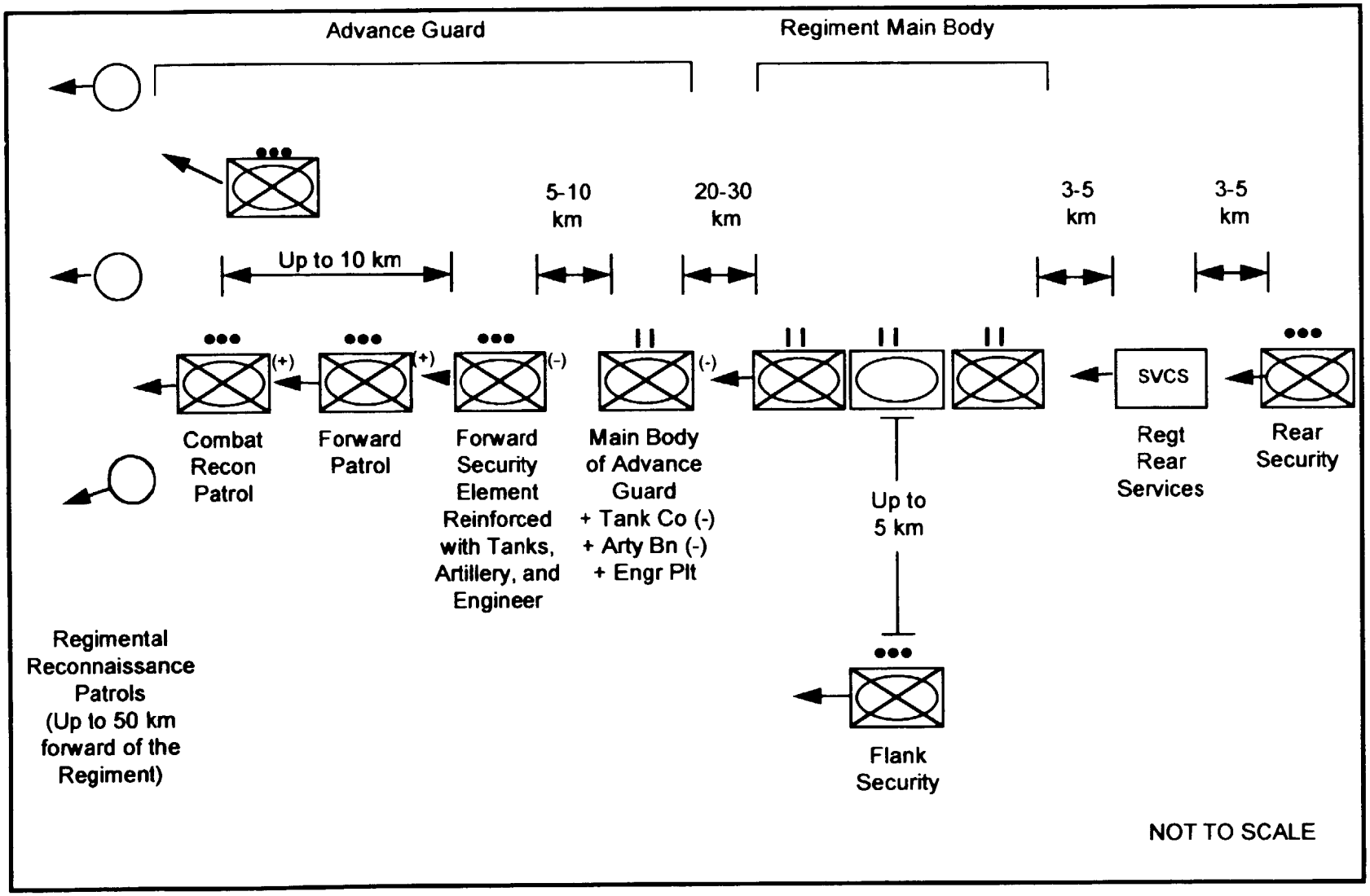

Figure 5-8. First-echelon MRR of an MRD or TD in march formation.

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Interval between			*Tank mechanized*	*Motorized*	*Foot*
CRP (or FP)	and	FP or ADV GD	3-5 km	3-5 km	Up to 1 km
FSE	and	ADV GD	5-10 km	4-7 km	3-6 km
ADV GD	and	MAIN BODY	20-30 km	8-12 km	2-3 km
FLANK SEC	and	MAIN BODY	Up to 5 km	Up to 5 km	2-3 km
REAR SEC	and	MAIN BODY	3-5 km	4-7 km	Up to 1 km

CRP = Combat reconnaissance patrol
ADV GD = Advance guard
FLANK SEC = Flank security element
FP = Forward patrol
FSE = Forward security element
REAR SEC = Rear security element

Figure 5-9. Typical intervals between march security elements

At an average rate of 25 kilometers per hour, a battalion of tracked vehicles can cover a straight-line distance of 5 to 10 kilometers in 12 to 24 minutes; however, the battalion main body may move over a longer route to engage the enemy from a flank. Thus, the total time interval from engagement of the FSE to engagement of the battalion main body may be 20 to 30 minutes. This means that the advisable distance is 5 kilometers for a platoon-sized FSE and up to 10 kilometers for a company-sized FSE. For truck-mounted motorized infantry, the distance can be 4 to 7 kilometers; for infantry on foot, it is 3 to 6 kilometers.

(3) *Combat reconnaissance patrol or forward patrol.* The CRP or forward patrol (FP) can precede the FSE company main body by 3 to 5 kilometers. This distance precludes the enemy from being able to engage both the CRP or FP and the FSE with direct fire. It also permits the FSE to support the CRP or FP's battle using fires of reinforcing artillery and allows the FSE to engage the enemy force in an organized manner. In some cases, both a CRP and an FP may precede the FSE; then the CRP could be 3 to 5 kilometers ahead of the FP and 6 to 10 kilometers ahead of the FSE. Once his platoon-sized CRP and/or FP becomes engaged. a mechanized infantry company commander needs about 8 to 12 minutes to move up the rest of the company at a speed of 25 kilometers per hour During that time, he must estimate the situation, make his decision, and assign missions to subordinates The time and distance are about the same for truck-mounted motorized infantry. For dismounted infantry, the FSE would be no more than 1 kilometer behind a CRP or FP.

A platoon-sized FSE may send out a single patrol squad or vehicle. In this case, the distance from the FSE must allow the parent platoon to observe the patrol and support it by fire. For a mechanized or tank unit, that distance can be 300 meters to 1 kilometer. For dismounted infantry, it can be 300 to 600 meters.

(4) *Flank security element.* A brigade or regiment can deploy a flank security element. usually in company strength. on a threatened flank. It can reinforce this company with antitank and minelaying assets, or have it march with an antitank reserve and a MOD. These mobile flank security elements usually march even with the head of the main body and about 5 kilometers from the main route.

The brigade or regiment can also use stationary flank security elements, for example, to block the exit from a mountain pass while the main body passes by. At the line designated for it, the company given this mission deploys all or part of its forces into battle formation and organizes a defense. It remains at this line, protecting the flank of the main column. until a prescribed time.

(5) *Rear security element.* The rear security element for a brigade or regiment is normally a reinforced company in strength. It follows 4 to 7 kilometers behind the main body.

f. Main body battalions. The combat grouping of first-echelon battalions may differ between the various types of brigades or regiments. If a motorized infantry brigade has one mechanized battalion, the commander may choose to use that battalion as an advance guard; in other situations, he could place it near the front of the main body. A tank brigade or regiment often allocates a company of its mechanized infantry battalion to each of its tank battalions. In mechanized infantry brigades or regiments, the tank battalion (less any company allocated to the advance guard) remains together on the march and moves close behind the brigade or regiment main CP at the head of the column. As commitment to battle approaches, the brigade or regiment commander may split up the tank battalion's companies and allocate them to first-echelon mechanized infantry battalions, with one tank company kept under brigade or regiment control. Of course, a motorized or light infantry brigade has no organic tank battalion. Second-echelon battalions, in both tank and infantry brigades or regiments, receive little reinforcement before their commitment to battle.

The brigade or regiment main body attempts to maintain uninterrupted forward movement as a result of the actions of the march security and reconnaissance elements. It remains in a close column to help maintain the speed of the march. A brigade or regiment in the second echelon of the division main body would deploy flank and rear security and also some form of forward security (although less than an advance guard).

g. Artillery. A brigade or regiment organic artillery battalion or battery, or a BrAG, if formed, may occupy varying positions in the column of march. When contact with the enemy is imminent, the artillery follows close behind the main CP at the head of the column This arrangement is likely in anticipation of a meeting battle. On encountering the enemy, the artillery must be ready to support the CRP battle and then the successive deployment of the FSE, advance guard and main body into the battle. In second-echelon brigades and regiments, and on other occasions when contact is unlikely, the artillery may be farther to the rear.

The antitank unit of an infantry brigade may cover an exposed flank or march well forward, depending on the tactical situation. It often moves and acts in concert with an MOD.

n. Air defense. The brigade or regiment commander plans air defense for the march in advance. His plan incorporates organic and supporting air defense weapons and aviation. The commander can position air defense weapons in the column or in stationary positions occupied in advance. He normally distributes the weapons throughout the column. However, he may deploy some elements in air defense ambushes on the flanks.

When enemy aircraft are within range and threatening the column, the commander gives the signal to open fire. Simultaneously, the column speeds up and drivers increase their interval to a distance of up to 150 meters between vehicles. If a large group of aircraft attacks, the column may have to disperse or seek off-road concealment.

5-5. BATTALION TACTICAL MARCH

In the march, a reinforced infantry or tank battalion may serve as one of the following:

- The FD of a division.
- The advance guard of a brigade or regiment.
- Part of the main body of the brigade or regiment.

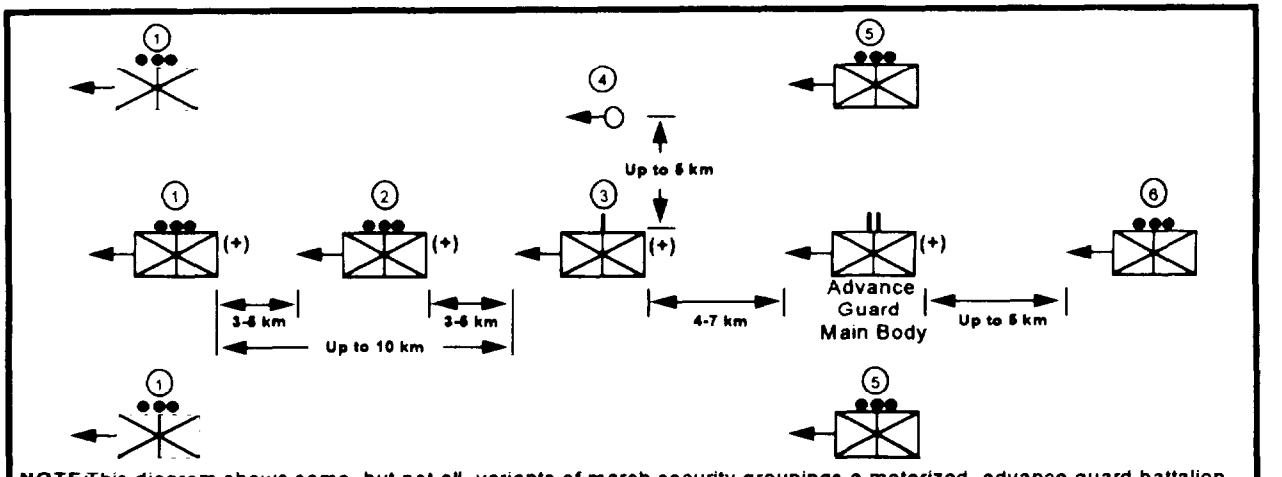
Figure 5-10 shows the various march security elements that can appear in the march formation of a reinforced battalion acting as an advance guard. The advance guard's mission is to-

- Prevent an enemy surprise attack.
- Forestall penetration by enemy reconnaissance into the vicinity of the main body.
- Create favorable conditions for the deployment of the main body and its introduction into battle.

A division FD may move in the same type formation as an advance guard, dependent on the chance of contact with the enemy. As part of the main body, the battalion would move in a single column. The commander would be at or near the head of the battalion column.

First echelon battalions and battalions with independent missions, such as FDs or advance guards, all tend to receive similar reinforcements. Therefore, it is difficult to determine a battalion's role from its march formation.

a. Forward patrols. The most common march security patrol is the FP, found throughout a division's formation. FPs typically lead the FSEs of first-echelon battalions. Advance guards and FDs may deploy an FP in addition to their CRPs. Second-echelon battalions can also employ FPs. When the likelihood of contact with the enemy is low, even first-echelon battalions may use FPs instead of FSEs. FPs operate close to the FSE or battalion main body, generally 3 to 5 kilometers ahead, traveling along the main body's actual route. These patrols may attack from the march to destroy weak enemy forces or seize high ground for the subsequent commitment of the FSE or advance guard. They do not have to avoid contact with the enemy, but normally would not attack an enemy who is stronger or in well-prepared defenses,



NOTE: This diagram shows some, but not all, variants of march security groupings a motorized advance guard battalion could dispatch, depending on the situation. In normal circumstances, not all of these would be present.

1. Combat reconnaissance patrol (CRP)--usually a reinforced platoon. A battalion may send out as many as three CRPs to reconnoiter flanks and alternate routes, as well as the primary route.
2. Forward patrol--a squad or platoon that provides march security ahead of the forward security element.
3. Forward security element (FSE)--a reinforced platoon or company that provides march security ahead of the advance guard main body.
4. Patrol squad--a single squad, mounted or dismounted, that either conducts reconnaissance or provides march security for the unit which dispatched it. In this example, it provides flank security or reconnaissance for the FSE. But the forward patrol could send a patrol squad forward along its route of march for additional security.
5. Flank security element--a platoon that provides march security to the flank of the main body.
6. Rear security element--a platoon that provides march security to the rear of the main body.

Figure 5-10. March security elements in advance guard battalion.

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b. Flank and rear patrols. Battalions employ flank and rear patrols in appropriate tactical situations. Infantry or tank platoons can serve as march security patrols and may include engineer or chemical reconnaissance assets. The smallest form of patrol is the patrol vehicle or patrol squad. These may be sent ahead of platoons or companies operating independently, or even battalions deep in the main body of the division. Scout patrols frequently deploy on the open flanks of such units.

5-6. COMPANY TACTICAL MARCH

In the march, a company may serve as one of the following:

- A forward detachment for a brigade or regiment.
- A forward security element for a battalion or brigade or regiment.
- A flank or rear security element for a brigade or regiment.
- Part of the battalion main body.

In a march security role, the company march formation consists of a main body column and its own security patrols. As part of the battalion main body. it consists of a single column.

If a tank platoon reinforces an infantry company. the entire platoon marches at the head of the company column. A tank company allocated an infantry platoon may use it as a forward patrol, if the tactical situation requires one. If not, it can split the infantry platoon among the tank platoons, and individual vehicles follow the tanks of their assigned platoon.

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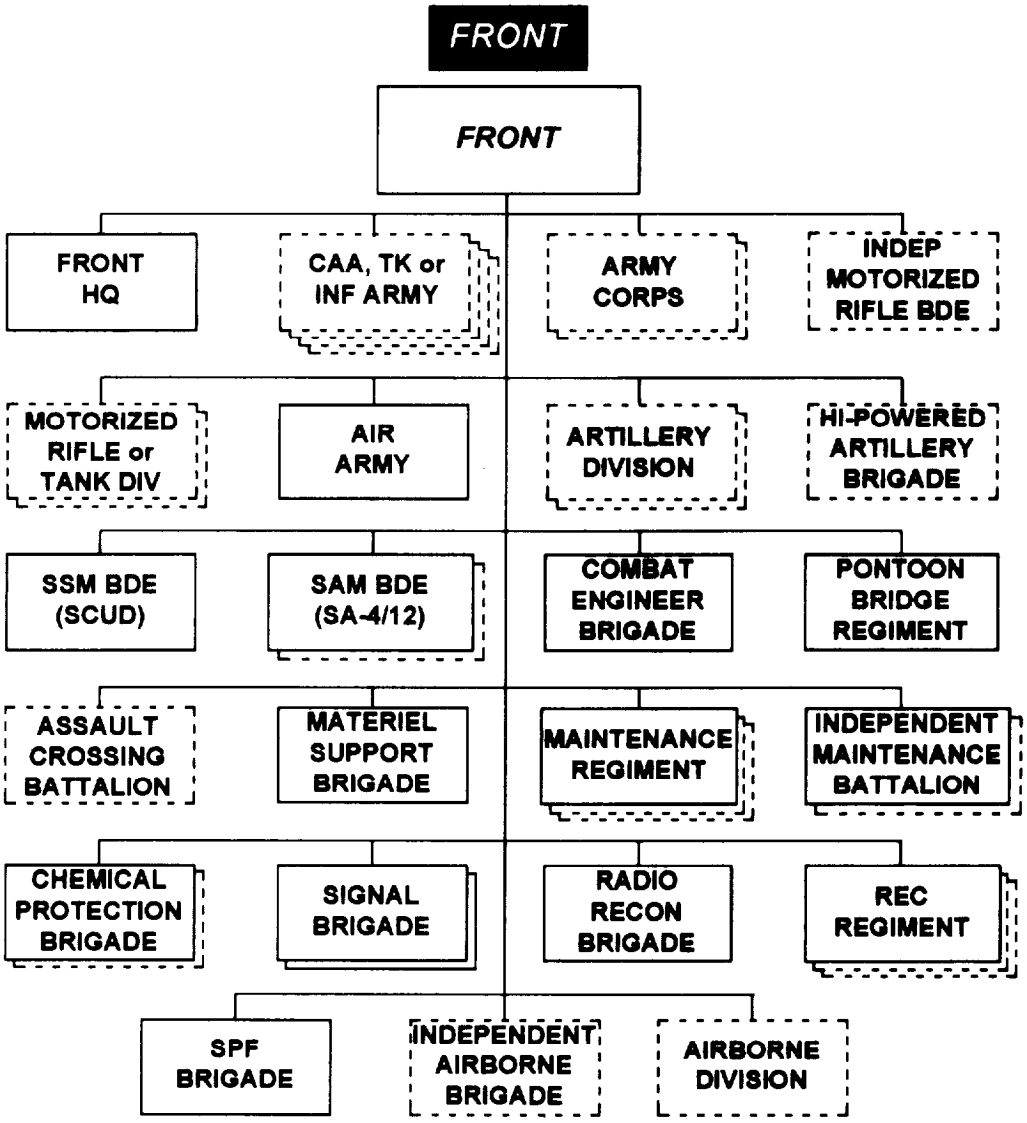

NOTES:

1. There is no fixed organization for a front. The organizations shown above represent those elements found in most of the military districts, which could become fronts in wartime. Dashed lines indicate those elements which may not be present, or at least not in the numbers found in some fronts.
2. A typical front would contain a varying number of armies. However, some fronts might only have the smaller army corps organizations. Some might comprise a mixture of armies and army corps. Some might also include independent motorized rifle brigades or motorized rifle/tank divisions which are not part of an army or army corps.
3. Airborne forces are not organic to a front. However, higher command may allocate such forces in a brigade or division size to support a front in a given operation.
4. Higher command may also allocate a front one or more artillery divisions and/or a high-powered artillery brigade.

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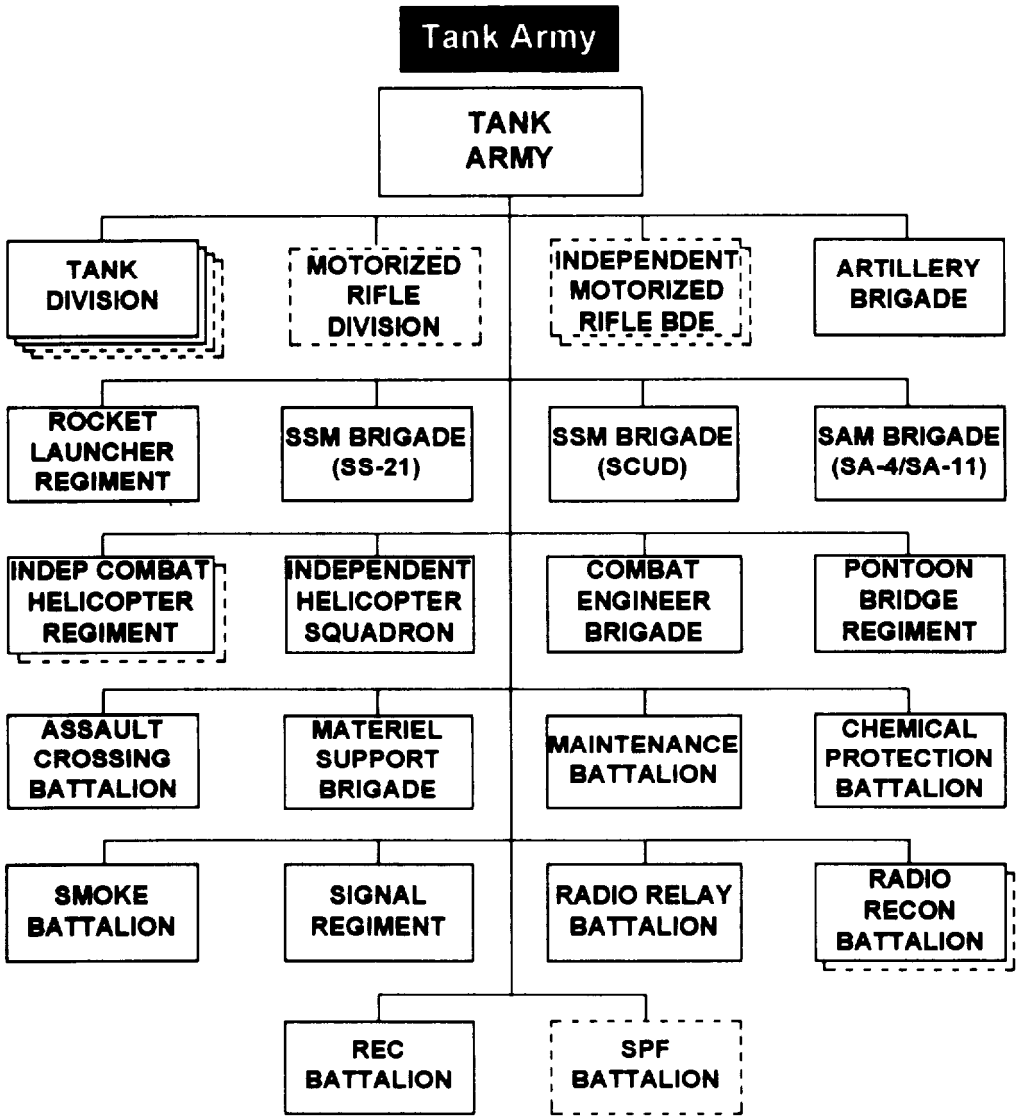

NOTE: A typical tank army has three to five divisions, with four being the most common. These normally include at least two TD and no more than one MRD.

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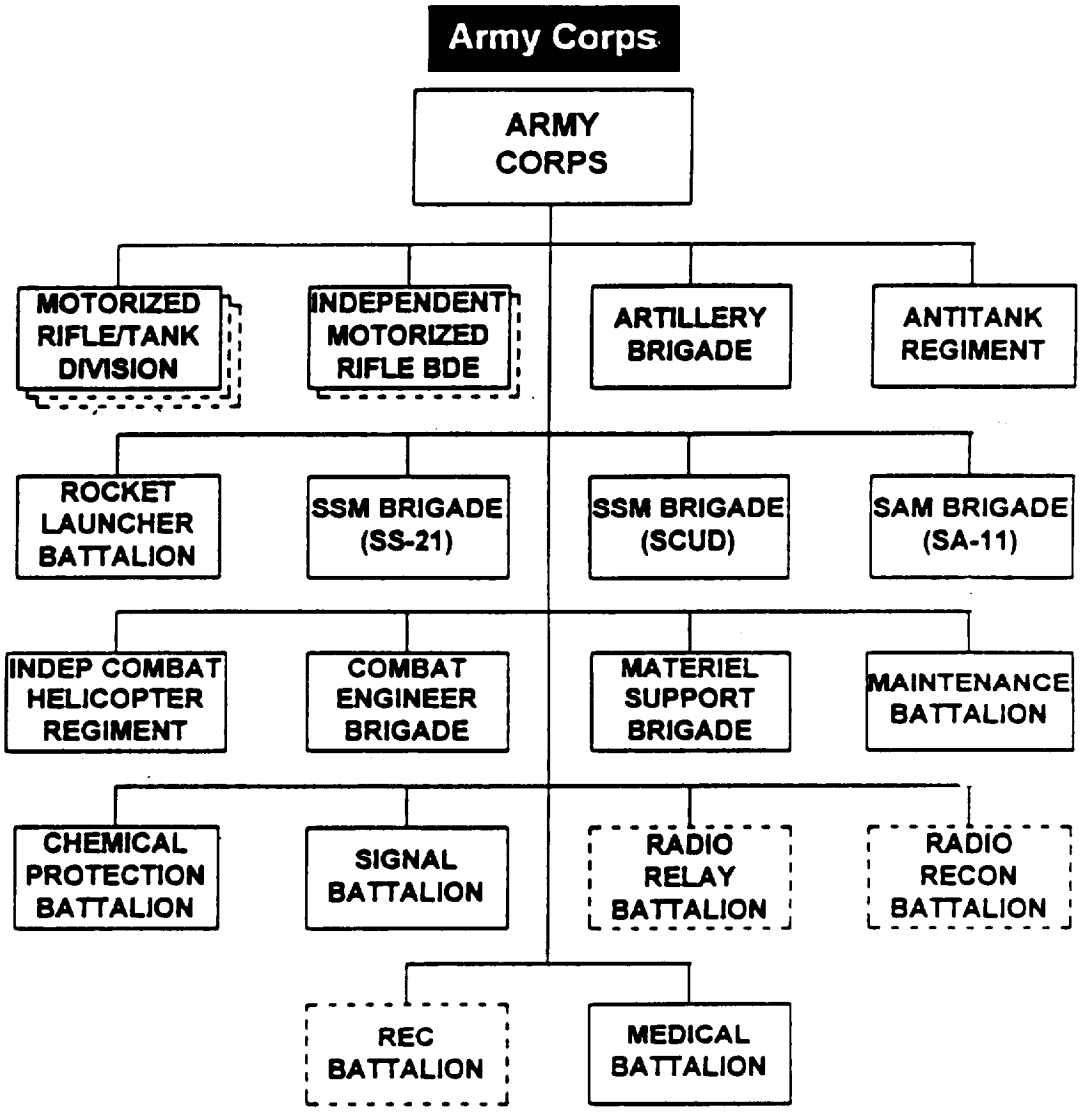

NOTES:

1. A typical army corps has one or two divisions and perhaps one or two IMRBs. The Divisions are most likely to be MRDs.
2. It is also possible that some army corps could consist of IMRBs rather than divisions. In this case there could be more than two IMRBs.

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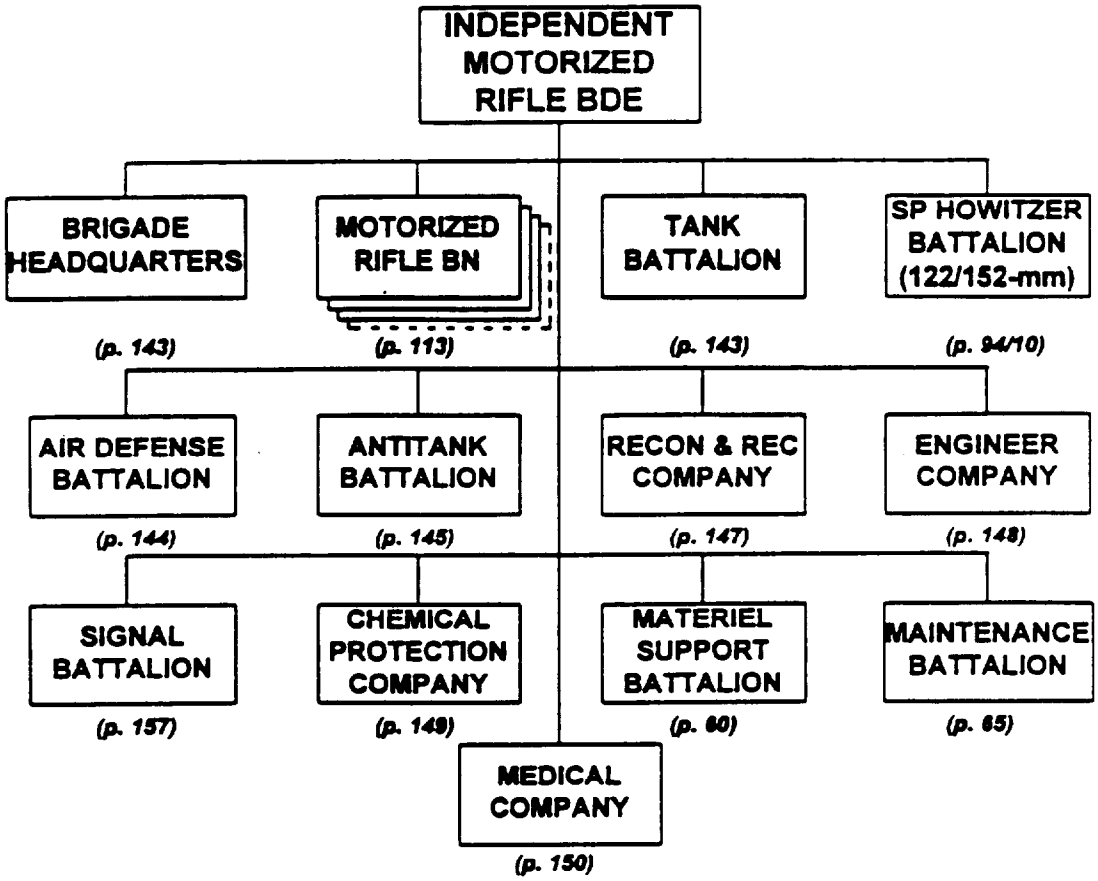
Independent Motorized Rifle Brigade, Army Corps or Army or *Front*



NOTES:

1. An independent motorized rifle brigade most likely has four MRBs and one 51-tank TB. However, the mix might be three MRBs and two 31-tank TBs. The MRBs are most likely BMP-equipped (see p. 113), although there may be some BTR-equipped battalions (see p. 127).
2. When there is a single SP howitzer battalion, it may be either 122-mm or 152-mm, with 152-mm most likely. When there are two battalions, there may be one 122-mm and one 152-mm or, more likely, both 152-mm.

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INDEPENDENT MOTORIZED RIFLE BRIGADE														
Principal Items of Equipment	*Brigade HQ*	*Motorized Rifle Bn (BMP) (4x)*	*Tank Bn*	*SP Howitzer Bn (2x)*	*Air Defense Bn*	*Antitank Bn*	*Recon & REC Co*	*Engineer Co*	*Signal Bn*	*Chem Protection Co*	*Material Support Bn*	*Maintenance Bn*	*Medical Co*	*TOTAL*
ARMORED VEHICLES														
Medium Tank, T-64K/72K/80K			1											1
Medium Tank, T-64/72/80			50											50
ACV, BMP-1K/2K/3K		4	1											5
AICV, BMP-1/2/3		164					4							168
AICV, BMP-2					6									6
ACV, BRM-1K w/ TALL MIKE		4					3							7
ACV, BTR-60PBK/70K/80K	1													1
APC, BTR-60/70/80								3						3
ACV, BTR (R-145BM)		8	1			5			8					22
APC, BTR-60PA (FAC)	1													1
ASC, BRDM-2							4							4
Chem Recon Vehicle, BRDM-2RKh/RKhM										4				4
Mobile Recon Post, PRP-3/4				2										2
Prime Mover, MT-LBT						14								14
ACRV, 1V13/1V13M/1V22				6										6
ACRV, 1V14/1V14M/1V23				6										6
ACRV, 1V15/1V15M/1V24				2										2
ACRV, 1V16/1V16M/1V25				2										2
ACV, PPRU (DOG EAR)					2									2
ACV, BTR-60 (PU-12)					4									4
Armored Recovery Vehicle												5		5
WEAPONS														
30-mm Auto Grenade Launcher, AGS-17		24												24
120-mm Mortar, M1943/2S12 or 82-mm Automatic Mortar, 2B9		24												24
152-mm SP Howitzer, 2S3 or 2S19				36										36
100/125mm AT Gun, MT-12/2A45M						12								12
ATGM Manpack, AT-4/SPIGOT		24												24
ATGM Vehicle, 9P148 w/ AT-5/SPANDREL						12								12
30-mm SPAA System, 2S6					6									6
SAM, SA-13/GOPHER					6									6
SAM, SA-15/GAUNTLET					8									8
SAM, SA-16/18	3	36			24									63
ENGINEER EQUIPMENT														
Bridge, Tank-Launched								2						2
Bridge, Truck-Launched								4						4
Tracked Amphibian, K-61/PTS												1		1
Minelayer, GMZ								3						3
Mineclearing Plow								15						15
Mine Roller-Plow								5						5
Mine Detector, DIM								1						1
Armored Engineer Tractor, IMR								1						1
Ditching Machine, BTM/MDK								1						1
Ditching Machine, PZM/TMK								3						3
Dozer								1						1
Truck, Water Purification								1						1

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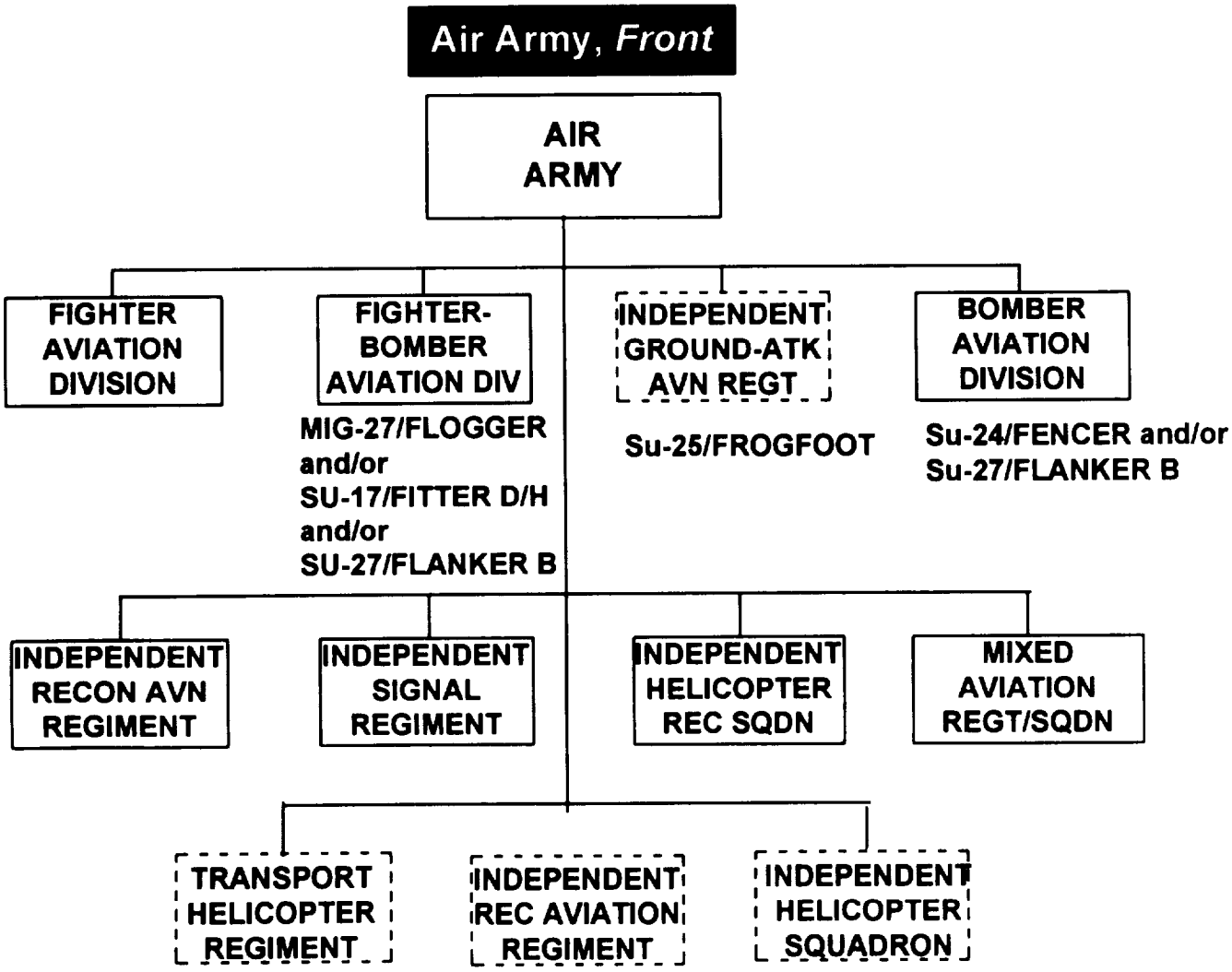

NOTE: An air army has no fixed organization and may tailor its structure to meet specific needs of the ground forces within the supported front. The numbers of aircraft can vary greatly, even down to the squadron level.

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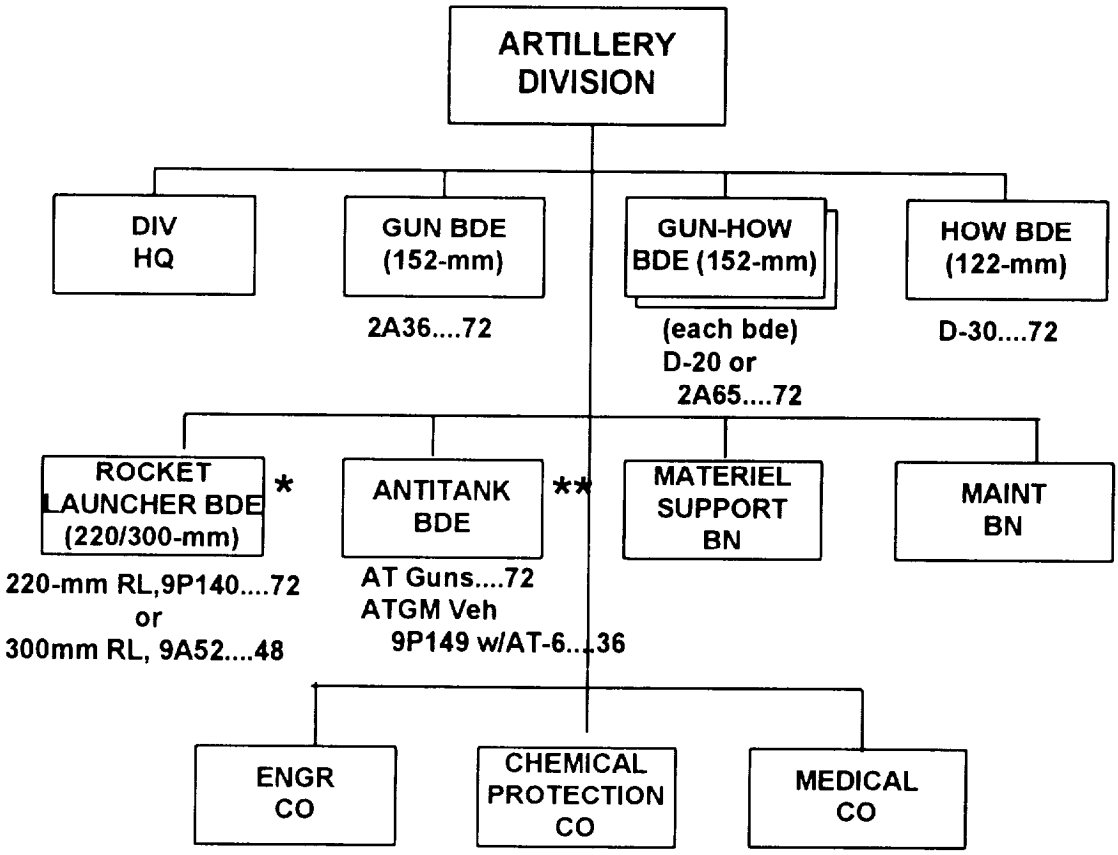
Artillery Division, *Front*



NOTES:

* The 220-mm rocket launcher brigade normally consists of four battalions, each with 18 9P140 rocket launchers (previously known as BM-22). However, the 300-mm rocket launcher brigade has only 48 of the 9A52 launchers (four battalions of 12).

** The antitank brigade has four antitank battalions like those found at army level (each with 18 antitank guns and 9 ATGM launcher vehicles (9P149).

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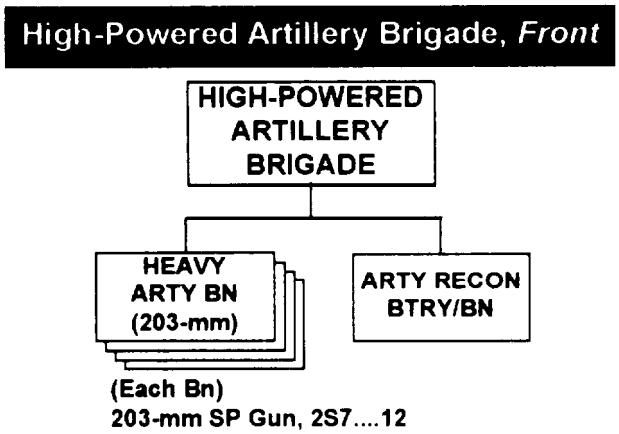

NOTE: This nuclear-capable brigade is not organic to a front. However, a higher command may allocate a high-powered artillery brigade to a front. In some high-powered artillery brigades, two of the battalions may be equipped with the 240-mm SP Mortar 2S4, rather than the 2S7.

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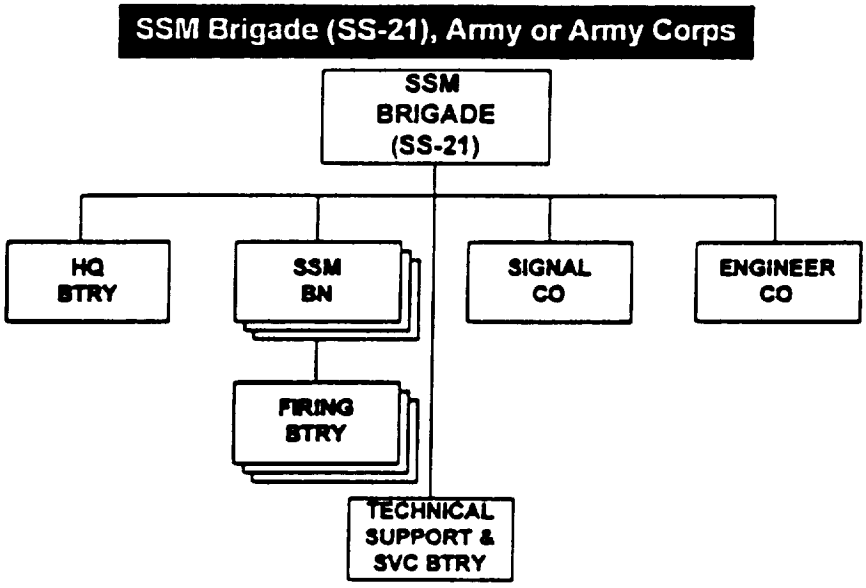
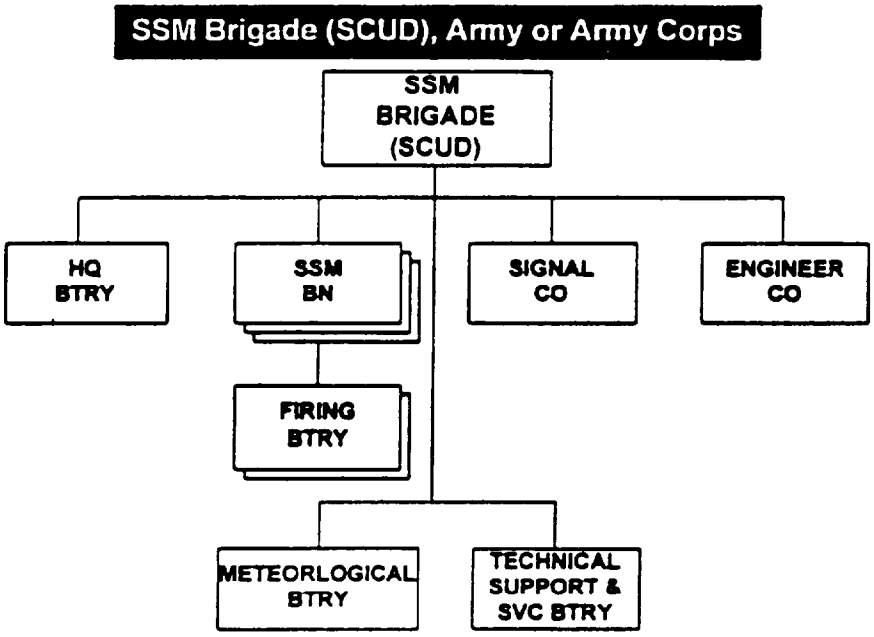


PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
SSM, SS-21/SCARAB	18



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total	Equipment	Total
SSM, SS-1c/SCUD B TEL	12	Radar, Meteorological, END TRAY	3

NOTE: An SSM battalion may consist of either two or three firing batteries; therefore, a battalion may have 4 or 6 TELs, and a brigade may have 12 TELs (at army or army corps level) or 18 TELs (at *front* level). There is at least one reload per TEL.

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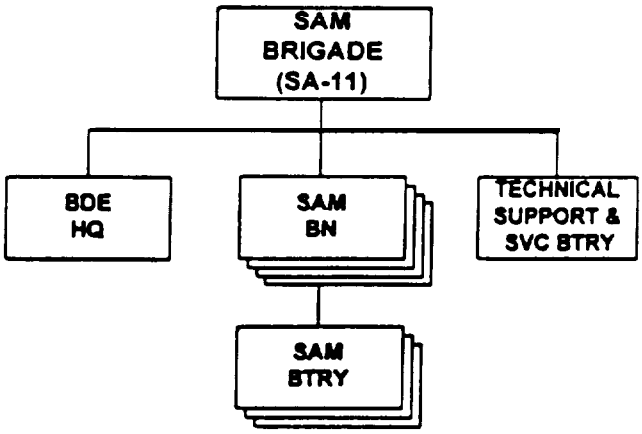
SAM Brigade (SA-11), Army or Army Corps



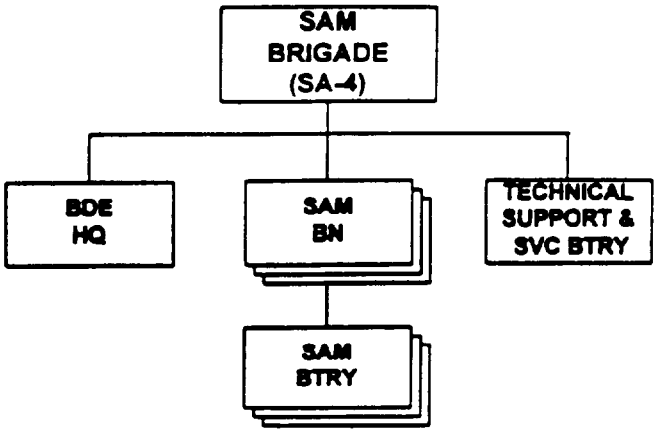
PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
SAM, SA-11/GADFLY TELAR*	24
Radar, Target Acquisition, TUBE ARM or SNOW DRIFT	4
SA-11 Missile Transloader (TELAR Chassis).	12

NOTE: Some armies may still have SAM brigades equipped with the older SA-4 system. (See p. 168). However, the SA-11 is standard for armies and army corps.

FOOTNOTE: * This system includes the FIRE DOME target engagement radar.

SAM Brigade (SA-4), Army or Army Corps



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
SAM, SA-4/GANEF TEL	27

Equipment	Total
Radars:	
Fire Control, PAT HAND	9
Aerial Surveillane/Target Acquisition., LONG TRACK	5
Height Finding, THIN SKIN	1

NOTE: The SA-11 is replacing the SA-4 in my-level SAM brigades, but under a different organization (see p. 167). The SA-12a/GLADIATOR and the SA-12b/GIANT are replacing the SA-4 in *front* -level SAM units, but under an organization different form that of the SA-4 or the SA-11 (seep. 197).

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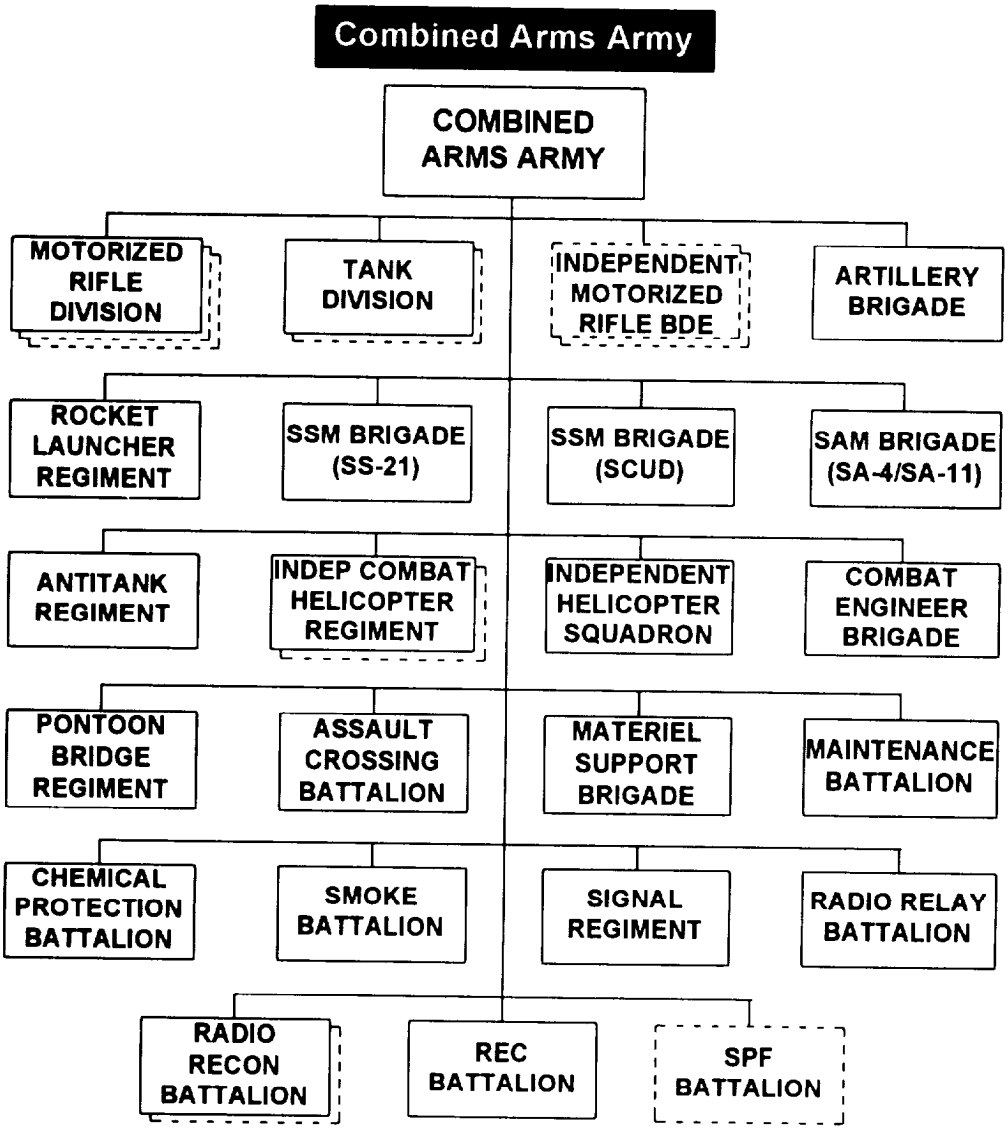

NOTE: A typical combined arms army has three or four divisions, with four being the *most* common. These normally include at least two MRDs and one TD, with a possible fourth division of either type.

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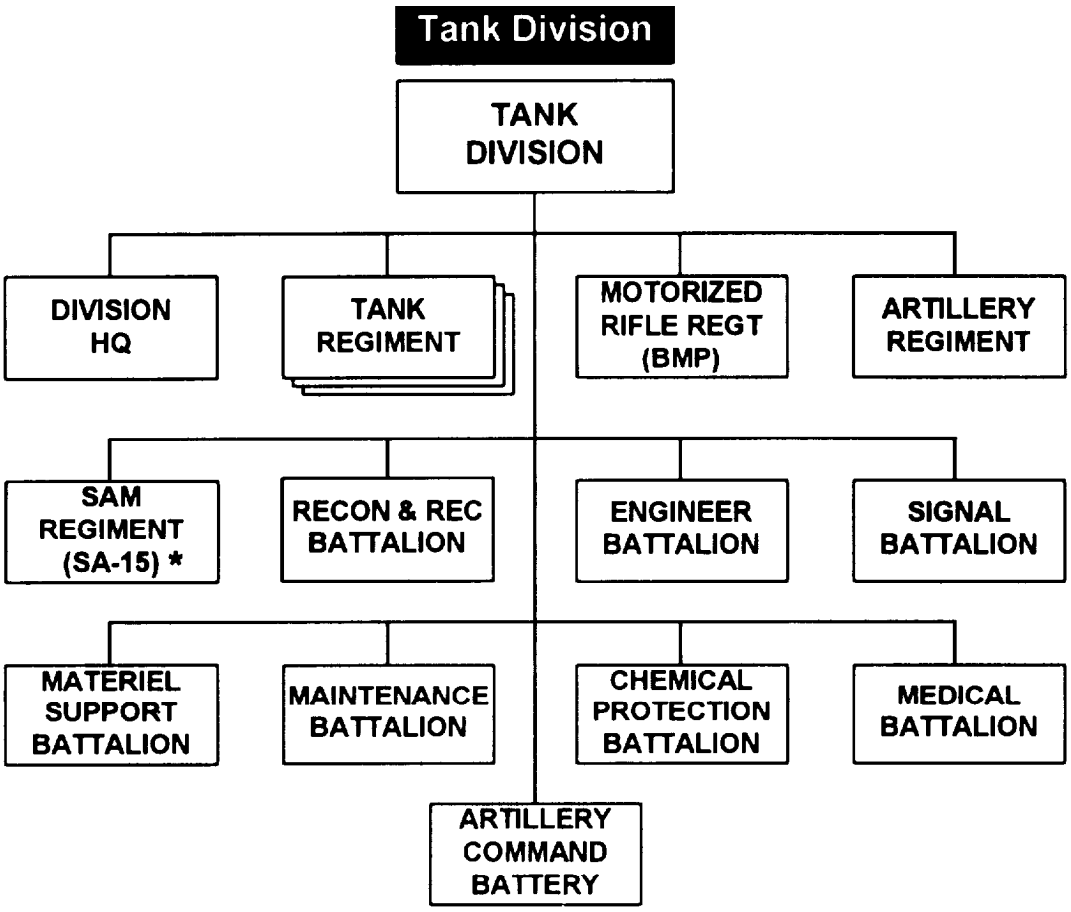

*Instead of the SA-15 SAM regiment, the TD may have a SAM regiment equipped with the SA-6 or SA-8.

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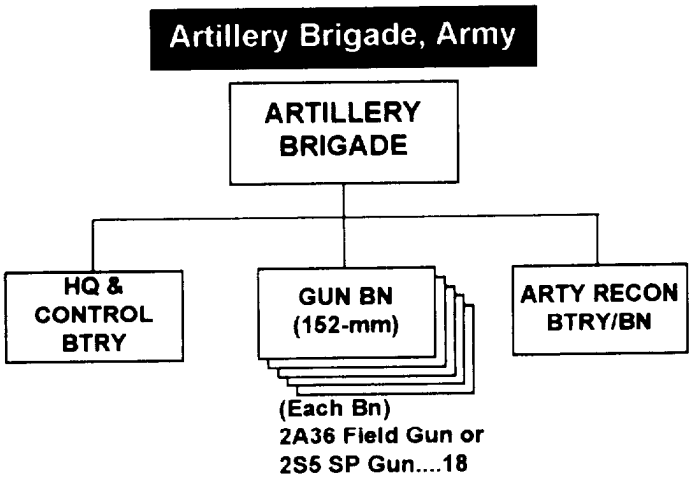

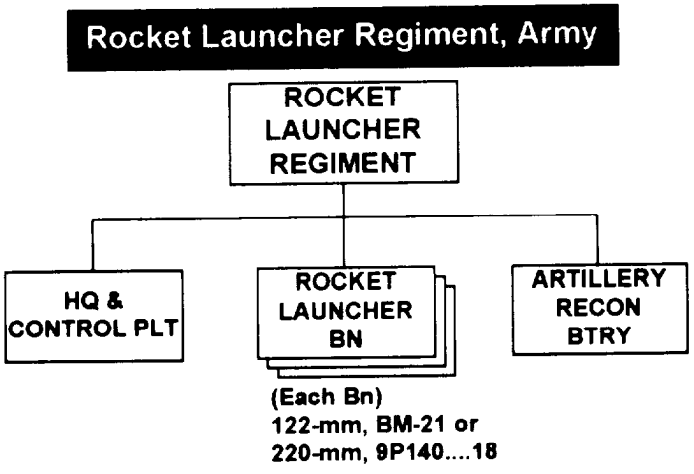

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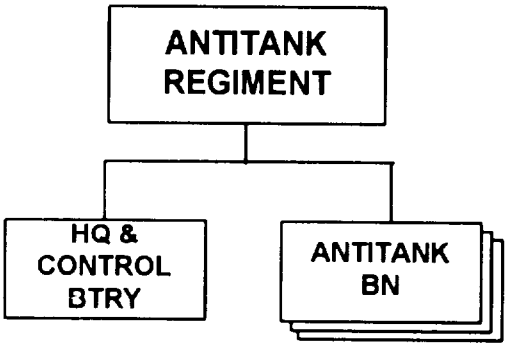
Antitank Regiment, Army

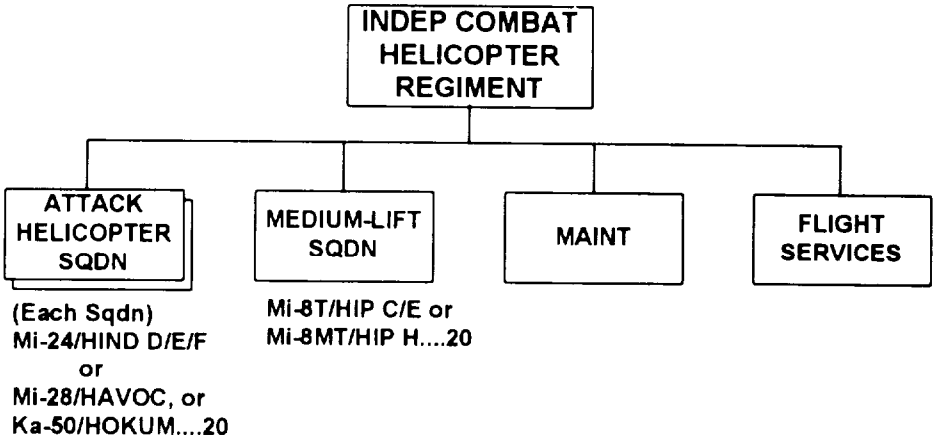


PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total	Equipment	Total
125/100-mm Antitank Gun, 2A 45M/MT-12	54		
Prime Mover, MT-LBT	63		
ATGM Vehicle, 9P149 w/ AT-6/SPIRAL	27		

NOTE: Each antitank battalion has 18 antitank guns (3 batteries of 6) and 9 ATGM launchers (one battery).

Independent Combat Helicopter Regiment, Army



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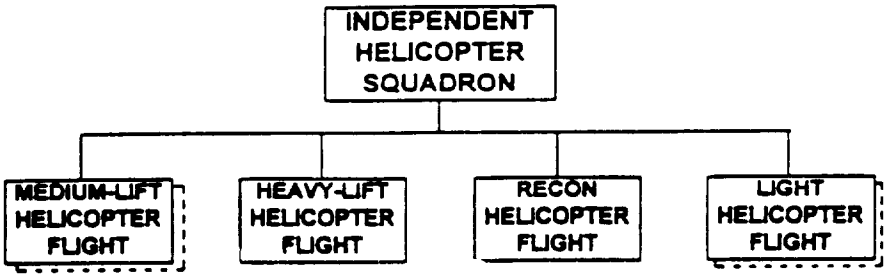
Independent Helicopter Squadron, Army or Army Corps



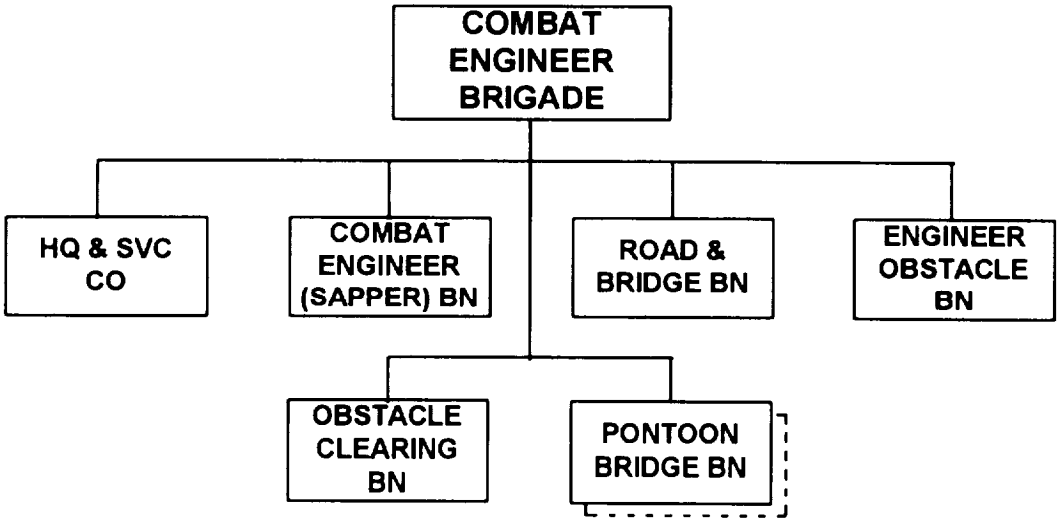
PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Medium Helicopter, Mi-8T/HIP C/E or Mi-8MT(Mi- 17)/HIP H	3-6
Heavy-Lift Helicopter, Mi-6A/HOOK or Mi-26/HALO A	1-2
NBC-Sampling Helicopter, Mi-24R/HIND G1	2
Photo-Recon Helicopter, Mi-24/HIND G2	2
Light Helicopter, Mi-2/HOPLITE	6-12

NOTES:

1. Some independent helicopter squadrons may also have two or three Mi-8SMV/HIP K and two or three Mi-8PPA/HIP J or Mi-8MT(Mi-17)/HIP H ECM (jamming) helicopters. Some squadrons may also have one or two Mi-8VKP airborne command post helicopters.
2. Some armies may have an independent mixed aviation squadron with helicopter assets similar to those of an independent helicopter squadron (less the reconnaissance and ECM helicopters), plus 12 to 24 light-to-medium fixed-wing transport aircraft.

Combat Engineer Brigade, Army or *Front*



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
BRDM-21U	4
BTR-60/70/80	6-13
Truck, Utility	19
Truck, Medium	82
Truck, Heavy	25
Armored Recovery Vehicle	6
Bridge, Truck-Launched	20
Bridge, Tank-Launched	12-14
Bridge, PMP Center	32
Bridge, PMP Ramp	4

Equipment	Total
Bridge, PMP Service	2
Tracked Ferry, GSP/PMM-2	24
Tracked Amphibian, K-61/PTS	28
Ditching Machine, BTM/MDK	12
Dozer	15
Powerboat	15
Minelayer, PMR/GMZ	13
Armored Engineer Tractor, IMR	6
Mineclearer, MTK/MTK-2	8-13
Engineer Recon Vehicle, IRM	8-15

NOTES:

1. Structure and number/type of equipment may vary. Additional battalions may greatly expand the brigade. Engineer brigades can have twice as many battalions and twice as much equipment as shown above.
2. In addition to the battalions shown above, the brigade could include a second pontoon bridge battalion, an engineer construction battalion, a fabrication battalion, and a water supply battalion.

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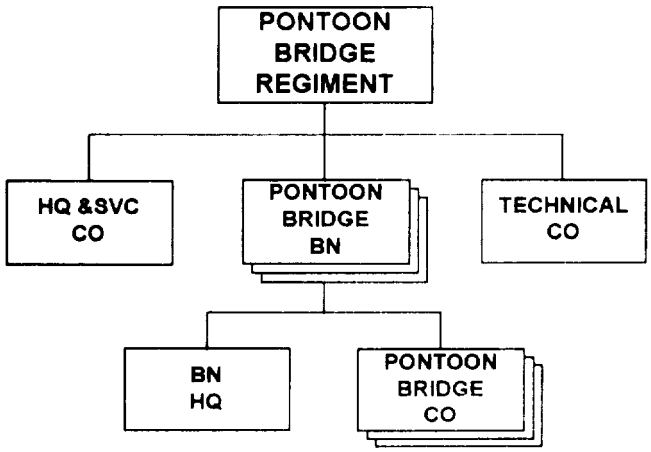
Pontoon Bridge Regiment, Army or *Front*

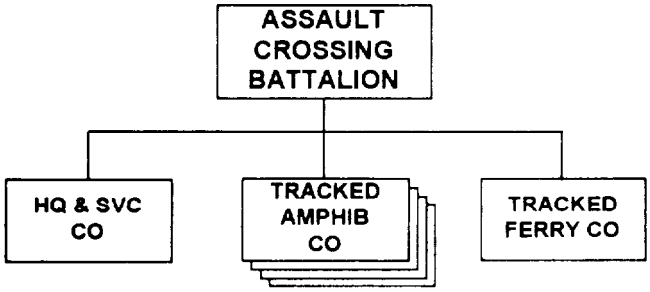


PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
BRDM-2U..	10
Truck, Utility	5
Truck, Medium	60
Truck, Heavy	5
Armored Recovery Vehicle	3
Bridge, Truck-Launched	4
Bridge, PMP Center..	96

Equipment	Total
Bridge, PMP Ramp	12
Bridge, PMP Service..	6
Tracked Amphibian, K-61/PTS..	8
Ditching Machine, BTM/MDK..	3
Dozer	7
Powerboat..	36
Engineer Recon Vehicle, IRM	1-8

Assault Crossing Battalion, Army or *Front*



PRINCIPAL, ITEMS OF EQUIPMENT

Equipment	Total
BRDM-2U	4
Truck, Utility	2
Truck, Medium	10
Armored Engineer Tractor, IMR	3
Armored Recovery Vehicle	3

Equipment	Total
Engineer Recon Vehicle, IKM	2-3
Tracked Ferry, GSP/PMM-2	40
Tracked Amphihian, K-61/PTS..	36
Ditching Machine, BTM/MDK	3
Dozer	3

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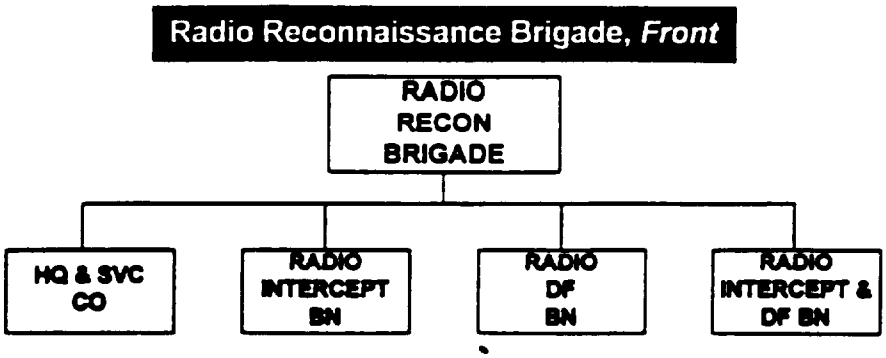
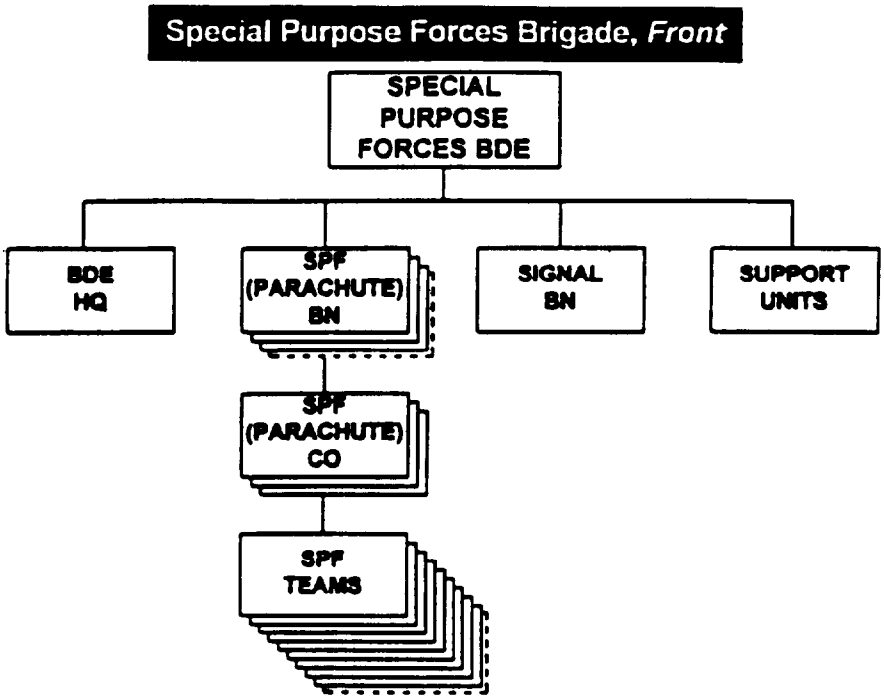


NOTE: This brigade is also known as a radio and radar intercept and direction finding brigade or as a radiotechnical reconnaissance brigade.



NOTES:

1. Brigade structure is not fixed. This chart represents what may be the organziation of a typical brigade.
2. A brigade may deploy about 80 to 100 SPF teams.

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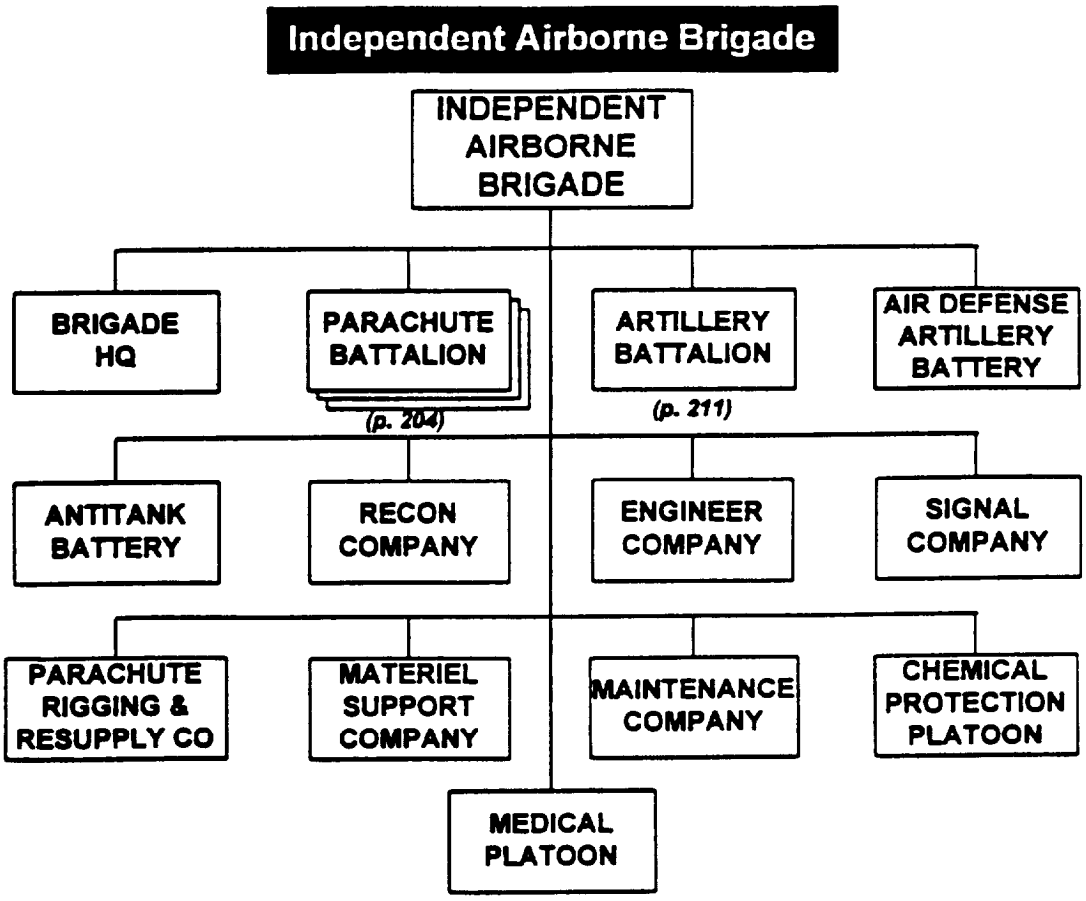
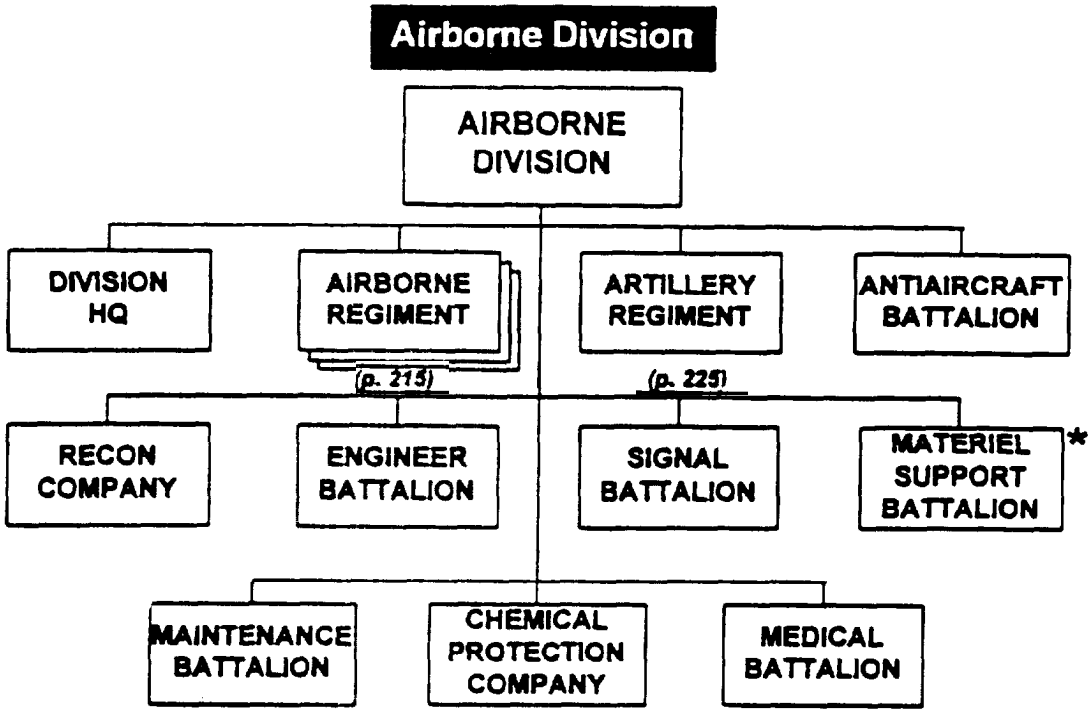


NOTE: Air transport support units required for deployment may be allocated to the brigade from military transport aviation assets. Either transport aircraft or heavy-lift helicopters could air-land the brigade or to insert the parachute battalions by parachute.

INDEPENDENT AIRBORNE BRIGADE														
Principal Items of Equipment	*Brigade HQ*	*Parachute Bn (3X)*	*Artillery Bn*	*Air Defense Arty Bty*	*Antitank Bty*	*Recon Co*	*Engineer Co*	*Signal Co*	*Parachute Rig & Resupply Co*	*Material Support Co*	*Maintenance Co*	*Chem Protection Plt*	*Medical Plt*	*TOTAL*
WEAPONS														
30-mm Auto Grenade Launcher, AGS-17		18												18
82-mm Mortar		24												24
122-mm Howitzer, D-30			18											18
73-mm Recoilless Gun, SPG-9		9			9									18
ATGM Manpack, AT-4/SPIGOT		18			12									30
ATGM Manpack, AT-7/SAXHORN		27												27
23-mm AA Gun, ZU-23				6										6
SAM, SA-16/18	3	27		12										42
TRUCKS														
ACRV, 1V110 (Battery FDC)			3											3
ACRV, 1V111 (Battalion FDC)			1											1
Truck, Utility	8	30	1	1	1	10	1	8		1				61
Truck, Light		75	34	10	12		7		30	38			2	208
Truck, Medium			9						31	8				48
Truck, Chem Recon, UAZ-69RKh												4		4
Truck, POL (4,000-L)		6	2						12					20
Van, Maintenance		3	1								9			13
Van, Signal		3	4					3						10
Ambulance		3	1										2	6
TRAILERS														
Trailer, Cargo, 1-Axle	2	6								6				14
Trailer, Cargo, 2-Axle			9											9
Trailer, Generator		3	2											5
Trailer, Kitchen		9	3				1	1	2	4	1		1	22
Trailer, POL (900-L)		3	2											5
Trailer, Water (900-L)		6	1				1	1	1	1	1		1	13
RADARS														
Radar, BS, Man-Portable, PSNR-1					1	3								4
RADIOS														
VHF, Manpack, Low-Power	2	42	14	1	4	1	1	10	1		1	4	2	83
VHF, Portable, Low-Power		69			19	4								92
VHF, Portable, Very-Low-Power		93	23	8		12								136
VHF, Vehicle Mount, Medium-Power					13									13
HF, Manpack, Low-Power						1						1		2
HF/VHF, Vehicle Mount, Medium-Power	8	3	4					3						18
HF/VHF, Vehicle Mount, High-Power								1						1
Ground-to-Air Set	2	6		1				1						10
Warning Receiver	1	3	2	1		1		1						9
MISCELLANEOUS														
Rangefinder					1									1
Rangefinder, Laser, SAGE GLOSS			4											4
Rangefinder, Stereoscopic		3												3
Periscopic Aiming Circle		3												3
Collimator (Aiming Stakes)		24												24
Motorcycle						3								3



FOOTNOTE: * Also known as the parachute rigging and materiel support battalion.

AIRBORNE DIVISION												
Principal Items of Equipment	*Division HQ*	*Airborne Regt (BMD) (3x)*	*Arty Regt*	*Antiaircraft Bn*	*Recon Co*	*Engineer Bn*	*Signal Bn*	*Material Support Bn*	*Maintenance Bn*	*Chem Protection Co*	*Medical Bn*	*TOTAL*
ARMORED VEHICLES												
AAICV, BMD-1/2/3	9	303			6							318
APC, BTR-D	12	69	5		6	11	3		1			107
APC, BTR-RD		18	18									36
APC, BTR-ZD	1	39	3	4								47
ACV, BMD-1KSh	2	24	2	1	1	1	12					43
ASC, BRDM-2		12			6							18
ACRV, 1V119	1	30	10									41
Armored Recovery Vehicle						3			1			4
WEAPONS												
30-mm Auto Grenade Launcher, AGS-17		54										54
120-mm Combination Gun, 2S9		54	18									72
122-mm Howitzer, D-30			6									6
ATGM Manpack, AT-4/SPIGOT		36	36									72
23-mm AA Gun, ZU-23		18		18								36
SAM, SA-16/18	3	117	9	12								141
TRUCKS												
ACRV, 1V110 (Bty FDC)			1									1
Truck, Utility	16	33	9	1		10	7	10	6	6	4	102
Truck, Light	6	249	73	25		20	2	60			1	436
Truck, Medium		207	17				3	50	50		10	113
Truck, Decon, DDA-53/66										3		3
Truck, Decon, DDP/DDA										1	1	2
Truck, Chem Recon, UAZ-69RKh		12	1							7		20
Truck, POL (4,000-L)		42	12	1		1	1	15	4	1	1	36
Van	8										1	9
Van, Hospital											5	5
Van, Maintenance		42	7						18			67
Van, Signal		27	7				9					43
Ambulance	1	18	2	1		1		1			10	34
TRAILERS												
Trailer, Cargo, 1-Axle	4	66	35					20			3	128
Trailer, Cargo, 2-Axle			5						20			25
Trailer, Generator	2	15	5				3				2	27
Trailer, Kitchen	2	69	10			3	1	1	1		2	89
Trailer, POL (900/1,200-L)		24	11									35
Trailer, Water (900/1,200-L)	1	30	9	2		2	1	1	1	2	3	52
RADARS												
Radar, BS, Man-Portable, PSNR-1		9			4							13
RADIOS												
VHF, Manpack, Low-Power	3	195	50	10	5	8	1	3	2	10	2	289
VHF, Portable, Low-Power		153	1									154
VHF, Portable, Very-Low-Power		48	11									59
VHF, Vehicle Mount, Medium-Power	25	546	52	5	19	12	15					674
HF, Manpack, Low-Power		6			1							7
HF, Vehicle Mount, Medium-Power	10	36	5	1	1		4					57
HF/VHF, Vehicle Mount, Medium-Power		3	5				1				1	10
HF/VHF, Vehicle Mount, High-Power		3	1				1					5
Ground-to-Air Radio Set	2	33	2	1	1		4			1		44
Warning Receiver	1	36	4	1	1	1	1		1	1		47
Radio Relay, VHF/UHF			1				1					1
MISCELLANEOUS												
Rangefinder		3	3									6
Rangefinder, Laser, SAGE GLOSS		12	6									18

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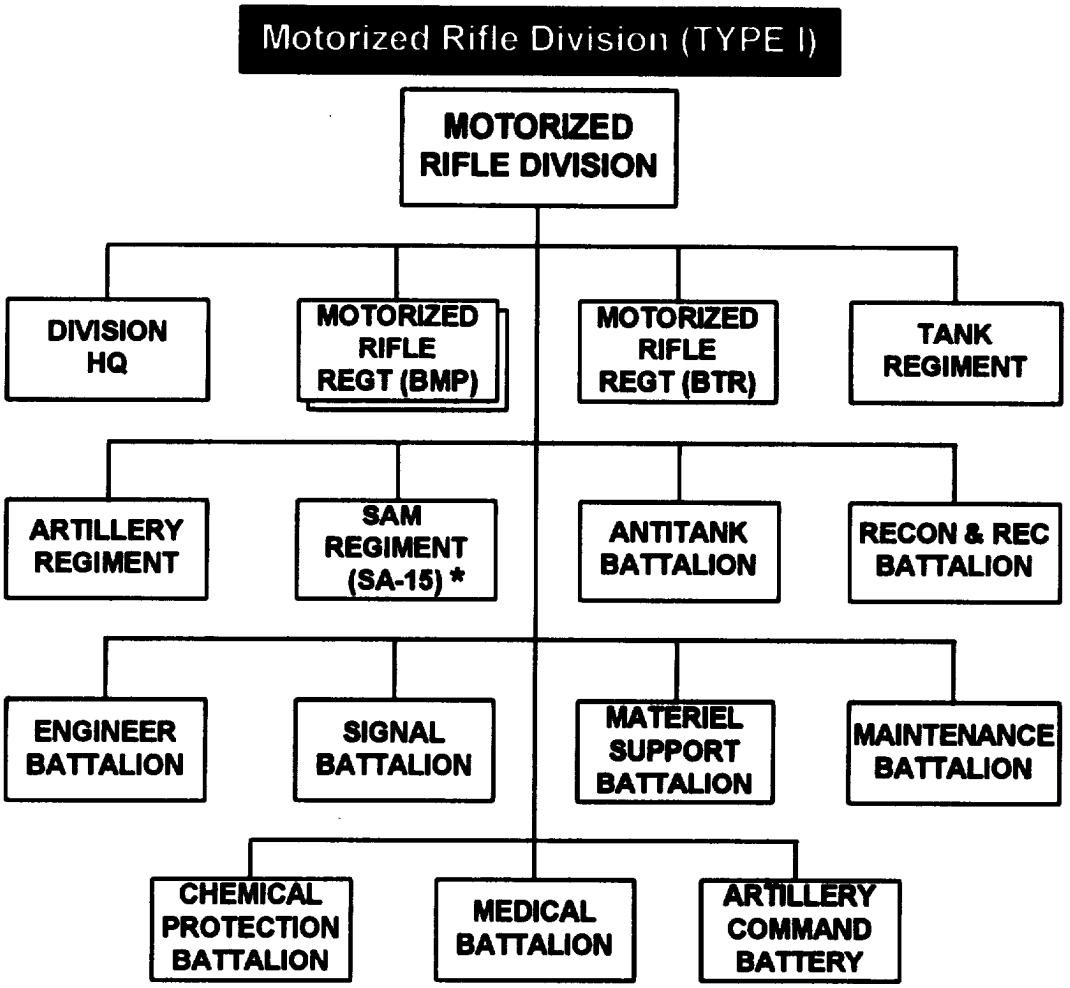
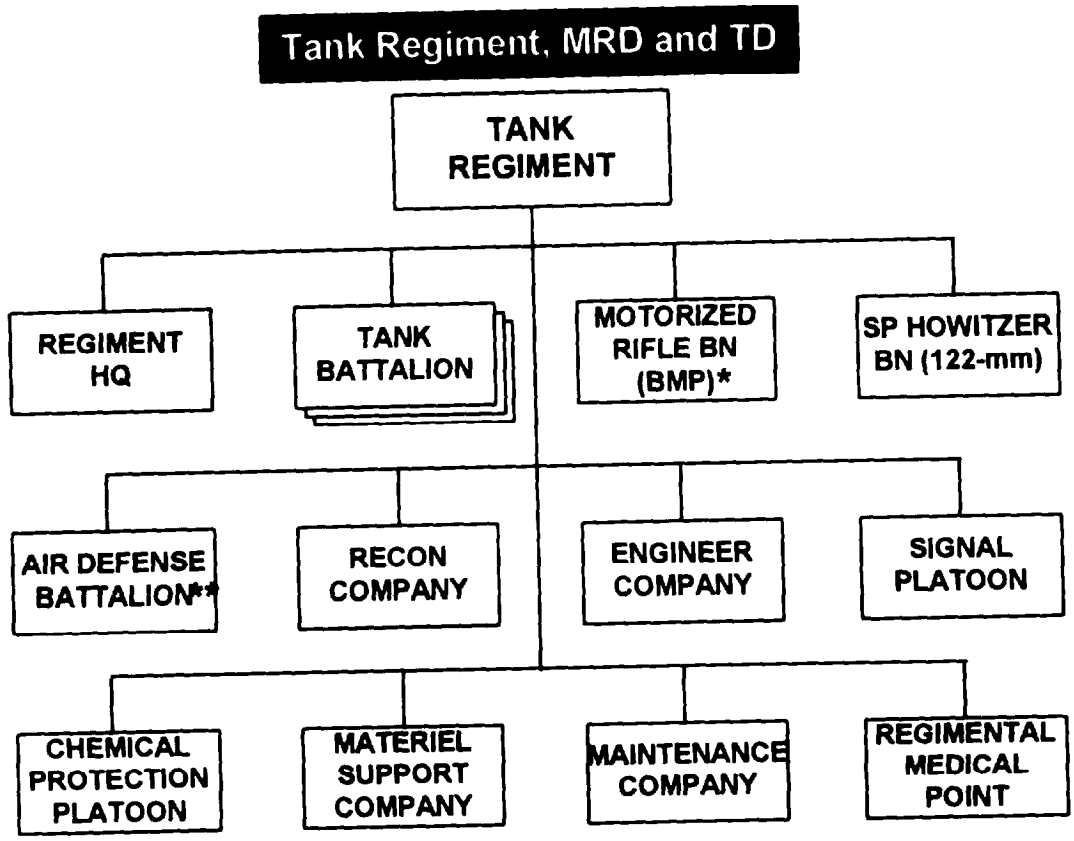


*Instead of the SA-15 SAM regiment, the MRD may have a SAM regiment equipped with the SA-6 or SA-8.

NOTE: The MRD (Type I) has two MRR (BMP) and one MRR (BTR), while the MRD (Type II) has two MRR (BTR) and one MRR (BMP). Otherwise, the two division types are identical.



NOTES:

* The TR of the MRD does not have a MRB

**Some TRs may still have a single air defense battery equipped with ZSU 23-4, 23-mm SP antiaircraft guns and SA-13/GOPHER SAM systems.

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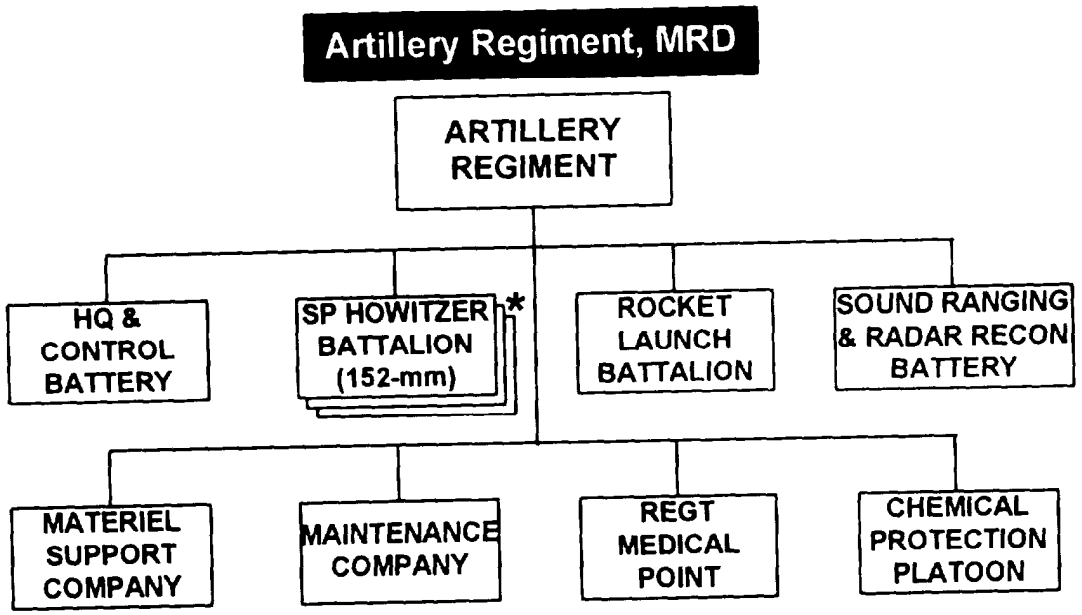
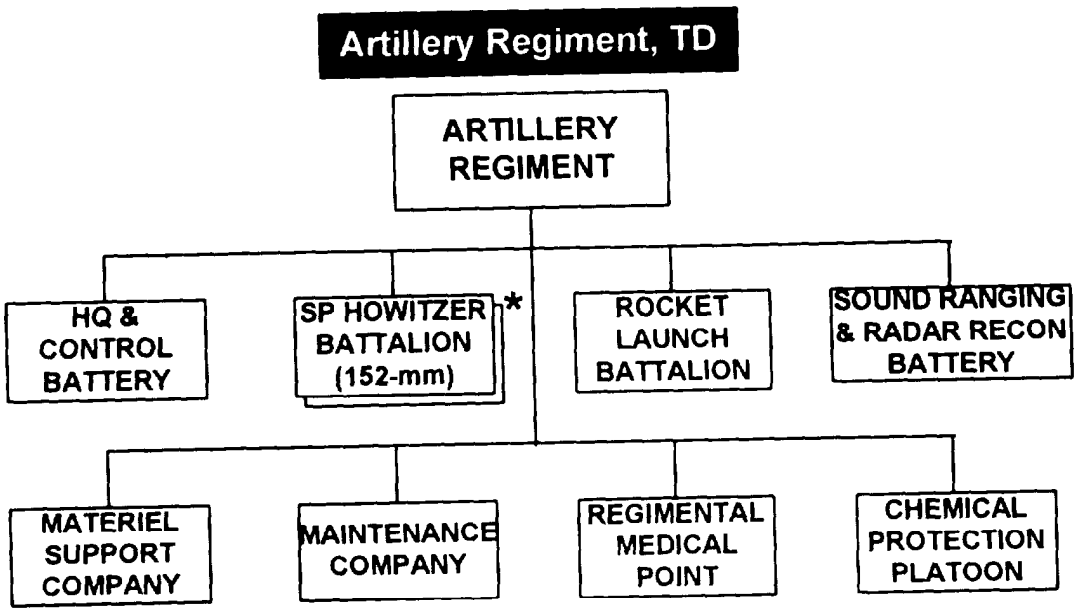
TANK REGIMENT, MRD* and TD													
Principal Items of Equipment	***Regt HQ***	***Tank Bn (3x)***	***[Motorized Rifle Bn (BMP)]****	***SP Howitzer Bn***	***Air Defense Bn***	***Recon Co***	***Engineer Co***	***Signal Co***	***Chem Protection Plt***	***Material Support Co***	***Maintenance Co***	***Regt Medical Point***	***TOTAL***
ARMORED VEHICLES													
Medium Tank, T-64K/72K/80K	1	3											4
Medium Tank, T-64/72/80		90											90
BMP-1K/2K/3K		3	[1]										3[4]
BMP-1/2/3			[41]		6	4							10[51]
BMP-1KSh			[1]					5					5[6]
BRM-1K w/ TALL MIKE			[1]			3							3[4]
BTR-60/70/80	1						1						2
BTR (R-145BM)		3	[2]					3					6[8]
BTR-60PA (FAC)	1												1
BRDM-2						4							4
Chem Recon Vehicle, BRDM-2RKh/RKhM									3				3
Mobile Recon Post, PRP-3/4				1									1
ACRV, 1V13/1V13M/1V22				3									3
ACRV, 1V14/1V14M/1V23				3									3
ACRV, 1V15/1V15M/1V24				1									1
ACRV, 1V16/1V16M/1V25				1									1
ACV, PPRU (DOG EAR)					2								2
ACV, BTR-60 (PU-12)					2								2
Armored Recovery Vehicle											5		5
WEAPONS													
30-mm Auto Grenade Launcher, AGS-17			[6]										[6]
120-mm Mortar, M1943/2S12 or 82-mm Automatic Mortar, 2B9			[6]										[6]
ATGM Manpack, AT-4/SPIGOT			[6]										[6]
122-mm SP Howitzer, 2S1				18									18
30-mm SPAA System, 2S6					6								6
SAM, SA-13/GOPHER					6								6
SAM, SA-16/18	3		9		18								21[30]

*The TR of the MRD does not have a MRB





* The artillery regiment has three SP howitzer battalions in the MRD but only two in the TD.

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ARTILLERY REGIMENT, MRD/TD									
Principal Items of Equipment	*HQ & Control Btry*	*SP Howitzer Bn (152-mm) (3x)/(2x)*	*Rocket Launcher Bn*	*Sound Range & Radar Recon Btry*	*Materiel Support Co*	*Maintenance Co*	*Regt Medical Point*	*Chem Protection Plt*	***TOTAL***
ARMORED VEHICLES									
APC, BTR-60/70/80	1								1
ACV, BTR (R-145BM)	2			1					3
Chemical Recon Vehicle, BRDM-2RKh/RKhM	1							3	4
Mobile Recon Post, PRP-3/4	1	3(2)		1					5(4)
APC, Radar, MT-LB (SNAR-10)				1					1
ACRV, 1V13/1V13M/1V22		9(6)							9(6)
ACRV, 1V14/1V14M/1V23		9(6)							9(6)
ACRV, 1V15/1V15M/1V24		3(2)							3(2)
ACRV, 1V16/1V16M/1V25		3(2)							3(2)
ACRV, 1V18			3						3
ACRV, 1V19			1						1
Armored Recovery Vehicle						1			1
WEAPONS									
152-mm SP Howitzer, 2S3 or 2S19		54(36)							54(36)
122-mm Rocket Launcher, BM-21			18						18
SAM, SA-16/18	3								3
TRUCKS									
ACRV, 1V110 (Battery FDC)			3						3
ACRV, 1V111 (Battalion FDC)			1						1
Truck, Utility	6		1		1	1			9
Truck, Light	2			2	1		1		6
Truck, Medium	1	60(40)	37	3	43	3	2		54(129)
Truck, Decon, ARS-12U/14								3	3
Truck, Decon, DDA-53/66							1	1	2
Truck, POL (4,000/5,200-L)		12(8)	2		8				22(18)
Truck, Water (2,000-L)					3			2	5
Van, Hospital							1		1
Van, Maintenance	1	6(4)	3	4	2	8			24(22)
Van, Signal	2	12(8)	4						22(18)
Van, Survey				1					1
Ambulance		3(2)	1				4		8(7)
TRAILERS									
Trailer, Cargo, 1-Axle				1					1
Trailer, Cargo, 2-Axle	1	51(34)	27		30	3			112(95)
Trailer, Generator	2	6(4)	2	2		2			14(12)
Trailer, Kitchen	1	9(6)	3	1			1		15(12)
Trailer, POL (1,200-L)		12(8)	2		8				22(18)
Trailer, Water (900/1,200-L)	1	3(2)	1	1			1	2	9(8)
RADARS									
Radar, CMCB, ARK-1				1					1
RADIOS									
VHF, Manpack, Low-Power	6	30(20)	18	13	1	1	1		70(60)
VHF, Portable, Low-Power	1								1
VHF, Vehicle Mount, Medium-Power	5	84(60)		4				3	96(72)
HF, Manpack, Low-Power	1							1	2
HF, Vehicle Mount, Medium-Power	5								5
HF/VHF, Vehicle Mount, Medium-Power	3		2						5
HF/VHF, Vehicle Mount, High-Power	1								1
Radio Relay, VHF/UHF	1								1
Warning Receiver	1	6(4)	1	1					9(7)
MISCELLANEOUS									
Rangefinder, Laser, SAGE/GLOSS	1	12(8)		2					15(11)
Sound Ranging Set				1					1

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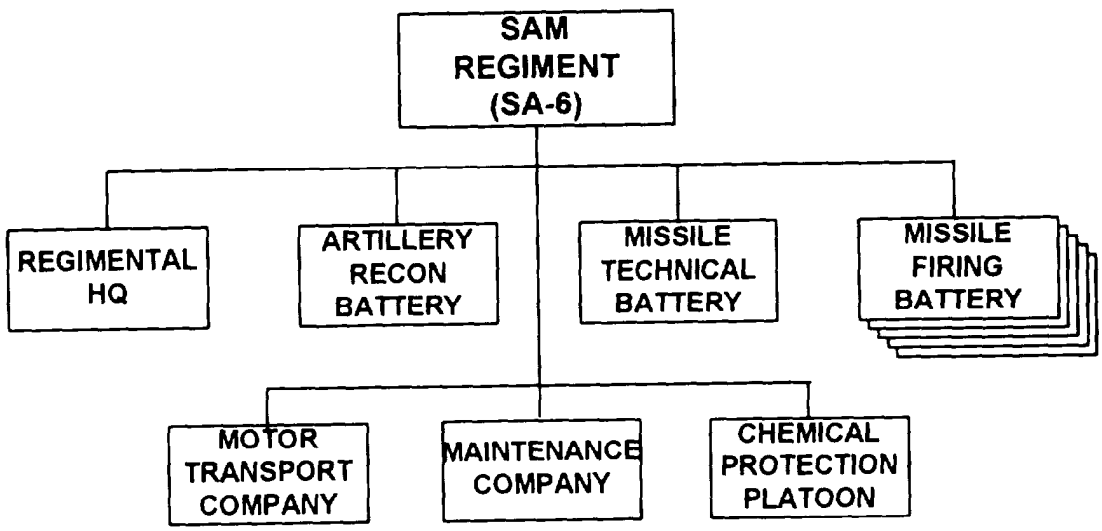
NOTE: MRDs and TDs have one SAM Regt, either SA-6, SA-8, or SA-15.

SAM Regiment (SA-6), MRD and TD



SAM REGIMENT (SA-6), MRD and TD								
Principal Items of Equipment	***Regt HQ***	***Arty Recon Btry***	***Missile Technical Btry***	***Missile Firing Btry (5x)***	***Motor Transport Co***	***Maintenance Co***	***Chem Protection Plt***	***TOTAL***
ARMORED VEHICLES								
BRDM-2U				5				5
Chemical Recon Vehicle, BRDM-2RKh/RKhM							3	3
BTR-60 (PU-12)	1							1
WEAPONS								
SAM, SA-6/GAINFUL TEL				20				20
SAM, SA-16/18	3		3	15				21
TRUCKS & VANS	12	6	20	10	46	15	6	115
RADARS								
Aer. Surv./Tgt Acq, LONGTRACK		2						2
Radar, Fire Control, STRAIGHT FLUSH				5				5
Radar, Height Finding, THIN SKIN		1						1
MISCELLANEOUS								
SA-6 Canister Transporter (Tractor-Trailer)			15					15
SA-6 Missile Transloader (Truck)			5	10				15

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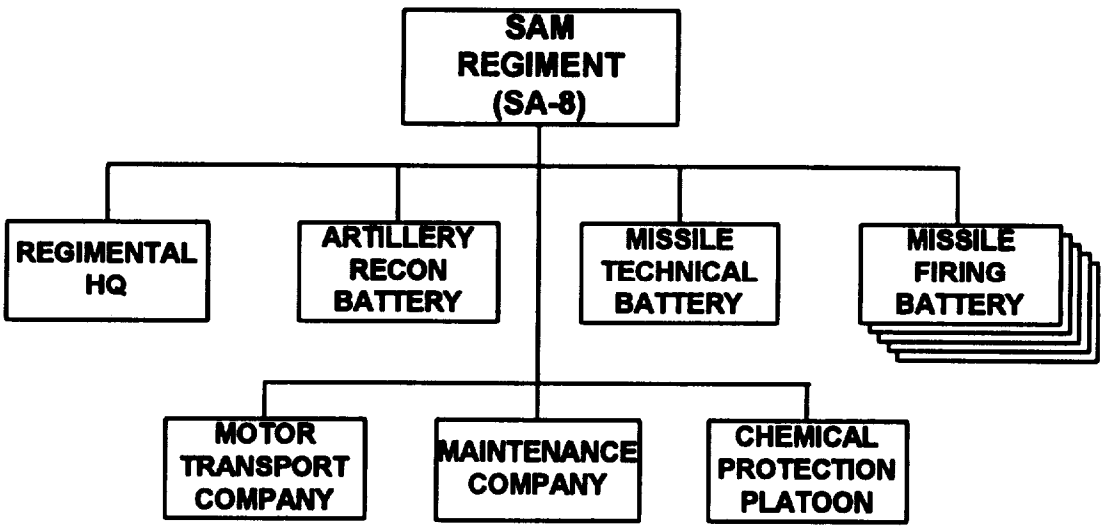
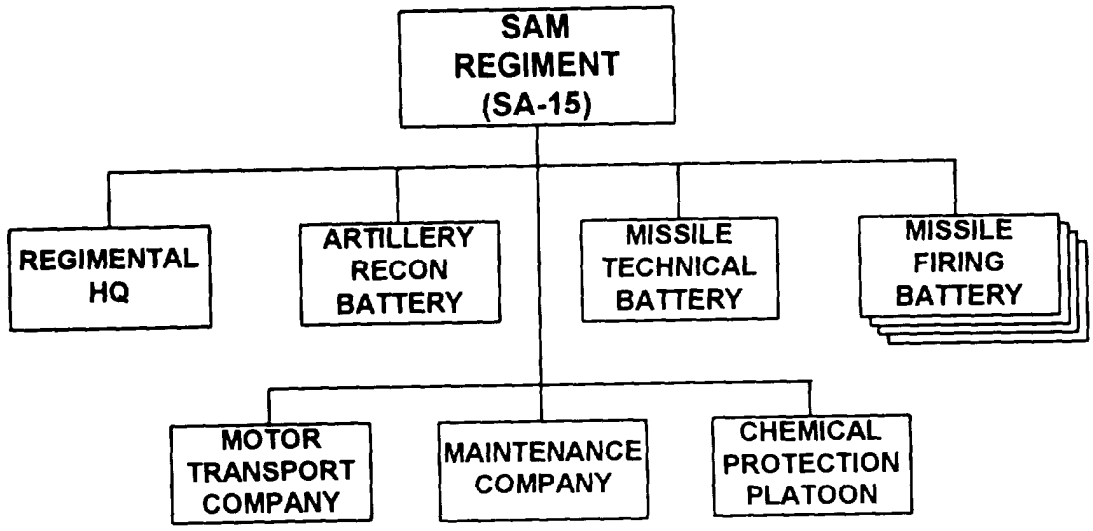
SAM Regiment (SA-8), MRD and TD



SAM REGIMENT (SA-8), MRD and TD								
Principal Items of Equipment	***Regt HQ***	***Arty Recon Btry***	***Missile Technical Btry***	***Missile Firing Btry (6x)***	***Motor Transport Co***	***Maintenance Co***	***Chem Protection Plt***	***TOTAL***
ARMORED VEHICLES								
Chemical Recon Vehicle,BRDM-2RKh/2RKhM							3	3
BTR-60 (PU-12)	1			5				6
WEAPONS								
SAM, SA-8/GECKO TELAR*				20				20
SAM, SA-16/18	3		3	15				21
TRUCKS & VANS	10	6	17	10	46	15	6	110
RADARS								
Aer. Surv./Tgt Acq, LONGTRACK		2						2
Radar, Height Finding, THIN SKIN		1						1
MISCELLANEOUS								
SA-8 Transloader (TELAR Chassis)				10				10

* The TELAR includes the LAND ROLL fire control/target acquisition radar.

SAM Regiment (SA-15), MRD and TD



SAM REGIMENT (SA-15), MRD and TD								
Principal Items of Equipment	***Regt HQ***	***Arty Recon Btry***	***Missile Technical Btry***	***Missile Firing Btry (4x)***	***Motor Transport Co***	***Maintenance Co***	***Chem Protection Plt***	***TOTAL***
ARMORED VEHICLES								
Chemical Recon Vehicle BRDM-2RKh/RKhM							3	3
BTR-60 (PU-12)	1			4				5
WEAPONS								
SAM, SA-15/GAUNTLET TELAR*				16				16
SAM, SA-16/18	3		3	12				18
TRUCKS	10	6	17	8	57	15	6	119
RADARS								
Aer. Surv./Tgt Acq, LONGTRACK		2						2
Radar, Height Finding, THIN SKIN		1						1
MISCELLANEOUS								
SA-15 Transloader (TELAR Chassis)				8				8

*The TELAR includes the SCRUM HALF fire control/target acquisition radar

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Antitank Battalion, MRD*
and
Antitank Battalion (Variant), MRR (BMP or BTR), MRD and TD

ANTITANK BATTALION

BN HQ	ANTITANK GUN BTRY *	ATGM BTRY	MATERIEL SUPPORT PLT
BRDM-2U or BTR (R- 145BM). 1	MT-12 100mm AT Gun 6	9P148 (BRDM) w/AT-5 9-12	Truck.. ..... .14
Mobile Recon Post, PRP-3/4**. 1	MT-LBT.. 7	BRDM-2U 4	Van.. 4
Truck 2	PSNR-1..... 1	PSNR-1 1	
	Rangefinder 1	Rangefinder 1	
	Truck. 1	Truck 3	

NOTES:
*The AT Bn of the MRD has two AT Gun batteries. Antitank gun batteries in MRRs and MRDs are more likely to have 100-mm guns, while similarly organzied batteries at army or front level are more likely to have 125-mm guns (2A45Ms).
**This system includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

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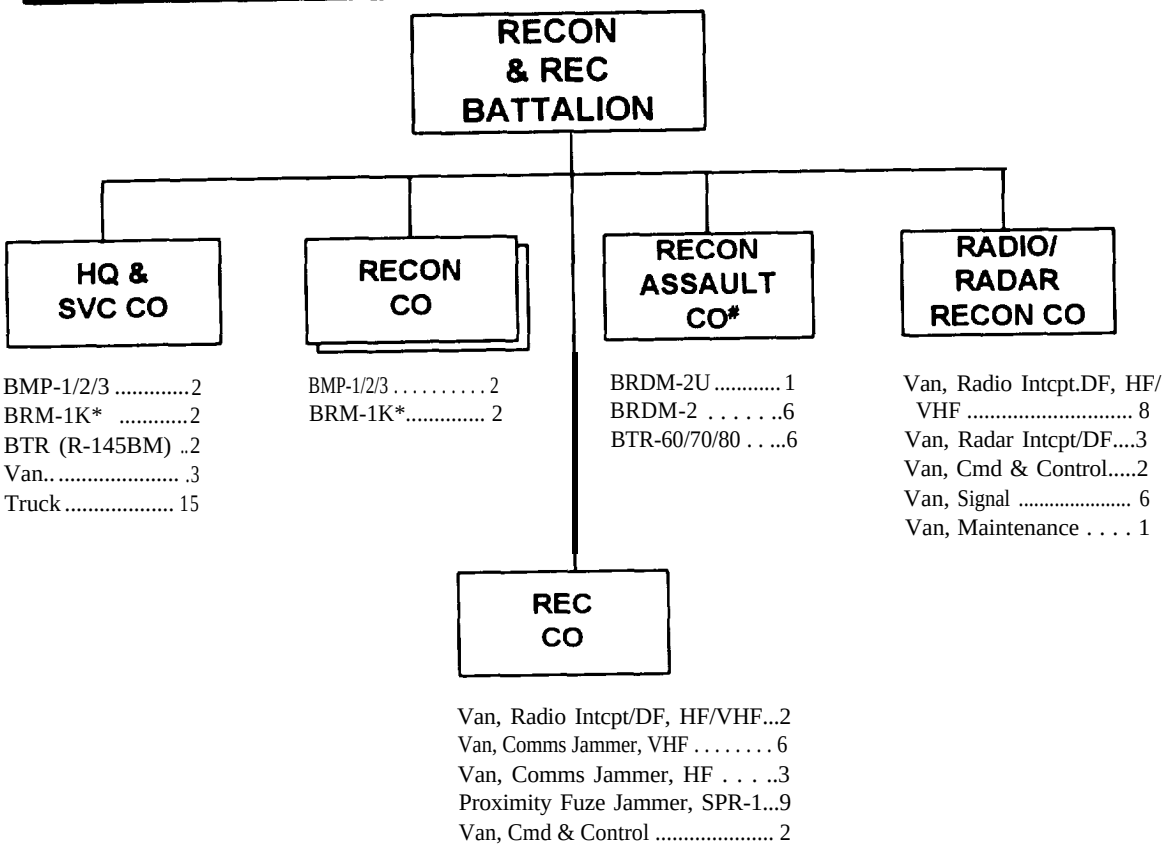
Reconnaissance and Radioelectronic Combat Battalion, MRD and TD



*The recon assault company is also called the long-range reconnaissance company or the airborne reconnaissance company.

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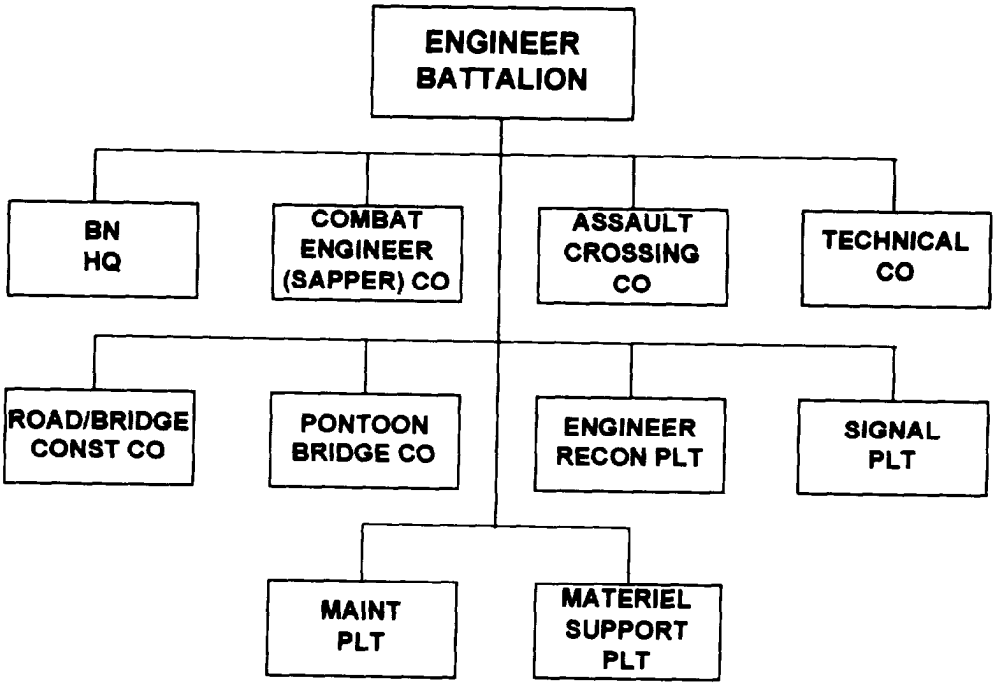
Engineer Battalion, MRD and TD



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ENGINEER BATTALION, MRD and TD											
Principal Items of Equipment	***Battalion HQ***	***Combat Engr (Sapper) Co***	***Assault Crossing Co***	***Technical Co***	***Road/Bridge Const Co***	***Pontoon Bridge Co***	***Engineer Recon Plt***	***Signal Plt***	***Maintenance Plt***	***Materiel Support Plt***	***TOTAL***
ARMORED VEHICLES											
APC, BTR-60/70/80							3				3
ACV, BTR (R-145BM)		1									1
ACV, BRDM-2U			1								1
ENGINEER EQUIPMENT											
Bridge, Truck-Launched					8						8
Tracked Amphibian, K-61/PTS			12								12
Trailer, Amphibious, PKP			3								3
Tracked Ferry, GSP/PMM-2			6								6
Bridge, PMP Center						16					16
Bridge, PMP Ramp						2					2
Bridge, PMP Service						1					1
Assault Boat			10								10
Power Boat						6					6
Pileriver Set, KMS				1							1
Minelayer, GMZ		3									3
Mineclearer, MTK/MTK-2		2									2
Mine Detector, DIM		2					1				3
Engineer Recon Vehicle, IRM							2				2
Armored Engineer Tractor, IMR		2									2
Ditching Machine, BTM/MDK				4							4
Dozer				6	2						8
Tractor				2							2
Truck, Sawmill					1						1
Trailer, Saw					1						1
Grader					2						2
Concrete Mixer					1						1
Truck, Water Purification				1							1
TRUCKS											
Truck, Utility	2			1	1	1	2	1		1	9
Truck, Medium	1	5	2	13	2		1	1	1	1	27
Truck, Dump				1	2						3
Truck, Crane			1								1
Truck, Crane Shovel				2	1						3
Van										1	1
Van, Maintenance									4		4
Van, Signal	1							1			2
TRAILERS											
Trailer, Cargo, 1-Axle	1	2			1						4
Trailer, Cargo, 2-Axle			1	1					1		3
Trailer, Compressor			1								1
Trailer, Generator				1	1			1	1	1	5
RADIOS											
VHF, Vehicle Mount, Medium-Power		8	3	3	3	4	3				24
HF, Manpack, Low-Power	1	1	1	1	1	1	3				9
HF VHF, Vehicle Mount, Medium-Power	1							1			2
HF VHF, Vehicle Mount, High-Power	1							1			2
Warning Receiver								1			1

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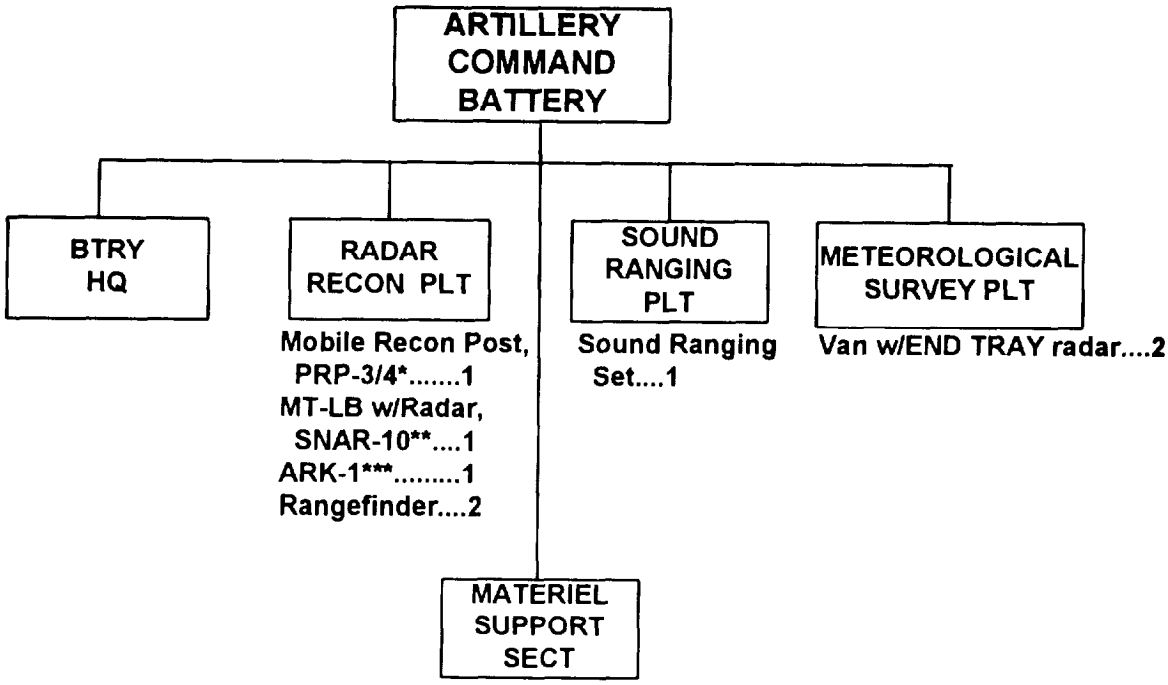
Artillery Command Battery, MRD and TD



NOTES:

The Artillery Command Battery works for the division's Chief of Missile (or Rocket) Troops and Artillery. Its organization closely resembles that of the Sound Ranging and Radar Recon Battery of the division's Artillery Regiment, which works for the Artillery Regiment Commander. The redundant capabilities can accomodate additional tube and rocket launcher battalions from Army or Front when forming a Division Artillery Group (DAG).

* This system includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

** This system includes the BIG FRED battlefield surveillance radar.

*** This system includes the RICE BAG countermortar/counterbattery radar.

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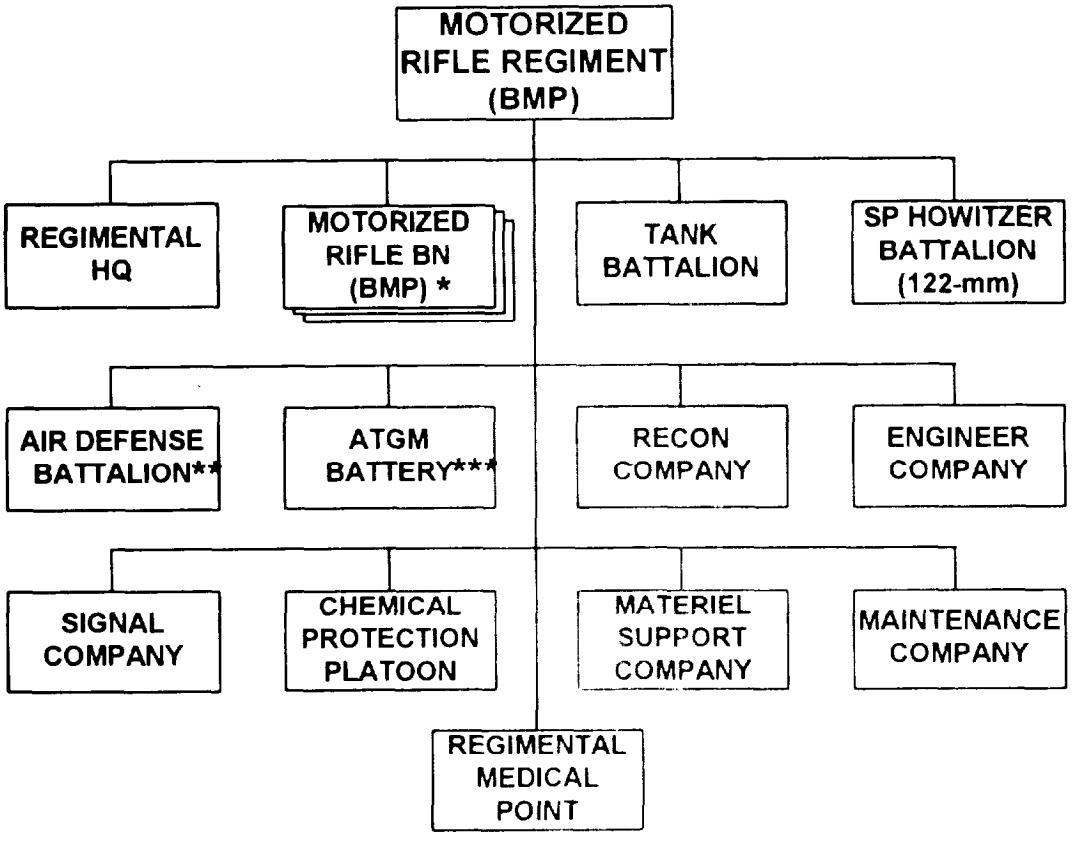
Motorized Rifle Regiment (BMP), MRD and TD *



NOTES:

* The MRR in the TD has two (vice three) MRBs.

** Some MRRs may still have a single air defense battery equipped with ZSU-23-4, 23-mm SP antiaircraft guns and SA-13/GOPHER SAM systems

***Some MRRs may have an antitank battalion rather than just an ATGM battery

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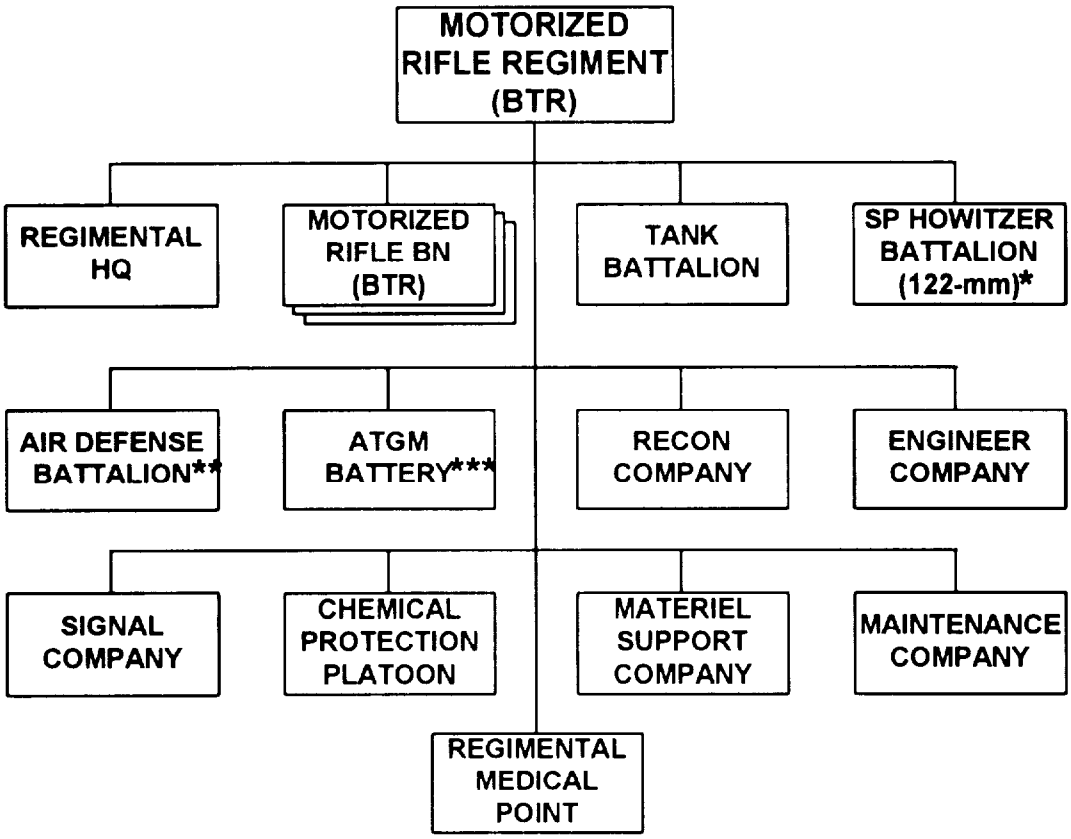
MOTORIZED RIFLE REGIMENT (BMP), MRD and TD*														
Principal Items of Equipment	***Regt HQ***	***Motorized Rifle Bn (3x)****	***Tank Bn***	***SP Howitzer Bn***	***Air Defense Bn***	***ATGM Btry***	***Recon Co***	***Engineer Co***	***Signal Co***	***Chem Protection Plt***	***Material Support Co***	***Maintenance Co***	***Regt Medical Point***	***TOTAL***
ARMORED VEHICLES														
Medium Tank, T-64K/72K/80K			1											1
Medium Tank, T-64/72/80			30											30
ACV, BMP-1K/2K/3K		3	1											4
AICV, BMP-1/2/3		123			6		4							133
ACV, BMP-1KSh		3							5					8
ACV, BRM-1K w/TALL MIKE		3					3							6
APC, BTR-60/70/80	1							1						2
ACV, BTR (R-145BM)		6	1						3					10
APC, BTR-60PA (FAC)	1													1
ASC, BRDM-2							4							4
ACV, BRDM-2U						4								4
Chem Recon Vehicle, BRDM-2RKh/RKhM										3				3
Mobile Recon Post, PRP-3/4				1										1
ACRV, 1V13/1V13M/1V22				3										3
ACRV, 1V14/1V14M/1V23				3										3
ACRV, 1V15/1V15M/1V24				1										1
ACRV, 1V16/1V16M/1V25				1										1
ACV, PPRU (DOG EAR)					2									2

*Numbers reflect total for three MRBs. Note, however, that the MRR, TD has only two MRBs.

Motorized Rifle Regiment (BTR), MRD



NOTES:

* The MRR (BTR) may have a battalion of 122-mm towed howitzers (D-30), instead of this SP howitzer battalion.

** Some MRRs may still have a single air defense battery equipped with ZSU 23-4, 23-mm SP antiaircraft guns and SA-13/GOPHER SAM systems.

***Some MRRs may have an antitank battalion rather than just an ATGM battery.

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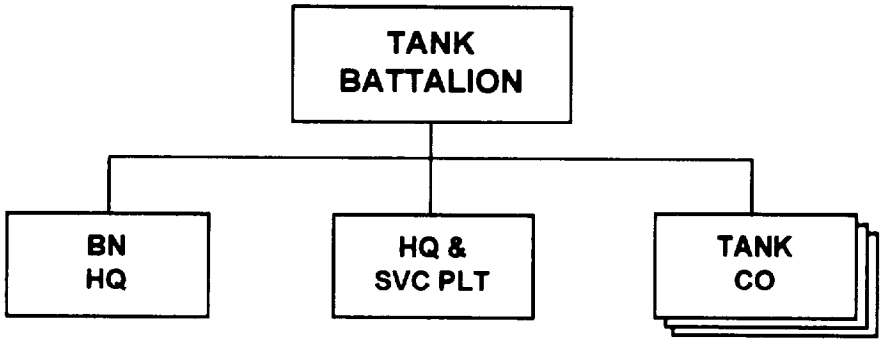
MOTORIZED RIFLE REGIMENT (BTR), MRD														
Principal Items of Equipment	***Regt HQ***	***Motorized Rifle Bn (3x)***	***Tank Bn***	***SP Howitzer Bn***	***Air Defense Bn***	***ATGM Btry***	***Recon Co***	***Engineer Co***	***Signal Co***	***Chem Protection Plt***	***Material Support Co***	***Maintenance Co***	***Regt Medical Point***	***TOTAL***
ARMORED VEHICLES														
Medium Tank, T-64K/72K/80K			1											1
Medium Tank, T-64/72/80			30											30
BMP-1K/2K/3K			1											1
BMP-1/2/3					6		4							10
BRM-1K w/TALL MIKE							3							3
BTR-60PBK/70K/80K	1	3												4
BTR-60/70/80		141						1						142
BTR (R-145BM)		9	1						8					18
BTR-60PA (FAC)	1													1
BRDM-2							4							4
BRDM-2U						4								4
Chem Recon Vehicle, BRDM-2RKh/RKhM										3				3
Mobile Recon Post, PRP-3/4				1										1
ACRV, 1V13/1V13M/1V22				3										3
ACRV, 1V14/1V14M/1V23				3										3
ACRV, 1V15/1V15M/1V24				1										1
ACRV, 1V16/1V16M/1V25				1										1
ACV, PPRU (DOG EAR)					2									2
ACV, BTR-60 (PU-12)					2									2
Armored Recovery Vehicle												3		3
WEAPONS														
30-mm Auto Grenade Launcher, AGS-17		18												18
120-mm Mortar, M1943/2S12 or 82-mm Automatic Mortar, 2B9		18												18
122-mm SP Howitzer, 2S1				18										18
73-mm Recoilless Gun, SPG-9		9												9
ATGM Manpack, AT-4/SPIGOT		18												18
ATGM Manpack,AT-7/SAXHORN		27												27
ATGM Vehicle, 9P148 w/ AT-5/SPANDREL						9								9
30-mm SPAA System, 2S6					6									6
SAM, SA-13/GOPHER					6									6
SAM, SA-16/18	3	27			18									48

Tank Battalion (Standard), MRR (BMP or BTR) and TR, MRR and TD

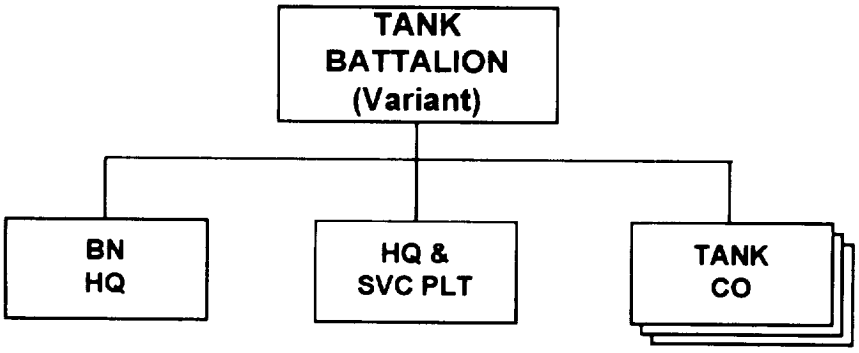


Med Tank, T-64k/72k/ 80k (cmd vehicle).....1
BMP-1k/2k/3k 1

BTR (R-145BM)....1
Truck 10
Van. 2

Med Tank, T-64/72/80.... 10

Tank Battalion (40-Tank Variant), MRR (BMP or BTR), MRD and TD



Med Tank, T-64k/72k/ 80k (cmd vehicle)...1
BMP-1k/2k/3k 1

BTR(R-145BM)...1
Truck 10
Van 2

Med Tank, T-64k/72k/80k. . . . 13

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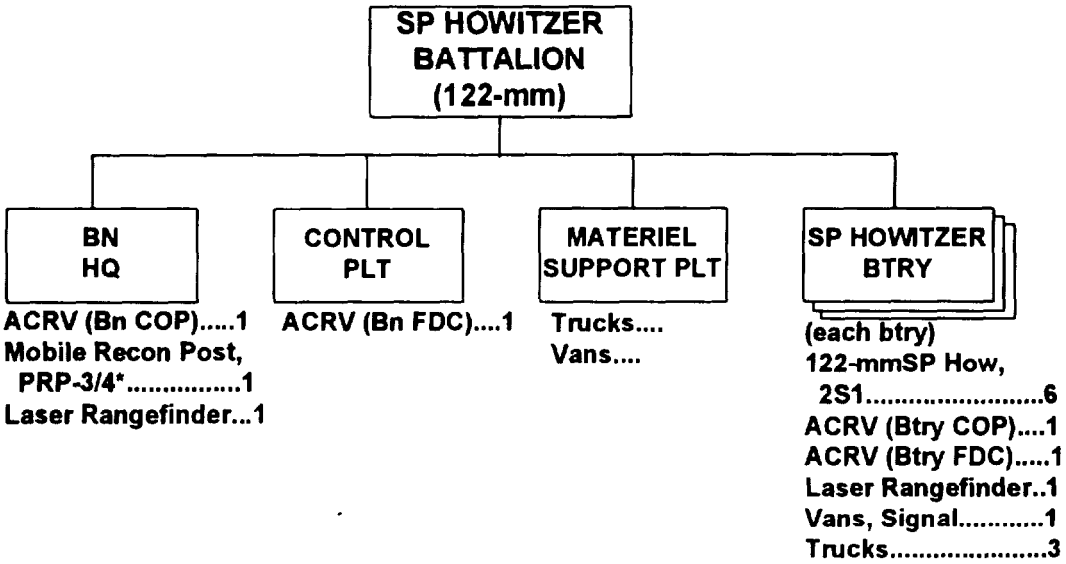
122-mm SP Howitzer Battalion, MRR (BMP or BTR) and TR, MRD and TD



NOTES:

The MRR (BTR) may have a battalion of 122-mm towed howitzers (D-30), instead of this SP howitzer battalion.

* This system includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

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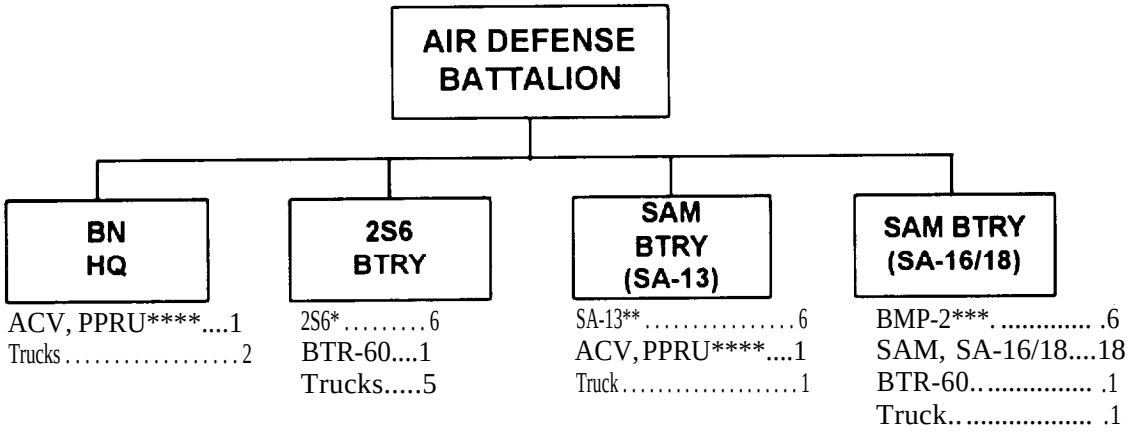
Air Defense Battalion, MRR (BMP or BTR) and TR, MRD and TD



NOTES:

Some MRRs and TRs may still have a single air defense battery equipped with ZSU-23-4 23-mm SP antiaircraft guns and SA-13/GOPHER SAM systems.

* This system includes SA-19/GRISON SAM launchers and HOT SHOT target acquisition and fire control radars.

** This system includes a ranging system.

*** In the MRR (BTR), this battalion may have BTR-60/70/80 APCs in lieu of the BMP-2.

**** This system includes the DOG EAR target acquisition radar

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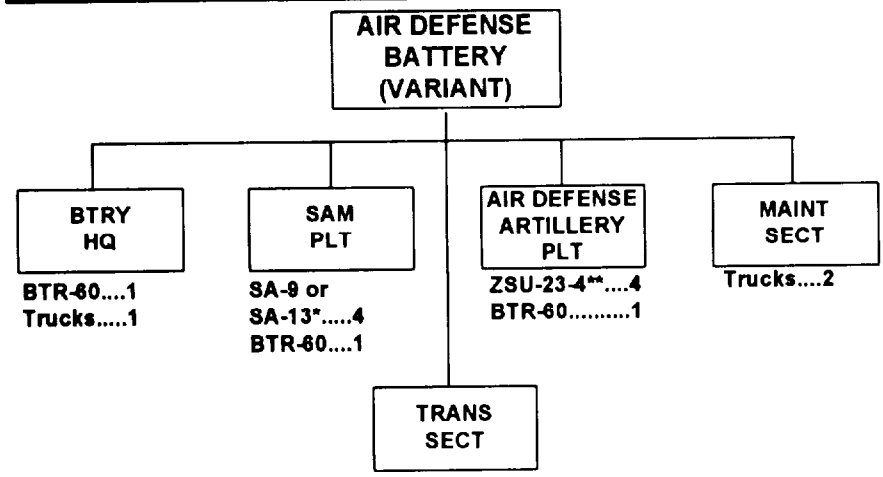
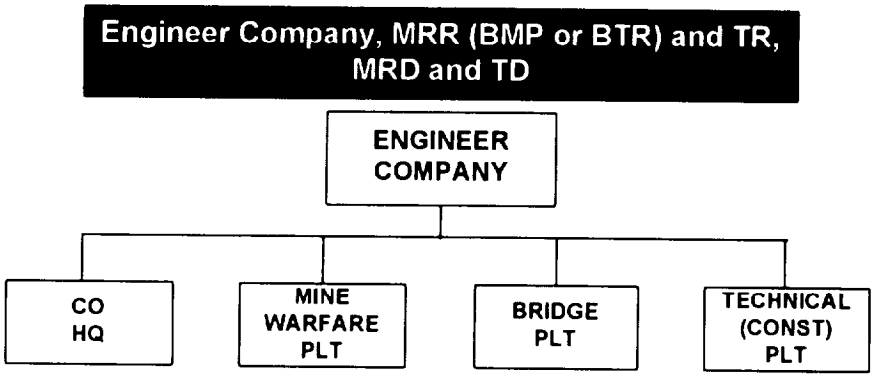
Air Defense Battery (Variant), MRR (BMP and BTR) and TR, MRD and TD



NOTES:

* The SA-13 system includes a ranging radar.

** This system includes the GUN DISH fire control radar



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
BTR-60/70/80	1
Truck, Utility..	1
Truck, Medium	8*/9**
Truck, Dump	2
Van, Maintenance..	1
Truck, Crane.,	1
Truck, Crane Shovel	1
Bridge, Tank-Launched	1*/3**
Bridge, Truck-Launched..	4
Armored Engineer Tractor, IMR..	1

Equipment	Total
Ditching Machine, BTM/MDK	1
Dozer	1
Ditching Machine, PZM/TMK	3
Minelayer, GMZ	3
Mineclearing Plow	9*/27**
Mine Roller-Plow	3*/9**
Mine Detector, DIM..	1
Truck, Water Purification	1
Trailer, Cargo, 2-Axle..	2

NOTES: The following variations may exist:

1. Frogmen may be attached to assist in the reconnaissance of water obstacles.
2. Some companies may have five KMM truck-launched bridge spans instead of four TMM bridge spans.
3. Some units may have PMR towed minelayers instead of GMZ armored tracked minelayers Trucks normally tow PMR minelayers. Some units may have BTR-152s for this purpose.
4. Some units may have up to six one-axle cargo trailers besides the two-axle cargo trailers.
5. Some units may have tractor-trailers to carry heavy tracked equipment on long road movements.

* Equipment levels for the engineer company, MRR (BMP or BTR)

** Equipment levels for the engineer company, TR.

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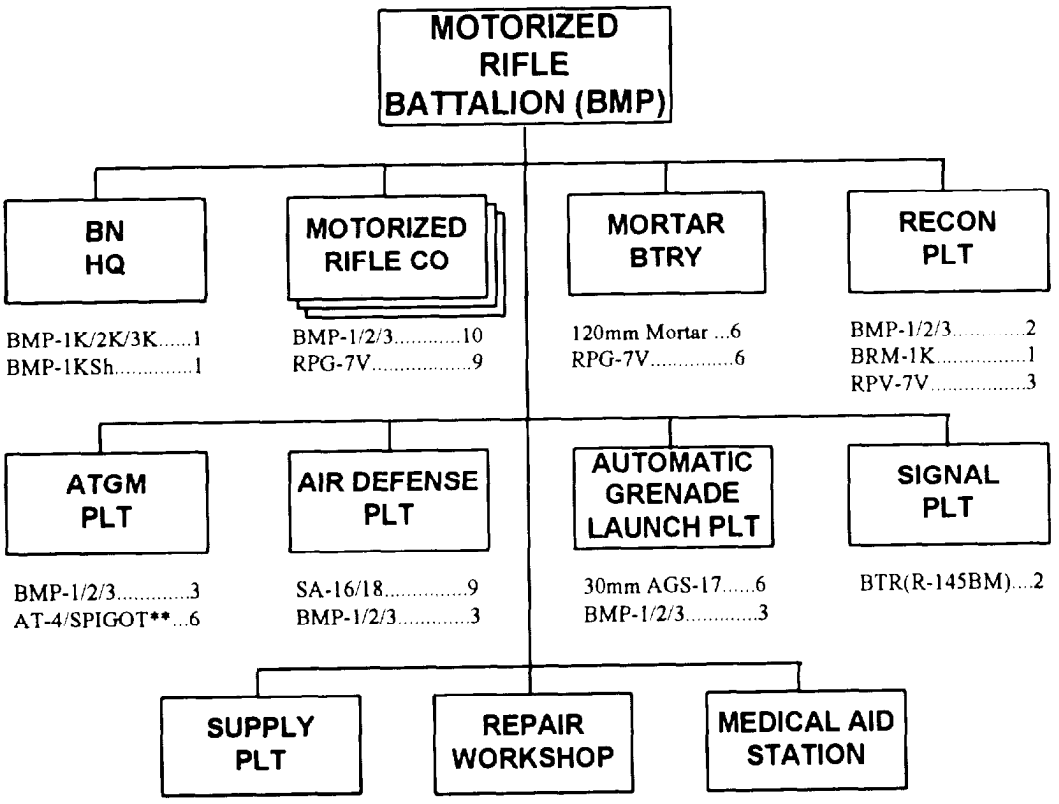
Motorized Rifle Battalion (BMP), MRR (BMP), MRD and TR, and TD



PRINCIPAL ITEMS OF EQUIPMENT

Vehicles	Total
BMP-1K/2K/3K	1
BMP-1/2/3	41
BMP-1KSh	1
BRM-1K*..	1
BTR (R-145BM)	2
ATGL, RPG-7V	36
ATGM Manpack, AT-4/SPIGOT**	6

Weapons	Total
120-mm Mortar, M1943/2S12 or 82-mm Automatic Mortar, 2B9	6
30-mm Automatic Grenade Launcher, AGS-17	6
SAM, SA-16/18	9

NOTES:
* This system includes the TALL MIKE battlefield surveillance radar.
** The ATGM platoon may be equipped with nine AT-7/SAXHORN launchers rather than the six AT-4/SPIGOT launchers shown here. In either case, its ATGM assets and vehicles may be deployed with the three MRCs.

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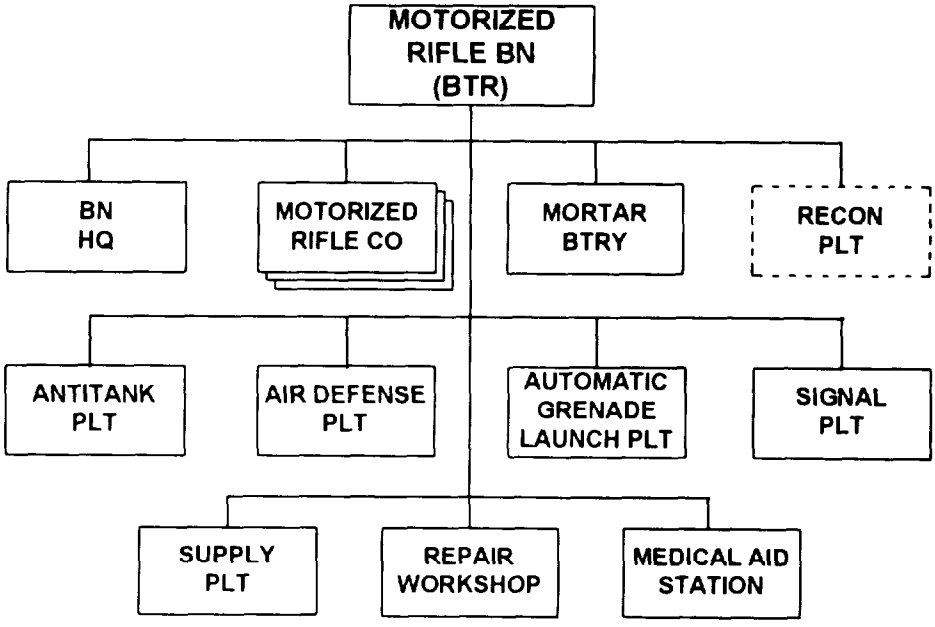
Motorized Rifle Battalion (BTR), MRR (BTR), or MRD



PRINCIPAL ITEMS OF EQUIPMENT

Vehicles	Total
BTR-60/70/80..	47
BTR-60PBK/70K/80K..	1
BTR (R-145BM)	3
Trucks	22
Vans	2

Weapons	Total
120-mm Mortar, M1943/2S12 or 82-mm Automatic Mortar, 2B9	.6
30-mm Automatic Grenade Launcher, AGS-17..	6
73-mm Recoilless Gun, SPG-9..	.3
ATGL, RPG-7V..	.36
ATGM Manpack, AT-4/SPIGOT	.6
ATGM Manpack, AT-7/SAXHORN	.9.
SAM, SA-16/18..	.9

NOTE: Some BTR-equipped MRBs do not have a reconnaissance platoon. However, the battalion's equipment totals shown here include that platoon.

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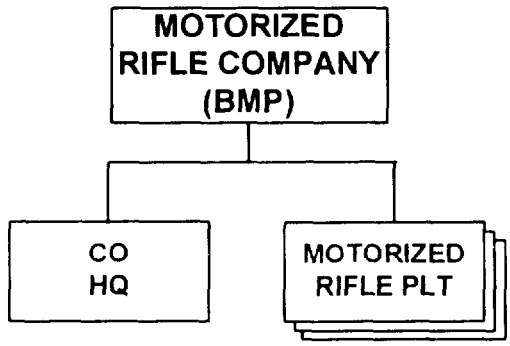
Motorized Rifle Company (BMP), MRB, MRR (BMP) and TR, MRD and TD

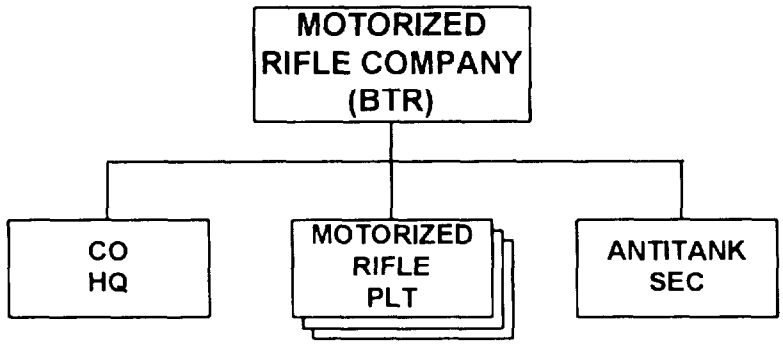


BMP-1/2/3 1
AK-74 1

BMP-1/2/3 3
ATGL, RPG-7V.....3
RPK-74 3
AK-74. 15
SVD 1

NOTE: With a standard eight-man squad, each BMP has two or three empty seats. The platoon leader and sniper normally ride in the first squad vehicle, the assistant platoon leader in the second, and the rifleman/medic in the third.

Motorized Rifle Company (BTR), MRB, MRR (BTR), MRD



BTR-60/70/80 . . . 1
AK-74 1

BTR-60/70/80 3
ATGL, RPG-7V....3
RPK-74.....3
AK-74..... 15
SVD 1

BTR-60/70/80 1
AT-7/SAXHORN....3
AK-74 6

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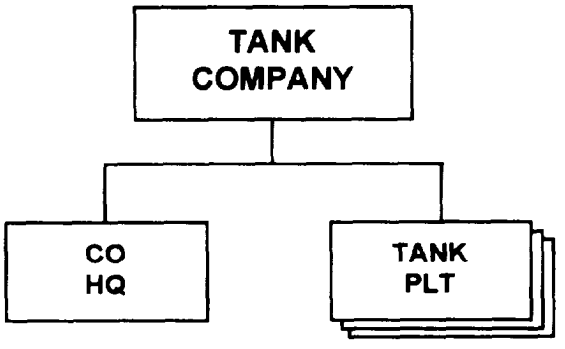
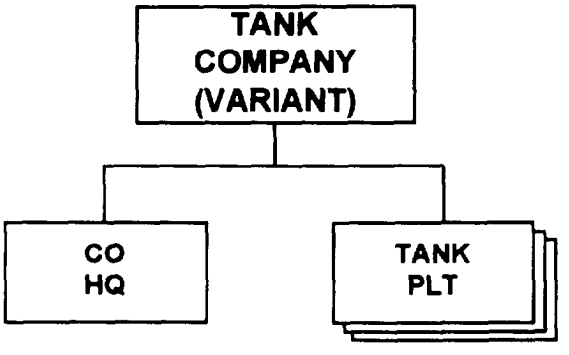
Tank Company (Standard), TB, MRR (BMP or BTR) and TR, MRD and TD



Med Tank, T-64/72/80...1 Med Tank, T-64/72/80..3

Tank Company (13-Tank Variant), TB (40-Tank Variant), MRR (BMP or BTR), MRD and TD



Med Tank, T-64/72/80....1 Med Taank,T-64/72/80....4

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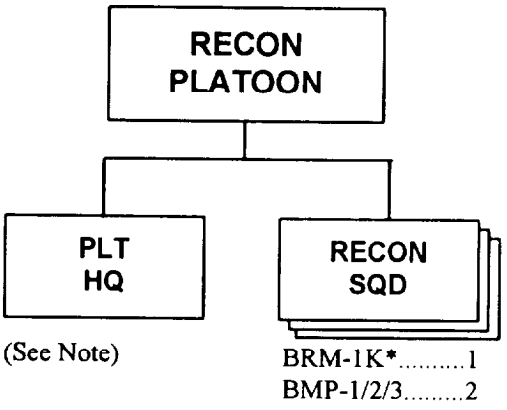
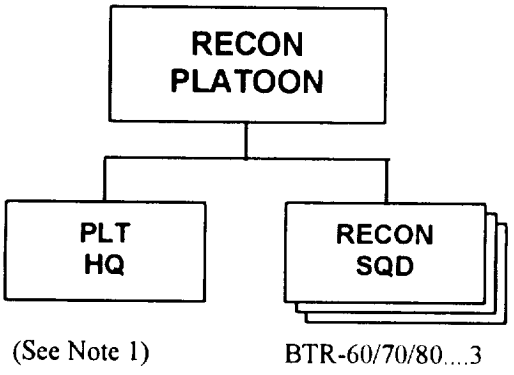
Reconnaissance Platoon, MRB (BMP), MRR (BMP) and TR, MRD and TD



NOTES: The platoon leader, assistant platoon leader, sniper, and rifleman/medic ride in extra seats in the recon squad vehicles.

* This system includes the TALL MIKE battlefield surveillance radar.

Reconnaissance Platoon, MRB (BTR), MRR (BTR), MRD



NOTES:

1. The platoon leader, assistant platoon leader, sniper, and rifleman/medic ride in extra seats in the reconnaissance squad vehicles.
2. This platoon is not always present in BTR-equipped MRBs.

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ATGM Platoon, MRB (BMP), MRR (BMP) and TR, MRD and TD

ATGM PLATOON

BMP-1/2/3 3
AT-4/SPIGOT 6
or
AT-7/SAXHORN 9

Antitank Platoon, MRB (BTR), MRR (BTR), MRD

ANTITANK PLATOON

BTR-60/70/80 5
AT-4/SPIGOT 6
73-mm Recoilless Gun,
SPG-9 3

NOTE: Each BTR can carry one or two recoilless gun sections or two ATGM teams.

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Air Defense Platoon, MRB (BMP), MRR (BMP) and TR, MRD and TD

AIR DEFENSE PLATOON

SAM, SA-16/18....9
BMP-1/2/3.....3

Air Defense Platoon, MRB (BTR), MRR (BTR), MRD

AIR DEFENSE PLATOON

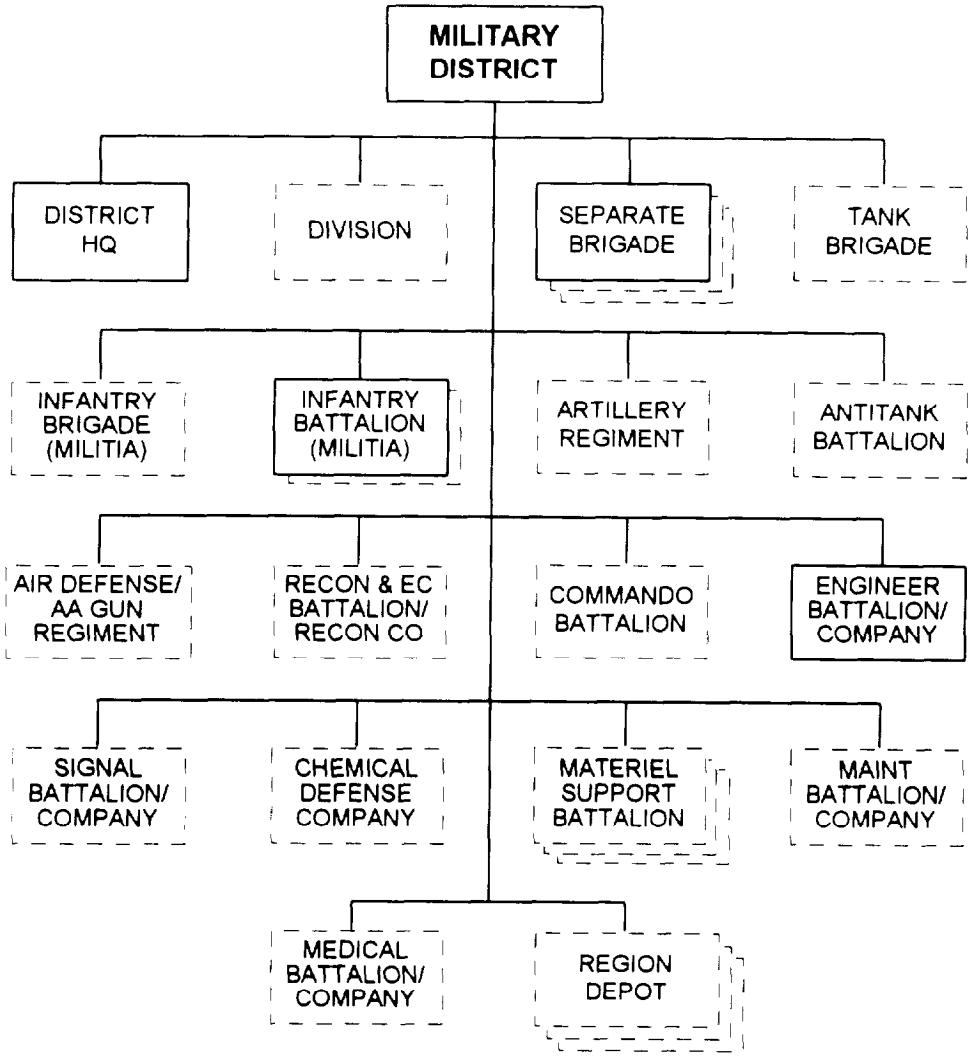
SAM, SA-16/18....9
BTR-60/70/80.....3

Automatic Grenade Launcher Platoon, MRB (BMP), MRR (BMP and BTR) and TR, MRD and TD

AUTOMATIC GRENADE LAUNCHER PLATOON

BMP-1/2/3 or BTR-60/70/80.....3
30-mm Automatic Grenade
Launcher AGS-17.....6

Military districts are **geographical** entities which delineate the territorial responsibilities and disposition of forces subordinate to a military region. There is no standard composition for forces within a district. The number and types of units can vary widely from district to district. Therefore, the following organization chart merely outlines the types of units and facilities that might or might not be present in a given district,

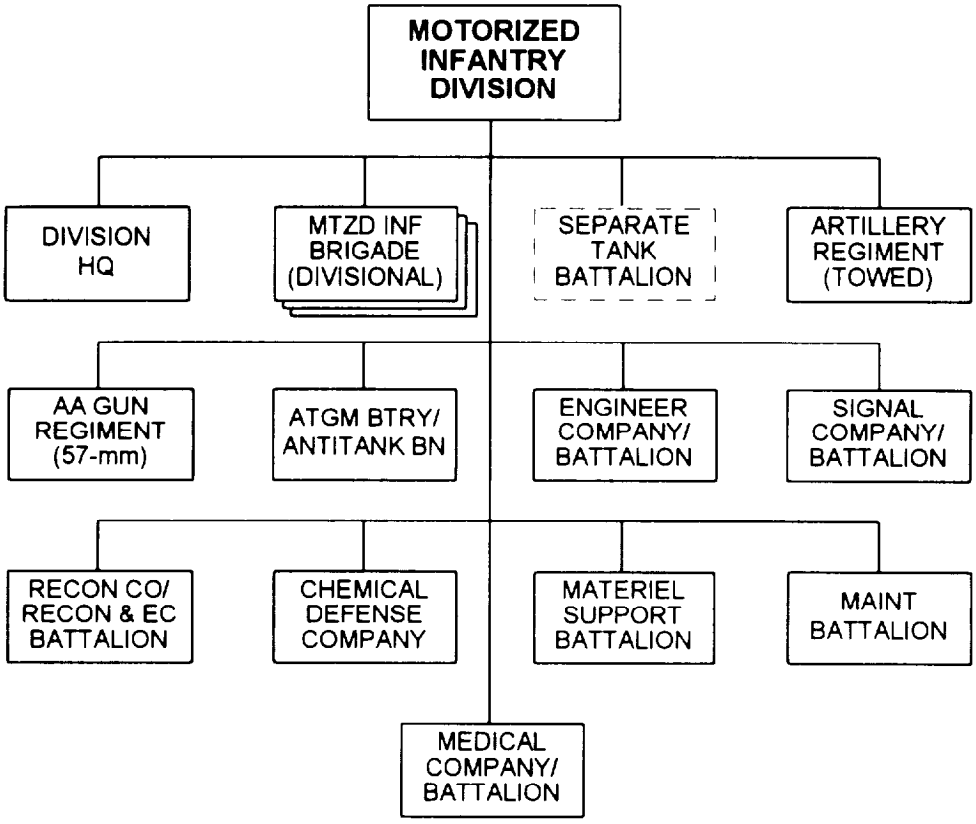


NOTES:

1. Districts generally contain one or more separate brigades, but may have a standing division (infantry, motorized infantry, or mechanized infantry). During mobilization, a district may form a division from the reserves, possibly using a separate brigade as a mobilization base. However, this would occur only in a high-priority district. Even a district with a standing division in peacetime might have that division resubordinated to a higher-priority district or region in wartime

(continued)

2. A basically rural, mountainous district with no major population centers may have only one or two separate infantry brigades, with little or no additional combat support and combat service support. In addition to these regular army forces, such a district may have a single militia infantry battalion.
3. A district astride a major avenue of approach, or one that contains several major population/industrial centers, may contain two or three separate infantry brigades (or motorized or mechanized infantry) and perhaps a tank brigade. Such a district is more likely to have some of the additional combat support and combat service support assets allocated from the national level through the region Depending on the size of its population centers, a district might be able to constitute a brigade-sized militia force, or at least multiple battalions.
4. A district may have organic or allocated artillery, antitank, and air defense units. If a district's maneuver units are predominantly mechanized infantry and tank forces, these fire support units are more likely to be self-propelled. If the maneuver units are infantry or motorized infantry, the fire support units are more likely to be towed.
5. One high-priority district is the Capital District, which contains the State's national capital The Capital Defense Forces garrisoned there are typically the best-equipped in the country. They are specially tailored for their primary mission of defending the capital and for their secondary mission as the strategic reserve.



NOTES:

1. The basic maneuver units in this division are three motorized infantry brigades (divisional). These divisional brigades differ structurally from their separate counterparts normally found within military districts. In addition to its motorized infantry brigades, this division may or may not have a separate tank battalion.
2. Most motorized infantry divisions have an ATGM battery and company-sized engineer, signal, reconnaissance, and medical units. However, some better-equipped motorized infantry divisions may have battalion-sized antitank, engineer, signal, reconnaissance (and Electronic Combat), and medical units.
3. Motorized and mechanized infantry divisions are the basic maneuver formations of an expeditionary army. Such an army, mobilized in one military region to conduct large-scale offensive operations, may include divisions resubordinated from other regions or districts.
4. Divisions can be either standing or mobilized from the reserves. Standing divisions may exist in districts along an international border, in districts that contain historically threatened avenues of approach, or around critical cities/facilities. Standing division have the assets shown above, even before mobilization. Divisions mobilized from the reserves may draw the combat support and combat service support shown above from reserves or receive them from the national assets pool. The commander of the district in which a division is garrisoned or mobilized is also the division commander, as long as the division remains in that district.
5. Motorized infantry divisions are more common than mechanized or infantry divisions.

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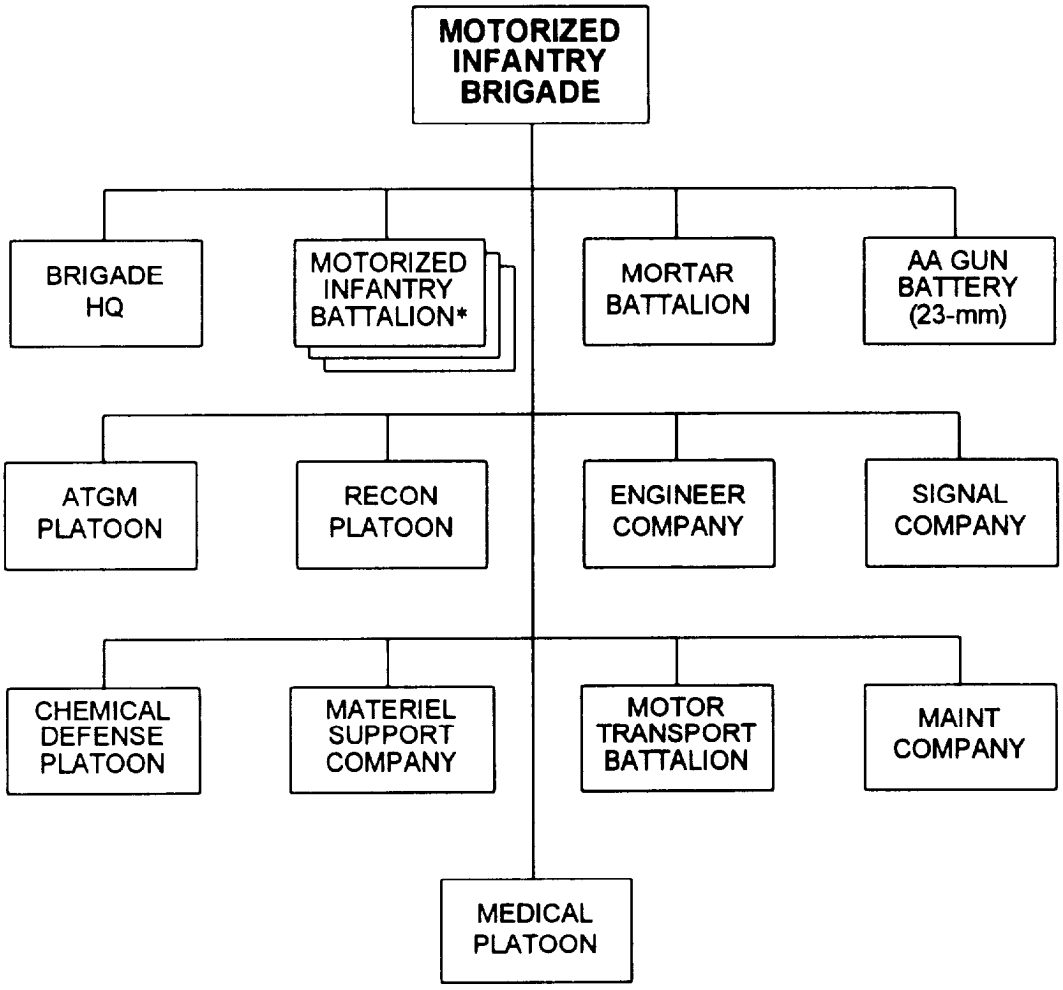

*In some motorized infantry brigades, one of these infantry battalions may be mechanized rather than motorized.

(continued)

Principal Items of Equipment	*Brigade HQ*	*Motorized Inf Bn (3x)*	*Mortar Bn*	*AA Gun Btry (23-mm)*	*ATGM Plt*	*Reconnaissance Plt*	*Engineer Co*	*Signal Co*	*Chemical Defense Plt*	*Material Support Co*	*Motor Transport Bn*	*Maintenance Co*	*Medical Plt*	*TOTAL*
ARMORED VEHICLES														
ACV, BTR (R-145BM)		3												3
Chemical Recon Vehicle, BRDM-2RKh									3					3
WEAPONS														
30-mm Auto Grenade Lchr, AGS-17		18												18
60-mm Mortar, Light		27												27
82-mm Mortar, M1937		9												9
120-mm Mortar, M1943/2S12 or 82-mm Mortar, M1937			18											18
73-mm Recoilless Gun, SPG-9		6												6
ATGM Manpack, AT-4/SPIGOT					6									6
ATGM Manpack, AT-7/SAXHORN		9												9
23-mm AA Gun, ZU-23				8										8
SAM, Shoulder-Fired	3	27												30
Flamethrower, LPO/RPO		27					4							31
ENGINEER EQUIPMENT														
Bridge, Truck-Launched							4							4
Minelayer, PMR-3							3							3
Mine Detector, DIM							1							1
Truck, Water Purification							1							1
TRUCKS														
Truck, Utility	2	6	3	1			4	5		2	14	1		38
Truck, Light	6	30	23	8	3			3		4	39		1	117
Truck, Medium		6				1	9			45	60	2	2	125
Truck, Crane							2				1	1		4
Truck, Decon, ARS-12U/14									3					3
Truck, Decon, DDA-53/66									1				1	2
Truck, Dump							2							2
Truck, POL (5,000-L)			1							15	4			20
Truck, Recovery												2		2
Truck, Water (2,000-L)									2	4				6
Van, Command	3													3
Van, Hospital													1	1
Van, Kitchen		3												3
Van, Maintenance			1				1			1	1	9		13
Van, Signal		3	1				1	10			1			16
Ambulance		3	1								1		4	9
TRAILERS														
Trailer, Cargo, 1-Axle							6				2			8
Trailer, Cargo, 2-Axle		3	4				2			30	4	4		47
Trailer, Generator			1					1		1	6	2		11
Trailer, Kitchen		9	3				1			2	3			18
Trailer, POL (1,200-L)			1											1
Trailer, POL (4,200-L)		3								15	4			22
Trailer, Water (900-/1,200-L)		3	1				1		2	1	3			11

(continued)

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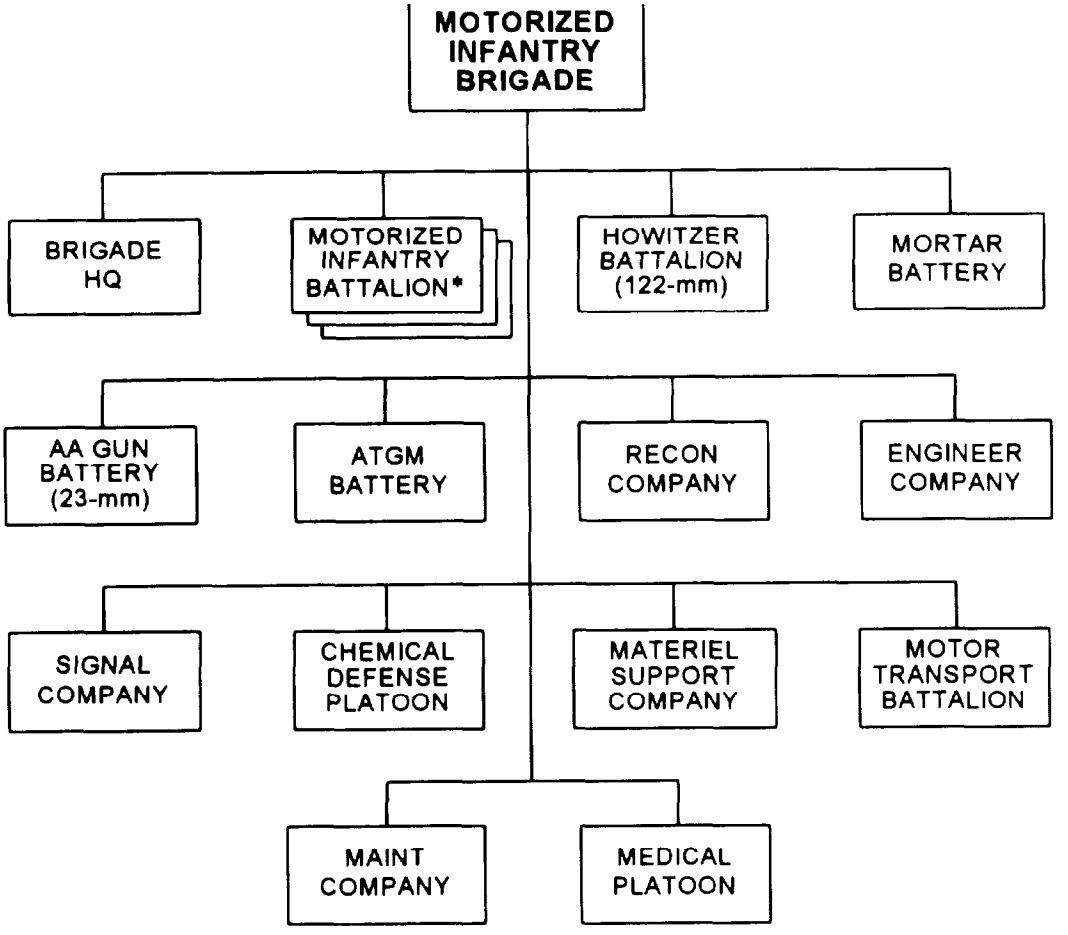
Principal Items of Equipment	Brigade HQ	Motorized Inf Bn (3x)	Mortar Bn	AA Gun Btry (23-mm)	ATGM Plt	Reconnaissance Plt	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Motor Tranpsort Bn	Maintenance Co	Medical Plt	TOTAL
RADARS														
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE			1			1								2
RADIOS														
VHF, Manpack, Low-Power	3	201	18	3	3	3	4	7			3	1	1	247
VHF, Portable, Low-Power		51	2		4	1								58
VHF, Portable, Very-Low-Power		12												12
VHF, Vehicle Mount, Medium-Power	3	9	3				1		3		6	2		27
HF, Manpack, Low-Power		3						2	1	1	1			8
HF, Vehicle Mount, Medium-Power	1						1	2						4
HF/VHF, Vehicle Mount, Med-Power		3	1					8			1			13
HF/VHF, Vehicle Mount, High-Power								2						2
HF, Vehicle Mount, High-Power		3						1						4
Radio Relay, VHF/UHF								2						2
Warning Receiver	1	3	1					3			1			9
MISCELLANEOUS														
Rangefinder, Stereoscopic		3	3											6
Rangefinder, Laser, SAGE GLOSS														0
Periscopic Aiming Circle, PAB2A		3	3											6
Collimator		9	18											27
Motorcycle						3		3						6



* In some new motorized infantry brigades, one of these infantry battalions may be mechanized rather than motorized.

(continued)

Principal Items of Equipment	Brigade HQ	Motorized Inf Bn (3x)	Howitzer Bn (122-mm)	Mortar Battery	AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Motor Transport Bn	Maintenance Co	Medical Plt	TOTAL
ARMORED VEHICLES															
ACV, BRDM-2U						4									4
ACV, BTR (R-145BM)		3													3
Chemical Recon Vehicle, BRDM-2RKh										3					3
ACRV, 1V18			3												3
ACRV, 1V19			1												1
WEAPONS															
30-mm Auto Grenade Lchr, AGS-17		18													18
60-mm Mortar, Light		27													27
82-mm Mortar, M1937		9													9
120-mm Mortar, M1943/2S12 or 82-mm Mortar, M1937				6											18
122-mm Howitzer, D-30			18												6
73-mm Recoilless Gun, SPG-9		6													9
ATGM Manpack, AT-7/SAXHORN		9													12
ATGM Vehicle, w/AT-3/5						12									8
23-mm AA Gun, ZU-23					8										48
SAM, Shoulder-Fired	3	27	18												31
Flamethrower, LPO/RPO		27						4							
ENGINEER EQUIPMENT															
Bridge, Truck-Launched								4							4
Minelayer, PMR-3								3							3
Mine Detector, DIM								1							1
Truck, Water Purification								1							1
TRUCKS															
ACRV, 1V110 (Battery FDC)			3												3
ACRV, 1V111 (Battalion FDC)			1												1
Truck, Utility	2	6	1	1	1		1	4	5		2	14	1		38
Truck, Light	6	30	9	7	8				3		4	39		1	107
Truck, Medium		6	34			3	3	9			45	60	2	2	164
Truck, Crane								2				1	1		4
Truck, Decon, ARS-12U/14										3					3
Truck, Decon, DDA-53/66										1				1	2
Truck, Dump								2							2
Truck, POL (5,000-L)			2								15	4			21
Truck, Recovery													2		2
Truck, Water (2,000-L)										2	4				6
Van, Command	3														3
Van, Hospital														1	1
Van, Kitchen		3													3
Van, Maintenance			1					1			1	1	9		13
Van, Signal		3	4					1	10			1			19
Ambulance		3	1									1		4	9
TRAILERS															
Trailer, Cargo, 1-Axle								6				2			8
Trailer, Cargo, 2-Axle		3	11					2			30	4	4		54
Trailer, Generator			1						1		1	6	2		11
Trailer, Kitchen		9	4					1			2	3			19
Trailer, POL (4,200-L)		3	2								15	4			24
Trailer, Water (900-/1,200-L)		3	1					1		2	1	3			11

(continued)

Principal Items of Equipment	Brigade HQ	Motorized Inf Bn (3x)	Howitzer Bn (122-mm)	Mortar Battery	AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Motor Tranpsort Bn	Maintenance Co	Medical Plt	TOTAL
RADARS															
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE			1			1	3								5
RADIOS															
VHF, Manpack, Low-Power	3	201	14	5	3	4	11	4	7			3	1	1	257
VHF, Portable, Low-Power		51	23				4								78
VHF, Portable, Very-Low-Power		12													12
VHF, Vehicle Mount, Medium-Power	3	9	8	1		16	1	1		3		6	2		50
HF, Manpack, Low-Power		3							2	1	1	1			8
HF, Vehicle Mount, Medium-Power	1						1	1	2						5
HF/VHF, Vehicle Mount, Med-Power		3	4						8			1			16
HF/VHF, Vehicle Mount, High-Power									2						2
HF, Vehicle Mount, High-Power		3							1						4
Radio Relay, VHF/UHF									2						2
Warning Receiver	1	3	1				1		3			1			10
MISCELLANEOUS															
Rangefinder, Stereoscopic		3		1		1									5
Rangefinder, Laser, SAGE GLOSS			4												4
Periscopic Aiming Circle, PAB2A		3		1											4
Collimator		9		6											15
Motorcycle							9		3						12

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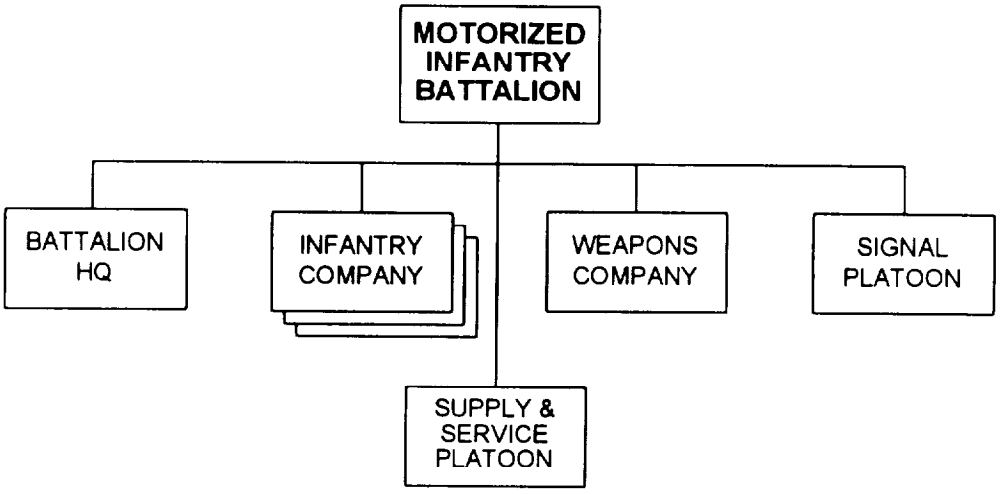


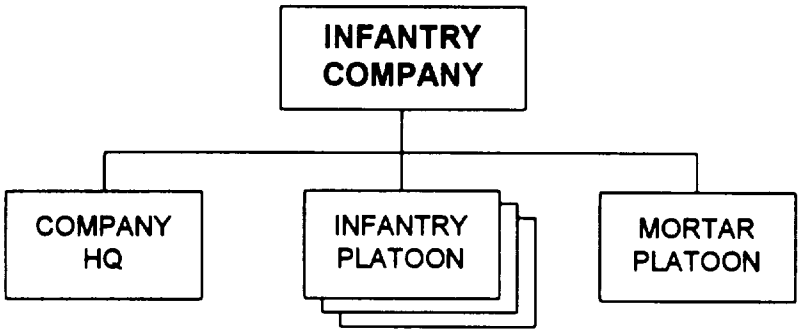
PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BTR (R-145 BM)	1
7.62-mm GP MG, PKM	27
40-mm Under-Barrel Grenade Launcher, BG-15	79
30-mm Automatic Grenade Launcher, AGS-17	6
60-mm Mortar, Light	9
82-mm Mortar, M1937	3
SAM, Shoulder-Fired	9
ATGM Manpack, AT-7/SAXHORN	3
73-mm Recoilless Gun, SPG-9	2

Equipment	Total
ATGL, RPG-7V	.45
ATRL, RPG-18/22	75
Flamethrower, LPO/RPO	.9
Rangetinder, Stereoscopic, DS-1	1
Periscopic Aiming Circle, PAB2A	1
Collimator	.3
Night-Vision Goggles	48
Night-Vision Goggles (Driver)	.6
Night-Vision Sight (AGL)	.6
Night-Vision Sight (MG)	.27
Night-Vision Sight (Small Arms)	.65

NOTES:

1. A motorized infantry battalion does not have organic transport assets to move its infantry companies and weapons company. Rather, it relies on the brigade-level motor transport battalion to provide trucks for movement over longer distances. Movement of all 3 infantry companies requires a total of 18 medium trucks. A weapons company requires 3 utility trucks and 12 light trucks.
2. Some motorized infantry battalions may have a mortar battery with nine 82-mm mortars instead of a mortar platoon in the weapons company. In that case, there would probably be no 60-mm mortars in the infantry companies



Company Cdr.. ..... PM
Deputy Company Cdr.. ..... PM
First Sergeant AK-74

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
9-mm Pistol, PM	29
5.45-mm Assault Rifle, AK-74	82
5.45-mm LMG, RPK-74	18
7.62-mm Sniper Rifle, SVD	3
7.62-mm GP MG, PKM	9
40-mm Under-Barrel Grenade Launcher, BG-15..	23
60-mm Mortar, Light	3
ATGL, RPG-7V	15

Equipment	Total
ATRL, RPG- 18/22	.22
Flamethrower, LPO/RPO	.3
Night-Vision Goggles	16
Night-Vision Sight (Small Arms).	15
Night-Vision Sight (MG)	.9
Radios:	
VHF, Manpack, Low-Power..	16
VHF, Portable, Low-Power	5

NOTE: An infantry company in a motorized infantry battalion does not have organic transportation assets. Rather, it relies on the brigade-level troop transport company to provide trucks for troop transport. Movement of an infantry company requires six medium trucks,

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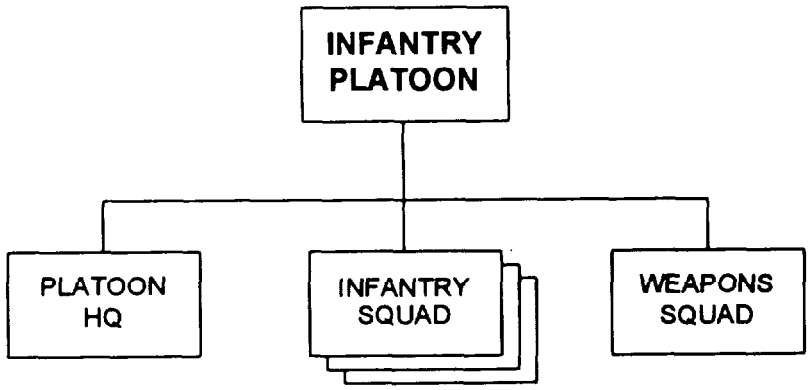


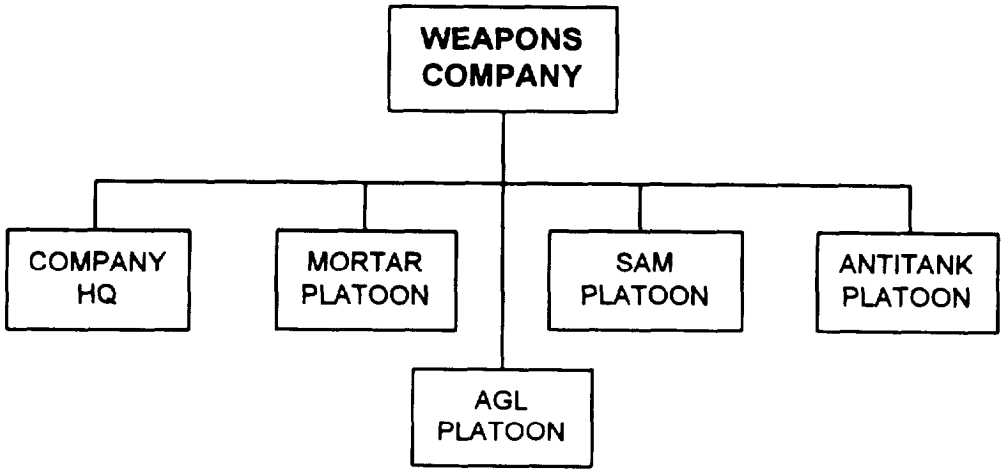
Platoon Leader.. ..... PM
Asst Plt Leader AK-74

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
9-mm Pistol, PM	9
5.45-mm Assault Rifle, AK-74	23
5.45-mm LMG, RPK-74	6
7.62-mm Sniper Rifle, SVD	1
7.62-mm GP MG, PKM	3
40-mm Under-Barrel Grenade Launcher, BG-15..	7

Equipment	Total
ATGL, RFG-7V	5
ATRL, RPG- 18/22	.6
Flamethrower, LPO/RPO	1
Night-Vision Goggles	4
Night-Vision Sight (Small Arms)	4
Night-Vision Sight (MG)	.3
Radio, VHF, Manpack, Low-Power..	.5

NOTE: An infantry platoon in a motorized infantry battalion does not have organic transportation assets. Rather, it relies on the brigade-level troop transport company to provide trucks for troop movement. Movement of an infantry platoon requires two medium trucks.



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
82-mm Mortar, M1937	3
SAM, Shoulder Fired..	9
ATGM, Manpack, AT-7/SAXHORN	3
73-mm Recoilless Gun, SPG-9	2
9-mm Pistol, PM	20
5.45-mm Assault Rifle, AK-74	66
40-mm Under-Barrel Grenade Launcher, BG-15..	4
30-mm Automatic Grenade Launcher, AGS-17..	6
ATGL, RPG-7V	3

Equipment	Total
ATRL, RPG- 18/22	.2
Rangefinder, Stereoscopic, DS-1 or DM-09/DAK-1	1
Periscopic Aiming Circle, PAB2A..	1
Collimator	.3
Night-Vision Sight (AGL)	.6
Night-Vision Sight (Small Arms).	12
Radios:	
VHF, Manpack, Low-Power..	13
VHF, Portable, Very-Low-Power..	.4

NOTES:

1. The motorized infantry battalion does not have organic transportation assets to move its weapons company. Rather, it relies on the brigade-level weapons transport company to provide trucks for movement over longer distances. Movement of the weapons company requires 3 utility trucks and 12 light trucks.
2. Some motorized infantry or infantry battalions may have a mortar battery with nine 82-mm mortars instead of a mortar platoon in the weapons company.

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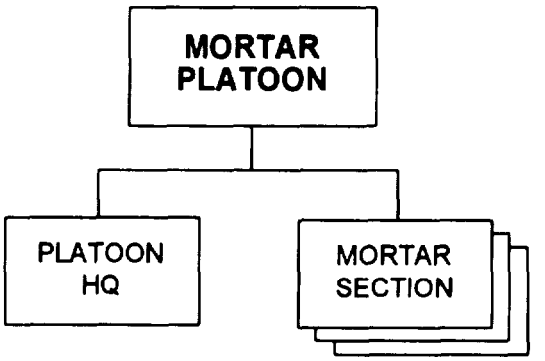

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
82-mm Mortar, M1937	3
9-mm Pistol, PM	4
5.45-mm Assault Rifle, AR-74	18
40-mm Under-Barrel Grenade Launcher, BG-15	4
ATRL, RPG- 18/22	3

Equipment	Total
Rangefinder, Stereoscopic, DS-1 or DM-09/DAK-1	1
Periscopic Aiming Circle, PAB2A	1
Collimator	3
Night-Vision Sight (Small Arms)	4
Radio, VHF, Manpack, Low-Power	4

NOTES:

1. In a motorized infantry battalion, one utility truck and three light trucks from the brigade-level weapons transport company can move this mortar platoon.
2. Some motorized infantry or infantry battalions may have a mortar battery with nine 82-mm mortars instead of this mortar platoon in the weapons company.

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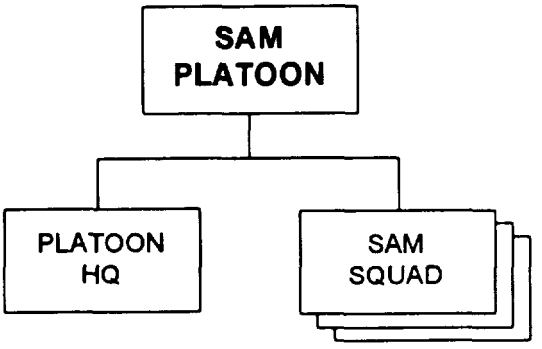

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
SAM, Shoulder-Fired.,	9
9-mm Pistol, PM.	2
5.45-mm Assault Rifle, AK-74.	9
Radio, VHF, Portable, Very-Low-Power	4

NOTE: In a motorized infantry battalion, three lights trucks from the brigade-level weapons transport company can move this SAM platoon.

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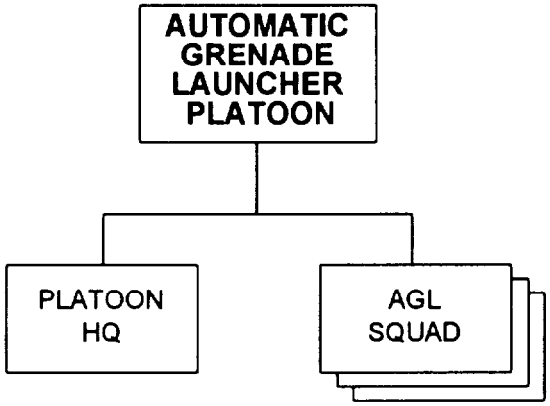

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
30-mm Automatic Grenade Launcher, AGS-17..	6
9-mm Pistol, PM.,	7
ATRL, RPG- 18/22	3
5.45-mm Assault Rifle, AR-74..	18
Night-Vision Sight (AGL)	6
Night-Vision Sight (Small Arms).	3
Radio, VHF, Portable, Low-Power..	4

NOTES:
1. In a motorized infantry battalion, three light trucks from the brigade-level weapons transport company can carry this AGL platoon.
2. Depending on the situation, the motorized infantry battalion commander may retain the entire AGL platoon under his own control, or he may allocate its squads to individual infantry companies.

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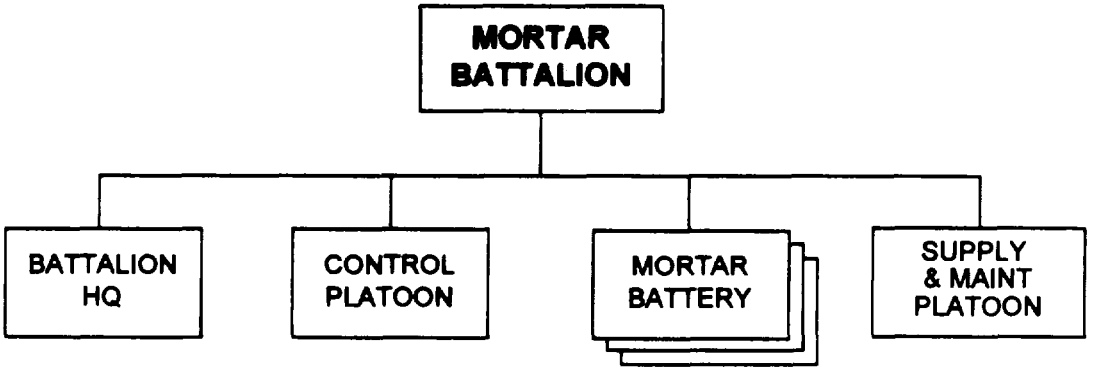

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
120-mm Mortar, M1943/2S12 or 82-mm Mortar, M1937/2B9	18
7.62-mm GP MG, PKM	6
ATGL, RPG-7V	18
Truck, Utility	3
Truck, Light	23
Truck, POL (5,000-Liter)	1
Van, Maintenance	1
Van, signal	1
Ambulance	1
Trailer, Cargo, 2-Axle	4
Trailer, Generator	1
Trailer, Kitchen	3
Trailer, POL (1,200-Liter)	1
Trailer, Water (900-Liter)	1

Equipment	Total
Rangefinder, Stereoscopic, DS-1	3
Periscopic Aiming Circle, PAB2A	3
Collimator	18
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Manpack, Low-Power	18
VHF, Portable, Low-Power or Very-Low-Power	2
VHF, Vehicle Mount, Medium-Power	3
HF/VHF, Vehicle Mount, Medium-Power	1
Warning Receiver	1

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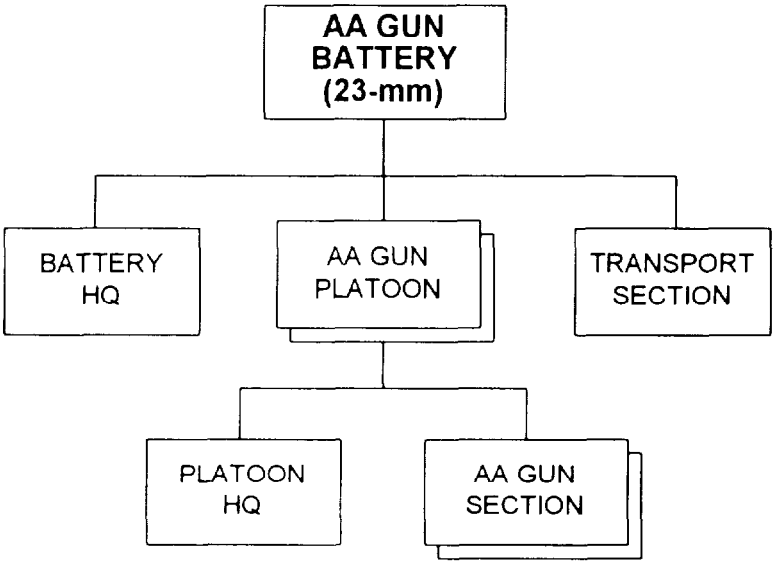
Antiaircraft Gun Battery (23-mm), Mtzd Inf Bde (Sep and Div), Inf Bde (Sep, Div, and Militia), and Abn Inf Bde, or Arty Regt or Arty Bde or MRL Bde or SAM Bn (SA-4) _____



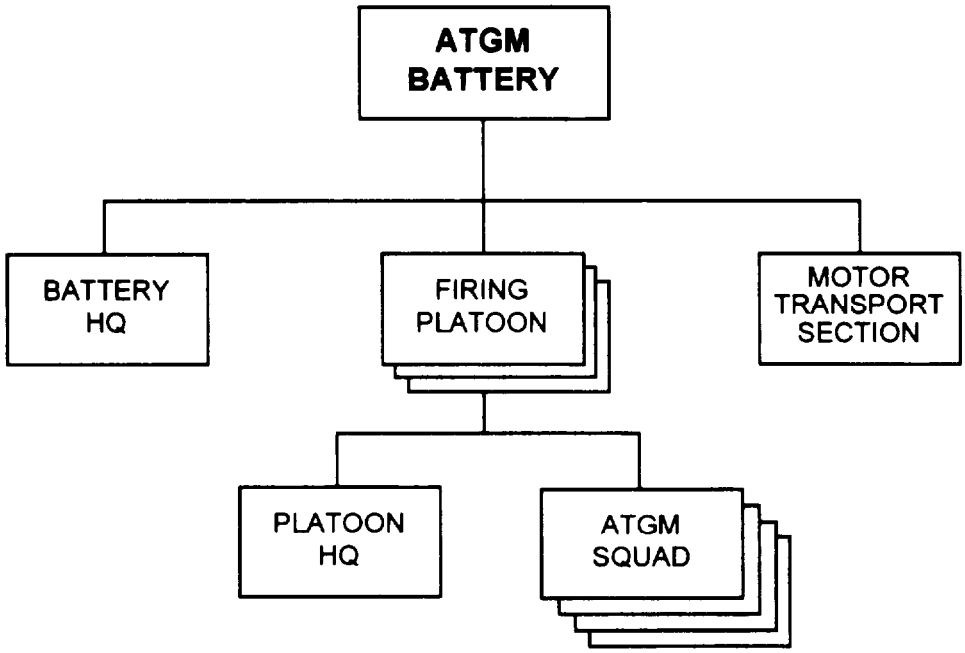
PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
23-mm AA Gun, ZU-23	8
Truck, Utility	1
Truck, Light	8

Equipment	Total
Radios:	
VHF, Manpack, Low-Power	3
Warning Receiver	1

NOTE: In motorized infantry brigades, this battery may have a mix of antiaircraft weapons. When it does, the mix is four ZU-23 and four ZSU-23-4.

ATGM Battery, Mtzd Inf Bde (Sep), Inf Bde (Sep), and Mech Inf Bde (Sop and Div), or Mtzd Inf Div, Inf Div, and Mech Inf Div



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM Vehicle, 9P133 w/AT-3/SAGGER or 9P148 w/AT-S/SPANDREL	12
ATGL, RPG-7V..	12
ACV, BRDM-2U..	4
Truck, Medium	3
Rangefinder, Stereoscopic, DS-1	1

Equipment	Total
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Manpack, Low-Power..	4
VHF, Vehicle Mount, Medium-Power..	16

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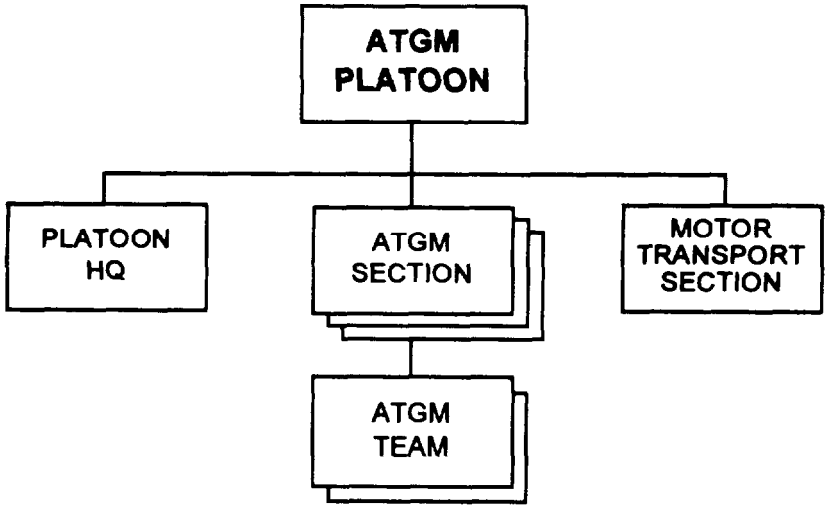

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM, Manpack, AT-4/SPIGOT	6
ATRL, RPG-18/22	6
Truck, Light	3

Equipment	Total
Radios:	
VHF, Manpack, Low-Power	3
VHF, Portable, Low-Power	4

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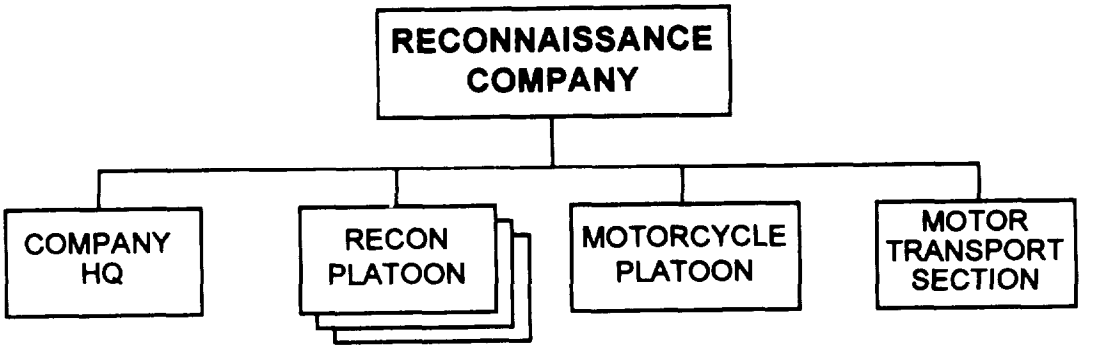
Reconnaissance Company, Mtzd Inf Bde (Sop) and Inf Bde (Sop), or Mtzd Inf Div and Inf Div, or MD



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
9-mm Pistol, PM	6
5.45-mm Assault Rifle, AK-74	87
5.45-mm LMG, RPK-74	10
40-mm Under-Barrel Grenade Launcher, BG-15..	17
ATRL, RPG- 18/22	10
Truck, Utility	1
Truck, Medium	3
Motorcycle.	9
Night-Vision Goggles	17
Night-Vision Goggles (Driver)	.4
Night-Vision Sight (Small Arms)	13
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	3
Radios:	
VHF, Manpack, Low-Power	11
VHF, Portable, Low-Power	4
VHF, Vehicle Mount, Medium-Power	1
HF, Vehicle Mount, Medium-Power	1
Warning Receiver	1

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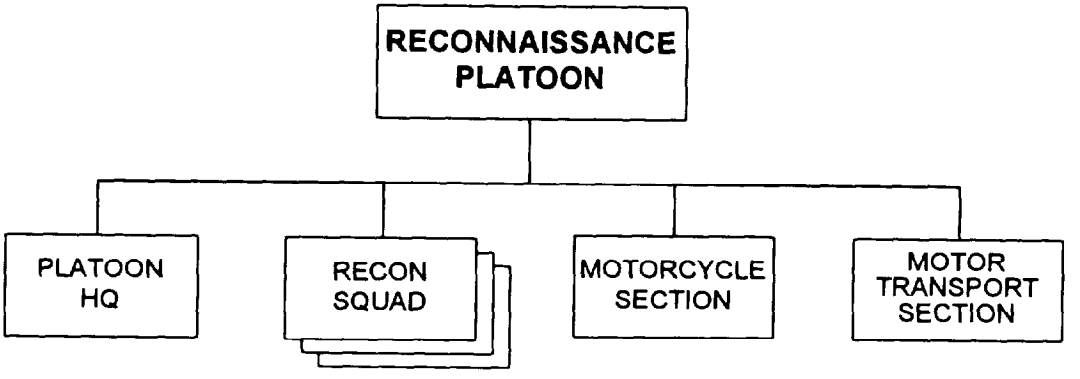

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
9-mm Pistol, PM	1
5.45-mm Assault Rifle, AR-74	28
5.45-mm LMG, RPK-74	3
40-mm Under-Barrel Grenade Launcher, BG-15	4
ATRL, RPG-18/22	3
Motorcycle	3
Truck, Medium	1

Equipment	Total
Night-Vision Goggles	5
Night-Vision Goggles (Drivers)	1
Night-Vision Sight (Small Arms)	4
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Manpack, Low-Power	3
VHF, Portable, Low-Power	1

NOTE: In some cases, the medium truck in the motor transport section may carry a 12.7-mm HMG or a 30-mm automatic grenade launcher. This weapon provides a minimum of fire support for the unit during movement by vehicle,

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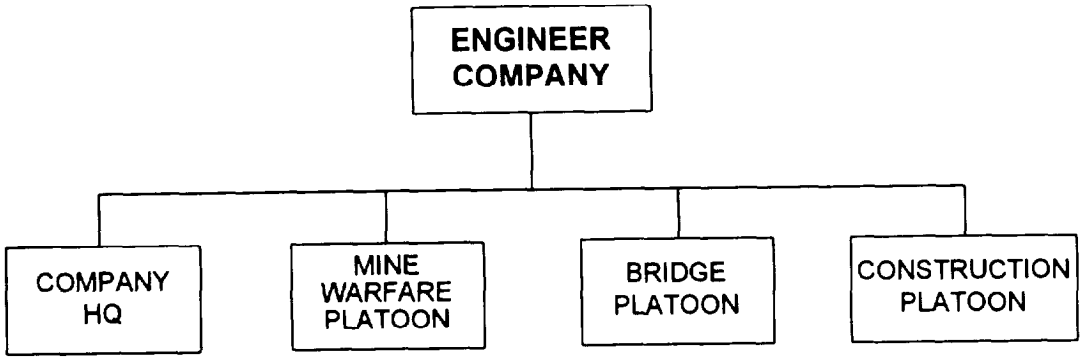

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATRL, RPG- 18/22	4
Flamethrower, LPO/RPO	4
Truck, Utility,	4
Truck, Medium	9
Truck, Crane	2
Truck, Dump	2
Truck, Water Purification	1
Van, Maintenance	1
Van, Signal	1
Trailer, Cargo, 1-Axle	6*
Trailer, Cargo, 2-Axle	2
Trailer, Kitchen	1
Trailer, Water (900-Liter)	1

Equipment	Total
Bridge, Truck-Launched	4
Ditching Machine, PZM/TMK	4**
Route-Clearing Vehicle, BAT/PKT	1**
Minelayer, PMR	3
Mine Detector, DIM	1
Radios:	
VHF, Vehicle Mount, Medium-Power	1
HF or VHF, Manpack, Low-Power	4
HF, Vehicle Mount, Medium-Power	1

NOTES: The motorized infantry division or infantry division normally has only an engineer company organic to it. However, such a division would probably receive additional support from national-level engineer organizations.

* An engineer company in a motorized infantry brigade or division normally does not have the six l-axle cargo trailers shown here.

** An engineer company in an infantry brigade normally does not have ditching machines or a route-clearing vehicle.

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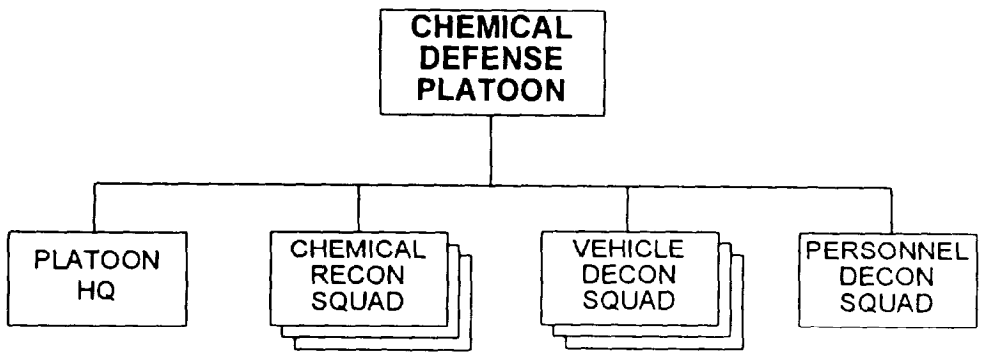
Chemical Defense Platoon, Mtzd Inf Bde (Sep and Div), Mech Inf Bde (Sep and Div), and Tank Bde, or Arty Regt or SP Arty Regt or Arty Bde or Air Defense Regt or AA Gun Regt or MRL Bde or SAM Regt (SA-6 and SA-8) or SAM Bde (SA-2, SA-3, SA-4, and SA-11) or Engr Bde _____



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Chemical Recon Vehicle, BRDM-2RKh or RKhM*	3
Truck, Decon, ARS-12U/14	3
Truck, Decon, DDA-53166	1
Truck, Water (2,000-Liter)	2
Trailer, Water (1,200-Liter)	2
Radios:	
VHF, Vehicle mount, Medium-Power	3
HF, Manpack, Low-Power	1

* The tracked RKhM is more common in mechanized infantry, tank, and SP artillery units. In other units, the wheeled BRDM-2RKh is more common, and even the truck-mounted UAZ-69RKh may appear.

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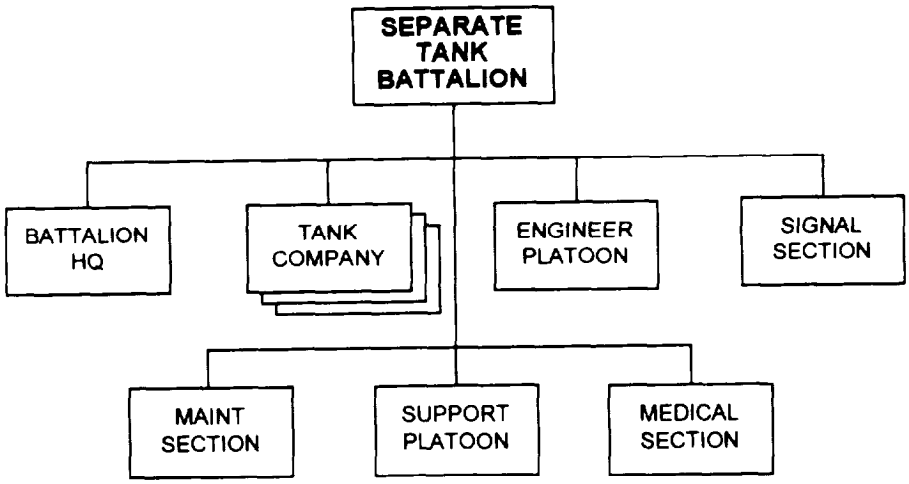

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	22-Tank	31-Tank
Medium Tank, T-55K/62K (Command Vehicle)	1	1
Medium Tank, T-55/62	21	30
ACV, BTR (R-145BM)	2	2
ACV, BMP-1K/2K	1	1
ATGL, RPG-7V	2	2
9-mm Pistol, PM	80	110
5.45-mm Assault Rifle, AK-74/AKS-74	73	79
Flamethrower, LPO/RPO	2	2
Truck, Utility	1	1
Truck, Light	1	1
Truck, Medium	12	13
Truck, Crane	1	1
Truck, POL (5,000-Liter)	4	5
Van, Kitchen	1	1
Van, Maintenance	1	1
Van, Signal	2	2
Ambulance	1	1
Armored Recovery Vehicle	2	2
Bridge, Tank-Launched	1	1
Ditching Machine, BTM/MDK	1	1
Mineclearing Plow	6	9
Mine Roller-Plow	3	3
Dozer Blade, BTU	1	1
Route-Clearing Vehicle, BAT/PKT	1	1
Trailer, Cargo, l-Axle	1	1
Trailer, Cargo, 2-Axle	7	7
Trailer, Generator	3	3
Trailer, POL (4,200-Liter)	-4	5
Trailer, Water (900-Liter)	1	1
Night-Vision Goggles	2	2
Night-Vision Sight (Small Arm)	11	11
Radios:		
VHF, Manpack, Low-Power	5	5
VHF, Vehicle Mount, Medium-Power	28	37
HF, Manpack, Low-Power	2	2
HF, Vehicle Mount, Medium-Power	6	6
Radio Relay, VHF/UHF	2	2
Warning Receiver	1	1

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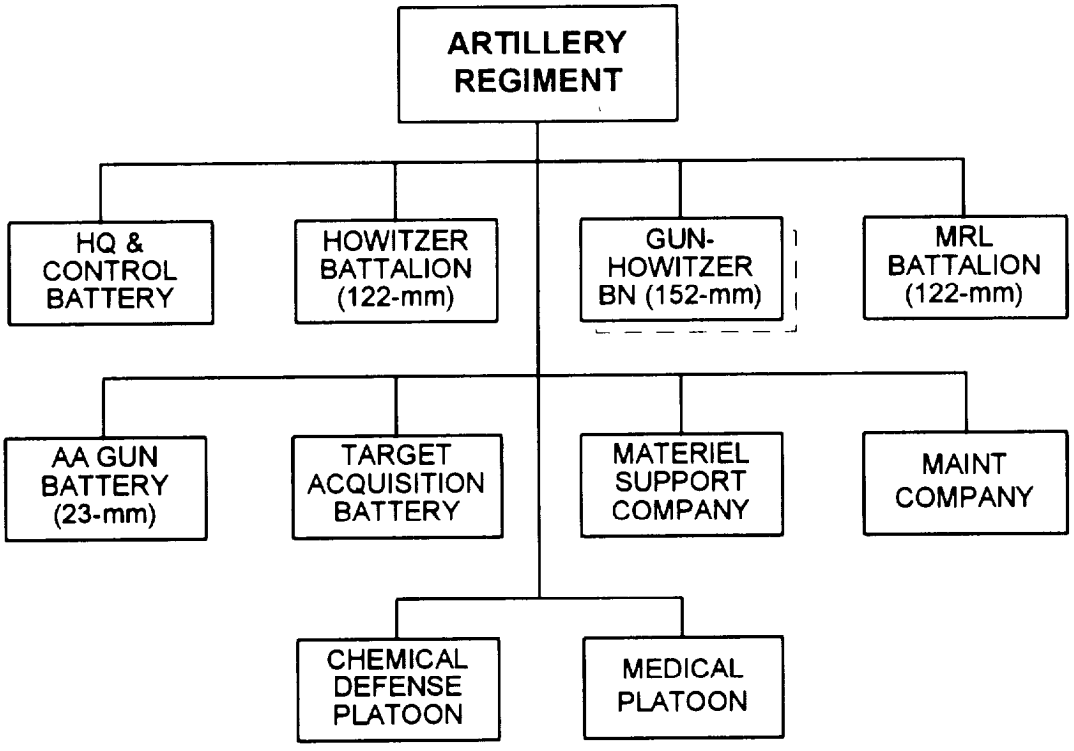

NOTES:

1. Divisions always have regiments with only one of each type of battalion. The equipment listing below does not include a second gun-howitzer battalion.
2. Most regiments have one of each type of battalion: howitzer, gun-howitzer, and MRL. Regiments with two 152-mm gun-howitzer battalions are more common in districts with more than three maneuver brigades.

(continued)

Principal Items of Equipment	*HQ & Control Btry*	*Howitzer Bn (122-mm)*	*Howitzer Bn (152-mm)*	*MRL Bn (122-mm)*	*AA Gun Btry (23-mm)*	*Target Acquisition Btry*	*Materiel Support Co*	*Maintenance Co*	*Chemical Defense Plt*	*Medical Plt*	*TOTAL*
ARMORED VEHICLES											
ACV, BTR (R-145BM)	2					1					3
Chemical Recon Vehicle, BRDM-2RKh	1								3		4
APC, Radar, MT-LB (SNAR-10)*						1					1
APC, Radar, MT-LB (ARK-1)**						1					1
ACRV, 1V18 (Battery COP)		3	3	3							9
ACRV, 1V19 (Battalion COP)		1	1	1							3
WEAPONS											
122-mm Howitzer, D-30		18									18
152-mm Gun Howitzer, D-20			18								18
122-mm MRL, BM-21				18							18
23-mm AA Gun, ZU-23					8						8
ATGL, RPG-7V	4	6	6	6				4			26
SAM, Shoulder-Fired	3	18	18	18							57
TRUCKS											
ACRV, 1V110 (Battery FDC)		3	3	3							9
ACRV, 1V111 (Battalion FDC)		1	1	1							3
Truck, Utility	7	1	1	1	1		1	1			13
Truck, Light	2	9	9		8	3	1			1	33
Truck, Medium	1	34	34	37		3	32	3		2	146
Truck, Decon, ARS-12U/14									3		3
Truck, Decon, DDA-53/66									1	1	2
Truck, Crane								1			1
Truck, POL (5,000-L)		2	2	3			6				13
Truck, Recovery								1			1
Truck, Water (2,000-L)									2		2
Van, Hospital										1	1
Van, Maintenance		1	1	3		4	2	6			17
Van, Signal	3	4	4	4							15
Van, Survey						1					1
Ambulance		1	1	1						4	7
TRAILERS											
Trailer, Cargo, 1-Axle	1					1					2
Trailer, Cargo, 2-Axle		11	11	27			20	3			72
Trailer, Generator	2	1	1	2		2		2			10
Trailer, Kitchen	1	4	4	3		1				1	14
Trailer, POL (4,200-L)		2	2	3			6				13
Trailer, Water (900-/1,200-L)		1	1	1		1	2		2	1	9
Trailer, Welding								1			1
RADARS											
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1	1	1			1					4

NOTES:

* This system includes the BIG FRED battlefield surveillance radar.

** This system includes the RICE BAG countermortar/counterbattery radar.

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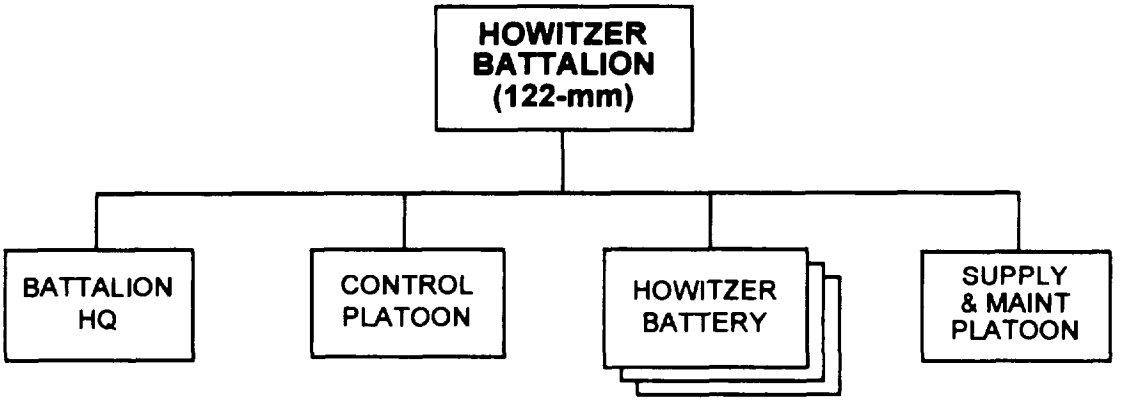
Principal Items of Equipment	*HQ & Control Btry*	*Howitzer Bn (122-mm)*	*Howitzer Bn (152-mm)*	*MRL Bn (122-mm)*	*AA Gun Btry (23-mm)*	*Target Acquisition Btry*	*Materiel Support Co*	*Maintenance Co*	*Chemical Defense Plt*	*Medical Plt*	*TOTAL*
RADIOS											
VHF, Manpack, Low-Power	6	14	14	18	3	13	1	1		1	71
VHF, Portable, Low-Power	1	23	23								47
VHF, Vehicle Mount, Medium-Power	4	8	8	6		4			3		33
HF, Manpack, Low-Power	1								1		2
HF, Vehicle Mount, Medium-Power	5										5
HF/VHF, Vehicle Mount, Med-Power	3	4	4	6							17
HF/VHF, Vehicle Mount, High-Power	1										1
Radio Relay, VHF/UHF	1										1
Warning Receiver	1	1	1	1	1	1					6
MISCELLANEOUS											
Rangefinder, Laser, SAGE GLOSS	1	4	4			2					11
Sound-Ranging Set						1					1

122-mm Howitzer Battalion, Mtzd Inf Bde (Sep) and Inf Bde (Sep), or Arty Regt



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
122-mm Howitzer, D-30	18
ACRV, 1V110 (Battery FDC)	3
ACRV, 1V18 (Battery COP)	3
ACRV, 1V19 (Battalion COP)	1
ACRV, 1V111 (Battalion FDC)	1
SAM, Shoulder-Fired	18
ATGL, RPG-7V	6
7.62-mm GP MG, PKM	18
Truck, Utility	1
Truck, Light	9
Truck, Medium	34
Truck, POL (5,000-Liter)	2
Van, Maintenance	1
Van, Signal	4
Ambulance	1
Trailer, Cargo, 2-Axle	11

Equipment	Total
Trailer, Generator	1
Trailer, Kitchen	4
Trailer, POL (4,200-Liter)	2
Trailer, Water (900-Liter)	1
Rangefinder, Laser, SAGE GLOSS	4
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Manpack, Low-Power	14
VHF, Portable, Low-Power or Very-Low-Power	23
VHF, Vehicle Mount, Medium-Power	8
HF/VHF, Vehicle Mount, Medium-Power	4
Warning Receiver	1

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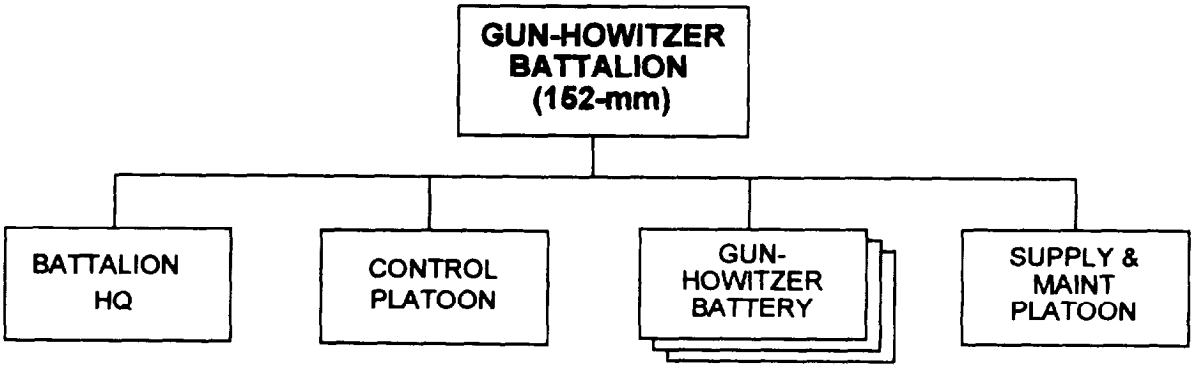

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
152-mm Gun-Howitzer, D-20	18
ACRV, 1V110 (Battery FDC)	3
ACRV, lV18 (Battery COP)	3
ACRV, 1V19 (Battalion COP)	1
ACRV, 1V111 (Battalion FDC)	1
SAM, Shoulder-Fired	18
ATGL, RPG-7V	6
7.62-mm GP MG, PKM	18
Truck, Utility	1
Truck, Light	9
Truck, Medium	34
Truck, POL (5,000-Liter)	2
Van, Maintenance	1
Van, Signal	4
Ambulance	1
Trailer, Cargo, 2-Axle	11

Equipment	Total
Trailer, Generator	1
Trailer, Kitchen	4
Trailer, POL (4,200-Liter)	2
Trailer, Water (900-Liter)	1
Rangefinder, Laser, SAGE GLOSS	4
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Manpack, Low-Power	14
VHF, Portable, Low-Power or Very-Low-Power	23
VHF, Vehicle Mount, Medium-Power	8
HF/VHF, Vehicle Mount, Medium-Power	4
Warning Receiver	1

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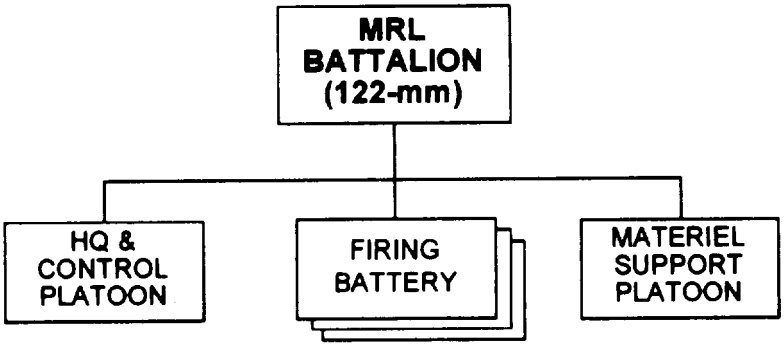

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
122-mm MRL, BM-21	18
ACRV, 1V110 (Battery FDC)	3
ACRV, 1V18 (Battery COP)	3
ACRV, 1V19 (Battalion COP)	1
ACRV, IV111 (Battalion FDC)	1
SAM, Shoulder-Fired	18
ATGL, RPG-7V	6
Truck, Utility	1
Truck, Medium	37
Truck, POL (5,000-Liter)	3
Van, Maintenance	3
Van, Signal	4
Ambulance	1

Equipment	Total
Trailer, Cargo, 2-Axle	27
Trailer, Generator	2
Trailer, Kitchen	3
Trailer, POL (4,200-Liter)	3
Trailer, Water (1,200-Liter)	1
Radios:	
VHF, Manpack, Low-Power	18
VHF, Vehicle Mount, Medium-Power	6
HF/VHF, Vehicle Mount, Medium-Power	6
Warning Receiver	1

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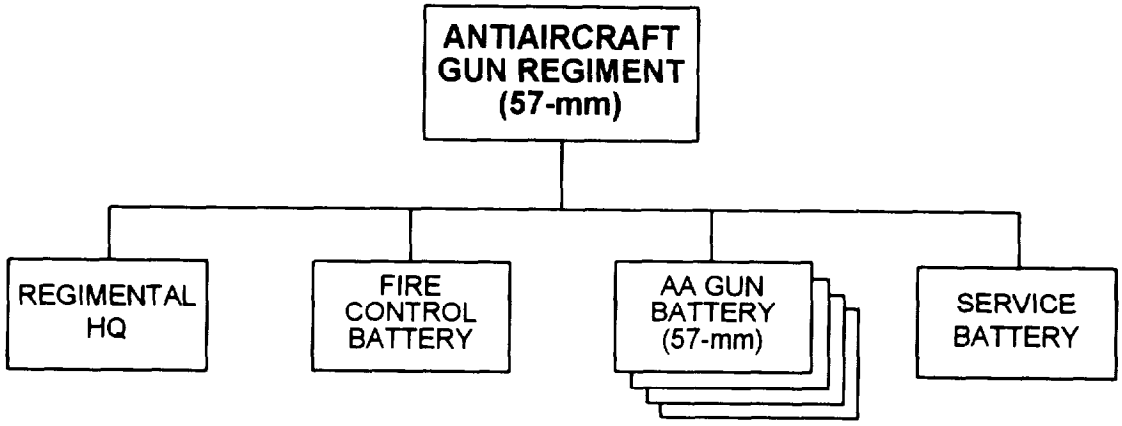

NOTE: Some AA gun regiments at army level or in the Air Defense Command (ADC) may have the 100-mm AA gun, KS-19. Regiments so equipped may have the organization shown above or have three battalions, each with three firing batteries. In this organization, regimental total KS-19 would be 54 systems.

(continued)

Principal Items of Equipment	*Regimental HQ*	*Fire Control Btry*	*AA Gun Btry (57-mm) (4x)*	*Service Btry*	*TOTAL*
ARMORED VEHICLES					
APC, BTR-60 (PU-12)	2				2
WEAPONS					
57-mm AA Gun, S-60			24		24
SAM, Shoulder-Fired	3		12		15
TRUCKS					
Truck, Utility	1	3	4	2	10
Truck, Light	3		4		7
Truck, Medium			36	33	69
Truck, Chemical Recon, UAZ-69RKh		1			1
Truck, Crane				1	1
Truck, POL (5,000-L)			4	2	6
Truck, Water (2,000-L)				1	1
Van, Maintenance				4	4
Van, Radar		2	4		6
Van, Signal	2	1			3
Ambulance	1				1
TRAILERS					
Trailer, Cargo, 2-Axle				5	5
Trailer, Generator	1	1	4	2	8
Trailer, Kitchen	1		4	3	8
Trailer, POL (1,200-L)			4		4
Trailer, POL (4,200-L)				2	2
Trailer, Water (900-/1,200-L)			4	3	7
RADARS					
Aer. Surv./Tgt Acq, FLAT FACE		2			2
Radar, Fire Control, FLAP WHEEL			4		4
RADIOS					
VHF, Manpack, Low-Power	1	1	18	2	22
VHF, Portable, Very-Low-Power	1	1	12		14
VHF, Vehicle Mount, Medium-Power	2				2
HF, Manpack, Low-Power				1	1
HF, Vehicle Mount, Medium-Power	2				2
HF/VHF, Vehicle Mount, Med-Power	1	1			2
HF/VHF, Vehicle Mount, High-Power	1	1			2
Radio Relay, VHF/UHF	1				1
Warning Receiver	1		4		5

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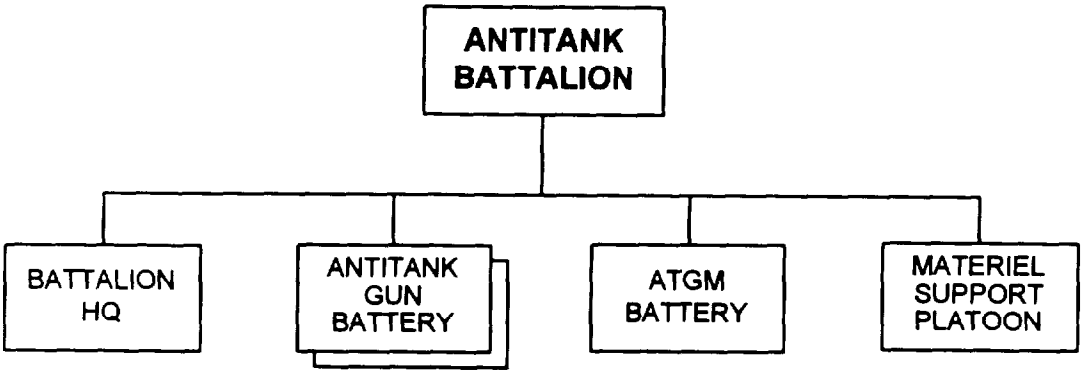
Antitank Battalion (Standard), Mtzd Inf Div or MD or Army or National



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM Vehicle, 9P133, w/AT-3/SAGGER or 9P148, w/AT-S/SPANDREL	9
100-mm Antitank Gun, T-12/MT-12	12
ATGL, RPG-7V	9
ACV, BTR (R-145BM)/BRDM-2U	1
ACV, BRDM-2U	4
Truck, Utility..	3
Truck, Light..	.4
Truck, Medium	26
Truck, POL (5,000-Liter).	.3
Van, Maintenance	2
Van, Signal	2
Ambulance	1
Trailer, Cargo, 2-Axle	10
Trailer, Generator	1

Equipment	Total
Trailer, Kitchen..	1
Trailer, POL (4,200-Liter)	1
Trailer, Water (900-Liter)	1
Rangefinder, Stereoscopic, DS-1	3
Radar, Battlefield Surveillance, Man-Portable, PSNR-1, or TALL MIKE	4
Radios:	
VHF, Manpack, Low-Power..	10
VHF, Vehicle Mount, Medium-Power..	.28
HP/VHF, Vehicle Mount, Medium-Power..	.3
HP, Vehicle Mount, Medium-Power..	1
Radio Relay, VHF/UHF	1
Warning Receiver..	1

NOTES:

1. Some antitank units from the national asset pool have three antitank gun batteries instead of two antitank gun batteries and one ATGM battery. An army, region, district, or division may receive such a battalion, known as an antitank gun battalion.

2. Separate mechanized infantry brigades and well-equipped districts can have either the battalion as depicted above or a battalion composed entirely of ATGM batteries, in which case it will be called an ATGM battalion During force modernization, the tendency is for districts/brigades with offensive contingency missions to have an ATGM battalion, whereas districts/brigades with primarily defensive contingency missions have the standard antitank battalion.

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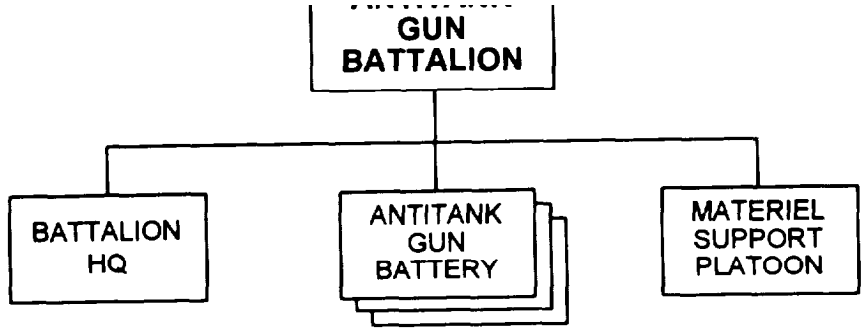

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
100-mm Antitank Gun, T-12/MT-12	18
ACV, BTR (R-145BM)/BRDM-2U	1
Truck, Utility	3
Truck, Light	4
Truck, Medium	31
Truck, POL (5,000-Liter)	3
Van, Maintenance	2
Van, Signal	2
Ambulance	1
Trailer, Cargo, 2-Axle	11
Trailer, Generator	1
Trailer, Kitchen,,	1
Trailer, POL (4,200-Liter)	3
Trailer, Water (900-Liter)	1

Equipment	Total
Rangefinder, Stereoscopic, DS-1	3
Radar, Battlefield Surveillance, Man-Portable, PSNR-1, or TALL MIKE	4
Radios:	
VHF, Manpack, Low-Power	7
VHF, Vehicle Mount, Medium-Power	22
HP/VI-IF, Vehicle Mount, Medium-Power	3
HF, Vehicle Mount, Medium-Power	1
Radio Relay, VHF/UHF	1
Warning Receiver	1

NOTES:

1. Some antitank units from the national asset pool are antitank gun battalions. They have three antitank gun batteries instead of two and one ATGM battery of a standard antitank battalion.
2. The General Staff can allocate an antitank gun battalion to an army or military region. In turn, the army or region can allocate such a battalion to a division or district expecting the greatest armor threat.

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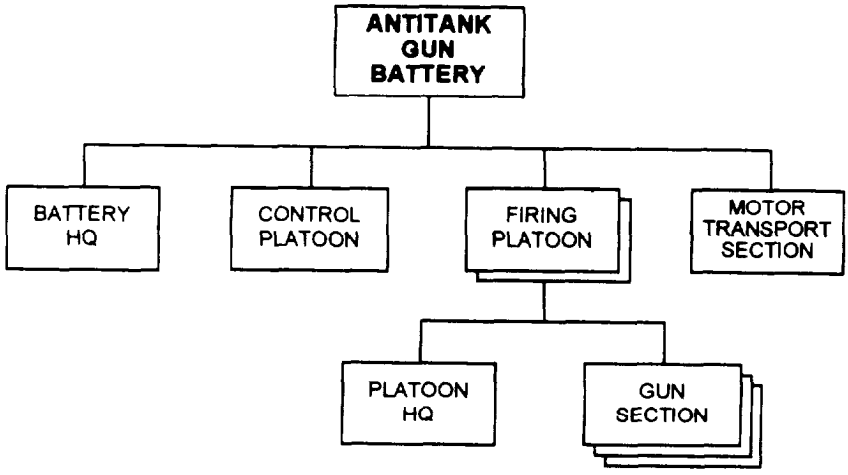
Antitank Gun Battery, Antitank Bn (Standard) or Antitank Gun Bn



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
100-mm Antitank Gun, T-12/MT-12	6
Truck, Medium	8
Trailer, Cargo, 2-Axle	1
Rangefinder, Stereoscopic, DS-1	1
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1

Equipment	Total
Radios:	
VHF, Manpack, Low-Power	1
VHF, Vehicle Mount, Medium-Power	7

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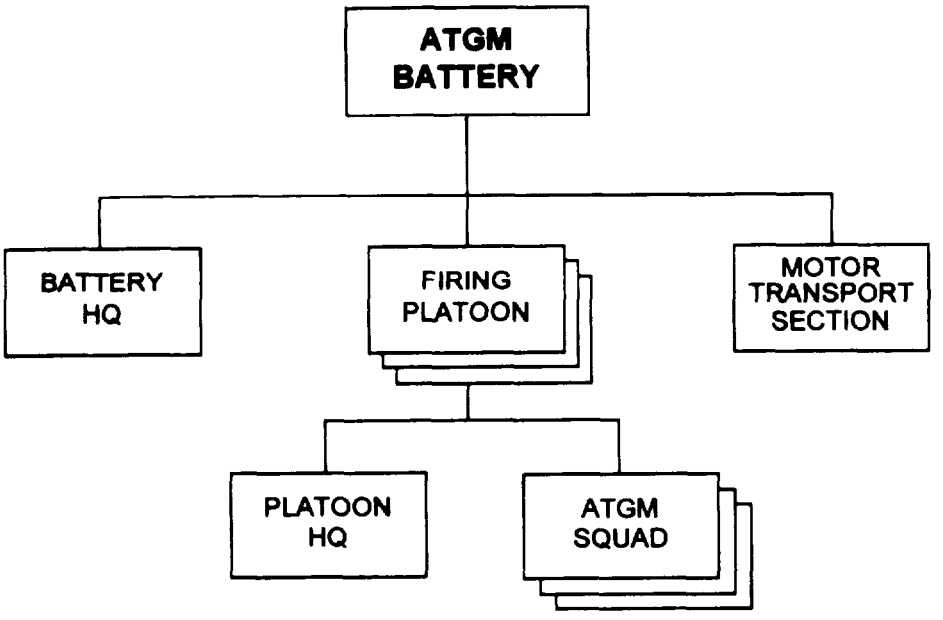

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM Vehicle, 9P133 w/AT-3/SAGGER or 9P148 w/AT-S/SPANDREL	9
ATGL, RPG-7V	9
ACV, BRDM-2U	4
Truck, Medium	3
Rangefinder, Stereoscopic, DS-1	1

Equipment	Total
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Manpack, Low-Power	4
VHF, Vehicle Mount, Medium-Power	13

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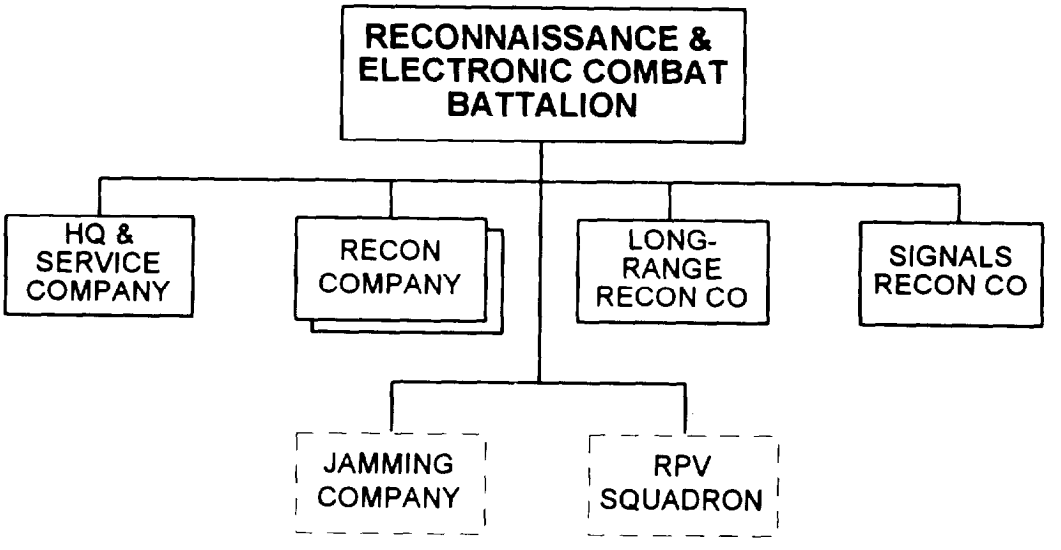

NOTES:

1. A reconnaissance and electronic combat (EC) battalion subordinate to the Directorate of Military Intelligence (DMI) would normally have an organic remotely-piloted vehicle (RPV) squadron. If the General Staff allocates a reconnaissance and EC battalion from the DMI to a military region or an expeditionary army, it normally includes an RPV squadron. District and divisional reconnaissance and EC battalions may or may not have an organic RPV squadron.
2. Some infantry divisions and more poorly equipped military districts may have a reconnaissance battalion that lacks a jamming company.
3. The equipment listing for the reconnaissance and EC battalion includes the assets of the jamming company as well as the RPV squadron.

(continued)

Principal Items of Equipment	HQ & Service Co	Recon Co (2x)	Long-Range Recon Co	Signals Recon Co	Jamming Co	RPV Sqdn	TOTAL
ARMORED VEHICLES							
ACV, BTR (R-145BM)	2						2
ACV, BRM-1K*	1	8					9
ACV, BRDM-2U			1				1
ASC, BRDM-2		12	12				24
REMOTELY-PILOTED VEHICLES							
RPV, Short-Range						4	4
RPV Launch Vehicle (Truck, Medium)						4	4
RPV Recovery Vehicle (Truck, Crane)						2	2
Van, Ground Control Station (RPV)						2	2
Van, Mission Control (RPV)						1	1
ELECTRONIC COMBAT SYSTEMS							
Radar Intercept/DF				3			3
Radio Intercept/DF, VHF/HF				7	3		10
Communications Jammer, VHF					6		6
Communications Jammer, HF					3		3
Proximity Fuze Jammer					9		9
TRUCKS							
Truck, Utility	4			1		4	9
Truck, Light	5			1	2	1	9
Truck, Medium	4					1	5
Truck, POL (5,000-L)	3						3
Truck, Water (2,000-L)	1						1
Van, Command	2			1	1	1	5
Van, Jammer					18		18
Van, Maintenance	1			1	1	1	4
Van, Signal	6						6
Van, Signals Reconnaissance				10	3		13
Ambulance	1						1
TRAILERS							
Trailer, Generator	1			11	21	3	36
Trailer, Kitchen	6			1	1	1	9
Trailer, POL (4,200-L)	3						3
Trailer, Water (900-L)	2			1	1	1	5
RADIOS							
VHF, Manpack, Low-Power	2	20	13	7		13	55
VHF, Vehicle Mount, Medium-Power	3	20	13		22	4	62
HF, Manpack, Low-Power	2	2	1	4			9
HF, Vehicle Mount, Medium-Power	1	2	1		1	1	6
HF/VHF, Vehicle Mount, Med-Power	2			4			6
HF/VHF, Vehicle Mount, High-Power	1			1			2
Radio Relay, VHF/UHF	1						1
Radio Telegraph	6						6
Warning Receiver	2	2	1	1	1	1	8

NOTE:
*This system includes the TALL MIKE battlefield surveillance radar

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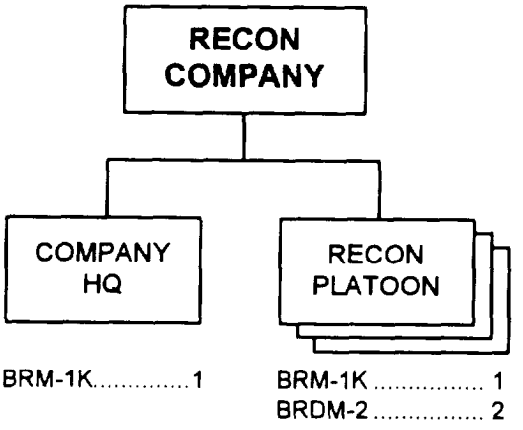

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BRM-1K*.	4
ASC, BRDM-2	6
9-mm Pistol, PM	22
5.45-mm Assault Rifle, AK-74	38
5.45-mm LMG, RPK-74	4
40-mm Under-Barrel Grenade Launcher, BG-15..	14
ATGL, RPG-7V	4
ATRL, RPG-18/22..	6
Night-Vision Goggles	10

Equipment	Total
Night-Vision Sight (Small Arms).	10
Radios:	
VHF, Manpack, Low-Power..	10
VHF, Vehicle Mount, Medium-Power..	10
HP, Vehicle Mount, Medium-Power..	1
HP, Manpack, Low-Power	1
Warning Receiver..	1

NOTES: Motorized infantry and infantry divisions, military districts, an expeditionary army, or the DMI could have either this reconnaissance company or a variant of the above with APCs, BTR-60/70/80 replacing the BRDM-2s.

* This system includes the TALL MIKE battlefield surveillance radar.

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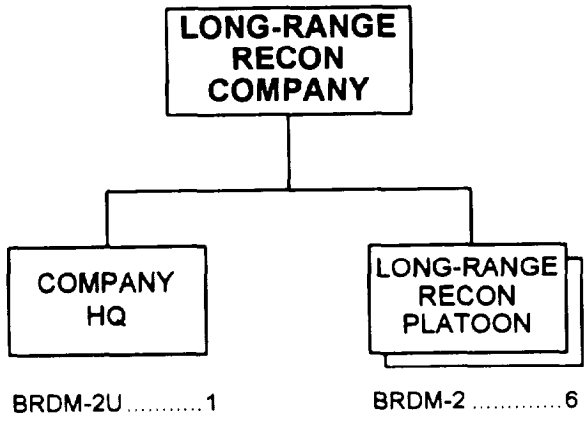

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BRDM-2U	1
ASC, BRDM-2	12
9-mm Pistol, PM..	16
5.45-mm Assault Rifle, AK-74	23
5.45-mm LMG, RPK-74..	13
40-mm Under-Barrel Grenade Launcher, BG-15..	13
ATRL, RPG-18/22..	13
Night-Vision Goggles	13

Equipment	Total
Night-Vision Sight (Small Arms)	13
Radios:	
VHF, Manpack, Low-Power..	13
VHF, Vehicle Mount, Medium-Power.	13
HP, Manpack, Low-Power	1
HP, Vehicle Mount, Medium-Power..	1
Warning Receiver..	1

NOTES:

1. Personnel in the long-range reconnaissance company have parachute training. Small teams of four to six men can enter the enemy rear area by parachute, helicopter, vehicle, or on foot. They can also land by transport helicopter with their combat vehicles,
2. A variant of the long-range reconnaissance company could have 12 APCs, BTR-60/70/80 instead of the BRDM-2s. In that case, the command vehicle could be either a BRDM-2U or a command variant of the BTR.

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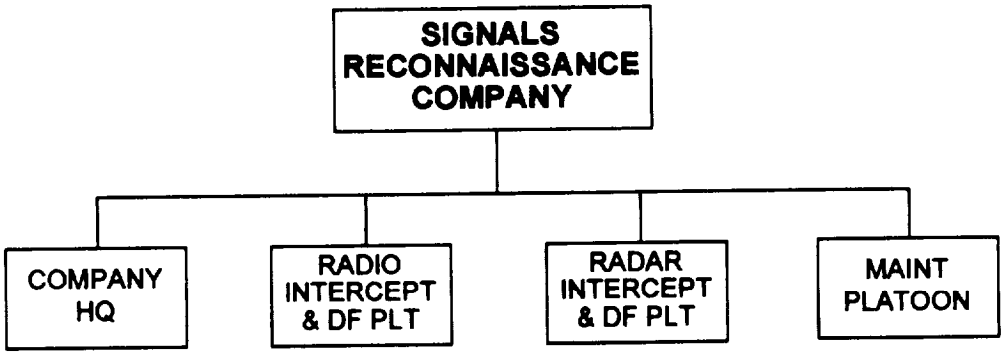

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Radio Intercept/Direction Finder, HF/VHF	7
Radar Intercept/Direction Finder	3
Truck, Utility	1
Truck, Light	1
Van, Command	1
Van, Maintenance	1
Van, Signals Reconnaissance	10
Trailer, Generator	11
Trailer, Kitchen	1
Trailer, Water (900-Liter)	1
Radios:	
VHF, Manpack, Low-Power	7
HF/VHF, Vehicle Mount, Medium-Power	4
HF/VHF, Vehicle Mount, High-Power	1
HF, Manpack, Low-Power	4
Warning Receiver	1

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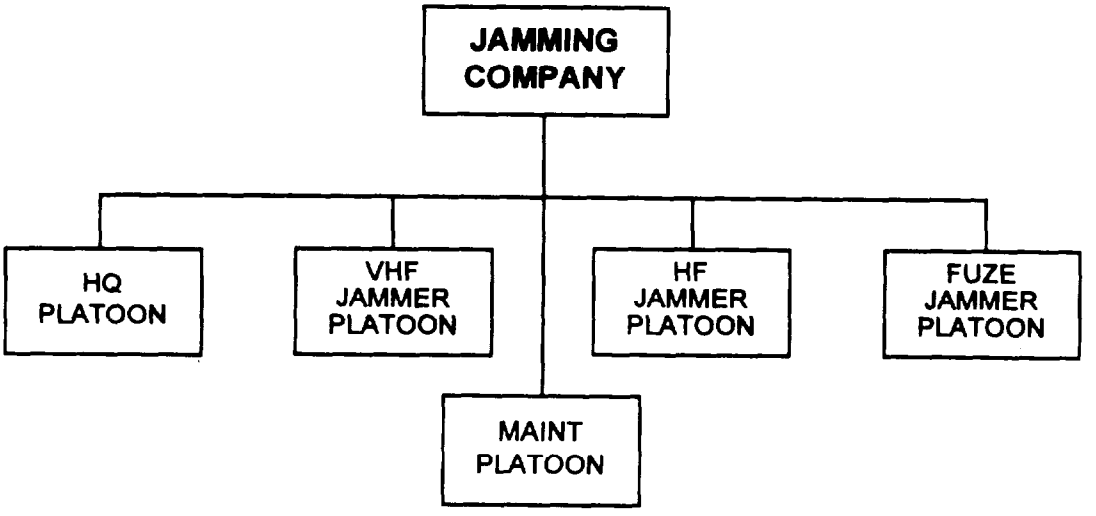

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Radio Intercept/Direction Finder, VHF/HF	3
Communications Jammer, VHF	6
Communications Jammer, HF	3
Proximity Fuze Jammer	9
Truck, Light..	2
Van, Command	1
Van, Jammer	18
Van, Maintenance	1
Van, Signals Reconnaissance..	3

Equipment	Total
Trailer, Generator.	21
Trailer, Kitchen	1
Trailer, Water (900-Liter)	1
Radios:	
VHF, Vehicle Mount, Medium-Power	22
HF, Vehicle-Mount, Medium-Power	1
Warning Receiver	1

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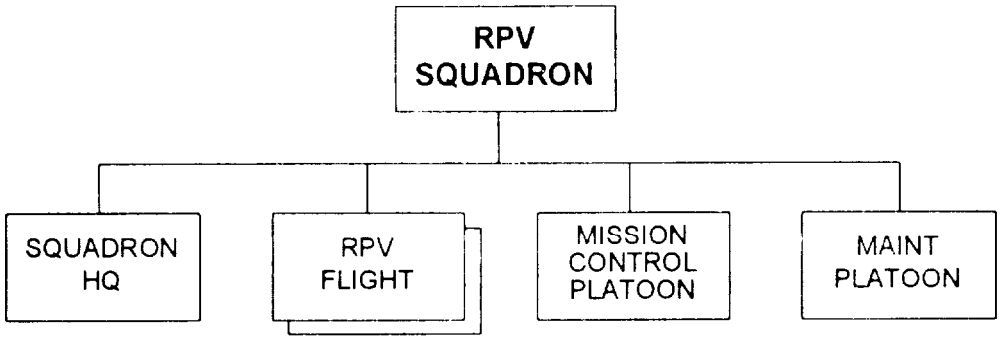

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
RPV Launch Vehicle (Truck, Medium)	4
RPV Recovery Vehicle (Truck, Crane)	2
Remotely-Piloted Vehicle (Short-Range)	4
Van, Mission Control (RPV)	1
Van, Ground Control Station (RPV)	2
Truck, Utility	4
Truck, Light	1
Truck, Medium	1
Van, Command	1

Equipment	Total
Van, Maintenance	1
Trailer, Generator	3
Trailer, Kitchen	1
Trailer, Water (NO-Liter)	1
Radios-	
VIIF, Manpack, Low-Power	13
VHF, Vehicle Mount, Medium-Power	4
HF, Vehicle Mount, Medium-Power	1
Warning Receiver	1

NOTE: An expeditionary army, the CDF, and higher- levels of command normally have a reconnaissance and EC battalion with an organic remotely-piloted vehicle (RPV) squadron. If the General Staff allocates a reconnaissance and EC battalion from the DMI to a region, it normally includes an RPV squadron. District and divisional reconnaissance and EC battalions may or may not have an organic RPV squadron. The equipment listing for the reconnaissance and EC battalion includes the RPV squadron

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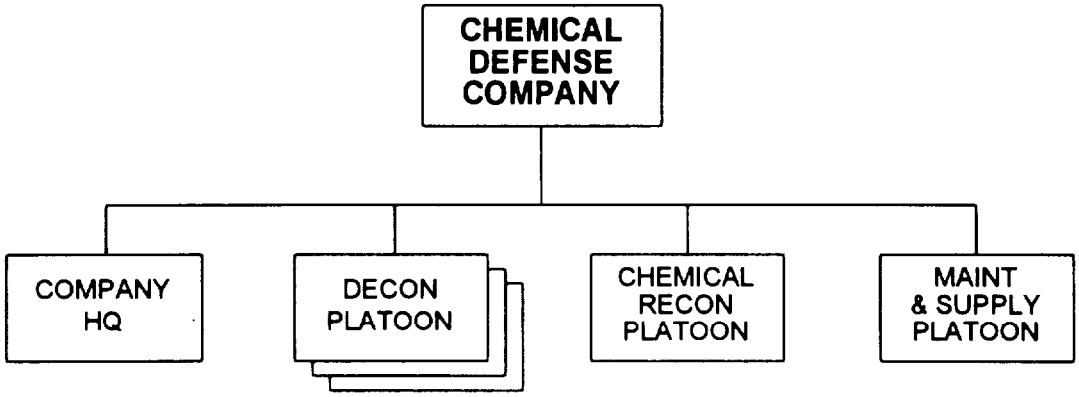

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Chemical Recon Vehicle, BRDM-2RKh*	4
Truck, Decon, ARS-12U/14	4
Truck, Decon, DDA-53/66**	8
Truck, Decon, TMS-65	2
Truck, Utility	2
Truck, Light	3
Truck, Medium	6
Truck, POL (5,000-Liter)	1

Equipment	Total
Truck, Water (2,000-Liter)	2
Trailer, POL (4,200-Liter)	1
Trailer, Water (1,200-Liter)	2
Trailer, Water (900-Liter)	2
Radios:	
VHF, Vehicle Mount, Medium-Power	4
HP, Manpack, Low-Power	2

NOTES:

* Some motorized infantry or infantry divisions may use the truck-mounted chemical reconnaissance vehicle UAZ-69RKh instead of the armored BRDM-2RKh.

** Some infantry divisions may use the single-axle DDP decontamination trailer, towed by a light truck, to perform the same personnel decontamination function as the truck-mounted DDA-53/66.

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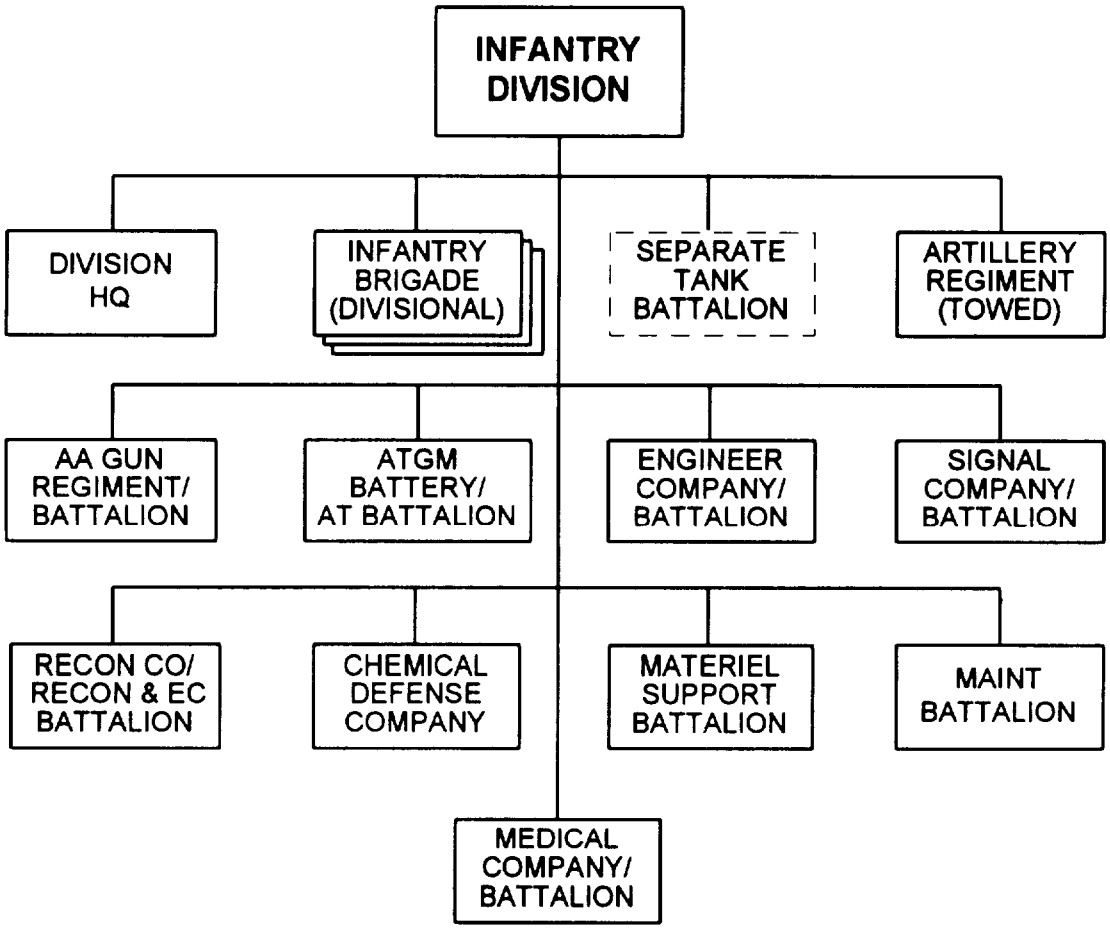

NOTES:

1. The basic maneuver units in this division are infantry brigades (divisional). Divisional brigades differ structurally from their separate counterparts normally found within districts. In rare cases, an infantry division may include a separate tank battalion.
2. Most infantry divisions have company-sized engineer, signal, reconnaissance, and medical units. However, some better-equipped infantry divisions may have battalion-sized units of these types
3. Divisions can either be standing or mobilized from the reserves. Standing divisions may exist in districts along an international border, in districts that contain historically threatened avenues of approach, or around critical cities/facilities, Standing divisions have the assets shown above, even before mobilization. Divisions mobilized from the reserves may draw the combat support and combat service support assets shown above from reserves or receive them from the national asset pool. The commander of the district in which a division is garrisoned or mobilized is also the division commander, as long as the division remains in that district.
4. Infantry divisions are less common than motorized infantry divisions.

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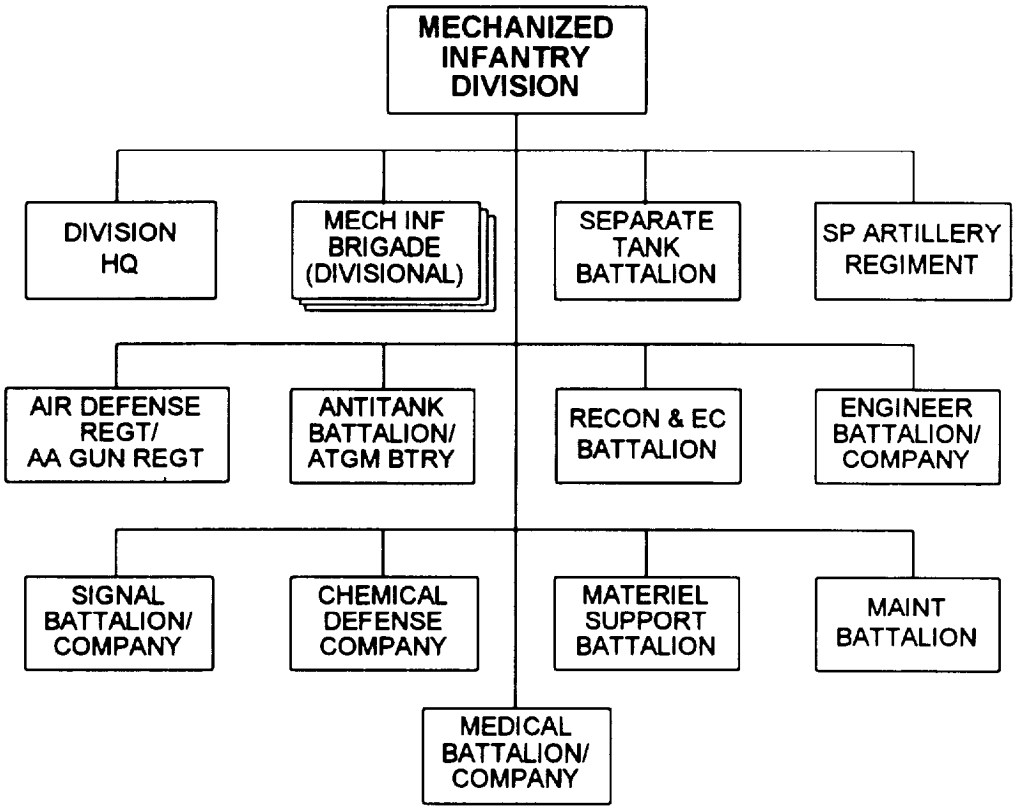

NOTES:

1. The basic maneuver units in this division are three mechanized infantry brigades (divisional). The normal mix is two APC-equipped brigades and one IFV-equipped brigade, or vice versa. These divisional brigades differ structurally from their separate counterparts normally found within military districts. In addition to its mechanized infantry brigades, this division normally has a separate tank battalion.
2. Most mechanized infantry divisions have battalion-sized antitank, engineer, signal, and medical units. However, some not-so-well-equipped mechanized infantry divisions may have only an ATGM battery and company-sized engineer, signal, and medical units.
3. Mechanized and motorized infantry divisions are normally the basic maneuver formations of an expeditionary army. Such an army, mobilized in one military region to conduct large-scale offensive operations, may include divisions resubordinated from other regions or districts.
4. Divisions can be either standing or mobilized from the reserves. Standing divisions may exist in districts along an international border, in districts that contain historically threatened avenues of approach, or around critical cities/facilities. Standing divisions have the assets shown above, even before mobilization. Divisions mobilized from the reserves may draw the combat support and combat service support assets shown above from reserves or receive them from the national asset pool. The commander of the district in which a division is garrisoned or mobilized is also the division commander, as long as the division remains in that district,
5. Mechanized infantry divisions are less common than motorized infantry divisions.

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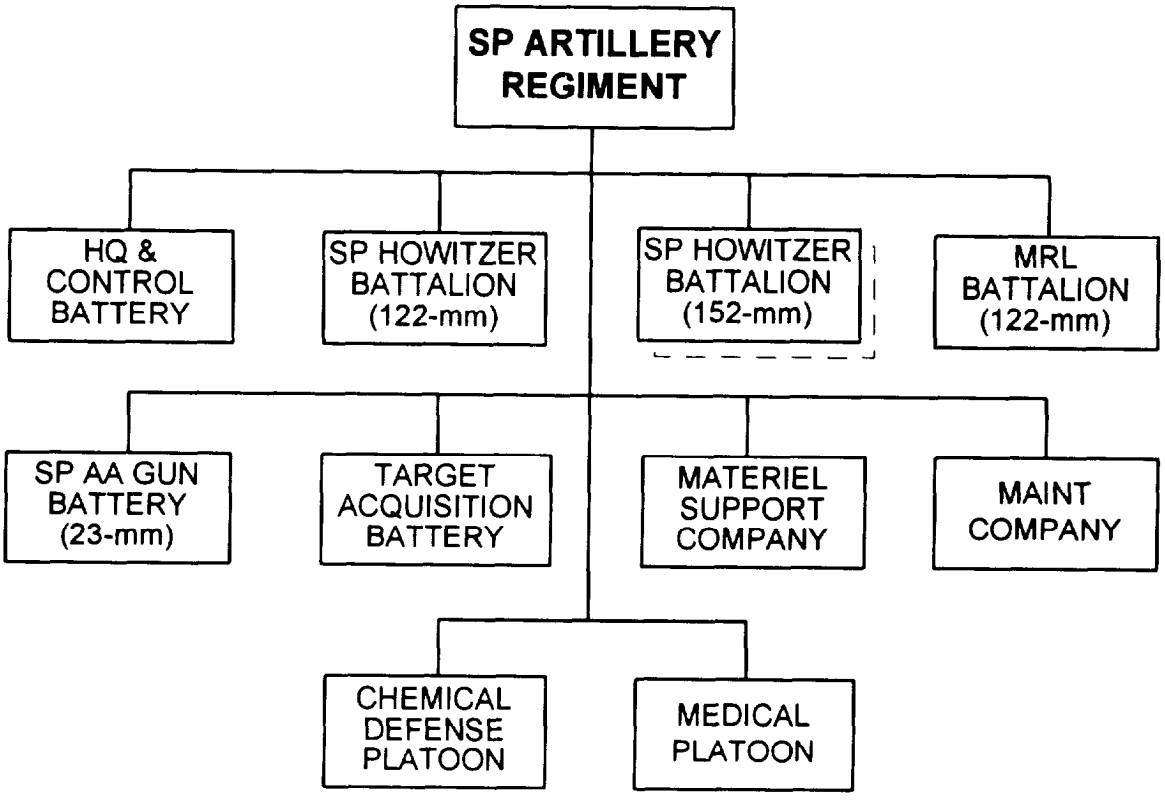

NOTES:

1. Divisions always have regiments with only one of each type of battalion. The equipment listing below does not include a second gun-howitzer battalion.
2. Most regiments have one of each type of battalion: howitzer, gun-howitzer, and MRL. Regiments with two 152-mm gun-howitzer battalions are more common in districts with more than three maneuver brigades.

(continued)

Principal Items of Equipment	HQ & Control Btry	SP Howitzer Bn (122-mm)	SP Howitzer Bn (152-mm)	MRL Bn (122-mm)	SP AA Gun Btry (23-mm)	Target Acquisition Btry	Materiel Support Co	Maintenance Co	Chemical Defense Plt	Medical Plt	TOTAL
ARMORED VEHICLES											
APC, BTR-60/70/80	1										1
APC, BTR-60 (PU-12)					1						1
ACV, BTR (R-145BM)	2					1					3
Chem Recon Vehicle, BRDM-2RKh/RKhM	1								3		4
Mobile Recon Post, PRP-3/4*	1	1	1			1					4
APC, Radar, MT-LB (SNAR-10)**						1					1
APC, Radar, MT-LB (ARK-1)***						1					1
ACRV, 1V13/1V13M/1V22		3	3								6
ACRV, 1V14/1V14M/1V23		3	3								6
ACRV, 1V15/1V15M/1V24		1	1								2
ACRV, 1V16/1V16M/1V25		1	1								2
ACRV, 1V18				3							3
ACRV, 1V19				1							1
WEAPONS											
122-mm SP Howitzer, 2S1		18									18
152-mm SP Howitzer, 2S3			18								18
122-mm MRL, BM-21				18							18
23-mm SP AA Gun, ZSU-23-4****					8						8
ATGL, RPG-7V	4	6	6	6				4			26
SAM, Shoulder-Fired	3	18	18	18							57
TRUCKS											
ACRV, 1V110 (Battery FDC)				3							3
ACRV, 1V111 (Battalion FDC)				1							1
Truck, Utility	6			1			1	1			9
Truck, Light	2	4			1	2	1			1	11
Truck, Medium	1	14	20	37	4	3	32	3		2	116
Truck, Decon, ARS-12U/14									3		3
Truck, Decon, DDA-53/66									1	1	2
Truck, Crane								1			1
Truck, POL (5,000-L)		2	4	3			6				15
Truck, Recovery								1			1
Truck, Water (2,000-L)									2		2
Van, Hospital										1	1
Van, Maintenance	1	2	2	3		4	2	6			20
Van, Signal	2	4	4	4							14
Van, Survey						1					1
Ambulance		1	1	1						4	7

NOTES:
* This system includes the SMALL FRED or TALL MIKE battlefield surveillance radar.
** This system includes the BIG FRED battlefield surveillance radar.
*** This system includes the RICE BAG countermortar/counterbattery radar.
**** This system includes the GUN DISH fire control radar.

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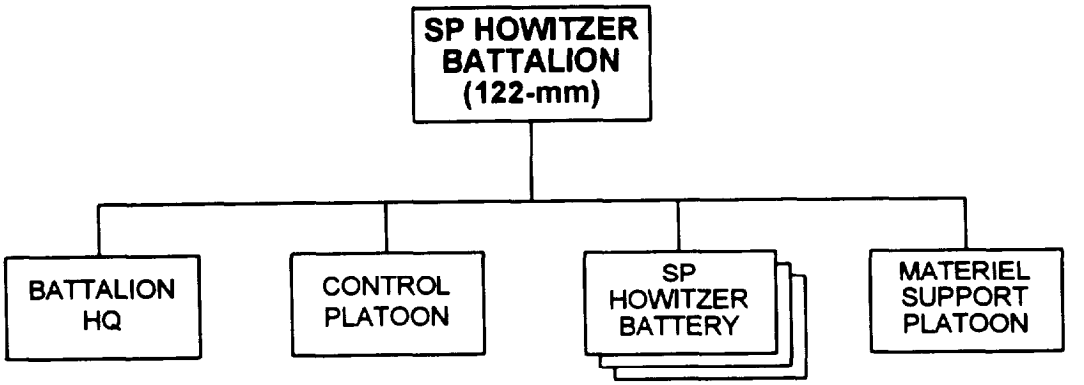
Self-Propelled Artillery Regiment, Mech Inf Div or MD or Army or CDF or National (continued)

Principal Items of Equipment	*HQ & Control Btry*	*SP Howitzer Bn (122-mm)*	*SP Howitzer Bn (152-mm)*	*MRL Bn (122-mm)*	*SP AA Gun Btry (23-mm)*	*Target Acquisition Btry*	*Materiel Support Co*	*Maintenance Co*	*Chemical Defense Plt*	*Medical Plt*	*TOTAL*
TRAILERS											
Trailer, Cargo, 1-Axle						1					1
Trailer, Cargo, 2-Axle	1	16	17	27			20	3			84
Trailer, Generator	2	2		2	2	2		2			12
Trailer, Kitchen	1	3	3	3		1				1	12
Trailer, POL (4,200-L)		2	4	3			6				15
Trailer, Water (900-/1,200-L)	1	1	1	1		1	2		2	1	10
Trailer, Welding								1			1
RADIOS											
VHF, Manpack, Low-Power	6	10	10	18		13	1	1		1	60
VHF, Portable, Low-Power	1				1						2
VHF, Vehicle Mount, Medium-Power	5	27	27	6	9	4			3		81
HF, Manpack, Low-Power	1								1		2
HF, Vehicle Mount, Medium-Power	5										5
HF/VHF, Vehicle Mount, Med-Power	3	4	4	6							17
HF/VHF, Vehicle Mount, High-Power	1										1
Radio Relay, VHF/UHF	1										1
Warning Receiver	1	2	2	1	3	1					10
MISCELLANEOUS											
Rangefinder, Laser, SAGE GLOSS	1	4	4			2					11
Sound-Ranging Set						1					1

122-mm Self-Propelled Howitzer Battalion, Mech Inf Bde (Sep and Div) and Tank Bde, or SP Arty Regt



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
122-mm SP Howitzer, 2S1..	18
ACRV, 1V13/1V13M/1V22 (Btry FDC)	3
ACRV, 1V14/1V14M/1V23 (Btry COP)	3
ACRV, 1V15/1V15M/1V24 (Bn COP)	1
ACRV, 1V16/1V16M/1V25 (Bn FDC).	1
Mobile Recon Post, PRP-3/4*.	1
7.62-mm GP MG, PKM	18
SAM, Shoulder-Fired	18
ATGL, RPG-7V	6
Truck, Light.	4
Truck, Medium	14
Truck, POL (5,000-Liter).	2
Van, Maintenance	2
Van, Signal..	4

Equipment	Total
Ambulance	1
Trailer, Cargo, 2-Axle	16
Trailer, Generator	.2
Trailer, Kitchen	.3
Trailer, POL (4,200-Liter)	.2
Trailer, Water (1,200-Liter)	1
Rangetinder, Laser, SAGE GLOSS	4
Radios:	
VHF, Manpack, Low-Power	10
VHF, Vehicle Mount, Medium-Power	.27
HF/VHF, Vehicle Mount, Medium-Power,,	.4
Warning Receiver.,	.2

* This system includes the SMALL FRED or TALL MIKE battlefield surveillance radar

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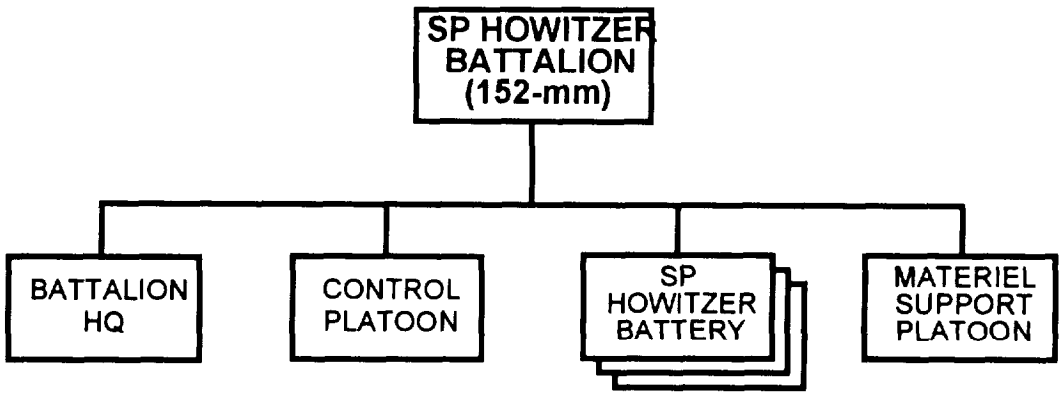

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
152-mm SP Howitzer, 2S3	18
ACRV, 1V13/1V13M/1V22 (Btry FDC)	3
ACRV, 1V14/1V14M/1V23 (Btry COP)	3
ACRV, 1V15/1V15M/1V24 (Bn COP)	1
ACRV, 1V16/1V16M/1V25 (Bn FDC)	1
Mobile Recon Post, PRP-3/4*	1
7.62-mm GP MG, PKM	18
SAM, Shoulder-Fired	18
ATGL, RPG-7V	6
Truck, Medium	20
Truck, POL (5,000-Liter)	4
Van, Maintenance	2
Van, Signal	4

Equipment	Total
Ambulance	1
Trailer, Cargo, 2-Axle	17
Trailer, Kitchen	3
Trailer, POL (4,200-Liter)	4
Trailer, Water (1,200-Liter)	1
Rangefinder, Laser, SAGE GLOSS	4
Radios:	
VHF, Manpack, Low-Power	10
VHF, Vehicle Mount, Medium-Power	27
HF/VHF, Vehicle Mount, Medium-Power	4
Warning Receiver	2

* This system includes the SMALL FRED or TALL MLKE battlefield surveillance radar.

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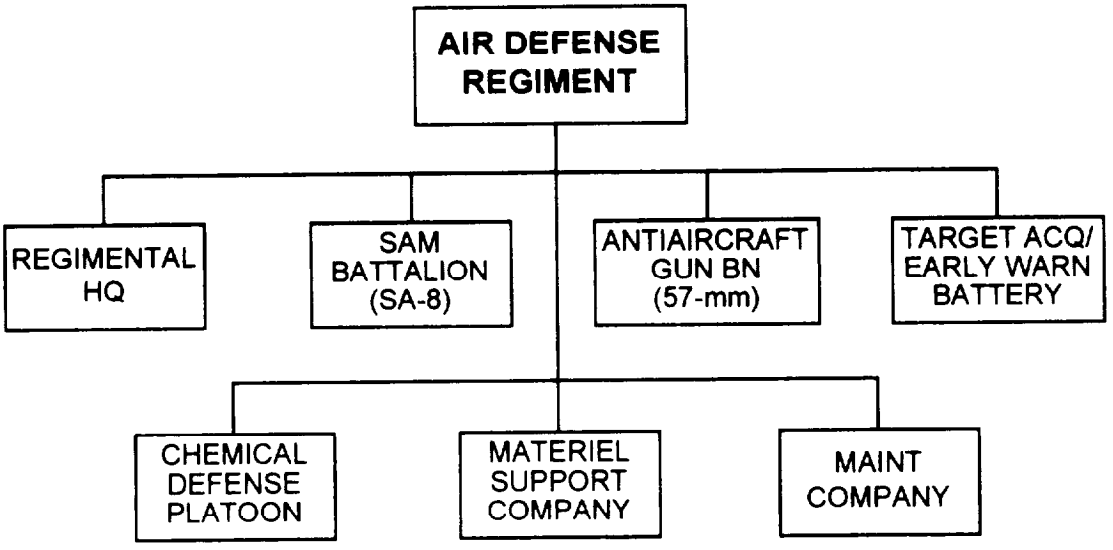

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Air Defense Regiment, Mech Inf Div or MD or Army or CDF or ADC (continued)

Principal Items of Equipment	*Regimental HQ*	*SAM Bn (SA-8)*	*AA Gun Bn (57-mm)*	*Target Acquisition /Early Warning Btry*	*Chemical Defense Plt*	*Materiel Support Co*	*Maintenance Co*	*TOTAL*
ARMORED VEHICLES								
APC, BTR-60 (PU-12)	1	3	1					5
Chem Recon Vehicle, BRDM-2RKh/RKhM					3			3
Tgt Acq Radar Vehicle				2				2
WEAPONS								
57-mm AA Gun, S-60			18					18
SAM, SA-8/GECKO TELAR*		8						8
SAM, Shoulder-Fired	3	12	12					27
TRUCKS								
Truck, Utility	1	2	7	3		3	1	17
Truck, Light	3	7	7	1		2	1	21
Truck, Medium		19	36			25	3	83
Truck, Decon, ARS-12U/14					3			3
Truck, Decon, DDA-53/66					1			1
Truck, Crane		1	1					2
Truck, POL (5,000-L)		2	4			3		9
Truck, Water (2,000-L)			1		2	2		5
Van Computer				1				1
Van, Maintenance		5	3	1		2	8	19
Van, Medium	2	2						4
Van, Missile Testing		2						2
Van, Radar			4	1				5
Van, Signal	4	1	1					6
Ambulance	2							2
TRAILERS								
Trailer, Cargo, 1-Axle		1						1
Trailer, Cargo, 2-Axle		5	3	1		5	3	17
Trailer, Generator	2	6	5			2	7	22
Trailer, Kitchen	1	4	4	1		3	1	14
Trailer, POL (1,200-L)			4					4
Trailer, POL (4,200-L)		2	2			3		7
Trailer, Van	4	4		1				9
Trailer, Water (900-/1,200-L)		2	4		2	1	1	10
RADARS								
Aer. Surv./Tgt Acq, LONG TRACK				2				2
Aer. Surv./Tgt Acq, FLAT FACE			1					1
Radar, Fire Control, FLAP WHEEL			3					3
Radar, Height Finding, THIN SKIN				1				1
RADIOS								
VHF, Manpack, Low-Power	1	6	20	2		1	1	31
VHF, Portable, Low-Power		3						3
VHF, Portable, Very-Low-Power	1	4	10					15
VHF, Vehicle Mount, Medium-Power	1	15	1	3	3			23
HF, Manpack, Low-Power			1	2	1			4
HF, Vehicle Mount, Medium-Power		1	1					2
HF/VHF, Vehicle Mount, Med-Power	4	1	1					6
HF/VHF, Vehicle Mount, High-Power	2	1	1					4
Radio Relay, VHF/UHF	1							1
Warning Receiver	2	3	4					9
MISCELLANEOUS								
SA-8 Transloader (TELAR Chassis)		4						4

* The TELAR includes the LAND ROLL fire control/target acquisition radar.

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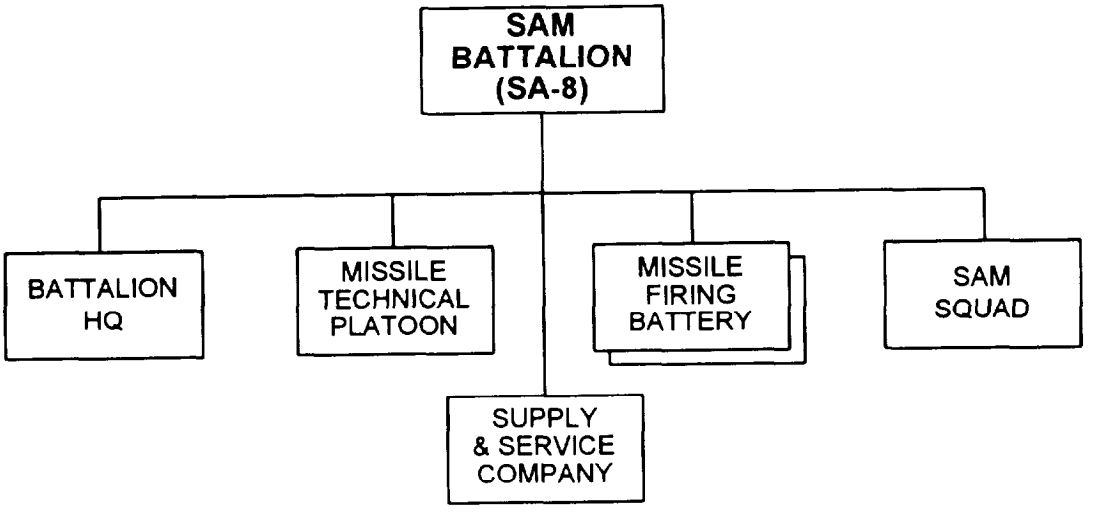

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
SAM, SA-8/GECKO TELAR*	8
SAM, Shoulder-Fired.	12
ACV, BTR-60 (PU-12).	3
SA-8 Missile Transloader (TELAR Chassis)	4
Truck, Utility	2
Truck, Light.,	7
Truck, Medium	19
Truck, Crane	1
Truck, POL (5,000-Liter).	2
Van, Medium	2
Van, Signal	1
Van, Maintenance	5
Van, Missile Testing.	2
Trailer, Cargo, 1-Axle	1
Trailer, Cargo, 2-Axle	5
Trailer, Generator	6
Trailer, POL (4,200-Liter)	2

Equipment	Total
Trailer, Van.	4
Trailer, Water (1,200-Liter)	2
Trailer, Kitchen.	4
Radios:	
VHF, Manpack, Low-Power..	6
VHF, Portable, Low-Power.	3
VHF, Portable, Very-Low-Power.	4
VHF, Vehicle Mount, Medium-Power.	15
HF, Vehicle Mount, Medium-Power	1
HF/VHF, Vehicle Mount, Medium-Power..	1
HF/VHF, Vehicle Mount, High-Power..	1
Warning Receiver...	3

* The TELAR includes the LAND ROLL fire control/target acquisition radar.

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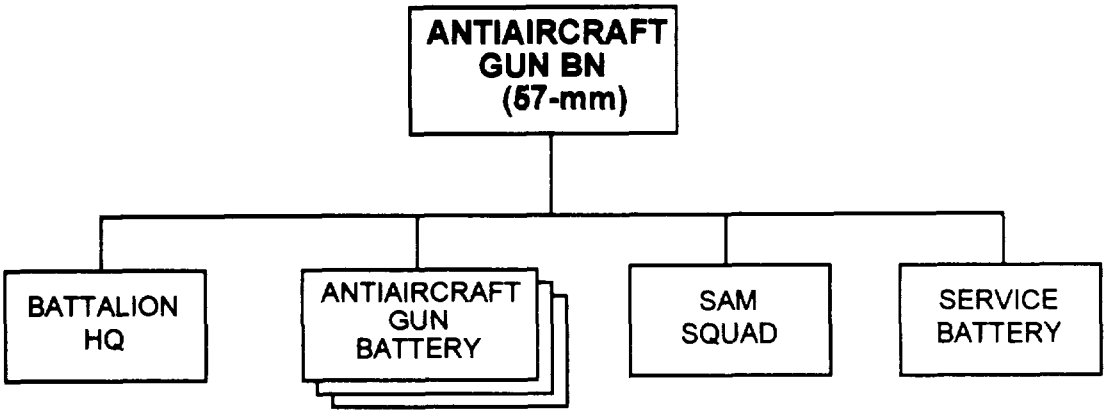

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
57-mm AA Gun, S-60	18
SAM, Shoulder-Fired	12
ACV, BTR-60 (PU-12)	1
Truck, Utility	7
Truck, Light	7
Truck, Medium	36
Truck, Crane	1
Truck, POL (5,000-Liter)	4
Truck, Water (2,000-Liter)	1
Van, Maintenance	3
Van, Radar	4
Van, Signal	1
Trailer, Cargo, 2-Axle	3
Trailer, Generator	5
Trailer, Kitchen	4
Trailer, POL (1,200-Liter)	4
Trailer, Water (900-Liter)	3
Trailer, Water (1,200-Liter)	2

Equipment	Total
Radars:	
Fire Control, FLAP WHEEL	3
Aerial Surveillance/Target Acquisition, FLAT FACE	1
Radios:	
VHF, Portable, Very-Low-Power	10
VHF, Manpack, Low-Power	20
VHF, Vehicle Mount, Medium-Power	1
HF/VHF, Vehicle Mount, High-Power	1
HF/VHF, Vehicle Mount, Medium-Power	1
HF, Manpack, Low-Power	1
HF, Vehicle Mount, Medium-Power	1
Warning Receiver	4

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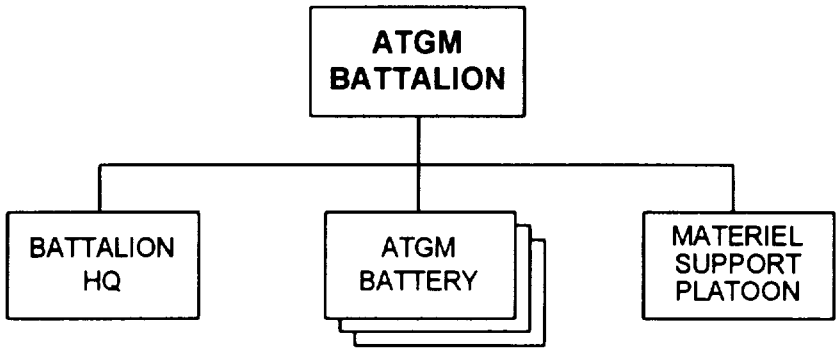
ATGM Battalion, Mech Inf Bde (Sep) or Mech Inf Div or MD or Army or CDF or National



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM Vehicle, 9P 133, w/AT-3/SAGGER or 9P 148, w/AT-S/SPANDREL	27
ATGL, RPG-7V	27
ACV, BTR (R-145BM)/BRDM-2U	1
ACV, BRDM-2U..	12
Truck, Utility	3
Truck, Light	4
Truck, Medium	16
Truck, POL (5,000-Liter).	3
Van, Maintenance	2
Van, Signal	2
Ambulance	1
Trailer, Cargo, 2-Axle..	8
Trailer, Generator	1
Trailer. Kitchen..	1

Equipment	Total
Trailer, POL (4,200-Liter)	3
Trailer, Water (900-Liter)	
Rangefinder, Stereoscopic, DS- 1.	3
Radar, Battlefield Surveillance, Man-Portable, PSNR-1, or TALL MIKE	4
Radios:	
VHF, Manpack, Low-Power..	16
VHF, Vehicle Mount, Medium-Power.	40
HF/VHF, Vehicle Mount, Medium-Power..	3
HF, Vehicle Mount, Medium-Power.	1
Radio Relay, VHF/UHF	1
Warning Receiver.	1

NOTES:

1. Separate mechanized infantry brigades and well-equipped districts can have either the ATGM battalion as depicted above or an antitank battalion composed of two antitank gun batteries and one ATGM battery.
2. During force modernization, the tendency is for districts/brigades with offensive contingency missions to have an ATGM battalion, whereas districts/brigades with primarily defensive contingency missions have the standard antitank battalion.

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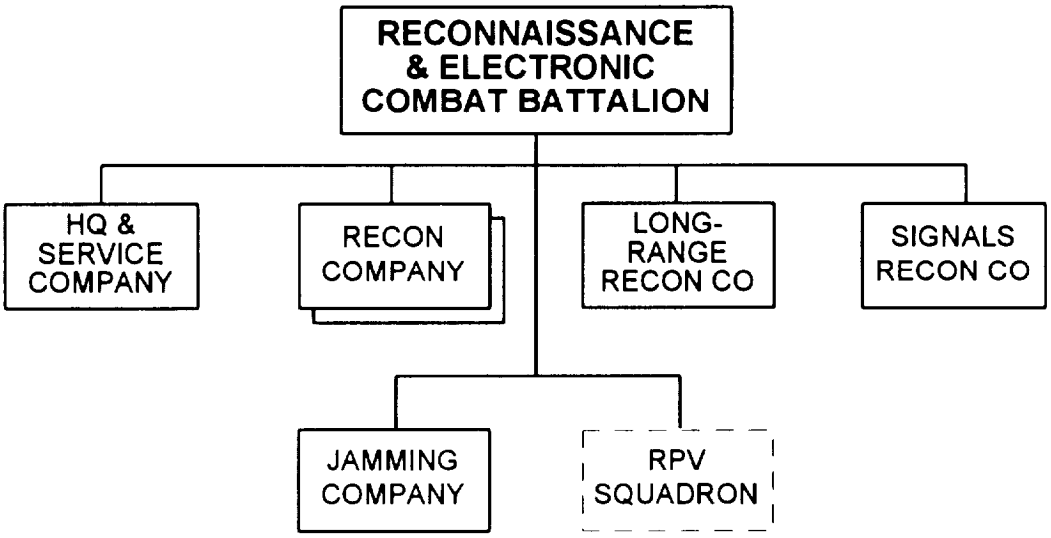

NOTES:

1. A reconnaissance and electronic combat (EC) battalion subordinate to the CDF or the DMI would normally have an organic RPV squadron, If the General Staff allocates a reconnaissance and EC battalion from the DMI to a military district or an expeditionary army, it normally includes an RPV squadron.
2. District and divisional reconnaissance and EC battalions may or may not have an organic RPV squadron. However, a mechanized infantry division is more likely to have one than are motorized infantry or infantry divisions.
3. The equipment listing for the reconnaissance and EC battalion includes the assets of the RPV squadron.

(continued)

Principal Items of Equipment	*HQ & Service Co*	*Recon Co (2x)*	*Long-Range Recon Co*	*Signals Recon Co*	*Jamming Co*	*RPV Sqdn*	*TOTAL*
ARMORED VEHICLES							
ACV, BTR (R-145BM)	2						2
ACV, BRM-1K*	1	8					9
ACV, BRDM-2U			1				1
ASC, BRDM-2			12				12
IFV, BMP-1/2		12					12
REMOTELY-PILOTED VEHICLES							
RPV, Short-Range						4	4
RPV Launch Vehicle (Truck, Medium)						4	4
RPV Recovery Vehicle (Truck, Crane)						2	2
Van, Ground Control Station (RPV)						2	2
Van, Mission Control (RPV)						1	1
ELECTRONIC COMBAT SYSTEMS							
Radar Intercept/DF				3			3
Radio Intercept/DF, VHF/HF				7	3		10
Communications Jammer, VHF					6		6
Communications Jammer, HF					3		3
Proximity Fuze Jammer					9		9
TRUCKS							
Truck, Utility	4			1		4	9
Truck, Light	5			1	2	1	9
Truck, Medium	4					1	5
Truck, POL (5,000-L)	3						3
Truck, Water (2,000-L)	1						1
Van, Command	2			1	1	1	5
Van, Jammer					18		18
Van, Maintenance	1			1	1	1	4
Van, Signal	6						6
Van, Signals Reconnaissance				10	3		13
Ambulance	1						1
TRAILERS							
Trailer, Generator	1			11	21	3	36
Trailer, Kitchen	6			1	1	1	9
Trailer, POL (4,200-L)	3						3
Trailer, Water (900-L)	2			1	1	1	5
RADIOS							
VHF, Manpack, Low-Power	2	20	13	7		13	55
VHF, Vehicle Mount, Medium-Power	3	20	13		22	4	62
HF, Manpack, Low-Power	2	2	1	4			9
HF, Vehicle Mount, Medium-Power	1	2	1		1	1	6
HF/VHF, Vehicle Mount, Med-Power	2			4			6
HF/VHF, Vehicle Mount, High-Power	1			1			2
Radio Relay, VHF/UHF	1						1
Radio Telegraph	6						6
Warning Receiver	2	2	1	1	1	1	8

*This system includes the TALL MIKE battlefield surveillance radar.

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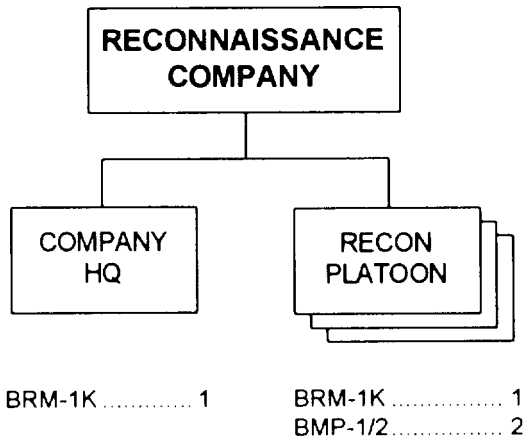

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BRM-1K*	4
IFV, BMP-1/2	6
9-mm Pistol, PM	3 1
5.45-mm Assault Rifle, AK-74	40
5.45-mm LMG, RPK-74	10
40-mm Under-Barrel Grenade Launcher, BG-15	10
ATRL, RPG-18/22	10
ATGL, RPG-7V	10
Night-Vision Goggles	10

Equipment	Total
Night-Vision Sight (Small Arms)	10
Radios:	
VHF, Manpack, Low-Power	10
VHF, Vehicle Mount, Medium-Power	10
HF, Manpack, Low-Power	1
HF, Vehicle Mount, Medium-Power	1
Warning Receiver	1

NOTES: The mix of BRM-1K and BMP vehicles can vary

* This vehicle includes the TALL MIKE battlefield surveillance radar.

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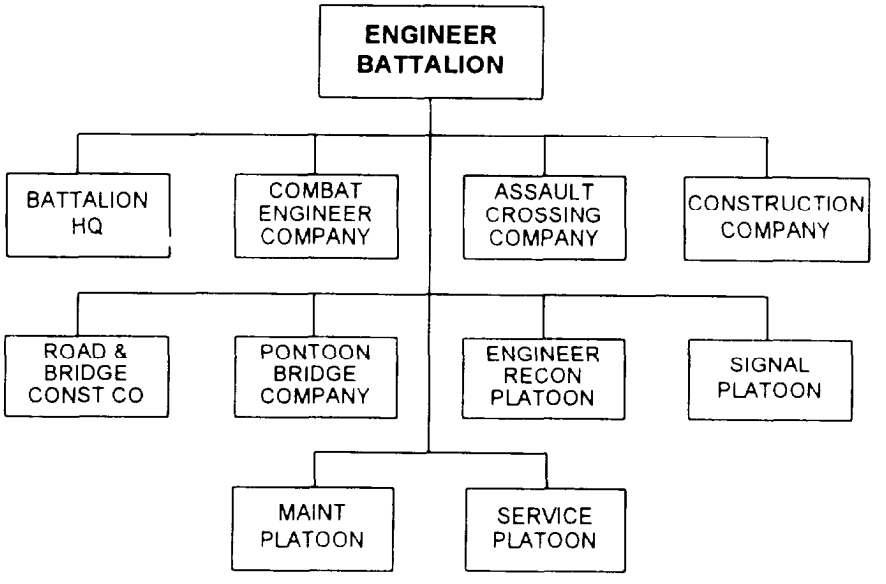

Principal Items of Equipment	*Battalion HQ*	*Combat Engr Co*	*Assault Crossing Co*	*Construction Co*	*Road & Bridge Const Co*	*Pontoon Bridge Co*	*Engr Recon Plt*	*Signal Plt*	*Maintenance Plt*	*Service Plt*	*TOTAL*
ARMORED VEHICLES											
APC, BTR-60/70/80							3				3
ACV, BTR (R-145BM)		1									1
ACV, BRDM-2U			1								1
Armored Recovery Vehicle									3		3
WEAPONS											
ATGL, RPG-7V							6				6
ATRL, RPG-18/22		3									3
SAM, Shoulder-Fired			3		3	3					9
ENGINEER EQUIPMENT											
Minelayer, PMR/GMZ*		3									3
Mineclearer, MTK/MTK-2		2									2
Mine Detector, DIM		2					1				3
Engineer Recon Vehicle, IRM							2				2
Armored Engineer Tractor, IMR		2									2
Ditching Machine, PZM/BTM/MDK				4							4
Route-Clearing Vehicle, BAT/PKT				6	2						8
Bridge, Tank-Launched					4						4
Bridge, Truck-Launched					8						8
Tracked Amphibian, K-61/PTS			12								12
Trailer, Amphibious, PKP			6								6

NOTE:

* When the armored tracked minelayer GMZ replaces the towed PMR, the combat engineer company needs only five medium, trucks, but has a total of eight VHF, vehicle mount, medium-power radios.

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Principal Items of Equipment	*Battalion HQ*	*Combat Engr Co*	*Assault Crossing Co*	*Construction Co*	*Road & Bridge Const Co*	*Pontoon Bridge Co*	*Engr Recon Plt*	*Signal Plt*	*Maintenance Plt*	*Service Plt*	*TOTAL*
ENGINEER EQUIPMENT (continued)											
Tracked Ferry, GSP/PMM-2**			6								6
Bridge, PMP Center						16					16
Bridge, PMP Ramp						2					2
Assault Boat			10								10
Power Boat						6					6
Piledriver Set, KMS				1							1
Tractor				2							2
Truck, Sawmill					1						1
Trailer, Saw					1						1
Grader					2						2
Concrete Mixer					1						1
Truck, Water Purification				1							1
TRUCKS											
Truck, Utility	2			1	1	1	2	1		1	9
Truck, Medium*	1	8	2	13	2		1	1	1	1	30
Truck, Dump				1	2						3
Truck, Crane			1								1
Truck, Crane Shovel				2	2						4
Truck, POL (5,000-L)										9	9
Truck, Water (2,000-L)										1	1
Van, Kitchen										1	1
Van, Medium										1	1
Van, Maintenance									4		4
Van, Signal								1			1
Ambulance										1	1
TRAILERS											
Trailer, Cargo, 1-Axle	1	2			1						4
Trailer, Cargo, 2-Axle			1	1					1		3
Trailer, Compressor			1								1
Trailer, Generator				1	1			1	1	1	5
Trailer, Kitchen		1	1	1	1	1				1	6
Trailer, POL (4,200-L)										9	9
Trailer, Saw					1						1
Trailer, Water (900-L)		1	1	1	1	1					5
RADIOS											
VHF, Manpack, Low-Power									3	1	4
VHF, Vehicle Mount, Medium-Power*		5	3	3	6	4	3		3		27
HF, Manpack, Low-Power	1	1	1	1	1	1	3				9
HF/VHF, Vehicle, Medium-Power	1							1			2
HF/VHF, Vehicle, High-Power								1			1
Warning Receiver	1										1

NOTES:

* When the armored tracked minelayer GMZ replaces the towed PMR, the combat engineer company needs only five medium, trucks, but has a total of eight VHF, vehicle mount, medium-power radios.

** With the GSP, 12 half-ferries form 6 ferries;with the PMM-2, there is only one vehicle per ferry.

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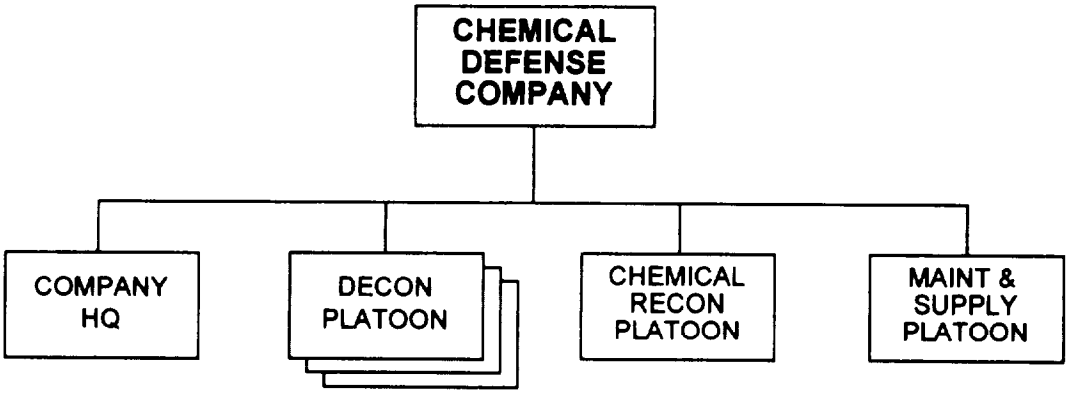
Chemical Defense Company, Mech Int Div
or MD or Army or CDF _____



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Chemical Recon Vehicle, BRDM-2RKh/RKhM	4
Truck, Decon, ARS-12U/14.	8
Truck, Decon, DDA-53/66..	4
Truck, Decon, TMS-65..	2
Truck, Utility	2
Truck, Light..	3
Truck, Medium	6
Truck, POL (5,000-Liter).	2

Equipment	Total
Truck, Water (2,000-Liter)	2
Trailer, POL (4,200-Liter)	2
Trailer, Water (1,200-Liter)	2
Trailer, Water (900-Liter)	2
Radios:	
VHF, Vehicle Mount, Medium-Power.	4
HF, Manpack, Low-Power	2

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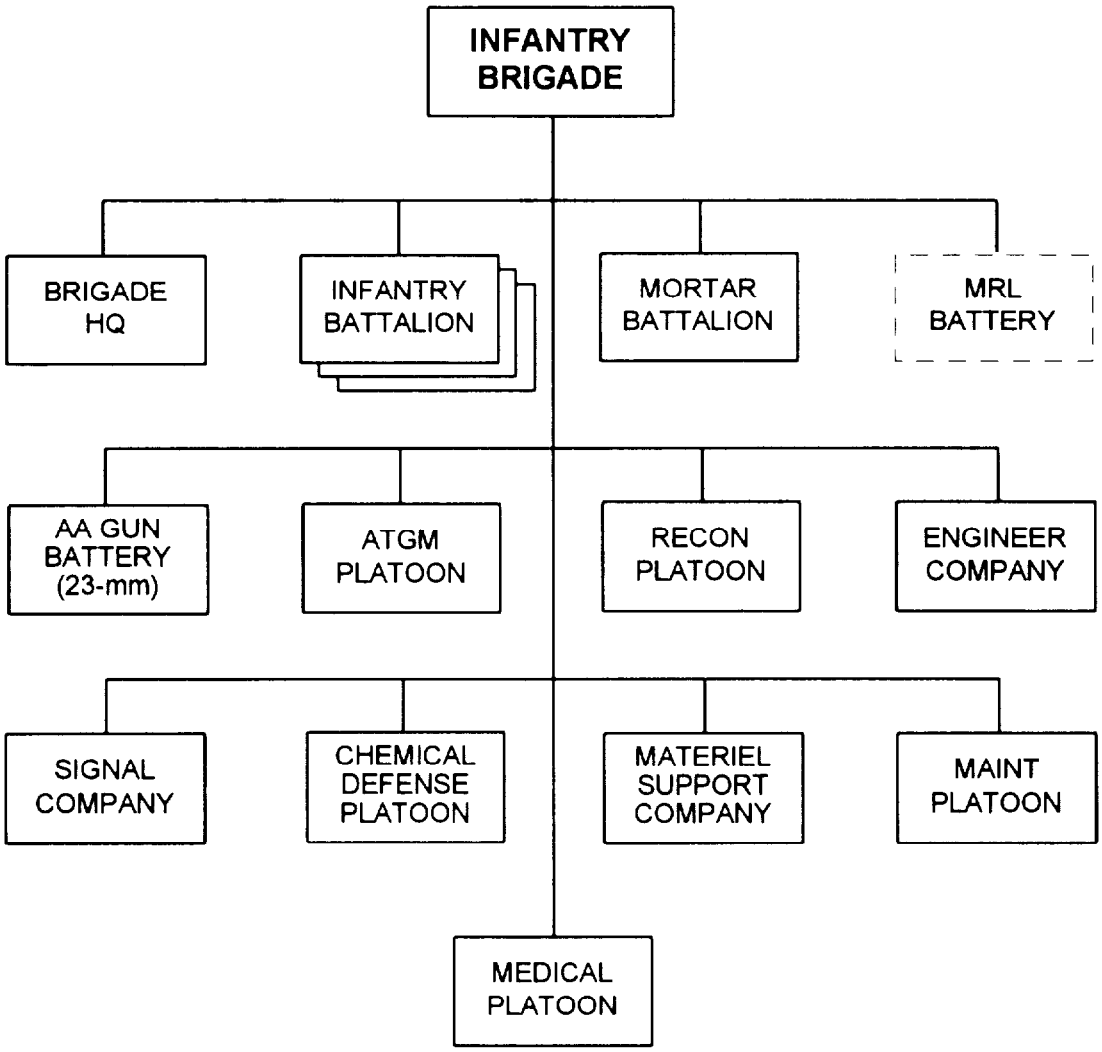

NOTE: The MRL battery is not present in all infantry brigades. Therefore, the equipment list below does not include this battery.

(continued)

Principal Items of Equipment	Brigade HQ	Inf Bn (3x)	Mortar Bn	AA Gun Btry (23-mm)	ATGM Plt	Reconnaissance Plt	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Plt	Medical Plt	TOTAL
ARMORED VEHICLES													
Chem Recon Veh, BRDM-2RKh									3				3
WEAPONS													
30-mm Auto Grenade Lchr, AGS-17		18											18
60-mm Mortar, Light		27											27
82-mm Mortar, M1937		9											9
120-mm Mortar, M1943/2S12 or 82-mm Mortar M1937/2B9			18										18
23-mm AA Gun, ZU-23				8									8
SAM, Shoulder-Fired	3	27											30
ATGM Manpack, AT-4/SPIGOT					6								6
ATGM Manpack, AT-7/SAXHORN		9											9
73-mm Recoilless Gun, SPG-9		6											6
Flamethrower, LPO/RPO		27					4						31
ENGINEER EQUIPMENT													
Bridge, Truck-Launched							4						4
Minelayer, PMR							3						3
Mine Detector, DIM							1						1
Truck, Water Purification							1						1
TRUCKS													
Truck, Utility	2	3	3	1			4	5		2			20
Truck, Light	6	9	23	8	3			3		40		1	93
Truck, Medium						1	9			8	2	2	22
Truck, Crane							2				1		3
Truck, Decon, ARS-12U/14									1				1
Truck, Decon, DDA-53/66									3			1	4
Truck, Dump							2						2
Truck, POL (5,000-L)			1							10			11
Truck, Recovery											1		1
Truck, Water (2,000-L)									1				1
Van, Command	3												3
Van, Hospital												1	1
Van, Maintenance			1				1			1	4		7
Van, Signal			1				1	10					12
Ambulance			1									4	5
TRAILERS													
Trailer, Cargo, 1-Axle							6			30			36
Trailer, Cargo, 2-Axle			4				2						6
Trailer, Generator			1					1			1		3
Trailer, Kitchen			3				1			4		1	9
Trailer, POL (1,200-L)			1							10			11
Trailer, Water (900-/1,200-L)			1				1		1	4		1	8
RADARS													
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE			1			1							2

(continued)

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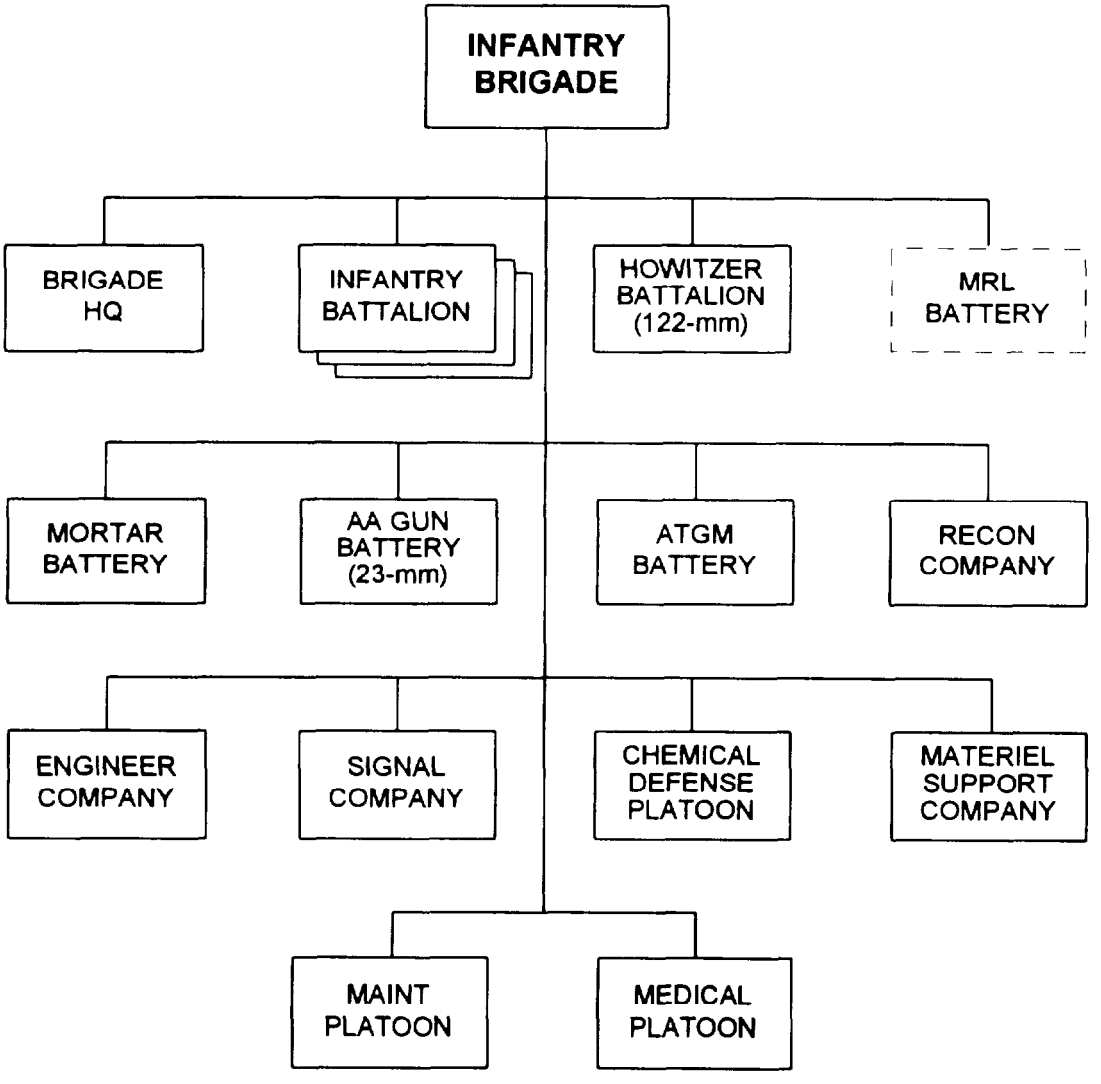
Principal Items of Equipment	Brigade HQ	Inf Bn (3x)	Mortar Bn	AA Gun Btry (23-mm)	ATGM Plt	Reconnaissance Plt	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Plt	Medical Plt	TOTAL
RADIOS													
VHF, Manpack, Low-Power	3	177	18	3	3	3	4	7		3	1	1	223
VHF, Portable, Low-Power		63	2		4	1							70
VHF, Portable, Very-Low-Power		12											12
VHF, Vehicle Mount, Medium-Power	3	3	3				1		3				13
HF, Manpack, Low-Power								2	1				3
HF, Vehicle Mount, Medium-Power	1	3					1	2					7
HF/VHF, Vehicle Mount, Med-Power			1					8					9
HF/VHF, Vehicle Mount, High-Power								2					2
HF, Vehicle Mount, High-Power								1					1
Radio Relay, VHF/UHF								2					2
Warning Receiver	1	3	1					3					8
MISCELLANEOUS													
Rangefinder, Steroscopic		3	3										6
Periscopic Aiming Circle		3	3										6
Collimator		9	18										27
Motorcycle						3		3					6



NOTE: The MRL battery is not present in all infantry brigades. Therefore, the equipment list below does not include this battery.

(continued)

Principal Items of Equipment	Brigade HQ	Inf Bn (3x)	Howitzer Bn (122-mm)	Mortar Btry	AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Plt	Medical Plt	TOTAL
ARMORED VEHICLES														
ACV, BRDM-2U						4								4
Chem Recon Veh, BRDM-2RKh										3				3
ACRV, 1V18 (Battery COP)			3											3
ACRV, 1V19 (Battalion COP)			1											1
WEAPONS														
30-mm Auto Grenade Lchr, AGS-17		18												18
60-mm Mortar, Light		27												27
82-mm Mortar, M1937		9												9
120-mm Mortar, M1943/2S12				6										6
122-mm Howitzer, D-30			18											18
23-mm AA Gun, ZU-23					8									8
SAM, Shoulder-Fired	3	27	18											48
ATGM Manpack, AT-7/SAXHORN		9												9
ATGM Vehicle, 9P113 w/ AT-3						12								12
73-mm Recoilless Gun, SPG-9		6												6
Flamethrower, LPO/RPO		27						4						31
ENGINEER EQUIPMENT														
Bridge, Truck-Launched								4						4
Minelayer, PMR								3						3
Mine Detector, DIM								1						1
Truck, Water Purification								1						1
TRUCKS														
ACRV, 1V110 (Battery FDC)			3											3
ACRV, 1V111 (Battalion FDC)			1											1
Truck, Utility	2	3	1	1	1		1	4	5		2			20
Truck, Light	6	9	9	7	8				3		30		1	73
Truck, Medium			34			3	3	9			20	2	2	73
Truck, Crane								2				1		3
Truck, Decon, ARS-12U/14										1				1
Truck, Decon, DDA-53/66										3			1	4
Truck, Dump								2						2
Truck, POL (5,000-L)			2								15			17
Truck, Recovery												1		1
Truck, Water (2,000-L)										1				1
Van, Command	3													3
Van, Hospital													1	1
Van, Maintenance			1					1			1	4		7
Van, Signal			4					1	10					15
Ambulance			1										4	5
TRAILERS														
Trailer, Cargo, 1-Axle								6			15			21
Trailer, Cargo, 2-Axle			11					2			15			28
Trailer, Generator			1						1		1	1		4
Trailer, Kitchen			4					1			3		1	9
Trailer, POL (4,200-L)			2											2
Trailer, POL (1,200-L)											15			15
Trailer, Water (900-/1,200-L)			1					1		1	5		1	9

(continued)

Principal Items of Equipment	Brigade HQ	Inf Bn (3x)	Howitzer Bn (122-mm)	Mortar Btry	AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Plt	Medical Plt	TOTAL
RADARS														
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE			1			1	3							5
RADIOS														
VHF, Manpack, Low-Power	3	177	14	5	3	4	11	4	7		1	1	1	231
VHF, Portable, Low-Power		63	23				4							90
VHF, Portable, Very-Low-Power		12												12
VHF, Vehicle Mount, Medium-Power	3	3	8	1		13	1	1		3				33
HF, Manpack, Low-Power									2	1				3
HF, Vehicle Mount, Medium-Power	1	3					1	1	2					8
HF/VHF, Vehicle Mount, Med-Power			4						8					12
HF/VHF, Vehicle Mount, High-Power									2					2
HF, Vehicle Mount, High-Power									1					1
Radio Relay, VHF/UHF									2					2
Warning Receiver	1	3	1				1		3					9
MISCELLANEOUS														
Rangefinder, Steroscopic		3		1		1								5
Rangefinder, Laser, SAGE GLOSS			4											4
Periscopic Aiming Circle		3		1										4
Collimator		9		6										15
Motorcycle							9		3					12

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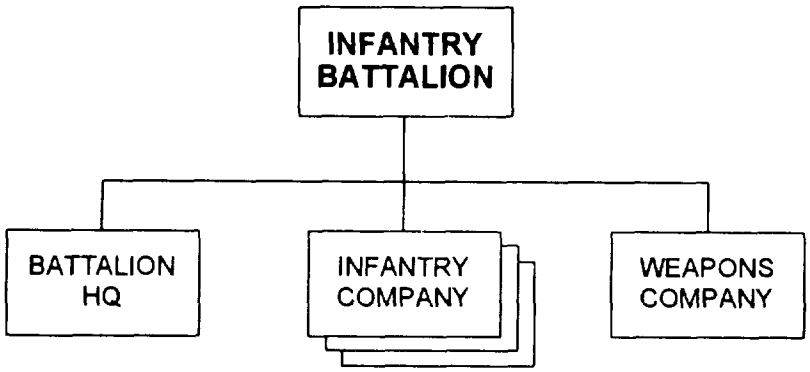

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
9-mm Pistol, PM..	111
5.45-mm Assault Rifle, AK-74	328
5.45-mm LMG, RPK-74	54
7.62-mm GP MG, PKM..	27
7.62-mm Sniper Rifle, SVD..	9
40-mm Under-Barrel Grenade Launcher, BG-15..	79
60-mm Mortar, Light	9
82-mm Mortar, M1937	3
30-mm Automatic Grenade Launcher, AGS-17	6
SAM, Shoulder-Fired	9
ATGM Manpack, AT-7/SAXHORN	3
73-mm Recoilless Gun, SPG-9	2
ATGL, RPG-7V	45
ATRL, RPG-18/22	74
Flamethrower, LPO/RPO	9
Truck, Utility..	1

Equipment	Total
Truck, Light..	.3
Rangefinder, Stereoscopic	1
Periscopic Aiming Circle, PAB2A..	1
Collimator	.3
Night-Vision Goggles	.48
Night-Vision Goggles (Driver).	1
Night-Vision Sight (AGL)	6
Night-Vision Sight (MG)	.27
Night-Vision Sight (Small Arms).	.59
Radios:	
VHF, Manpack, Low-Power	59
VHF, Portable, Low-Power	21
VHF, Portable, Very-Low-Power..	4
VHF, Vehicle Mount, Medium-Power	1
HF, Vehicle Mount, Medium-Power	1
Warning Receiver	1

NOTE: Some infantry battalions may have a mortar battery with nine 82-mm mortars instead of a mortar platoon in the weapons company. In that case, there would probably be no 60-mm mortars in the infantry companies.

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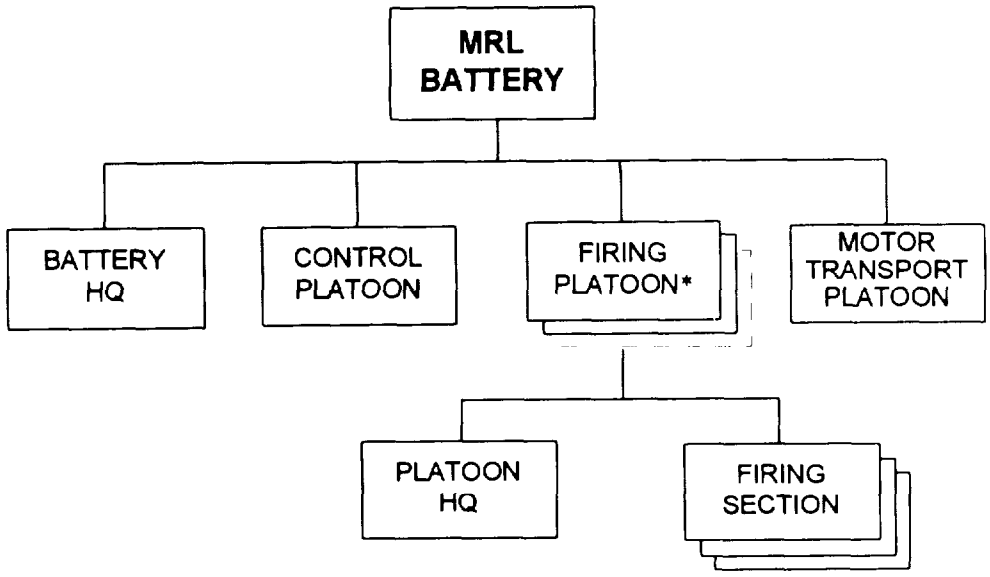

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	6-Lchr	9-Lchr
140-mm MRL, RPU-14**	6	9
ACRV, 1V110 (Battery FDC)	1	1
SAM, Shoulder-Fired	6	9
ATRL, RPG-18/22.	2	3
Truck, Utility (Battery COP)	1	1
Truck, Light	8	11
Van, Signal	1	1
Trailer, Cargo, l-Axle	2	2

Equipment	6-Lchr	9-Lchr
Radios:		
VHF, Manpack, Low-Power	3	4
VHF, Portable, Very-Low-Power	7	10
VHF, Vehicle Mount, Medium-Power	1	1
HFNHF, Vehicle Mount, Medium-Power	1	1

NOTES:

* This MRL battery may have either two or three firing platoons. Thus, the number of launchers is either six or nine.

** Some MRL batteries may have the 107-mm towed MRL instead of the 140-mm towed MRL, RPU-14.

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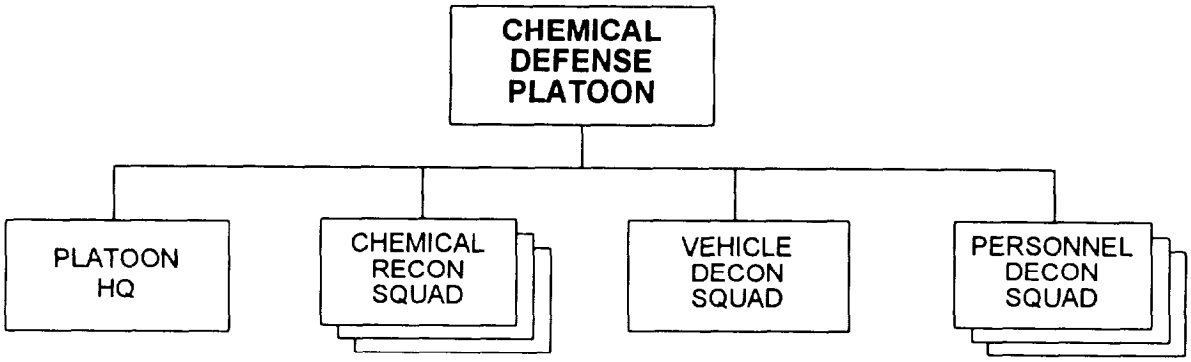

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Chemical Recon Vehicle, BRDM-2RKh*	3
Truck, Decon, ARS-12U/14	1
Truck, Decon, DDA-53/66**	3
Truck, Water (2,000-Liter)	1
Trailer, Water (1,200-Liter)	1
Radios:	
VHF, Vehicle Mount, Medium-Power	3
HF, Manpack, Low-Power	1

NOTES:

* Some infantry brigades may use the truck-mounted chemical reconnaissance vehicle UAZ-69RKh instead of the armored BRDM-2RKh.

** Some infantry brigades may use the single-axle DDP decontamination trailer, towed by a light truck, to perform the same personnel decontamination functions as the truck-mounted DDA-53/66.

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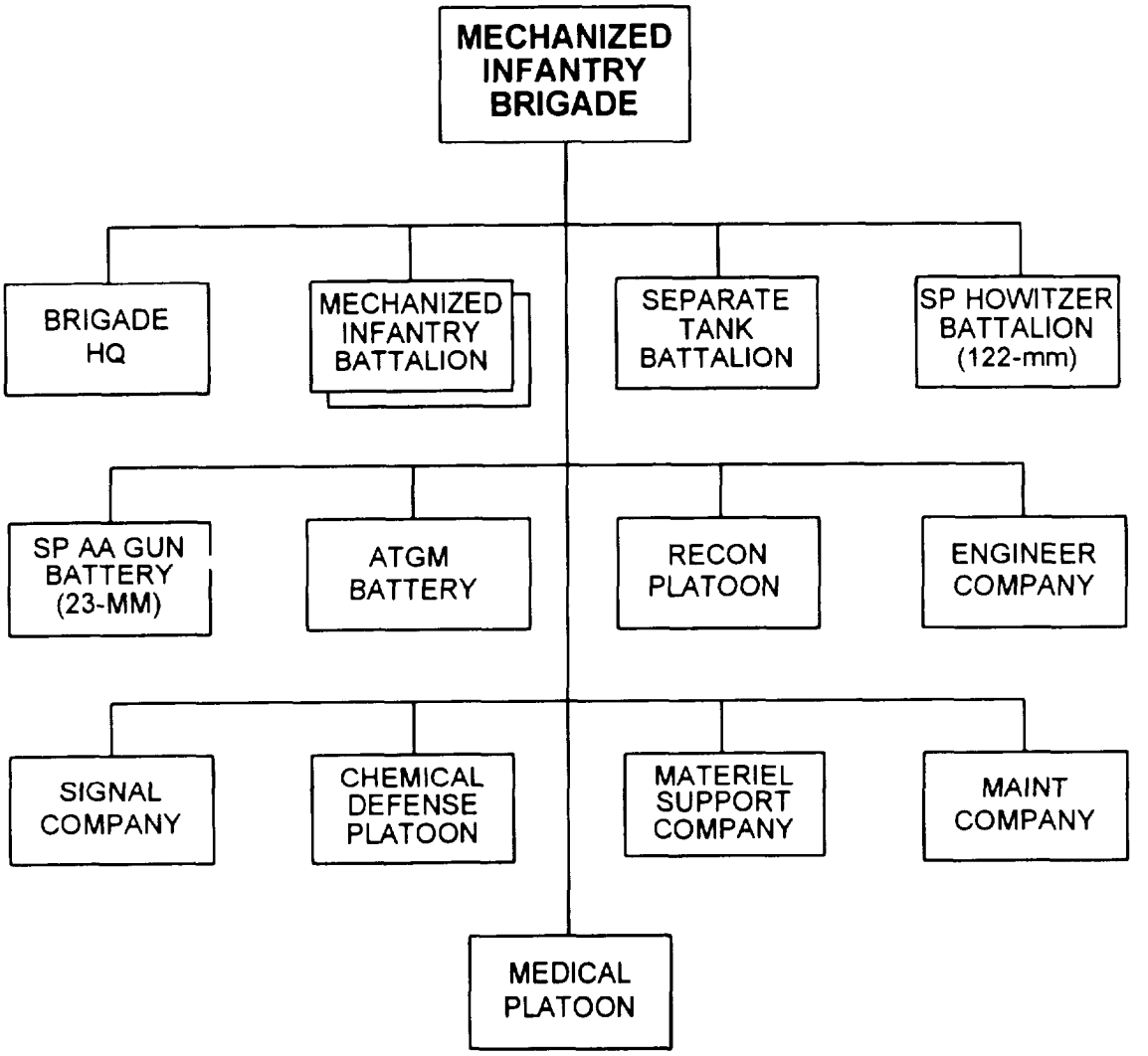

NOTES:

1. A mechanized infantry brigade normally has all mechanized infantry battalions of the same type (APC-equipped or IFV-equipped). In rare cases, however, a mix of the two battalion types may occur.
2. The principal items of equipment that follow depict normal brigade structures. These have either all APC-equipped mechanized infantry battalions or all IFV-equipped battalions.

(continued)

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Mechanized Infantry Brigade (APC) (Divisional)

Principal Items of Equipment	Brigade HQ	Mech Inf Bn (APC) (2x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	SP AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Plt	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
ARMORED VEHICLES														
ACV, BTR-60PBK/70K/80K	1	4												5
APC, BTR-60/70/80	1	82												83
APC, BTR-60PA (FAC)	1													1
APC, BTR-60 (PU-12)					1									1
ACV, BTR (R-145BM)		2	2					1	8					13
ACV, BMP-1K/2K			1											1
Mobile Recon Post, PRP-3/4*				1										1
ASC, BRDM-2							3							3
ACV, BRDM-2U						4	1							5
Chem Recon Vehicle, BRDM-2RKh/RKhM										3				3
ACRV, 1V13/1V13M/1V22 (Btry FDC)				3										3
ACRV, 1V14/1V14M/1V23 (Btry COP)				3										3
ACRV, 1V15/1V15M/1V24 (Bn COP)				1										1
ACRV, 1V16/1V16M/1V25 (Bn FDC)				1										1
Medium Tank, T-55K/62K			1											1
Medium Tank, T-55/62			30											30
Armored Recovery Vehicle			2									3		5
WEAPONS														
30-mm Auto Grenade Lchr, AGS-17		12												12
73-mm Recoilless Gun, SPG-9		6												6
120-mm Mortar, M1943/2S12 or 82-mm Mortar M1937/2B9		12												12
122-mm SP Howitzer, 2S1				18										18
ATGM Manpack, AT-4/SPIGOT		12												12
ATGM Vehicle, w/AT-3/5						12								12
23-mm SP AA Gun, ZSU-23-4**					8									8
SAM, Shoulder-Fired	3	18		18										39
Flamethrower, LPO/RPO		18	2					4						24
ENGINEER EQUIPMENT														
Bridge, Tank-Launched			1					1						2
Bridge, Truck-Launched								4						4
Ditching Machine, BTM/MDK			1											1
Ditching Machine, PZM/TMK								4						4
Route-Clearing Vehicle, BAT/PKT			1					1						2
Armored Engineer Tractor, IMR								1						1
Minelayer, GMZ								3						3
Mineclearing Plow			9											9
Mine Roller-Plow			3											3
Mine Detector, DIM								1						1
Truck, Water Purification								1						1

NOTES:

* This vehicle includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

** This vehicle includes the GUN DISH fire control radar.

(continued)

Principal Items of Equipment	Brigade HQ	Mech Inf Bn (APC) (2x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	SP AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Plt	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
TRUCKS														
Truck, Utility	3	8	1					4	5		2	1		24
Truck, Light		28	1	4	1				3		4		1	40
Truck, Medium	1	8	13	14	4	3		9			30	2	2	86
Truck, Crane			1					1						2
Truck, Crane Shovel								1						1
Truck, Decon, ARS-12U/14										3				3
Truck, Decon, DDA-53/65										1			1	2
Truck, Dump								2						2
Truck, POL (5,000-L)		6	4	2							10			22
Truck, Water (2,000-L)										2	3			5
Van, Command	3													3
Van, Hospital													1	1
Van, Kitchen		2	1											3
Van, Maintenance		2	1	2				1			1	9		16
Van, Signal		2	2	4					2					10
Ambulance		2	1	1									4	8
TRAILERS														
Trailer, Cargo, 1-Axle		4	1					6						11
Trailer, Cargo, 2-Axle			7	16				2			20			45
Trailer, Generator		2	3	2	2				1		1	6		17
Trailer, Kitchen		6		3				1			2	3	1	16
Trailer, POL (4,200-L)		2	4	2							10			18
Trailer, POL (1,200-L)		2												2
Trailer, Water (500-/1,200-L)		2	1	1				1		2	1		1	9
RADARS														
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE						1	1							2
RADIOS														
VHF, Manpack, Low-Power	3	32	5	10		4		4	7		1	1	1	68
VHF, Portable, Low-Power		50			1		4							55
VHF, Portable, Very-Low-Power		8												8
VHF, Vehicle Mount, Medium-Power	3	92	37	27	9	16	4	6	8	3		3		208
HF, Manpack, Low-Power			2						2	1				5
HF, Vehicle Mount, Medium-Power	1	4	6				1	1	2					15
HF/VHF, Vehicle Mount, Med-Power		2		4					2					8
HF/VHF, Vehicle Mount, High-Power									2					2
HF, Vehicle Mount, High-Power									1					1
Radio Relay, VHF/UHF			2						2					4
Warning Receiver	1	2	1	2	3				3					12
MISCELLANEOUS														
Rangefinder, Laser, SAGE GLOSS				4										4
Rangefinder, Stereoscopic		2				1								3
Periscopic Aiming Circle		2												2
Collimator		12												12
Motorcycle									3					3

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Principal Items of Equipment	Brigade HQ	Mech Inf Bn (IFV) (2x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	SP AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Plt	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
ARMORED VEHICLES														
ACV, BTR-60PBK/70K/80K	1													1
APC, BTR-60/70/80	1													1
APC, BTR-60PA (FAC)	1													1
APC, BTR-60 (PU-12)					1									1
ACV, BTR (R-145BM)		2	2					1	8					13
ACV, BMP-1K/2K		4	1											5
IFV, BMP-1/2		78					2							80
ACV, BRM-1K*							1							1
Mobile Recon Post, PRP-3/4**				1										1
ACV, BRDM-2U						4								4
Chem Recon Vehicle, BRDM-2RKh/RKhM										3				3
ACRV, 1V13/1V13M/1V22 (Btry FDC)				3										3
ACRV, 1V14/1V14M/1V23 (Btry COP)				3										3
ACRV, 1V15/1V15M/1V24 (Bn COP)				1										1
ACRV, 1V16/1V16M/1V25 (Bn FDC)				1										1
Medium Tank, T-55K/62K			1											1
Medium Tank, T-55/62			30											30
Armored Recovery Vehicle			2									3		5
Armored Maintenance Vehicle, MTP												3		3
WEAPONS														
30-mm Auto Grenade Lchr, AGS-17		12												12
120-mm Mortar, M1943/2S12 or 82-mm Mortar M1937/2B9		12												12
122-mm SP Howitzer, 2S1				18										18
ATGM Manpack, AT-4/SPIGOT		12												12
ATGM Vehicle, w/AT-3/5						12								12
23-mm SP AA Gun, ZSU-23-4***					8									8
SAM, Shoulder-Fired	3	18		18										39
Flamethrower, LPO/RPO		18	2					4						24
ENGINEER EQUIPMENT														
Bridge, Tank-Launched			1					1						2
Bridge, Truck-Launched								4						4
Ditching Machine, BTM/MDK			1											1
Ditching Machine, PZM/TMK								4						4
Route-Clearing Vehicle, BAT/PKT			1					1						2
Armored Engineer Tractor, IMR								1						1
Minelayer, GMZ								3						3
Mineclearing Plow			9											9
Mine Roller-Plow			3											3
Mine Detector, DIM								1						1
Truck, Water Purification								1						1

NOTES:

* This vehicle includes the TALL MIKE battlefield surveillance radar.

** This vehicle includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

*** This vehicle includes the GUN DISH fire control radar.

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Principal Items of Equipment	Brigade HQ	Mech Inf Bn (IFV) (2x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	SP AA Gun Btry (23-mm)	ATGM Btry	Reconnaissance Plt	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
TRUCKS														
Truck, Utility	3	8	1					4	5		2	1		24
Truck, Light		26	1	4	1				3		4		1	40
Truck, Medium	1	8	13	14	4	3		9			30	2	2	86
Truck, Crane			1					1						2
Truck, Crane Shovel								1						1
Truck, Decon, ARS-12U/14										3				3
Truck, Decon, DDA-53/66										1			1	2
Truck, Dump								2						2
Truck, POL (5,000-L)		4	4	2							10			20
Truck, Water (2,000-L)										2	3			5
Van, Command	3													3
Van, Hospital													1	1
Van, Kitchen		2	1											3
Van, Maintenance		2	1	2				1			1	9		16
Van, Signal		2	2	4					2					10
Ambulance		2	1	1									4	8
TRAILERS														
Trailer, Cargo, 1-Axle		4	1					6						11
Trailer, Cargo, 2-Axle			7	16				2			20			45
Trailer, Generator		2	3	2	2				1		1	6		17
Trailer, Kitchen		6		3				1			2	3	1	16
Trailer, POL (4,200-L)		6	4	2							10			22
Trailer, Water (900-/1,200-L)		2	1	1				1		2	1		1	9
RADARS														
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE						1								1
RADIOS														
VHF, Manpack, Low-Power	3	32	5	10		4	3	4	7		1	1	1	71
VHF, Portable, Low-Power		44			1									45
VHF, Portable, Very-Low-Power		8												8
VHF, Vehicle Mount, Medium-Power	3	88	37	27	9	16	3	6	8	3		6		206
HF, Manpack, Low-Power			2						2	1				5
HF, Vehicle Mount, Medium-Power	1	4	6				1	1	2					15
HF/VHF, Vehicle Mount, Med-Power		2		4					2					8
HF/VHF, Vehicle Mount, High-Power									2					2
HF, Vehicle Mount, High-Power									1					1
Radio Relay, VHF/UHF			2						2					4
Warning Receiver	1	2	1	2	3				3					12
MISCELLANEOUS														
Rangefinder, Laser, SAGE GLOSS				4										4
Rangefinder, Stereoscopic		2				1								3
Periscopic Aiming Circle		2												2
Collimator		12												12
Motorcycle									3					3

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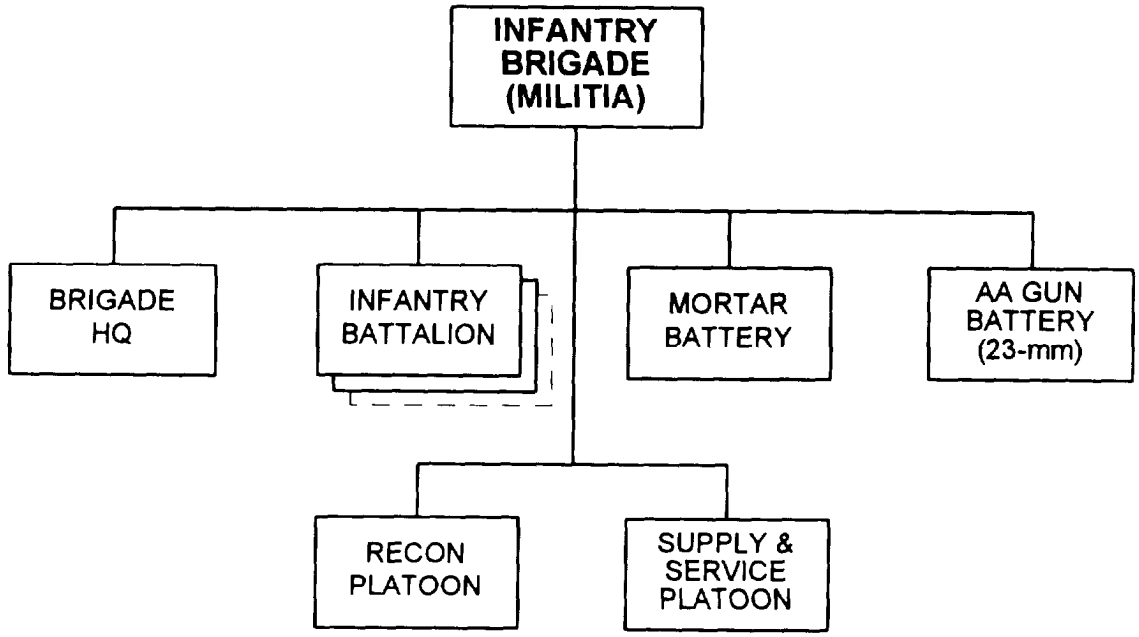

NOTES:

1. Districts, depending on their population/population centers, may or may not be able to constitute a brigade-sized militia force; many districts have, at most, a battalion. These forces may or may not act as an integrated force. Regardless of militia size, every village, farm cooperative, or factory has a militia formation, manned in wartime by the workers and peasants, over-age reservists, medically-retired soldiers, women, and young men not yet old enough for military service. The militia could receive additional combat support and combat service support assets from the district, but this would be extremely rare.
2. Although included in the equipment totals of some of the subordinate units referenced above, night-vision sights or goggles are not normally organic to militia forces.

(continued)

Principal Items of Equipment	Brigade HQ	Infantry Bn (2x)	Mortar Btry	AA Gun Btry (23-mm)	Recon Plt	Supply & Service Plt	TOTAL
WEAPONS							
30-mm Auto Grenade Lchr, AGS-17		12					12
60-mm Mortar, Light		18					18
82-mm Mortar, M1937		6					6
120-mm Mortar, M1943/2S12			6				6
73-mm Recoilless Gun, SPG-9		4					4
ATGM Manpack, AT-7/SAXHORN		6					6
23-mm AA Gun, ZU-23				8			8
SAM, Shoulder-Fired	3	18					21
Flamethrower, LPO/RPO		18					18
TRUCKS							
Truck, Utility	3	2	1	1		1	8
Truck, Light	6	6	7	8		10	37
Truck, POL (4,000-L)						2	2
Van, Maintenance						1	1
Van, Signal	1						1
Ambulance						1	1
TRAILERS							
Trailer, Cargo, 1-Axle						5	5
Trailer, Kitchen						2	2
Trailer, POL (1,200-L)						2	2
Trailer, Water (900-L)						3	3
RADARS							
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE					1		1
RADIOS							
VHF, Manpack, Low-Power	6	118	5	3	3	1	136
VHF, Portable, Low-Power		42			1		43
VHF, Portable, Very-Low-Power	3	8					11
VHF, Vehicle Mount, Medium-Power	1	2	1				4
HF, Vehicle Mount, Medium-Power	1	2					3
Warning Receiver	1	2		1			4
MISCELLANEOUS							
Rangefinder, Stereoscopic		2	1				3
Periscopic Aiming Circle, PAB2A		2	1				3
Collimator		6	6				12
Motorcycle					3		3

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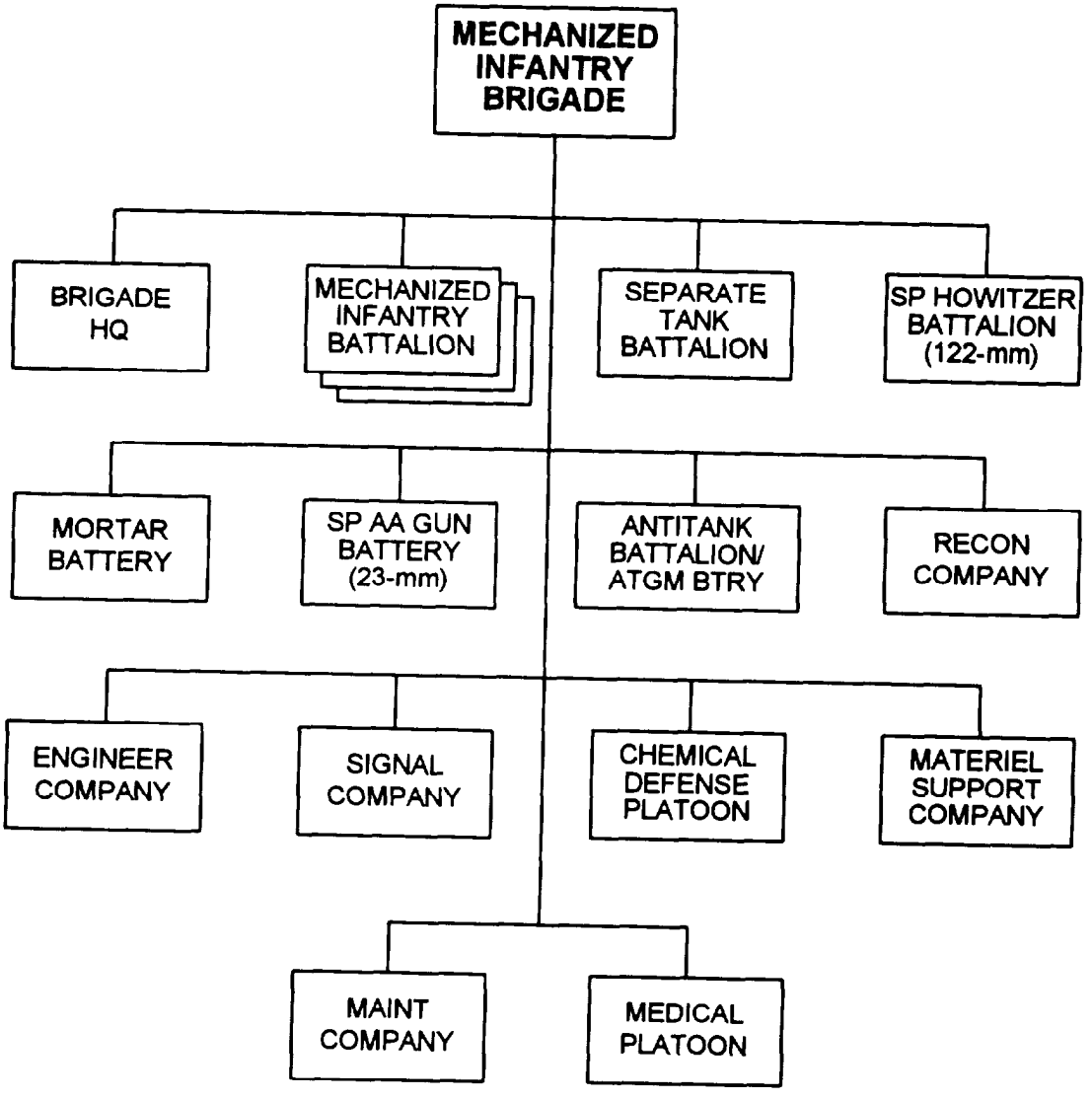

NOTES:

1. A mechanized infantry brigade normally has all mechanized infantry battalions of the same type (APC-equipped or IFV-equipped). In rare cases, however, a mix of the two battalion types may occur.
2. The principle items of equipment that follow depict normal brigade structures. These have either all APC-equipped mechanized infantry battalions or all IFV-equipped battalions.

(continued)

Principal Items of Equipment	Brigade HQ	Mech Inf Bn (APC) (3x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	Mortar Btry	SP AA Gun Btry (23-mm)	Antitank Bn*	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
ARMORED VEHICLES															
ACV, BTR-60PBK/70K/80K	1	6													7
APC, BTR-60/70/80	1	123													124
APC, BTR-60PA (FAC)	1														1
APC, BTR-60 (PU-12)						1									1
ACV, BTR (R-145BM)		3	2				1		1	8					15
ACV, BMP-1K/2K			1												1
Mobile Recon Post, PRP-3/4**				1			1								2
ASC, BRDM-2								8							8
ACV, BRDM-2U							4	1							5
Chem Recon Vehicle, BRDM-2RKh/RKhM											3				3
Prime Mover, MT-LBT							14								14
ACRV, 1V13/1V13M/1V22 (Btry FDC)				3											3
ACRV, 1V14/1V14M/1V23 (Btry COP)				3											3
ACRV, 1V15/1V15M/1V24 (Bn COP)				1											1
ACRV, 1V16/1V16M/1V25 (Bn FDC)				1											1
Medium Tank, T-55K/62K			1												1
Medium Tank, T-55/62			30												30
Armored Recovery Vehicle			2										3		5
WEAPONS															
30-mm Auto Grenade Lchr, AGS-17		18													18
73-mm Recoilless Gun, SPG-9		9													9
120-mm Mortar, M1943/2S12 or 82-mm Mortar M1937/2B9		18			6										24
122-mm SP Howitzer, 2S1				18											18
100-mm AT Gun, T-12/MT-12							12								12
ATGM Manpack, AT-4/SPIGOT		18													18
ATGM Vehicle, w/AT-3/5							9								9
23-mm SP AA Gun, ZSU-23-4***						8									8
SAM, Shoulder-Fired	3	27		18											48
Flamethrower, LPO/RPO		27	2						4						33
ENGINEER EQUIPMENT															
Bridge, Tank-Launched			1						1						2
Bridge, Truck-Launched									4						4
Ditching Machine, BTM/MDK			1												1
Ditching Machine, PZM/TMK									4						4
Route-Clearing Vehicle, BAT/PKT			1						1						2
Armored Engineer Tractor, IMR									1						1
Minelayer, GMZ									3						3
Mineclearing Plow			9												9
Mine Roller-Plow			3												3
Mine Detector, DIM									1						1
Truck, Water Purification									1						1

NOTES:

* Some separate mechanized infantry brigades (APC) may have only an ATGM battery (see p. 3-27).

** This vehicle includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

*** This vehicle includes the GUN DISH fire control radar.

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Mechanized Infantry Brigade (APC) (Separate) (continued)

Principal Items of Equipment	Brigade HQ	Mech Inf Bn (APC) (3x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	Mortar Btry	SP AA Gun Btry (23-mm)	Antitank Bn*	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
TRUCKS															
Truck, Utility	3	12	1		1		3		4	5		2	1		32
Truck, Light		39	1	4	7	1	4			3		4		1	64
Truck, Medium	1	12	13	14		4	12		9			45	2	2	114
Truck, Crane			1						1						2
Truck, Crane Shovel									1						1
Truck, Decon, ARS-12U/14											3				3
Truck, Decon, DDA-53/66											1			1	2
Truck, Dump									2						2
Truck, POL (5,000-L)		9	5	2			3					15			34
Truck, Water (2,000-L)											2	4			6
Van, Command	3														3
Van, Hospital														1	1
Van, Kitchen		3	1												4
Van, Maintenance		3	1	2			2		1			1	9		19
Van, Signal		3	2	4			2			2					13
Ambulance		3	1	1			1							4	10
TRAILERS															
Trailer, Cargo, 1-Axle		6	1						6						13
Trailer, Cargo, 2-Axle			7	16			10		2			30			65
Trailer, Generator		3	3	2		2	1			1		1	6		19
Trailer, Kitchen		9		3			1		1			2	3	1	20
Trailer, POL (4,200-L)		3	5	2			3					15			28
Trailer, POL (1,200-L)		3													3
Trailer, Water (900-/1,200-L)		3	1	1			1		1		2	1		1	11
RADARS															
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE							3	2							5
RADIOS															
VHF, Manpack, Low-Power	3	48	5	10	5		10		4	7		1	1	1	95
VHF, Portable, Low-Power		75				1		13							89
VHF, Portable, Very-Low-Power		12													12
VHF, Vehicle Mount, Medium-Power	3	138	37	27	1	9	28	9	6	8	3		3		272
HF, Manpack, Low-Power			2							2	1				5
HF, Vehicle Mount, Medium-Power	1	6	6				1	1	1	2					18
HF/VHF, Vehicle Mount, Med-Power		3		4			3			2					12
HF/VHF, Vehicle Mount, High-Power										2					2
HF, Vehicle Mount, High-Power										1					1
Radio Relay, VHF/UHF			2				1			2					5
Warning Receiver	1	3	1	2		3	1	1		3					15
MISCELLANEOUS															
Rangefinder, Laser, SAGE GLOSS				4											4
Rangefinder, Stereoscopic		3			1		3								7
Periscopic Aiming Circle		3			1										4
Collimator		18			6										24
Motorcycle								9		3					12

NOTE:

* Some separate mechanized infantry brigades (APC) may have only an ATOM battery (see p. 3-27).

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Principal Items of Equipment	Brigade HQ	Mech Inf Bn (IFV) (3x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	Mortar Btry	SP AA Gun Btry (23-mm)	Antitank Bn*	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
ARMORED VEHICLES															
ACV, BTR-60PBK/70K/80K	1														1
APC, BTR-60/70/80	1														1
APC, BTR-60PA (FAC)	1														1
APC, BTR-60 (PU-12)						1									1
ACV, BTR (R-145BM)		3	2				1		1	8					15
ACV, BMP-1K/2K		6	1												7
IFV, BMP-1/2		117						2							119
ACV, BRM-1K								2							2
Mobile Recon Post, PRP-3/4**				1			1								2
ASC, BRDM-2								4							4
ACV, BRDM-2U							4								4
Chem Recon Vehicle, BRDM-2RKh/RKhM											3				3
Prime Mover, MT-LBT							14								14
ACRV, 1V13/1V13M/1V22 (Btry FDC)				3											3
ACRV, 1V14/1V14M/1V23 (Btry COP)				3											3
ACRV, 1V15/1V15M/1V24 (Bn COP)				1											1
ACRV, 1V16/1V16M/1V25 (Bn FDC)				1											1
Medium Tank, T-55K/62K			1												1
Medium Tank, T-55/62			30												30
Armored Recovery Vehicle			2										3		5
Armored Maintenance Vehicle, MTP													3		3
WEAPONS															
30-mm Auto Grenade Lchr, AGS-17		18													18
120-mm Mortar, M1943/2S12 or 82-mm Mortar M1937/2B9		18			6										24
122-mm SP Howitzer, 2S1				18											18
100-mm AT Gun, T-12/MT-12			4				12								12
ATGM Manpack, AT-4/SPIGOT		18													18
ATGM Vehicle, w/AT-3/5							9								9
23-mm SP AA Gun, ZSU-23-4***						8									8
SAM, Shoulder-Fired	3	27		18											48
Flamethrower, LPO/RPO		27	2						4						33
ENGINEER EQUIPMENT															
Bridge, Tank-Launched			1						1						2
Bridge, Truck-Launched									4						4
Ditching Machine, BTM/MDK			1												1
Ditching Machine, PZM/TMK									4						4
Route-Clearing Vehicle, BAT/PKT			1						1						2
Armored Engineer Tractor, IMR									1						1
Minelayer, GMZ									3						3
Minecleering Plow			9												9
Mine Roller-Plow			3												3
Mine Detector, DIM									1						1
Truck, Water Purification									1						1

NOTES:

* Some separate mechanized infantry brigades (IFV) may have only an ATGM battery (see p. 3-27).

** This vehicle includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

*** This vehicle includes the GUN DISH fire control radar.

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Principal Items of Equipment	Brigade HQ	Mech Inf Bn (IFV) (3x)	Separate Tank Bn	SP Howitzer Bn (122-mm)	Mortar Btry	SP AA Gun Btry (23-mm)	Antitank Bn*	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
TRUCKS															
Truck, Utility	3	12	1		1		3		4	5		2	1		32
Truck, Light		39	1	4	7	1	4			3		4		1	64
Truck, Medium	1	12	13	14		4	12		9			45	2	2	114
Truck, Crane			1						1						2
Truck, Crane Shovel									1						1
Truck, Decon, ARS-12U/14											3				3
Truck, Decon, DDA-53/66											1			1	2
Truck, Dump									2						2
Truck, POL (5,000-L)		6	4	2			3					15			30
Truck, Water (2,000-L)											2	4			6
Van, Command	3														3
Van, Hospital														1	1
Van, Kitchen		3	1												4
Van, Maintenance		3	1	2			2		1			1	9		19
Van, Signal		3	2	4			2			2					13
Ambulance		3	1	1			1							4	10
TRAILERS															
Trailer, Cargo, 1-Axle		6	1						6						13
Trailer, Cargo, 2-Axle			7	16			10		2			30			65
Trailer, Generator		3	3	2		2	1			1		1	6		19
Trailer, Kitchen		9		3			1		1			2	3	1	20
Trailer, POL (4,200-L)		9	4	2			3					15			33
Trailer, Water (900-/1,200-L)		3	1	1			1		1		2	1		1	11
RADARS															
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE							3	1							4
RADIOS															
VHF, Manpack, Low-Power	3	48	5	10	5		10	4	4	7		1	1	1	99
VHF, Portable, Low-Power		66				1		5							72
VHF, Portable, Very-Low-Power		12													12
VHF, Vehicle Mount, Medium-Power	3	132	37	27	1	9	28	8	6	8	3		6		268
HF, Manpack, Low-Power			2							2	1				5
HF, Vehicle Mount, Medium-Power	1	6	6				1	1	1	2					18
HF/VHF, Vehicle Mount, Med-Power		3		4			3			2					12
HF/VHF, Vehicle Mount, High-Power										2					2
HF, Vehicle Mount, High-Power										1					1
Radio Relay, VHF/UHF			2				1			2					5
Warning Receiver	1	3	1	2		3	1	1		3					15
MISCELLANEOUS															
Rangefinder, Laser, SAGE GLOSS				4											4
Rangefinder, Steroscopic					1		3								4
Periscopic Aiming Circle					1										1
Collimator					6										6
Motorcycle								3		3					6

NOTE:

* Some separate mechanized infantry brigades (IFV) may have only an ATGM battery.

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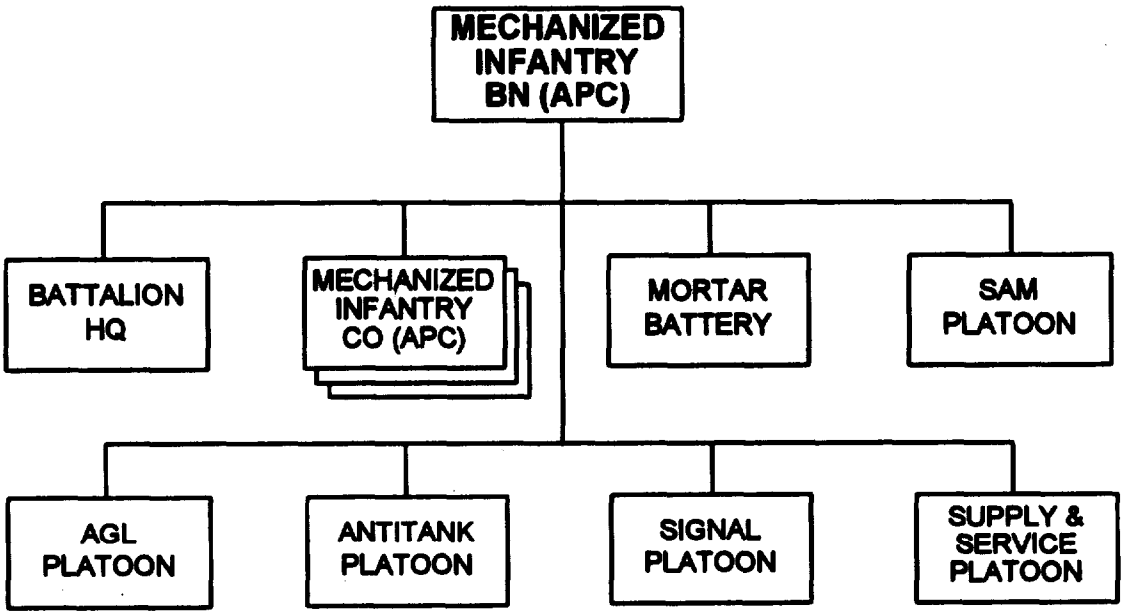
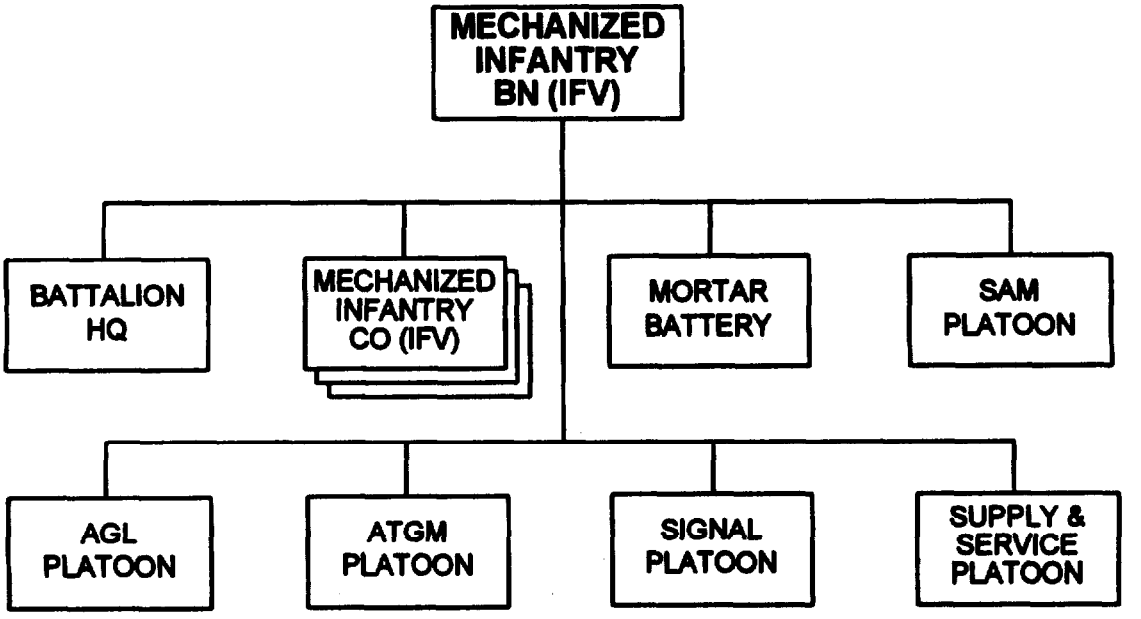
Mechanized Infantry Battalion (APC), Mech Inf Bde (Sep and Div)



Mechanized Infantry Battalion (IN), Mech Inf Bde (Sep and Div) and Tank Bde



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PRINCIPAL ITEMS OF EQUIPMENT

Equipment	APC	IFV
ACV, BTR-60PBK/70K/80K*	2	0
ACV, BMP-1K/2K**	0	2
ACV, BTR (R-145BM)***	1	1
APC, BTR-60/70/80	41	0
IFV, BMP-1/2	0	39
9-mm Pistol, PM	158	155
5.45mm Assault Rifle, AK-74	324	318
5.45-mm LMG, RPK-74	23	23
7.62-mm GP MG, PKM	6	6
7.62-mm Sniper Rifle, SVD	9	9
30-mm Automatic Grenade Launcher, AGS-17	6	6
40-mm Under-Barrel Grenade Launcher, BG-15	60	60
120-mm Mortar, M1943/2S12 or 82-mm Mortar, M1937/2B9	6	6
ATGM Manpack, AT-4/SPIGOT	6	6
73-mm Recoilless Gun, SPG-9	3	0
ATGL, RPG-7V	33	33
ATRL, RPG-18/22	36	34
SAM, Shoulder-Fired	9	9
Flamethrower, RPO	9	9
Truck, Utility	4	4
Truck, Light	13	13
Truck, Medium	4	4
Truck, POL (5,000-Liter)	3	2
Van, Kitchen	1	1
Van, Maintenance	1	1
Van, Signal	1	1
Ambulance	1	1
Trailer, Cargo, 1-Axle	2	2
Trailer, Generator	1	1
Trailer, Kitchen	3	3
Trailer, POL (4,200-Liter)	1	3
Trailer, POL (1,200-Liter)	1	0
Trailer, Water (900-Liter)	1	1
Rangetinder, Stereoscopic, DS-1	1	1
Periscopic Aiming Circle, PAB2A	1	1
Collimator	6	6
Night-Vision Goggles	46	46
Night-Vision Goggles (Driver)	9	9
Night-Vision Sight (AGL)	6	6
Night-Vision Sight (Small Arms)	52	50
Radios:		
VHF, Manpack, Low-Power	16	16
VHF, Portable, Low-Power	25	22
VHF, Portable, Very-Low-Power	4	4
VHF, Vehicle Mount, Medium-Power	46	44
HP, Vehicle Mount, Medium-Power	2	2
HF/VHF, Vehicle Mount Medium-Power	1	1
Warning Receiver	1	1

NOTES:

* In some APC-equipped mechanized infantry battalions, an additional ACV, BTR (R-145BM) can replace one of these command vehicles.

** In some IFV-equipped mechanized infantry battalions, an ACV, BMP- 1KSh can replace one of these command vehicles,

*** Some IFV-equipped mechanized infantry battalions may have a tracked ACV, BMP-IKSh instead of the wheeled ACV, BTR (R-145BM) shown here.

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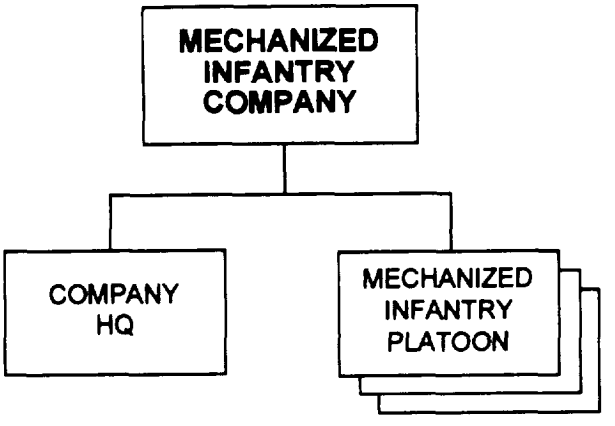

Company Commander ..... PM
Deputy Commander ..... PM
Logistics Officer ..... PM
First Sergeant AK-74
Vehicle Driver..... PM
Vehicle Gunner ..... PM

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
IFV, BMP-1/2 or APC, BTR-60/70/80	10
9-mm Pistol, PM	35
5.45-mm Assault Rifle, AK-74	58
5.45-mm LMG, RPK-74	9
7.62-mm Sniper Rifle, SVD	3
40-mm Under-Barrel Grenade Launcher, BG-15	18
ATGL, RPG-7V	9
ATRL, RPG- 18/22	10

Equipment	Total
Flamethrower, RPO	3
Night-Vision Goggles	13
Night-Vision Sight (Small Arms)	9
Radios:	
VHF, Manpack, Low-Power	1
VHF, Portable, Low-Power	4
VHF, Vehicle Mount, Medium-Power	10

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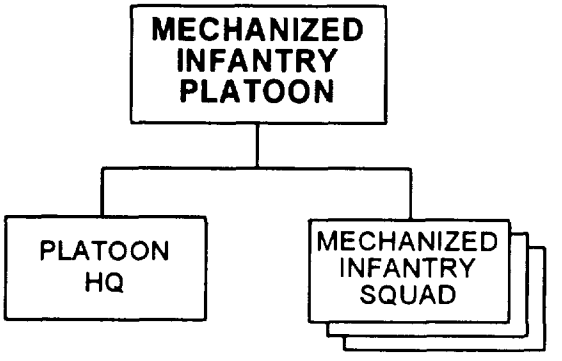

Platoon Leader ..... PM
Asst Plt Leader AK-74

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
IFV, BMP-1/2 or APC, BTR-60/70/80	3
9-mm Pistol, PM	10
5.45-mm Assault Rifle, AK-74	19
5.45-mm LMG, RPK-74	3
7.62-mm Sniper Rifle, SVD	1
40-mm Under-Barrel Grenade Launcher, BG-15	6
ATGL, RPG-7V	3

Equipment	Total
ATRL, RPG-18/22	3
Flamethrower, RPO	1
Night-Vision Goggles	4
Night-Vision Sight (Small Arms)	3
Radios:	
VHF, Portable, Low-Power	1
VHF, Vehicle Mount, Medium-Power	3

NOTE: The platoon leader and assistant platoon leader each ride in one of the squad vehicles (IFV or APC).

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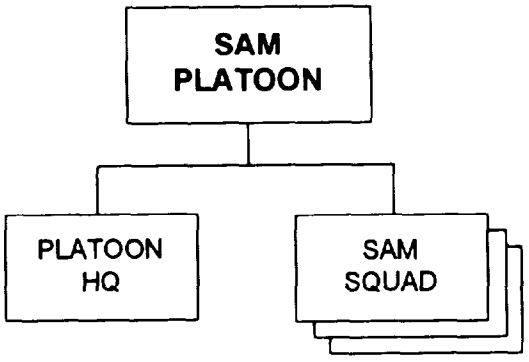

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
SAM, Shoulder-Fired	9
IFV, BMP-1/2 or ACV, BTR-60/70/80	3
9-mm Pistol, PM	4
5.45-mm Assault Rifle, AR-74	9
Night-Vision Sight (Small Arms)	3

Equipment	Total
Radios:	
VHF, Portable, Very-Low-Power	4
VHF, Vehicle Mount, Medium-Power	3

NOTE: Depending on the situation, the battalion commander may retain the entire SAM platoon under his own control, or he may allocate its squads to individual mechanized infantry companies (or SA-11 batteries).

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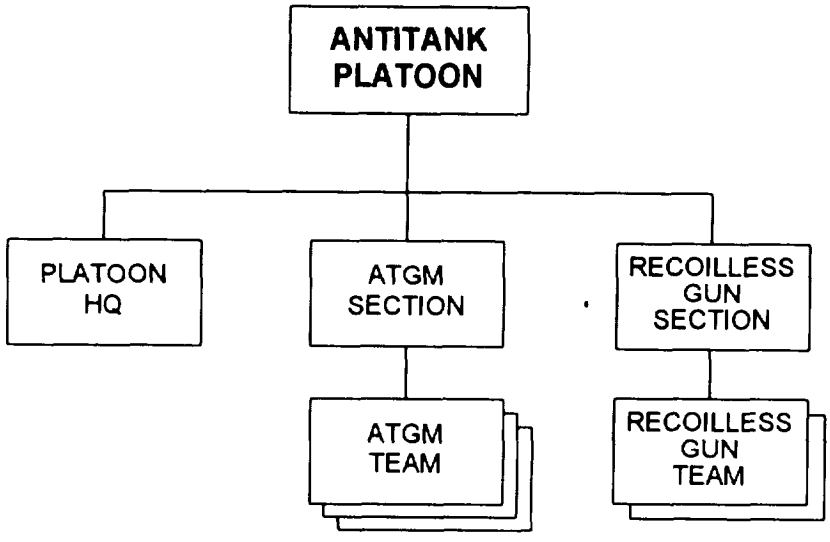

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM, Manpack, AT-7/SAXHORN	3
73-mm Recoilless Gun, SPG-9	2
9-mm Pistol, PM	4
5.45-mm Assault Rifle, AR-74	15
40-mm Under-Barrel Grenade Launcher, BG-15	4

Equipment	Total
ATRL, RPG- 18/22	2
Night-Vision Sight (Small Arms)	5
Radio, VHF, Manpack, Low-Power	4

NOTE: In a motorized infantry battalion, two light trucks from the brigade-level weapons transport company can carry this antitank platoon.

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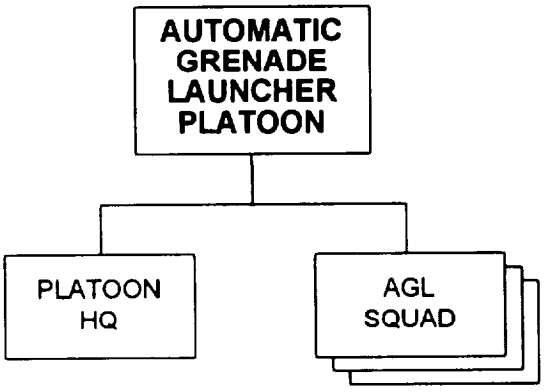

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
30-mm Automatic Grenade Launcher, AGS-17	6
IFV, BMP-1/2 or APC, BTR-60/70/80	3
9-mm Pistol, PM	13
5.45mm Assault Rifle, AR-74	18
Night-Vision Goggles	3

Equipment	Total
Night-Vision Sight (AGL)	6
Night-Vision Sight (Small Arms)	3
Radios:	
VHF, Portable, Low-Power	4
VHF, Vehicle Mount, Medium-Power	3

NOTE: Depending on the situation, the mechanized infantry battalion commander may retain the entire AGL platoon under his own control, or he may allocate its squads to individual mechanized infantry companies.

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AUTOMATIC GRENADE LAUNCHER SQUAD

Squad Leader	AK-74
Senior Rifleman	AK-74
Grenadier (x2)	AGS-17, PM
Rifleman/Asst Grenadier (x4)	AK-74
IFV/APC Driver/Mechanic	PM
IFV/APC Gunner	PM

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
30-mm Automatic Grenade Launcher, AGS-17	2
9-mm Pistol, PM	4
5.45-mm Assault Rifle, AR-74	6
IFV, BMP-1/2 or APC, BTR-60/70/80	1
Night-Vision Goggles	1

Equipment	Total
Night-Vision Sight (AGL)	2
Night-Vision Sight (Small Arms)	3
Radios:	
VHF, Portable, Low-Power	1
VHF, Vehicle Mount, Medium-Power	1

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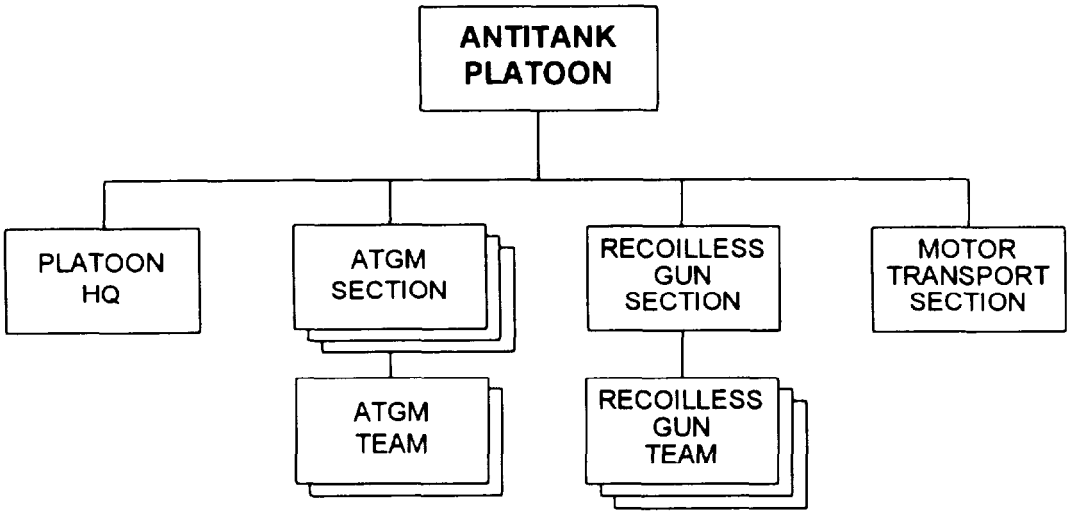

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
APC, BTR-60/70/80	5
ATGM Manpack, AT-4/SPIGOT	6
73-mm Recoilless Gun, SPG-9	3
9-mm Pistol, PM	14
5.45-mm Assault Rifle, AR-74	25
ATRL, RPG-18/22	5

Equipment	Total
Night-Vision Sight (Small Arms)	5
Radios:	
VHF, Portable, Low-Power	7
VHF, Vehicle Mount, Medium-Power	5

NOTES:

1. ATGMs deploy by squads Each squad consists of two teams, each containing one AT-4/SPIGOT launcher.
2. Recoilless guns deploy by teams. Each team contains one SPG-9.
3. Each APC can carry one or two recoilless gun teams or one ATGM section.
4. The platoon leader and assistant platoon leader ride in extra seats in the recoilless gun and ATGM vehicles.

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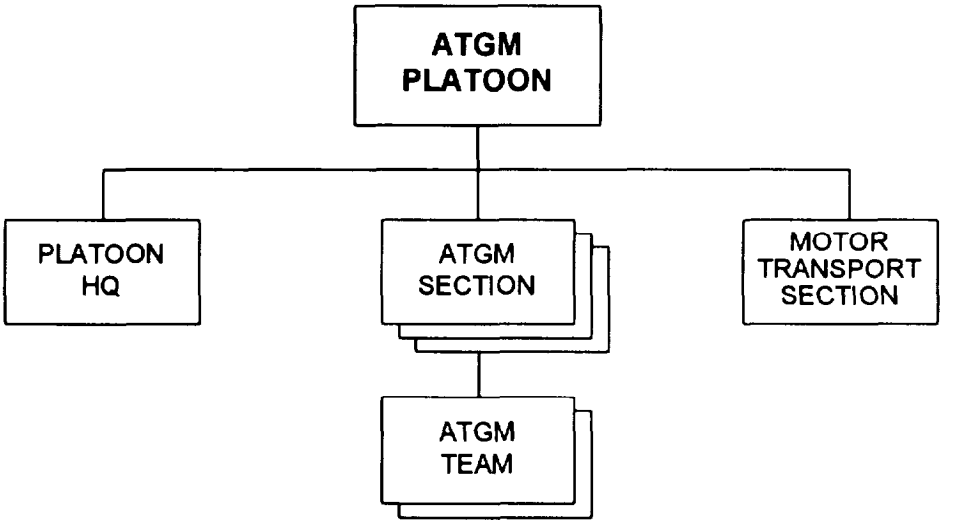

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM Manpack Launcher, AT-4/SPIGOT	6
IFV, BMP-1/2	3
9-mm Pistol, PM	11
5.45-mm Assault Rifle, AR-74	19
ATRL, RPG-18/22	3

Equipment	Total
Night-Vision Sight (Small Arms)	3
Radios:	
VHF, Portable, Low-Power	4
VHF, Vehicle Mount, Medium-Power	3

NOTES:

1. This platoon may have nine AT-7/SAXHORN launchers rather than the six AT-4/SPIGOT launchers shown here.
2. The IFV-equipped mechanized infantry battalion may divide this platoon's ATGM launchers and vehicles among the battalion's three mechanized infantry companies.
3. The platoon leader and assistant platoon leader ride in extra seats in the ATGM section vehicles.

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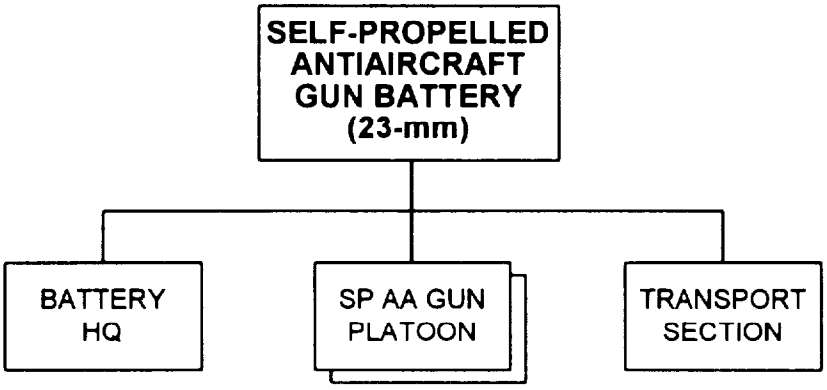

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
23-mm SP AA Gun, ZSU-23-4*	8
ACV, BTR-60 (PU-12)	1
Truck, Light	1
Truck, Medium	4
Trailer, Generator	2

Equipment	Total
Radios:	
VHF, Portable, Low-Power	1
VHF, Vehicle Mount, Medium-Power	.9
Warning Receiver	3

NOTES: Some mechanized infantry brigades have an air defense battery with one SA-9/GASKIN platoon (4 SAM launchers) and one ZSU-23-4 platoon (4 guns).

* This system includes the GUN DISH fire control radar.

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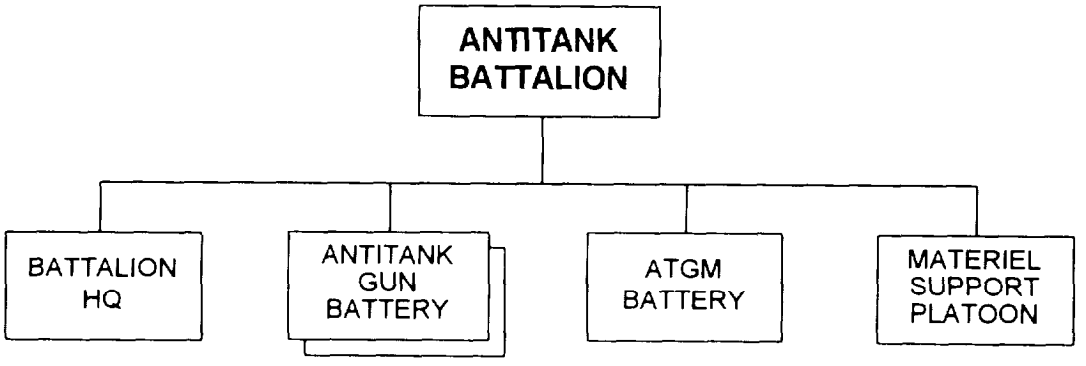

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ATGM Vehicle, 9P133 w/AT-3/SAGGER or 9P148 w/AT-S/SPANDREL	9
100-mm Antitank Gun, T-12/MT-12	12
ATGL, RPG-7V	9
ACV, BTR (R-145BM)/BRDM-2U	1
ACV, BRDM-2U	4
Mobile Recon Post, PRP-3/4*	1
Prime Mover, MT-LBT	14
Truck, Utility	3
Truck, Light	4
Truck, Medium	12
Truck, POL (5,000-Liter)	3
Van, Maintenance	2
Van, Signal	2
Ambulance	1
Trailer, Cargo, 2-Axle	10
Trailer, Generator	1

Equipment	Total
Trailer, Kitchen	1
Trailer, POL (4,200-Liter)	3
Trailer, Water (900-Liter)	1
Rangetinder, Stereoscopic, DS-1	3
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	3
Radios,	
VHF, Manpack, Low-Power	10
VHF, Vehicle Mount, Medium-Power	28
HF, Vehicle Mount, Medium-Power	1
HF/VHF, Vehicle Mount, Medium-Power	3
Radio Relay, VHF/UHF	1
Warning Receiver	1

* This system includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

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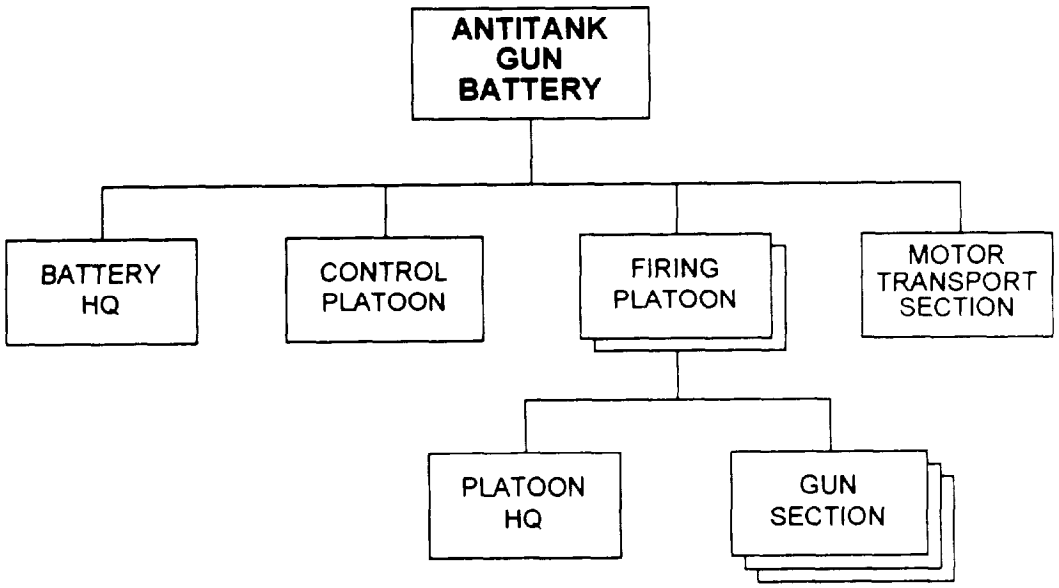

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
100-mm Antitank Gun, T-12/MT-12	6
Prime Mover, MT-LBT	7
Truck, Medium	1
Trailer, Cargo, 2-Axle	1
Rangetinder. Stereoscopic, DS-1	1

Equipment	Total
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Manpack, Low-Power..	1
VHF. Vehicle Mount, Medium-Power..	7

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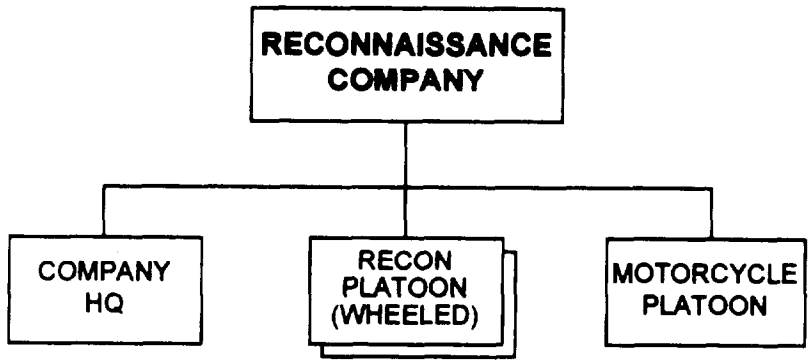
Reconnaissance Company, Mech Int Bde (APC) (Sep), Mtzd Inf Bde (Sep), and Inf Bdo (Sep)



BRDM-2U..... 1

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BRDM-2U	1
ASC, BRDM-2	8
9-mm Pistol, PM	11
5.45-mm Assault Rifle, AK-74	47
40-mm Under-Barrel Grenade Launcher, BG-15	13
ATRL, RPG- 18/22	9
Motorcycle	9
Night-Vision Goggles	13
Night-Vision Sight (Small Arms)	9

Equipment	Total
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	2
Radios:	
VHF, Portable, Low-Power	13
VHF, Vehicle Mount, Medium-Power	9
HF, Vehicle Mount, Medium-Power	1
Warning Receiver	1

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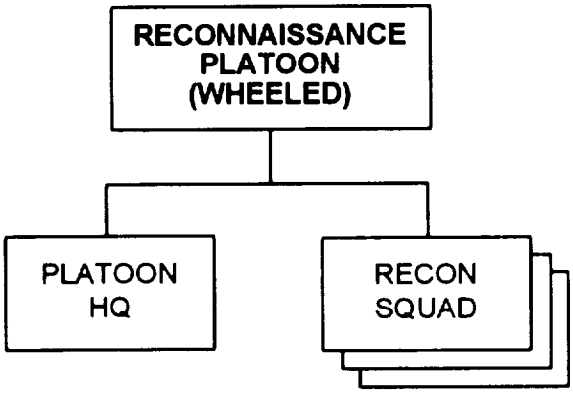

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ASC, BRDM-2*	4
9-mm Pistol, PM	1
5.45-mm Assault Rifle, AR-74	15
40-mm Under-Barrel Grenade Launcher, BG-15	4
ATRL, RPG-18/22	4
Night-Vision Goggles	4

Equipment	Total
Night-Vision Sight (Small Arms)	4
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VHF, Portable, Low-Power	4
VHF, Vehicle Mount, Medium-Power	4

* When this platoon is not part of a parent reconnaissance company, a BRDM-2U armored command vehicle can replace the BRDM-2 in the platoon headquarters. The BRDM-2U carries one additional radio (HP, vehicle mount, medium-power).

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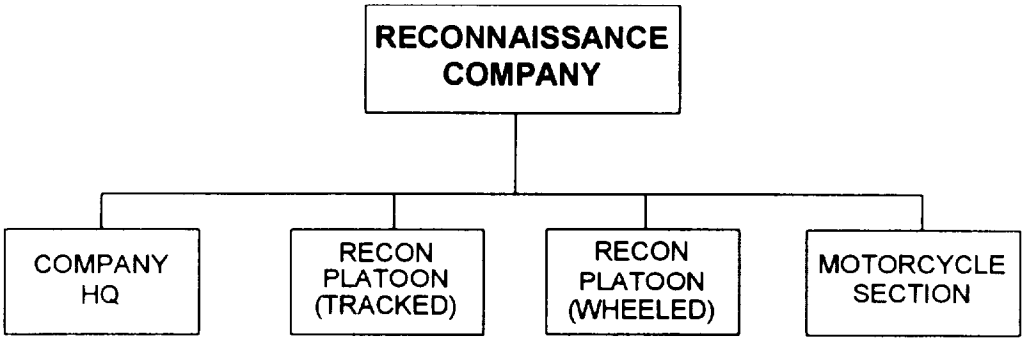

BRM-1K 1

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ASC, BRDM-2	4
ACV, BRM-1K*	2
IFV, BMP-1/2	2
9-mm Pistol, PM	15
5.45-mm Assault Rifle, AK-74	36
5.45mm LMG, RPK-74	3
ATGL, RPG-7V	3
ATRL,RPG-18/22	8
40-mm Under-Barrel Grenade Launcher, BG-15	7
Motorcycle	3
Night-Vision Goggles	9

Equipment	Total
Night-Vision Sight (Small Arms)	8
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE	1
Radios:	
VI-IF, Manpack, Low-Power	4
VHF, Portable, Low-Power	5
VHF, Vehicle Mount, Medium-Power	8
HF, Vehicle Mount, Medium-Power	1
Warning Receiver	1

NOTES:

1. The mix of BMP and BRM vehicles within a tracked reconnaissance platoon can vary.
2. The motorcycle section may also provide courier service.

* This vehicle includes the TALL MIKE battlefield surveillance radar.

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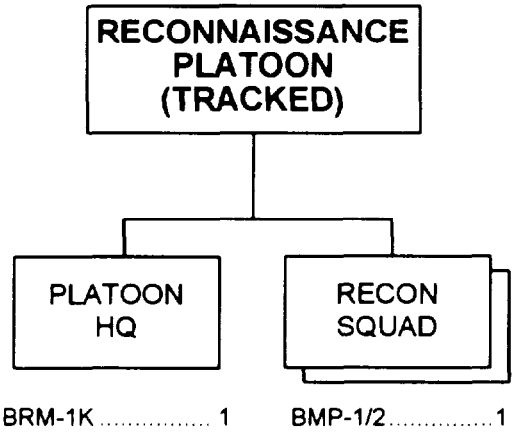
Reconnaissance Platoon (Tracked), Mech Inf Bde (IFV) (Div), or Recon Co, Mech Inf Bde (IFV) (Sep) and Tank Bde, or Recon Co, Recon & EC Bn, Mech inf Div or MD or Army or CDF or DMI _____



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BRM-1K*.	1
IFV, BMP- 1/2	2
9-mm Pistol, PM..	10
5.45-mm Assault Rifle, AK-74	11
5.45-mm LMG, RPK-74	3
ATGL, RPG-7V	3
ATRL, RPG-18/22..	3

Equipment	Total
40-mm Under-Barrel Grenade Launcher, BG-15	3
Night-Vision Goggles.	3
Night-Vision Sight (Small Arms).	3
Radios:	
VHF, Manpack, Low-Power	3
VHF, Vehicle Mount, Medium-Power.	3

NOTES: The mix of BRM-1K and BMP vehicles can vary.

* This vehicle includes the TALL MIKE battlefield surveillance radar. When this platoon is not part of a parent reconnaissance company, the BRM-1K carries one additional radio (HF, vehicle mount, medium-power).

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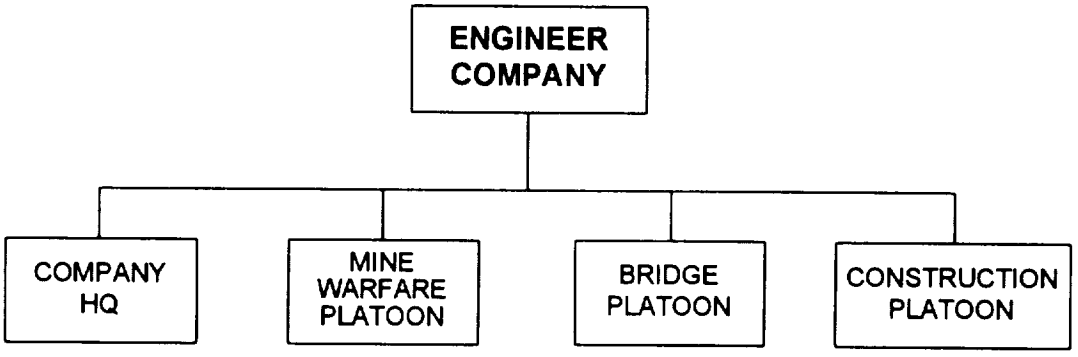

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BTR (R-145BM)	1
ATRL, RPG-18/22	4
Flamethrower, LPO/RPO	4
Truck, Utility	4
Truck, Medium	9
Truck, Crane	1
Truck, Crane Shovel	1
Truck, Dump	2
Truck, Water Purification	1
Van, Maintenance	1
Trailer, Cargo, l-Axle	6
Trailer, Cargo, 2-Axle	2
Trailer, Kitchen	1
Trailer, Water (900-Liter)	1

Equipment	Total
Bridge, Tank-Launched	1
Bridge, Truck-Launched	4
Ditching Machine, PZM/TMK	4
Armored Engineer Tractor, IMR	1
Route-Clearing Vehicle, BAT	1
Minelayer, GMZ	3
Mine Detector, DIM	1
Radios:	
VHF, Vehicle Mount, Medium-Power	6
HF or VHF, Manpack, Low-Power	4
HF, Vehicle Mount, Medium-Power	1

NOTE: A mechanized infantry division or military district may have only an engineer company organic to it. However, it would probably receive additional support from national-level engineer organizations.

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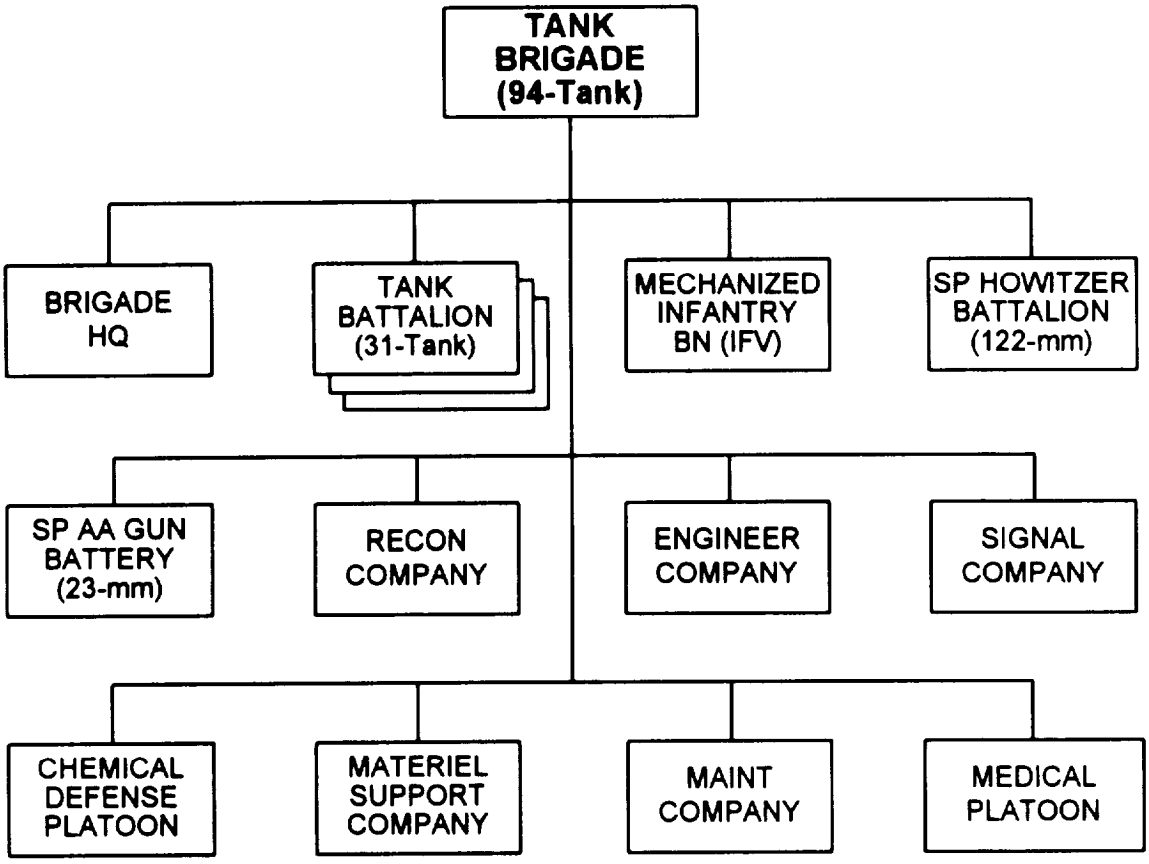

NOTE: In a CDF tank brigade, the mechanized infantry battalion is most likely IFV-equipped.

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Principal Items of Equipment	*Brigade HQ*	*Tank Bn (3x)*	*Mech Inf Bn (IFV)*	*SP Howitzer Bn (122-mm)*	*SP AA Gun Btry (23-mm)*	*Reconnaissance Co*	*Engineer Co*	*Signal Co*	*Chemical Defense Plt*	*Materiel Support Co*	*Maintenance Co*	*Medical Plt*	*TOTAL*
ARMORED VEHICLES													
Medium Tank, T-55K/62K	1	3											4
Medium Tank, T-55/62		90											90
APC, BTR-60/70/80	1												1
APC, BTR-60PA (FAC)	1												1
APC, BTR-60 (PU-12)					1								1
ACV, BTR (R-145BM)		3	1				1	8					13
ACV, BMP-1K/2K		3	2										5
IFV, BMP-1/2			39			2							41
ACV, BRM-1K*						2							2
Mobile Recon Post, PRP-3/4**				1									1
ASC, BRDM-2						4							4
Chem Recon Vehicle, BRDM-2RKh/RKhM									3				3
ACRV, 1V13/1V13M/1V22 (Btry FDC)				3									3
ACRV, 1V14/1V14M/1V23 (Btry COP)				3									3
ACRV, 1V15/1V15M/1V24 (Bn COP)				1									1
ACRV, 1V16/1V16M/1V25 (Bn FDC)				1									1
Armored Recovery Vehicle											5		5
WEAPONS													
30-mm Auto Grenade Lchr, AGS-17			6										6
120-mm Mortar, M1943/2S12 or 82-mm Mortar M1937/2B9			6										6
122-mm SP Howitzer, 2S1				18									18
ATGM Manpack, AT-4/SPIGOT			6										6
23-mm SP AA Gun, ZSU-23-4***					8								8
SAM, Shoulder-Fired	3		9	18									30
Flamethrower, RPO			9				4						13
ENGINEER EQUIPMENT													
Bridge, Tank-Launched							3						3
Bridge, Truck-Launched							4						4
Ditching Machine, BTM/MDK							1						1
Ditching Machine, PZM/TMK							3						3
Route-Clearing Vehicle, BAT							1						1
Dozer Blade, BTU							3						3
Armored Engineer Tractor, IMR							1						1
Minelayer, GMZ							3						3
Mineclearing Plow							27						27
Mine Roller-Plow							9						9
Mine Detector, DIM							1						1
Truck, Water Purification							1						1

NOTES:

* This vehicle includes the TALL MIKE battlefield surveillance radar.

** This vehicle includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

*** This vehicle includes the GUN DISH fire control radar.

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Principal Items of Equipment	Brigade HQ	Tank Bn (3x)	Mech Inf Bn (IFV)	SP Howitzer Bn (122-mm)	SP AA Gun Btry (23-mm)	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
TRUCKS													
Truck, Utility	3		4				4	5		2	1		19
Truck, Light			13	4	1			3		4		1	26
Truck, Medium	1	21	4	14	4		36			45	2	2	129
Truck, Crane							1						1
Truck, Crane Shovel							1						1
Truck, Decon, ARS-12U/14									3				3
Truck, Decon, DDA-53/66									1			1	2
Truck, Dump							2						2
Truck, POL (5,000-L)		12	2	2						15			31
Truck, Water (2,000-L)									2	4			6
Van, Command	3												3
Van, Hospital												1	1
Van, Kitchen		3	1										4
Van, Maintenance		3	1	2			1			1	12		20
Van, Signal			1	4				2					7
Ambulance		3	1	1								4	9
TRAILERS													
Trailer, Cargo, 1-Axle		3	2				6						11
Trailer, Cargo, 2-Axle		18		16			2			30	6		72
Trailer, Generator		3	1	2	2			1		1	3		13
Trailer, Kitchen			3	3			1			2		1	10
Trailer, POL (4,200-L)		12	3	2						15			32
Trailer, Water (900-/1,200-L)		3	1	1			1		2	1		1	10
RADARS													
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE						1							1
RADIOS													
VHF, Manpack, Low-Power	2	3	16	10		4	4	7		1	1	1	49
VHF, Portable, Low-Power			22		1	5							28
VHF, Portable, Very-Low-Power			4										4
VHF, Vehicle Mount, Medium-Power	3	99	44	27	9	8	8	8	3		5		214
HF, Manpack, Low-Power		6						2	1				9
HF, Vehicle Mount, Medium-Power	1	15	2			1	1	2					22
HF/VHF, Vehicle Mount, Med-Power			1	4				2					7
HF/VHF, Vehicle Mount, High-Power								2					2
HF, Vehicle Mount, High-Power								1					1
Radio Relay, VHF/UHF								2					2
Warning Receiver	1	3	1	2	3	1		3					14
MISCELLANEOUS													
Rangefinder, Laser, SAGE GLOSS				4									4
Rangefinder, Steroscopic			1										1
Periscopic Aiming Circle			1										1
Collimator			6										6
Motorcycle						3		3					6

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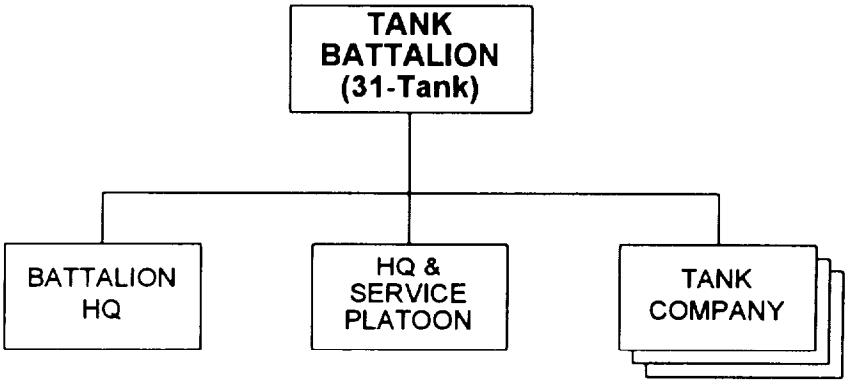


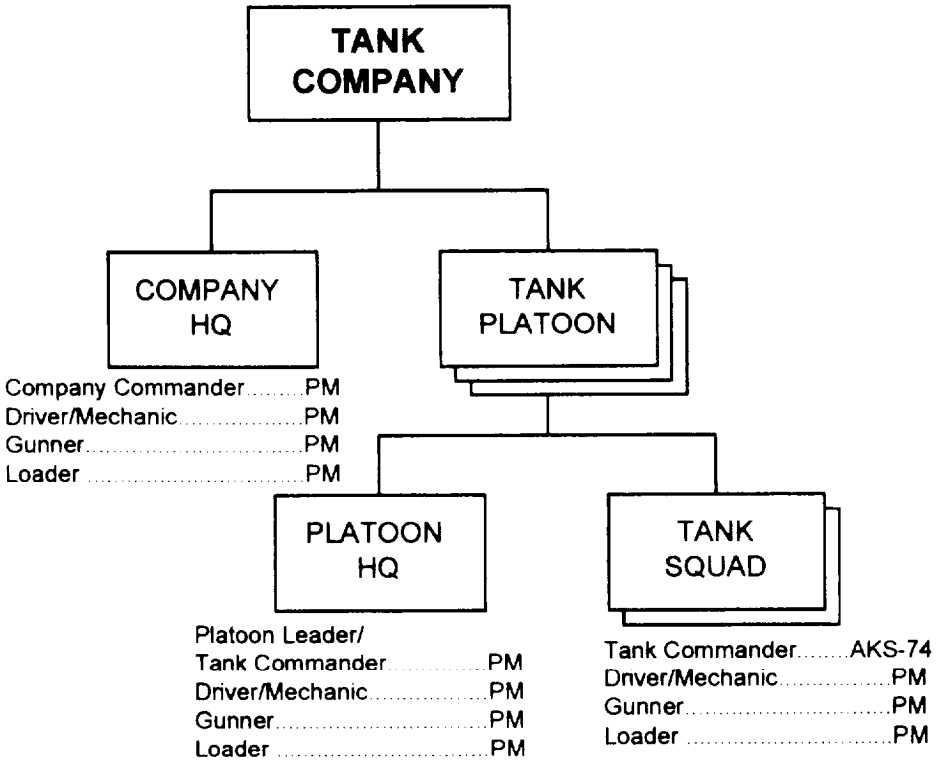
PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Medium Tank, T-55K/62K (Command Vehicle)	1
Medium Tank, T-55/62	30
ATGL, RPG-7V	2
ACV, BMP-1K/2K	1
ACV, BTR (R-145BM)	1
Truck, Medium	7
Truck, POL (5,000-Liter)	4
Van, Kitchen	1
Van, Maintenance	1
Ambulance	1
Trailer, Cargo, 1 -Axle	1

Equipment	Total
Trailer, Cargo, 2-Axle	6
Trailer, Generator	1
Trailer, POL (4,200-Liter)	4
Trailer, Water (900-Liter)	1
Radios:	
VHF, Manpack, Low-Power	1
VHF, Vehicle Mount, Medium-Power	33
HP, Manpack, Low-Power	2
HF, Vehicle Mount, Medium-Power	5
Warning Receiver	1

NOTE: Most tank brigades have the standard 31-tank battalion structure. However, the 22-tank variant is also possible.

Tank Company (10-Tank Standard), Tank Bn (31-Tank Standard) or Separate Tank Bn



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Medium Tank, T-55/62	10
9-mm Pistol, PM	34
5.45-mm Assault Rifle, AKS-74	6

Equipment	Total
Radios:	
VHF, Vehicle Mount, Medium-Power	10
HF, Vehicle Mount, Medium-Power	1

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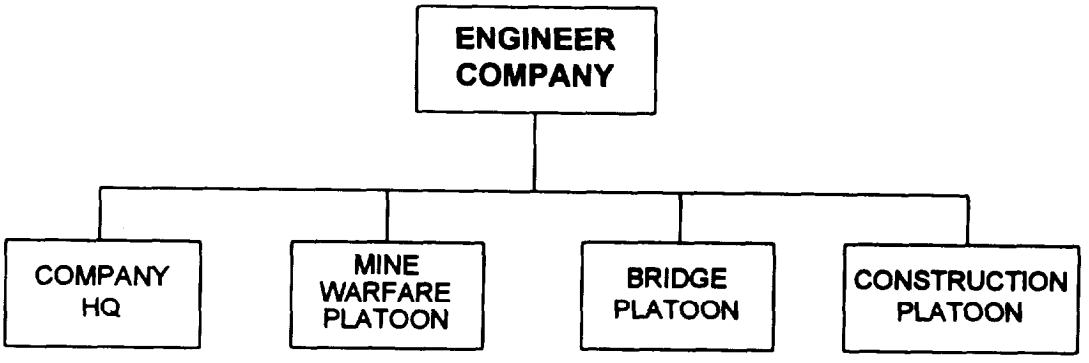

PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
ACV, BTR(R-145BM)	1
ATRL, RPG-18/22	4
Flamethrower, LPO/RPO	4
Truck, Utility	4
Truck, Medium	33*/36**
Truck, Crane	1
Truck, Crane Shovel	1
Truck, Dump	2
Truck, Water Purification	1
Van, Maintenance	1
Trailer, Cargo, l-Axle	6
Trailer, Cargo, 2-Axle	2
Trailer, Kitchen	1
Trailer, Water (900-Liter)	1
Bridge, Tank-Launched	3
Bridge, Truck-Launched	4

Equipment	Total
Ditching Machine, PZM/TMK	3
Ditching Machine, BTM/MDK	1
Route-Clearing Vehicle, BAT	1
Dozer Blade, BTU	3
Armored Engineer Tractor, IMR	1
Minelayer, GM2	3
Mineclearing Plow	18*/27**
Mine Roller-Plow	9
Mine Detector, DIM	1
Radios:	
VHF, Vehicle Mount, Medium-Power	8
HF or VHF, Manpack, Low-Power	4
HF, Vehicle Mount, Medium-Power	1

* Equipment levels for 67-tank brigade.
** Equipment levels for 94-tank brigade.

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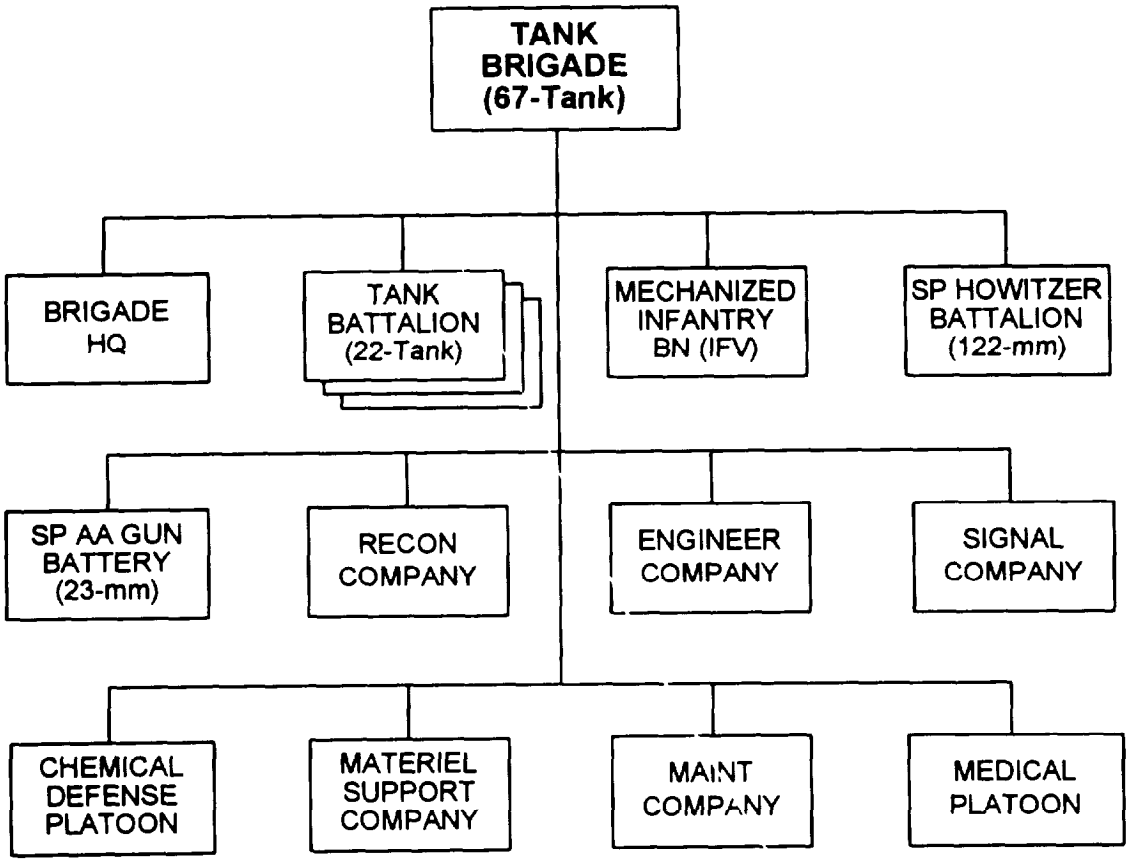

NOTES:

1. Tank battalions in this brigade have the 22-tank structure.
2. The mechanized infantry battalion is normally IFV-equipped. However, an APC-equipped battalion is possible in some cases. The principal items of equipment that follows includes equipment totals for an IFV-equipped battalion.

(continued)

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Principal Items of Equipment	Brigade HQ	Tank Bn (3x)	Mech Inf Bn (IFV)	SP Howitzer Bn (122-mm)	SP AA Gun Btry (23-mm)	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
ARMORED VEHICLES													
Medium Tank, T-55K/62K	1	3											4
Medium Tank, T-55/62		63											63
APC, BTR-60/70/80	1												1
APC, BTR-60PA (FAC)	1												1
APC, BTR-60 (PU-12)					1								1
ACV, BTR (R-145BM)		3	1				1	8					13
ACV, BMP-1K/2K		3	2										5
IFV, BMP-1/2			39			2							41
ACV, BRM-1K*						2							2
Mobile Recon Post, PRP-3/4**				1									1
ASC, BRDM-2						4							4
Chem Recon Vehicle, BRDM-2RKh/RKhM									3				3
ACRV, 1V13/1V13M/1V22 (Btry FDC)				3									3
ACRV, 1V14/1V14M/1V23 (Btry COP)				3									3
ACRV, 1V15/1V15M/1V24 (Bn COP)				1									1
ACRV, 1V16/1V16M/1V25 (Bn FDC)				1									1
Armored Recovery Vehicle											3		3
WEAPONS													
30-mm Auto Grenade Lchr, AGS-17			6										6
120-mm Mortar, M1943/2S12 or 82-mm Mortar M1937/2B9			6										6
122-mm SP Howitzer, 2S1				18									18
ATGM Manpack, AT-4/SPIGOT			6										6
23-mm SP AA Gun, ZSU-23-4***					8								8
SAM, Shoulder-Fired	3		9	18									30
Flamethrower, LPO/RPO			9				4						13
ENGINEER EQUIPMENT													
Bridge, Tank-Launched							3						3
Bridge, Truck-Launched							4						4
Ditching Machine, BTM/MDK							1						1
Ditching Machine, PZM/TMK							3						3
Route-Clearing Vehicle, BAT							1						1
Dozer Blade, BTU							3						3
Armored Engineer Tractor, IMR							1						1
Minelayer, GMZ							3						3
Mineclearing Plow							18						18
Mine Roller-Plow							9						9
Mine Detector, DIM							1						1
Truck, Water Purification							1						1

NOTES:

* This vehicle includes the TALL MIKE battlefield surveillance radar.

** This vehicle includes the SMALL FRED or TALL MIKE battlefield surveillance radar.

*** This vehicle includes the GUN DISH fire control radar.

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Principal Items of Equipment	Brigade HQ	Tank Bn (3x)	Mech Inf Bn (IFV)	SP Howitzer Bn (122-mm)	SP AA Gun Btry (23-mm)	Reconnaissance Co	Engineer Co	Signal Co	Chemical Defense Plt	Materiel Support Co	Maintenance Co	Medical Plt	TOTAL
TRUCKS													
Truck, Utility	3		4				4	5		2	1		19
Truck, Light			13	4	1			3		4		1	26
Truck, Medium	1	21	4	14	4		33			30	2	2	111
Truck, Crane							1						1
Truck, Crane Shovel							1						1
Truck, Decon, ARS-12U/14									3				3
Truck, Decon, DDA-53/66									1			1	2
Truck, Dump							2						2
Truck, POL (5,000-L)		9	2	2						10			23
Truck, Water (2,000-L)									2	3			5
Van, Command	3												3
Van, Hospital												1	1
Van, Kitchen		3	1										4
Van, Maintenance		3	1	2			1			1	9		17
Van, Signal			1	4				2					7
Ambulance		3	1	1								4	9
TRAILERS													
Trailer, Cargo, 1-Axle		3	2				6						11
Trailer, Cargo, 2-Axle		18		16			2			20	6		62
Trailer, Generator		3	1	2	2			1		1	3		13
Trailer, Kitchen			3	3			1			2		1	10
Trailer, POL (4,200-L)		9	3	2						10			24
Trailer, Water (900-/1,200-L)		3	1	1			1		2	1		1	10
RADARS													
Radar, Battlefield Surveillance, Man-Portable, PSNR-1 or TALL MIKE						1							1
RADIOS													
VHF, Manpack, Low-Power	2	3	16	10		4	4	7		1	1	1	49
VHF, Portable, Low-Power			22		1	5							28
VHF, Portable, Very-Low-Power			4										4
VHF, Vehicle Mount, Medium-Power	3	24	44	27	9	8	8	8	3		3		137
HF, Manpack, Low-Power		6						2	1				9
HF, Vehicle Mount, Medium-Power	1	15	2			1	1	2					22
HF/VHF, Vehicle Mount, Med-Power			1	4				2					7
HF/VHF, Vehicle Mount, High-Power								2					2
HF, Vehicle Mount, High-Power								1					1
Radio Relay, VHF/UHF								2					2
Warning Receiver	1	3	1	2	3	1		3					14
MISCELLANEOUS													
Rangefinder, Laser, SAGE GLOSS				4									4
Rangefinder, Steroscopic			1										1
Periscopic Aiming Circle			1										1
Collimator			6										6
Motorcycle						3		3					6

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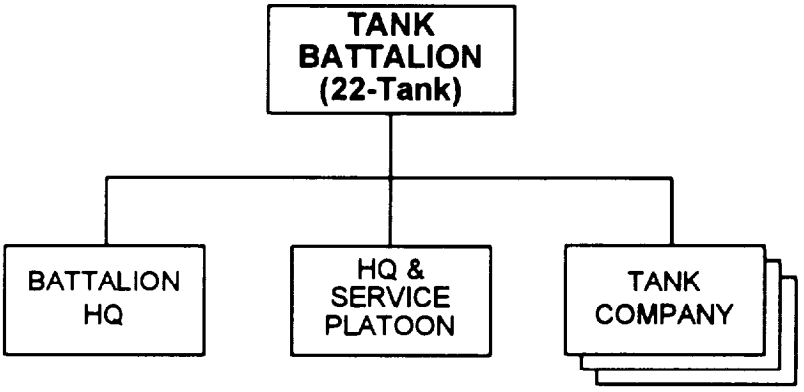


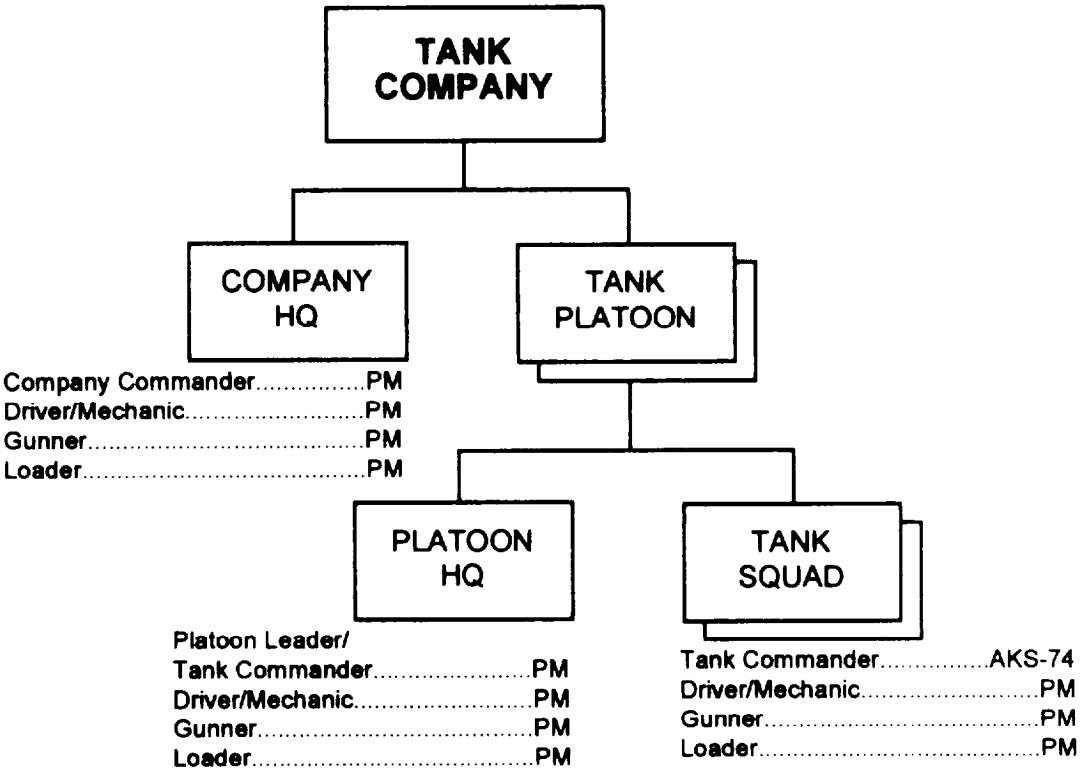
PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total
Medium Tank, T-55K/62K (Command Vehicle)	1
Medium Tank, T-55/62	21
ACV, BMP-1W2K	1
ACV, BTR (R-145BM)*	1
9-mm Pistol, PM	77
5.45-mm Assault Rifle, AKS-74/AK-74	42
ATGL, RPG-7V	2
Truck, Medium	7
Truck, POL (5,000-Liter)	3
Van, Kitchen	1
Van, Maintenance	1
Ambulance	1
Trailer, Cargo, 1-Axle	1

Equipment	Total
Trailer, Cargo, 2-Axle	6
Trailer, Generator	1
Trailer, POL (4,200-Liter)	3
Trailer, Water (900-Liter)	1
Night-Vision Goggles	2
Night-Vision Sight (Small Arms)	6
Radios:	
VHF, Manpack, Low-Power	1
VHF, Vehicle Mount, Medium-Power	24
HP, Manpack, Low-Power	2
HP, Vehicle Mount, Medium-Power	5
Warning Receiver	1

* In some tank battalions, the tracked ACV, BMP-1KSh may replace the wheeled ACV, BTR (R- 145BM).

Tank Company (7-Tank Variant), Tank Bn (22-Tank Variant) or Separate Tank Bn



PRINCIPAL ITEMS OF EQUIPMENT

Equipment	Total Equipment	Total
Medium Tank, T-55/62	7	
9-mm Pistol, PM	24	
5.45mm Assault Rifle, AKS-74	4	
Radios:		
VHF, Vehicle Mount, Medium-Power		7
I-IF, Vehicle Mount, Medium-Power		1

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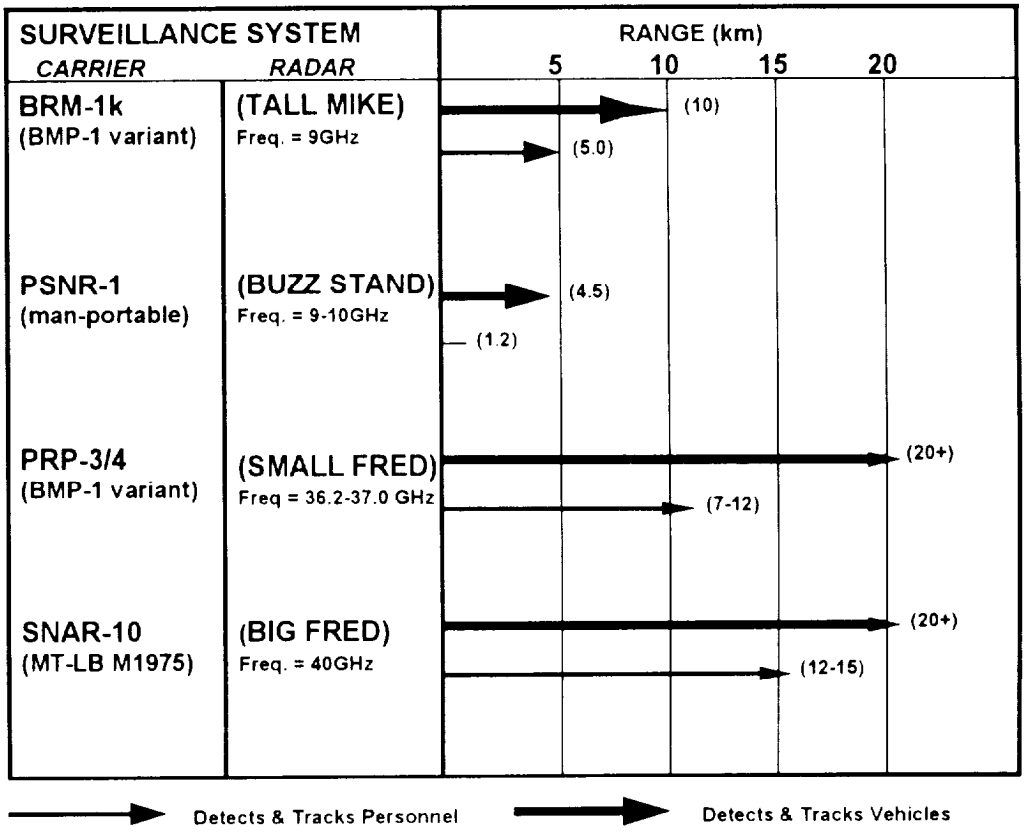
CHAPTER 7

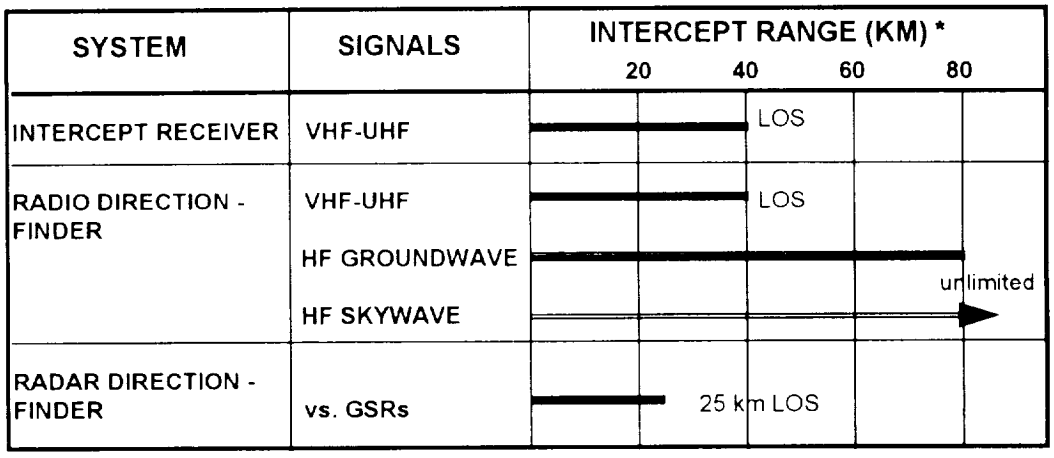
EQUIPMENT

1. INTELLIGENCE SYSTEMS CAPABILITIES

a. Battlefield surveillance radars.



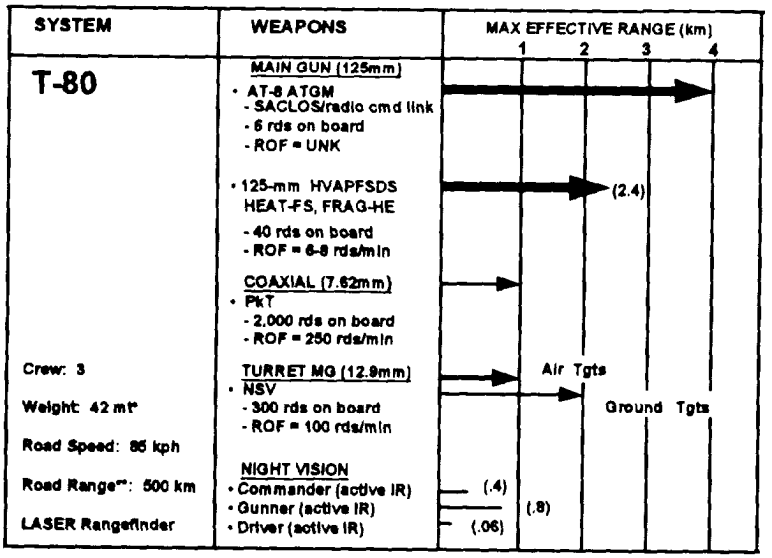
b. Signals intelligence and direction-finding systems.

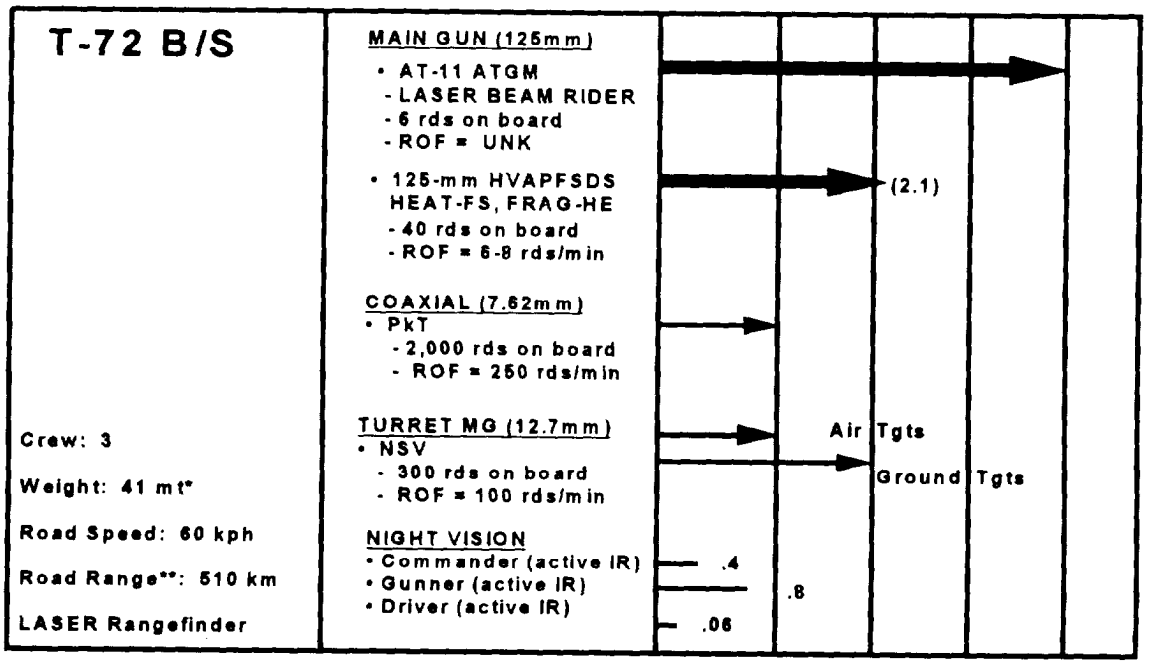


*Ranges vary significantly based on terrain and weather conditions

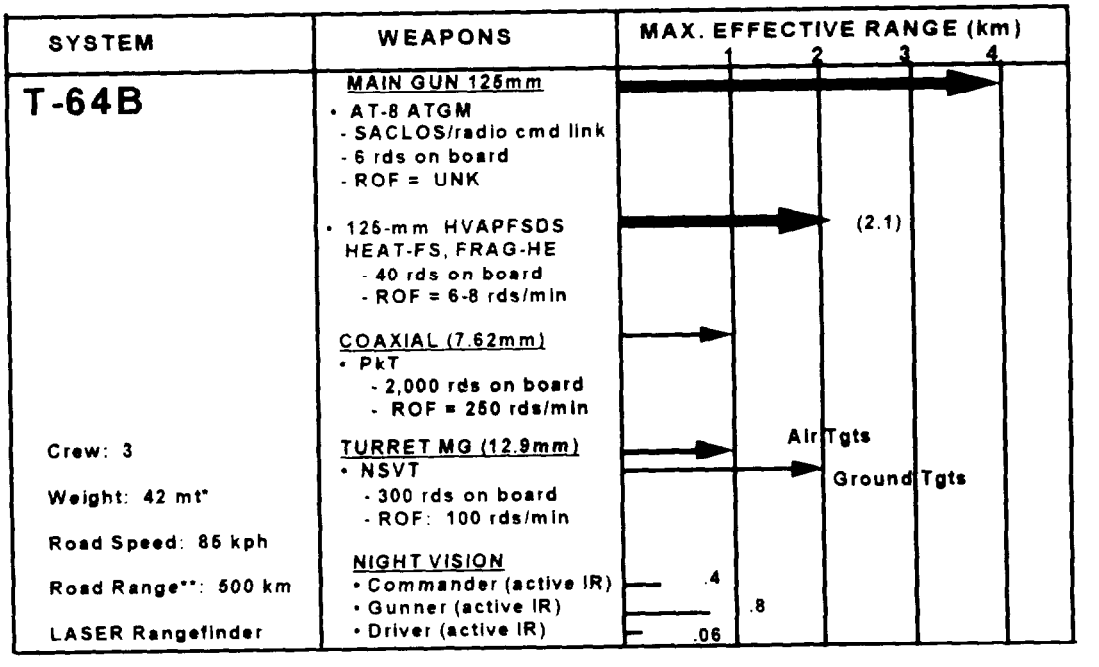
2. MANUEVER EQUIPMENT CAPABILITIES

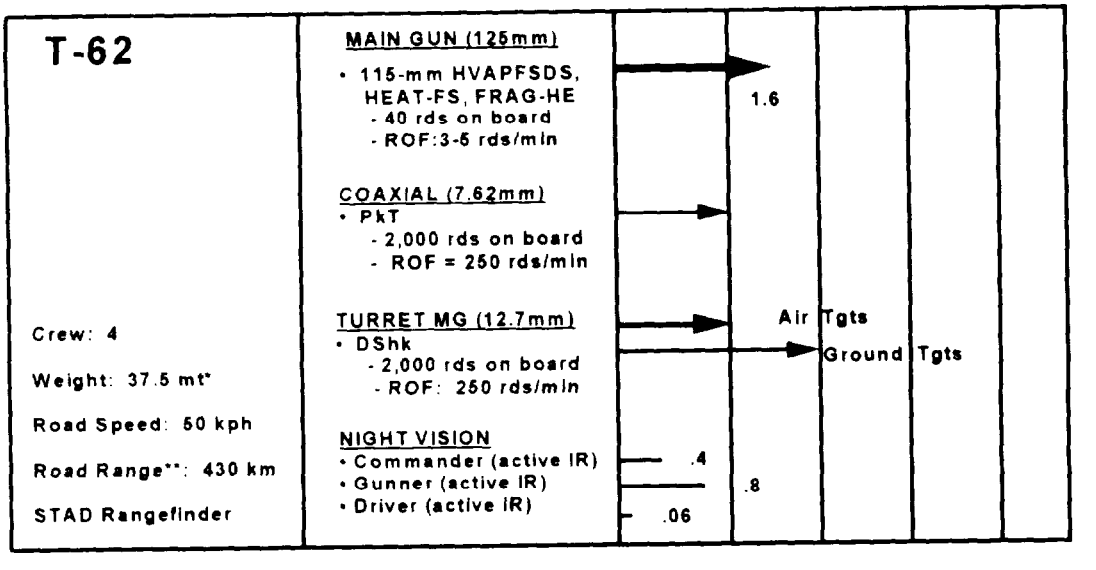
a. Main battle tanks (MBT).





* Add 3 metric tons to vehicle weight for reactive armor.
** Vehicle road range is with auxilliary fuel drums.





* Add 3 metric tons to vehicle weight for Reactive Armor.

** Vehicle road range is with auxilliary fuel drums.

b. Armored combat vehicles.

SYSTEM	WEAPONS	MAX. EFFECTIVE RANGE (km) 1 2 3 4
BMP-3	MAIN GUN 100-mm • AT-10 ATGM - Laser Beam Rider (Other data not available) • 100-mm AP-T, FRAG-T, HEI (Other data not available) CANNON (30-mm) • 30-mm AP-T, FRAG-T HEI - ROF = 200-300 rds/min (Other data not available) COAXIAL (7.62 mm) • PkT - ROF = 250 rds/min TWIN BOW MG (7.62mm) (Data not available) NIGHT VISION • Commander (active IR) • Gunner (active IR) • Driver (active IR)	Air Tgts Direct Fire // Suppresive Fire Ground Tgts .4 .8 .06
Crew: 3 Passengers: 6 Weight: Road Speed: 65 kph Road Range**: 500 km Amphibious NBC Protection System		
BMP-2	MAIN GUN 30-mm • 30-mm AP-T, FRAG-T HEI - 500 rds on board - ROF = 200-300 rds/min COAXIAL (7.62 mm) • PKT - 2000 rds on board - ROF = 250 rds/min EXTERNAL RAIL (ATGM) • AT-5/SPANDREL - SACLOS/wire - 4 rds on board - ROF = 1.5 rds/min* *or* • AT-4/SPIGOT - SACLOS/wire - 4 rds on board - ROF = 1.5 rds/min* NIGHT VISION • Commander (active IR) • Gunner (active IR) • Driver (active IR)	Air Tgts Direct fire Suppressive fire AT-4b 2.5 km AT-4a .4 .8 .06
Crew: 3 Passengers: 7 Weight: 14.3 mt Road Speed: 65 kph Road Range**: 600 km Amphibious NBC Protection System		

* Estimate ** Vehicle road range without combat.

SYSTEM	WEAPONS	MAX. EFFECTIVE RANGE (km) 1 2 3 4
BMP-1 Crew: 3 Passengers: 8 Weight: 13.5mt Road Speed: 65 kph Road Range: 500 km Amphibious NBC Protection System	MAIN GUN 100-mm • 73-mm HEAT-FS, HE-FRAG - 40 rds on board - ROF = 2-3 rds/min COAXIAL (7.62mm) • PKT - 2,000 rds on board - ROF = 250 rds/min EXTERNAL RAIL (ATGM) • AT-5/SPANDREL - SACLOS/wire - 4 rds on board - ROF = 1.5 rds/min (est.) *or* • AT-4/SPIGOT - SACLOS/wire - 4 rds on board - ROF = 1.5 rds/min (est.) *or* • AT-3C/SAGGER C - SACLOS/wire - 4 rds on board - ROF = 1-2 rds/min NIGHT VISION •Commander (active IR) •Gunner (active IR) •Driver (active IR)	Ground Tgts .8 - 1.0 .1 AT-4b 2.5 km .07 AT-4a unk .4 1.3 .06
MT-LB Crew: 2 Passengers: 10 Weight: 9.7 mt Road Speed: 60 kph Road Range: 500 km Amphibious	TURRET GUN (7.62mm) • PKT - 2,000 rds on board - ROF = 250 rds/min NIGHT VISION •Commander or Gunner •Driver (active IR)	.4 .04
Variant **ACRV 1V12 Series** (1V13, 1V14, 1V16)	TURRET GUN (12.7mm) (1V13 and 1V16 only) • DShk - ROF = 100 rds/min TURRET SENSORS (1V14 and 1V15 only) • Optical Observation Device • Laser Rangefinder	Air Targets Ground Targets
Variant **9P149** (ATGM Vehicle)	EXTERNAL RAIL (ATGM) •AT-6/SPIRAL - SACLOS/radio cmd link - 4 rds on board - ROF = 1.5 rds/min (est.)	.4 5 km

SYSTEM	WEAPONS	MAX. EFFECTIVE RANGE (km) 1 2 3 4
BTR 60/70/80*	**MAIN GUN (14.5mm)** • KPVT - 500 rds on board - ROF = 150 rds/min	1.4 Air Targets Ground Targets
Crew: 3 Passengers: 8 Weight: 10.5mt (BTR-60) 11.5mt (BTR-70) 11.0mt (BTR-80) Road Speed: 65 kph 80kph (BTR-70) 85kph (BTR-80) Road Range: 500 km Amphibious NBC Protection System	**COAXIAL (7.62mm)** • PKT - 2,000 rds on board - ROF = 250 rds/min **NIGHT VISION** • Commander (active IR) • Driver (active IR)	.3 .06
*BTR-80 has higher main-gun elevation (+60 degrees) than BTR-60/70 (+30), as well as improved armor protection and diesel engine.		

BRDM-2	**MAIN GUN (14.5mm)** • KPVT - 500 rds on board - ROF = 150 rds/min	1.4 Air Targets Ground Targets
Crew: 2-5 (varies with mission) Weight: 7 mt Road Speed: 100 kph Road Range: 750 km Amphibious NBC Protection System	**COAXIAL (7.62mm)** • PKT - 2,000 rds on board - ROF = 250 rds/min **NIGHT VISION** •Commander or Gunner •Driver (active IR)	.4 0.6
Variant **BRDM-2rkh** (NBC recon vehicle)	(Maingun is PKT in lieu of KPVT, no coaxial gun.)	
Variant **BRDM-2u** (command vehicle)	*(No armament)*	
Variant **BRDM-2 AT veh. (9P148)**	**EXTERNAL RAILS (5)** • AT-5/SPANDREL ATGM - SACLOS/wire cmd link - 15 rds on board - ROF = 1.5 rds/min (est.) *(No other armament)*	.1

c. Crew-served weapons.

WEAPON	MAX. EFFECTIVE RANGE (km) 1 2 3 4
2A45M (towed 125-mm AT Gun) *Army - level* Crew: 7 (est.) Emplace/Displace Time: > 3 min (est.) Prime mover: MT-LB Ammo: AT-11 (Laser-Beam Rider ATGM,), 125-mm HEAT and HVAPFSDS	AT-11 2.1 - HVAP FSDS HEAT
MT-12 (towed 100-mm AT Gun) Crew: 6 or 7 Emplace/Displace Time: 2-3 min Prime mover: MT-LB Ammo: AT-10 (Laser-Beam Rider ATGM) 100-mm HVAPFSDS, HEAT ROF = 10 rds/min (max.); 60 rds/hr (sus.)	AT-10 HVAPFSDS HEAT
AT-4/SPIGOT (SACLOS/wire ATGM)) Crew: 3 ; Warhead: HEAT	AT-4b 2.5 km .07 AT-4a
AT-7 /SAXHORN (SACLOS/wire ATGM) Crew: 1 or 2 ; Warhead: HEAT	version 1 .05 1.5 km - version 2
SPG-9 (Recoilless AT Gun) Crew: 3 Ammo: 73-mm HEAT-FS or 73-mm HE-FS IR and passive NVD ROF: 6 rds/min (max.)	
AGS-17 (Automatic Grenade Launcher) Crew: 3 Ammo: 30-mm Frag-HE 29 rds per drum ROF; 60 rds/min (sus.)	1.2 Indirect fire .7 Direct fire

d. Individual weapons.

WEAPON	MAX. EFFECTIVE RANGE (meters) 200 400 600 800
RPG-7V (AT Grenade Launcher) 70-mm HEAT, ROF: 4-6 rds/min	(300) Moving target (500) Stationary target
RPG-18 (disposable AT Rocket Launcher) 64-mm HEAT	Moving & stationary targets
RPG-22 (disposable AT Rocket Launcher) 73-mm HEAT	Moving & stationary targets
BG-15 (Grenade Launcher) 40-mm HE (single-shot, muzzle-loaded, mounted on AK-74 rfle)	Direct fire
RPK-74 (Light Machine Gun) 5.45mm ball, box feed ROF: 150 rds/min (sus.)	
AK-74 (Assault Rifle) 5.45mm ball, 30-rd magazine ROF: 100 rds/min (auto), 40 rds/min (semi)	(500)
SVD (Sniper Rifle) 7.62mm ball, 10 rd magazine ROF: 30 rds/min. (semi-auto only)	(1,300 m)

a. Rocket launchers.

SYSTEM		MIN./MAX. RANGES (km) 10 20 30 40
9A52 (SMERCH) *[Front asset]* Weight: Data not avail. Road speed: Data not avail. Road range: Data not avail.	300-mm MRL - Warheads - Rds on launcher: Unk - Reload time: Unk - 9T234-2 transloader carries 14 rockets	
9P140 (formerly BM-22) *[Front or Army asset]* Weight: 23 mt Road speed: 65 kph Road range: 520 km	220-mm MRL - Warheads: FRAG-HE, chemical, incendiary, ICM (AP & AT mines, frag, incendiary bomblets) - 16 rds on launcher - Reload time: 15-20 min. - 2 resupply vehicles with 16 rockets each	(5)
BM-21 Weight: 14 8 mt Road speed: 75 kph Road range: 750 km	122-mm MRL - Warheads: FRAG-HE, chemical, incendiary - 40 rds on launcher - Reload time: 8-10 min.	(0.5km direct fire) (1.5) (20.38)

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b. Guns and gun-howitzers.

SYSTEM		MAX. RANGES (km) 10 20 30 40
2S7 203-mm SP Gun *[Front asset]* Weight: 40 mt Road speed: 50 kph Road range: 500 km	- Ammo: Frag-HE, concrete-piercing, nuclear - rds on vehicle - ROF: 1 rd/min.	(37.5) (50-ext)
2S5 152-mm *[Army asset]* Weight: 30 mt Road speed: 50 kph Road range: 500 km	- Ammo: Frag-HE , chemical, nuclear - 25 rds on vehicle - ROF: 4-5 rds/min.	(28) (30-ext)
2A36 152-mm Towed Gun *[Army asset]*	- Ammo: Frag-HE, chemical, nuclear, AP-T - ROF: 5-6 rds/min	(28) (33-ext)
2A65 152-mm Towed Gun-How *[FRONT asset]*	- Ammo: Unk - ROF: Unk	(30) (40-ext)
D-20 152-mm Towed Gun-How. *[FRONT asset]*	- Ammo: Frag-HE, RAP, Smoke, Illumin, HEAT, Flechette, Incendiary, Concrete-piercing, Laser-guided, scatterable mines, chemical, nuclear - ROF: 5 rds/min (max.) 65 rds/1st hr. (sus.)	(17.23) (20.5-ext)

c. Howitzers.

SYSTEM		MAX. RANGES (km) 10 20 30 40
2S19 152-mm SP Howitzer Weight: 42 mt Road speed: 60 kph Road range: 500 km	- Ammo: Frag-HE, RAP, illumin, incendiary, smoke, nuclear - 50 rds on vehicle - ROF: 8 rds/min. - 12.7mm NSV Turret MG for defense	(24.7-30) (36-40) RAP
2S3 152-mm Weight: 25-30 mt Road speed: 50 kph Road range: 500 km	- Ammo: Frag-HE, RAP, smoke, chemical, illumin, incendiary, HEAT, flechette, concrete-piercing, laser-guided, scatterable mines, nuclear - 25 rds on vehicle - ROF: 4-5 rds/min.	(17.23) (20.5) RAP
2S1 122-mm SP Howitzer Weight: 16 mt. Road Speed: 70 kph Road Range: 500 km Amphibious	- Ammo: Frag-HE, smoke (WP), illumin, incendiary, chemical, LASER-guided, leaflet, flechette, HEAT-FS - 40 rds on vehicle - ROF: 5-8 rds/min 70 rds/1st hr. (Sus.)	(15.3)
D-30 122-mm Towed Gun-How.	- Ammo: Frag-HE, smoke, (WP), illumin, flechette, incendiary, chemical, leaflet, HEAT-FS - ROF: 7-8 rds/min 75 rds/1st hr. (sus.)	(15.3)

d. Mortars.

SYSTEM		MIN/MAX. RANGE (km) 2 4 6 8 10 12 14 16 18
2S4 240-mm SP Mortar *[Front asset]*	- Ammo: HE, chemical, nuclear, extended-range - ROF: unk	(.8) (9.7) (20-ext)
2S12 120-mm Mortar	- Ammo: Frag-HE, smoke, illumin, incendiary, extended-range - ROF: 10 rds/min.	(.46) (7.1) (9.0-ext)
2B9 82-mm Automatic Mortar	- Ammo: Frag-HE, smoke, illumin, incendiary, - ROF: 40-60 rds/min (breech-loaded from 4-rd clips)	(.1) (5)

e. Aircraft (fixed-wing).

SYSTEM	WEAPONS	COMBAT RADIUS (km) 150 300 450 600
Su-25/FROGFOOT Ground Attack Max. Speed: 880 km/hr. Cruising Speed: unk	• 30-mm gun • 4,000 kg of ordnance: - Bombs - Rockets - Air-to-Surface Missiles: - AS-10/KAREN - AS-14/KEDGE (both LASER semi-active guidance) - Vikhr ATGM (SU-25T only) Laser-beam rider 8 km max range	(556 km)

f. Aircraft (rotary wing).

SYSTEM	WEAPONS	MIN/MAX. ATGM RANGES (km) 2 4 6 8
MI-8T HIP Crew: 2-3 Passengers: 24 Max. speed: 250 kph Cruising speed: 225 kph Max. service ceiling: 3,500m, or 4,500m, depending on role Cbt radius: 200 km (C,E) Roles: Transport, assault	HIP C • 2 weapons racks with: - 4x16-rd 57 min rocket pods, or - 4x250kg bombs or - 2x500kg bombs, • 12.7mm MG in right, rear door (optional) • Firing points for infantry HIP E (gunship) • Two weapons racks with: - 6x32-rd 57mm rocket pads, or - 4x250kg bombs, or - 2x500kg bombs •AT-2c/SWATTER C ATGM - SACLOS/radio cmd link - 4 total; 2 above each rack • 12.7-mm Swivel MG in nose and (optional) in right rear door	.5 → 4 (27 sec) DAYLIGHT ENGAGEMENT ONLY

SYSTEM	WEAPONS	MIN/MAX. ATGM RANGES (km) 2 4 6 8
MI-8MT (formerly known as MI-17) Crew: 2-3 Passengers: 24 Max. speed: 250 kph Cruising speed: 240 kph Max. service ceiling: 3,500m, or 4,500m, depending on role Cbt radius: 220-260 km Roles: Transport, assault	HIP H • Same as HIP E, (if armed), except: - No ATGMs - 6x32-rd 57-mm rocket-pads, or - 2x32-rd 57-mm rocket pads and 2x23-mm MG pads	DAYLIGHT ENGAGEMENT ONLY

SYSTEM	WEAPONS	MIN/MAX. ATGM RANGES (km) 2 4 6 8
Mi-24 HIND Crew: 3 Passengers: 8-10 Max. speed: 320 kph Cruising speed: 310 kph Max. service ceiling: 2,100m, Cbt radius: 160 km Roles: Close air support DAYLIGHT ENGAGEMENT ONLY (NOTE: E&F versions may mount four additional AT-6s on outer pylons in lieu of rockets or bombs)	HIND D • AT-2c/SWATTER C ATGM - SACLOS/radio cmd link - 4 total; 2 on each wing tip • 4 Universal Pylons - 4x32-rd 57-mm rocket pads or - 2x20-rd 80-mm rocket pads - 4x250-kg bombs or - 2x500-kg bombs • 4x12.7mm MG on chin turret HIND E (same as HIND D except:) • AT-6/SPIRAL ATGM - SACLOS/radio cmd link - 4 total; 2 on each wing tip in lieu of AT-2c HIND F (same as HIND E except:) • Twin 30-mm Gatling gun on pad on right side of fuselage, in lieu of chin turret	.5 → 4 (27 sec) .5 → 5 (11 sec)

SYSTEM	WEAPONS	MIN/MAX. ATGM RANGES (km) 2 4 6 8
Mi-28 HAVOC Crew: 2 Max. speed: 300 kph Cruising speed: 280 kph Max. service ceiling: Cbt radius: 240 km Roles: CAS, anti-tank	• AT-6/SPRIRAL ATGMs - SACLOS/radio cmd link - 8 to 16 on wing pylons • Up to 4 rocket pads, or • 4 to 8 SA-14s or air-to-air missiles • 30-mm cannon in chin turret	.5 → 5 (11 sec.) DAYTIME ENGAGEMENT ONLY
Ka-50 HOKUM Crew: 1 Max speed: 350 kph Cruising speed: unknown Max. hovering ceiling: 4,000m Cbt radius: 250 km Roles: CAS, anti-tank	•AT-16/Vikhr ATGM • - Laser beam rider with automatic TV tracker - 16 launchers on wing pylons or • 4x20-rd 80-mm rocket pads, in lieu of ATGMs • 30-mm nose gun	unk → 8 (23 sec.) (.8 prob. hit) (can engage aircraft moving at relative speed of 800kph) LOW LIGHT ENGAGEMENT POSSIBLE

4. ENGINEER EQUIPMENT CAPABILITIES

a. Amphibians.

K-61

- Empty wt = 9,550mt.
- Payload = 3,000kg (land); 5,000kg (water)
- Max. passengers = 50
- Typical load = Towed arty, trucks

PTS-M

- Empty wt = 15,000mt.
- Payload = 7,500kg (land); 15,000kg (water)
- Max. passengers = 50
- Typical load = trucks

PKP (trailer)

- Empty wt = 3,600mt.
- Payload = 5,000kg (land); 5,000kg (water)
- No passengers
- Typical load = Towed arty

6. Bridge, rafts, and ferries.

PMP, Pontoon Bridge/Raft

(2 ramps and 16 centers = Half set)

- 20mt. capacity: 191 m long by 3.27m wide, assembles in 35-40 min.
- 60mt. capacity: 119m long by 6.5m wide, assembles in 15-17 min.
- 65-man work crew

(4 ramps and 32 centers = Full set)

- 20mt. capacity: 382m long by 3.27m wide, assembles in 50 min
- 60mt. capacity: 227m long by 6.5m wide, assembles in 30 min.
- 130-man work crew

TMM, Truck-Mounted Bridge

- Length = 42m (4 spans in one set)
- Capacity = 60mt.
- Assembly time = 20-40min.

MTU-20, Tank-Launched Bridge

- Length = 18m (one span)
- Capacity = 50mt.
- Launch/retrieval time = 5 min/5-7 min.

Amphibious Bridging System - Wheeled (ABS-W)

- Modified ZIL- 135 truck chasis
- Pontoons unfold to form a 8.4m long by 7m wide ferry
- May serve as a single ferry or combine to form a ribbon bridge

PMM-S (Amphibious Bridging System-Tracked)

- Pontoons unfold to form a 13.5m. long by 10.5m. wide ferry
- May serve a single ferry or combine to form a ribbon bridge
- Ferry capacity = 52mt.

GSP (Heavy Amphibious Ferry)

- Two mirror-image GSP units join to form a single ferry
- Ferry capacity = 50mt.
- Water speed = Up to 7.7 kph
- Assembly time = 3 to 5 mm.

c. Mine detectors

D I M

- Detects metallic mines up to 25cm deep
- Operating speed = 10 kph
- Normally mounted GAZ-469 truck

d. Mineclearing plows and rollers.

KMT-4/6 Tank-mounted Mineclearing Plow

- KMT-4 (T-62); KMT-6M (T-64, T-72, T-80)
- Clearance depth = 10cm
- Estimated clearing speed = 6-12 kph
- Assigned to Regt's Engr Co; issued one tank per plt
- Installation = 15-20 min./Removal = 5-10 min.
- Three plows can be carried on a 3.5T ZIL- 131 truck

KMT-5M Tank-mounted Mineclearing Roller Plow

- Mounts on any type tank
- Clearance depth = 10cm
- Estimated clearance speed = 6-12 kph
- Assigned to Regt's Engr Co; issued one per Tank Co
- Installation = 30-45 min./Removal = 8-13 min.
- Luminous lane-marking device
- Rollers and plows do not operate at the same time

e. Mineclearers with line charges.

MTK

- Fixes one explosive line charge
- Clears path 140m long by 2 to 8m wide
- BTR-50 chassis (amphibious)

MTK-2

- Fires one or two line charges
- Clears path 180m. long by 3m. (pressure fuse mines) or 8m. (tilt-rod mines) wide
- 2S1 -type chassis (amphibious)

f. Route and obstacle-clearing systems.

IMR, Obstacle-Clearing Vehicle

- T-54/55 chassis
- Hydraulic crane and dozer blade
- Crane capacity = 4-7mt.

IMR 1986, Obstacle-Clearing Vehicle

- T-72 chassis
- Hydraulic crane and dozer blade
- Crane capacity = 5-11mt.

BAT-M, Route-Clearing Vehicle

- Artillery tractor chassis
- Max. road speed = 35 kph
- Max. road range = 500km
- Crane capacity = 2mt.
- Hydraulic dozer blade capacity: 200-250 cu. m/hr
- Can prepare up to 6 vehicle fighting positions per hour

g. Digging and ditching equipment.

Tank-Mounted Blades

- T-62s may mount BTU dozer blade (3 per Engr Co, TR)
  - -- Earth moving capacity = 150 cu. m/hr
  - -- Vehicle fighting positions = 3.5 per hour
- T-64, T-72, T-80 = self-entrenching blade
  - -- Hull down fighting position = 20 to 60 min.

E-305V, Crane Shovel

- Max road speed = 70 kph
- Digging capacity = 65 cu.m/hr (as shovel); 30 cu.m/hr (as back hoe)

BTM-3, Ditching Machine

- Capacity = 220-600 cu.m/hr (depending on soil)
- Single-pass cut = 0.6m wide and 1.5m deep
- Max depth = 1.5m
- Max. trench/ditch per hour = 600m. (0.6m x 1.5m)
- Max vehicle fighting position per hour = 14 (7m x 3.5m x 1.5m)

MDK-3, Ditching Machine w/Dozer blade

- Capacity: 400-500 cu.m/hr (depending on soil)
- Single-pass cut = 3.5m wide and 1.7m deep
- Max depth = 3. Om
- Trench/ditch per hour = 400-500m (3.5m x 1.7m)
- Max vehicle fighting positions per hour: 12 (7m x 3.5m x 1.7m)

MDK-2M, Ditching Machine w/Dozer blade

- Capacity = 120-300 cu.m/hr. (dpending on soil)
- Single-pass cut = 3.5 .m wide and 1.7m deep
- Max depth = 3.5m
- Trench/ditch per hour = 200-800m (3.5m x 1.7m)
- Max vehicle fighting positions per hour = 7 (7m x 3.5m x 1.7m)

PZM-2, Ditching Machine w/Dozer blade

- Capacity = 80-250 cu.m/hr. (depending on soil)
- Single-pass cut = 0.8m wide and 1.5m deep
- Max depth = 1.5m
- Max width = 3.5m
- Max trench/ditch per hour = 180m (0.8m x 1.5m)

TMK-2, Trenching Machine w/Light Dozer blade

- Capacity = 200-600 cu.m/hr. (depending on soil)
- Single-pass cut = 1.1 m wide and 1.5m deep
- Max depth = 1.5m
- Max trench/ditch per hour = 450m (1.1 m x 1.5m)
- Secondary missions: snow plowing, river bank prep, NBC detection and decontaminator

h. Minelaying equipment.

PMR-3, Towed Minelaying Trailer

- Surface laid a buried 6-12cm deep
- Spacing = 4 to 5.5m apart
- Work rate = 5 kph (83m/min)
- Towing vehicle (BTR- 152/60/70/80) normally carries 200-300 mines
- Capability = One 500m-long single row of 125 buried mines in six minutes

GMZ, Armored Tracked Minelayer

- Surface laid or buried
- Spacing = 4 to 5.5m apart
- Work rate = 2-3 kph (buried); 4-10 kph (surface laid)
- Load capacity = 208 mines (estimated)
- Re-load time = 12-15 min.
- Capability = One 500m-long single row of 125 buried mines in 10 minutes

Scatterable Mines

Delivered by helicopters, tube artillery, or rocket launchers

i. Mines.

Antipersonnel Mines

CHARACTERISTICS	PMN	PMD-6M	POMZ-2M	OZM-3
TYPE	BLAST	BLAST	FRAGMENTATION STAKE MINE	BOUNDING FRAGMENTATION
MAXIMUM DIAMETER (mm)	110	LENGTH-191 WIDTH-89	60	75
HEIGHT (mm)	56	64	107 (not including stake)	120
WEIGHT (kg)	0.55	0.4	2.0	3.0
ACTUATING FORCE (kg)	8.25	1.0	1.0	VARIES
FUZING SYSTEM	PRESSURE PLATE	PULL	TRIP WIRE PULL	TRIP WIRE OR ELECTRONIC

CHARACTERISTICS	PFM-1	MON-50	MON-100	MON-200
TYPE	SCATTERABLE BLAST	DIRECTIONAL FRAGMENTATION	DIRECTIONAL FRAGMENTATION	DIRECTIONAL FRAGMENTATION
MAXIMUM DIAMETER (mm)	120.4	220 X 105	220	520
HEIGHT (mm)	60.96	INA	80	INA
WEIGHT (kg)	0.074	INA	5	25
ACTUATING FORCE (kg)	5	1.0	1.0	1.0
FUZING SYSTEM	DELAY, PRESSURE	TRIP WIRE OR ELECTRONIC	TRIP WIRE OR ELECTRONIC	TRIP WIRE OR ELECTRONIC

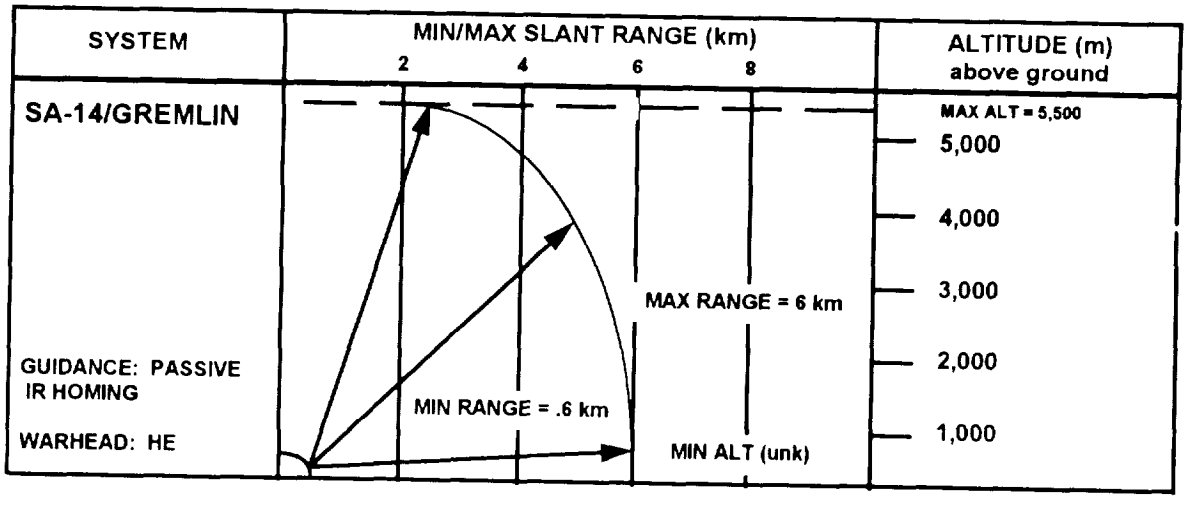
Antitank Mines

CHARACTERISTICS	TMN-46	TM-57	TM-62B	TM-62D
TYPE	ANTITANK BLAST	ANTITANK BLAST	ANTITANK BLAST	ANTITANK BLAST
MINE CASE MATERIAL	SHEET STEEL	SHEET STEEL	CASELESS	WOODEN
MAXIMUM DIAMETER (mm)	305	316	INA	340X295
HEIGHT (mm)	74	100	INA	178
WEIGHT (kg)	8.7	8.5	7.0	11-13
ACTUATING FORCE (kg)	180 (MVM FUZE 132 (MVSH TILT ROD FUZE)	200 (MVZ FUZE INA (MVSH TILT ROD FUZE)	200 (VM-62 SEISMIC (VM-62Z)	200 (VM-62 SEISMIC (VM-62Z)
FUZING SYSTEM	PRESSURE, TILT ROD, AND ANTI-LIFT DEVICE	PRESSURE, TILT ROD, AND ANTI-LIFT DEVICE	PRESSURE, SEISMIC,TILT ROD	PRESSURE, SEISMIC,TILT ROD

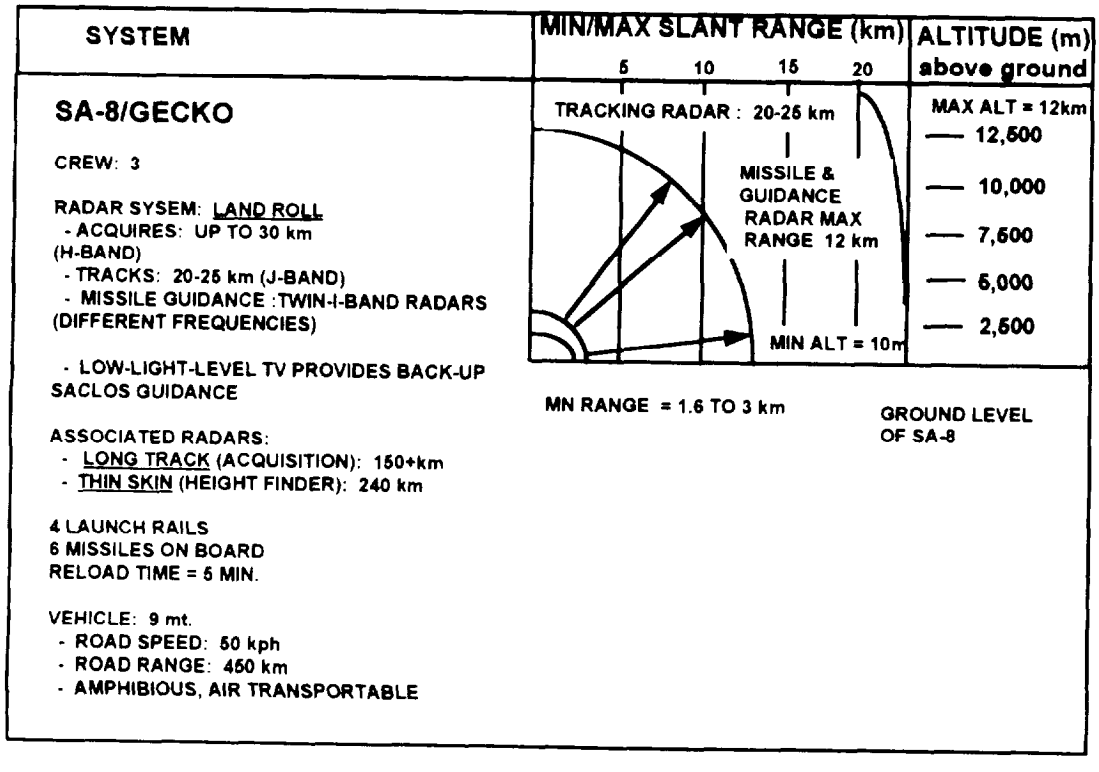
CHARACTERISTICS	TM-62M	TM-62P	TMK-2
TYPE	ANTITANK BLAST	ANTITANK BLAST	ANTITANK SHAPED-CHARGE
MINE CASE MATERIAL	SHEET STEEL	PLASTIC	SHEET STEEL
MAXIMUM DIAMETER (mm)	316	INA	80 (MIN) 300(MAX)
HEIGHT (mm)	100	115	350
WEIGHT (kg)	8.5	8.2	12.5
ACTUATING FORCE (kg)	200 (VM-62) SEISMIC (VM-62Z)	200 (VM-62) SEISMIC (VM-62Z)	8-12
FUZING SYSTEM	PRESSURE, SEISMIC, TILT ROD	PRESSURE, SEISMIC, TILT ROD	TILT ROD

2. ADA EQUIPMENT CAPABILITIES

a. Man-Portable Air Defense Systems (MANPADS)

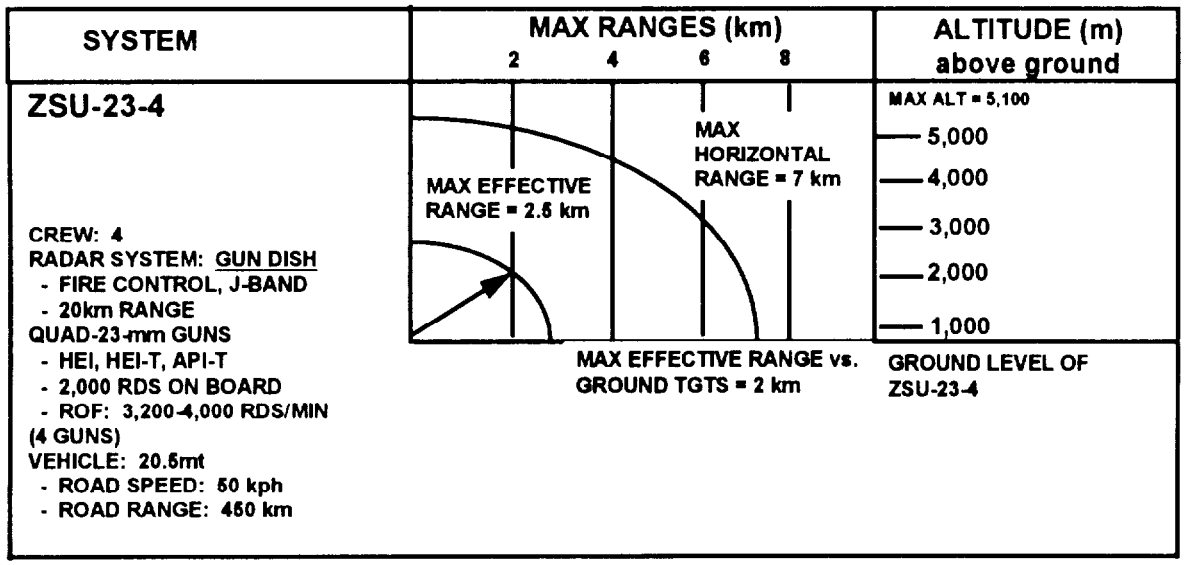


h. Tactical Air Defense Systems.



SYSTEM	MIN/MAX SLANT RANGE (km) 5 10 15 20	ALTITUDE (m) above ground
SA-6/GAINFUL CREW: 3 ASSOCIATED RADARS: - LONG TRACK (ACQUISITION): 150+km - THIN SKIN (HEIGHT FINDER): 240 km - STRAIGHT FLUSH (ACQUISITION, TRACKING): 60-90 km SEPARATE VEHICLE IN "A" MODEL, INTEGRATED TEL (B-MODEL) MISSILE GUIDANCE: RADIO CMD WITH SEMI-ACTIVE RADAR TERMINAL HOMING = OPTICAL (SACLOS) BACK-UP 3 LAUNCH RAILS, 3 MISSILES ON BOARD, HE-WARHEAD RELOAD TIME = 10 MIN. VEHICLE: 20.5 mt. - ROAD SPEED: 50 kph - ROAD RANGE: 450 km	MAX ALT = 12m MISSILE RANGE: 24 km MIN RANGE = 4 km MIN ALT = 50m	12,500 10,000 7,500 2,500 GROUND LEVEL OF SA-6

SYSTEM	MIN/MAX SLANT RANGE (km) 4 8 12 16	ALTITUDE (m) above ground
SA-9/GASKIN CREW: 3 NO ASSOCIATED RADARS MISSILE GUIDANCE: PASSIVE IR HOMING 4 LAUNCH CANNISTERS 8 MISSILES ON BOARD RELOAD TIME: 5 MIN. VEHICLE: MODIFIED BRDM - 7mt. - ROAD SPEED: 100 kph MAX. - AMPHIBIOUS	MAX ALT = 5,500 MISSILE MAX RANGE = 6 km MIN ALT 10m MIN RANGE = .6 km	6,000 4,000 2,000 GROUND LEVEL OF SA-9
SA-13/GOPHER CREW: 3 RANGE-ONLY RADAR MISSILE GUIDANCE: PASSIVE IR HOMING 4 LAUNCH CANNISTERS 12 MISSILES ON BOARD RELOAD TIME: UNK VEHICLE: MODIFIED MT-LB - 12mt - ROAD SPEED: 60 kph - ROAD RANGE: 500 km - AMPHIBIOUS	MAX ALT = 5,500 MISSILE MAX RANGE = 6-7 km (est.) MIN ALT = 10m MIN RANGE = .7m	6,000 4,000 2,000 GROUND LEVEL OF SA-13



2S6 (TUNGUSKA)

Crew: 4
Radar System: Hot Shot
Missile Guidance: SACLOS, Radar
Weapons System: 8 ready-to-fire SA-19 missiles, 4 x 30mm automatic cannons
Vehicle: 34mt, road speed - 65 kph, road range - 500 km
SA-19 characteristics:

minimum altitude - 15m
maximum altitude - 3,500m
minimum range - 2 km
maximum range - 8 km

AA	antiaircraft; antiarmor
AAG	army artillery group
acq	acquisition
ACRV	armored command and reconnaissance vehicle
ACV	armored combat vehicle
ACV	armored combat vehicle
ADC	Air Defense Command
AGL	automatic grenade launcher
alt	altitude
APC	armored personnel carrier
APC	armored personnel carrier
arty	artillery
ASC	armored scout car
AT	antitank
ATGL	antitank grenade launcher
ATGM	antitank guided missile
atk	attack
avn	aviation
bde	brigade
bn	battalion
BrAG	brigade artillery group
btry	battery
C^2	command and control
CAA	combined arms army
CAG	corps artillery group
CCD	camouflage, concealment, and deception
co	company
const	construction
COP	command observation post
CP	command post
CRP	combat reconnaissance patrol
CSOP	combat security outpost
DAG	division artillery group
DF	direction finding
div	division
DMI	Directorate of Military Intelligence
EC	electronic combat
engr	engineer
FD	forward detachment
FDC	fire direction center
FP	forward patrol
frag	fragmentation
FSE	forward security element
fwd	forward
GP	general purpose
HEI	high explosive, incendiary

HF	high frequency
how	howitzer
HQ	headquarters
hr	hour
IFV	infantry fighting vehicle
IMRB	independent motorized rifle brigade
indep	independent
IR	infrared
km	kilometer
km	kilometer
kph	kilometers per hour
LMG	light machinegun
LOC	line of communication
LOS	line of sight
m	meter
maint	maintenance
MANPADS	man-portable air defense system
max	maximum
MBT	main battle tank
MG	machinegun
MLR	multiple rocket launcher
nun	millimeter
MOD	mobile obstacle detachment
MRB	motorized rifle battalion
MRC	motorized rifle company
MRC	motorized rifle company
MRD	motoried rifle detachment
MRR	motorized rifle regiment
MSD	movement support detachement
mtz	motorized
NBC	nuclear, biological. and chemical
OMG	operational maneuver group
OPFOR	opposing force
Plt	platoon
POL	petroleum. oils. and lubricants
PRV	remotely piloted vehiclc
RAG	regimental artillery group
rds	rounds
REC	radioelectronic combat. reconnaissancc and electronic combat
recon	reconnaissance
regt	regiment
ROF	rate of fire
SACLOS	semi-automatic command to line-of-sight
SAM	surface-to-air missile
sep	separate
SP	self-propelled
SPF	special purpose forces (enemy)
sqh	squadron
SSM	surface-to-surface missile

surv	surveillance
svc	service
TB	tank battalion
TC	tank company
TD	tank detachment
tgt	target
tk	tank
TR	tank regiment
UHF	ultra high frequency
VHF	very high frequency

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