ARMY FIELD MANUAL VOLUME II
PART 3 - GENERIC ENEMY
(REST OF THE WORLD

PART 1 - (ROWEN)
OPERATION ART
&
TACTICAL DOCTRINE

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1995

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AMENDMENTS

Amendment Number	By whom amended	Date amended

DISTRIBUTION

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PREFACE
GENERIC ENEMY REST OF THE WORLD ENEMY (ROWEN)

GENFORCE

1. The purpose of the Generic Enemy Force (GENFORCE) is to provide a basis for the generation of enemy forces for all except the most specialised training needs. It is designed to be used flexibly, in a modular fashion, to craft enemy requirements for training.

2. GENFORCE offers three types of artificial, yet challenging and realistic, opposing force options. It will be issued in a series of three packages:

   Basic Forces: This enemy has heavy and light armoured forces, predominantly equipped along Former Soviet Union (FSU) lines. Its Tactical Doctrine and Operational Art are modelled on a revision of Army Field Manual Volume II.

   Mobile Forces: This enemy is futuristic, more advanced in terms of equipment and Tactical Doctrine, with an Operational Art geared towards less dense battlefield scenarios.

   Rest of the World Enemy (ROWEN): This composite enemy has a broad range of equipments of mixed origin. Its Tactical Doctrine and Operational Art are designed to support specific operational environments: normal, desert, mountain, FIBUA and jungle.

GENSCEN

3. The Training Support Team at the Combined Arms Training Centre has developed an evolutionary scenario generator (GENSCEN) to be used with GENFORCE. GENSCEN will provide a range of country/infrastructure options to supplement and bring to life the GENFORCE selected for a particular exercise. Background information is provided in a format similar to real-life intelligence documents, including a selection of country briefs, with options for political and military personalities and supporting data in a variety of forms.

ROWEN

4. The third of the three GENFORCE packages, **ROWEN**, is issued in two separate folders as follows:

   Part 1 - Tactical Doctrine
   Part 2 - ORBATs and Tables of Organisations & Equipment

5. GENFORCE supersedes Army Code 71357 for training. However, the latter publication should be retained and will remain available on demand.

ROWEN

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CHAPTER 1

ROWEN MILITARY DOCTRINE OVERVIEW

SECTION 1 – INTRODUCTION

0101. ***Overview***. ROWENIA is a mythical country designed to provide equipment, tactics and doctrine required to exercise British forces in operations that may be required in a "Rest of the World" country at some time in the future. ROWENIA has been given a force structure that will permit operations to be portrayed along the entire spectrum of conflict from peace, through operations other than war (OOTW), and finally to war.

0102. ***Capability.*** ROWENIA possesses a multiplicity of capabilities to include a robust armoured force, less well equipped infantry force, and a poorly equipped, lightly armed partisan/militia force. ROWENIA has a sophisticated offensive chemical capability and a suspected biological and nuclear research programme. It also has an air force and navy to allow, and in some circumstances require, joint operations to be conducted. The supporting table of organisation and equipment (TOE) is a large but tailorable force that can be altered to suit training objectives at all levels in a variety of circumstances.

0103. ***Environment.*** ROWENIA has a diverse environment in which operations can be conducted. In addition to 'normal' combat conditions, there is also the possibility of desert, mountain, jungle and urban areas in which operations could occur. Again, the environment, level of conflict and enemy force structure are adaptable to the needs of the exercising unit/formation.

0104. ***History.*** ROWENIA has a long history of warfare. Some alternative facets of the country can include:

a. A federation of states with a history of internal conflicts due to varying culture, religion, language, or ethnic composition or any combination of these.

b. A post-colonial country with economic development difficulties.

c. A post-colonial state that has poorly defined borders and conflicting claims to sovereignty.

d. A sponsor of international terrorism.

e. A regional power with expansionist aims

f. Unstable political structure, i.e. vulnerable to coups, rioting, etc.

This is not an exhaustive list, but rather a set of possibilities that are available to users to support the type of exercise required. The scenario generator

(GENSCEN) available through Combined Arms Training Centre (CATC) will provide the actual scenario needed, including the afore-mentioned factors as required.

0105. ***Political System***. ROWENIA is a military dictatorship which purports to be a republic of federated states. Under the constitution, the president is chosen by a 'special commission' which meets for that purpose after separate elections are held in each region. Each region is represented in the 'special commission'. Because of the conflicting ambitions of the regions and the extraordinary power possessed by the leader, there is much discontent with the electoral system and varying degrees of support for the president. The current president has usurped the legitimate political system and remains in power primarily through feudal relationships and the threat, and use, of force. The political system has been thoroughly corrupted and is used by the president and his supporters to maintain their hold on ROWENIA. There is widespread discontent with the president but no clear opposition has survived the ending of the latest regional uprising.

0106. ***Defensive Concept***. Rowenia has a regional defensive concept. It has forces organised to defend each region and a limited ability to conduct operations between regions. This limited ability to conduct inter-regional operations is primarily the result of regional rivalries and geography which limit this level of cooperation and support.

0107. ***Presidential Guard***. The clearest manifestation of the power, and interests, of the president is the establishment of an autonomous Presidential Guard Corps. This combined arms corps is directly subordinate to the Ministry of Defence (MOD), which in turn is led by the president's most loyal supporters. It is the force that will ensure the president remains in power. It has been used in that role to put down three coup attempts and two regional uprisings. These uprisings were put down in a particularly cruel manner (chemical attacks were used on several occasions in one uprising).

0108. ***United Nations' Involvement***. Battalions from the commando and mountain infantry brigades (part of the Special Operations Division) have served with the United Nations in Europe and in Africa where they were noted for their high level of professionalism. However, they were accused of brutality in Central Africa and the ROWEN High Command has stated that it will not send troops to support future UN operations.

SECTION 2 – OPERATIONAL LEVEL OF WAR

0109. ***ROWEN Guiding Principles***. The principles of the operational level of war are not regarded as immutable. The principles are the result of an extensive militaristic history and political/military necessities as seen by the ROWENIAN leadership. ROWENIA has tried to take advantage of technological developments as much as possible. Its success has been limited only by the availability of funds. ROWENIA continues to disregard its civilian population's desire

for a better life, and the military dominates all sectors of society. Therefore, ROWEN principles supporting the operational level of war are established to meet the realities of the country's situation, but the principles are always subject to revision as improved technology becomes available, and/or when the military/politico dictates it should change. The leadership of ROWENIA is very opportunistic and will seize every opportunity to press for 'strategic' goals. When these goals shift because of a change in the military/politico situation, the principles of operational warfare will be adapted to meet those changes. ROWENIA sees the most effective operational level conflict as being offensive in nature. While limited in its ability to acquire quantities of advanced military equipment, it sees advanced technology as decisive on the battlefield. While many of these principles are generally accepted by other armies, the differences in emphasis and interpretation are most instructive in revealing the ROWENIAN approach to military problems. It considers Weapons of Mass Destruction (WMD) as supporting these principles.

0110. ***Significance***. The ROWENS understand the significance of the operational art. History has shown that they are capable of identifying political objectives which can be achieved by military force; but they also recognise that there are occasions when defeat of an enemy's military capability is a prerequisite for operational success.

0111. ***Operational Understanding.*** ROWENIA has developed an understanding of the operational level of war because it is capable of conducting that level of war. Having limited experience fighting at that level, ROWENIA has constantly sought to improve its capability to prosecute a conflict at the highest level required to achieve its vision. Indeed, the principles of war have been interpreted into an effective operational concept. The ability of ROWENIA to actually conduct this level of conflict has ebbed and flowed depending on its success or failure in the politico-economic sphere, but the conceptual basis for operational level warfare remains.

0112. ***Principles of War***. ROWENIA has a long martial history. This has created a distinctive view of war. This view of war has developed over time and reflects ROWENIA's unique history of conflict. This view at the highest level is evident from the ROWENIAN Principles of war. They are:

a. *Vision*. A commander must create a clear vision of what the mission is and why it is important to accomplish. Vision is created at the highest level and is conveyed downward to the lowest levels of command with a progressive focus on the appropriate level of command. In this way each level of command has the appropriate vision and it supports the higher level vision.

b. *Freedom of Action*. The conditions must be created to permit 'free decisions'. Freedom of action must be maintained to allow commanders to create initiative where it is felt necessary.

c. *Selection of Critical Point*. The selection of a critical point establishes how a mission is achieved. It is a recognition of the primacy of key geographical locations that are critical to success on the battlefield.

d. *Tempo*. Fast, decisive action is critical to unbalance the enemy; it retains freedom of action while supporting the commander's vision. It is key to maintaining the initiative.

e. *Cohesion*. Cohesion in all its forms provides unity of action and is necessary to generate synergy in all aspects of combat potential. It includes not just a common understanding of the commander's vision, but unit solidarity and morale.

f. *Security*. Lines of communications (LOCs) must be secured to provide all types of support to the force. This includes communications, as well as logistics and the arteries of transportation and commerce that support the war effort.

g. *Popular Support*. It is important to maintain popular support. When possible, the vision should be promulgated to all. However, when required, the vision may be misrepresented to support operational necessity. Popular support is critical in long-term operations, and is a means to enhance combat potential.

SECTION 3 – OPERATIONAL PLANNING CONTEXT

0113. ***Integration of Forces.*** ROWENIA has a military structure based on ground, air and naval forces. The ground forces are highly organised and are capable of operating in support of ROWENIAN strategic goals. The air and naval forces are less potent, but are capable of supporting ground force operations in most circumstances where required. The ground forces are based on a four Corps structure plus the Presidential Guard Corps.

0114. ***Operational Level of Command.*** The operational level of command is the Corps. ROWENIAN Corps are combined arms units that have organic fire support (both artillery and aviation) as well as other integrated combat support and combat service support elements. A Corps consists of three divisions under normal combat (and peacetime) conditions; however, it can comprise up to five divisions. Corps have exercised with larger groupings but these were unsuccessful and the span of control at corps level will be limited to five divisions. While Corps is the highest level of independent command, the corps is not an independent agent but rather tightly integrated into the strategic and operational plan. The corps commanders are extremely loyal to the president and he personally approves each appointment.

SECTION 4 – ROWENIAN FORMATIONS

0115. ***The Presidential Guard Corps***. The Presidential Guard Corps is a special force and it will be used primarily in a strategic role of defending the president or capital, or when the president feels their commitment will be decisive. In a strategic sense, the Guard Corps will be employed when ROWENIAN forces are reaching their culminating point and when their influence will change the outcome of battle. There is also a ceremonial guards regiment which will remain in the capital region during hostilities.

0116. ***Other Forces***. Other ROWEN forces are:

a. *Airborne Brigade***.** The Airborne Brigade consists of three airborne battalions; but no aviation support is organic to the brigade. It has a close relationship with the air force and is ROWEN's most combat ready brigade. It has been used in an internal security role in the past.

b. *Special Operations Division***.** The Special Operations Division gives ROWENIA the capability to fight in a variety of environments. This division consists of three brigades; A Commando Brigade, a Jungle Warfare Brigade, a Mountain Infantry Brigade and an Aviation Regiment. The division also has a large combat support element to support a wide variety of operations. This elite force gives ROWENIA flexibility to conduct operations in great depth and in many conditions.

c. *Special Intelligence Brigade*. The Special Intelligence Brigade has three communications intelligence battalions, and one jamming battalion. However, with only a company to support analysis, the ROWENIAN intelligence capability is unbalanced.

d. *People's Militia*. The People's Militia provides for much of the military inculcation of society and has a major role in rear area defence. It has had a varying rate of success primarily as a result of regional differences in ROWENIA. The People's Militia Commands are geographically organised (Northern, Central, & Southern Districts) with 3-5 brigades in each district. The militia has its own integrated training system consisting of five schools (Militia Officers' Training school, NCOs' Training School, ROWEN Youth Academy, Artillery School and Engineer School). The effectiveness of the militia is extremely limited in those districts which have a large dissident population.

CHAPTER 2

CONVENTIONAL OPERATIONS OVERVIEW

SECTION 1 – BACKGROUND

0201. ROWENIA uses combined arms to support military objectives. It differs from other countries over the use of Weapons of Mass Destruction (WMD). ROWEN forces consider chemical warfare as an element of conventional warfare. If they were to develop biological and/or nuclear weapons they would also be likely to consider their use if strategic advantage favoured it. They are well trained in the employment of chemical weapons and have combat experience with them. The ROWEN understanding of the operational art includes awareness of serious effects which the use of WMD can have on operations, particularly on the key elements of freedom of action, cohesion and tempo.

SECTION 2 – OFFENSIVE OPERATIONS

0202. ***Composition.*** The manoeuvre brigade is the lowest echelon which the ROWEN forces will operate independently. Brigades are normally made up of four battalions. The brigade may be task organised from two to six battalions, depending on the specific mission. Lead divisions may receive reinforcements from corps resources. Typical resources pushed down from corps to lead divisions include artillery units, and anti-tank units.

0203. ***Principles.*** The ROWEN Principles of Offensive are:

a. *Force Ratio*. The ROWENs will have at least 2 to 1 overall superiority prior to initiating offensive operations. The normal force ratio is 3 to 1, especially for deliberate attack and assault operations.

b. *Objectives*. The ROWEN objectives are normally based on terrain. They will also base their objective on known enemy locations. Divisional objectives are normally 20-30 km from the Forward Line of Own Troops (FLOT).

c. *Reserves*. The ROWENs will establish reserves at all echelons to assist attacking forces in achieving their goals.

d. *Rehearsals*. Attack rehearsals are based on a detailed operation plan. ROWENs are firm believers in rehearsing and all soldiers are required to know the plan as it relates to their role in accomplishing the mission. The ROWENs will use terrain similar to their objective to rehearse on.

0204. ***Tactical Formations.*** ROWEN forces use a variety of tactical formations that they employ in various situations. These formations take advantage of the military situation as well as the terrain over which they are operating. These formations are rehearsed at all levels. The ROWENs have 6 basic tactical formations that they use when conducting offensive operations. The forma-

tions are: vee, wedge, echelon, column, diamond or box, and line. (See Tactical Formations at Figures 1-20).

SECTION 3 – DEFENCE

0205. ***Composition***. During the transition from offence to defence ROWEN mechanised and armoured forces will initially be forward in a hasty defence. The reason for this is that these forces are normally the spearhead of any offensive operation. Infantry units will come forward and construct a deliberate defence behind the mechanised and armoured forces. When the infantry has established its defence, the armoured and mechanised forces will withdraw through the defending infantry units. Artillery will provide supporting fires (including scatterable mines). Forces will then move to an assembly area where they can prepare for future offensive or blocking operations. Defending divisions may receive reinforcements from corps resources. Typical resources pushed down from corps to defending divisions include artillery, engineer and anti-tank units. Corps will always retain control of all helicopter assets.

0206. ***Principles.*** The ROWEN principles of Defence are:

a. *General*. For ROWEN forces defence is only a stage from which to prepare offensive operations, to gain time to achieve political goals or to wait for reinforcements. In the deliberate defence 2/3 of the combat power is forward.

b. *Rehearsal.* The mobile reserve will rehearse moving to blocking positions. The brigade reserves will rehearse counterattacking and moving to prepared positions behind the front line troops.

c. *Anti-Tank Guided Missiles (ATGMs)*. During the deliberate defence a heavy use of ATGMs will be made. An attempt will be made to mass Anti-Tank (AT) weapons in order to destroy the main effort of the attacking enemy force.

d. *Obstacles.* ROWENs believe in a detailed use of obstacles to enhance their ability in defence. The obstacles are established in belts and consist of AT and Anti-Personnel (AP) mine fields, tank ditches, berms and concertina wire. Obstacles are normally covered by fire. They also use fire trenches to further complicate the breaching of their obstacle belts.

e. *Reserves.* Reserves are maintained at all levels. The reserve forces are committed upon the identification of the enemy's main effort. They also maintain a mobile reserve at the divisional level and above. The mobile reserve is committed when the enemy forces exploit a penetration. The Presidential Guard may be used as a strategic reserve.

TACTICAL FORMATIONS

BRIGADE TACTICAL FORMATIONS

FIGURE 1. MECHANISED BRIGADE - VEE FORMATION

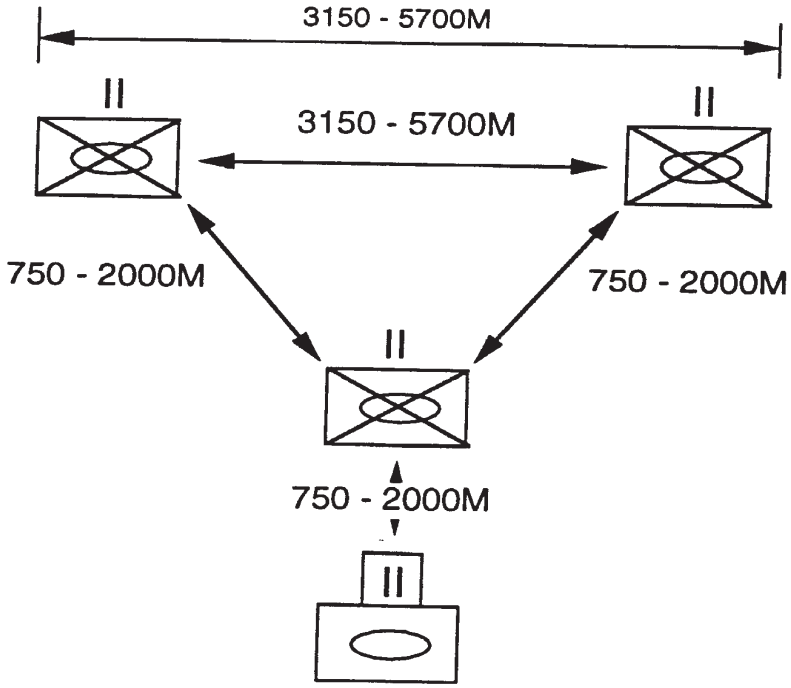


FIGURE 2. ARMOURED BRIGADE - VEE FORMATION

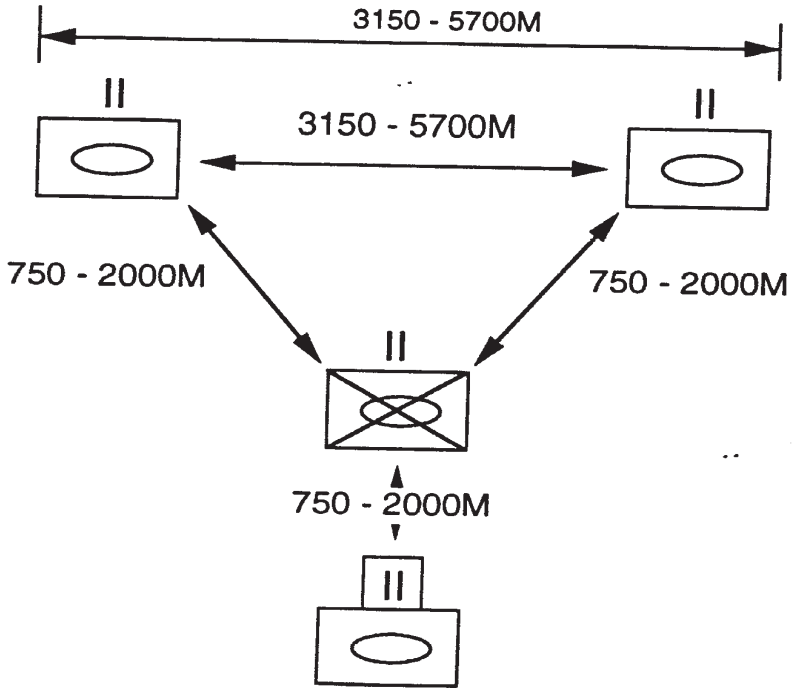


FIGURE 3. BRIGADE BOX/DIAMOND FORMATION (USED IN MOUNTAIN/JUNGLE OPERATIONS)

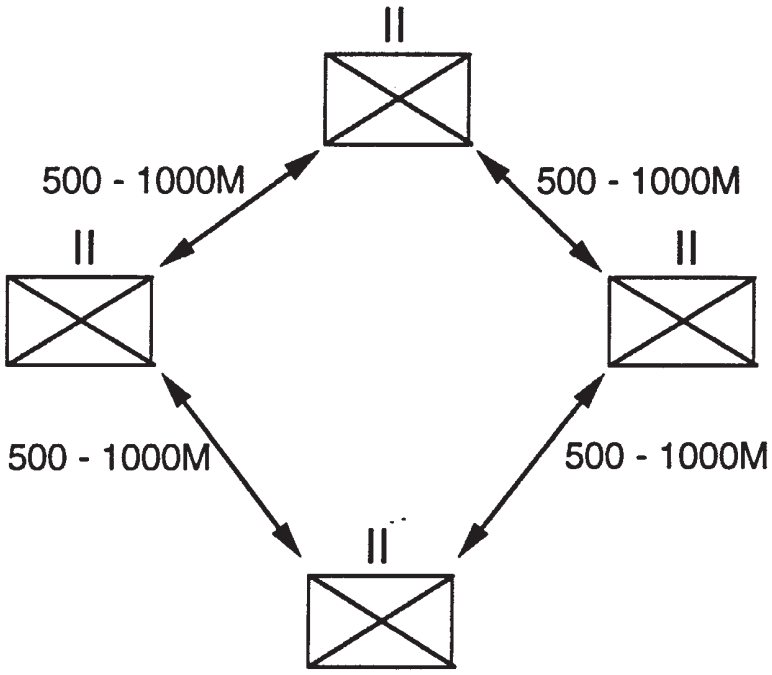


FIGURE 4. BATTALION/REGIMENTAL TACTICAL FORMATIONS

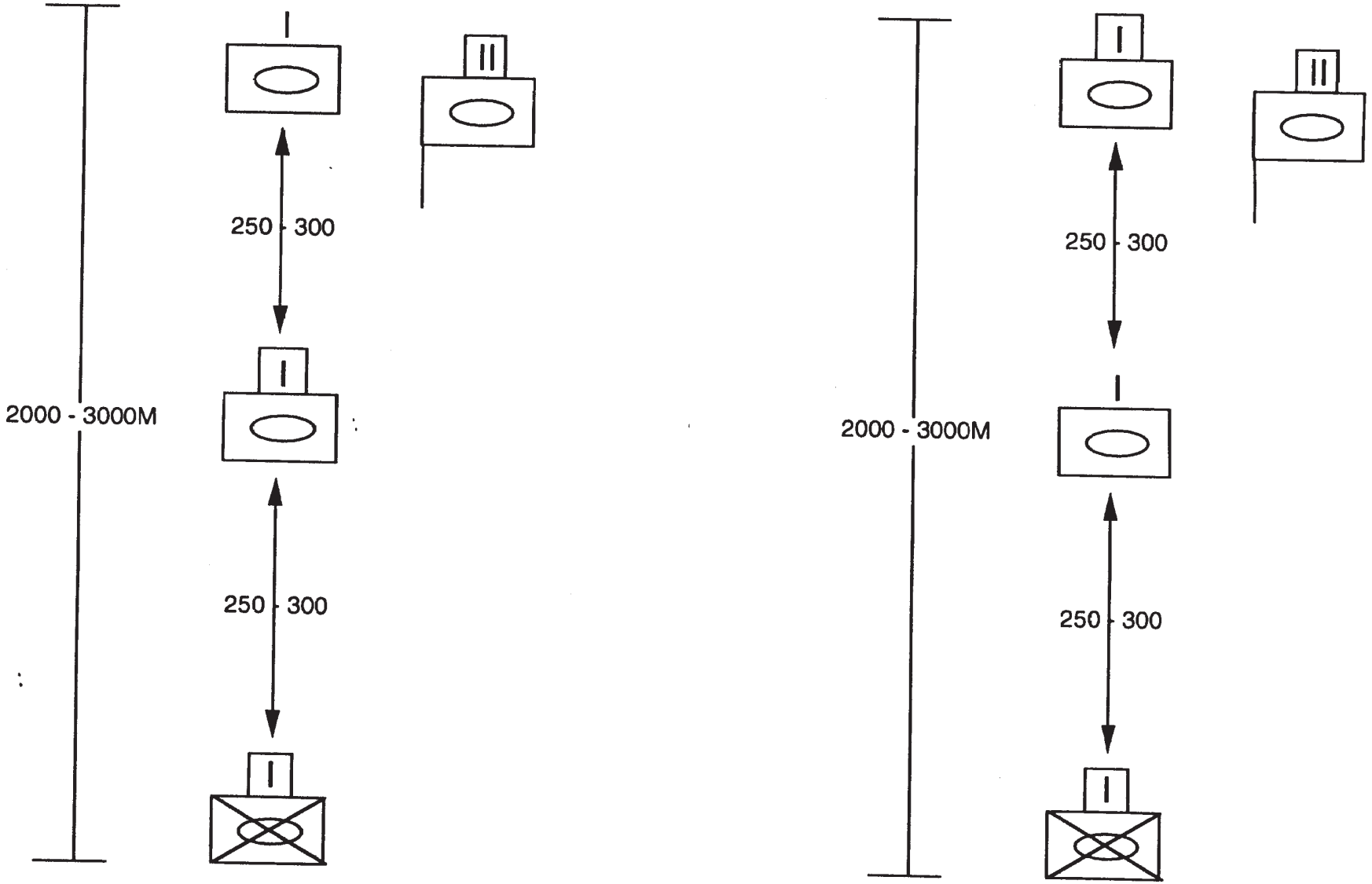


FIGURE 5. MECHANISED - VEE FORMATION

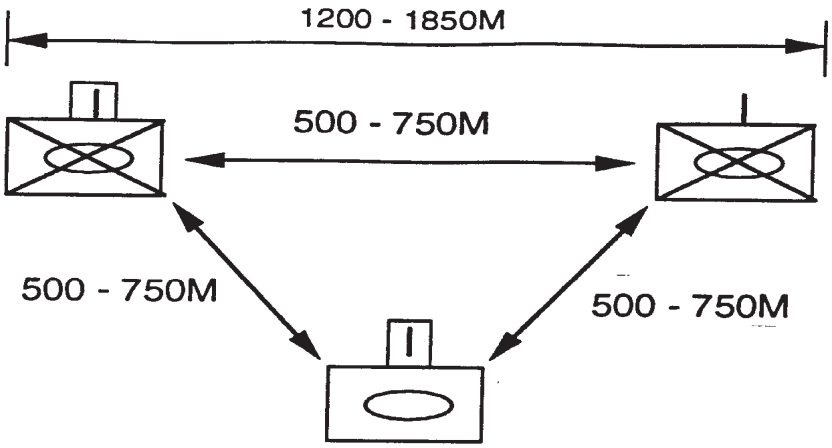


FIGURE 6. ARMOURED - VEE FORMATION

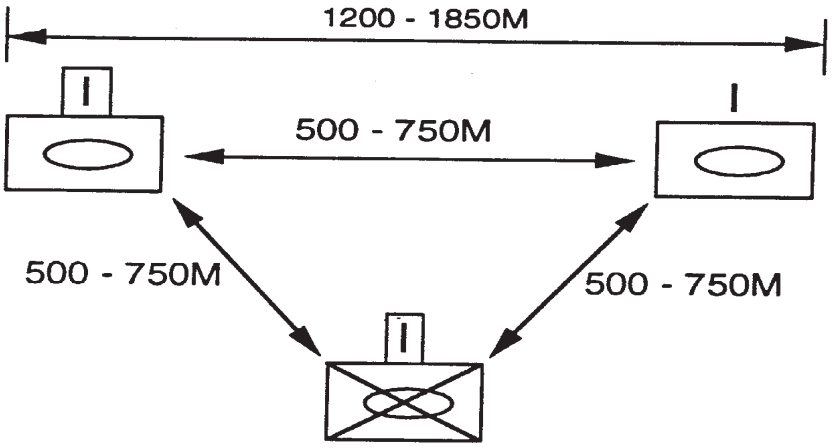
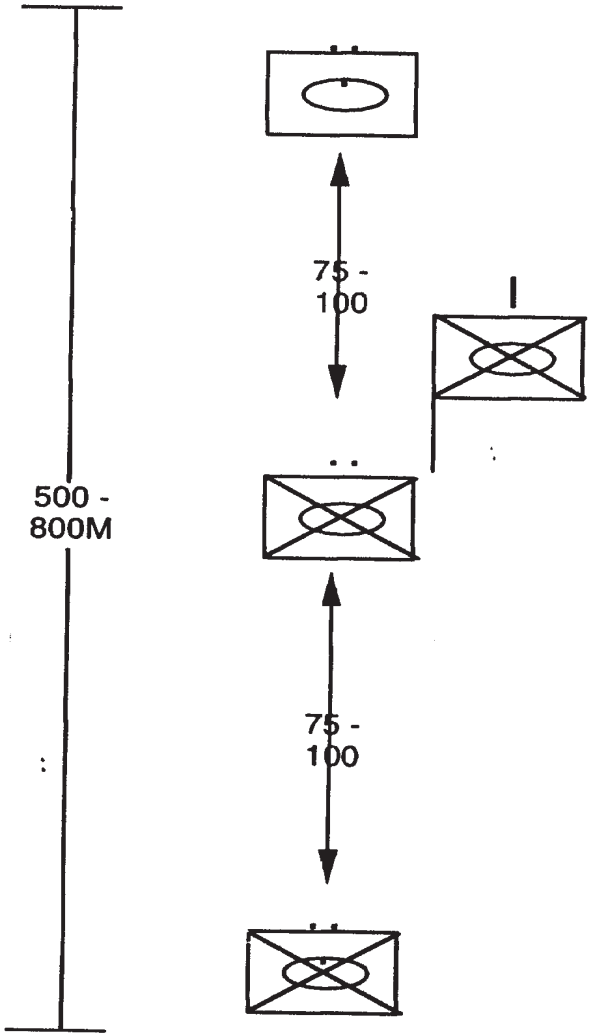


FIGURE 7. COMBAT TEAM TACTICAL FORMATIONS

MECHANISED COMBAT TEAM - COLUMN FORMATION



TANK COMBAT TEAM - COLUMN FORMATION

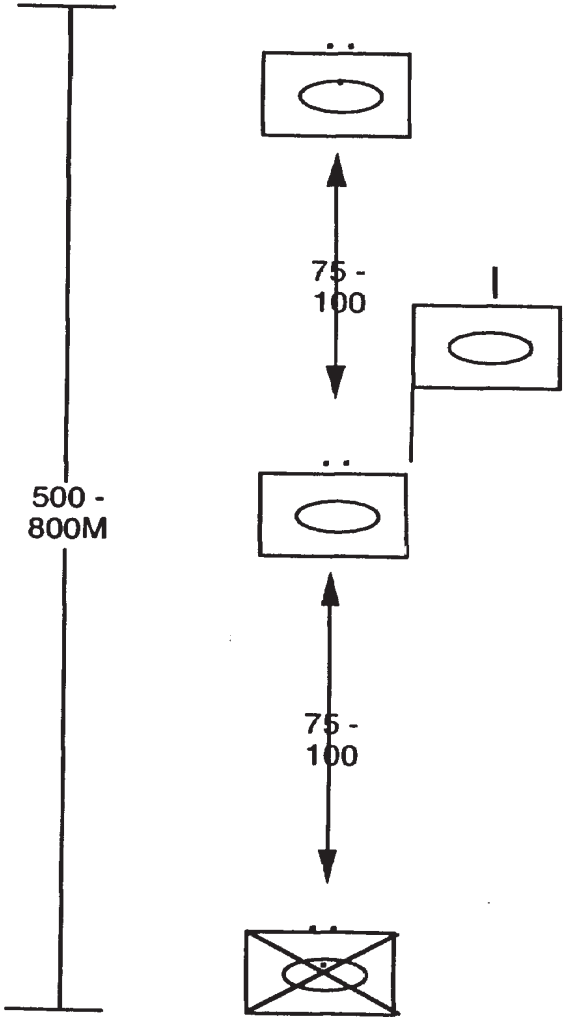


FIGURE 8. COMPANY - BOX/DIAMOND FORMATION (USED IN MOUNTAIN/JUNGLE OPERATIONS)

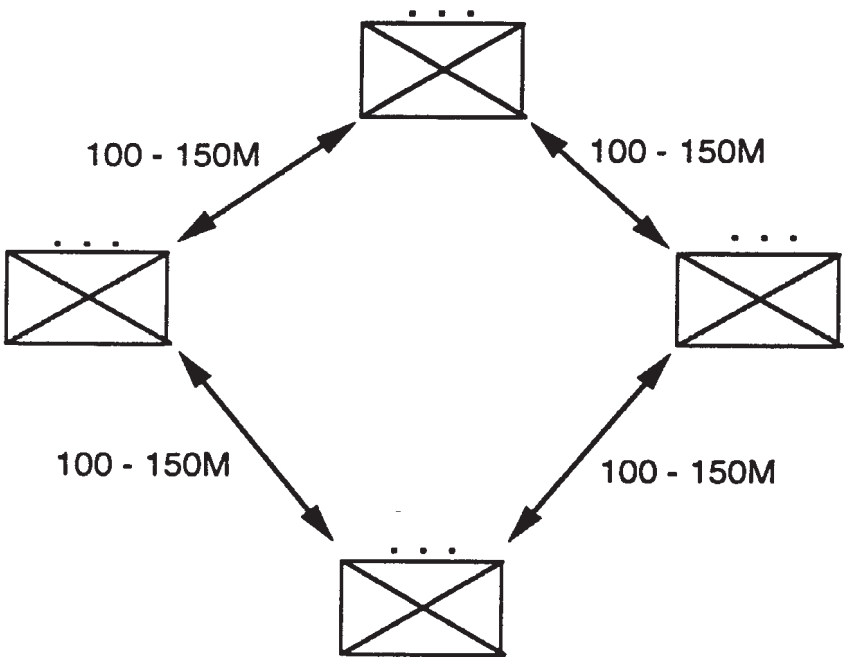


FIGURE 9. MECHANISED COMBAT TEAM - VEE FORMATION

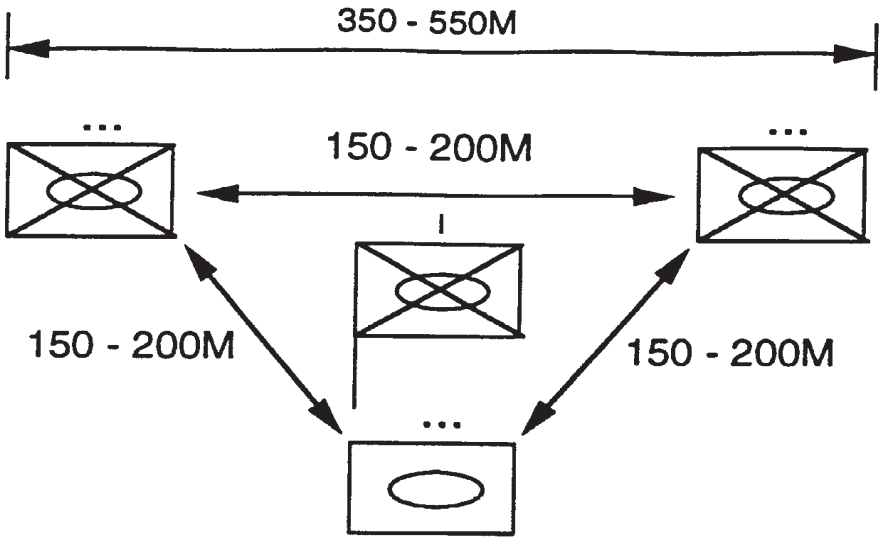


FIGURE 10. TANK COMBAT TEAM - VEE FORMATION

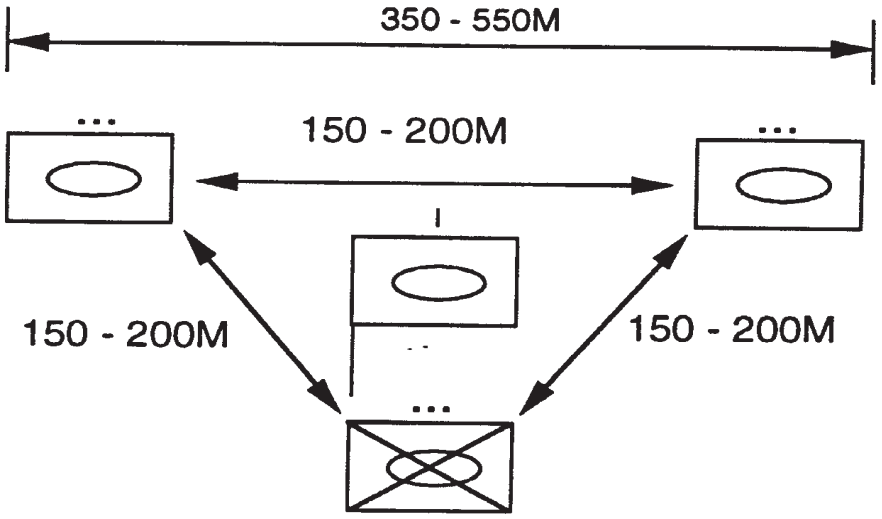


FIGURE 11. MECHANISED COMBAT TEAM - LINE/ASSAULT FORMATION

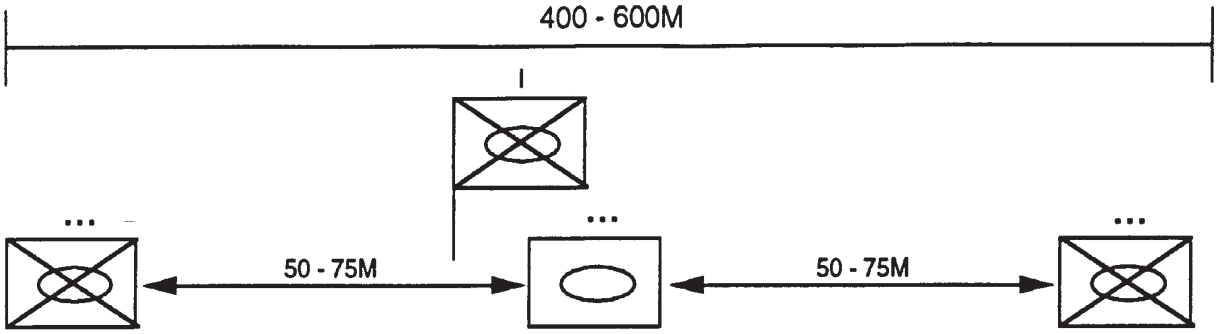


FIGURE 12. TANK COMBAT TEAM - LINE/ASSAULT FORMATION

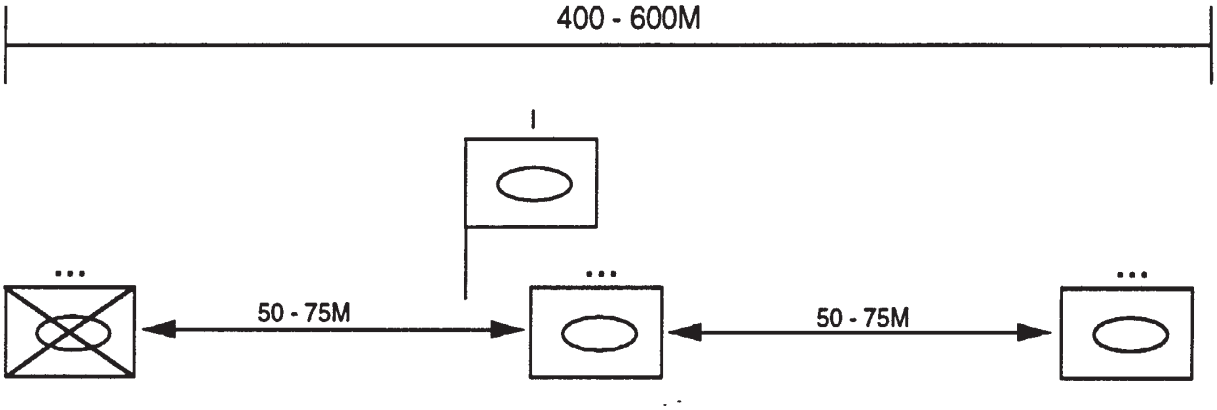


FIGURE 13. MECHANISED PLATOON ECHELON LEFT FORMATION

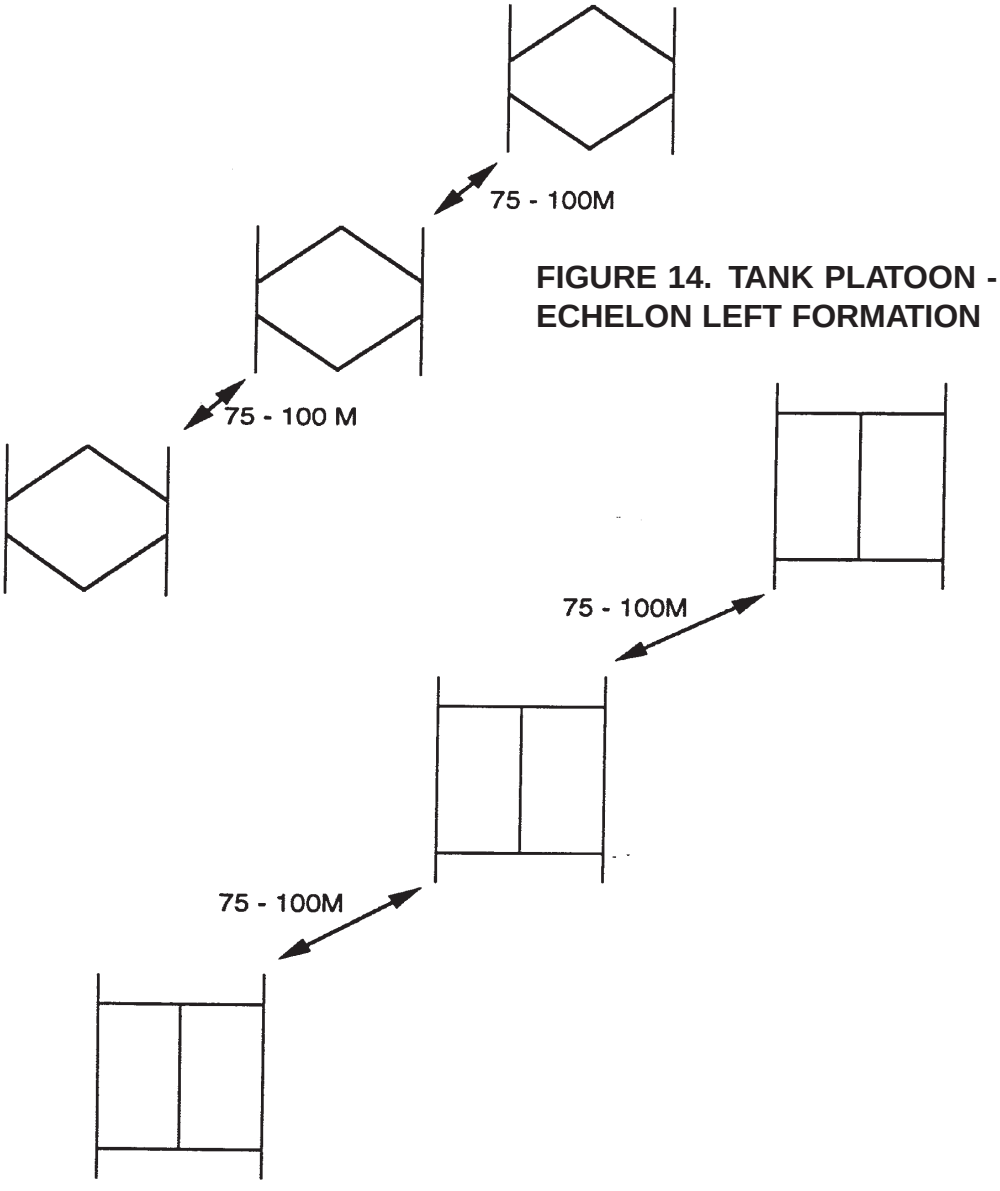


FIGURE 14. TANK PLATOON - ECHELON LEFT FORMATION

FIGURE 15. MECHANISED PLATOON - WEDGE FORMATION

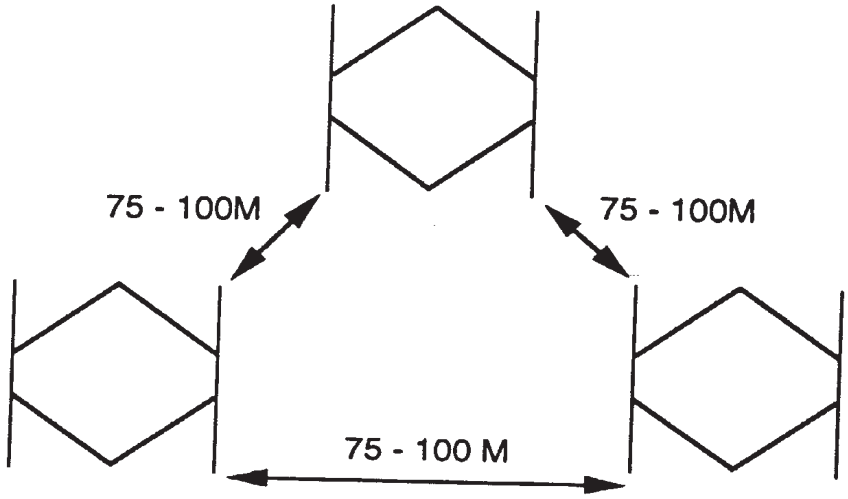


FIGURE 16. TANK PLATOON - WEDGE FORMATION

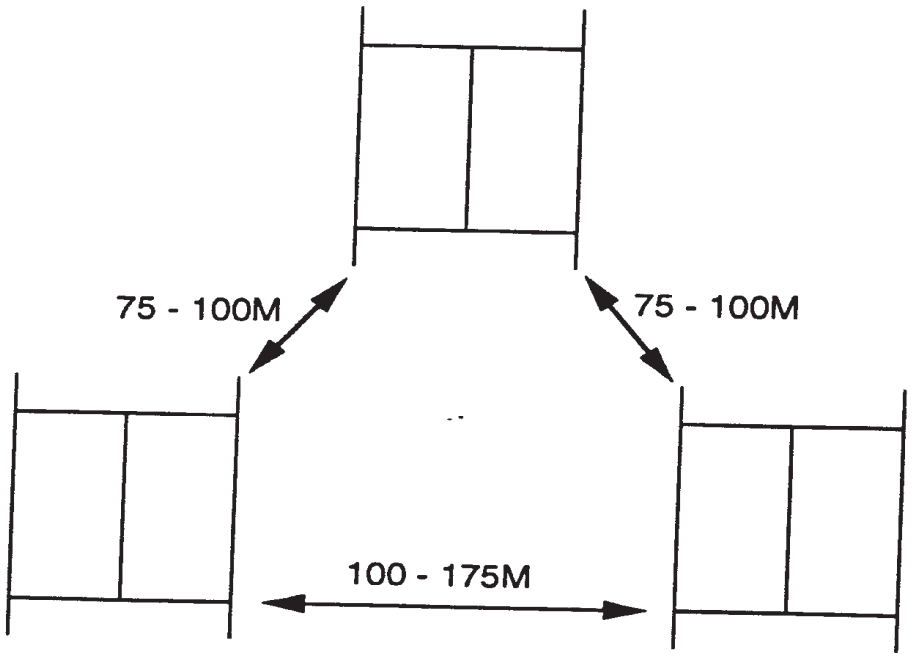


FIGURE 17. MECHANISED PLATOON - VEE FORMATION

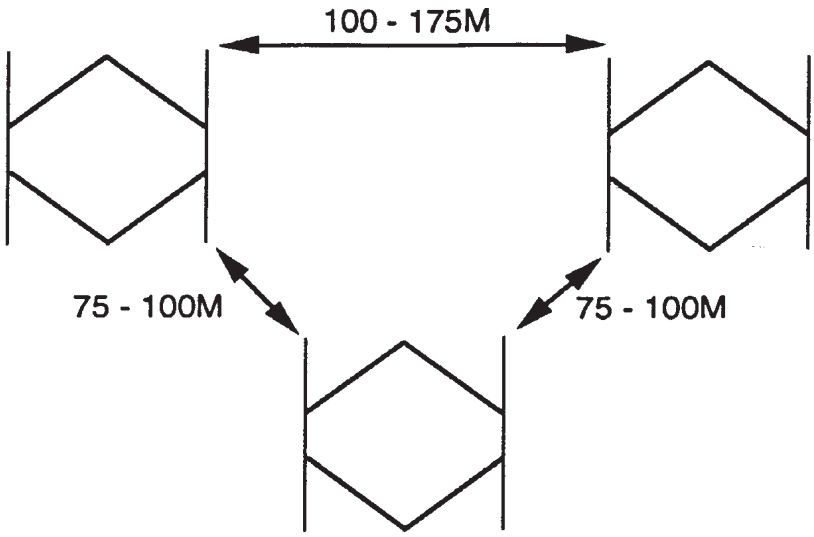


FIGURE 18. TANK PLATOON - VEE FORMATION

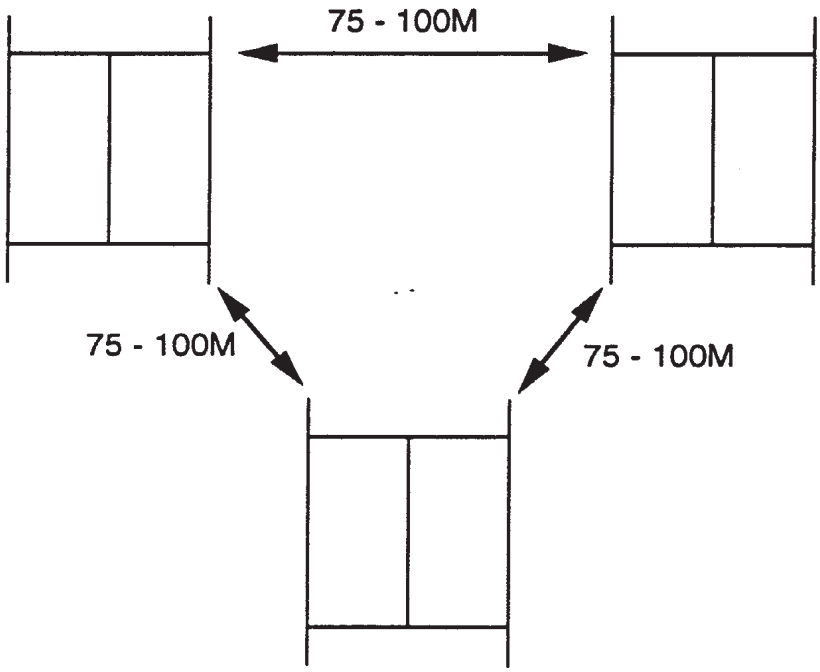


FIGURE 19. MECHANISED PLATOON LINE/ASSAULT FORMATION

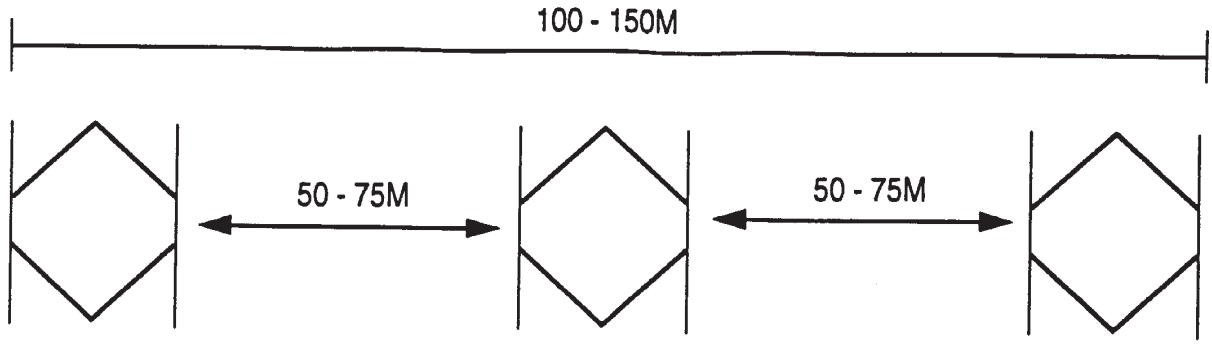
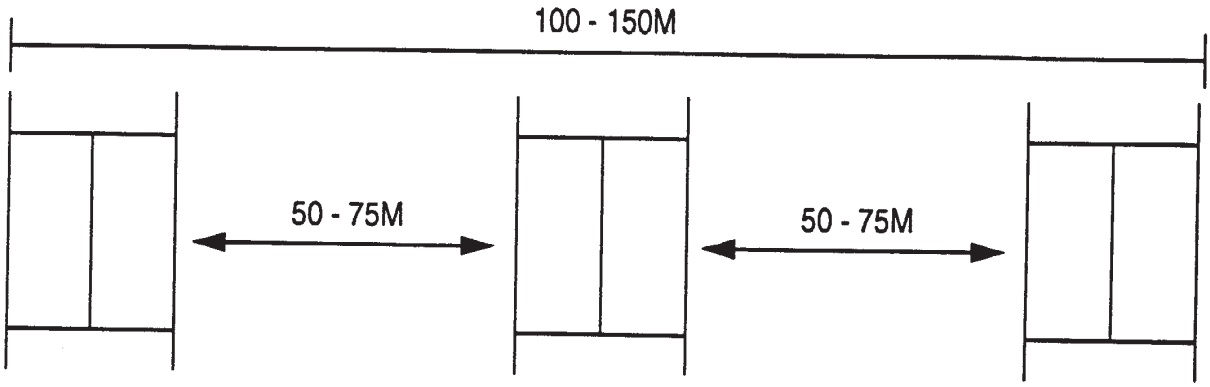


FIGURE 20. TANK PLATOON - LINE/ASSAULT FORMATION



SECTION 4 – WITHDRAWAL

0207. The ROWENs conduct two types of withdrawal operations: The deliberate delay and the hasty withdrawal.

0208. ***Deliberate Delay***. The ROWENs will conduct deliberate delay operations when offensive operations have been stopped or they have extended their lines of communication and supply beyond their means. The delaying force will attempt to buy time for a follow on element to establish a deliberate defence by using delaying actions.

0209. ***Hasty Withdrawal***. A hasty withdrawal is conducted when a unit is being overrun.

0210-0212 Spare.

SECTION 5 – COMBAT SUPPORT

0213. ***Command and Control*.** Command and control is achieved through the use of detailed plans and extensive rehearsals. Commanders at all levels are positioned forward and will issue orders using radio or land line if available.

0214. ***Communications*.** Most communications at divisional level and above are in the secure mode. Some command and control nets and artillery nets at brigade level may be secure.

0215. ***Intelligence***. Military intelligence personnel and units are found at all levels from General Headquarters (GHQ) to brigade. Military intelligence personnel and units are responsible for counter intelligence, censorship, electronic warfare (EW), imagery intelligence (IMINT), collecting and analysing combat intelligence and the handling of prisoners. Intelligence is concentrated at specific levels of command according to the mission.

0216. ***Electronic Warfare*.** EW is integrated with intelligence units. ROWEN EW units are only found at high command level in peacetime, but may be subordinated to corps level in war. Subordinate elements will be situated as far forward as possible during an advance, but tasking and movement will be done at corps level. Intelligence gained will be disseminated down to brigade when necessary. Jamming will only be used to support assault operations.

0217. ***Reconnaissance and Surveillance***. Types of Reconnaissance and Surveillance missions are:

a. *Aerial Reconnaissance*. Reconnaissance targets are determined mainly by corps and division. The air force has the capability to fly both high and low altitude aerial reconnaissance missions. Reconnaissance aircraft can be equipped with sideways looking airborne radar (SLAR) and long-range photographic and TV cameras.

b. *Corps Reconnaissance***.** Corps reconnaissance will attempt to penetrate the division and corps rear areas in order to place Observation Posts (OPs). The OPs will attempt to locate command and control facilities, reserve forces and troop assembly areas. Corps reconnaissance will also identify lucrative targets for Special Forces units and artillery attack. (See 04.15.c.(2))

c. *Divisional Reconnaissance***.** Divisional reconnaissance will normally operate up to 50 kms in front of the attacking divisions. Divisional reconnaissance elements will work in pairs and not engage the enemy unless for self defence. Divisional reconnaissance can call down artillery fire. It will operate mounted and will not normally insert OPs. It may be assisted by divisional engineer assets. (See 04.15.c.(3))

d**.** *Brigade Reconnaissance***.** Brigade reconnaissance will operate up to 25 kms in front of the attacking brigade. Brigade reconnaissance elements will work in pairs and operate mounted at all times. (See 04.15.c.(4))

e. *Battalion Reconnaissance***.** During offensive operations, the battalion reconnaissance will operate as screening force 3–5 kms in front of the attacking battalion.

f. *Dismounted Patrols***.** Brigades will aggressively conduct dismounted reconnaissance patrols to confirm enemy positions as well as enemy obstacles. Patrols will normally be up to platoon size and will have limited AT systems, normally RPG 7s. If available, they will call indirect fire on targets of opportunity.

0218**.** ***Fire Support***. Fire support is used, organised and controlled as follows:

a. *Utilisation***.** ROWEN field artillery consists of mortars, towed and self-propelled artillery and Multiple Rocket Launchers (MRLs). Utilisation of artillery assets to provide preparatory fire for the assault is a key element in ROWEN offensive operations

b. *Command and Control***.** The supporting artillery commander is always located with the commander of the unit he is supporting. Artillery units are generally attached to the units they support. Divisions allocate the majority of artillery support to brigades supporting the main effort.

0219**.** ***Air Support***.

a. *Rotary Wing Support.* The Army Aviation Command (AAC) found at GHQ controls helicopters in ROWEN forces. Helicopters are used in offensive and defensive roles for ground attack, troop transport, anti-insurgent missions and close air support (CAS).

b. *Fixed Wing Support.*

(1) *Command and Control*. ROWEN Air Force control all the fixed wing assets which are available for ground attack (GA), air interdiction (AI), CAS, reconnaissance, troop transport and air defence (AD) missions. Corps can request air support through GHQ.

(2) *Tactics*. Fixed wing aircraft are used primarily for battlefield air interdiction (BAI). They also support ground forces if there are only a limited number of attack helicopters available. BAI targets are normally lines of communication, command posts, troop assembly areas and logistic facilities. Fixed wing aircraft are used to deliver chemical munitions. BAI targets are airfields, LOCs and industrial facilities.

0220. ***Logistics***. ROWEN forces are very concerned about sustainability and as a result they have fairly shallow objectives. Resupply of food and ammo is normally done at night through the use of main supply routes (MSRs) and convoys. Repair of vehicles is perhaps the weakest point in their logistics. They rely on recovering vehicles to the rear and do not repair forward at first line. They rely heavily on assets being pushed down from corps and division.

0221. ***Engineer Operations***. The engineers during offensive operations will have the tasks of engineer reconnaissance (identifying minefields and obstacles) and opening gaps for attacking units. The divisional engineer reconnaissance section will travel with the divisional reconnaissance elements supporting the main effort of the division.

0222**.** ***Air Defence***. ROWEN forces use a variety of air defence weapons including missiles and guns that can provide a multi-layered and overlapping air defence umbrella. The divisional Air Defence Regiment will allocate the majority of its assets to the attacking brigades. Primary air defence coverage will go to the HQ elements and artillery units. Corps and divisional air defence units have an early warning element with radars to detect enemy aircraft.

CHAPTER 3

SPECIALIST OPERATIONS OVERVIEW

SECTION 1 – GENERAL

0301. The Special Operations Division of the ROWEN armed forces was formed in 1988. It brought all the elite units under one central control. The division comprises commando, mountain infantry and jungle warfare brigades.

SECTION 2 – COMMANDO

0302. ***Commando.*** Commando raider battalions are specialised light infantry units trained primarily in infiltration techniques, airborne assault operations and desert, swamp and mountain warfare. At light scales, a commando battalion is capable of independent action for up to 4 days (intense) and 10 days (light activity)

0303-0306. Spare.

SECTION 3 – MOUNTAIN WARFARE

0307. ***Mountain Warfare Brigade***. The Mountain Warfare Brigade of the ROWEN Armed forces Special Operation Division is a light infantry element organised for warfare in mountainous terrain.

0308. ***Organisation.*** Depending upon the terrain and situation, personnel in mountain operations are organised into several echelons. The infantry company is used as the base echelon with attachments of artillery, engineer, and chemical personnel as necessary. The success of mountain operations depends largely upon how well personnel can deal with inherently difficult physical conditions during mountain movements; critical considerations include march speed, march distance, and rest periods during marches.

0309. ***Reconnaissance***. Operations in the mountains offer distinct advantages as well as disadvantages for reconnaissance. (These are described at para 0483.c.)

0310. ***Offence***. The basic combat goals of mountain offensives are to pass around the enemy's flank, to penetrate the enemy's rear, and to attack with all resources. To mount a successful attack commanders:

a. Utilise the strength of the division in the main attack.

b. Avoid a frontal attack against a hilltop and employ encirclement techniques.

c. Use infantry companies and battalions as basic attack units.

d. Use massed artillery fires.

e. Emphasise use of infiltration.

f. Expand engineer support.

0311. ***Defence***. In the mountains, there are numerous ways to by'pass defensive positions by taking advantage of terrain conditions; therefore, strong points are organised on or near hilltops, obstacles are emplaced, and firepower is oriented to enhance defensive capabilities. When planning for a battalion defence, the commander should:

a. Orientate fire over the approach route by placing organic defences on forward slopes.

b. Consider leaving ‘stay behind’ forces to attack the enemy from the rear.

c. Orientate organic firepower for high-angle fires up the hillside.

d. Utilise flank firepower attack and intersecting fires.

e. Use concealed weapons and obstacles along approaches.

0312-0315 Spares.

SECTION 4 – JUNGLE WARFARE

0316. ***Jungle Warfare Brigade***. The Jungle Warfare Brigade of the ROWEN armed forces is a light infantry formation that is completely self-contained for extended operations. The brigade was formed from some commando battalions and is airlifted to fight in jungle environments. Its prime role is counter insurgency, but its personnel are trained and equipped to fight well armed troops should the need arise.

0317. ***Offensive Operations***. The two most likely offensive operations in this environment are movement to contact and reconnaissance in force. Both are likely to result in hasty or deliberate attacks.

a. *Movement to Contact***.** A movement to contact is used to gain or regain contact with the enemy, and to develop a situation. It serves as the first stage of operations against an enemy force which has not been located, and normally ends in a meeting engagement.

b. *Reconnaissance in Force*. A reconnaissance in force is employed to force the enemy to react, so that friendly elements can develop information about the enemy by discovering his location, disposition, and intent. It is used when alternative means of gaining information about the enemy are not available.

c. *Attack***.** Hasty and deliberate attacks are conducted in much the same manner as they are in conventional terrain. The techniques, however, may differ due to the jungle environment, especially the strict application of control measures such as very short frontages and small areas of responsibility, in controlling manoeuvre elements in the jungle. ROWEN infantry attack in fast moving columns, well-spaced, which aim to outflank enemy positions

0318. ***Defensive Operations***. ROWEN jungle infantry units are a formidable force when defending. The most common types of defensive operations are forming a defensive perimeter, establishing a strong point and taking part in a position defence.

a. *Defensive Perimeter*. Defensive perimeters may be established at any time but are normally used during periods of limited visibility to increase the security of the force and to allow time for maintenance and rest. The perimeter is a hasty defence technique. It is usually only a temporary arrangement and is moved frequently. A perimeter is not oriented against a particular enemy force, but takes advantage of terrain to obtain the greatest security possible.

b. *Strong Point Defence*. A strong point is a defensive position which is fortified as extensively as time and materials permit. It is normally located on a terrain feature critical to the defence. Individual fighting positions should be prepared with overhead cover. If materials are on hand and time is available, a chain link fence may be emplaced 10 to 15 meters in front of each position to cause premature detonation of antitank rounds. Each squad's position and OP is linked with the platoon leader in a telephone loop, with radio used as an alternate means of communication. Ambushes are established on appropriate routes.

0319. ***Other Jungle Operations*.** When operating in the jungle, infantry units may be given missions which they would not normally perform in other types of terrain. Such missions require special planning and coordination before and during the conduct of the mission.

a. *Route Clearance and Security*. These operations are conducted when a route has been closed or unused. Route security and clearance operations are orientated to a specific route and the surrounding areas, to ensure that vehicular operations are not interrupted along that route. Route clearance operations are conducted to eliminate the enemy along the road and to remove any explosives which may have been placed there. Whenever possible, route clearance is a combined arms effort involving, as a minimum, the use of armour, infantry, engineers, artillery, and army aviation. Route clearance involves deliberate, detailed, and coordinated actions which are slow. The route must often be walked by mine-sweep teams, and the areas adjoining the route must be cleared by dismounted infantry. Route security missions are characterised by continuous activity

to prevent the enemy from cutting the route or ambushing elements using it. Patrolling is the key to route security, day and night. Patrols are dispatched on a random basis so that there is no pattern. Patrols are usually section-sized and are assigned specific areas of responsibility. They may at times move mounted, but dismount where appropriate.

b. *Convoy Movements*. Coordination takes place before and during a convoy movement. Each patrol will know the time of entry and time of exit of each convoy, the numbers and types of vehicles, and whether the convoy has an armed escort. Just prior to the convoy's approach, the security patrols intensify patrolling of areas immediately next to the road, and assume security positions along known or suspected enemy avenues of approach.

0320–0323 Spares.

SECTION 5 – DESERT WARFARE

0324. ***Background***. Because of the physical geography of ROWENIA it has had a long history of desert warfare. Although it is capable of effective desert campaigns it has no dedicated desert units but all units are trained, to a limited degree in desert warfare.

0325. ***Tactics***. In desert operations, unit frontages are expanded 50% in most cases. Reconnaissance is emphasised because of increased visibility and depth of operations.

a. *Offensive Operations*. In a desert environment, ROWEN forces are much more fluid than in normal conditions. High speed is used with effective fire support to exploit success. Operations are characterised by the acceptance of open flanks and close cooperation with army aviation and fixed wing air assets.

b. *Defensive Operations*. Defensive operations combine a static defensive line with a mobile quick reaction force able to respond when and where required. Fire support is fully integrated and positioned to provide mutually supporting fire along, and in front of the static front line.

0326-0327 Spare.

SECTION 6 – URBAN WARFARE

0328. ***Background***. ROWEN forces will seek to avoid urban warfare where possible. They have no special urban warfare units although some units are trained in that type of warfare. Elite forces will be employed and special designations are used to identify units performing this function. In addition, militia units are regularly trained in defending their areas. Most urban areas, even very small ones, have extensive fixed defences in place.

0329. ***Tactics***. Urban warfare is conducted by elite troops, primarily airborne or special operations forces, although militia units in urban areas receive training in their own cities and towns. Elite troops are used in the attack, while militia troops are used to defend their own areas.

a. *Offensive Operations*. During offensive operations, urban areas are avoided where possible. However, when built-up areas are critical to an offensive or to clear pockets of resistance, ROWENIA employs light, elite forces with special designations. These specially designated units, 'Storm Units', have additional training in urban warfare, but are only designated when the need arises. 'Storm Units' are discussed more fully in Chapter 4, Tactical Doctrine, Section 3, Specialist Operations. (See para 0486)

b. *Defensive Operations*. Urban defensive operations involve close coordination between regular and local militia forces. Regular commanders are usually given command of key urban areas and their forces are bolstered by local militia forces. Less important urban areas may be left to the control of militia forces, while regular forces conduct operations in the areas considered critical.

CHAPTER 4

TACTICAL DOCTRINE

SECTION 1 – FORMS OF OFFENSIVE MANOEUVRE

0401. ***General***. Offensive operations normally occur one or two hours prior to sunrise. The ROWENs "tailor" their divisions and brigades according to the main effort. The ROWENs also cross-attach divisions to other corps. The ROWENs will task organise into combined battalion groups (task forces) and company combat teams. A battalion task force can have more or fewer companies than the generic battalion organisation. In either case, they will not task organise below company level (the platoon organisation will not be broken down). The three types of offensive manoeuvre used at the division are, advance operations, attack operations and assault operations. Chemical weapons can be used during offensive operations to protect flanks or, in a non-persistent form, as part of the main assault.

0402. ***Advance Operations***. Advance operations are used when the enemy situation is unclear. The brigade will move in an advance guard formation. This type of operation is force orientated. Advance operations include movement to contact, the meeting engagement and pursuit. During all three of these advance operations a division can operate on one or two axes. The lead brigade of the division's main effort will use an advance guard formation. (See Figure 21) If a brigade is conducting a supporting operation for the division it can either move in the advance guard formation or use the tactical formation suitable to its mission. The advance guard will ensure a high rate of speed and a secure axis of advance for its parent division. The advance guard does not avoid contact: rather, it seeks to defeat all enemy forces encountered along the brigade axis. Advance operations will have a terrain objective. Should they encounter an enemy force in their sector prior to reaching their objective, they will manoeuvre to destroy that enemy force. The three parts of the advance guard formation are: the advance party, the main force and the rear party.

a. *The Advance Party.* The basic structure of the advance party is a mechanised or armoured task force, an engineer section, a chemical reconnaissance section, an air defence element, an artillery battery and a light artillery battery (120mm mortar). The mission of the advance party is to make initial contact with the enemy force in order to fix them. The engineer section consisting of one Armoured Personnel Carrier (APC) and one Combat Engineer Vehicle (CEV), supported by dismounted infantry from a mechanised force, will attempt to clear a lane through any obstacles which might exist. The advance party provides supporting fire for the main force.

b. *The Main Force.* The basic structure of the main force is two battalions, an AT battery, a composite air defence battery, a chemical protection platoon, the brigade command post, the engineer company (-) and the artillery battalion (-). The reconnaissance platoons from the battalions in the main

force will provide flank security for the advance guard. The ATGM battery will normally operate as a battery, but it can operate in platoons and sections. It is used in the fire support role, not forward of the advance party and will operate in conjunction with the advance party or the main force. The ATGMs will establish support by fire positions which take advantage of the weapon's maximum effective range.

c. *The Rear Party.* The basic structure of the rear party is made up of at least two combat teams under the control of a battalion or regimental HQ, a commando company (which travels in lorries), and a transport and logistics platoon. The armoured tank battalion or mechanised infantry battalion with at least two combat teams is the advance guard's reserve force (brigade reserve). The mission of the reserve is to destroy any counter attacking forces, to exploit success and provide additional supporting fire as needed.

0403. ***Movement to Contact***. The ROWENs will conduct a movement to contact using the advance guard formation when the enemy has established a hasty defence. During a movement to contact operation, frontal assaults on the enemy are generally avoided in favour of flanking movements or exploiting gaps in the enemy's defence. Chemical weapons may be used to neutralise enemy positions. A movement to contact operation can develop into a meeting engagement should they encounter a moving enemy force. A movement to contact operation could also turn into a pursuit operation should the advance guard encounter an enemy force which is trying to withdraw. Figure 22 illustrates the movement to contact formation of a mechanised division. A brigade-size force conducting a movement to contact will use the advance guard formation. The brigade's reconnaissance patrols will be up to 25 km in front of the advance guard. They will attempt to identify obstacles and the disposition of the enemy forces (defensive locations, reserve or counter attack force locations). The battalion reconnaissance patrols will provide security and early warning to the advance guard as it manoeuvres towards its objective. Specifically, the battalion reconnaissance platoons will screen the advance guard's movement to contact. Scenarios which effect the actions of the advance guard are:

a. Inferior enemy force.

b. Comparable enemy force.

c. Superior enemy force.

0404. ***Inferior Enemy Forces*.** This type of scenario calls for the attacking advance party to leave a company size support force, while the remainder of the advance party moves to one of the enemy's flanks to neutralise reserves and prevent a counter attack. If the advance party can destroy the inferior force, then the main force will not deploy. If the advance party cannot destroy the enemy force, then the main force of the advance guard will deploy and destroy the remaining enemy forces. Continuous forward movement is maintained at

FIGURE 21. REGIMENTAL ADVANCE GUARD FORMATION

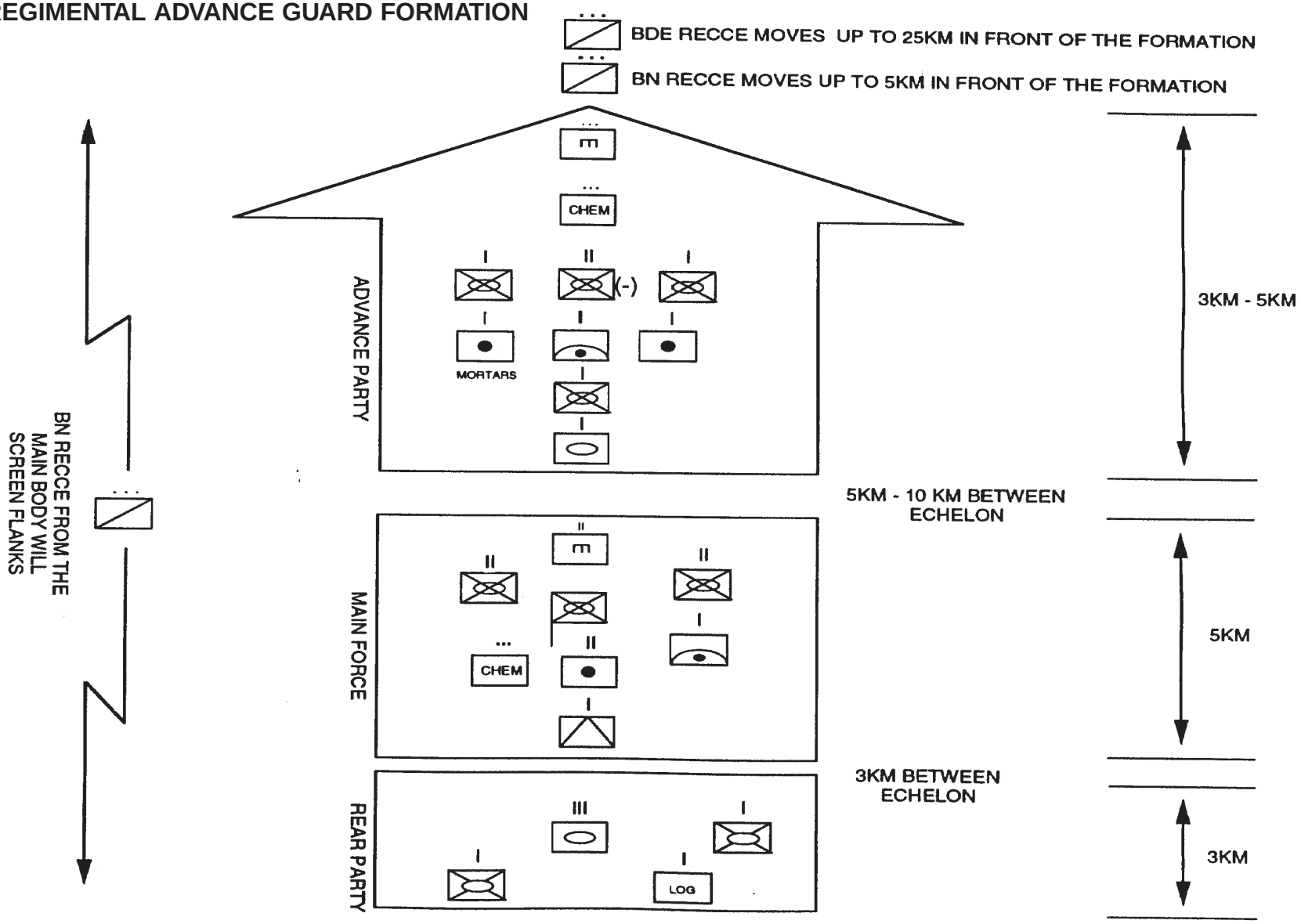
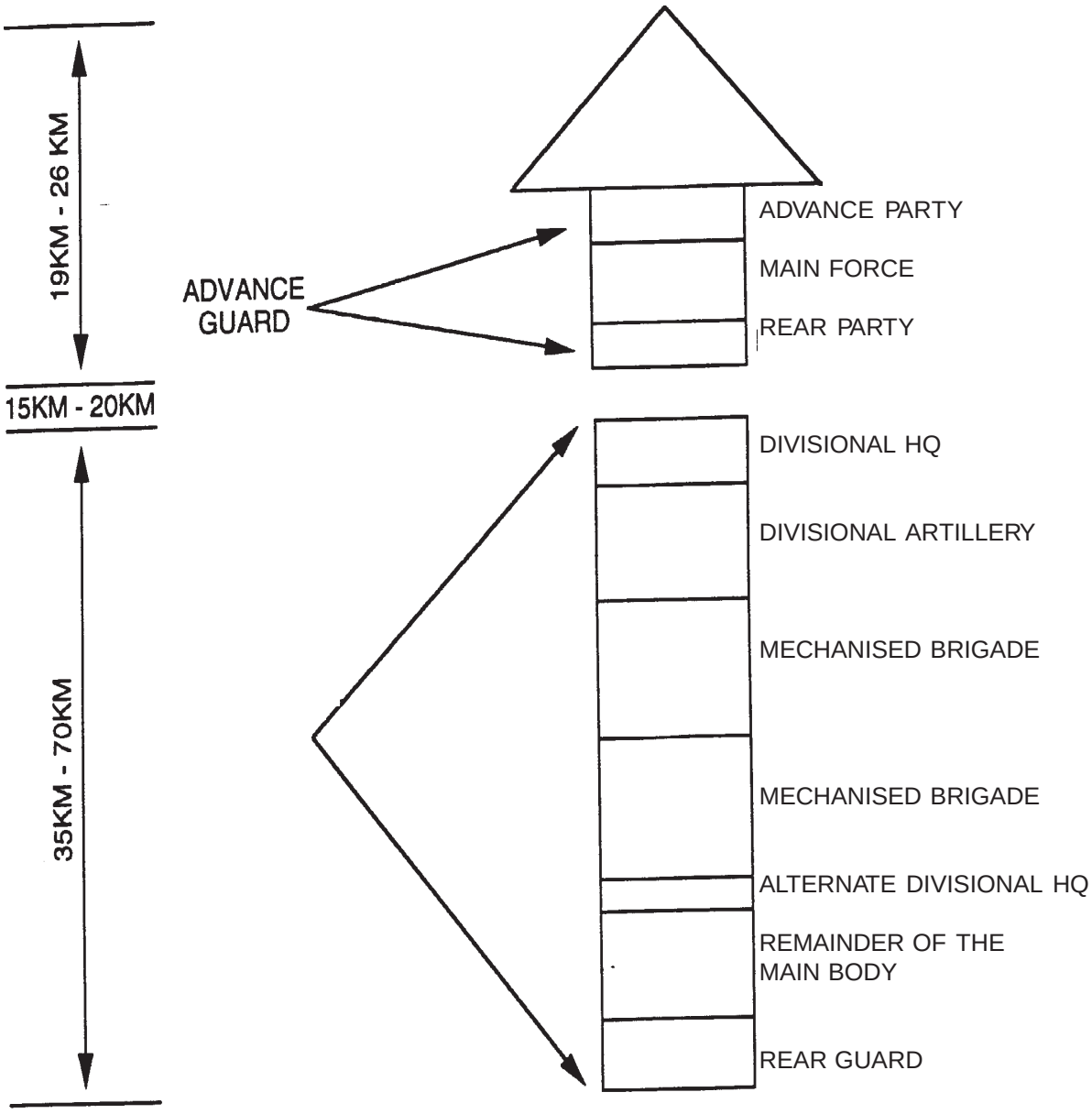


FIGURE 22. DIVISION MOVEMENT TO CONTACT (MTC)



all times. The brigade will attack an inferior force (ROWENs seek a greater than 3:1 force ratio) using the advance guard formation. (See Figure 23) As the advance party nears the defending enemy forces, the manoeuvre forces will establish a support fire position in an attempt to fix the enemy forces. Indirect fire will already have been planned, based on the intelligence received from brigade and battalion reconnaissance. Each battery of artillery or 120mm mortars will have between three and eight targets. As the artillery fire is landing, the engineer section, supported by dismounted infantry from the mechanised battalion, will move towards the flank of the enemy obstacle belt (if there are any obstacles) and begin to clear a lane. They will open a gap eight to twelve metres wide in order to support infantry units and a wider gap in order to support armoured units. Each lane is marked with flags for easy recognition of the lanes. Once the lanes are cleared, the advance party will leave the armoured combat team in the support fire position as the rest of the advance party attempts to manoeuvre on the flank of the defending enemy to neutralise the effectiveness of any reserve forces. (See Figure 24) If no obstacles are encountered, the engineers will remain the support element. Once the advance party has moved into position on the enemy's flank, the main force of the advance guard will manoeuvre into the flank of the enemy position to destroy the enemy forces. (See Figure 25) As the main force begins to manoeuvre, the artillery fire will shift to the rear or flanks of the enemy in order to prevent reinforcement of the enemy's position or to disrupt counter attacking forces. The air defence batteries will provide protection to the brigade HQ and artillery units. Attack helicopters will use "pop up" tactics to engage the defending enemy. Throughout the battle the brigade and battalion commanders will be well forward. Upon the destruction of the enemy forces, the advance guard will continue with its mission. If the reconnaissance forces have identified a gap in the enemy's defence, the main body of the brigade will then exploit the gap and roll up the defence from the centre. (See Figures 26-28) The advance party mission remains the same as before.

0405. ***Comparable Enemy Force.*** A comparable enemy force (the ROWENs seek no less than a 3:1 force ratio) will call for the initial attack to be made by a company from the advance party battalion, with the follow-on attack by the main force of the advance guard. During this attack the rest of the advance party battalion will provide direct fire support. Once the enemy forces are destroyed, the advance party battalion is replaced by another battalion which will assume the role of the advance party. The former advance party battalion will move to the rear party position.The brigade will attack a comparable enemy force using the advance guard formation. As the advance party nears the defending enemy forces, the manoeuvre elements will establish support fire positions in an attempt to fix the enemy forces. (See Figures 29-31) Each battery of artillery or 120mm mortars will have three to eight targets. If the advance guard brigades takes too many casualties, it too will be replaced as the division's advance guard by another brigade. The depleted brigades will assume the rear guard position of the division's main body.

0406. ***Superior Enemy Force.*** A superior enemy force is when the ROWENs have less than a 2:1 force ratio. If the advance guard is unable to destroy the enemy forces (see Figure 32), there is no reinforcement of the advance guard except to provide anti-tank defences to deal with the counter attack. Chemical weapons may be used to neutralise enemy positions. As the advance party nears the enemy forces, the manoeuvre elements will establish a support by fire position in an attempt to fix the enemy forces. Once the lanes are cleared, the advance party will leave an armour company in the support fire position and manoeuvre on the flank of the defending enemy to neutralise the effectiveness of that force. (See Figure 33) As the advance party begins to neutralise the enemy forces from the flank, the main force of the advance guard will manoeuvre to destroy the enemy forces. (See Figure 34) If the brigades are unable to destroy the enemy force, they will establish hasty defensive positions in order to fix the enemy forces. (See Figure 35) Additional anti-tank systems may be sent forward from the division if needed by the depleted advance guard in order to fix the enemy. The follow on elements of the division's main body will then by'pass the defending enemy position in order to maintain the momentum of the attack and reach its objective. The division will use one of the other brigades from the main body to assume the role of advance guard.

0407. ***Meeting Engagement.*** A meeting engagement is defined as the advance guard encountering another moving force on the battlefield. Meeting engagements are classified by the types of enemy forces the attacking force will encounter. General principles followed by the ROWENs in the meeting engagement are the avoidance of strong points, rapid manoeuvre, and movement to the enemy rear by flanking manoeuvres. When conducting a meeting engagement against a moving enemy force, the advance party will establish a hasty defence and attempt to disrupt the momentum of the enemy force. (See Figure 36) Based on the assessment by the brigade commander, the advance party will attack to neutralise or suppress the enemy force while the advance guard main force attacks. (See Figure 37) The advance party can also remain in its hasty defence and allow the main force to attack the enemy on its own, while the advance party provides direct fire support. When the enemy force is too strong, the advance guard will remain in a hasty defence to block the enemy force's movement and allow the main body of the division to by'pass. In the case of a moving enemy force going to ground prior to the advance guard making contact, the advance party will continue its movement towards the enemy position. The advance party will then establish a support fire position instead of a hasty defence. The ROWENs will then fight the battle as if it were a movement to contact based on the characteristics of the enemy force.

0408. ***Pursuit.*** Pursuit operations are either frontal or parallel. While the frontal is the easiest to employ, the use of parallel pursuit is preferred whenever possible to prevent the enemy from gaining time for resupply or reinforcement. The parallel pursuit is difficult to control and rarely used by the ROWENs. The pursuit operation will normally take place while the ROWENs are conducting a movement to contact operation and the enemy force is trying to withdraw or delay. It can be a separate, planned operation. The brigade will conduct a

FIGURE 23. MOVEMENT TO CONTACT (MTC) INFERIOR ENEMY

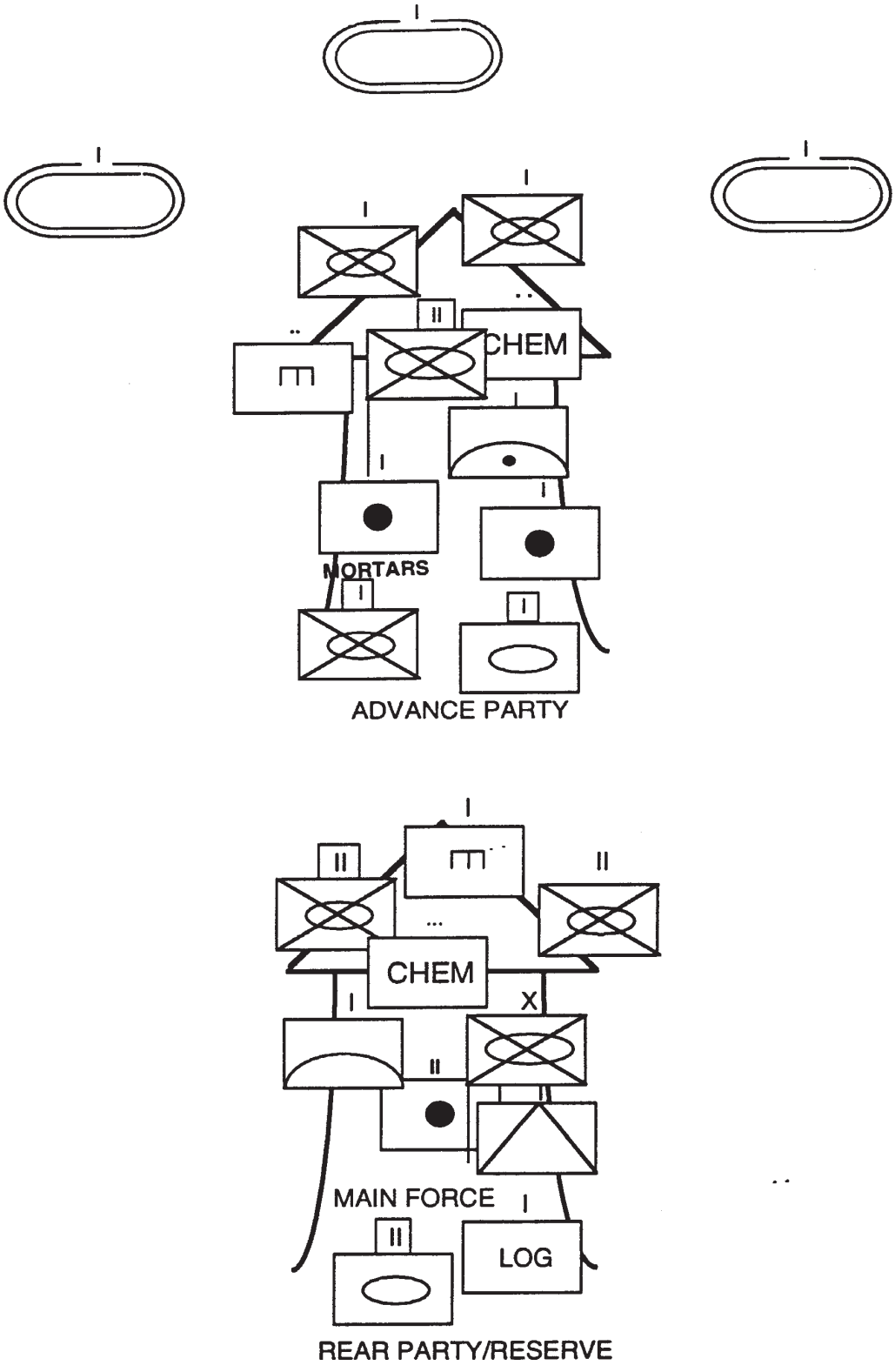


FIGURE 24. MTC INFERIOR ENEMY

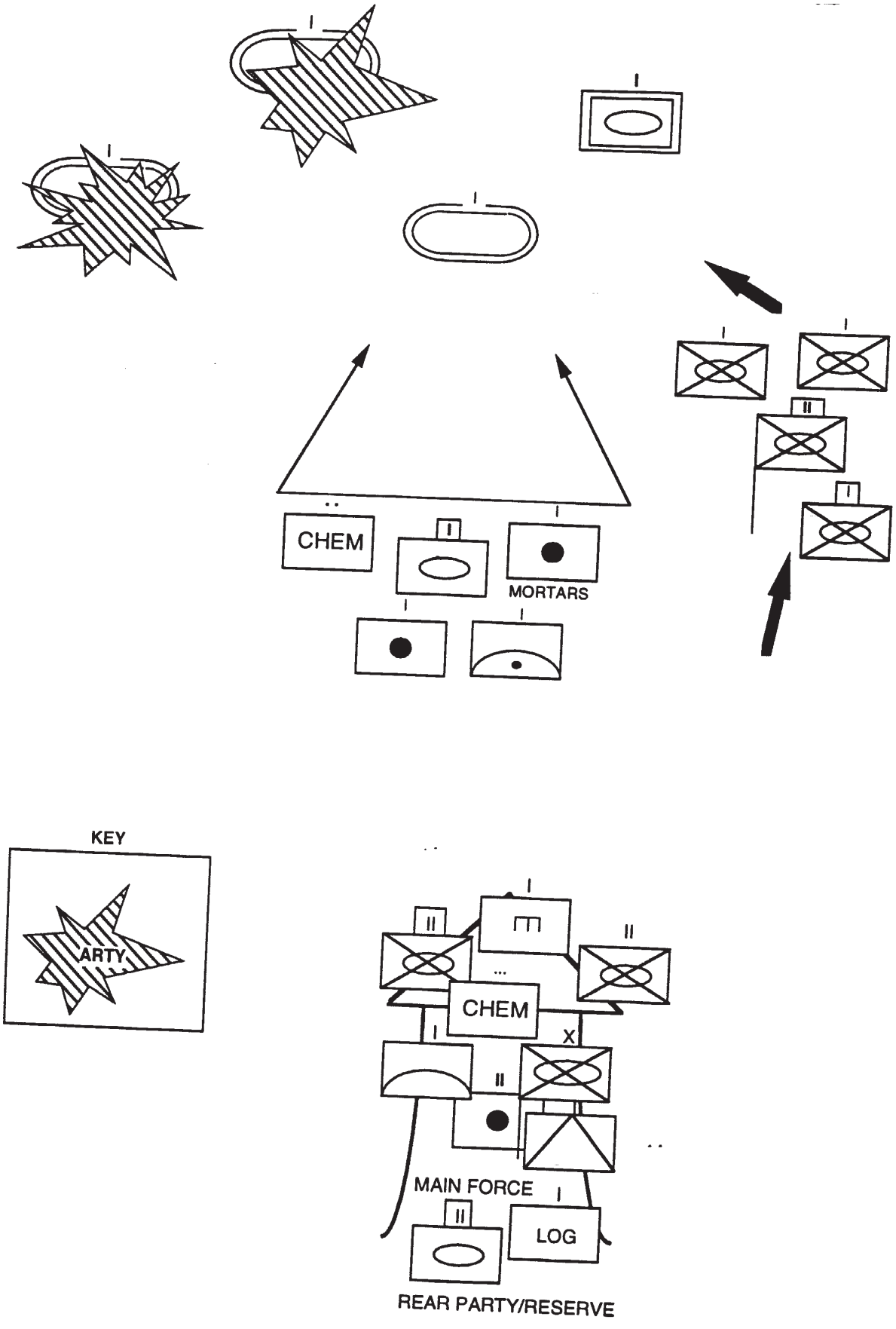


FIGURE 25. MTC INFERIOR ENEMY

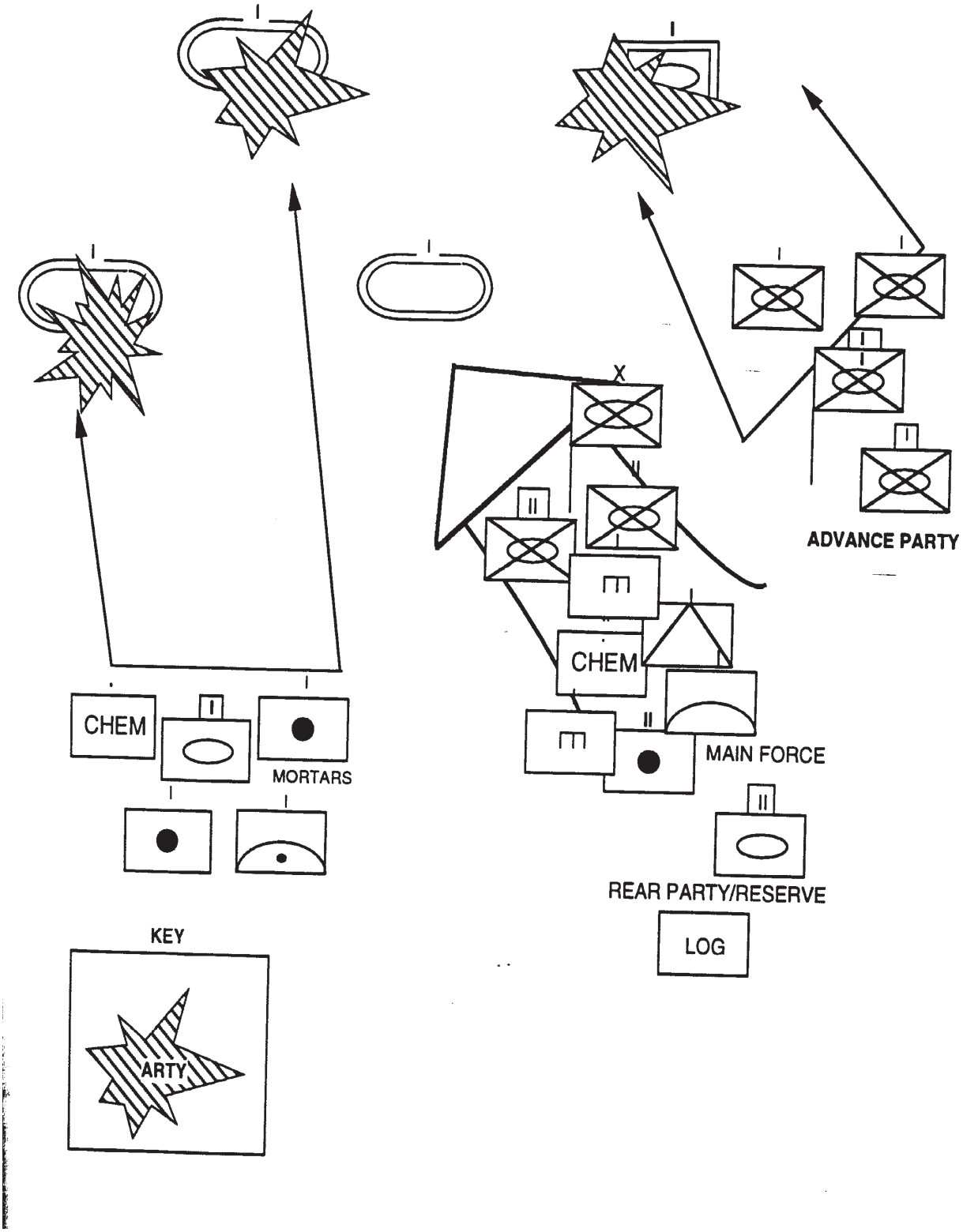


FIGURE 26. MTC AGAINST A GAP

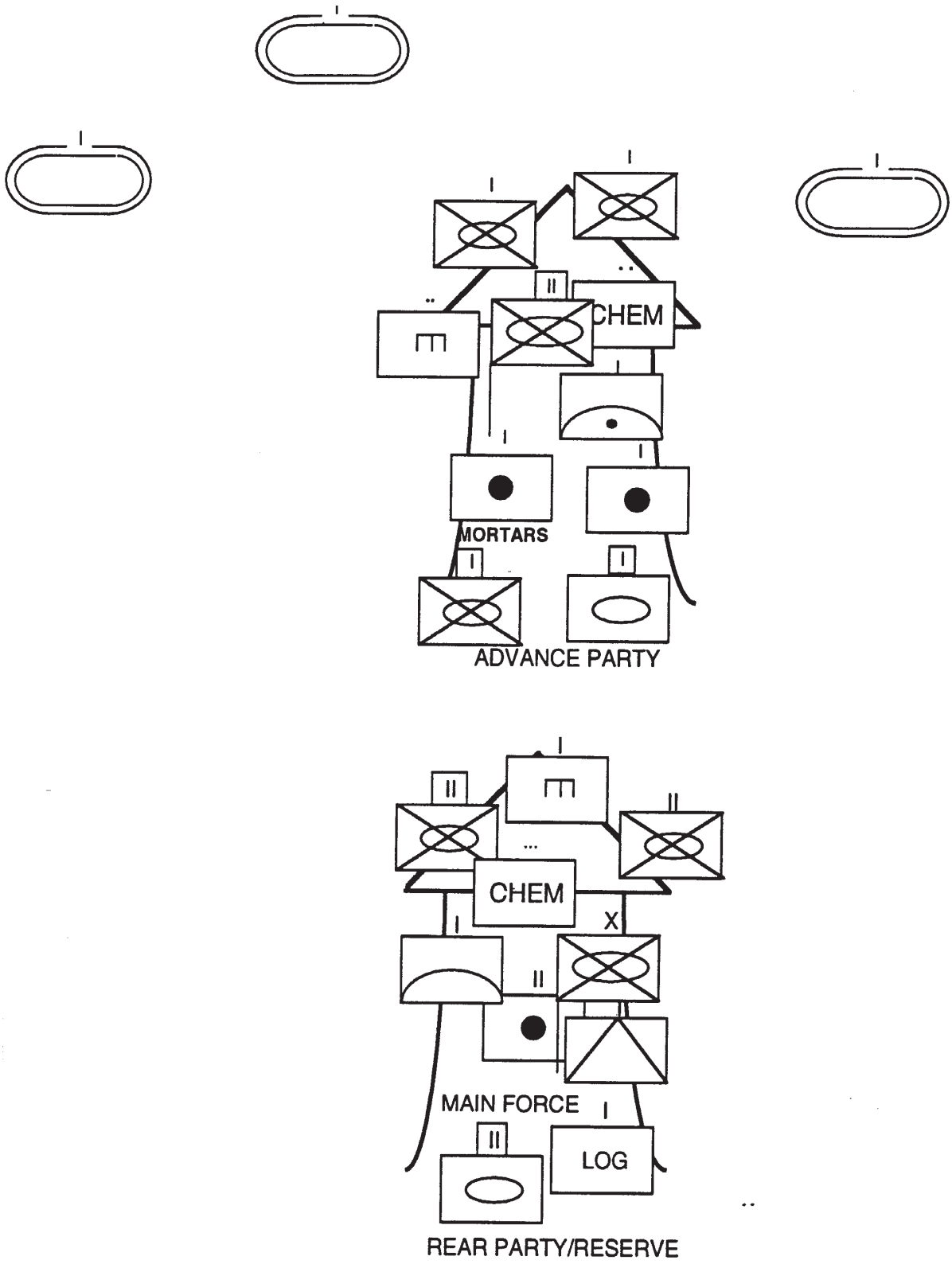


FIGURE 27. MTC AGAINST A GAP

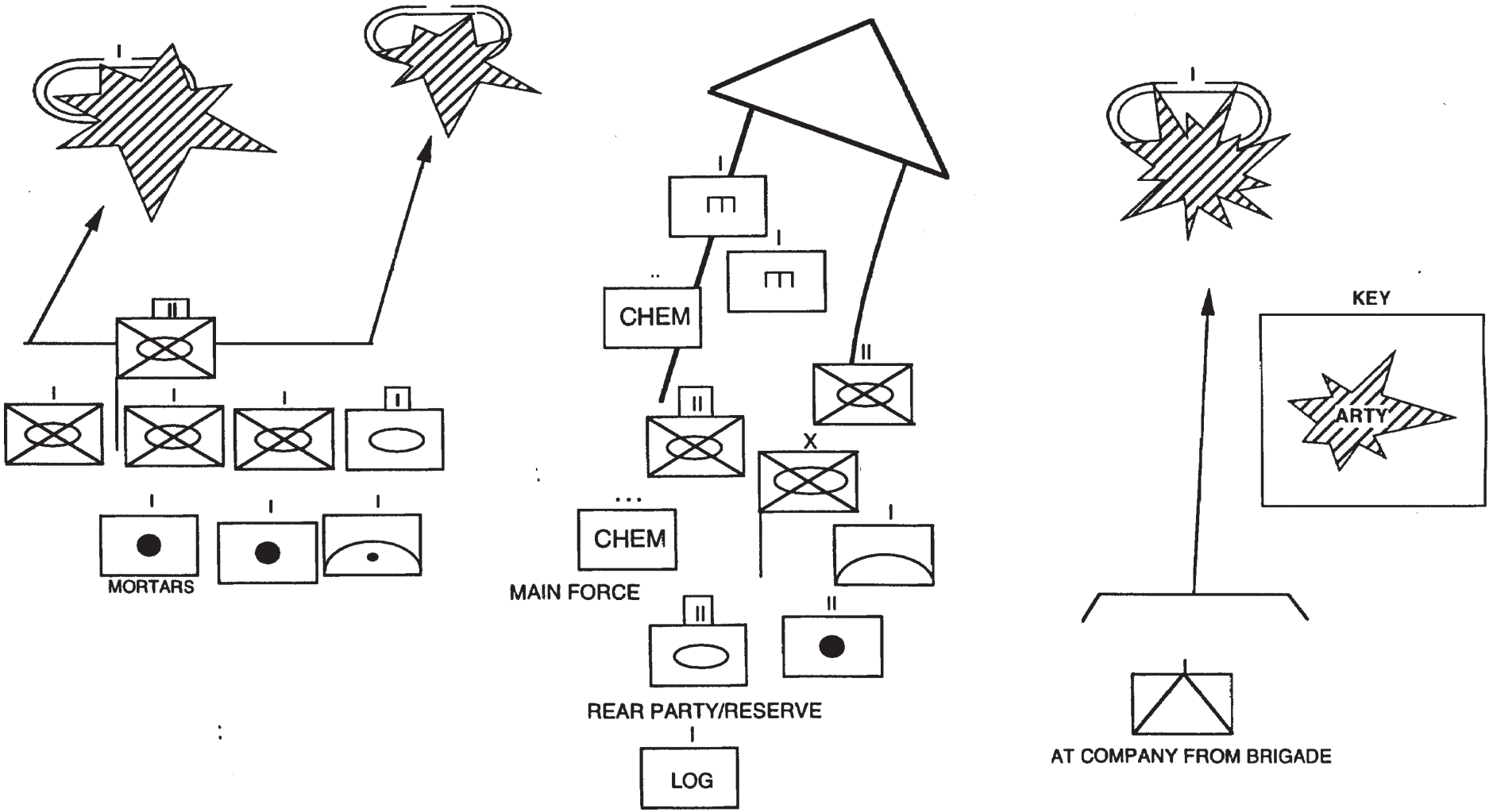


FIGURE 28. MTC AGAINST A GAP

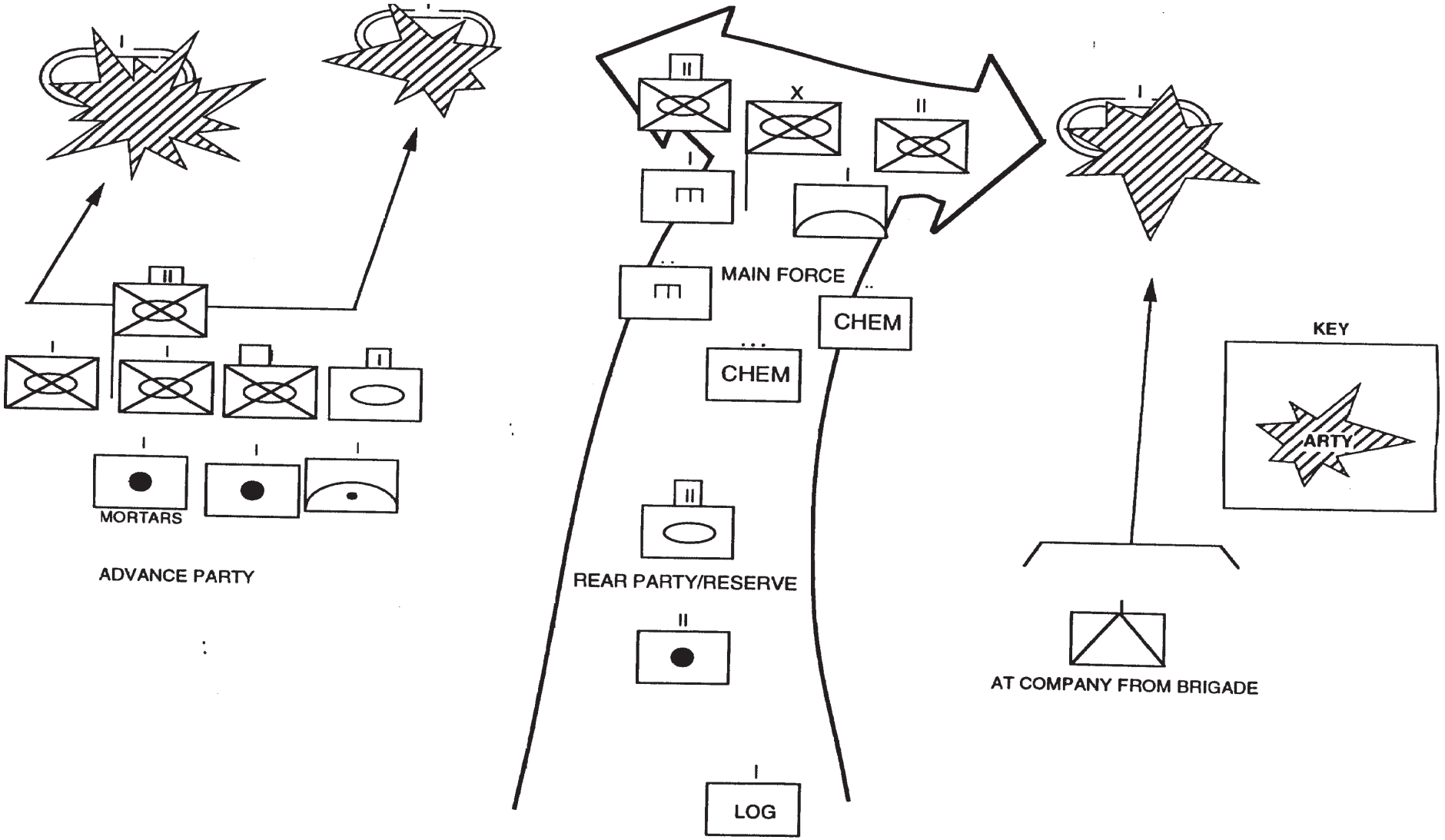


FIGURE 29. MTC AGAINST A COMPARABLE ENEMY FORCE

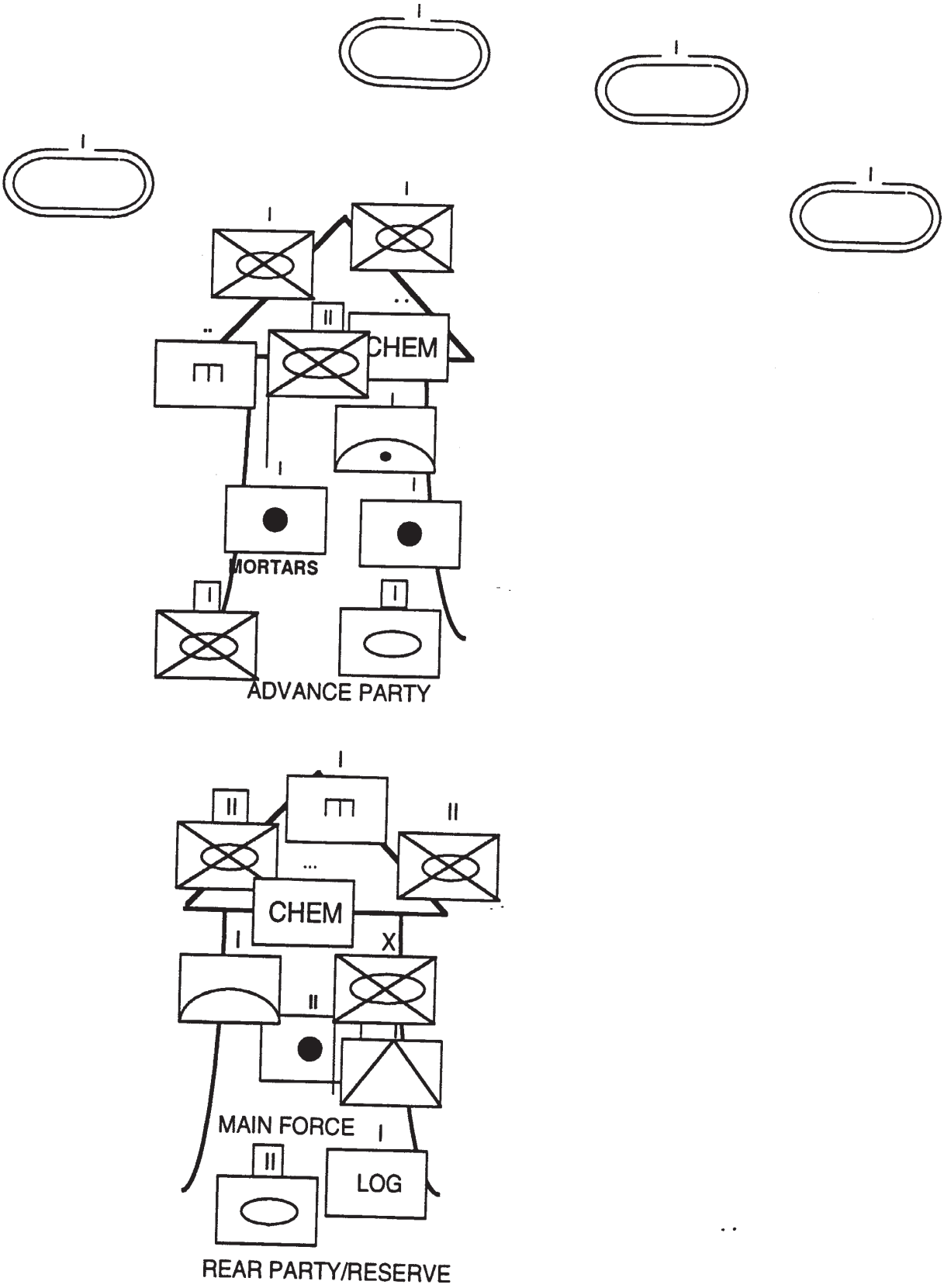


FIGURE 30. MTC AGAINST A COMPARABLE ENEMY FORCE

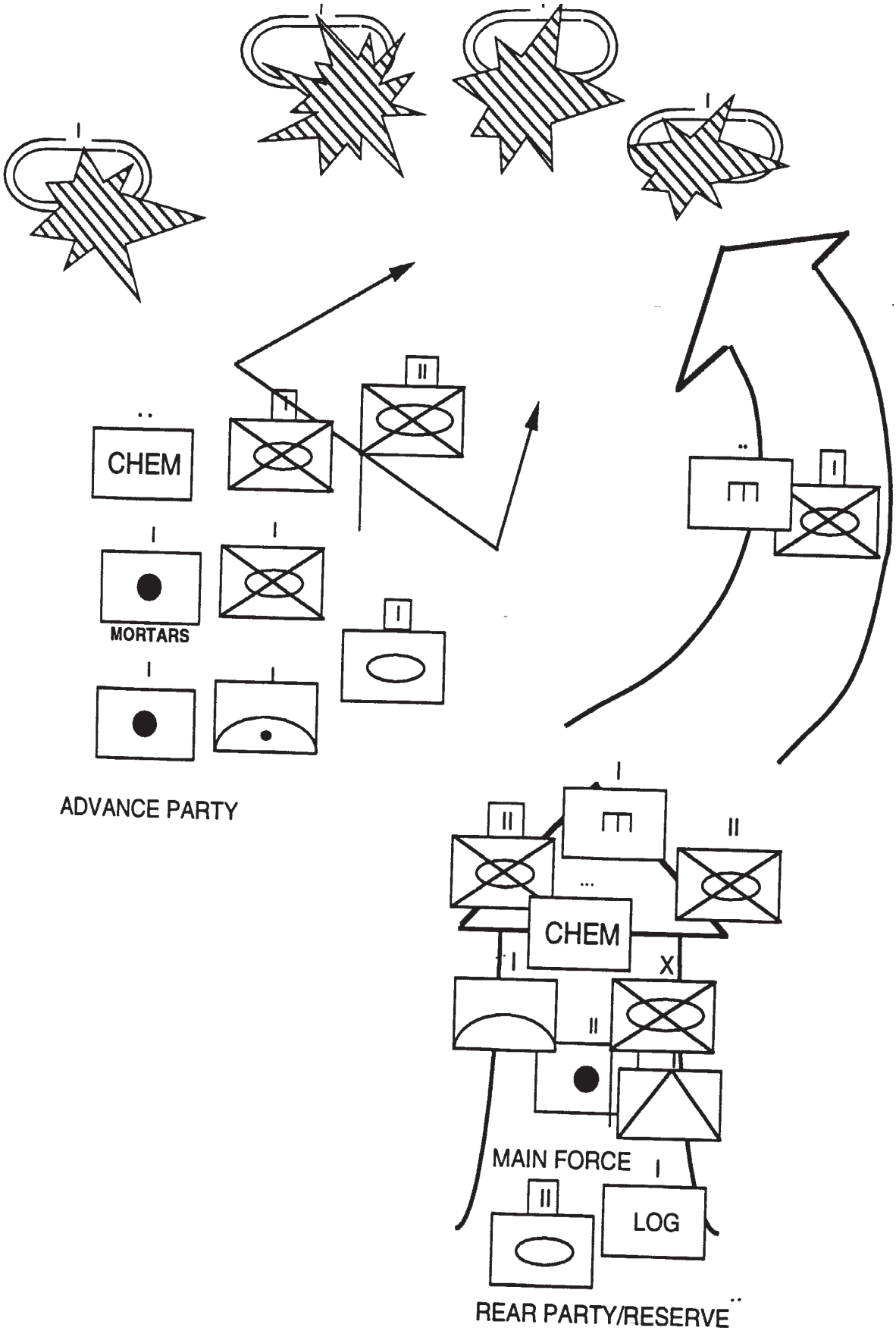


FIGURE 31. MTC AGAINST A COMPARABLE ENEMY FORCE

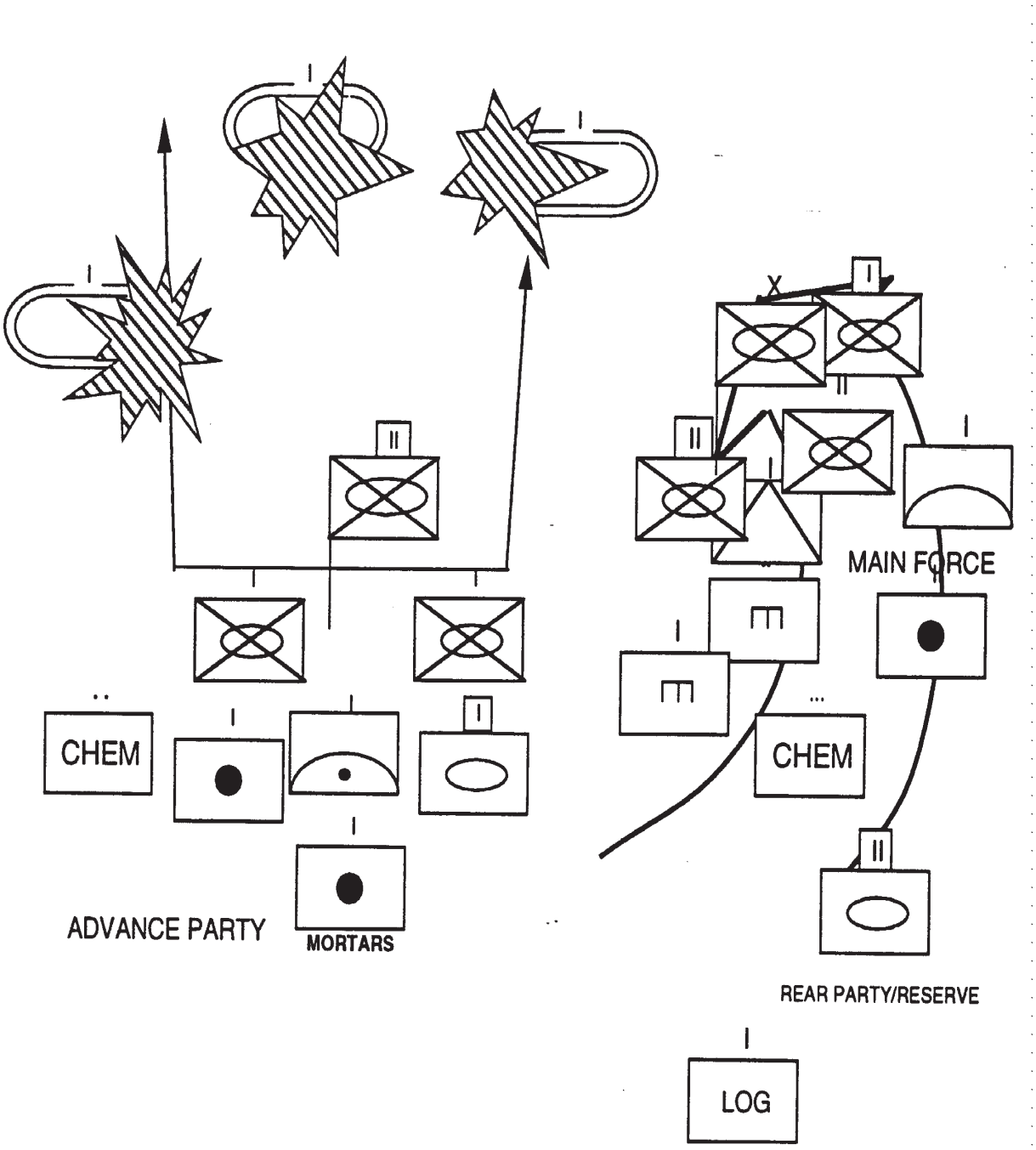


FIGURE 32. MTC AGAINST A SUPERIOR ENEMY FORCE

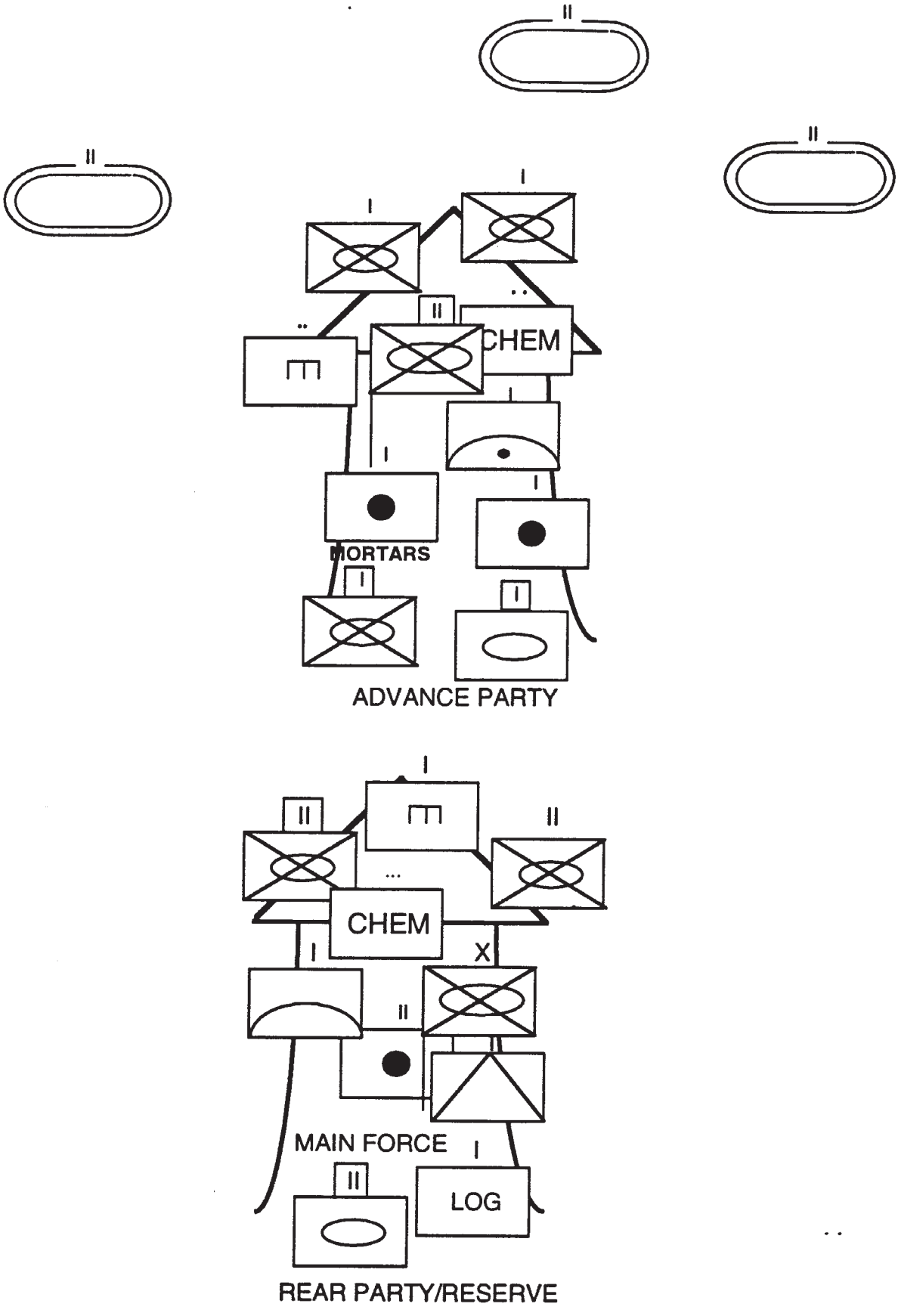


FIGURE 33. MTC AGAINST A SUPERIOR ENEMY FORCE

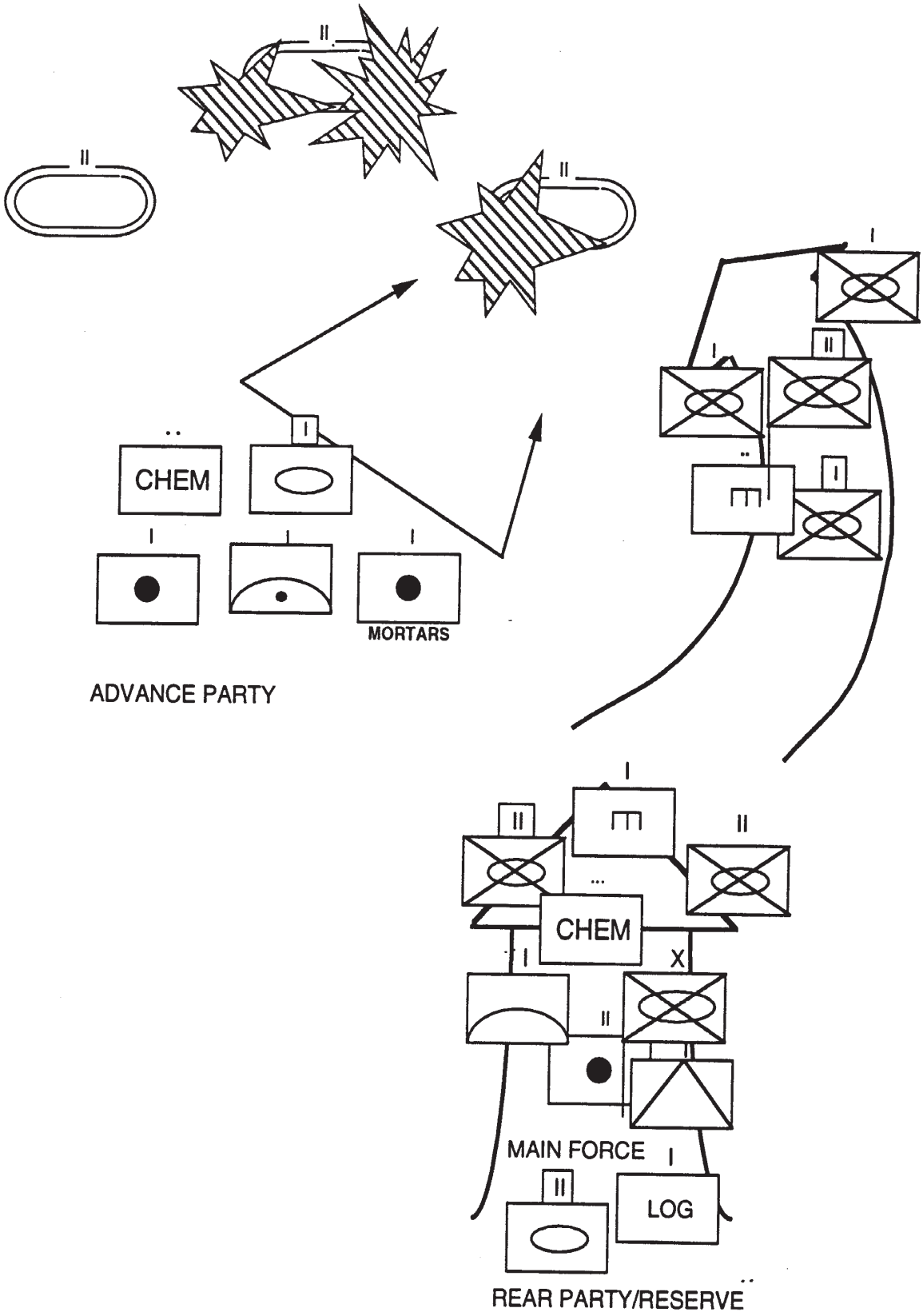


FIGURE 34. MTC AGAINST A SUPERIOR ENEMY FORCE

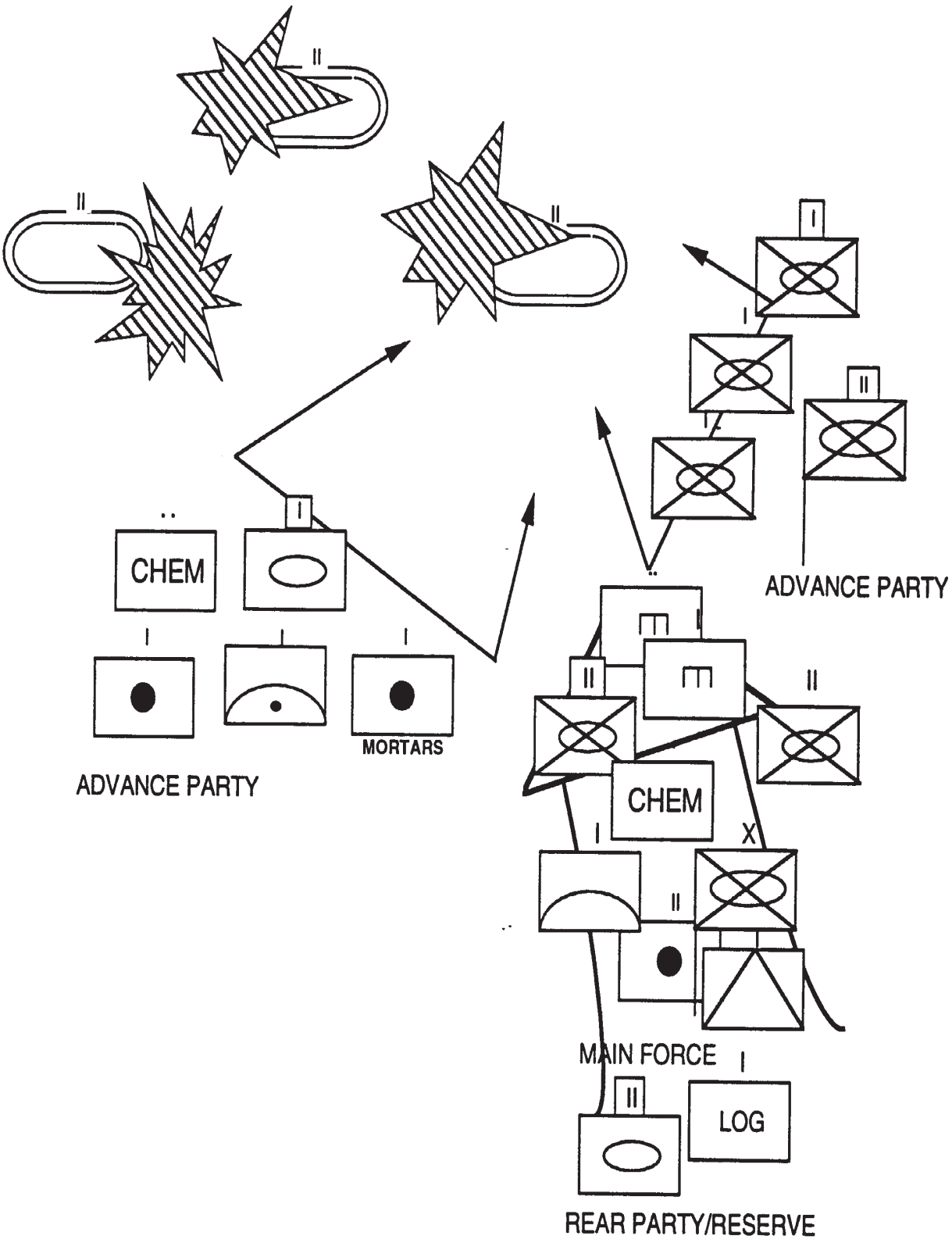


FIGURE 35. MTC AGAINST A SUPERIOR ENEMY FORCE

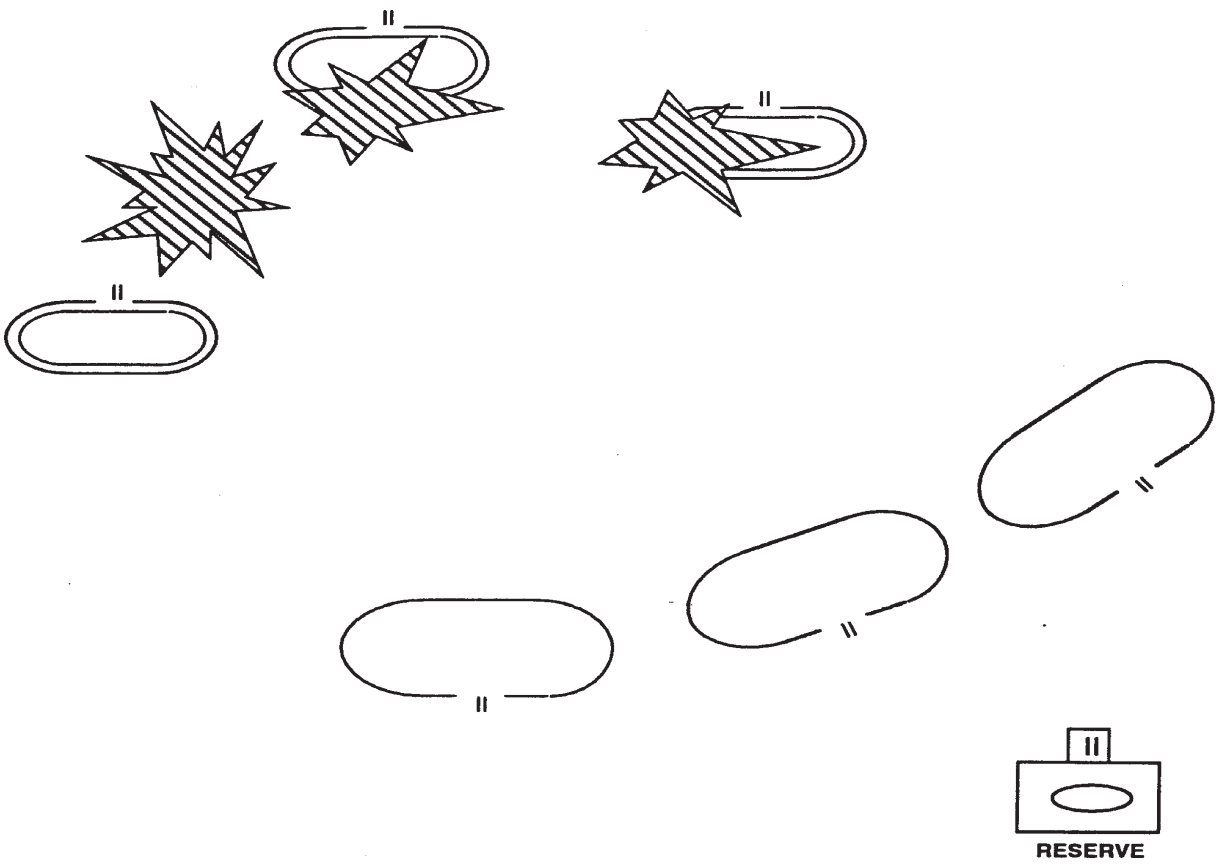


FIGURE 36. MEETING ENGAGEMENT

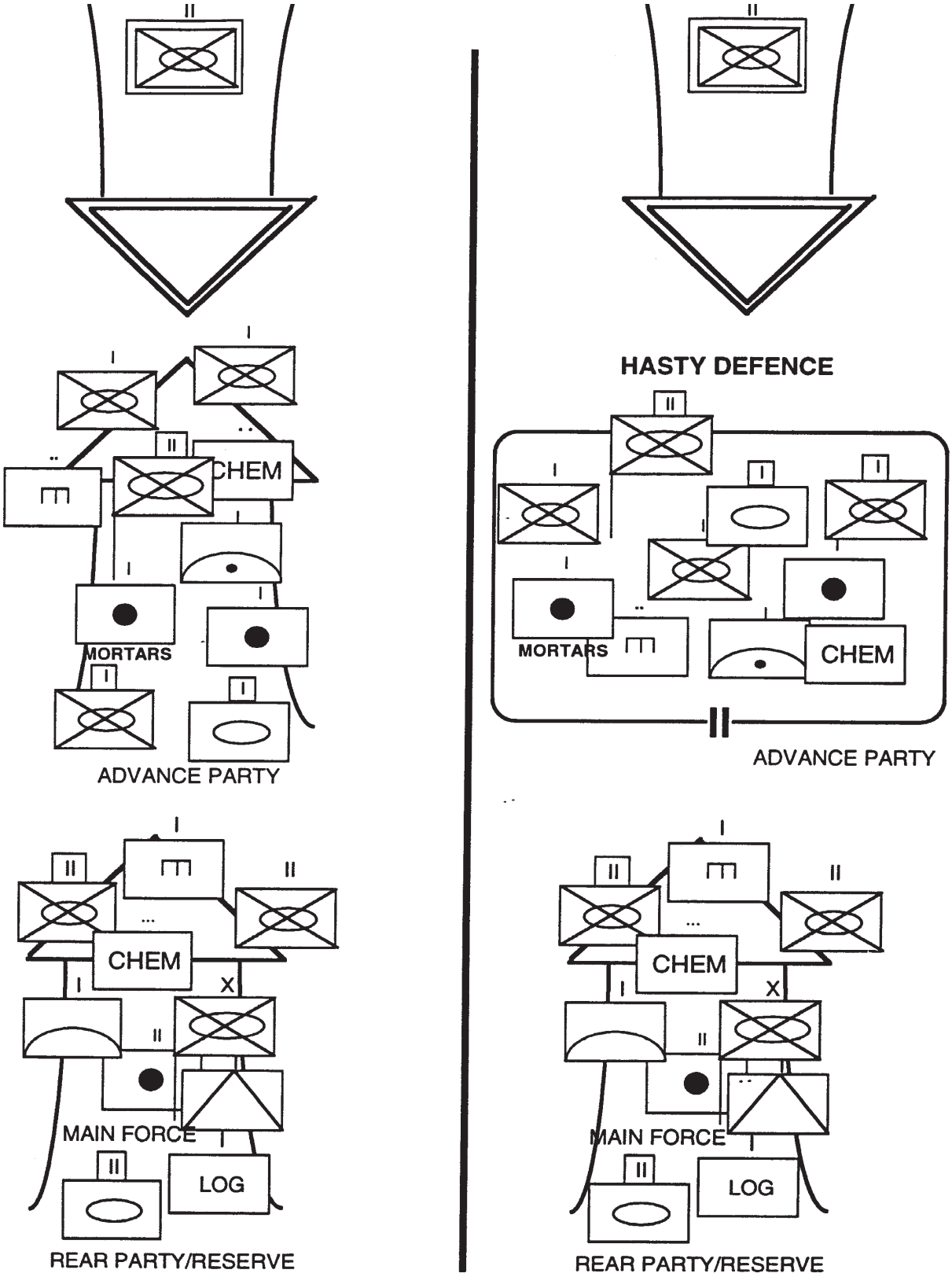


FIGURE 37. MEETING ENGAGEMENT

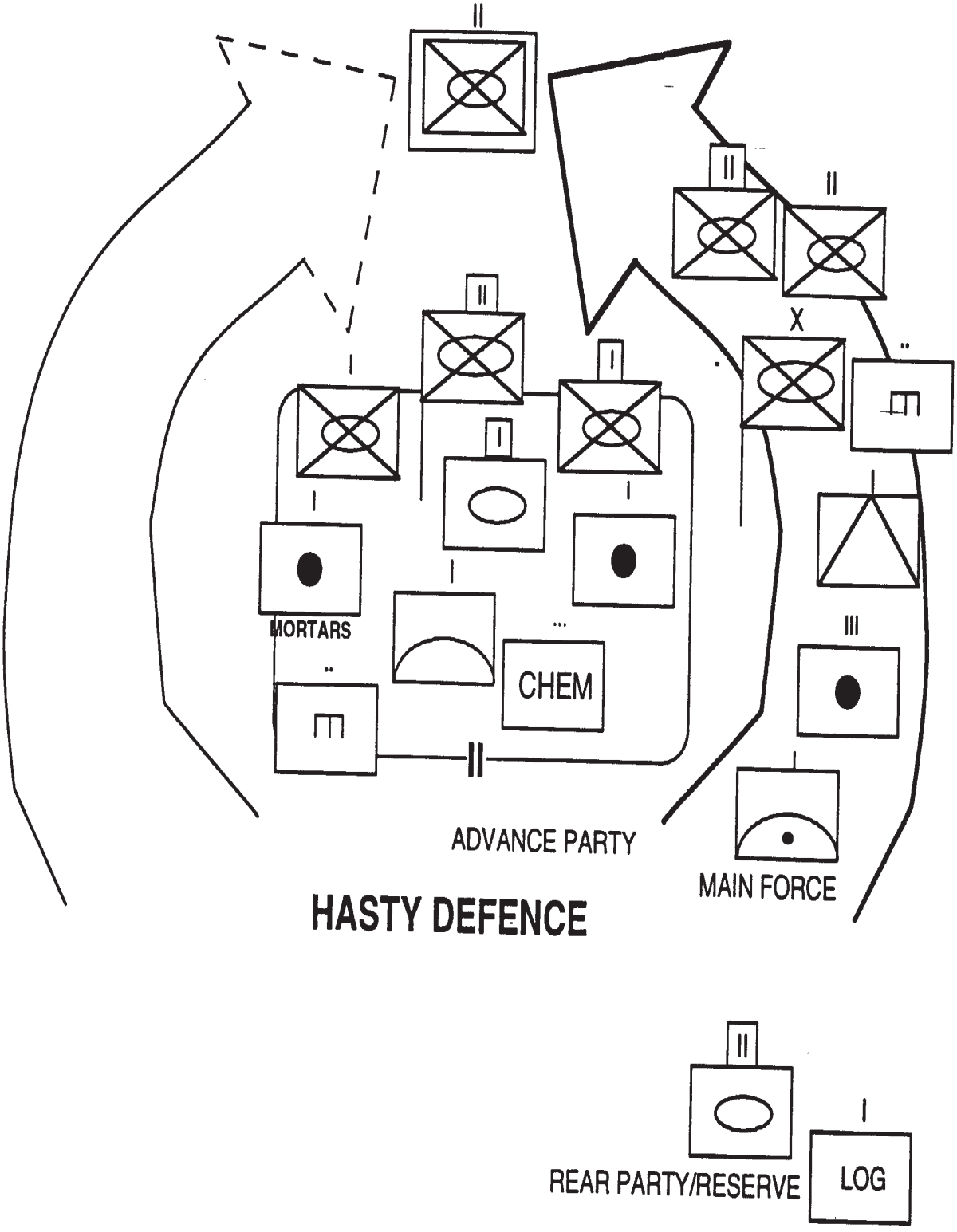
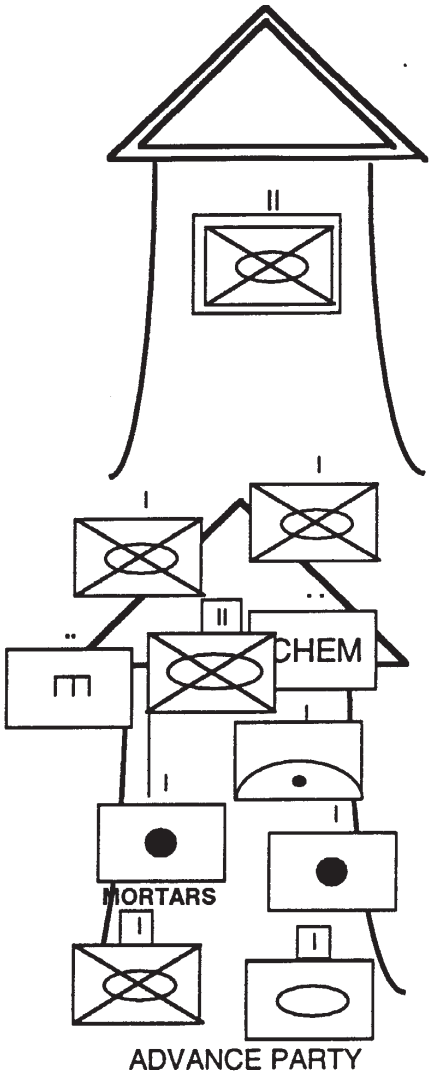


FIGURE 38. FRONTAL PURSUIT



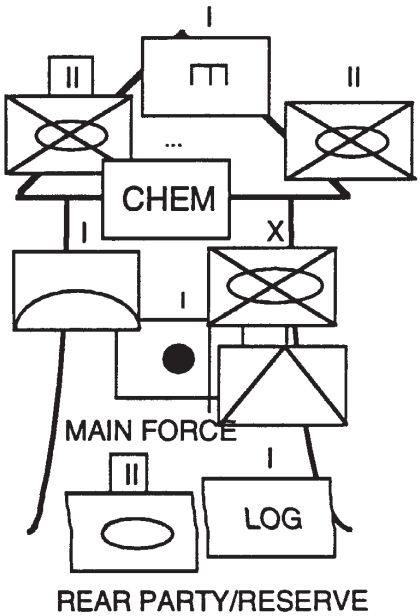
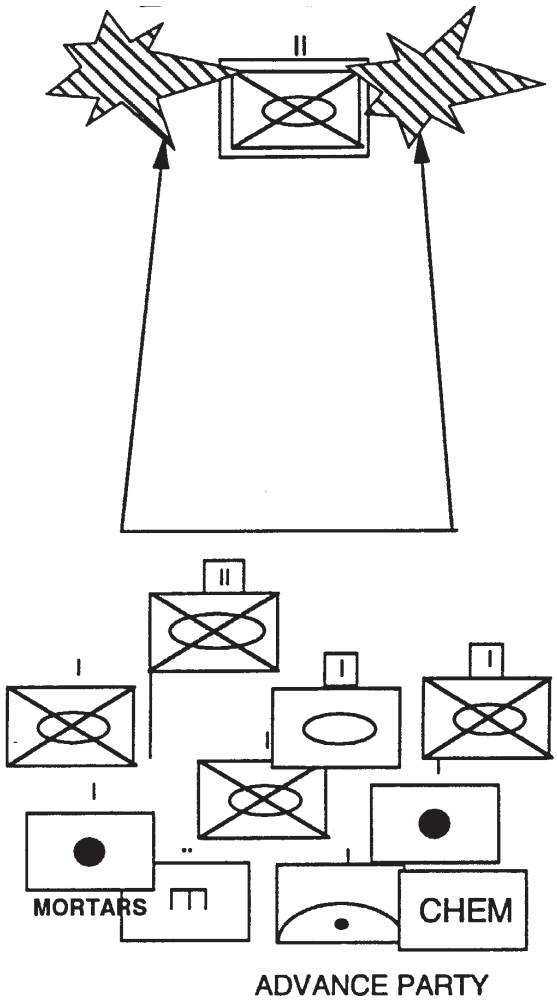
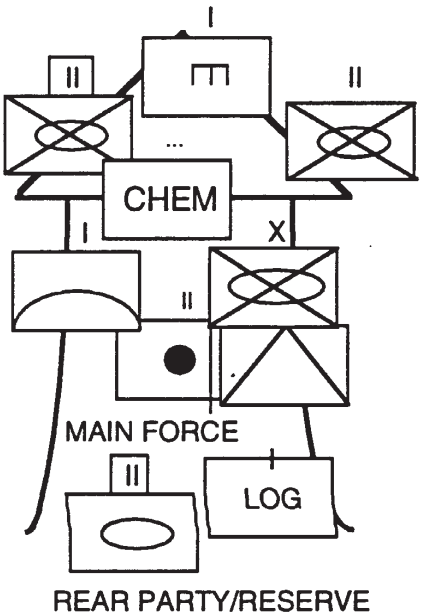


FIGURE 39. FRONTAL PURSUIT





pursuit operation using the advance guard formation. During a frontal pursuit (see Figure 38) the advance party will attempt to fix the enemy forces from the front. (See Figure 39) The main force will then attempt to envelop the enemy force from the flank or flanks and destroy them. A tank company is used as the reserve force in order to exploit success or engage any counter attack force. Artillery support will be used in order to assist in the fixing of the enemy force and will shift its fire to the rear or flanks of the enemy as the main body of the brigade conducts its attack to destroy the force. Commanders at all levels will be well forward and with the main effort. In addition to the air defence batteries, each manoeuvre platoon has one SA-7. The air defence batteries will provide coverage for the brigade's artillery assets. The attack helicopters will use "pop up" tactics to destroy the enemy forces. The divisional reconnaissance battalion will provide intelligence on the location of the enemy's main body and the location or status of any reserve or counter attacking forces identified. During a parallel pursuit, the brigade will once again use the advance guard formation. (See Figure 40) The reconnaissance elements will provide information to the brigade as to the location of the enemy's main body and the location and intent (if known) of reserve and counter attacking forces. The advance party of the advance guard will attempt to fix the enemy's main body from the rear flank. (See Figure 41) Artillery assets will provide support fire and assist in the advance party's mission. The main body of the brigade will manoeuvre against the flank and rear of the enemy, at which time the artillery will shift its fire. (See Figure 42) The reserve element of the brigade will be used to attack the flanks of any counter attacking force or to further exploit the main body's success. During the conduct of the parallel pursuit, the air defence assets will have a similar mission as in the frontal pursuit. The advantage of the parallel pursuit is that the brigade can ensure that the reinforcement and the resupply of the enemy force is prevented by cutting off the enemy's lines of communication and supply.

0409. ***Attack Operations.*** Attack operations are used by the ROWENs in order to fix and by'pass, or break through enemy defences. A ROWEN division will conduct deliberate attack operations on two or more axes. The main attack will consist of two to six brigades. The supporting attack will consist of one to three brigades. Chemical weapons may also be used. The objective during an attack operation is terrain orientated. There are three major types of attack operations: hasty, deliberate, and breakthrough. Each of these operations is geared towards the brigades achieving a terrain objective.

a. *Hasty.* Hasty attack will occur when force ratios are 2 to 1 with a reserve force ready to continue momentum or repel a counter attack. ROWEN forces will attempt to outmanoeuvre the enemy and maintain momentum in the attack. Maintaining momentum is considered key in hasty attacks, with as much time allocated to planning as the tactical situation allows. During a hasty attack operation the brigade will rely heavily on intelligence reports from the division's reconnaissance assets. The brigade will move with 2 battalions up and 1 back (using the formation at Figure 43). The tank battalion will normally act as a reserve force which will react to possible

enemy counter attacking forces. The vee formation of the brigade will also facilitate moving into an attack or assault operation should the mission of the brigade change for any reason. Prior to the lead battalions making contact with the enemy defensive position, the artillery will initiate indirect fire on suspected or known enemy positions. This fire will continue until direct fire contact is made by the lead battalion. After contact the artillery fire will shift to the rear or flanks of the enemy position to prevent reinforcements or repositioning of enemy forces. The lead battalions will attempt to fix the enemy forces, as the rest of the brigades manoeuvres through or around the enemy defence. (See Figure 44) The engineers, along with dismounted infantry support from the lead battalion, will attempt to clear a lane eight to twelve metres wide through the enemy's obstacle belt. The air defence assets will provide protection to the brigade's HQ and artillery assets. The attack helicopters will employ "pop up" tactics in order to provide additional supporting fires. Attack helicopters will not go forward of the FLOT. The brigades and battalion commanders will stay well forward with the main effort. This type of operation concentrates on reaching a terrain objective and not on enemy force destruction.

b. *Deliberate.* In deliberate attacks the ROWENs normally prefer a 3 to 1 force ratio. A division will normally attack along two and rarely three axes. The main attack will consist of two to six brigades (divisions are seldom larger than eight brigades), while the supporting attack will consist of one to three brigades. The ROWENs will normally use only armoured or mechanised units in the main and supporting attack. Infantry is used along an axis in restrictive terrain. In this case the infantry unit would lead the main attack. In the main attack the lead brigades will continue to attack until they have achieved their objective or are rendered combat ineffective (unable to accomplish the mission due to heavy losses or superior enemy forces or a combination of the two). Once that happens, the next brigade will pass through and continue the attack to the division's objective. In the supporting attack, the attacking brigade will continue to attack until given permission by the division commander to stop the attack or it has reached its objective. (See Figures 45-46)

(1) The main difference between hasty and deliberate attack operations is that in a deliberate attack the brigade has more time to develop a detailed plan. In addition, the artillery will conduct 45 minutes to one hour of preparatory fire on the enemy position, approximately one hour prior to the brigade crossing the line of departure. This fire shifts to the rear of the enemy position as the brigade attacks. If the artillery is out of range of the objective, the ROWEN forces will move forward up to a regiment of artillery forward for the preparatory fire. The artillery will not cross the line of departure and will have up to a company-sized manoeuvre element (normally brigade reserve forces) collocated with them for security purposes. ROWEN forces may also move the entire brigade to the line of departure and stop. The brigade would then continue its mission once the artillery is firing the preparatory fire mission.

FIGURE 40. PARALLEL PURSUIT

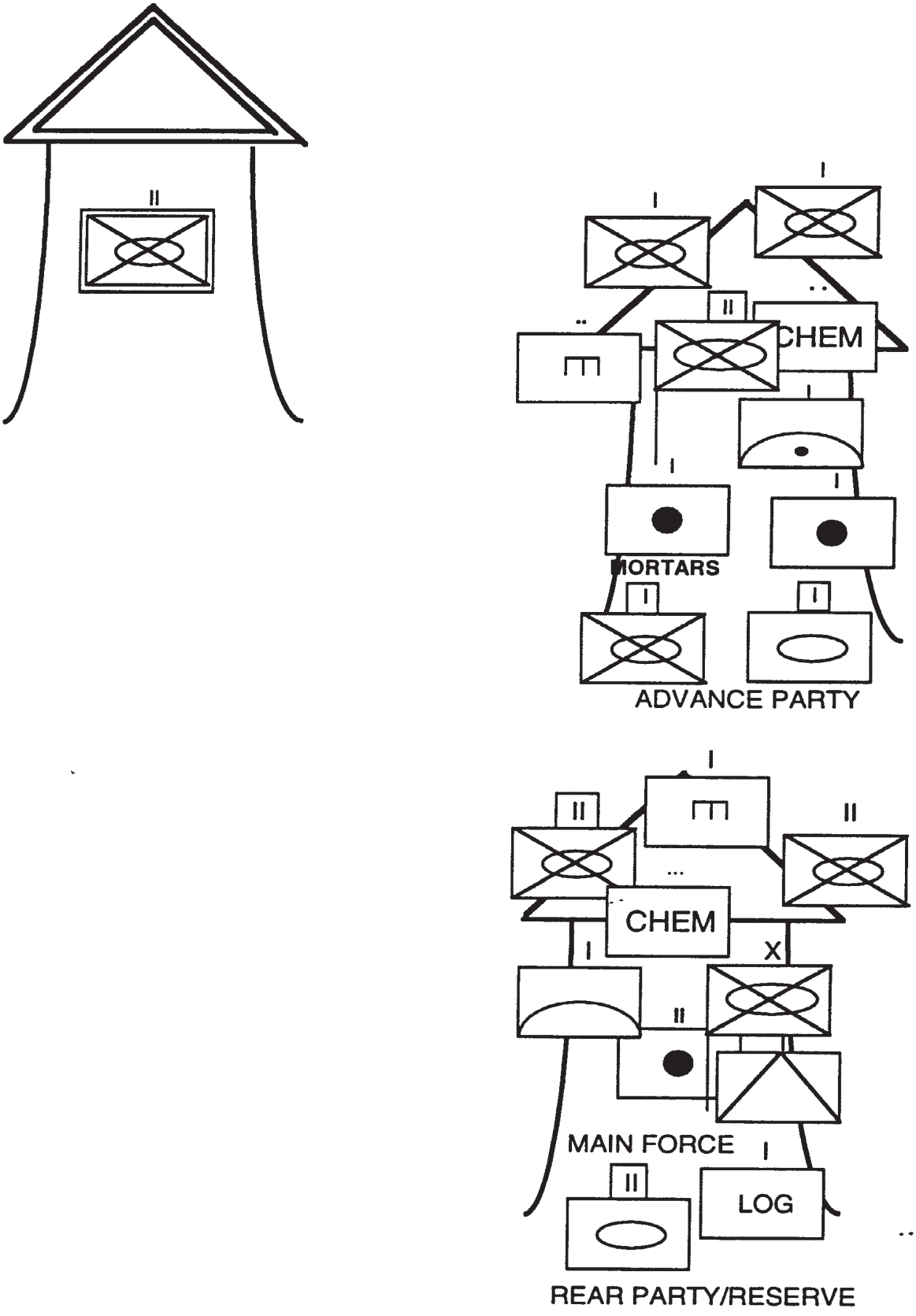
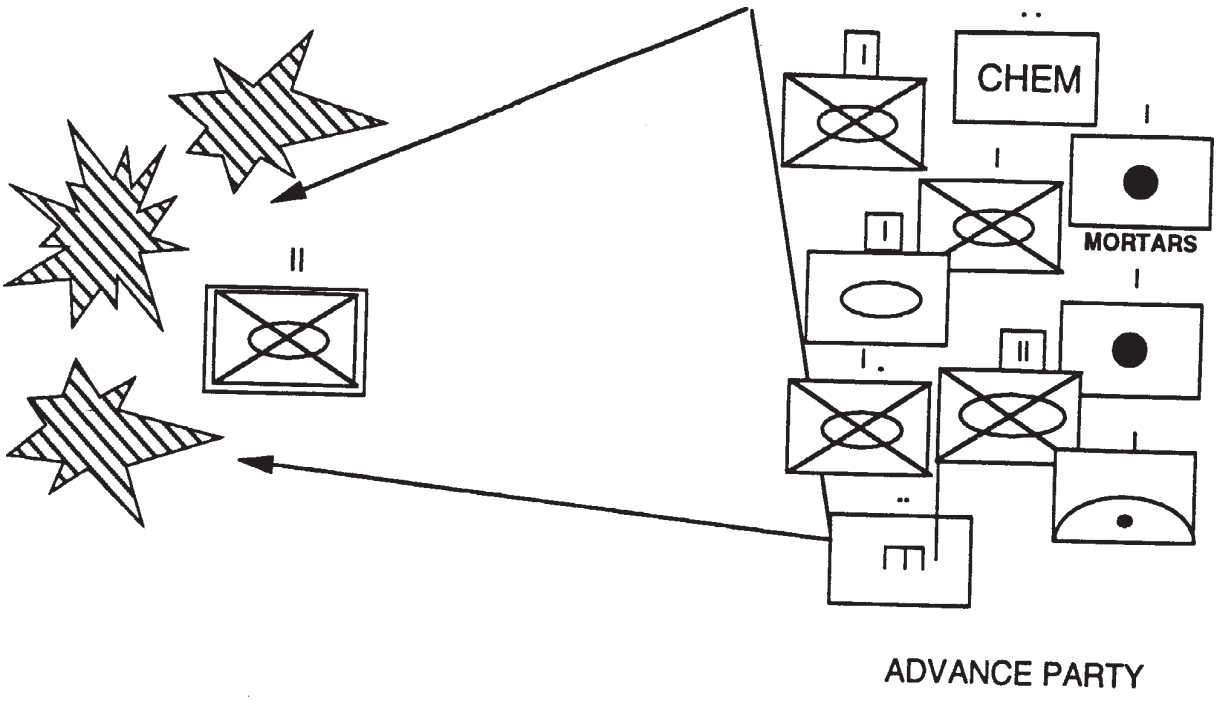


FIGURE 41. PARALLEL PURSUIT



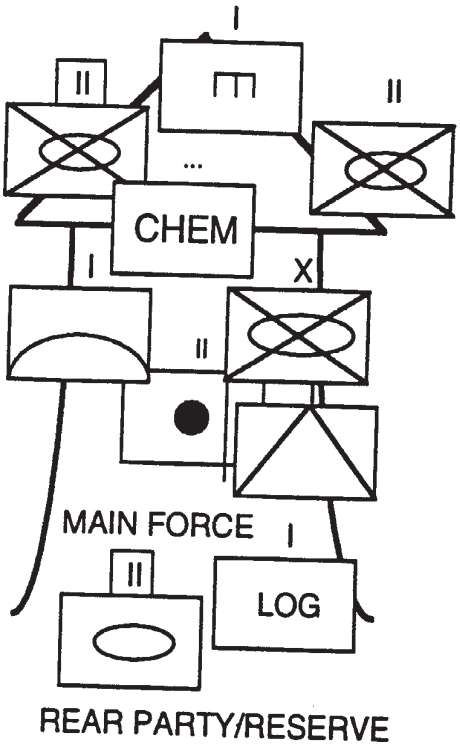


FIGURE 42. PARALLEL PURSUIT

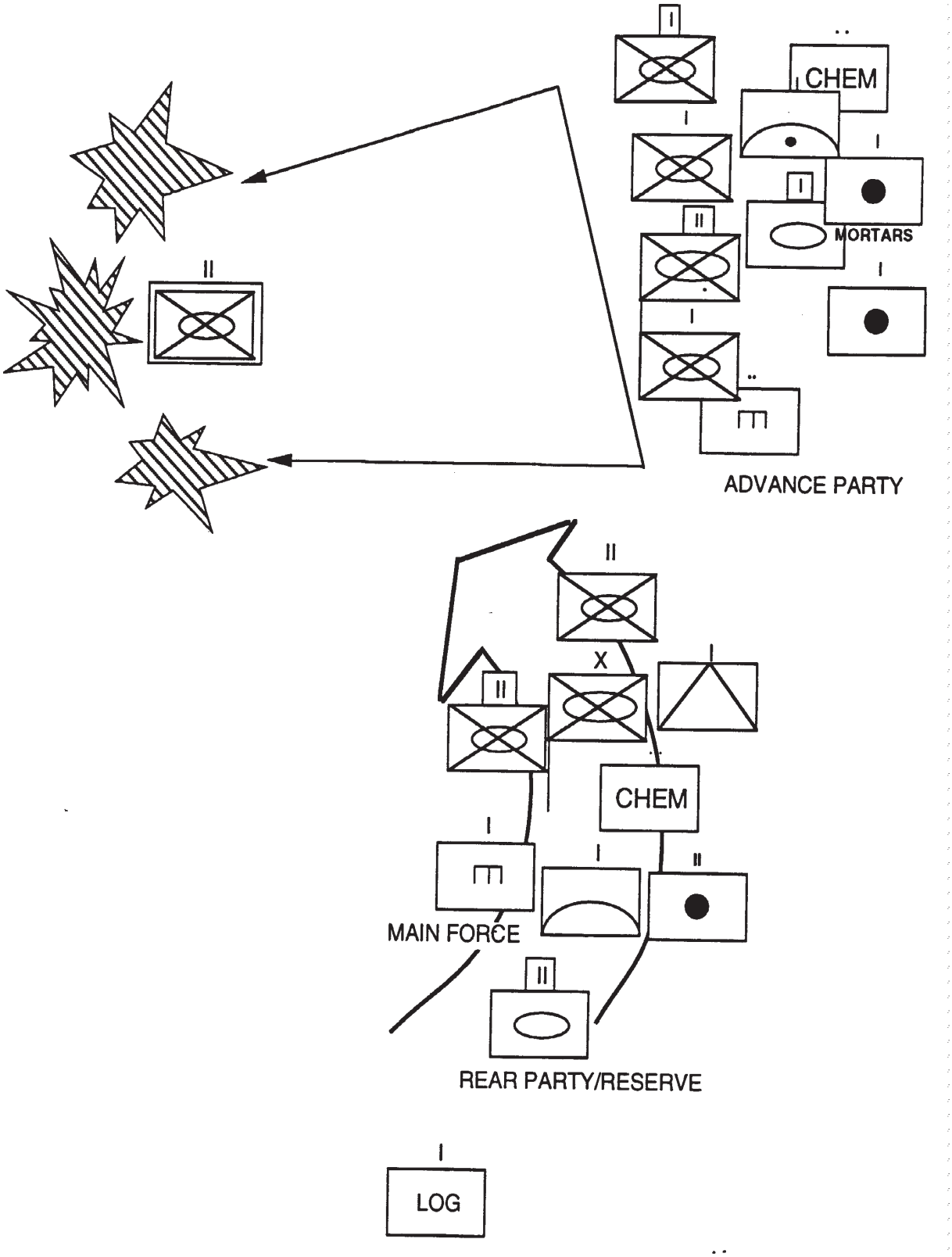


FIGURE 43. HASTY ATTACK

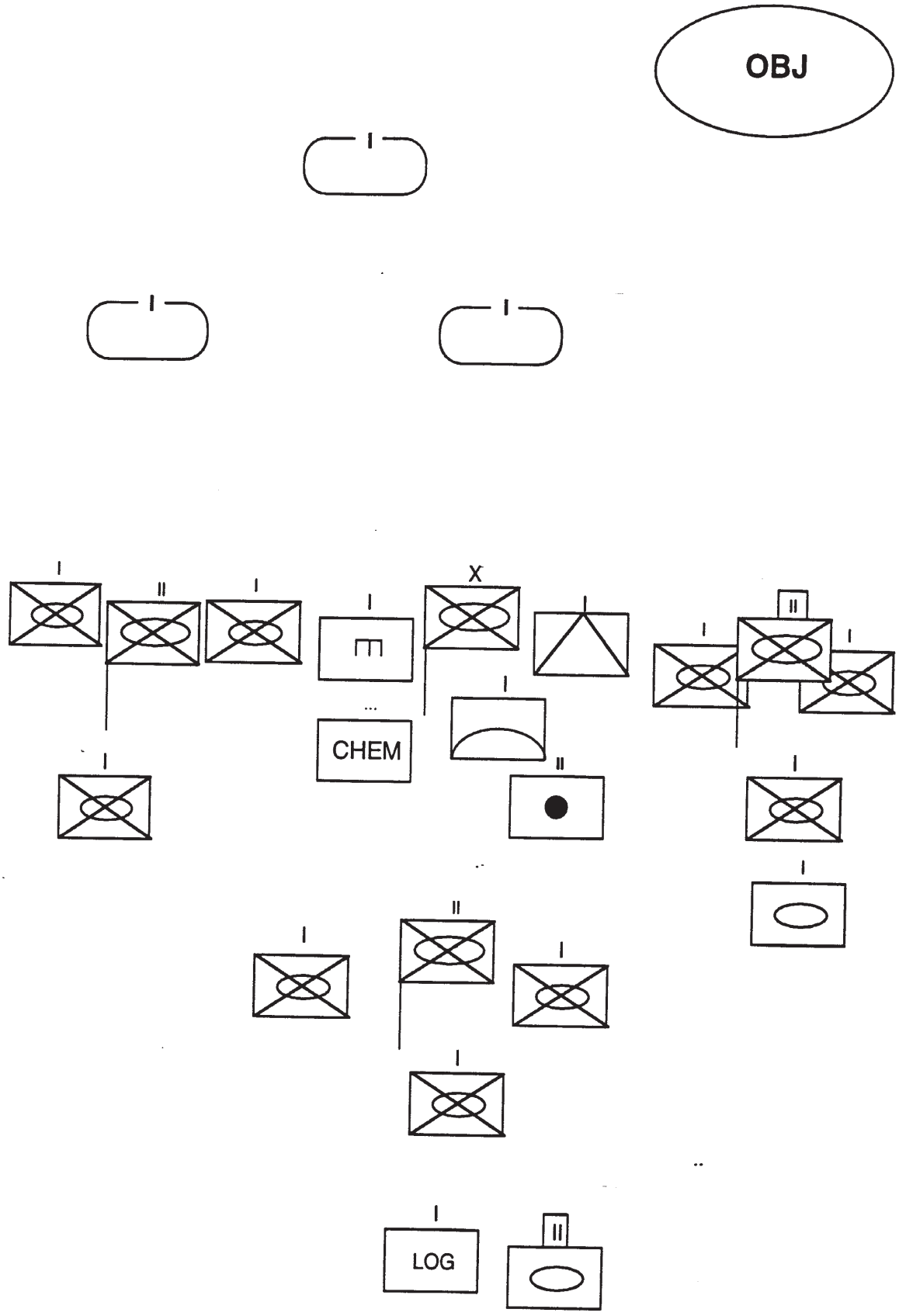


FIGURE 44. HASTY ATTACK

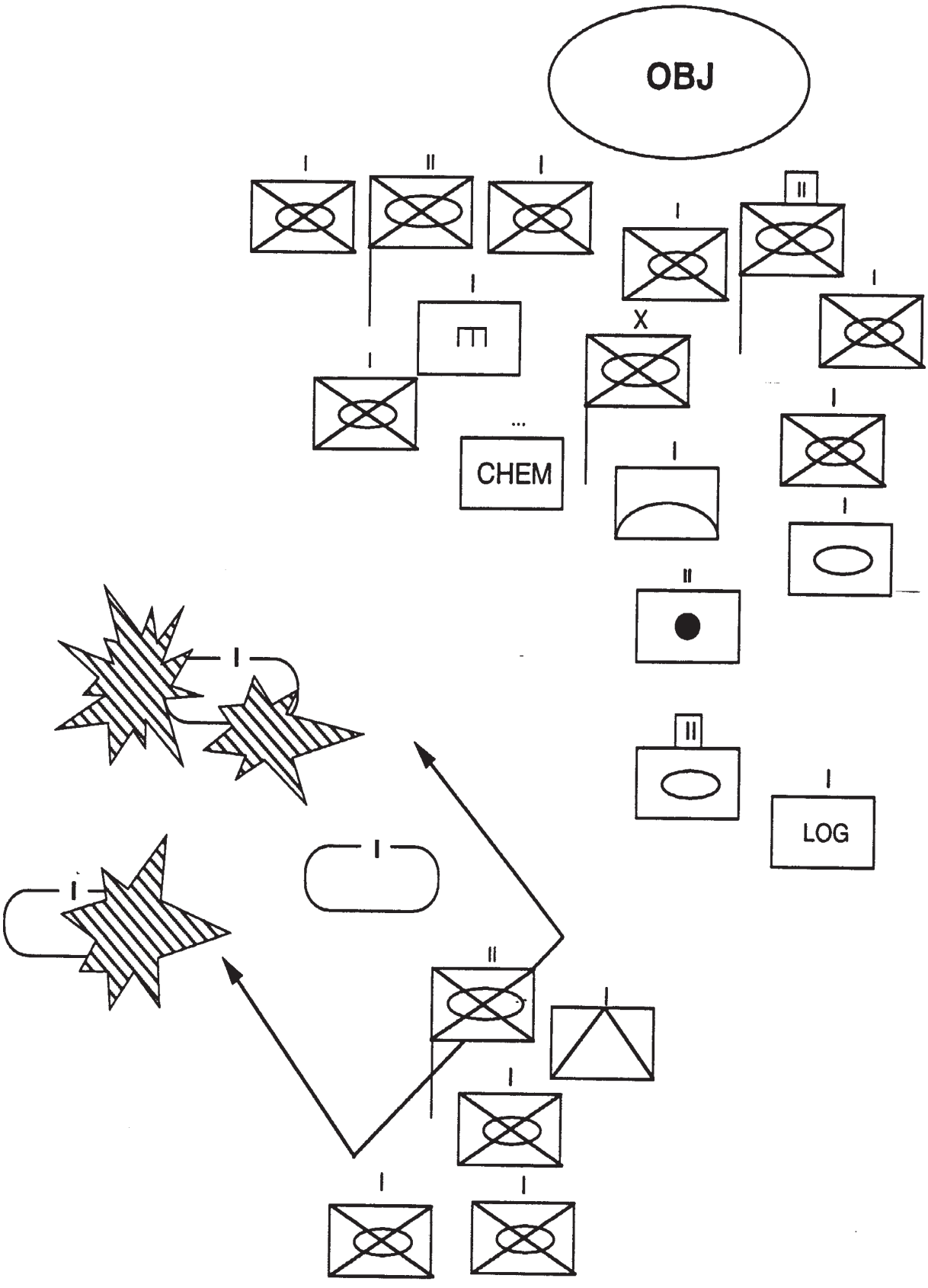


FIGURE 45. DIVISION DELIBERATE ATTACK

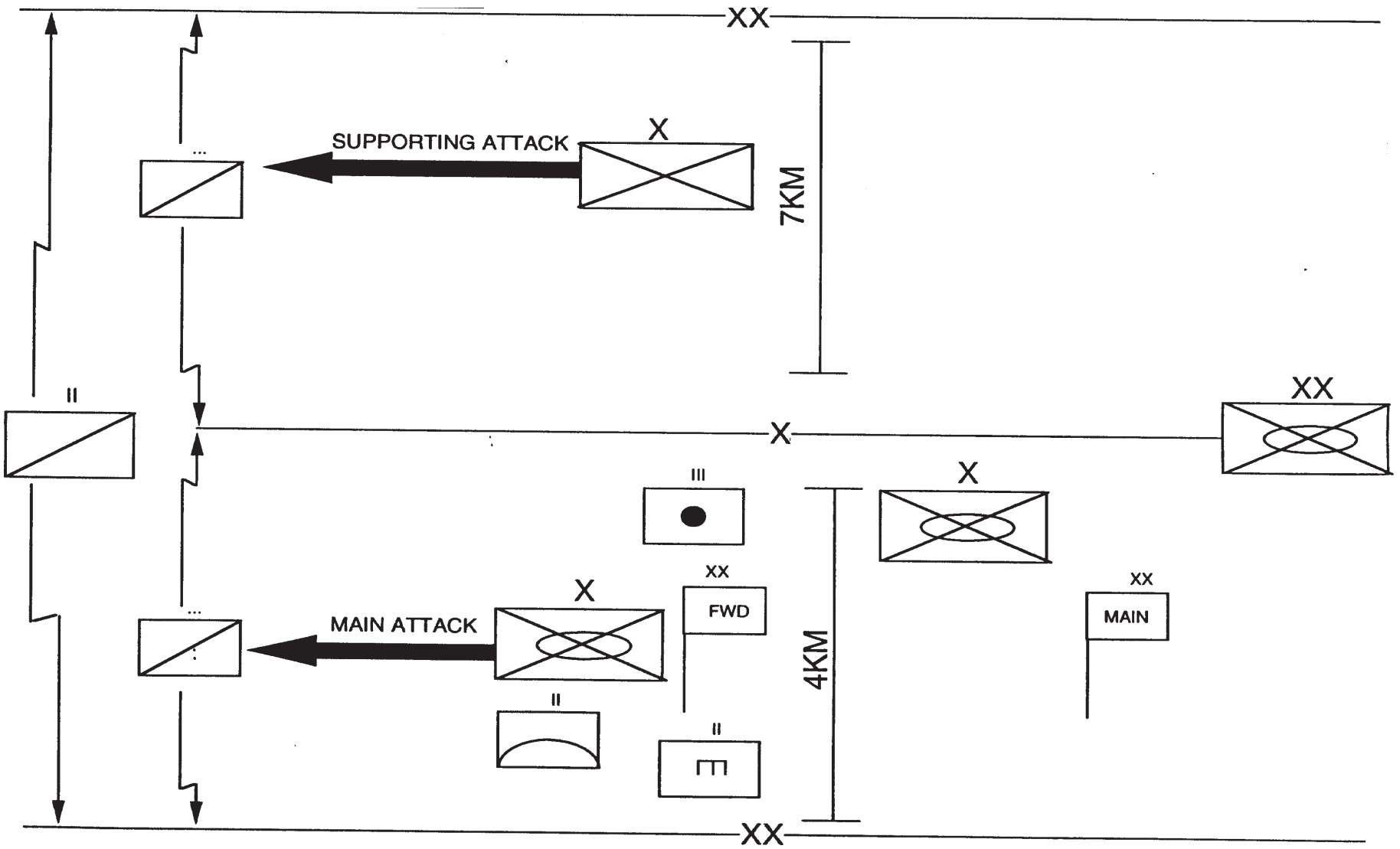
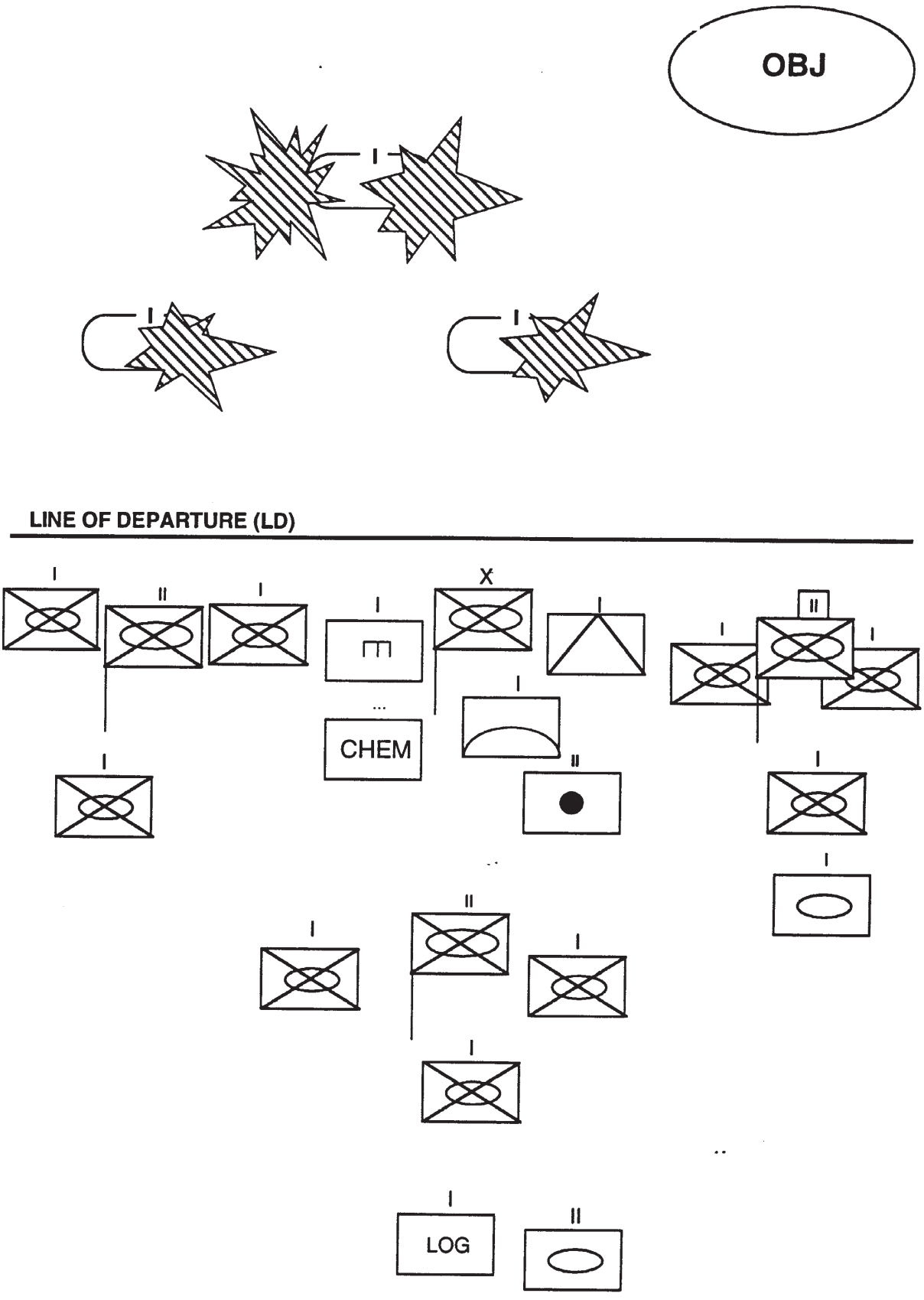


FIGURE 46. DELIBERATE ATTACK



(2) During a deliberate attack operation the brigade will rely heavily on intelligence reports from the divisional reconnaissance assets. The brigade will move in a vee formation with two battalions up and one battalion back. The tank battalion is normally used as the reserve force and will react to counter attacking forces. The vee formation of the brigade will also facilitate moving into an assault operation should the terrain objective be occupied by an enemy force. The lead battalion will attempt to fix the enemy forces as the rest of the brigade manoeuvres through or round the enemy defence. (See Figure 47) As the enemy forces are being “fixed” and the brigade begins to by'pass the enemy position, the second battalion will move forward to either flank. This movement will allow the brigade to maintain a two up and one back formation as it continues on to the terrain objective. The engineers, along with dismounted infantry support from the lead battalion, will attempt to clear a lane 8 - 12 metres wide through the enemy’s obstacle belt. The air defence assets will provide protection to the brigade’s headquarters and the artillery assets. Attack helicopters will employ pop-up tactics in order to provide additional supporting fire. The attack helicopters will not go forward of the FLOT. The brigade and battalion commanders will stay well forward with the main effort. This type of of operation is focused on reaching a terrain objective and not on enemy force destruction.

0410. ***Breakthrough.*** Breakthrough operations are not commonly used by ROWEN forces. They are viewed as methods to exploit enemy weaknesses. Breakthrough attacks have the objective of reaching enemy reserves and preventing a counterattack, or to penetrate an enemy’s defence in order that the main body can manoeuvre towards its terrain objective. Chemical weapons may be used to protect flanks and impede enemy counter attacks.

a. *Break In*. During a breakthrough operation the brigade will move in a vee formation with two battalions up and one back. (See Figure 48) The tank battalion will act as the brigade’s main reserve force. The brigade will rely on intelligence reports from divisional reconnaissance elements in order to determine the location of the weak spot or gap in the enemy’s defensive position. The engineers will follow the lead battalion and breach any mine fields or obstacles found. The engineers are normally supported by dismounted infantry from the lead battalions. The lead battalions will pass through the breaches in the obstacles. The lead battalions will then concentrate on penetrating the enemy’s defence and holding open the flanks of the penetration for the rest of the brigade. Artillery fire will then shift to the rear and flanks of the enemy position in order to prevent the repositioning of the enemy forces.

b. *Break Out.* Once penetration is made, the rest of the brigade will pass through the lead battalion's positions and move deep into the enemy rear in order to destroy any reserve or counterattacking forces. (See Figure 49) The air defence assets will provide protection to the brigade headquarters and artillery assets. Attack helicopters will employ pop-up tactics in order

to provide additional supporting fire. The attack helicopters will not go forward of the FLOT and are used to assist in the brigade's penetration of the enemy's defence. The brigade and battalions commanders will stay well forward with the main effort.

0411. ***Assault Operations.*** Assault operations are used to seize terrain objectives which are to be occupied by enemy forces. The assault operation is the basic manoeuvre used when the ROWENs desire to destroy enemy forces in detail. Assault operations can be incorporated into advance operations or attack operations. ROWEN forces use two types of assault, one employing an artillery preparation and the other being a silent assault without artillery, usually at night, to achieve surprise. Non-persistent chemical agents can be used during both types of assault. During an assault operation, ROWEN forces will use the vee, left/right echelon and diamond formations prior to reaching the assault line. At the assault line they will go into a line formation. The formation allows them both flexibility and security during their movement to the objective. The left/right echelon formation promotes better command and control. This formation also allows them to avoid the heavy dust kicked up by their vehicles. The diamond formation is used for small units in mountainous terrain or other terrain where little manoeuvre space is available. This provides maximum protection of the force. The line formation is used when the attacking force has reached the assault line. The assault line is normally the last covered and concealed position short of the objective. The main difference between offensive and assault operations is that assault operations are geared towards the total destruction of the enemy force which is occupying the objective. Assault operations are accomplished mounted or dismounted depending on situation.

a. *Assault phases*. Assault phases consist of the assembly area, the formation line, the line of departure and the assault line. The assembly area is positioned out of range of the enemy's artillery. This is the location where orders are issued and rehearsals take place. The formation line is normally prior to the line of departure but it can also be the same line. At the formation line the ROWEN forces will ensure that they have established the correct formation for the movement to the assault line. The line of departure is within enemy artillery range and is the jumping off point for the assault. The assault line is normally the last covered and concealed position before the objective. The assault line will vary in distance from the objective based on a dismounted or mechanised assault. At the assault line the units will be two up and one back at the battalion and brigade level. (See Figures 50-51)

b. *Assault Tactics.* Assault operations are designed to mass and destroy an enemy force which is occupying an objective. The principle behind the assault or attack operation is to mass forces and firepower (including chemical strikes) across a point of the enemy's front or flank and attack violently. There is a reserve force at the battalion and brigade level to exploit any success. The anti-tank battery will normally operate as a battery but can operate as platoons or sections. It is used in a fire support role, not forward

FIGURE 47. DELIBERATE ATTACK

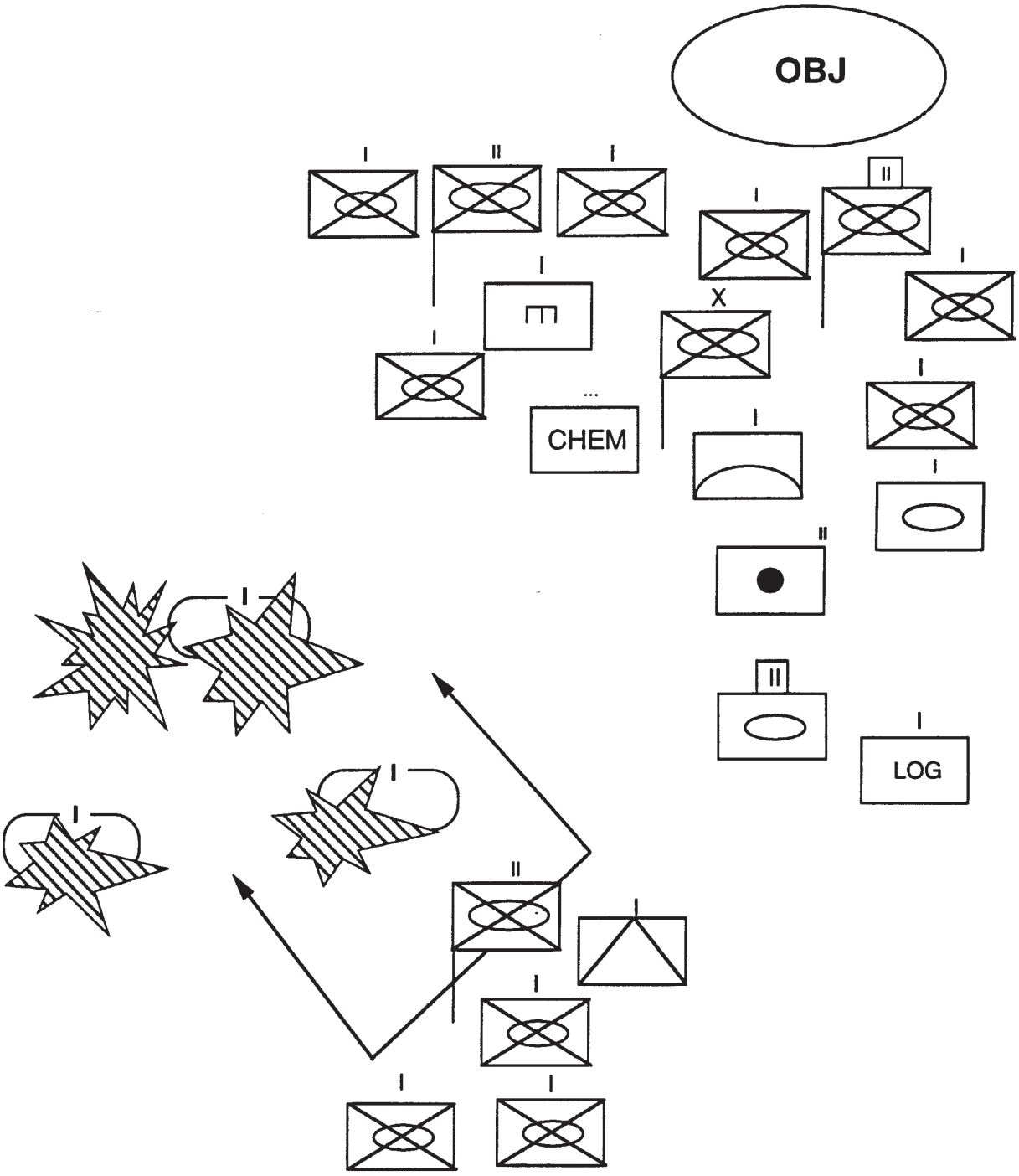


FIGURE 48. BREAKTHROUGH ATTACK

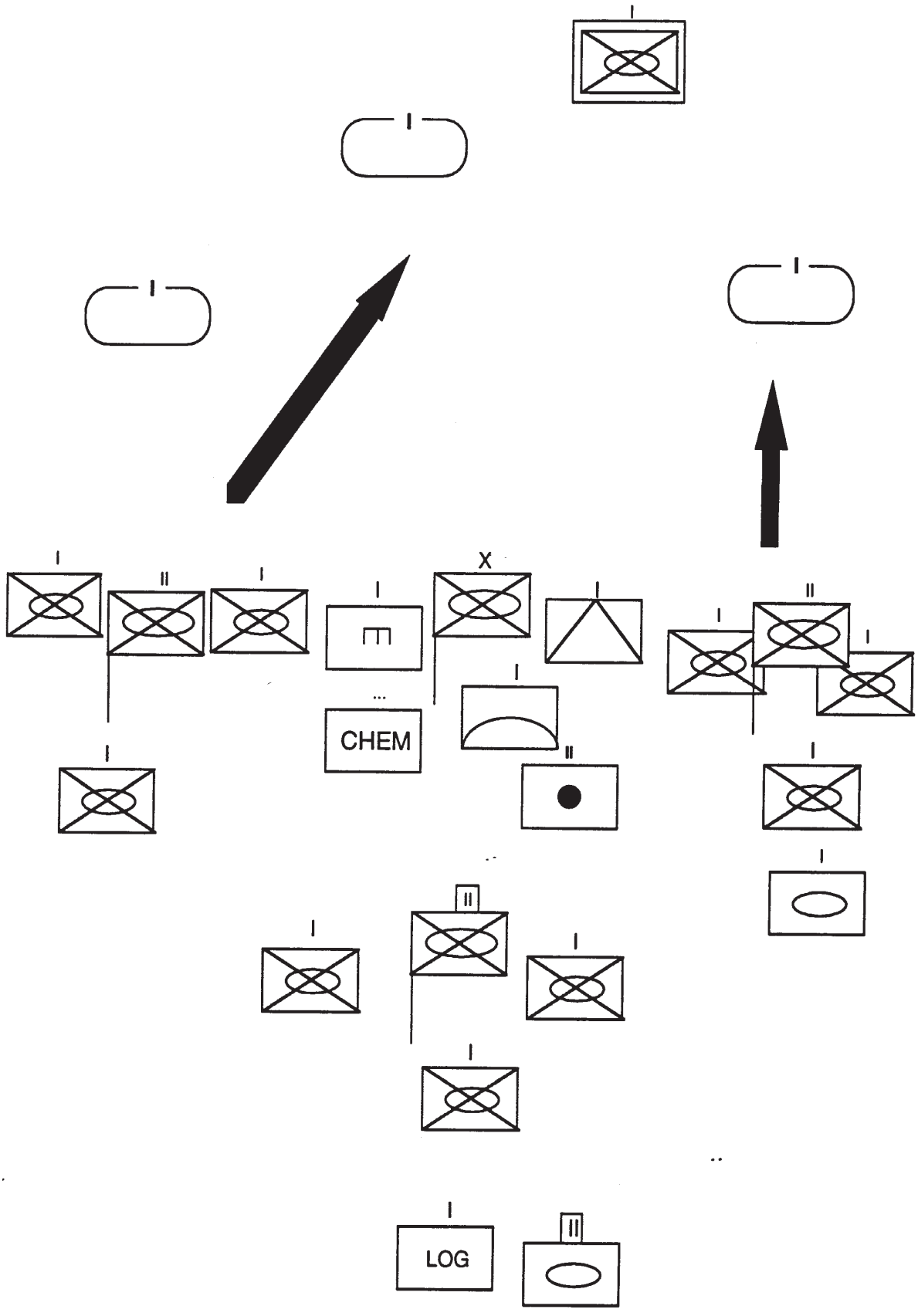


FIGURE 49. BREAKTHROUGH ATTACK

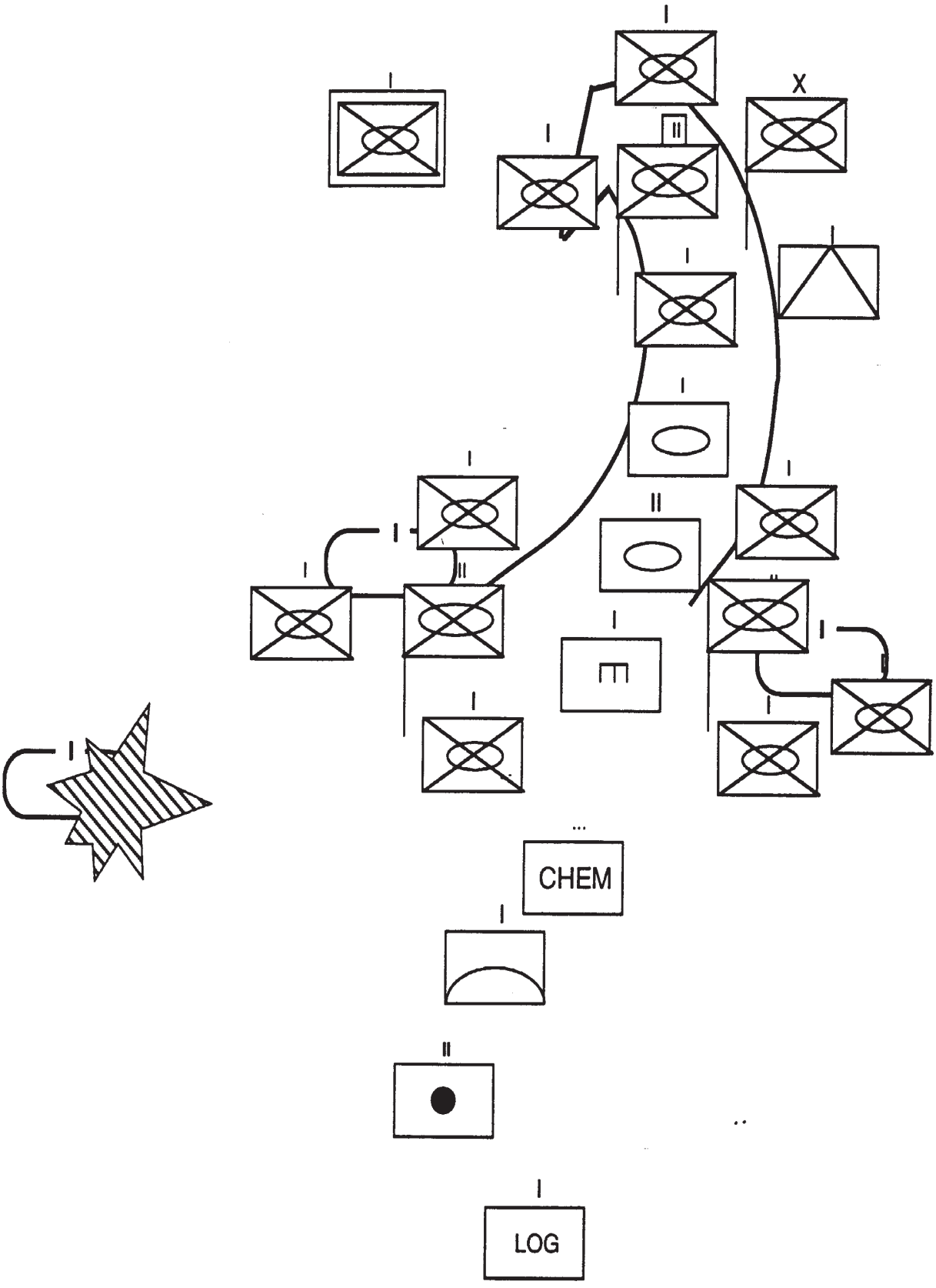


FIGURE 50. INFANTRY ASSAULT PHASES

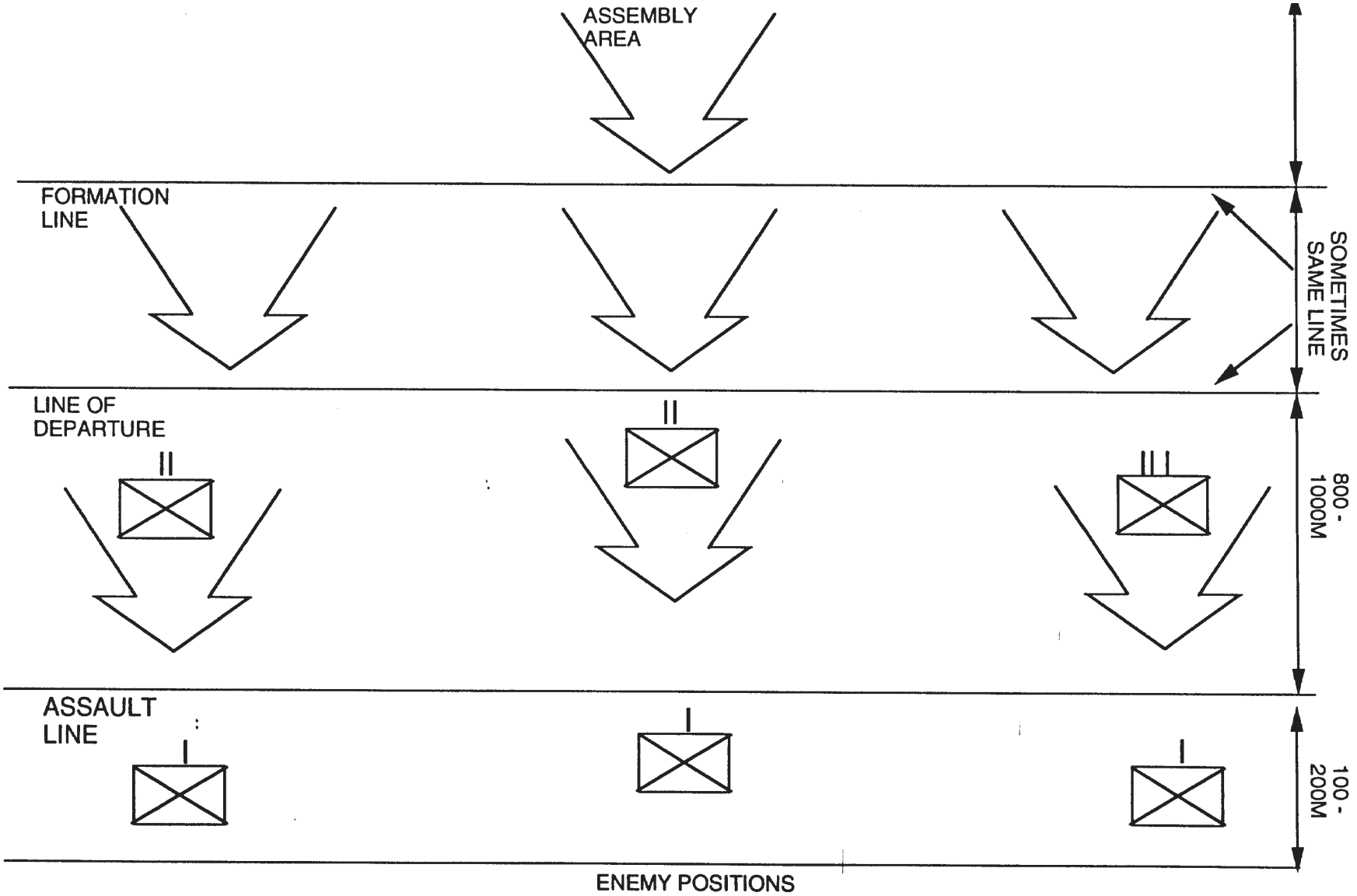
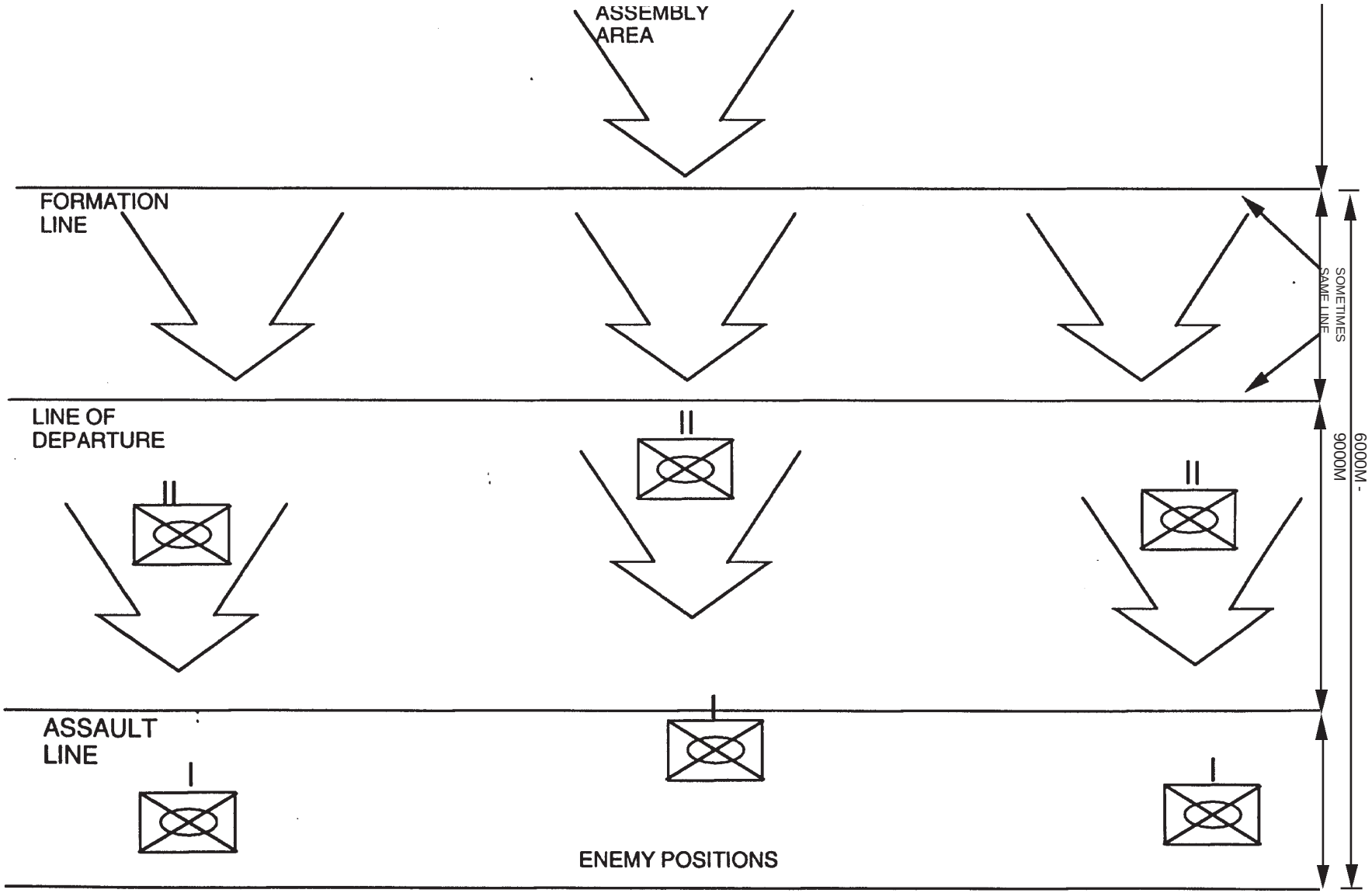


FIGURE 51. MECHANISED ASSAULT PHASES



of the main body and will operate in conjunction with the main body. The ATGMs will establish fire support positions which will take advantage of the weapons' maximum effective range. The tank battalion is used in either a support role, an assault role, a manoeuvre role or a combination of all three. In the support role the armoured forces will set up within maximum effective range of their main gun (within 2,000 metres). In the assault role they will move with infantry support to about 1,000 metres short of the objective and then stop while the infantry clears the objective area. These distances are dependent on weather, terrain, etc. The only situation in which the armoured forces as a whole would assault into the objective with dismounted infantry support is if the latter do not receive effective anti-armour fire support. In the manoeuvre role the armoured force can be used to outflank the enemy's position to destroy any reserve or counter attacking forces. The commanders will all be well forward in the attack. The brigade commander and his staff can be found with the main effort as the assaulting forces close with the enemy. Lower level commanders will be with their lead elements. In this type of operation the infantry will dismount from their vehicles (in the case of a mechanised unit) in order to clear out dug-in enemy forces. The dismounting point for the infantry is normally prior to receiving effective anti-armour fire (2,000 - 2,500 metres). In some cases the ROWEN forces will advance until they are receiving effective anti-armour fire (1,000 - 1,500 metres) prior to dismounting their infantry. The APCs will provide supporting fire for the infantry assault. The infantry always dismount in an assault operation. The engineers are responsible for breaching any obstacles that will interfere with the assault. Artillery support will be intense (except for the case of a silent assault). The artillery preparatory fire will be initiated one hour prior to the attack taking place and will last from 45 minutes to one hour. If the artillery is out of range of the objective, the ROWEN forces will move up to a regiment of artillery forward in order to provide the preparatory fire. The artillery will not cross the line of departure and will have up to a company-size manoeuvre element (normally brigade reserve forces) collocated with them for security purposes. They may also move the entire brigade to the line of departure and stop. The brigade would then continue with its mission once the artillery had established its position and provided the preparatory fire. When the attacking force reaches the assault line, the artillery will shift to the opposite flank or rear of the objective to prevent reinforcement. Air defence assets will not normally move into the area of the objective. Instead, they will set up in the vicinity of the support force and provide umbrella coverage for the brigade. The hand-held air defence systems will be forward with the attacking forces, but to the rear of the assault line. Attack helicopters will provide direct fire support into the objective, but will not manoeuvre forward of the assault forces and will not generally be used to counter any reserve or counterattacking forces unless those forces are in range. Once again, the attack helicopters will use pop-up tactics to engage enemy forces. An offensive mission can transition into an assault operation if the objective is occupied by a enemy force and there are other enemy forces in defensive positions in front of the terrain objective. In this case, the brigade will use the offensive operation

to fix and by'pass enemy forces while the main body of the brigade moves to its objective. At the formation line the brigade will adjust its movement in order to expedite the transition into an assault. (See Figures 52-53)

c. *Silent Attack.* The silent attack is normally conducted by infantry brigades,but can also be conducted by mechanised brigades. The principles remain the same as above; and there is also a reserve force to exploit any success. An anti-tank battery can be assigned to the infantry brigade from division and will be set up in a support position along with the heavy machine guns and mortars. The infantry brigade may have a tank company attached to them, but it will not be brought forward until the actual assault takes place in order to maintain surprise. The tank company's primary role will be supporting fire and manoeuvre against mechanised or armoured reserve forces. In order to maintain the element of surprise, the artillery will not fire preparatory fire. Instead the artillery will fire in support against the enemy's positions after the assault has started. Attack helicopters are not used in the silent assault.

0412. ***Night Operations.*** ROWEN forces do not generally conduct night offensive operations. Normally, the ROWEN forces will go into a hasty defence (if they have been attacking) just prior to last light and establish security. ROWEN forces will use the night to resupply combat units. All night operations, when they are conducted, are extensively rehearsed.

a. *Offensive.* ROWEN forces prefer to cross the line of departure prior to first light. They have found that navigation and command and control are significantly degraded during night operations, but they will attack if they perceive the enemy to be weak and unprepared. ROWEN forces will attempt to use stealth during night operations, conducting silent attacks. They will illuminate the objective only after their presence has been detected. They will use flares to enhance command and control. They will employ the same tactics and formations that they would use during daylight operations in conducting night operations.

b. *Equipment.* All ROWEN tanks, Infantry Fighting Vehicles (IFVs) and APCs are equipped with first generation night observation devices. Tanks are equipped with infra-red systems for the tank commander, gunner and driver. APCs are equipped with infra-red systems for the driver and gunner. Some individual weapons like machine guns and sniper rifles are equipped with either infra-red or starlight systems. Individual night sights are issued down to the platoon level.

0413. ***Frontages.***

Offensive frontages are as follows:

Corps	16 - 50 km
Division	7 - 15 km
Brigade	3 - 6 km

FIGURE 52. ASSAULT OPERATIONS

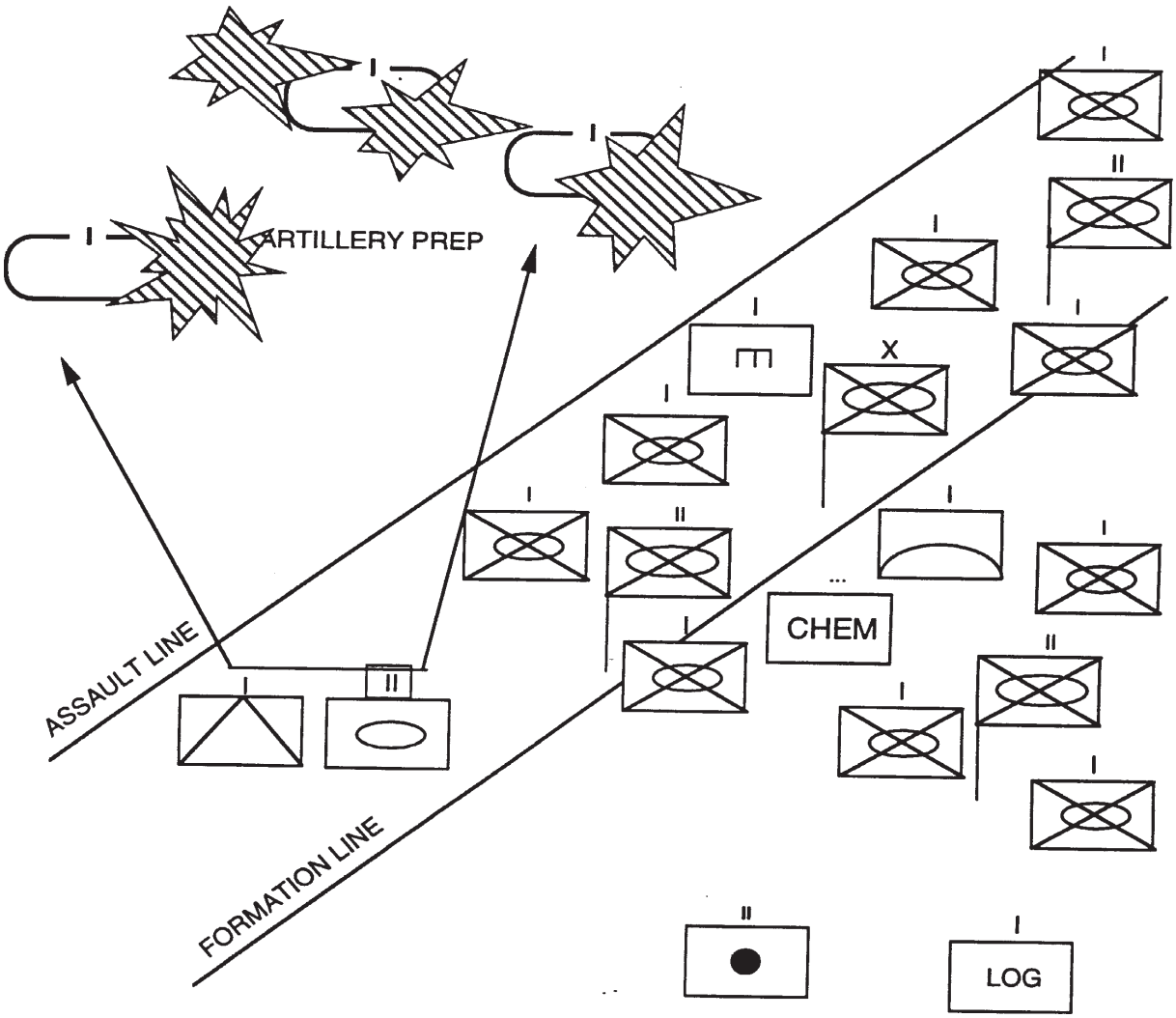
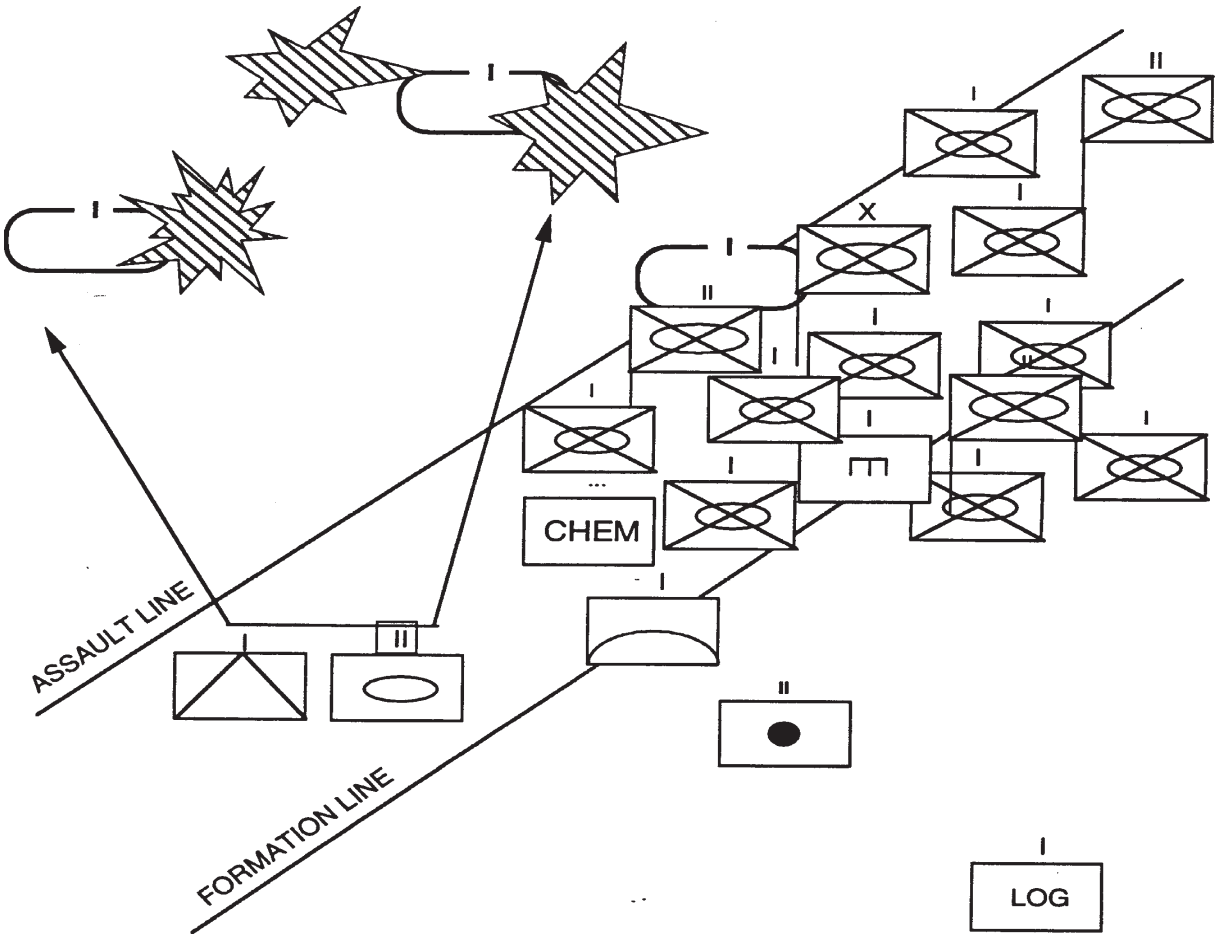


FIGURE 53. ASSAULT OPERATIONS



0414. ***March Rates (kph).***

Column	Paved Roads		Unpaved Roads		Cross-Country	
	Day	Night	Day	Night	Day	Night
Wheeled	30-40	25-35	30-35	25-30	15-20	15-20
Tracked	25-35	20-25	20-30	15-20	5-15	5-15

0415. ***Intelligence***. ROWENIAN military intelligence is a totally integrated structure comprising strategic and tactical capabilities.

a. *Organisation.* Military intelligence personnel and units are found at all levels from GHQ to brigade. Military intelligence personnel and units are responsible for counter intelligence, censorship, electronic warfare, imagery intelligence, collecting and analysing of combat intelligence and the handling and debriefing of prisoners.

b. *Electronic Warfare.* ROWEN EW units are only found at high command level in peacetime, but may be subordinated to corps level in conflict. Subordinate elements will be situated as far forward as possible during an advance; but tasking and movement will be done at corps level. Intelligence gained will be disseminated down to brigade when necessary. Jamming will only be used to support assault operations.

c. *Reconnaissance Operations.* There are several types of reconnaissance:

(1) *Aerial Reconnaissance.* Reconnaissance targets are determined mainly by corps and division. The air force has the capability to fly both high and low altitude aerial reconnaissance missions. Reconnaissance aircraft can be equipped with SLAR and long-range photographic and TV cameras. The air force will use Mirage F-1b and Mirage F-1E. Remote Piloted Vehicles (RPVs) are available at corps level and are equipped with cameras and TV. The army may fly aerial reconnaissance flights with rotary wing aircraft but these will not fly forward of the FLOT.

(2) *Corps Reconnaissance.* Corps reconnaissance will operate up to 100 kms in front of the attacking divisions,and will normally go forward 24 - 48 hrs prior to the attack. Corps reconnaissance will attempt to penetrate the division and corps rear areas in order to establish OPs. The OPs will attempt to locate command and control facilities, reserve forces and troop assembly areas. Corps reconnaissance will also identify lucrative targets for Special Forces units to attack. Corps reconnaissance elements will work in pairs. They will not engage enemy units unless it is for self defence. Corps reconnaissance units call down artillery fire on targets of opportunity. 50% of Corps reconnaissance con-

sists of armoured vehicles armed with ATGM systems; this applies down to battalion level.

(3) *Divisional Reconnaissance.* Divisional reconnaissance will normally operate up to 50 kms in front of the attacking divisions. Divisional reconnaissance elements will work in pairs and not engage the enemy unless for self defence. They will attempt to penetrate the enemy's sector 24 - 36 hrs prior to the attack. Divisional reconnaissance will call down artillery fire on lucrative targets. They will operate mounted at all times and will not insert OPs. Divisional reconnaissance will attempt to identify command and control facilities, reserve force locations, main defensive positions and logistic sites.

(4) *Brigade Reconnaissance.* Brigade reconnaissance will operate up to 25 kms in front of the attacking brigade. It will attempt to penetrate the enemy's sector up to 12 hrs prior to the attack. Like the divisional reconnaissance elements, they will call down artillery on lucrative targets. Brigade reconnaissance elements will attempt to identify obstacle networks, main defensive positions and reserve locations. Brigade reconnaissance elements will work in pairs and operate mounted at all times.

(5) *Battalion Reconnaissance.* During offensive operations, the battalion reconnaissance will operate as screening force 3–5 kms in front of the attacking battalion. It will attempt to identify the enemy's strengths and weaknesses as well as the locations of any reserve forces.

(6) *Dismounted Patrols.* Brigades will aggressively conduct dismounted reconnaissance patrols to confirm enemy positions as well as enemy obstacles. Patrols will normally be up to platoon size and will have a limited AT capability, normally RPG 7s. They may call indirect fire on targets of opportunity.

(7) *NBC Reconnaissance.* NBC reconnaissance or survey may be used after ROWEN or enemy use of WMD. This activity will usually be conducted by specialist chemical troops.

0416. ***Fire Support.*** Fire Support is applied and organised as follows:

a. *Utilisation.* ROWEN field artillery consists of mortars, howitzers, field guns, gun-howitzers and MRL. Chemical munitions are available for MRL and field guns. Utilisation of artillery assets to provide preparatory fire for the assault is a key element in ROWEN offensive operations.

b. *Organisation.* Artillery units are generally attached to the units they support, artillery battalions being assigned to support manoeuvre brigades. A brigade will normally have one artillery battalion in direct support and one regiment in general support. Each brigade may also receive light artillery

assets from division for general support duties. Division may also have one or more artillery battalions from corps in general support. Each manoeuvre company will have a forward observer (FO) who will normally collocate with the commander. The division will allocate most of its artillery assets to the brigade at the point of main effort.

c. *Command and Control.* At divisional level the artillery commander will be collocated with the divisional commander to facilitate the coordination of artillery fire. Chemical fire plans can be called, but authority for use will initially be kept at Corps level. At brigade level the direct support artillery regiment commander will collocate with the brigade he is supporting and will act as the fire support coordinator for the brigade. Each battalion and company will have FOs that will call fire for the companies and battalions. FOs will be located in the HQs of the units they are supporting. The company FO will communicate via FM directly to the battalion FO who will clear all requests to the battery fire control centre. The battery fire control centre will in turn pass the mission to the gun line.

d. *Dispersion.* Dispersion depends on the tactical situation. Normally each artillery battery requires 150 square metres for deployment with 500 to 1500 metres between batteries. Batteries are deployed in groups of 3-2 forward and 1 back. (See Figure 54)

e. *Movement.* Movement to and from firing positions depends on the rate of advance and the tactical situation. Coordination of artillery movement with attacking units is strongly emphasised over speed of movement. During deliberate attacks and assault operations up to three battalions of artillery could move forward in order to fire the preparatory fire. The artillery will not cross the line of departure and will have up to a company size manoeuvre element (normally brigade reserve forces) collocated with them for security reasons. They may also move the entire brigade to the line of departure and stop. The brigade would then continue with its mission once the artillery has established its position and is firing the preparatory fire.

f. *Occupation Times.*

Type of artillery	Occupation time	Move out time
SP artillery	30 - 35 minutes	15 minutes
Towed artillery	40 - 45 minutes	15 minutes

g. *Allocation*. ROWENIA has adopted the Soviet system of using units of fire to determine artillery round allocations.

h. *Target Acquisition.* Targets are acquired through reconnaissance, counter fire radars, sound ranging equipment and combat intelligence.

(1) Target Acquisition: Each corps artillery brigade in the army has a target acquisition battery. Each battery contains a sound ranging, artillery target acquisition radar and RPV assets.

(2) Reconnaissance: Divisional and brigade reconnaissance units will provide intelligence to brigade and division which the artillery units may use to target. Reconnaissance units do not normally communicate directly with artillery units.

0417. ***Types of Fire***. There are four types of fire: primary, direct support, general and non-divisional heavy:

a. *Primary Fire***.** Primary fire begins about one hour before the first attack echelon crosses the line of departure and will last from 45 minutes to 1 hr. Fire is initially directed at forward targets but once friendly troops cross the line of departure, fire is shifted to targets in the enemy's rear.

b. *Direct Fire Support.* Direct fire support is performed by brigade artillery battalions against enemy front line targets and is controlled by the commander of the brigade that the artillery is supporting. Each firing battery has between 3 and 8 targets that are assigned prior to the attack. Direct support fire begins as soon as the primary fire shifts to the rear of the enemy position. During an attack, the attacking unit will use its mortars in conjunction with the artillery. Once the attacking force gets to within 400 metres of the objective area the artillery fire shifts to the flanks and rear of the enemy positions while the mortar fire continues. The mortar fire shifts once the attacking force gets to within 100 metres of the enemy position.

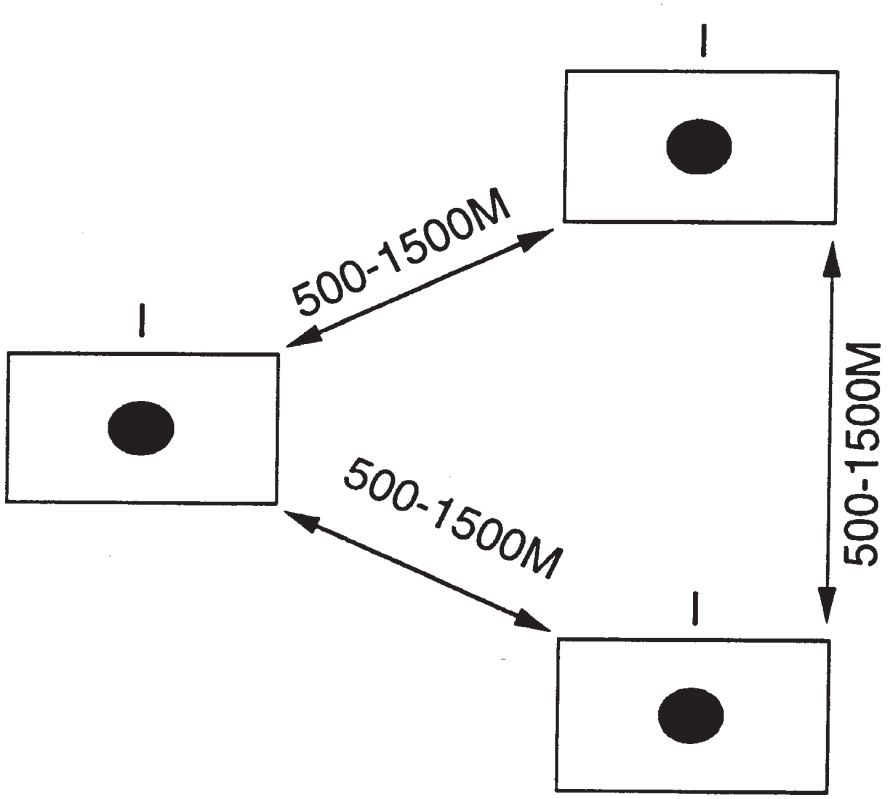
c. *General Support Fire.* General support fire is provided by the division and is normally used to support the divisional main effort.

d. *Non-divisional Heavy Fire Support.* Non-divisional heavy fire support consists of rockets and air support. Both are used primarily to attack the enemy rear; but MRLs have been used to deliver strikes at decisive moments in the battle. MRLs and FROG rockets are normally used after the assault has begun. Air strikes may take place prior to the attack and last until the battle is completed

0418. ***Target Priorities***. The chart below depicts normal targeting priorities during offensive operations.

Direct support	**General support**	**Corps support**
Anti-tank weapons	Division/brigade HQs	Artillery battalions
Observation Posts	Artillery batteries	Air defence sites
Infantry Positions	Battalion HQs	Logistic sites
Mortar Locations	Air defence sites	Choke points
Minefields	Reserves	Reserves
Reserves	Engineer units	

FIGURE 54. ARTILLERY DISPERSION



0419-0420. Spare.

0421. ***Engineer Operations.*** During offensive operations engineers have the tasks of engineer reconnaissance (identifying minefields and obstacles) and opening gaps for attacking units. The divisional engineer reconnaissance section will move with the division reconnaissance elements supporting the main effort of the division.

0422. ***Brigade Engineering Operations.*** During advance operations engineer reconnaissance will operate with the brigade reconnaissance and will assist in identifying routes and obstacles for the brigade. An engineer section consisting of one APC and a CEV will travel with the advance party and breach any hasty obstacles identified by the engineer reconnaissance section. An engineer company consisting of up to 2 assault platoons will travel with the main force. All assault engineer platoons have the same structure and can breach obstacles with line charges, with the CEV or by hand. During attack operations, the brigade engineer company may send up to a platoon forward to attempt to breach the enemy obstacle network. Bridging assets may be allocated to the brigade from the division.

0423. ***Opening Gaps.*** Engineers first open gaps in the minefields by clearing mines for advancing units. One 8-12 metre gap is required for each infantry unit, armour units requiring a greater width (15–35 metres).

a. Mine rollers and ploughs are controlled by division and allocated to the lead brigades prior to offensive operations. Each armoured brigade will receive up to 27x KMT–4 mine ploughs and nine KMT–5 plough/rollers. A mechanised brigade will receive up to nine KMT–4 mine ploughs and three KMT–5 plough/rollers. This means that each tank platoon will have a mine plough and each tank company will have a mine roller.

b. *Mine Clearance.* Minefields can be cleared manually with mine detectors and probes or through the use of counter mine equipment like ploughs (KMT–4 / 6), plough/rollers (KMT–5), and explosive line charges. Line charges can be both manportable and vehicular mounted (UR 67). The UR 67 is Russian made and will clear a lane 90 metres long and 6 - 8 metres wide. The standoff distance for the UR 67 is 150 metres. The manportable line charge is similar to the Bangalore Torpedo and is placed in the same manner.

c. *Fuel-air Explosives.* Fuel-air explosives (FAE) can also be used to clear lanes in mine fields. Both the blast and over pressure will detonate most mines. FAE can be delivered by rockets or fixed wing aircraft. FAE are not commonly used by ROWENIA.

d. *Minefield Gaps*. Larger gaps in minefields are required for general assaults. The time required to clear such paths varies with the situation, but engineer units are usually given the flexibility of one hour outside the designated time to accomplish their mission.

e. *Marking Minefields.* Minefields are marked with flags during the day and flares at night, with each attacking company having its own coloured flare.

0424. ***Air Defence.*** ROWEN forces use a variety of air defence weapons including missiles and guns that can provide a multi-layered and overlapping air defence umbrella. Currently they have the following SAM systems in their inventory:

SA-4 (GANEF)
SA-6 (GAINFUL)
SA-7 (GRAIL)
SA-8B (GECKO)
SA-9 (GASKIN)
SA-11 (GADFLY)
SA-12A (GLADIATOR)
SA-12B (GIANT)
SA-13 (GOPHER)
SA-14 (GREMLIN)
SA-15 (GAUNTLET)
M-48 (CHAPARRAL)

a. *Organisation.* The divisional Air Defence Regiment will allocate the majority of its assets to the attacking brigades. Each manoeuvre brigade will have one composite air defence battalion with ZSU 23-4 and SA-7.

b. *Disposition.* Primary air defence coverage will go to the HQs and artillery units. The SA-7 will be used to protect the attacking companies while the ZSU 23-4 will be responsible for protecting the artillery and unit HQs. The mobile SAMS are generally not pushed forward during attacks, but are brought up after the battle and positioned in the vicinity of the ZSU 23-4 and ZU-23 to protect HQs and artillery units.

c. *Early Warning System.* Corps and divisional air defence units have an early warning element with radars to detect enemy fixed and rotary winged aircraft.

0425-0429. Spare.

0430. ***Air Support.*** Air support operations are integrated into all aspects of ground operations. They consist of both rotary and fixed wing aviation support. (See equipment list).

a. ***Rotary Wing Support.*** GHQ controls rotary wing aircraft in ROWEN forces. Army aviation is responsible for providing helicopters for ground attack, troop transport, anti-insurgent missions and close air support.

(1) ***Command and Control.*** There is an aviation liaison officer at corps HQ to help plan and coordinate all requests for aviation support. He works closely with the corps operations staff and GHQ Air Defence

Controller in order to prevent fratricide. Forward Air Controllers may be available to help control attack helicopters.

(2) *Tactics*. Helicopters are used primarily in an offensive role, but they may be used in a defensive role as well. They are assets ROWEN uses to strike deep into the enemy's rear area. Attack helicopters frequently fly forward of the attacking forces and will work in groups of four as hunter-killer teams. Helicopters will use pop up tactics and fire in multiple directions. All helicopters will fly at least in pairs. Helicopters are also be used to insert special operations forces in the enemy rear as well as to move troops and supply laterally on the battlefield. Helicopters can be armed with guns and missiles. The HIND is equipped with AT-2 or AT-5 and Gazelle with HOT.

b. *Fixed Wing Support*. Fixed wing aircraft are integrated into ground force battle plans and they are used primarily for battlefield air interdiction. While ROWEN forces have limited numbers of modern aircraft, they can be expected to surge sorties early in a conflict. The sortie rate will drop off as attrition takes place because of limited repair and resupply facilities and expertise.

(1) *Command and Control*. All fixed wing aircraft are controlled by the ROWEN Air Force which will plan bombing missions, reconnaissance missions, troop transport, ground support missions and air interdiction missions. Corps can request air support through GHQ. Each corps will have Air Force liaison personnel that can work with corps commanders in requesting missions. Forward tactical air controllers will be well forward, controlling all ground support air operations.

(2) *Tactics*. Fixed wing aircraft are used primarily for battlefield interdiction. They also support ground forces if there are only a limited number of attack helicopters available. Battlefield air interdiction targets are normally lines of communication, command posts, troop assembly areas, logistic and industrial facilities. When battlefield interdiction missions are flown they will normally fly between 9,000 and 14,000 feet. The more experienced pilots will fly between 4,000 and 8,000 feet. When they fly a close air support mission, they will normally fly between 1,000 and 3,000 feet. Only the most experienced pilots will fly close air support missions. Fixed wing aircraft are also used to deliver chemical munitions.

0433. *Command and Control.* Command and control, at the tactical level, is achieved through the use of detailed plans and extensive rehearsals. Commanders at all levels are positioned well forward and will issue orders using radio.

a. *Secure Communications.* Most communications at divisional level and higher are done in the secure mode. Some command and control nets and artillery nets at brigade level may be secure.

b. *Land Line.* Land line communication is preferred if available. Land line is less likely to be used in the offensive. Although less flexible than radio communications, land line is reliable and more secure.

0434-0440. Spare

0441. *Logistics.* ROWEN forces are very concerned about logistics. They have shallow objectives so that they will not out-run their logistic tail. Resupply of food and ammunition is normally done at night through the use of MSRs and convoys. Vehicle maintenance is the weakest point in their logistics. They rely on recovering vehicles to the rear and do not repair forward. Most logistic assets are allocated from corps and division.

a. *Organisations.*

(1) *Corps*. The corps logistics area is divided into the transport area and the combat area. The combat area is the area from the forward line of contact to the corps main battle area, and the transport area is the area which extends back from the corps main battle area.

(2) *Division*. The division is divided into the rear administrative area (RAA) and the forward administrative area(FAA).

(a) *RAA*. The RAA is located in the divisional rear out of range of enemy artillery. The RAA will have a distribution point for each brigade in the division and a distribution point for any attached unit. Distribution points are dispersed, based on the deployment of the division. Distribution points will distribute ammo, fuel, food and equipment to the brigades. Maintenance workshops will also be located at the distribution points. The commando battalion will provide security for the units located in the RAA. An AAA battery or SAM battery (possibly both) will be located in the RAA to provide AD protection.

(b) *FAA.* The FAA is configured in a rectangle shape and will be located behind the the direct support artillery regiments. Each rectangle is divided into battalion areas which are further divided into areas which contain different classes of supply. The FAA receives its supplies from the RAA.

(3) *Brigade*. Each brigade will have an administrative area where the maintenance workshops, the supply and transportation company and the medical field unit set up.

(4) *Battalion.* Battalions will submit all of their requisitions to the division FAA. Battalions are responsible for transporting the supplies to their battalion area. Companies will move back and draw their supplies from the trucks.

c. *Stockpiles.* The ROWENs have three types of stockpiles; they are active stockpiles, combat reserves and repair stockpiles.

(1) *Active Stockpiles*. Active stockpiles are those which are intended to keep the units (division and below) moving for one day.

(2) *Combat Reserves*. Combat reserves are those supplies which are stockpiled in advance for combat operations.

(3) *Repair Stockpiles*. Repair stockpiles are those stockpiles which are used for repairing damaged or malfunctioning equipment. The following stockpiles are found in ROWEN units:

LEVEL	DAYS OF SUPPLY
Battalion	1 Day
Brigade	1-2 Days
Division	1-2 Days
Corps	3 Days
Total In Corps Area	6-10 Days
GHQ Trains Area	26-30 Days
Total In Theatre	32-40 Days

d. *Basic Load.* Each individual soldier will carry enough ammunition for one day. Each infantryman will carry 120 rounds of assault rifle ammunition. Each platoon, company, battalion and brigade will have a 5 day basic load. The ROWENs resupply their basic load daily.

e. *Artillery Resupply.* Artillery Resupply is conducted by trucks loaded with ammunition. These trucks move behind the attacking brigades.

f. *Fuel resupply.* Vehicles generally have a 250 kilometre on-board fuel capacity. The battalion and brigade can carry enough fuel for vehicles in the brigade to go another 150 kilometres. In addition, the division can carry enough fuel for the division to travel another 100 kilometres. This means that a ROWEN division can travel 500km without fuel resupply from corps.

g. *Vehicle Recovery and Evacuation.* In the ROWEN Army, armoured combat vehicles have priority for recovery and evacuation. Vehicles are recovered to the lowest appropriate echelon which can repair the vehicle. Damaged vehicles are categorised according to those vehicles which have sustained light damage, medium damage and heavy damage. All vehicles being evacuated to the rear will carry wounded soldiers.

0442-0450. Spare.

SECTION 2 – DEFENSIVE OPERATIONS

0451. ***General.*** Primary defensive operations are subdivided into hasty, mobile and deliberate. The hasty defence is used when the primary objective has been reached and when heavy losses have been taken and the offensive can no longer continue or when buying time for a deliberate defence to be established. The mobile defence is conducted by armoured and mechanised forces. When this type of defence is used, a posture of one up and two back will be adopted. The forward unit has the task of delaying the enemy so that the two remaining units can conduct counterattacks into the enemy's flank. The deliberate defence is used to retain ground and prevent penetration by the enemy. This type of defence is normally conducted by infantry with mechanised and armoured forces in reserve. Chemical weapons can be used in all three types of defensive operations.

0452. ***Hasty Defence.*** The hasty defence is used for the following reasons: To prepare for a counterattack, to prepare for continued offensive operations and to gain time to develop a deliberate defence. Units will also go into a hasty defence if they have reached their primary objective, or if they have suffered heavy attrition.

a. *Organisation*. The mechanised unit will establish a hasty defence on key terrain. The vehicles will be dug in to at least hull defilade and with more time, down to turret defilade. The unit will establish a screen line consisting of the brigade and battalion reconnaissance platoons. Hasty obstacles will be emplaced and will consist of wire and mines. The hasty obstacles will be in front of the individual companies and will be the base for the battalion's killing zone. The hasty defence will be established with two units up and one back. (See Figure 55)

b. *In Support of Offensive Operations*. If the hasty defence is for the purpose of furthering offensive operations or for a counterattack, another full unit (brigade or larger) will conduct a forward passage of lines through the hasty defence. The defending unit will then be reconstituted and held in reserve or be pushed forward for continued offensive operations. (See Figure 56)

c. *Delay*. If the hasty defence is for the purpose of buying time for the deliberate defence to be prepared, then the unit will actually delay through the main belt defence. (See Figure 57)

0453. ***Mobile Defence.*** The mobile defence is conducted by mechanised and armoured units when it is believed an attacking enemy can be destroyed. In this type of operation, one combat unit defends forward and two defend back in a hasty defence. The forward unit delays and disrupts the attacking enemy's momentum. An attempt is then made to get the attacking force to commit itself against the delaying force. Once the enemy is committed the remaining units

FIGURE 55. HASTY DEFENCE

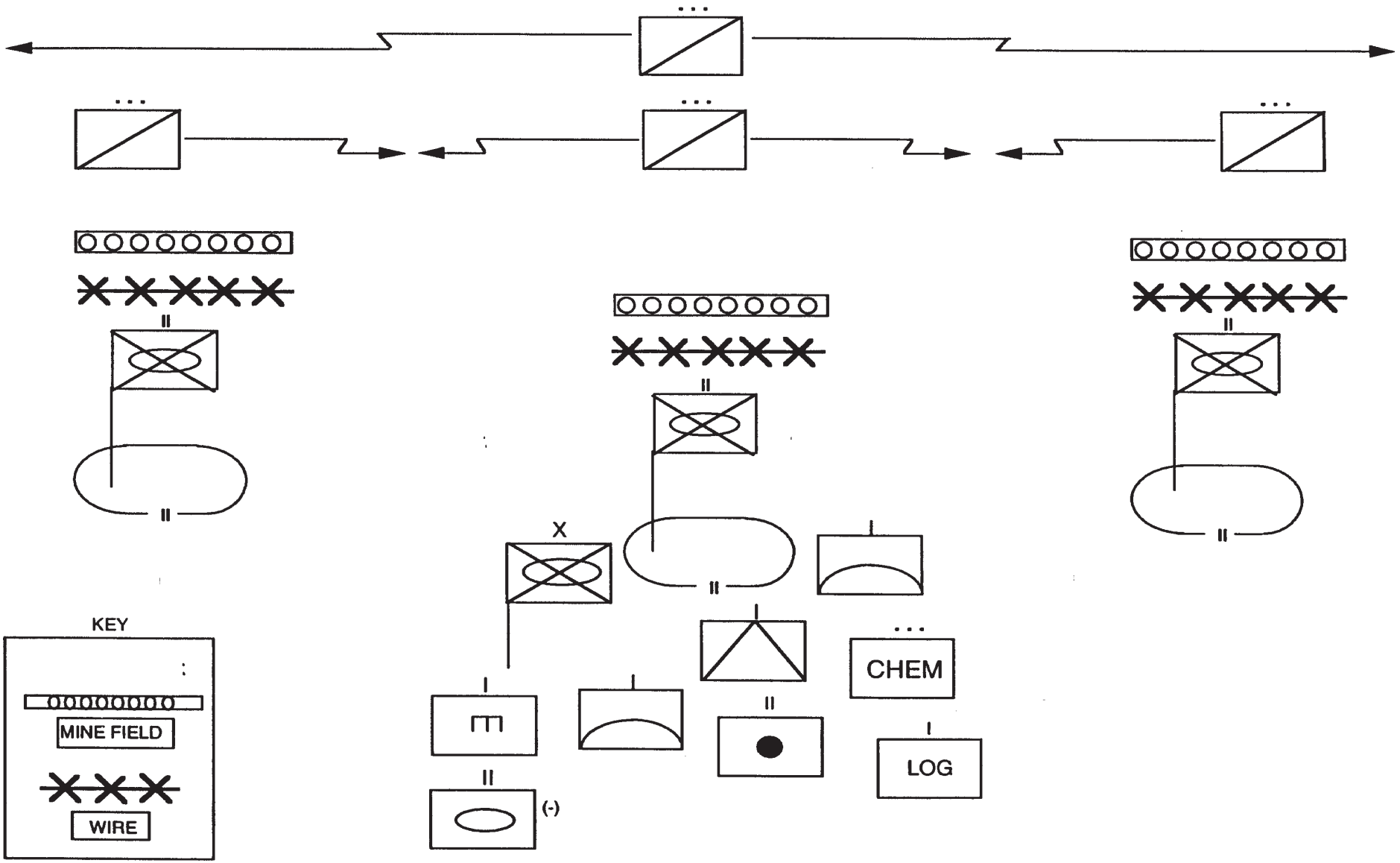


FIGURE 56. HASTY DEFENCE/FOR WARD PASSAGE OF LINES

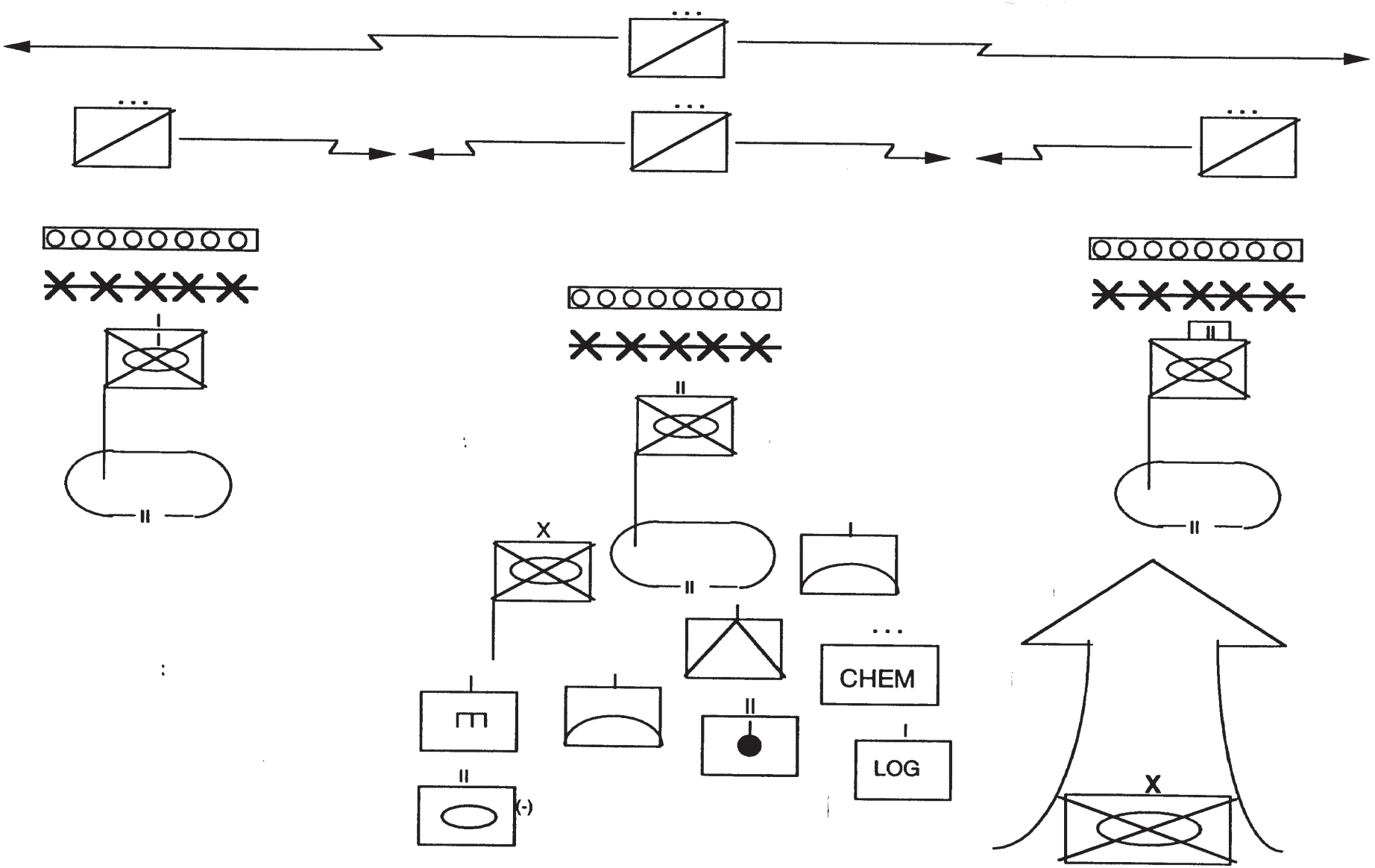


FIGURE 57. HASTY DEFENCE/WITHDRAWAL

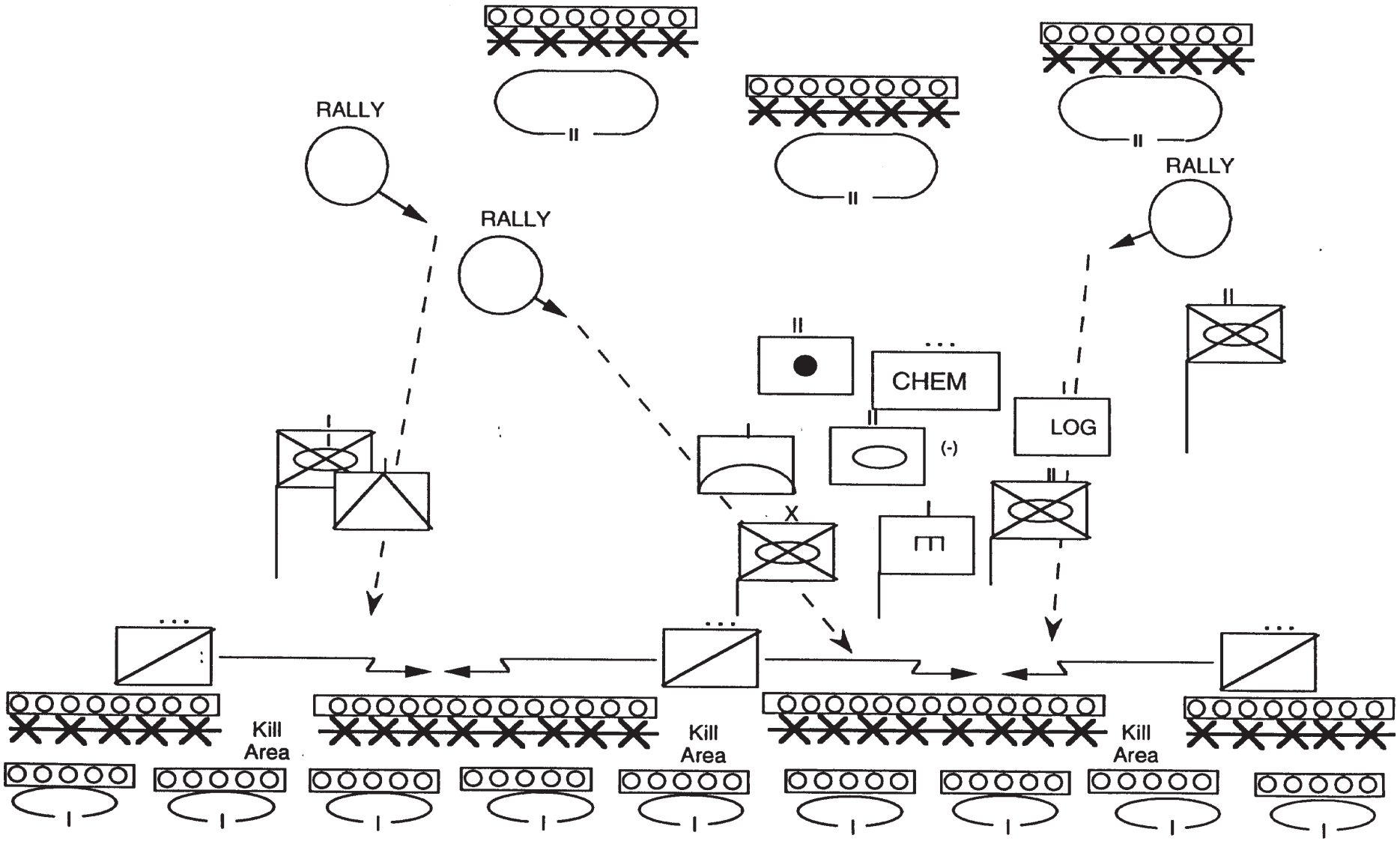
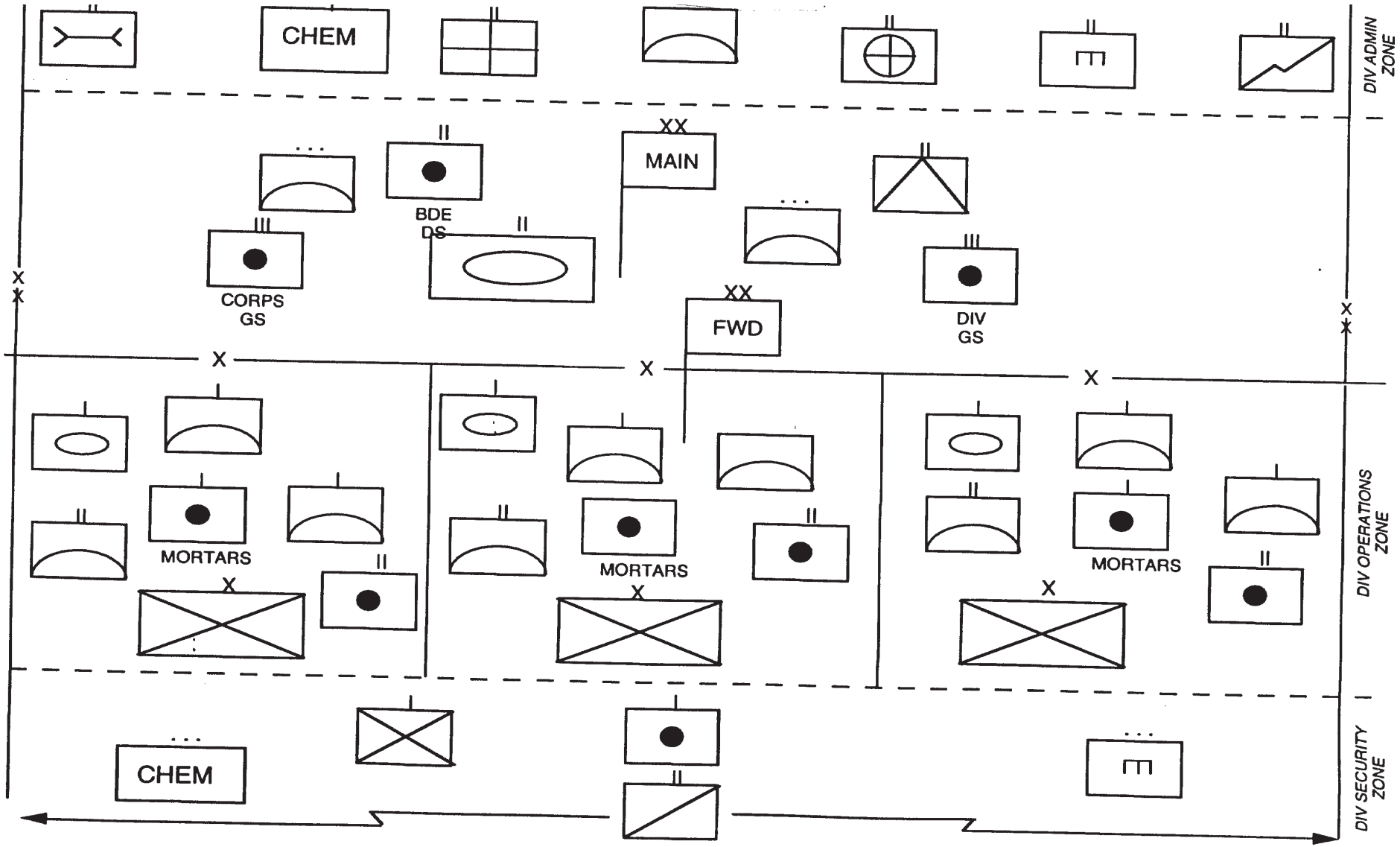


FIGURE 58. DIVISIONAL DEFENSIVE FRAMEWORK



will attack the flank of the attacking enemy. During the flank attack massive artillery strikes will be employed as will aviation assets in the direct fire support role. The mobile defence is also used when enemy forces have penetrated defensive positions and are attempting to exploit deep into the rear. In this situation, the division and corps reserves would conduct the mobile defence and attempt to destroy exploiting forces.

0454. ***Deliberate Defence.*** Infantry units are normally used in a deliberate defence, while mechanised and armoured units are used as mobile reserves. If mechanised units are used for a deliberate defence they will defend with two mechanised brigades up and an armoured brigade back. At the brigade level, that would mean that the three mechanised battalions would defend two up and one back, with the tank regiment either task organised and subordinated to the mechanised units, kept as a mobile reserve, or a combination of the two. The mechanised division conducting a deliberate defence is the exception rather than the rule. It will defend with two units up and one back or all three on line from the division level down to the company level. At the platoon level the sections are two up and one back. A deliberate defence will take at least 48 hrs to prepare. The priority of work for the engineers are revetments and then complex obstacles. If there is time the engineers will also lay additional obstacle belts.

0455. ***Frontages.*** The ROWENS will defend along the following frontages and depths:

LEVEL	FRONTAGE	DEPTH
Corps	90-160 Km	50-80 Km
Division	24-42 Km	20 Km
Brigade	8-12 Km	5-7 Km
Battalion	3-4 Km	2-3 Km

0456. ***Defensive Area.***

a. *Divisional Defensive Area.* The defensive area for an infantry division is divided into 3 distinct zones - security zone, operations zone and administrative area. (See Figure 58)

(1) *Security Zone.* The security zone is forward of the FLOT and is part of the operations area. The security zone for a division is approximately 8 kms deep. It is manned by a reconnaissance battalion reinforced with an artillery battery, an infantry company, an engineer platoon, a chemical defence and survey platoon and possibly a tank platoon. The engineers will put in a limited amount of obstacles along the main axes of approach. These simple obstacles consist of single strand concertina wire and hasty minefields. Berms, vehicle positions and tank ditches are not constructed in the security zone. The divisional reconnais-

sance battalion acts a screening force. It will fight only in self defence. Reconnaissance elements in the security zone will avoid decisive engagements with the enemy and are primarily concerned with identifying the enemy's main effort. The infantry company assigned to the security zone conducts patrols throughout the zone to prevent infiltration by the enemy. The tank platoon, if used, is mainly for morale purposes. The divisional commander has overall responsibility for the security zone force.

(2) *Operations Zone.* Defending brigades will be located in the operations zone. The brigades can defend on line or with two brigades up and one back. Forward brigades will have radio intercept units attached. The divisional forward Command Post (CP) is located with the centre brigade. The general support artillery regiment is located behind the forward brigades and positioned roughly in the centre. The mobile reserve is a brigade from another division that is attached to the defending division. The mobile reserve will be located behind the the defending brigade and is either a mechanised or armoured brigade that has its own supporting artillery battalion. The mobile reserve may be split if the division is defending across a wide or compartmentalised area. The division's main HQ will be located in the vicinity of the mobile reserve as are the AT and engineer battalions along with additional signal elements. The AT battalion may be split, with batteries attached to the forward brigades.

(3) *Administrative Zone.* The administrative zone is where the signal, medical, military police, supply and transportation, electrical and mechanical engineers and repair elements will be located. All of these units will be dispersed in an assembly area. The divisional reserve will be responsible for security in the zone.

b. *Brigade Defensive Area***.** This area is divided into three distinct zones: battalion operations area, brigade operations area and brigade administrative area. (See Figure 59)

(1) *Battalion Operations Area.* This is where the battalion's defence is established and is 2 km deep. All the battalion assets are located in the area, as is the brigade Forward CP.

(2) *Brigade Operations Area.* This is 7 kms deep and is located behind the battalion operations area. The brigade operations area is where the brigade direct support artillery, any attached artillery and the brigade's main CP are located.

(3) *Brigade Administrative Area*. This area is 1 km deep and is where the engineer company, supply and transport company and the chemical elements are located.

FIGURE 59. BRIGADE DELIBERATE DEFENCE

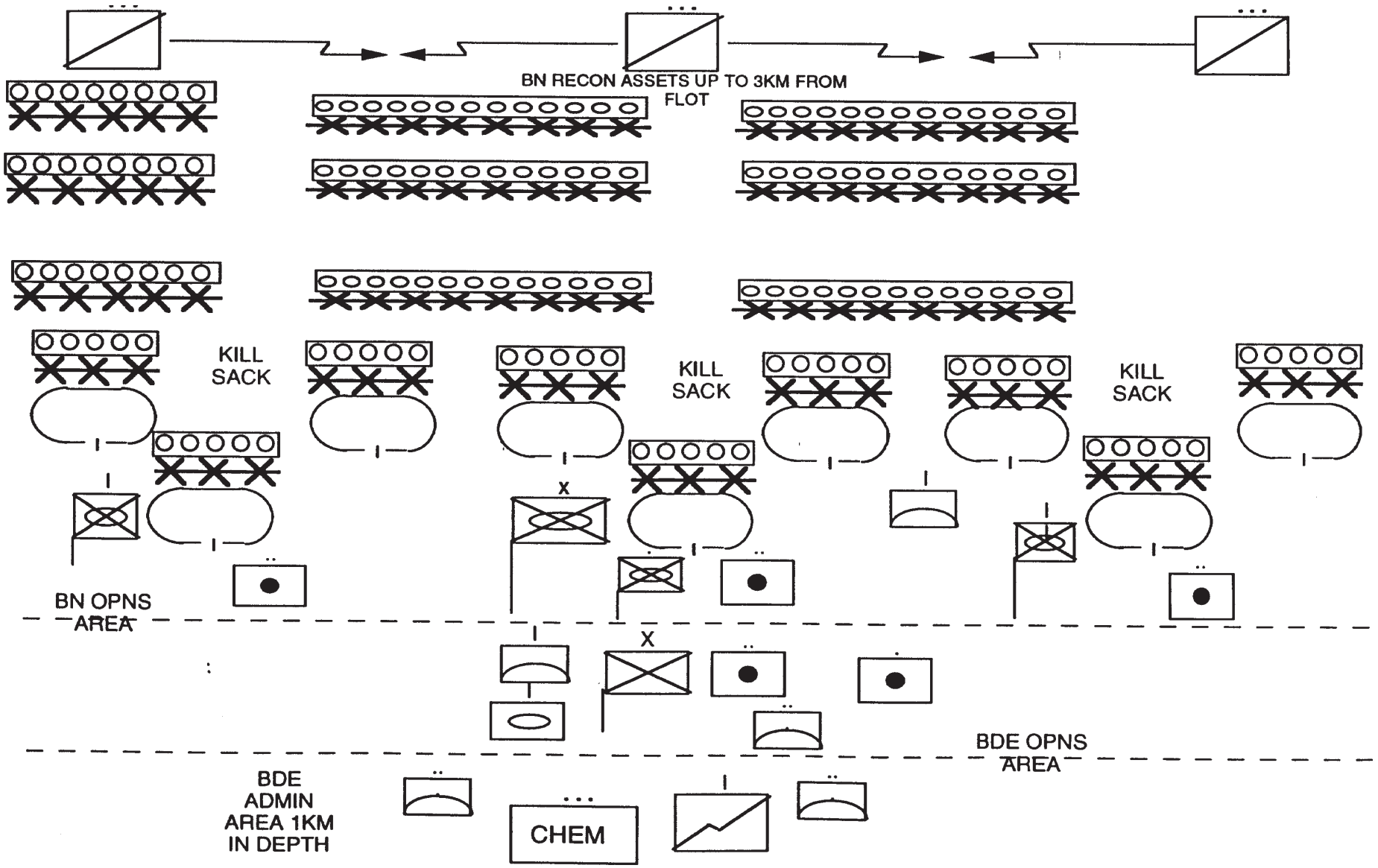
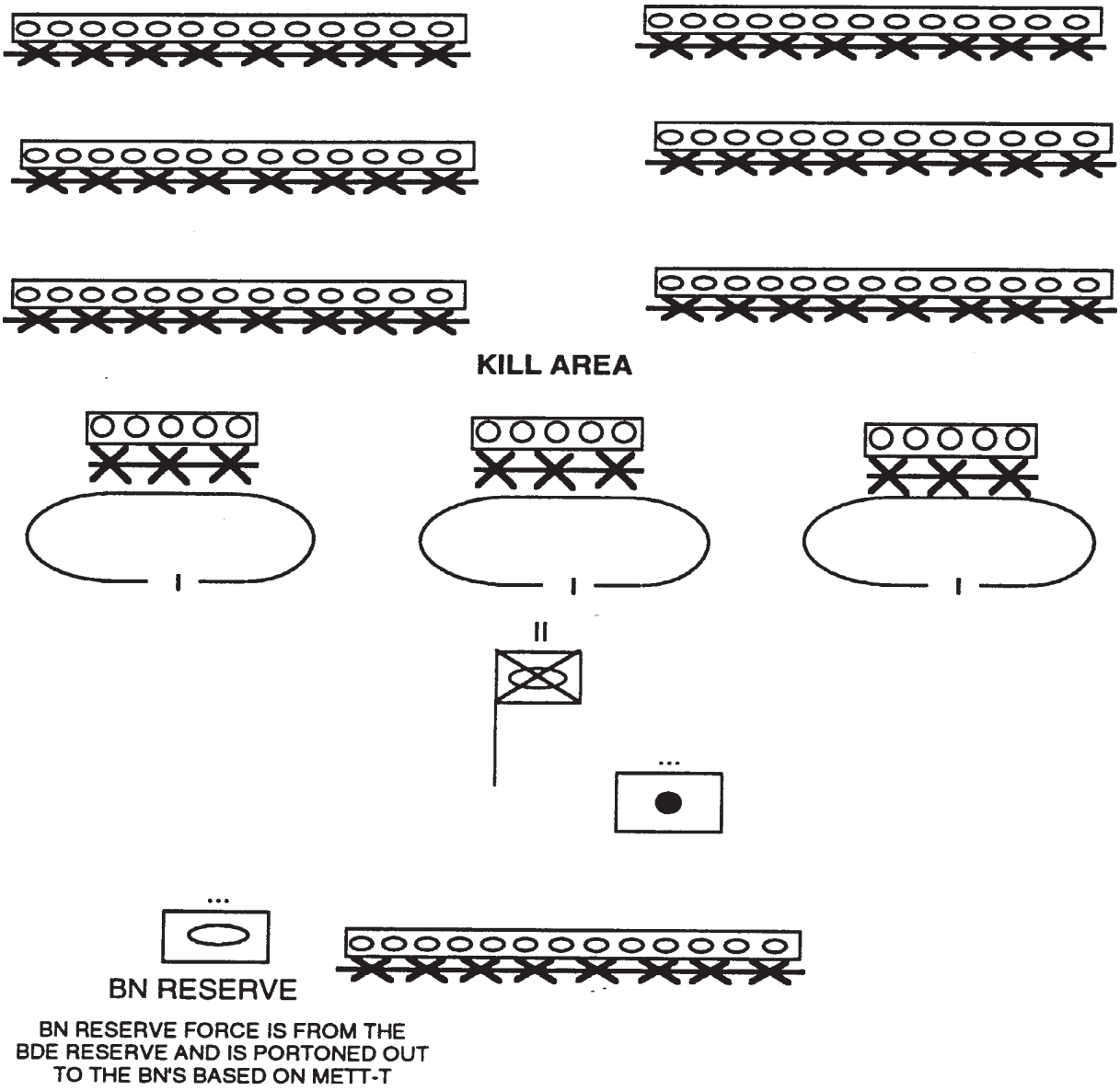


FIGURE 60. BATTALION DELIBERATE DEFENCE



0457. ***Development of the Deliberate Defence***. The deliberate defence comprises a number of elements:

a. *Security Zone and Battalion Reconnaissance.* The division will initially establish its security zone 8 km in front of the developing defence. The divisional reconnaissance battalion will establish its screen line in order to provide early warning of an enemy attack and to identify the enemy's main effort once the attack starts. The infantry company will conduct dismounted patrols along likely enemy dismounted avenues of approach. The engineers will put in a limited amount of obstacles along the main axes of approach. Berms, vehicle positions and tank ditches are not constructed in the zone. The battalion reconnaissance platoon will be screening up to 3 km in front of the developing defence. The reconnaissance platoon will play the major role in counter reconnaissance.

b. *Obstacle Belts.* While the security zone and reconnaissance units patrol, the brigades will begin to develop their positions and obstacles. The brigade will have the divisional engineers emplace a complex obstacle or tactical obstacle in front of the battalion/brigade. The complex obstacles will consist of berms, tank ditches and AT minefields. The complex obstacle will be 475 - 675 metres forward of the defence and be up to 275 metres deep. One or more rows of mines in the belt may be buried. The obstacle will normally run parallel to the defence. Tank ditches will be 2 - 3 metres deep and 2 - 3 metres wide. There will be 20 metre breaks in the belt that will canalise the enemy into the battalion's killing zone. If the brigade engineers have time, they will put in another minefield 2,000 - 2,200 metres in front of the defence. This minefield will be 100 - 150 metres deep. Minefields and obstacles will not be emplaced within the defence. All obstacles and mine fields will be forward of the defending units. ROWEN forces do not construct turning obstacles.

c. *Battalion Defensive Position.* At the battalion level, the defence is either two companies up and one back or all three companies on line. (See Figure 60) Each company in the battalion will have a protective minefield which forms the basis of the battalion killing zone. The AT platoon of the battalion is positioned in revetments based on the situation. The battalion relies on the AT platoon to provide coverage of its flanks.

d. *Company Defensive Position.* The company defensive position will consist of either three platoons defending on line or two platoons defending forward and one back. (See Figure 61) The company commander is located behind the centre platoon position when all three platoons are defending on line. When the company is defending with two up and one back the company commander is located with the rear platoon. In front of each company position is a protective minefield. The protective obstacle will consist of concertina and mines (predominantly AP). The minefields are normally 200 metres in front of the defending company and will be 75 metres deep. The protective obstacle is emplaced by the infantry company.

e. *Platoon and Section Positions.* ROWEN forces will defend with their infantry in forward trench lines unsupported by armoured vehicles. (See Figures 62-63) Each squad will dig five 2-man fighting positions with overhead cover that is flush to the ground and well camouflaged. The squad positions are connected by communication trench lines which are also dug by the infantry. The platoons will defend with two sections up and one back. The rear section may act as a reserve. In the event of a penetration the rear section will rush forward to reinforce the penetrated sector. The platoon leader is located in the vicinity of the rear section's position. Each platoon will have an OP up to 200 metres in front of their defensive position behind the protective obstacle. The OP will stay in this position throughout the battle. Each platoon is armed with three RPG-7s. Each section will have one RPG-7. The AT recoilless guns are located to the rear of the platoon position in order to make effective use of the weapons range. The platoon's AT weapons will have overlapping fire which covers the obstacle belt. Each platoon will have up to four revetments. Two of these can be occupied by ATGMs. The principle AT weapons are positioned in pairs in an attempt to provide maximum coverage. The other two are for tanks in the event that the enemy's main effort is in their sector.

f. *ATGM and AT Weapon Systems.* ROWEN forces will use long range anti-armour weapons to cover the tactical obstacles, while the protective mine fields are covered by final protective fire, automatic weapons and RPG-7s.The anti-armour weapons are used to form a layered anti-tank defence. The base of the layered defence are the RPG-7s which will cover the protective minefield. The recoilless anti-tank guns are the second layer and they will reach out to the complex minefield (or second obstacle belt). The third layer is the ATGM systems which range out to and beyond the third obstacle belt. The longer range AT systems also provide protection to the flank of the positions, especially where there are gaps between the battalions and companies. The ATGM systems are positioned in their revetments as they are dug. The weapons are positioned in pairs in an attempt to provide maximum coverage. Each battalion will have three ATGMs from its AT platoon and three ATGMs from the reconnaissance platoon (once the platoon withdraws through the defence). Additional ATGMs can be allocated the battalions from the brigade and division.

g. *Reserve Forces.* The brigade will receive from division a tank company from the division's tank battalion to use as a reserve force. The brigade will normally maintain control of the majority of the tanks. At most, the brigade will attach a platoon of tanks to one of its battalions for use as a a battalion reserve. The brigade and battalion reserve forces are kept in hide positions behind the defensive positions until the enemy's main effort is identified. Once the main effort is identified, the tanks will move to the point of the enemy's main effort, occupy revetments and augment the layered anti-tank defence. The division's mobile reserve is a brigade that is attached to the division from another division. The mobile reserve will be held back until the enemy forces have begun to exploit a penetration of the main

FIGURE 61. COMPANY DELIBERATE DEFENCE

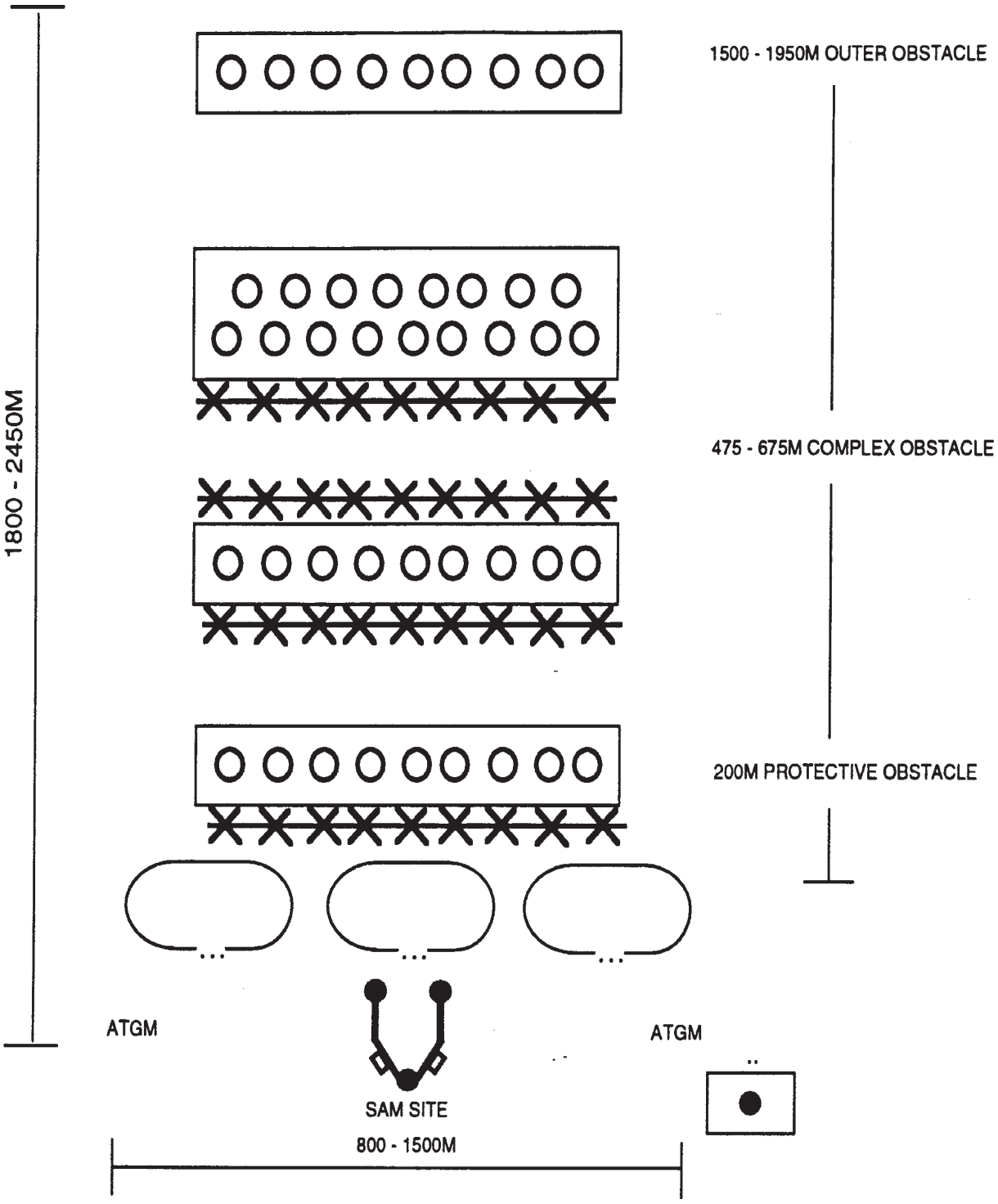


FIGURE 62. PLATOON DELIBERATE DEFENCE - STANDARD

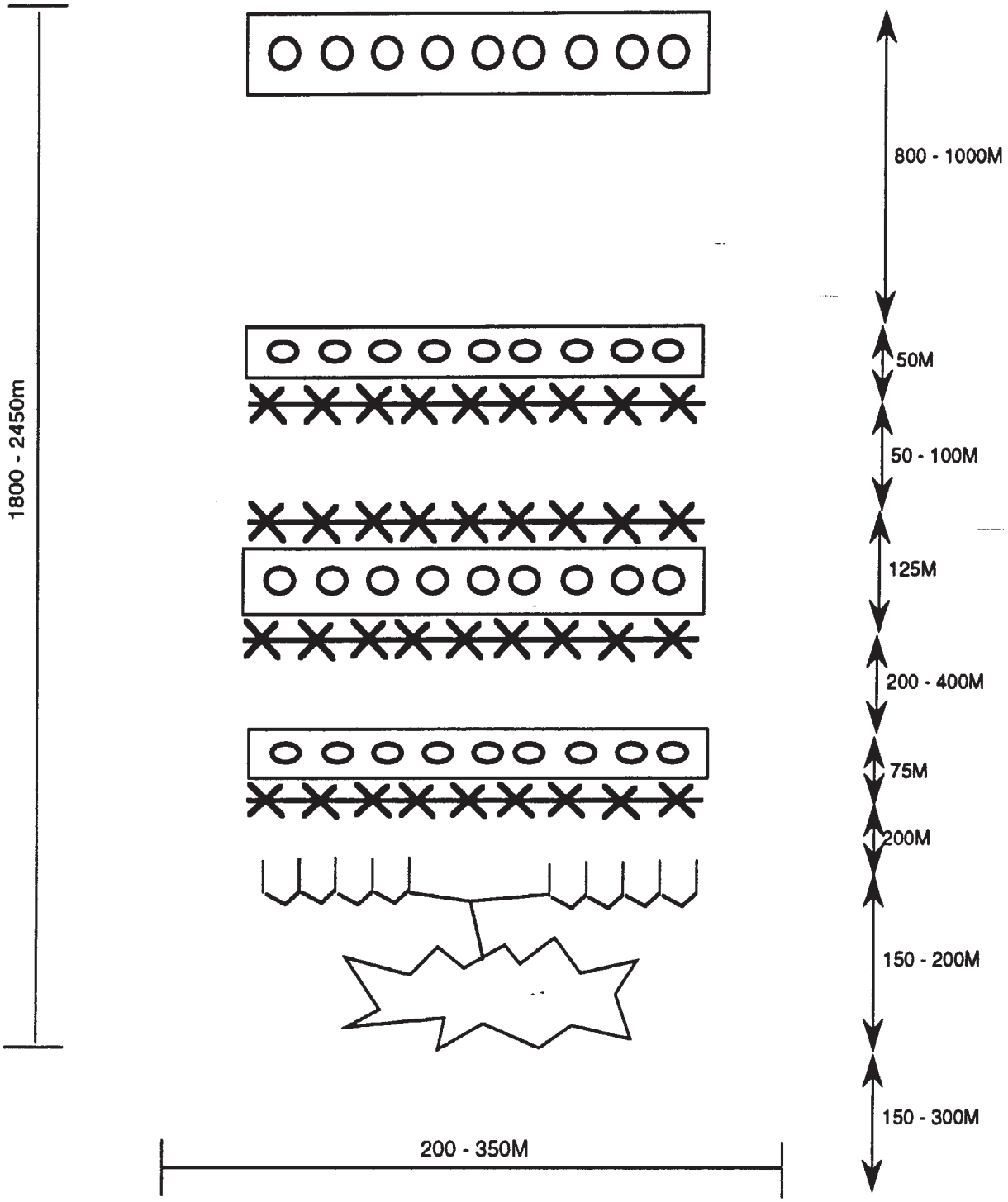
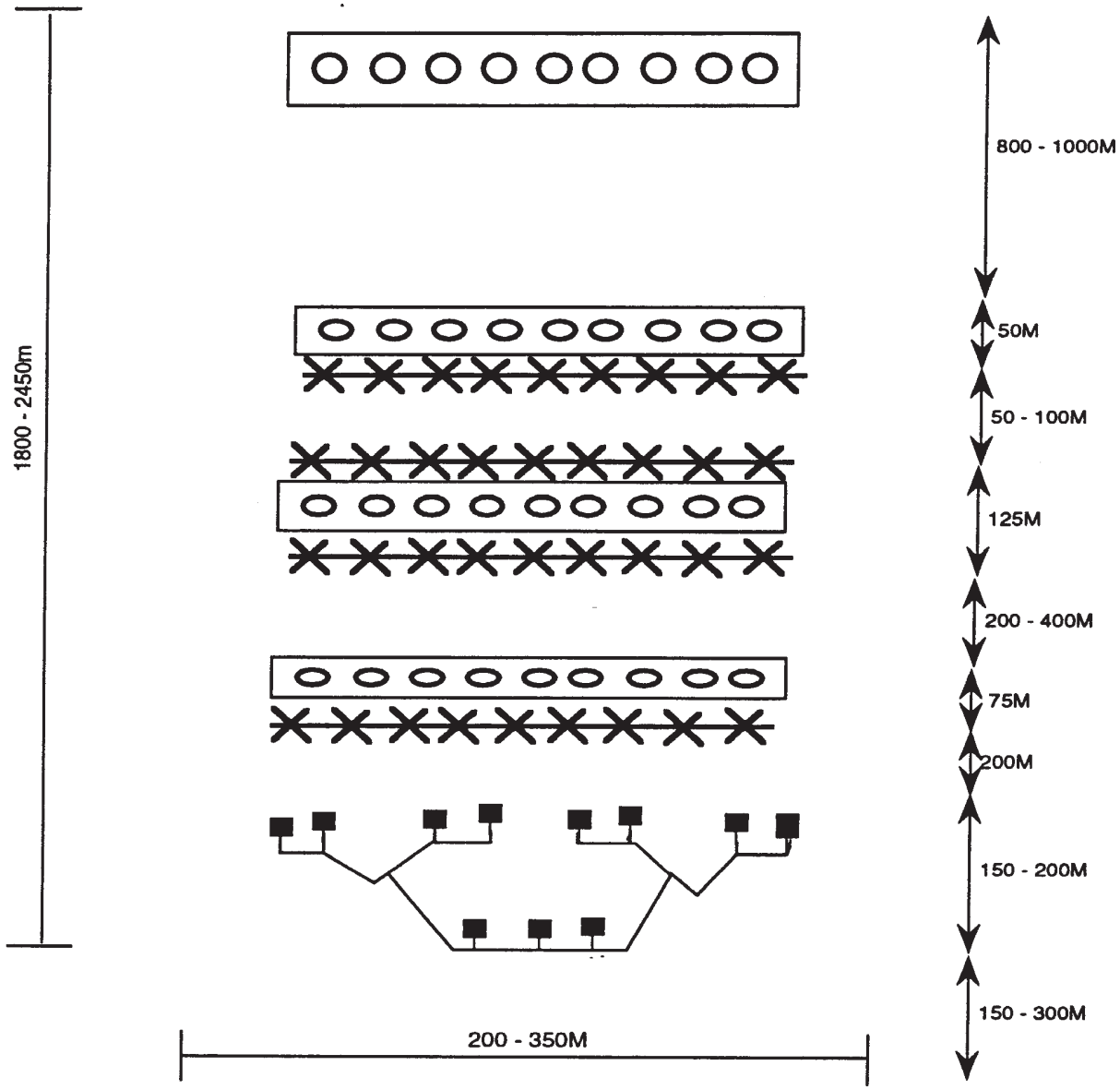


FIGURE 63. PLATOON DELIBERATE DEFENCE - MODIFIED



defensive belt. The mobile reserve will rehearse moving to pre-determined blocking positions. The mobile reserve may be split if the division is defending along a large frontage. The mobile reserve also has the mission to identify and rehearse movement to possible enemy heliborne sites behind the main defensive positions.

0458. ***Conduct of the Deliberate Defence***. The deliberate defence has three distinct parts:

a. *Security and Battalion Reconnaissance Withdrawal.* The security zone begins to withdraw once the main attack of the enemy force is identified and the divisional reconnaissance battalion is able accurately to identify the main effort of the attacking enemy forces. The infantry company, engineer section, chemical section and artillery battery will initially withdraw through the obstacle belt followed by the divisional reconnaissance battalion. The elements that were in the division's security zone will return to their parent organisation. The division's reconnaissance battalion will establish flank screens. The battalion reconnaissance platoons will fight the counter reconnaissance mission. They will attempt to destroy any enemy reconnaissance forces which come into the battalion's sector. As the enemy force advances towards the defensive position, battalion reconnaissance elements will attempt to identify the enemy's main effort in the battalion's sector and then will withdraw through the main defence prior to becoming decisively engaged by the enemy force. Once through the defence the platoon will establish flank screens.

b. *Enemy Approaches the Obstacle Belts and Breaches.* ROWEN will use artillery fire to engage the enemy before they reach the outer obstacle belt. They will engage the enemy with direct fire weapons as he enters the outer obstacle belt and artillery fire will increase. They will fire large volumes of ATGM weapons as much for effect as for target destruction. Priority targets for the ROWEN are breaching equipment and tanks. They will attempt to separate the tanks from the infantry units. The anti-tank recoilless gun will engage targets that enter the complex obstacle belt. The ROWENs will attempt to achieve at least a mobility kill on enemy tanks. Once the enemy main effort is identified, the reserve tanks will move to the revetments at the point of the enemy's main effort. The tanks will augment the ATGM systems with a quick kill capability. Should the enemy forces establish a breach or widen the gaps in the complex obstacle belts, the ROWEN forces will have the option to fire non-persistent chemical agents on top of the attacker, while the armoured element will act as a reserve and will rush forward to reinforce the penetrated sector. Upon penetration, forces may be moved from units on the flanks, not in contact, and from the rear, in order to strengthen the defence. Movement may be by foot, truck or helicopter. If the brigade's defence is in jeopardy, the commando company will be pushed forward to reinforce the threatened area. Once the trench line has been completely overrun, a persistent agent may be fired onto the position.

c. *Mobile Reserve is Committed*. On order of the division commander the mobile reserve will be committed to a pre-determined blocking position to stop the exploiting enemy force. Infantry units will then attack the shoulders of the penetration as heavy artillery and air attacks continue attrition of the attackers within the salient. When the mobile reserve is committed, all available artillery will be used to support the mission. The divisional commander can also request additional aviation assets from corps to assist in stopping the penetration. If the mobile reserve cannot stop the attacking enemy forces, the corps reserve will be committed.

0459. ***Night Defence Operations.*** Generally, ROWEN forces do not continue attacks at night. Normally, they would go into a hasty defence (if they have been attacking) just prior to last light and establish security. They will use the hours of darkness to resupply combat units.

a. *Tactics.* ROWEN forces are always prepared to defend their positions at night. Patrolling at night by reconnaissance units will increase and ground surveillance radars (GSR) will be set up to detect vehicle and personnel movement. Each divisional reconnaissance battalion has up to six GSRs which are normally placed on avenues of approach. The companies will send out patrols to insure the integrity of the obstacles. The air force will also fly SLAR mission to prevent a surprise attack by the enemy. All mortars and artillery pieces are capable of firing illumination rounds. If the enemy attacks at night, ROWENs will fire illumination rounds behind the attacking enemy.

b. *Equipment.* Night vision equipment is discussed at 0412.b.

0460. Spare

0461. ***Fire Support.*** ROWEN fire support is integrated into combat operations at all levels.

a. *Mission.* Revetments will be constructed for the artillery. In defence, artillery will be used primarily to destroy AT weapons, attacking troops, artillery and CPs. Artillery fire is divided into four categories for defensive missions. These are counter battery, long range, short range and direct fire. Chemical munitions may be used on any target and in each category.

(1) *Counter Battery*. The division general support and corps general support units will initially fire counter battery missions until the enemy crosses into the security zone.

(2) *Long Range.* Long range fire will be used against identified assembly areas. It is fired primarily by the divisional support artillery regiment and the corps general support artillery regiment (if present), but can be fired by the brigade direct support artillery if necessary.

(3) *Short Range.* The brigade direct support artillery regiment, the light artillery regiment and battalion mortars will use short range fire on the enemy once they have crossed into the security zone. These missions will continue until the enemy is defeated.

(4) *Direct Fire.* Artillery will be used in the direct fire mode in the event of a penetration of the defensive position. Each gun normally carries four AT rounds.

b. *Command and Control.* The artillery brigade commander will be collocated with the divisional commander to facilitate the coordination of artillery missions. The artillery communications structure is at illustrated at Figure 64.

c. *Allocation.* ROWEN have mainly adopted the Soviet system of using units of fire to determine artillery round allocation

d. *Target Acquisition.* Targets are acquired through reconnaissance counter fire radars, sound ranging and combat intelligence.

(1) *Acquisition Battery.* Each corps artillery brigade in the army has a target acquisition battery. Each battery contains sound ranging, artillery target acquisition radar and RPV assets.

(2) *Reconnaissance*. The divisional reconnaissance battalion in the security zone and the battalion reconnaissance platoons will provide intelligence from brigade and division which the artillery units may use to target.

e. *Positioning.* Artillery positioning depends on the type of artillery support available (Direct Support or General Support). Additionally, the density may vary, depending on the tactical situation.

(1) *Direct Support***.** The direct support artillery regiments will be positioned 5-7 km behind the defending brigade. Direct support artillery will be under the control of the defending brigade commander.

(2) *General Support*. The general support artillery regiment will be positioned 5-10 km behind the defending brigades. General support artillery will be under the control of the divisional artillery officer. General support artillery will fire the majority of the counter battery missions and long range missions. General support artillery will support the mobile reserve once it has been committed.

(3) *Density***.** Density depends upon the tactical situation, Normally each artillery regiment needs 150 metres square for deployment, with 150 metres between batteries. Batteries are deployed in groups of three, two forward and one back.

f. *Types of Artillery Ammunition.* The ROWENs possess High Explosive (HE), chemical, smoke, surface-scatterable mines and illumination ammunition. Surface-scatterable mines are laid only by artillery, and all artillery that is 152mm and larger can deliver these munitions. Minefields are 400 metres by 400 metres and are normally low density with a mixture of AT and AP mines. Mines may be laid once the enemy has breached a tactical obstacle in order to seal the breach.

0462. ***Engineer Operations.*** Engineer operations are conducted at all levels and are integrated into all battle plans.

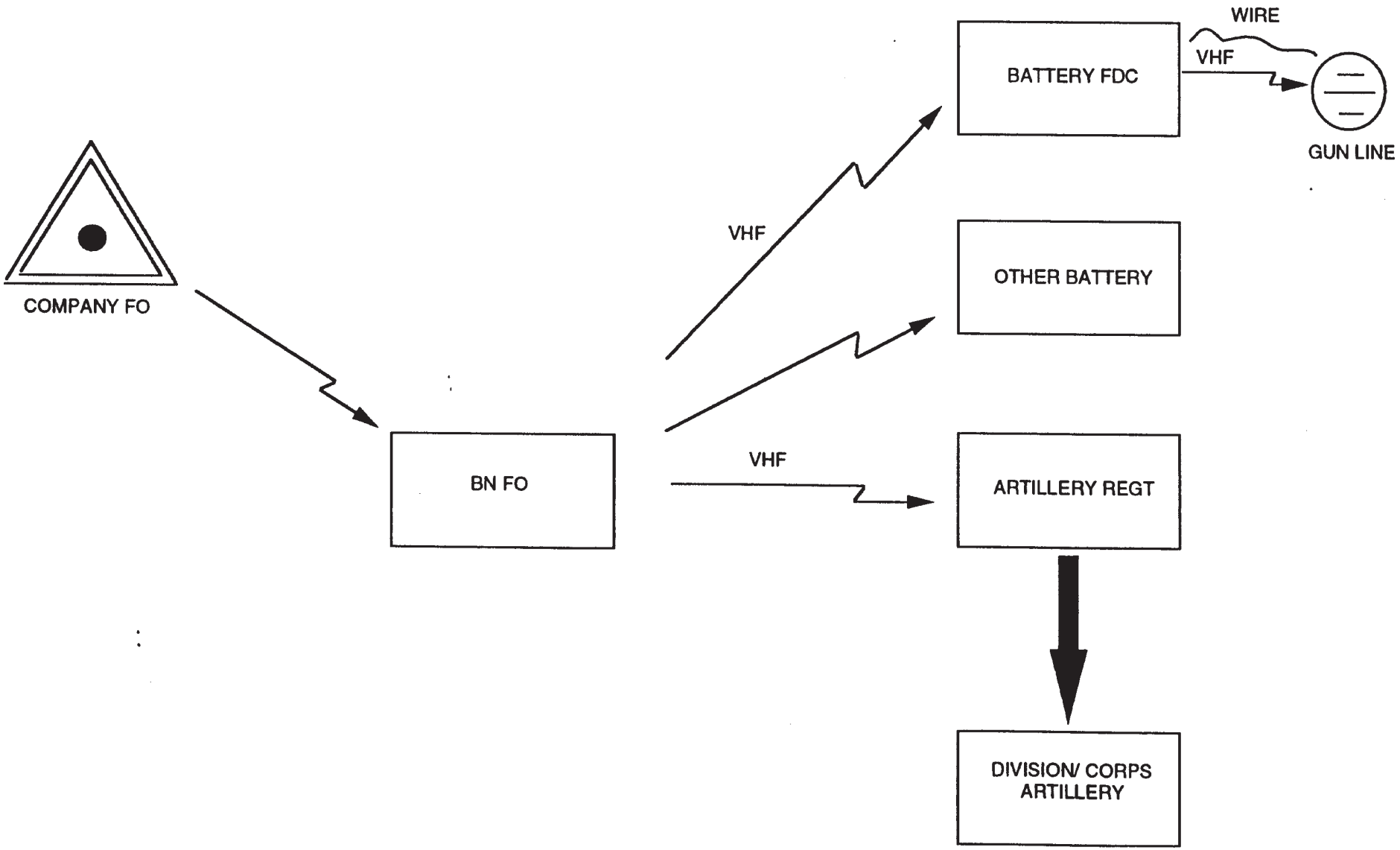
a. *Priorities.* During a deliberate defence the divisional engineers will initially construct revetments for the tanks and then work on constructing berms and tank ditches forward in the complex obstacle net. The initial time estimate for establishing a deliberate defence is 48 hrs. Should engineers have more time, they will also construct dummy positions once the obstacle network and revetments are completed. Dummy positions may be for tanks, air defence artillery and command and control elements. The divisional engineers also construct revetments for artillery. The priority of work during a hasty defence is for protective obstacles. If more time is available, they will improve existing obstacles and begin to dig revetments for vehicles.

b. *Obstacles and Minefields.* The defence will be supported by tactical and protective obstacles. These obstacles are designed to slow, disorganise and canalise the enemy forces. The minefields are intended to break up the enemy's assault and strip away the infantry's supporting armour.

(1) *Protective Obstacles*. These will consist of concertina and mines. The protective minefields are normally up to 200 metres in front of the defending units and 75 metres deep. Infantry companies are responsible for establishing these protective obstacles.

(2) *Tactical Obstacles*. These will be complex and consist of berms, tank ditches, and predominantly AT minefields. Up to 50% of the mines may be buried. The tactical obstacles will be 475 - 675 metres forward of the defence and be up to 275 metres deep. These obstacles normally run parallel to the defence and will be laid by divisional engineers. Tank ditches have been 2-3 metres deep and 2-3 metres wide. There will also be 20 metre breaks in the belt that will canalise enemy forces. If the divisional engineers have time they will put another minefield 1,500 - 1,950 metres in front of the defence. This minefield will be 100-150 metres deep and consist of only AT mines and one or more rows may be buried. Mines will be emplaced in rows with 5-6 metres between mines and 15-20 metres between rows. Minefields or obstacles will not be emplaced within the defence. All obstacles and mine fields will be forward of the defending unit. Turning obstacles are not constructed.

FIGURE 64. FIRE SUPPORT COMMUNICATIONS NET



c. *Fortifications.* Engineers will construct revetments behind the defending platoons for tanks and AT systems. Tanks and AT systems may occupy these revetments once the main effort has been identified. The revetments will allow the tanks to fight from hull defilade. If time permits, engineers will assist in the construction of the trench lines.

0463. ***Air Defence.*** (ROWEN AD systems are described at 0424.)

a. *Organisation.* The divisional air defence brigade will normally allocate the majority of its assets to the defending brigades. Each brigade will have one composite air defence battalion with ZSU 23-4 and SA-7. The divisional artillery brigade will receive a composite battery.

b. *Disposition.* Primary air defence coverage, when defending, will go to HQ elements and artillery units. The SA-7 will be used to protect the defending companies while the ZSU 23-4 will be responsible for protecting HQ units. The mobile SAMs, if fielded, are positioned in the vicinity of the ZSU 23-4 in order to help protect the HQs and artillery units. SA-7s attached to the battalions will be allocated to the forward company. This company will have two SA-7s dug in behind its company position. (See Figure 65) The position is in the shape of a 'V' and comprises two SA-7s plus four additional rounds per launcher.

0464. ***Air Support.*** The essential difference in the use of air support in support of ground attacks are that attack helicopters will work in groups of four as hunter-killer teams to engage the attacking troops. Helicopters will use pop up tactics and fire in multiple directions. All helicopters will at least fly in pairs. They will be used to transport troops laterally on the battle field, especially after a penetration has occurred. Helicopters can be armed with rockets,machine guns and missiles.

0465. ***Command and Control.*** Each echelon from battalion to division will establish a Forward CP and a Main CP. The commander and fire support officer will be found in the Forward CP. Communications between the divisional main HQ and the divisional forward are conducted on a command net and also on artillery unit frequencies. Secure communications will be used between division and corps. Wire will be the primary communications mode at brigade and below, supplemented by messenger, pyrotechnic signals and radio.

0466. ***Logistics.*** The logistics system is unchanged in the defence.

0467-0470. Spare

0471. ***Withdrawal Operations.*** The ROWENs conduct two types of withdrawal operations, they are the deliberate delay and hasty withdrawal.

a. *Deliberate.* The ROWENs will conduct deliberate delay operations when offensive operations have been stopped or they have extended their lines

of communication and supply beyond their means. The delaying force will attempt to buy time for a follow-on element to establish a deliberate defence by using delaying actions. Chemical weapons are likely to be used. When a division uses a deliberate delay it will keep the divisional reconnaissance battalion screen forward. The brigades will send their reconnaissance companies to reconnoitre the subsequent positions. (See Figure 66) The reserve brigades will then withdraw to the subsequent position as the front line brigades delay the enemy force. The front line brigades will then delay around the subsequent or intermediate defensive position. This action is repeated until the division has passed through the security zone of the infantry division which has established a deliberate defence to their rear. The delaying division will then go to the corps rear area to rearm and refit for future operations. Throughout this operation artillery would be used to disrupt the momentum of the advancing enemy forces.

(1) *Method.* Figure 67 illustrates how ROWENs will conduct a deliberate delay operation. The brigade's reconnaissance company will reconnoitre the subsequent position. The battalion reconnaissance will make initial contact with the enemy forces and begin to withdraw without becoming decisively engaged. The brigades will be in a hasty defence and will use artillery assets to engage the enemy early, as part of the deep battle. As the enemy forces continue their movement towards the hasty defence, the ROWEN brigades will begin to conduct delay operations. The reconnaissance elements will transition into a moving flank screen while the manoeuvre elements maintain direct fire contact with the advancing enemy, without becoming decisively engaged.

(2) *Specified Delay.* The only time the ROWENs become decisively engaged is when they have a time criteria in which to delay the enemy. In this type of operation, they will hold their positions at all costs to buy the necessary time needed for a deliberate defence to be established. Specified delay is usually conducted when they have been unsuccessful with offensive operations.

(3) *Subsequent Positions.* ROWEN brigades will use alternate or subsequent bounds to move back to positions which have already been reconnoitred. Artillery support will be provided from the brigade's attached artillery assets as well as from the infantry division which is establishing a deliberate defence. They will attempt to maximise the effects of artillery in order to disrupt the momentum of the advancing enemy. The ROWEN brigades will continue delaying action back to the security zone of the deliberate defence. The brigade commander will determine the locations of the positions based on the developing situation and may incorporate an economy of force operation, especially when the brigade has an extremely large sector. Once the brigade has reached the security zone each battalion in the brigade will move to a rally point. From these, each battalion will travel on a specific route and conduct a rearward passage of lines through the security zone

FIGURE 65. SAM MANPACK DEFENSIVE POSITION

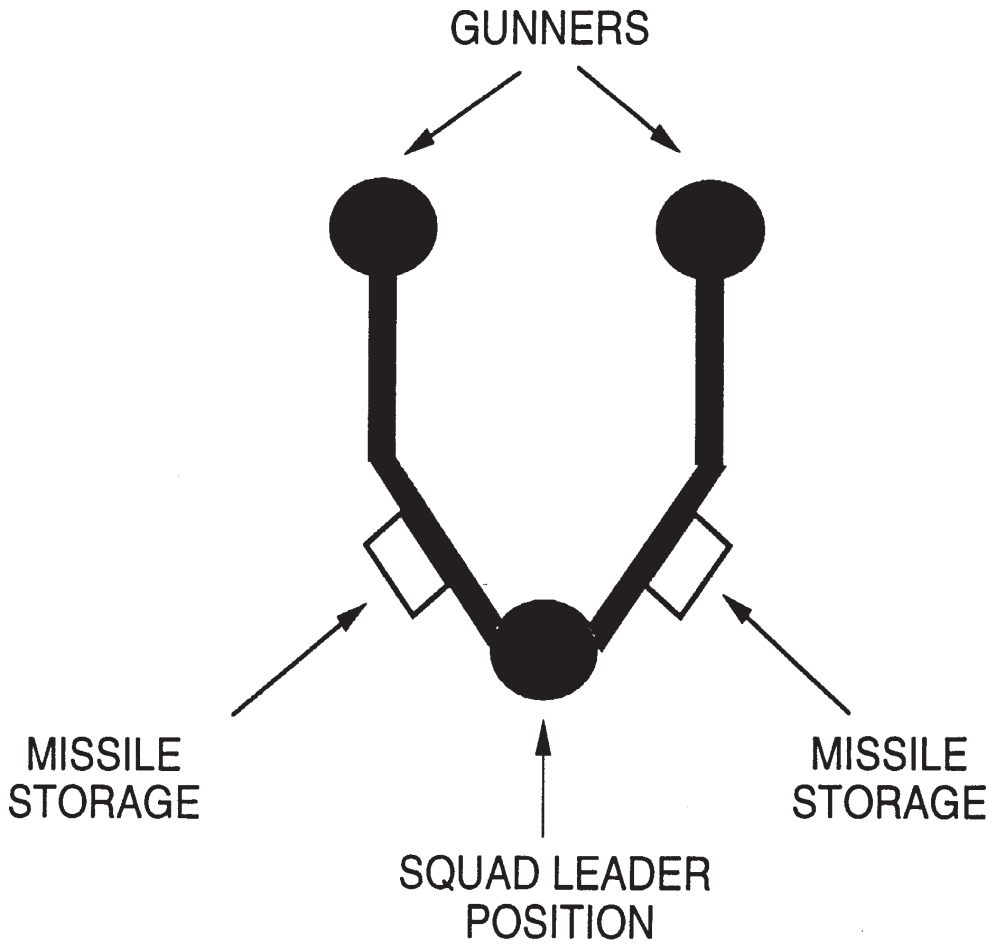


FIGURE 66. DIVISION DELIBERATE WITHDRAWAL

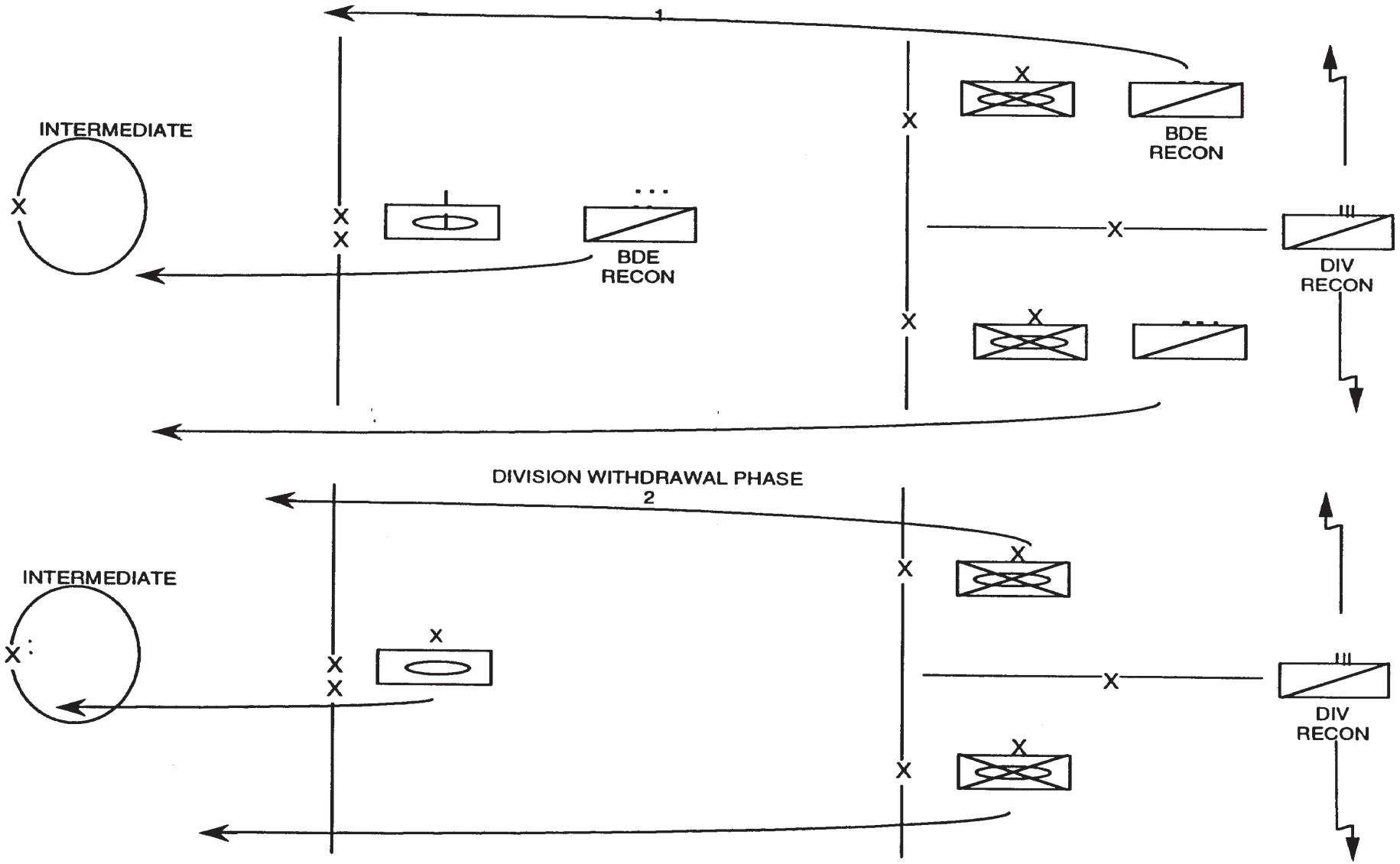
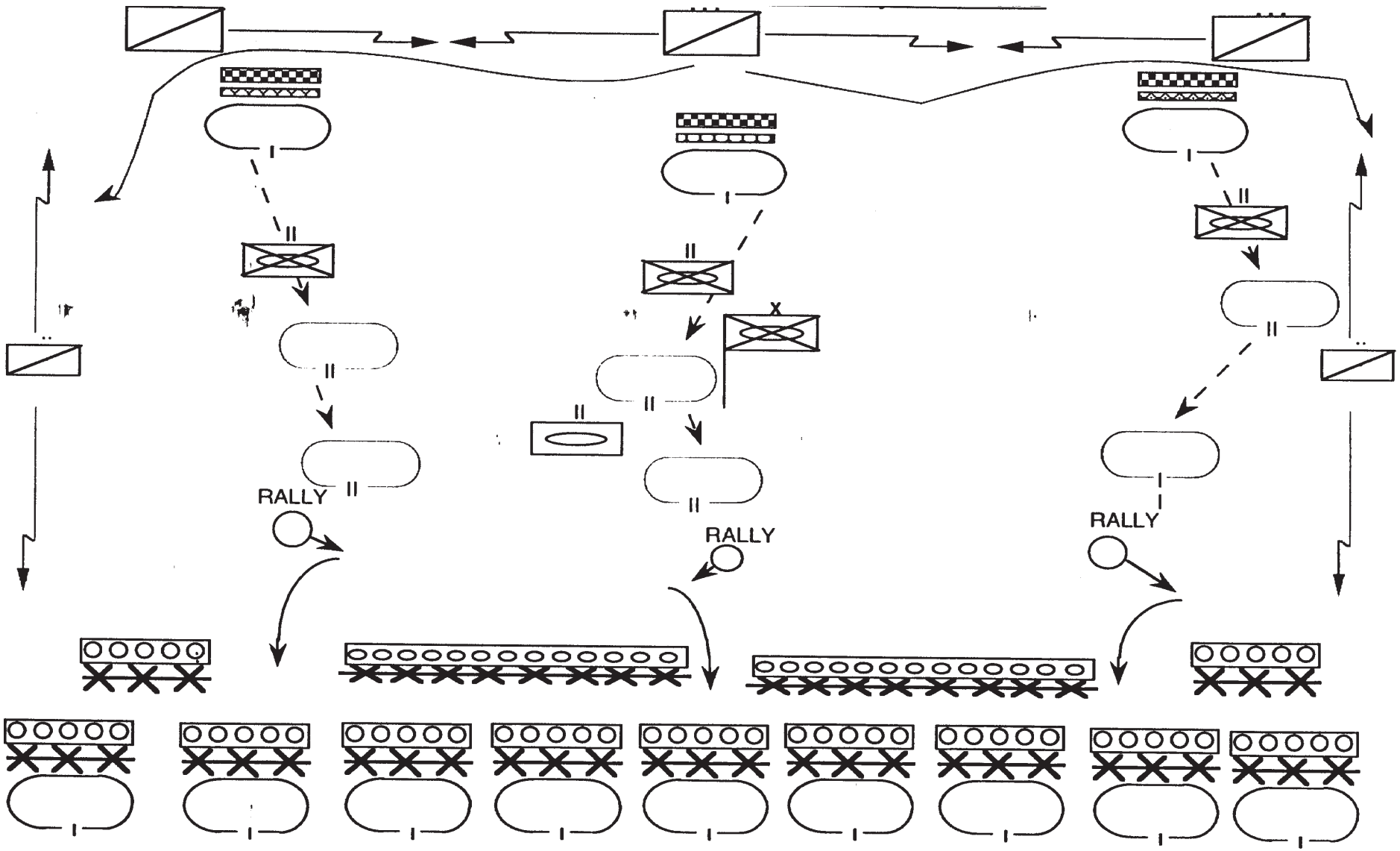


FIGURE 67. BRIGADE DELIBERATE WITHDRAWAL/DELAY



and the deliberate defensive position. The actual battle hand over will take place when two-thirds of the delaying force has passed through the security zone. Once the rearward passage of lines has taken place, the brigades will move to the Corps rear area to rearm and refit for future offensive operations.

(4) *Delay Out of Contact.* Even if the brigade is not in contact with the enemy forces, it may still be ordered to delay. In this situation (enemy contact not expected), each battalion will establish a rally point. The battalion will link up their elements at the rally point and then conduct a tactical movement back through the deliberate defence. Once the brigade has completed its rearward passage of lines, they will go to the corps rear area to rearm and refit for future operations. This type of withdrawal operation will normally take place at night.

(5) *Delay from a Deliberate Defence.* The ROWENs have also been known to conduct delay operations from a deliberate defence. This technique is rarely used and is based on a mechanised unit being in a deliberate defence.

b. *Hasty.* A hasty withdrawal is conducted when a unit is being overrun. Described as simultaneous, the total unit moves to the rear. In a hasty withdrawal each battalion, and sometimes each company, is on its own as it attempts to withdraw back to friendly units. During a hasty withdrawal, the ROWENs have been known to become separated from their parent brigades and either surrender en mass or establish staunch defensive positions on key terrain.

0472-0480. Spare

SECTION 3 – SPECIALIST OPERATIONS

0481. ***General***. The special operations division of the ROWEN armed forces was formed in 1988. It brought all the elite units under one central control. The division comprises commando, jungle warfare and mountain infantry brigades. Battalions from the commando and mountain infantry brigades have served with the United Nations in Europe and in Africa and have impressed UN observers with their professionalism. However, they were accused of brutality in Central Africa and the ROWEN High Command has decided not to send troops to support future United Nations' operations.

0482. ***Commando***. Commando raider battalions are specialised light infantry units. They are trained primarily in infiltration techniques, airborne assault operations, desert ,swamp and mountain warfare.

a. *Mission*. Their missions include raids, ambushes, deep reconnaissance, seizure of key terrain, and swift reinforcement of forces in threatened sectors. Commando battalions will conduct air assault operations up to 50 kms

from the FEBA. However, most air assault objectives are within the range of corps artillery. Commando units will only seize corps objectives on the axis of the main effort. Units will have also been known to employ platoon-size elements behind the enemy's defences in order to attack command and control and key logistic facilities. Although night operations are possible, most operations are conducted during daylight with link-up with heavy forces expected within three to four hours.

b. *Organisation and Equipment*. Commando units have the same organisation as infantry units. Basic weapons include machine guns, assault rifles, anti-tank missiles, RPGs and shoulder-held surface-to-air missiles.

0483. ***Mountain Warfare.*** The mountain warfare brigade of the ROWEN armed forces special operations division is a light infantry element organised as per the ROWEN order of battle. The mountains in ROWENIA impose many natural limitations on march and reconnaissance activities such as poor roads, undulating terrain, and severe and changing weather.

a. Mission. Operating in the mountains the brigade has specially trained and equipped individuals and units whose primary mission is to conduct surprise mountain-based attacks against a manoeuvring enemy.

b. *Organisation and Operations.* Depending upon the terrain and situation, personnel in mountain operations are organised into several echelons. The infantry company is used as the base echelon with attachments of artillery, engineer, and chemical personnel as necessary. The success of mountain operations depends largely upon how well personnel can deal with inherently difficult physical conditions during mountain movement; critical considerations include march speed, march distance, and rest periods during marches.

(1) *March Speed*. March speed is determined by terrain conditions, equipment carried, march techniques, degree of training, and weather. March hours per day are 7 to 8 hours for normal marches and 9 to 10 hours for forced marches.

(2) *March Distance*. The march distance depends upon the degree of incline to be negotiated. For a roadway with an incline of less than 10 degrees, 2 to 3 kph is the norm. In ascending a mountain with an incline of over 20 degrees, one should expect only 300 to 350 metres of vertical distance per hour; in descending a mountain with a decline of over 20 degrees, the norm is 600 to 700 meters of vertical distance per hour. A lower speed of march for individuals and a 10 to 15 km spacing between company echelons is required in the mountains. In order to increase the march speed while reducing fatigue, personnel take shorter formation moves in prescribed, measured phases.

(3) *Rest Period*. The long rest period during a mountain march is the same as it is under other conditions. Short rest periods vary with the degree of incline. For ascents of up to 10 degrees, there will be a 10 minute rest after 50 minutes of march. Similarly, for 12 to 20 degree ascents, there should be 10 minutes of rest after 20 minutes of march. In general, for ascents of more than 10 degrees, a short pause of 3 to 5 minutes is taken after a 15 to 20 minute march.

c. *Reconnaissance.* Operations in the mountains offer distinct advantages as well as disadvantages for reconnaissance; these include:

(1) High peaks to ensure long-range surveillance.

(2) Defiles which can be secured.

(3) Weather conditions which favour the ambush.

(4) Limited roads which may hinder reconnaissance ability.

(5) Numerous obstacles which limit movement.

d. *Reconnaissance Elements*. The reconnaissance force is composed of the reconnaissance main body, reconnaissance teams, reconnaissance scouts, and forward scouts.

(1) *Main Body*. The reconnaissance main body ranges in size from a reinforced company up to a battalion. It may be augmented with tanks, artillery, armoured vehicles, engineers, and chemical personnel as necessary. It operates one day's march forward from the remainder of the forces. The area of operation is 2 kilometres wide for the company and 6 to 8 kilometres for the battalion.

(2) *Reconnaissance Team*. The reconnaissance team ranges in size from a reinforced platoon to a company, depending upon the number and type of attachments (e.g., engineer, signal, and weapons squads). It operates to within 3 kilometres of the reconnaissance main body during the daytime, while at night it must operate to within 1 kilometre; on the other hand, it may be within 12 kilometres (by day) and 3 kilometres (by night) of the enemy's security line or zone.

(3) *Reconnaissance Scouts*. The reconnaissance scouts operate as squads (comprising one or two squads) to within 600 metres (by day) or 100 metres (by night) of the reconnaissance team. The forward scouts operate as two- or three-man teams within 300 metres (by day) and 100 metres (by night) of the reconnaissance scouts.

e. *Constraints*. Forests, hilltops, defiles, and ravines impose severe restrictions on mountain reconnaissance operations. Movement of a reconnais-

sance main body through a densely forested area, for example, requires additional prior reconnaissance missions. When roads or open spaces are traversed, personnel should make visual contact with the enemy, whereas only audible contact is necessary in thicker vegetation. The reconnaissance main body ambushes any large enemy force it encounters in forested areas; it captures, rather than fires on smaller enemy groups. Relief also imposes restrictions on mountain reconnaissance operations. Scouts search cross-compartmented type hilltops before the main body advances. For corridor-type hilltops, the scouts conduct a search operation along the slopes of the hills as they advance ahead of the main force.

f. *Reconnaissance of Defiles*. When conducting reconnaissance of defiles and ravines, the reconnaissance main force positions itself at the entrance of the valley while the scouts carry out a thorough search of the valley and hilltops. After the main force receives a signal from the reconnaissance element which has occupied a point on the hill that gives a clear view and field of fire far into the valley, it will move along one side of the valley.

g. *Command and Control.* Mountain combat takes place over an extensive frontage with many small, dispersed units; therefore, decentralised control over independently operating units must be maintained while the mission is being accomplished. The commanders maintain close surveillance over their units in order to conduct successful mountain combat. They locate themselves as near to the front as possible; See below:

Unit Commander's OP	Distance from front
Company	*50-100 m*
Battalion	*100-150 m*
Brigade	*300-500 m*

When organising communications, commanders establish links with independent elements in depth, and with units outside fire support ranges. Units use wire communications whenever possible; they place them over the shortest distance possible after completion of reconnaissance. Using a compass or azimuth plot, personnel place wires 50 to 100 metres from the road through the trees.

h. *Rear Security.* Rear security personnel are well organised and well equipped, but radio communications are the primary links in the mountains. Using directional antennae to increase range, personnel set up radios on high ground to avoid low-level interference. Mobile communications may be used in the form of infantry troop messengers, messengers on horseback, ski troops, or trained dogs. Light signals complement these other means, using intermediate rebroadcast sites as required.

i. *Offensive.* The basic combat goals of the mountain offensive are to pass around the enemy's flank, to penetrate the enemy's rear after circling around, and to attack with all resources. To mount a successful attack, commanders will:

(1) Utilise the strength of the division in the main attack.

(2) Avoid the frontal attack of a hilltop and employ encirclement techniques.

(3) Use infantry companies and battalions as basic attack units.

(4) Use continuously massed artillery fires.

(5) Emphasise use of infiltration units.

(6) Expand engineer support.

j. *Preparation.* Battalion commanders prepare for the offensive by carrying out a thorough reconnaissance, preparing to outflank the enemy, by being ready for ambushes, establishing reserves of ammunition, and by preparing for the use of special equipment (ropes, clamps, pitons, ladders, and block and tackle). Company and platoon commanders carry out extensive reconnaissance, select targets for suppression or destruction, preselect fire bases, evaluate encirclement routes, decide the sequential movement of bases and plan for the use of smoke. The direction of the attack will depend upon the situation. Usually, the main attack will be directed along a road or corridor terrain towards the objective and any high points along the way will be used to assist in command and control. Frontages will vary with the terrain (incline, difficulty of traverse, and degree of slope). The attack frontage for a battalion is 1,000 to 3,000 metres; for a company, it is 500 to 1,000 metres.

k. *Echelons.* In offensive combat, there normally are two echelons; the organisation of these two echelons is the same as that for any other operation. The size of the reserves for these forces are shown below:

UNIT	RESERVES
Brigade	*1-2 Companies*
Battalion	*1-2 Platoons*
Company	*1 Section*

When an attack is made along a narrow valley, three equal echelons are used with the third echelon acting as the reserve.

l. *Tailored Artillery.* The artillery used in offensive mountain operations is tailored to provide maximum decentralisation of control while maintaining a high level of support. Accompanying artillery normally locates near the Command Observation Post (COP) or on a hill under the supported unit's control. Large-calibre artillery, under the control of the manoeuvre unit commander, provides general support to the entire area of operations. Related supply points, vehicle parks, and areas where artillery is deployed receive reinforcing AAA support.

m. *Coordinated Fire Support.* All artillery fire during the attack will be coordinated with tank fire and mortars organic to the infantry companies. Mortars are especially effective in mountain operations because of their high trajectory. Artillery units may be separated into platoon or separate gun groups when terrain dictates. Artillery may be used in a direct fire role to conserve ammunition and to maximise results. When fire is implemented during the offensive, the majority of the artillery and mortar fire is used to suppress the upper portion of the hill. Independent guns, mortars, and heavy machine guns provide covering fire for the infantry assault on the lower portion of the hill. After destroying the enemy at the lower level with a frontal assault, fire is shifted to the middle portions. When possible, part of the attacking force will by'pass and encircle the enemy for an assault from either the flank or from the rear; artillery fires are shifted to support the attack.

n. *Areas of Extreme Relief.* In an area of extreme relief, where manoeuvre is difficult, only lightweight equipment and essential firepower will be transported. Units use long-range communications to maintain contact with higher headquarters. One independent scout squad is detached up to 1,500 metres forward.

o. *Defence.* In the mountains, there are numerous ways to by'pass defensive positions by taking advantage of terrain conditions; therefore, strong points are organised on or near hilltops, obstacles are constructed, and firepower is oriented to enhance defensive capabilities. When planning for a battalion defence, the following tactics apply:

(1) *Direct Fire*. Site direct fire weapons over the approach route by placing organic defences on forward slopes.

(2) *By'pass*. Where possible the enemy will be by'passed and then attacked from the rear.

(3) *Indirect Fire*. Organic firepower will be used in the high-angle role up the hillside.

(4) *Flanking Firepower*. Flanking firepower and intersecting fires are routine defensive tactics.

(5) *Obstacles*. The use of concealed weapons and obstacles along approaches is normal.

p. *Fire Support Plans.* The fire support plans should coordinate indirect weapons fire, organise fire in all directions, and set up a reserve of ammunition and hand grenades. Plans include anti-tank fires on the forward slope to cover obstacles which may slow down approaching tanks and also include measures to counter the enemy's attempts to by'pass and outflank friendly locations.

q. *Strong Points.* The battalion defensive strong point is located on a hilltop with connecting ridge lines; there are also company and platoon strong points linked to the battalion. Reconnaissance and security elements set up obstacles between these strong points. These obstacles reinforce the effectiveness of natural barriers. Locations for such obstacles include roads, defiles, approach routes, open spaces between strong points, and key locations to the flanks and rear of strong points.

r. *Execution of Defence.* The execution of the defence includes using terrain advantages to divide the enemy into small groups; conducting a counterattack with reserve units when necessary; using close-range, direct fire artillery in mountain passes; and positioning independent guns on flanks and rear slopes. Reserves are positioned in the direction of the anticipated main attack of the enemy.

0484. ***Jungle Warfare.*** The jungle warfare brigade of the ROWEN armed forces is a light infantry formation that is completely self-contained for extended operations. The brigade was formed from some commando battalions and airlifted to fight in a jungle environment. Its primary role is counter insurgency; however, it is trained and equipped to fight well armed troops should the need arise.

a. *Offensive Operations.* The offensive operations that ROWEN jungle infantry units are most likely to conduct in a jungle environment are movement to contact and reconnaissance in force.

(1) *Movement to Contact*. A movement to contact is used to gain or regain contact with the enemy, and to develop a situation. It serves as the first stage of operations against an enemy force which has not been located, and normally ends in a meeting engagement.

(2) *Reconnaissance in Force*. A reconnaissance in force is employed to force the enemy to react so that friendly elements can develop information about the enemy by discovering his location, disposition, and intent. It is used when other means of gaining information about the enemy are not available.

(3) *Hasty and Deliberate Attacks*. Hasty and deliberate attacks are conducted in much the same manner as they are in conventional terrain. The techniques, however, may differ due to the jungle environment, especially the strict application of control measures in controlling ma-

noeuvre elements in the thick jungle vegetation. Attacks will normally be conducted on narrow frontages due to limited visibility.

b. *Mounted Movement.* When moving in the jungle, either cross-country or along roads, ROWEN jungle infantry move in multiple columns on as broad a front as possible. The lead elements are usually preceded by an aerial route reconnaissance. Indirect fire support must be closely coordinated and immediately available, as contact is often violent and without warning. Close air support and attack helicopters provide another responsive means to react to enemy contact.

c. *Dismounted Movement.* When in contact, or contact is anticipated, the troops dismount and fight on foot. The weapons on the APC will provide fire support for dismounted elements .

d. *Reconnaissance by Fire.* Movement in the jungle carries with it the prospect of ambush at any time. Reconnaissance by fire is a technique that is used to decrease this danger. In this technique, lead elements engage suspected or likely enemy locations with automatic weapons as the unit moves. The enemy is then forced to move or return fire.

e. *Movement to Contact***.** Mounted movement to contact in the jungle is characterised by deliberate use of travelling overwatch and bounding overwatch. The overwatch positions will be closer than in other areas, due to the vegetation and terrain. Contact with the enemy will usually be made at close range (within 200 metres); therefore, automatic weapons should be kept well forward. Frontal, flank, and rear security may be established mounted, but more often should be provided by dismounted elements. The security elements are rotated frequently to prevent fatigue.

f. *Reconnaissance in Force.* When conducting a reconnaissance in force, an infantry unit may have lead elements conduct a mounted movement to contact. At likely ambush sites along the route, however, these elements will dismount and patrol. These patrols are normally conducted by a platoon's manoeuvre element. The carrier teams, usually with two men in each, will overwatch the manoeuvre element. They can be called forward when required.

g. *Deliberate Attacks.* Deliberate attacks in the jungle are usually conducted dismounted, with APCs supporting the attacking elements. Care is exercised to ensure that the manoeuvring infantry does not mask the supporting fires during the assault. The assault can be preceded by artillery preparation and use of close air support.

h. *Defensive Operations.* ROWEN jungle infantry units are a formidable force when defending. The most common types of defensive operations they might participate in are forming a defensive perimeter, establishing a strong point, or taking part in a position defence.

i. *Defensive Perimeters.* Defensive perimeters may be established at any time but are normally used during periods of limited visibility to increase the security of the force and to allow time for maintenance and rest. The perimeter is a hasty defence technique. It is usually only a temporary arrangement and is moved frequently. A perimeter is not oriented against a particular enemy force, but takes advantage of terrain to obtain the greatest security possible.

(1) *Establishment of a Perimeter*. Individual fighting positions are prepared in front of the parked vehicles. Dismounted observation posts and ambush patrols are sent out. These elements may use claymore mines and early warning devices. When the soldiers are allowed to sleep, they will be in, or close to, fighting positions in order to be near overhead protection.

(2) *Defence of a Perimeter*. An enemy ground attack against a perimeter defence may be by a surprise assault or be preceded by preparatory fires. ROWEN jungle infantry units continually have all automatic weapons manned and ready to fire.

j. *Strong Point Defence.* A strong point is a defensive position which is fortified as extensively as time and materials permit. It is normally located on a terrain feature critical to the defence. Individual fighting positions should be prepared with overhead cover. If materials are on hand and time is available, a chain link fence may be placed 10 to 15 metres in front of each position to cause premature detonation of anti-tank rounds. Each squad's position and OP is linked with the platoon leader in a telephone loop, with radio used as an alternate means of communication.

k. *Other Jungle Operations.* When operating in the jungle, infantry units may be given missions which they would not normally perform in other types of terrain. Such missions require special planning and coordination before and during the conduct of the mission.

(1) *Route Clearance and Security.* These operations are conducted when a route has been closed or left unused. They are usually conducted so that supply activities may occur, but should not be confused with convoy escort operations, which require different tactics and techniques. Route security and clearance operations are oriented to a specific route and the surrounding areas, to ensure that vehicle operations are not interrupted along that route.

(a) *Route Clearance*. Route clearance operations are conducted to eliminate the enemy along the road and to remove any explosives which may have been placed there. Whenever possible, route clearance is a combined arms effort involving, as a minimum, the use of armour, infantry, engineers, artillery, and army aviation. Route clearance involves deliberate, detailed, and co-

ordinated actions which are slow. The route must often be walked by mine-sweeping teams, and the areas adjoining the route must be cleared by dismounted infantry. During route clearance operations, the jungle infantry elements normally provide security forces for the combat engineer mine-sweeping teams. The jungle infantry is also used to clear the areas on either side of the road.

(b) *Route Security*. Route security missions are characterised by continuous activity to prevent the enemy from cutting the route or ambushing elements using it.

(c) *Patrolling*. Patrolling is the key to route security, day and night. Patrols are despatched at intervals so there is no pattern. Patrols are usually squad-sized and are assigned specific areas of responsibility. They may at times move mounted, but dismount where appropriate. These areas of responsibility usually extends to 1 kilometre each side of a route, for the mission is to prevent enemy mining or ambushes. A reserve force is centrally located to be able to react in any direction.

(2) *Convoy Movements.* Coordination takes place before and during a convoy movement. Each patrol will know the time of entry and time of exit of each convoy, the numbers and types of vehicles, and whether the convoy has an armed escort. Just prior to the convoy's approach, the security patrols intensify patrolling of the areas immediately next to the road, and assume security positions along the known or suspected enemy avenues of approach. The convoy commander has each patrol leader's call sign and frequency, and will notify him when he is entering and leaving the area.

0485. ***Desert Warfare.***

a. *Deployment*. The deployment of ROWEN forces is altered for desert offensive operations. Unless the terrain is restricted, frontages, in most circumstances, are increased by 50%. In defensive operations, deployment is much more static and significant mobile forces are held in reserve (See Defensive Operations at d. below).

b. *Reconnaissance*. Reconnaissance operations in the desert are important for the following reasons:

(1) *Visibility*. Visibility is much greater than under normal conditions. However, frequent dust storms can quickly degrade visibility (and therefore the effectiveness of surveillance/fire control systems).

(2) *Increased Depth*. High cross-country speeds of mobile forces make long-range reconnaissance critical. For this reason, reconnaissance elements are frequently employed at twice their standard depth.

(3) *Reconnaissance in Force*. Reconnaissance in Force is frequently used and can be a prelude to general offensive operations if successful.

c. *Offensive Operations*. Offensive operations in a desert environment are much more mobile than normal combat operations. Use of light armoured vehicles is key to ROWEN desert operations. These light forces are able to negotiate the difficult variety of terrain and still take advantage of the large areas of high speed avenues of approach. Because of the speed needed in these types of operations, it is difficult for all combat support systems to keep up with advancing forces. As a result, brief pauses in combat operations may be required. These pauses will be limited and timed so as to cause the least amount of disruption to the ongoing offensive.

(1) *Movement to Contact*. A movement to contact is used to gain or regain contact with the enemy, and to develop a situation as in normal conditions. It serves as the first stage of operations against an enemy force which has not been located, and normally ends in a meeting engagement. Because of the fluidity of desert warfare, command and control is vital. Units are prepared to conduct movements to contact whenever they employ elements in a reconnaissance in force role to quickly take advantage of any opportunities that are seen.

(2) *Fire Support*. ROWEN forces will employ their most mobile fire support systems in support of offensive operations. This ensures advancing lighter armed forces will be able to retain flexibility. Because of the speed that leading forces will employ, air force support to desert operations is important to maintain fire support at all times.

(3) *Engineer Support*. Engineer support in offensive operations is used to maintain lines of communication and to clear mines and obstacles to provide clear avenues of advance. Herds of camels may be used to clear mine fields. Engineer support is usually more important to defensive operations.

(4) *Logistics Support*. Water supplies are critical to the survival of troops in the desert. This truism is well known in ROWENIA because portions of their population have lived in the desert for centuries. The transportation network established to provide water is the same network that provides all other logistic support i.e. ammunition, food, spare parts, replacement troops, etc. Although vulnerable to rear area attacks because of great distances, the ROWENIAN logistic system can support prolonged desert operations.

d. *Defence Operations*. Defensive operations can be conducted in a combined, static and mobile manner. The basis for these tactics is a result of successful counter insurgency operations that ROWEN has fought in the recent past. Once attacking ROWEN forces can no longer advance, a fixed, or static front line is established using key terrain and strong points to

strengthen the line. This static front line will be defended by light infantry forces which require little mobility. To support these static forces a highly mobile reaction force is maintained in each area of responsibility that will quickly respond to attacks against the static front line.

(1) *Organisation*. The organisation of the front line is characterised by a series of strong points, primarily company and battalion sized, that provide interlocking fire and possibly some organic mortar support. Further to the rear, 5-10 kilometres, reaction forces are located in assembly areas and are prepared to counter any attacks that may occur. In addition, fire support is located 2-5 kilometres from these assembly areas.

(2) *Fire Support*. Artillery is located in dug-in positions 5-7 kilometres behind the static front line and horizontally along the front to support strong points with at least two batteries of artillery support. This positioning allows fire support elements to protect the front line forces as well as the rapid reaction force. It also provides the reaction forces a ready fire support base should they have to move forward to thicken the static front line or move laterally to counter a penetration.

(3) *Engineer Support.* Engineer support in the defence is critical to establishing the static front line. This is their first priority. Once the front line is established, using all available key terrain, then artillery positions are prepared, followed by the preparation of protected assembly areas for rapid reaction forces. The engineer works consist primarily of the creation of berms and dug-in fighting positions (strong points), and emplacing mines and barriers, but usually not more complex concrete bunkers, etc. Minefields will completely surround strong points to provide 360° protection. Routes through the mine fields are established and marked, although numerous false markings are always placed to confuse the enemy.

(4) *Logistics Support*. Logistics support is critical to less mobile static forces, but is somewhat less problematic when ROWEN forces are in a defensive posture. Fixed supply routes are established through minefields that are created completely around and between strong points.

0486. ***Urban Warfare***.

a. *Tactics*. ROWEN tactics in built-up areas is to use elite troops, primarily airborne or special operations forces, although militia units in urban areas receive extensive training in their own cities and towns. Elite troops are used in the attack, while militia troops are used to defend their own areas.

b. *Attack*. During offensive operations, urban areas are avoided where possible. However, when built-up areas are critical to an offensive or to clear pockets of resistance, ROWENIA employs light, elite forces with special designations.

(1) *'Storm' Units*. Units tasked to secure urban areas are designated 'Storm' units and will come from elite forces, or regular units that have received extra training in urban warfare. These 'Storm' units will normally enter a built-up area from two sides and move in company-sized elements toward the centre of the town. 'Storm' units are augmented with extra engineer support and artillery to provide integrated support as needed.

(2) *Manoeuvre*. As they move toward their objectives, the 'Storm' units will move down both sides of the street on foot, and fire across the street providing mutually supporting fire. An armoured vehicle will often follow the infantry to offer direct fire support where possible. In what is seen as an infantry battle, it is important that any armoured forces that enter the built-up area are fully integrated into infantry formations. When seizing individual buildings, forces will begin at the top, if possible, and move downward clearing resistance as they descend. Command and control is critical to ensure own casualties are limited. If the built-up area has blocks, each block along the axis of advance will be seized in turn.

c. *Defence*. Regular force commanders are given command of key built-up areas. Their force is bolstered by local militia, who are most familiar with the area and whose forces have the most interest in defending the city or town. Often the local militia commander is left to defend towns of secondary importance, while regular forces conduct defensive operations in more critical areas.

(1) *Defensive Perimeter*. ROWEN forces prefer to maintain a seamless defensive perimeter around an urban area, but may allow some selected units to be overrun if their position is tenuous. These overrun units will conduct rear area attacks in an attempt to break the enemy's offensive momentum.

(2) *Engineer Support*. Engineer support in urban defence operations is primarily focused on obstacle construction, with a secondary responsibility for maintaining internal lines of communication. All cities and towns practise civil defence operations and emergency stores are maintained.

0487. ***Chemical Warfare Operations***. The ROWENs have developed an extensive chemical warfare capability and demonstrated a willingness to use chemical weapons during recent regional and internal conflicts. Their nuclear and biological research is also giving cause for concern.

0488. ***Types***. The ROWENs have developed numerous types of chemical agents. Currently the ROWENS have the following chemical agents in their arsenal:

GB: SARIN - Non-persistent (NP) Nerve
GD: SOMAN - Persistent (P) Nerve (Thickened)
VX - Nerve (P)
HL - Mustard/Lewisite (P) Blister
CX - Phosgene Oxime (P) Blister
CS - Riot Control Agent
HD - Sulphur Mustard (P) Blister
BZ - Mental Incapacitant
AC - Hydrogen Cyanide

0489. ***Delivery Systems***. The ROWENs have a large variety of weapon systems that are capable of delivering chemical agents. Aircraft-delivered bombs and surface-to- surface missiles (SSM) are the favoured delivery systems for intermediate and deep targets. Indirect fire support systems are primarily used to attack forward targets. All indirect fire systems above 120mm can fire chemical rounds.

0490. ***Chemical Fire Planning.*** Chemical fires are designed to be combat multipliers. The divisional chemical staff is responsible for coordinating the requests for chemical fire support from their subordinate units. The release authority for chemical weapons is never lower than a corps commander. Chemical weapons are stored in the corps areas and are only fired by corps artillery units. Chemical fires are integrated into the overall fire support plan and planned to support the scheme of manoeuvre. Chemical artillery fires are usually mixed with smoke and HE to mask the distinctive signatures of bursting chemical rounds. Combinations of chemical agents may be employed on a single target to hamper detection and complicate medical treatment.

a. *Offensive Operations.* During offensive operations chemical operations will be planned to:

(1) Disrupt and destroy command and control facilities.

(2) Separate reserves from the battle.

(3) Disrupt enemy artillery fire.

(4) Prevent the repositioning of enemy forces.

(5) Stop enemy counter attacks.

(6) Create casualties along enemy front line troops.

(7) Hinder operations at enemy logistics and airfield bases.

During a deliberate attack the ROWENs will employ indirect fire or aircraft-delivered persistent agents against CPs, artillery units and reserves to disrupt operations and create longer-term casualties. Non-persistent agents

may be included to create immediate casualties. Deep targets may be attacked by SSMs with persistent nerve or blister fill. Front line troops will be attacked with non-persistent nerve agent to create immediate casualties at the ROWENs' intended point of penetration.

b. *Defensive Operations.* In defensive operations chemical fires will be planned to:

(1) Disrupt and destroy Command and Control facilities.

(2) Hinder operations at airfields and logistic bases.

(3) Disrupt enemy artillery fire and anti-aircraft fire.

(4) Disrupt enemy assaults

(5) Deny recently occupied defensive positions.

(6) Disrupt reserve and troop concentration sites.

c. *Non-persistent chemical agents.* Non-persistent chemical agents will be employed to slow down and disrupt attacking enemy forces by creating immediate casualties. This will also have the effect of making them aware of the threat and force the wearing of full Individual Protection Equipment (IPE). Timing of the chemical fire missions is designed to break the assault by attacking the enemy as he attempts to breach the obstacle system. Non-persistent chemical agents may also be used as final protective fire. Persistent chemical agents will be used to break contact and allow friendly forces to reposition to subsequent or alternate firing positions during a delay or withdrawal operation. Persistent chemical agents may be used to contaminate recently vacated positions. Targets in the enemy's rear areas are attacked in the same manner as during offensive operations. Dismounted infantry assaults are looked at as being particularly vulnerable to non-persistent chemical agents. Persistent agents will be fired upon command and control facilities and troop assembly areas in order to disrupt the enemy's offensive preparations and timings.

0491. ***NBC Defence Operations***. The ROWENs have adequate stocks of chemical protective clothing and medical treatment kits. There is a mixture of both permeable and impermeable chemical clothing in the ROWEN military. Protective masks will protect against all agents in their inventory. Chemical defence units are located at brigades through corps units. Each division and corps has a chemical defence company organised with decontamination and reconnaissance platoons. Each brigade has a chemical defence platoon with a primary mission of performing decontamination. Chemical reconnaissance units are also used as mobile weather stations. Chemical warning messages indicating friendly use of chemical weapons are not used by the ROWENs. Chemical warning signs are usually of Soviet design.

0492. ***Smoke Operations***. The ROWENS will use smoke to conceal the movement of friendly troops. Smoke is normally used to blind the enemy and conceal the deployment of chemical agents. Almost all combat vehicles are equipped with smoke grenade launchers and many have engine exhaust smoke systems, the ROWENS have acquired a large quantity of smoke pots.