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FM 30-102

DEPARTMENT OF THE ARMY FIELD MANUAL

HANDBOOK ON AGGRESSOR MILITARY FORCES

THE QUARTERMASTER SCHOOL
QUARTERMASTER TRAINING COMMAND
FORT LEE, VA.

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HEADQUARTERS, DEPARTMENT OF THE ARMY

JUNE 1960

FIELD MANUAL }
No. 30-102 }HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., 6 June 1960

HANDBOOK ON AGGRESSOR MILITARY FORCES

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PART ONE
ORGANIZATION

CHAPTER 1
THE AGGRESSOR ARMED FORCES

Section I. INTRODUCTION

1.1. Purpose

This manual is a guide to the organization, equipment, characteristics, and tactical doctrine to be employed by Aggressor in tactical exercises.

1.2. Scope

a. The manual includes the Aggressor military system, organization of units, and doctrine on offense, defense, and special operations by the Aggressor Ground Forces. It also includes a brief description of the weapons equipment and logistical system used by Aggressor.

b. The forces and material described herein are fictitious. Any resemblance to existing forces is coincidental.

c. The material presented herein is applicable to both nuclear and nonnuclear warfare unless otherwise indicated.

Section II. ARMED FORCES ORGANIZATION

1.3. General

a. The Aggressor government is totalitarian with control highly centralized in a triumvirate. The "Triumvirate" has absolute control of the Circle Trigon Party and the Aggressor nation. The Circle Trigon Party has a firm grip on the Aggressor Armed Forces.

b. The totalitarian form of government of Aggressor is a potential vulnerability. Psychological warfare, under favorable circumstances, may be able to discredit and undermine the leadership of the Circle Trigon Party and reduce its control over the Aggressor Armed Forces. Dissension within the Triumvirate is another

possible vulnerability which may be exploited to cause disunity within the Circle Trigon Party and the Aggressor nation.

1.4. The Armed Forces

a. The Armed Forces of Aggressor consist of the Army, Navy, Air Force, and Security Forces. These forces, except for the Security Forces, are controlled by the Ministry of the Armed Forces. Through the General Staff, directorates, and field forces headquarters, the Ministry of the Armed Forces carries out the nation's military policy. The Security Forces are the military element of the Ministry of Internal Affairs. These elite forces, composed of border troops, internal security troops, and certain signal units, are not used for normal military tasks. They provide the force necessary to insure the internal stability of the Aggressor homeland.

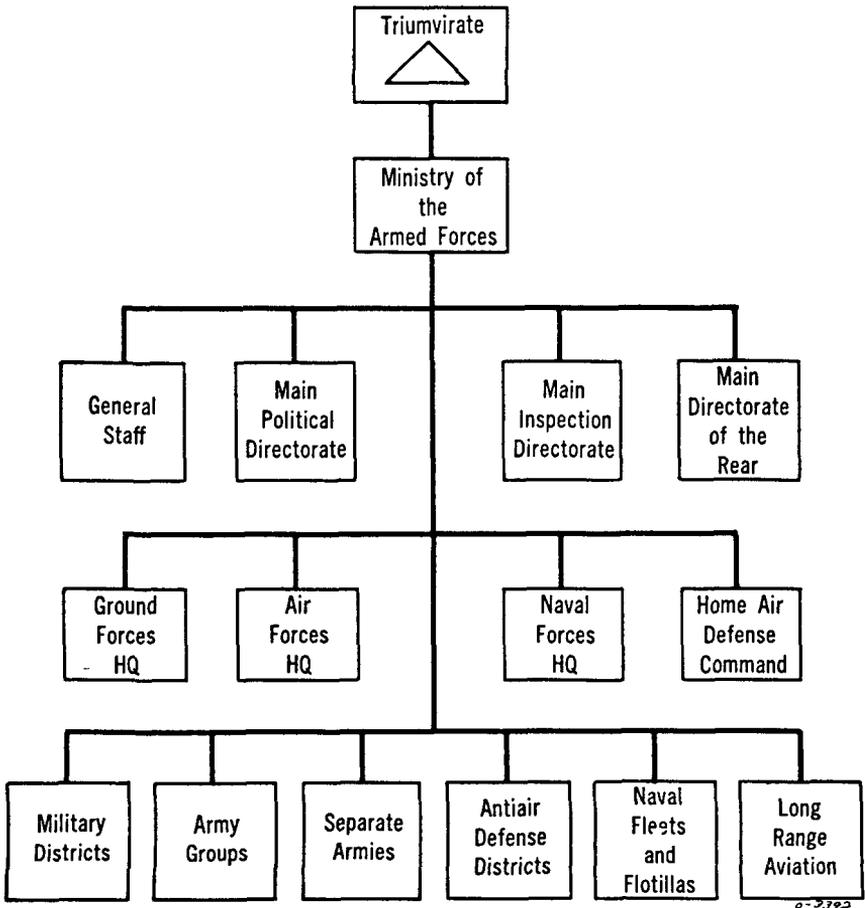


Figure 1. Aggressor high command.

b. The Aggressor Army, for tactical operations, is organized into army groups. Two or more army groups may be organized into a regional command to control operations in a particular area. Army groups, unless part of a regional command, are controlled by the Ministry of the Armed Forces.

c. The Aggressor Navy (ch. 4) is composed of fleets, flotillas, an air arm, and a marine force organized into naval rifle units. The marine force is trained to conduct small-scale assault landings and to provide the first wave for large-scale assault landings by Army forces. The Navy has a considerable number of modern ships, including aircraft carriers and submarines. Specially equipped Aggressor submarines can launch SUPRO missiles while submerged (par. 15.9).

d. The Aggressor Air Force (ch. 3) is organized into tactical air armies, a long-range air force, a troop carrier command, and fighter units of the Home Air Defense Command. One or more tactical air armies are assigned to each army group. Aggressor stresses the use of airpower in support of ground forces.

e. The training of all components is thorough and rigorous. A high standard of discipline is maintained and morale and *esprit de corps* are excellent. All troops are thoroughly indoctrinated in the principles of the Circle Trigon Party (par. 1.16).

1.5. Ministry of the Armed Forces

a. The Minister of the Armed Forces and his deputies deal primarily with the Chief of the General Staff, the Main Political Directorate, the Main Inspection Directorate, and the Main Directorate of the Rear. Although the Minister transmits his decisions and orders principally through the Chief of the General Staff, he does have a direct command channel to a number of staff headquarters and field commands in the homeland and abroad.

b. Most of the remaining business of the Ministry of the Armed Forces is administered by four officers, namely, the Commander in Chief of the Ground Forces, the Commander in Chief of the Air Forces, the Commander in Chief of the Naval Forces, and the Commander in Chief of the Home Air Defense Command. Each of these officers has a headquarters and a staff. Although all are designated commanders, their responsibilities make them staff officers rather than commanders.

1.6. General Staff

The General Staff assists the Minister of the Armed Forces by promulgating and supervising the execution of operational and joint training policies of the Armed Forces. The General Staff

assigns units of all services to joint task forces, and selects commanders and staffs for such forces. It prepares strategic war plans and in war supervises their execution.

1.7. Political Staff

a. A vital element in the Circle Trigon Party's control of the military forces is the Political Staff. This staff is a separate entity at the Ministry of the Armed Forces level and has counterparts within the Armed Forces down to battalion-size units. In each unit the political officer is the assistant commander for political affairs.

b. The Political Staff is responsible for the political indoctrination and surveillance of the troops. To accomplish this mission it maintains a network of informants and unit representatives in all units down to company size. The political officer is responsible for unit welfare, morale, orientation, and publication.

c. Although Aggressor adheres generally to the principle of unity of command, the political officer has access to confidential channels not available to the commander. In a controversy with his commander, it is possible for a junior political officer to be upheld by higher authority. At times this system may seriously disrupt command unity and reduce effectiveness of units.

1.8. Main Inspector Directorate

The Aggressor Inspection Directorate determines the status of training and combat preparedness of units and individuals. It is not concerned with morale, grievances, or fiscal matters.

1.9. Main Directorate of the Rear

a. The Directorate of the Rear has operating, staff, and coordinating responsibilities (figs. 48 and 50). It is responsible for the design, procurement, storage, issue, and maintenance of all general supplies including petroleum, oil, lubricants, rations, and general purpose vehicles. It also controls the medical, finance, transportation, military justice, and replacement facilities for all services.

b. The Main Directorate of the Rear is directly responsible to the Minister of the Armed Forces and not to the Ground Forces Headquarters. At ministry level it prepares the logistical and administrative elements of all plans and programs developed by the Armed Forces General Staff. In tactical units there is a staff of the deputy commander for the rear that performs the same general functions and controls the unit rear area. Every unit of regimental size has a deputy commander for supply or deputy

commander for the rear who commands the rear services of the unit.

1.10. Ground Forces Headquarters

The Ground Forces Headquarters develops basic tactical doctrine for the Army and prescribes its application in training. It coordinates the army school system and insures that the arms and services subordinate to it (tank, mechanized rifle, engineer, signal, and chemical troops) develop specialized training in consonance with a unified policy.

1.11. Air Force Headquarters

The Air Force Headquarters responsibilities are comparable to those of the Ground Force Headquarters. Long-range aviation and the Home Air Defense Command are under operational control of the Ministry of the Armed Forces and not the Air Force Headquarters.

1.12. Naval Force Headquarters

Naval Force Headquarters is responsible for various administrative, technical, research and development, and procurement functions. Naval fleets and flotillas are under the operational control of the Ministry of the Armed Forces.

Section III. TERRITORIAL ORGANIZATION AND MOBILIZATION

1.13. Theater of Operations

Aggressor does not divide the theater of operations into a combat zone and a communications zone. As the army groups advance, their former service areas may be organized into a zone of military administration or zone of occupied territory. Occupied territory in rear of the army groups is administered by a military structure controlled by the Main Directorate of the Rear.

1.14. Zone of Interior

The Aggressor homeland is divided into military districts. Military district commanders are responsible to the Minister of the Armed Forces for the training of all units within their districts, except for specified stations and units. The district commander is also responsible for conscription and mobilization within his district. If the homeland is attacked, commanders of military districts in the combat area become tactical commanders and direct the defense of their districts.

1.15. Mobilization

In war, mobilization is accomplished by the military districts in two main phases. The first phase involves assembling trained reserves to bring existing field units of all types to war table of organization strength, and the mobilization of new units in accordance with a 30-day mobilization plan. The second phase involves inducting, assembling, and training men who, for the most part, are without previous military service. Both phases of the mobilization program are preplanned.

Section IV. THE INDIVIDUAL SOLDIER

1.16. Characterization

a. It is difficult and perplexing to draw a valid characterization of the individual Aggressor soldier. Former enemies have found him unpredictable. Observers could not agree. Some depict him as a formidable fighter, highly disciplined, and superbly trained; others visualize him as a slovenly, uneducated, semibarbaric peasant. Both estimates may be partially correct.

b. The official portrayal of the ideal Aggressor soldier is not a reliable guide and contains basic contradictions. The soldier is said to be a dauntless fighter and capable of withstanding any hardship. No task is impossible for him, no difficulty insurmountable. He is well-grounded politically. He is not influenced by personal ambition and has no desire for personal possessions and pleasures. He is prepared to fight and die, and to lead others to do the same for the Aggressor fatherland and the aims of the ruling party. He obeys the commands of his superiors without question.

c. The regulations and directives for the management of military personnel contradict the official portrayal in *b* above. On the basis of these publications, the Aggressor soldier is stupid and must be prodded along with endless drill and repressive discipline. He is naturally lazy and shiftless. Only with constant supervision and a minimum of freedom will he fulfill his duties. He is incapable of intelligent initiative and will become an efficient soldier only if he is thoroughly reshaped.

d. The Aggressor population is too heterogeneous and far-flung to permit easy generalizations as to the character of the people. As in any society, however, there are common factors—economic, social, and political—which tend to produce a degree of uniformity. Most of the population is of peasant stock, disciplined for genera-

tions to hard manual labor. The peasant or collective farm worker today lives in a sod hut or roughhewn cabin. The young city man usually lives with his family in a shabby single room. He is physically hardy as a result of participation in the active sports sponsored by the Aggressor "cultural program." Whatever his background, the young Aggressor male has known few comforts and no luxuries. As a soldier, he has an extraordinary capacity to withstand extreme deprivations. He can operate with makeshift equipment and few welfare provisions.

e. Because of his background the Aggressor soldier is willing to accept severe regimentation and restricted movement as a normal part of military life. Although self-discipline is not usually a character trait, the recruit responds obediently to imposed discipline. With such an amenable attitude and because of his meager economic background, the Aggressor soldier often finds army living and working conditions superior to those in civilian life.

f. He has a genuine love of his native land. His hatred can be aroused easily against an invading enemy. The Aggressor soldier generally appears to be repelled by the continuous stream of propaganda to which he is subjected but the political dissatisfaction of the Aggressor soldier does not diminish his patriotism.

g. By its nature, Aggressor political philosophy does not encourage a willingness to accept responsibility in its citizenry. The lack of this quality hampers the Aggressor soldier in fluid offensive situations, although the lack scarcely affects his stubborn defensive capabilities. The Aggressor soldier who has endured hardships in civilian life usually shows great initiative in infiltration, tactical ruses and deception, and improvisation. Aggressor military leaders exploit their troops' resourcefulness. At the same time, the leaders are keenly aware of the shortcomings of their men and seek to overcome these by training junior officers and NCO's to assume responsibility and to maintain the initiative.

h. There are marked variations in the fighting capabilities of the various ethnic groups in the Aggressor Army. The other nationalities are of less military value. The Aggressors combat this weakness by systematically mixing the nationalities in military units; they form no units from any one cultural group.

i. The Aggressor soldier in battle can be expected to be a tough, callous opponent, inured to hardship, and convinced that he is righteously defending his country against aggression. He can be met and overcome only by methods equally tough, equally calloused, and equally inspired.

Section V. AGGRESSOR SATELLITE NATIONS

1.17. General

The Aggressor nation exercises almost complete control over several national powers throughout the world and has relegated them to the role of satellites. The armed forces of these satellites have received equipment, only a small percentage of which is of the latest design, and technical assistance from Aggressor. The resulting organization and tactical doctrine of these forces is very similar to Aggressor's.

CHAPTER 2

THE AGGRESSOR GROUND FORCES

Section I. GENERAL

2.1. Combat Arms

a. Aggressor ground combat arms include mechanized rifle (the basic arm), artillery (including missiles), tank, airborne, engineer, signal, and chemical troops. All these arms with their headquarters are subordinate to the Ground Forces Headquarters. Mechanized rifle troops do not have a separate headquarters but are directly subordinate to the Aggressor Ground Forces Headquarters. See chapters 9 and 11 for use of artillery.

b. Doctrine for mechanized rifle units is developed directly by the Ground Forces Headquarters. The chief of the other combat arms are responsible for the development of specialized doctrine and the conduct of specialized training, research and development programs, and supervision of procurement, storage, issue, and maintenance of specialized equipment and supplies applicable to their arm.

2.2. Administrative Services

Aggressor maintains administrative services comparable to the United States Army Judge Advocate General Corps, Finance Corps, Military Police Corps, and Inspector General. All these services except the Aggressor Inspection Staff are part of the office of the Directorate of the Rear.

2.3. Technical Service Troops

The Aggressor technical service troops, listed below, are all part of the rear services.

a. *Intendance*. Intendance troops have functions comparable to the US Army Quartermaster Corps.

b. *Military Construction Troops*. These troops include various specialized engineer units and do all major construction in rear areas (par. 2.35).

c. *Technical Troops of the Director of the Rear*. These troops and specialists perform maintenance on general purpose vehicles

and do other comparable tasks. At division level and lower, these troops also perform some of the repair and maintenance of combat vehicles which at higher echelons are normally performed by technical troops of the combat arms.

d. Medical and Finance. These troops perform generally the same functions as those in the United States Army.

2.4. Principles of Tactical Organization

a. Aggressor divisions are the largest units with tables of organization and equipment (TOE). The army and army group organizations are flexible and capable of forming many subordinate organizations into well-balanced teams to meet requirements. There are no corps in the Aggressor field armies with the exception of the Airborne Corps which may be organized in rare instances.

b. Most ground force regimental units are of a standard type. For example, the medium tank regiments of the mechanized rifle and tank divisions are the same. The antiaircraft regiment is identical in all divisions.

2.5. Staff Organization

a. The typical Aggressor headquarters, division and higher, consists of command, operations, political, rear, arms and services, and staff groups. The commander is usually the senior combat arms officer and is assisted by deputy commanders. The chief of staff is the assistant commander. The operations group, working directly for the chief of staff and not the commander, prepares plans and supervises their coordination and execution.

b. In a division staff, which is similar to other army staffs, the operations group is the principal staff element. This group contains subgroups performing duties similar to G1, G2, G3, and signal functions in United States organizations. The major functions of the political and rear staffs have been discussed in paragraphs 1.7 and 1.9.

2.6. Army Group

The highest tactical echelon is the army group (fig. 4 and table I). An army group normally consists of four combined arms armies (par. 2.8), a tank army (par. 2.9), an air army (par. 3.1), four mixed artillery divisions (par. 2.32*a*(1)), three gun artillery divisions (par. 2.32*a*(2)), a missile division (light) (par. 2.32*a*(3)), a missile division (medium) (par. 2.32*a*(4)), two anti-aircraft artillery divisions (par. 2.33*a*(1)), a heavy artillery brigade (par. 2.32*a*(6)), a rocket artillery brigade (par.

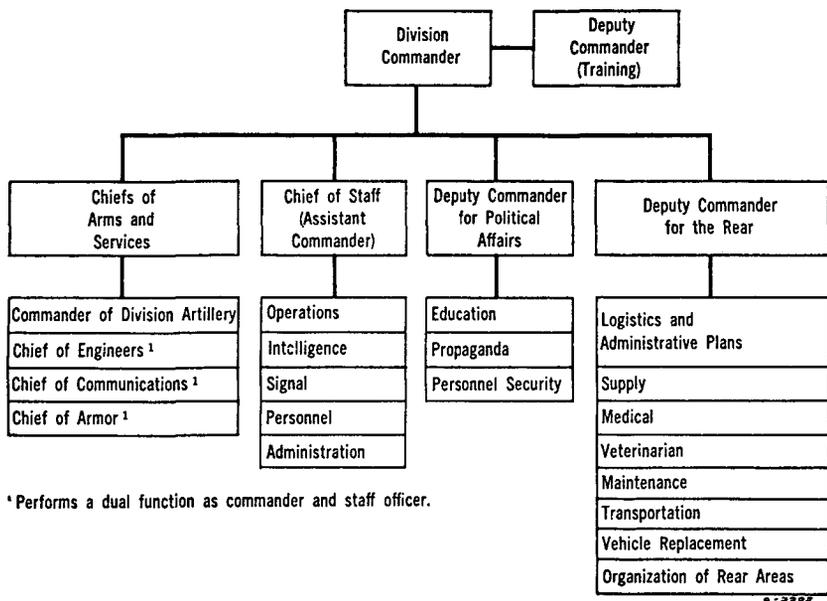


Figure 2. Division staff organization.

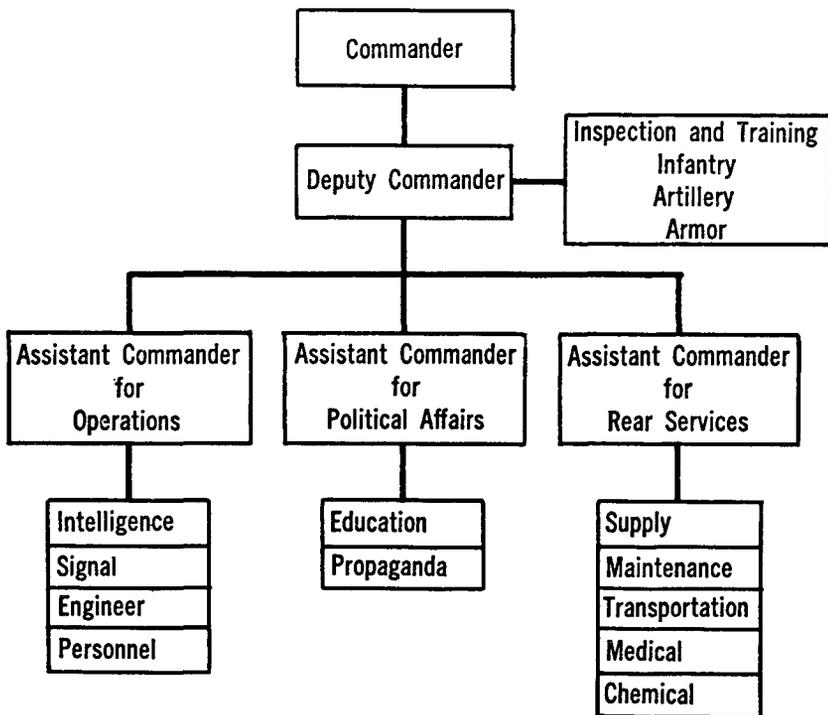


Figure 3. Regimental and battalion staff organization.

2.32a(5)), six antitank artillery brigades (par. 2.28c), engineer brigade (par. 2.35), motor transport brigade (par. 2.38), signal regiment (par. 2.36), propaganda battalion (par. 2.39), biological warfare company (par. 2.37c) and other administrative support as required. The army group has administrative and tactical functions. It operates supply installations for all types of military supply.

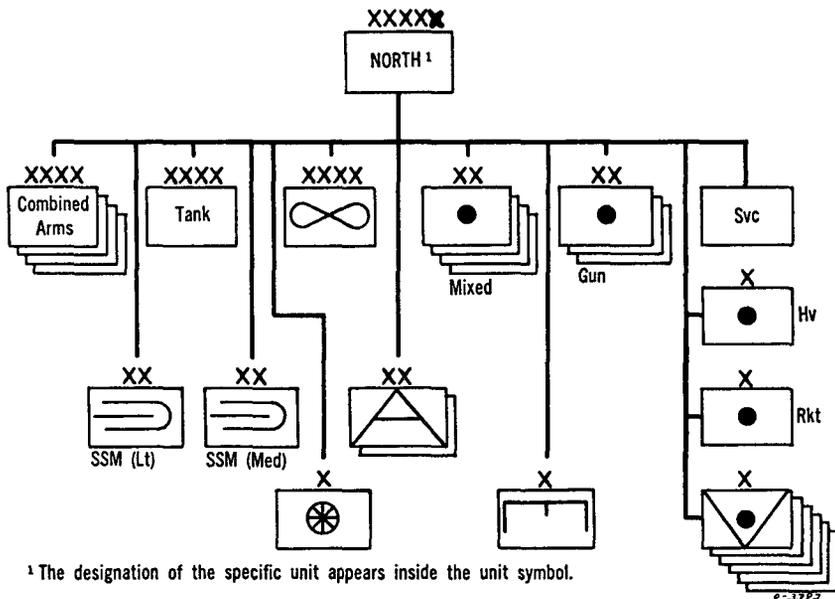


Figure 4. Typical army group.

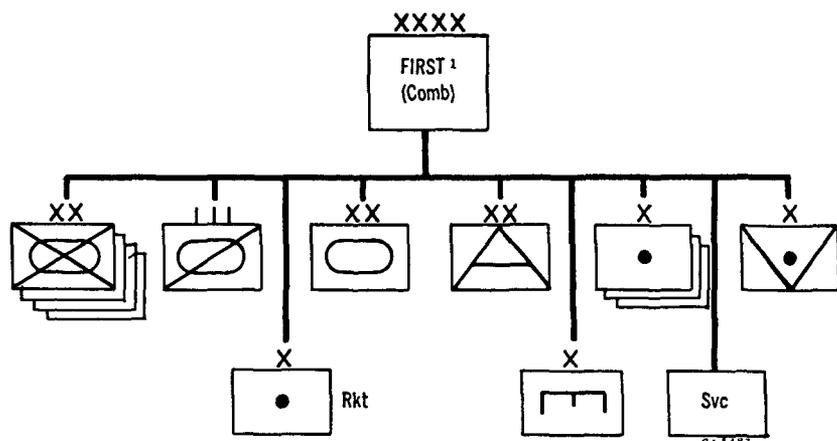
2.7. General Headquarters Troops (sec. VI)

General Headquarters (GHQ) troops which may be attached to major tactical units include artillery, mountain, airborne, tank, and mechanized rifle divisions; and other separate artillery, mechanized rifle, tank, engineer, chemical, signal (including electronic warfare), transportation, maintenance, medical, and psychological warfare units.

2.8. The Combined Arms Army

The combined arms army (fig. 5 and table II), organized principally for assault but having an exploitation capability, normally consists of four mechanized rifle divisions (par. 2.11), a reconnaissance regiment (par. 2.31c), a tank division (par. 2.22), an antiaircraft artillery division (par. 2.33a(1)), three artillery brigades (par. 2.28a), an antitank artillery brigade (par. 2.28c),

a rocket brigade (par. 2.28d), an engineer brigade (par. 2.35), signal regiment (par. 2.36), chemical regiment (par. 2.37), motor transportation regiment (par. 2.38b), propaganda company (par. 2.39), and other administrative support as required. Additional artillery, air support, and special troops such as engineer and separate tank and mechanized units are often attached for specific operations. Artillery divisions may be attached but airborne and mountain divisions normally operate directly under the army group commander. The combined arms army has both tactical and administrative functions. It operates installations for all types of military supply.



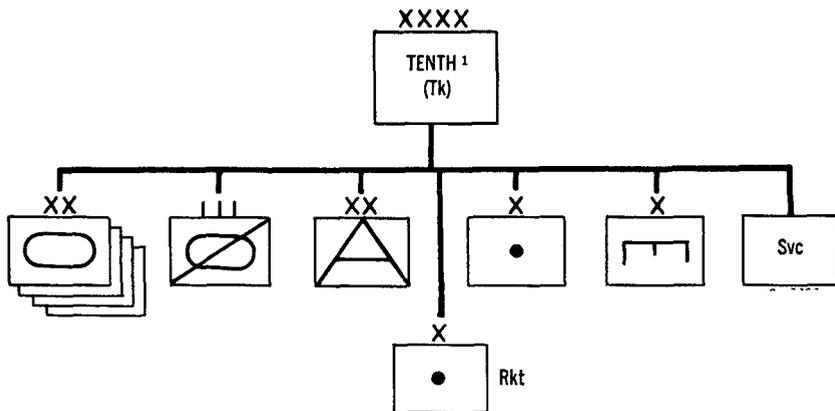
¹ The designation of the specific unit appears inside the unit symbol.

Figure 5. Typical combined arms army.

2.9. The Tank Army

The tank army (fig. 6 and table III), organized for exploitation, normally contains four tank divisions (par. 2.22), a reconnaissance regiment (par. 2.31c), an antiaircraft artillery division (par. 2.33a(1)), an artillery brigade (par. 2.28b), a rocket brigade (par. 2.28d), an engineer brigade (par. 2.35), signal regiment (par. 2.36), chemical regiment (par. 2.37), motor transportation regiment (par. 2.38b), propaganda company (par. 2.39) and other administrative support as required.

The artillery brigade in the tank army (par. 2.28b) has the 100-mm and 122-mm guns while the artillery brigade in the combined arms army (par. 2.28a) has the 122-mm gun and the 130-mm gun. Both brigades have the 152-mm gun-howitzer. As in the combined arms army additional artillery, air support, and special troops are often attached for specific missions. The tank army



¹ The designation of the specific unit appears inside the unit symbol.

Figure 6. Typical tank army.

has tactical and administrative functions and operates installations for all types of military supply.

2.10. Types of Divisions

Types of divisions are mechanized rifle (par. 2.11), tank (par. 2.22), airborne (par. 2.26), mixed artillery (par. 2.32a(1)), gun artillery (par. 2.32a(2)), antiaircraft artillery (par. 2.33a(1)), light missile (par. 2.32a(3)), and medium missile (par. 2.32a(4)). For special operations, mountain divisions are organized as needed. These divisions follow the general lines of a mechanized rifle division while employing lighter equipment. (The 76-mm mountain gun (How) is substituted for heavier artillery.)

Section II. THE MECHANIZED RIFLE DIVISION

2.11. Mechanized Rifle Division

The mechanized rifle division is the basic unit for Aggressor tactical operations and is the most versatile Aggressor division. It is completely motorized and is a well-balanced tank—infantry—artillery team. It has sufficient firepower and shock action to execute its principal roles of assault and exploitation. Units of the division may be employed in airmobile operations with reduced capability (par. 2.40h). The principal units of the mechanized rifle division (fig. 7 and table IV) are—

a. Division Headquarters Company. This company consists of division headquarters, a headquarters platoon, a security platoon, and an air section with three light aircraft.

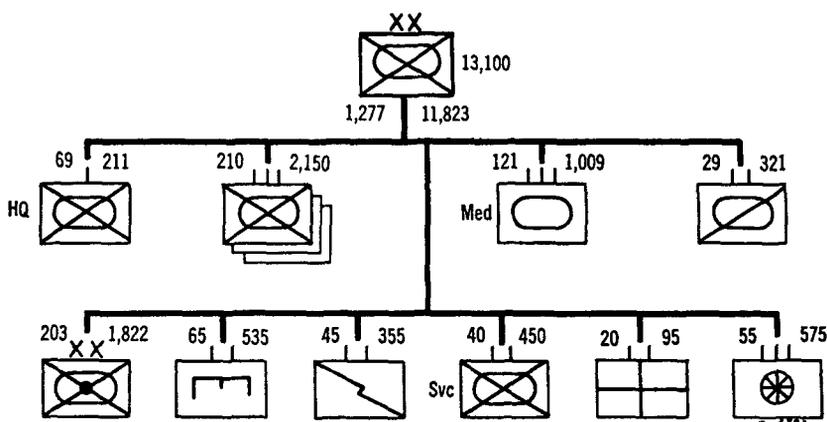


Figure 7. Mechanized rifle division.

b. *Three Mechanized Rifle Regiments* (par. 2.12).

c. *Medium Tank Regiment* (par. 2.14).

d. *Reconnaissance Battalion* (par. 2.16).

e. *Division Artillery* (par. 2.18).

f. *Engineer Battalion*. This battalion has a headquarters and service company, a bridge company, and two combat engineer companies (par. 2.35).

g. *Signal Battalion*. This battalion has a headquarters and service company, a wire company, and a radio company which provide, maintain, and operate the wire and radio communications equipment for the division.

h. *Service Battalion*. This battalion contains a headquarters, maintenance, intendance, and military police companies.

i. *Medical Battalion*. This battalion consists of headquarters section, three medical companies, and a hospital station divided into receiving, surgical, and medical sections.

j. *Transport Regiment*. This regiment consists of a regimental headquarters and service company and two truck battalions (fig. 18).

2.12. Mechanized Rifle Regiment, Mechanized Rifle and Tank Divisions

(fig. 8 and table V)

The principal units of the mechanized rifle regiment are—

a. *Headquarters Company*. This company contains the command and staff elements of the regiment, a security section and a chemical squad.

b. *Three Mechanized Rifle Battalions* (par. 2.13).

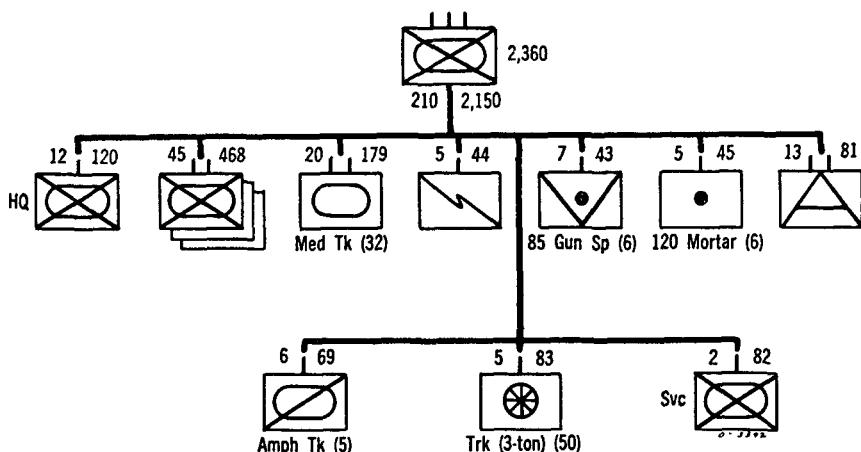


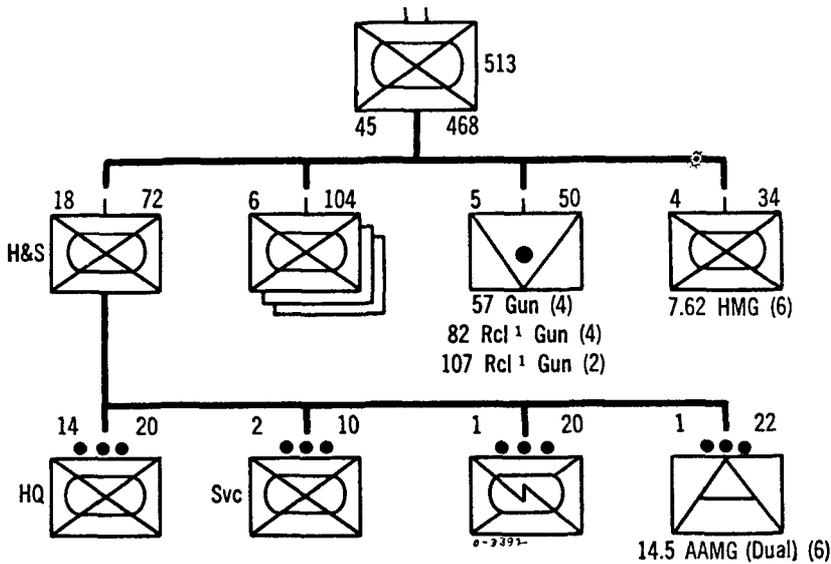
Figure 8. Mechanized rifle regiment, mechanized rifle and tank divisions.

- c. *Medium Tank Battalion* (par. 2.15).
- d. *Antiaircraft Artillery Battalion* (par. 2.17).
- e. *Antitank Company*. This company has three gun sections of two 85-mm guns (SP) each.
- f. *Mortar Company*. This company has three mortar sections with two 120-mm mortars each.
- g. *The Signal Company*. This company consists of headquarters, radio, and wire sections which provide, maintain, and operate the wire and radio communications equipment for the regiment.
- h. *The Reconnaissance Company*. This company contains two reconnaissance platoons equipped with armored carriers and one platoon with five amphibious tanks. The company operates under the control of the intelligence officer.
- i. *The Transportation Company*. This company has a headquarters and service platoon and two truck platoons of 25 trucks each.
- j. *Service Company*. This company contains a service and a support and maintenance section with three tank retrievers.

2.13. Mechanized Rifle Battalion, Mechanized Rifle Regiment
(fig. 9 and table VI)

The principal units of the mechanized rifle battalion are—

- a. *Headquarters and Service Company*. This company contains command, service, signal, and antiaircraft platoons with six 14.5 AAMG (Dual).
- b. *Three Mechanized Rifle Companies*. Each company consists of a company headquarters, three mechanized rifle platoons, each of which has three 9-man squads. Each squad has one light



¹ Rcl—recoilless.

Figure 9. Mechanized rifle battalion, mechanized rifle regiment.

machinegun, one squad antitank launcher, four rifles, and five submachineguns.

c. *Antitank Company.* This company consists of two gun platoons of two gun squads each. Each platoon has two 57-mm guns, two 82-mm recoilless guns, and one 107-mm recoilless gun.

d. *Machinegun Company.* This company consists of two platoons of three squads each. Each squad has one 7.62-mm heavy machinegun.

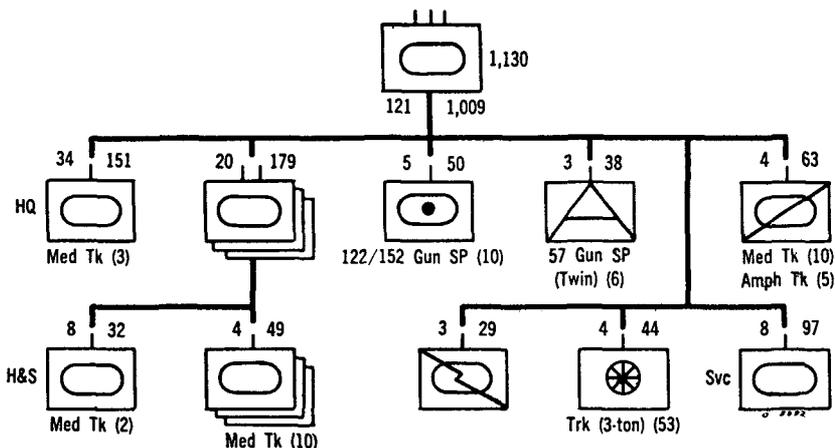


Figure 10. Medium tank regiment, mechanized rifle and tank divisions.

2.14. Medium Tank Regiment, Mechanized Rifle and Tank Divisions
(fig. 10 and table VII)

The principal units of the medium tank regiment are—

a. Headquarters Company. This unit has a command and staff element and three medium tanks.

b. Three Medium Tank Battalions (par. 2.15).

c. Assault Gun Company. This company has two platoons, each of which has five 122/152-mm assault guns.

d. Antiaircraft Artillery Battery. This battery has one 14.5-mm machinegun (dual) and two firing platoons with three 57-mm (SP) twin mount guns each.

e. Reconnaissance Company. This company contains a company headquarters and three platoons, two with five medium tanks each and one with five amphibious tanks. It usually remains with the regimental headquarters, under control of the regimental intelligence officer.

f. Signal Company. This company consists of a headquarters and service, wire, and radio sections which provide, maintain, and operate wire and radio communications equipment for the regiment.

g. Transportation Company. This company has a headquarters and service platoon and two truck platoons of 25 trucks each.

h. Service Company. This company has a headquarters and service section and a support and maintenance section with three tank retrievers.

2.15. Medium Tank Battalion, Medium Tank Regiment
(fig. 11 and table VIII)

The principal units of the medium tank battalion are—

a. Headquarters and Service Company. The battalion headquarters has two medium tanks. Combat and service support is provided by the headquarters and traffic control platoon, an engineer platoon, service platoon, and a tank-truck-weapons repair shop, with one tank retriever.

b. Three Medium Tank Companies. Each company has a headquarters section with one medium tank and three platoons with three medium tanks each. Each tank platoon has three tank sections with one tank each.

2.16. Reconnaissance Battalion, Mechanized Rifle and Tank Divisions
(fig. 12 and table IX)

The principal units of the reconnaissance battalion are—

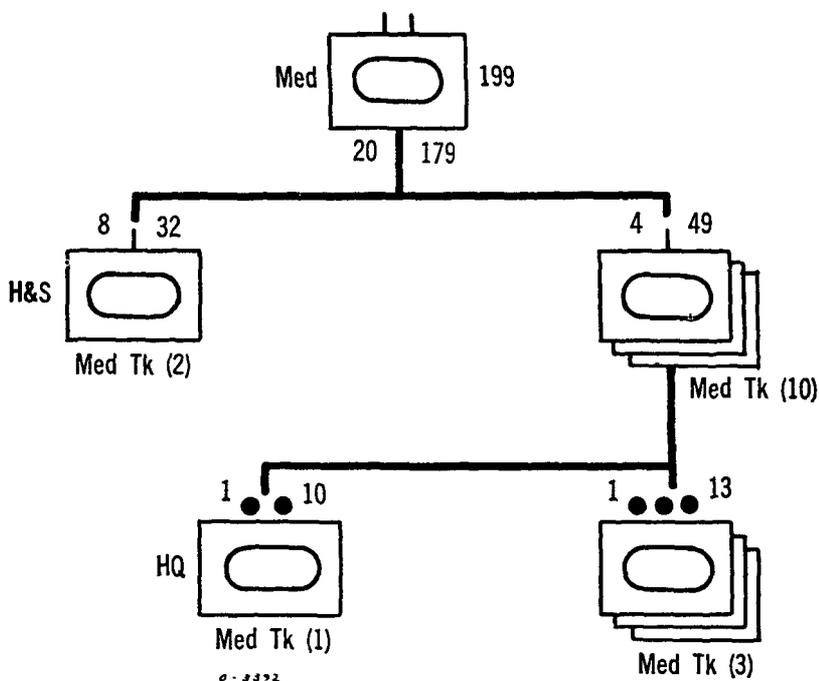


Figure 11. Medium tank battalion, medium tank regiment, mechanized rifle and tank divisions.

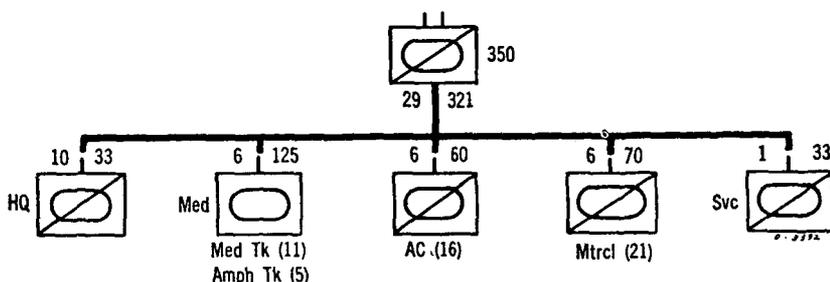


Figure 12. Reconnaissance battalion, mechanized rifle and tank divisions.

a. *Headquarters Company.* This company contains the command and communications sections of the battalion.

b. *Medium Tank Company.* This company contains a headquarters section with one medium tank, two tank platoons with five medium tanks each, and one platoon with five amphibious tanks.

c. *Reconnaissance Company.* This company consists of a headquarters section with one armored carrier and three reconnaissance platoons with five armored carriers and one 14.5 AAMG (dual) each.

d. *Motorcycle Company.* This company contains a headquarters section and three motorcycle platoons with seven motorcycles each.

e. *Service Company.* This company contains a headquarters, supply, maintenance, and service sections.

2.17. *Antiaircraft Artillery Battalion, Mechanized Rifle Regiment*
(fig. 13 and table X)

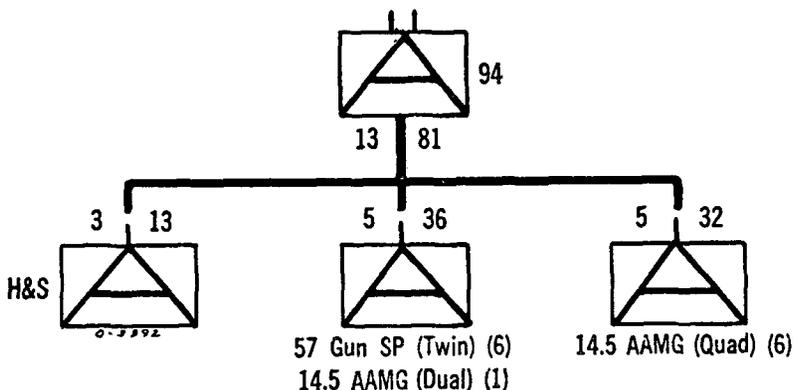


Figure 13. *Antiaircraft artillery battalion, mechanized rifle regiment.*

The principal units of the antiaircraft artillery battalion, are—

a. *Headquarters and Service Battery.* This battery consists of a headquarters platoon and a service platoon.

b. *57-mm Gun Battery.* This battery has six 57-mm guns (SP) and one 14.5-mm (dual) machinegun.

c. *14.5-mm Machinegun Battery.* This battery has six 14.5-mm (quad) machineguns (SP).

2.18. *Division Artillery, Mechanized Rifle Division*
(fig. 14 and table XI)

The principal units of the division artillery of the mechanized rifle division are—

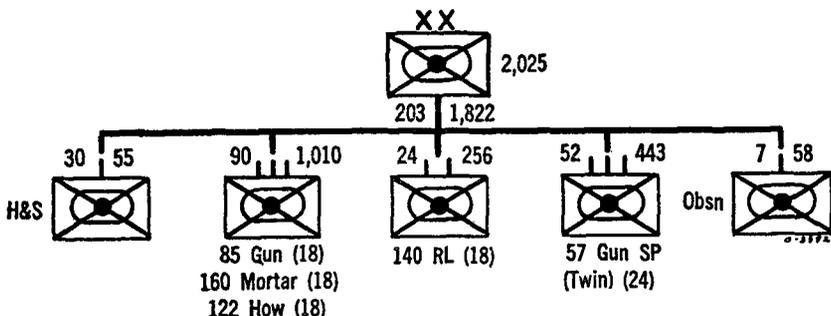


Figure 14. *Division artillery, mechanized rifle division.*

a. *Division Artillery Headquarters and Service Battery.* This battery has a command section; fire direction, reconnaissance, wire, and radio platoons; and battery headquarters personnel.

b. *Artillery Regiment* (par. 2.19).

c. *Rocket Launcher Battalion* (par. 2.20).

d. *Antiaircraft Artillery Regiment* (par. 2.21).

e. *Artillery Observation Battery.* This battery consists of a headquarters and survey, sound and flash and communication sections.

2.19. Artillery Regiment, Division Artillery, Mechanized Rifle Division

(fig. 15 and table XII)

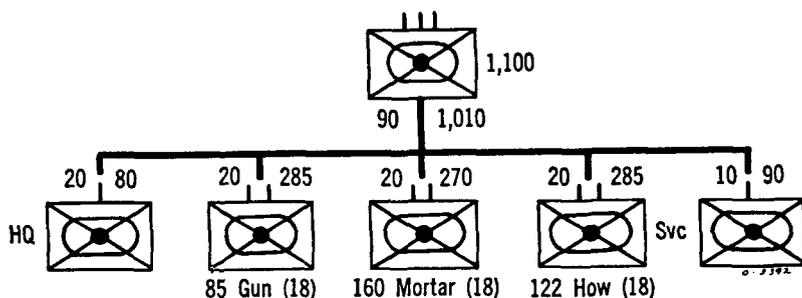


Figure 15. Artillery regiment, division artillery, mechanized rifle division.

The principal units of the artillery regiment are—

a. *Headquarters Battery.* This battery contains the command, reconnaissance, fire direction, and survey sections.

b. *Service Battery.* This battery has a supply and maintenance section.

c. *85-mm Gun Battalion.* This battalion has a headquarters, a reconnaissance squad, a signal platoon, and three firing batteries. Each battery has a command section and three firing platoons, each with one light machinegun and two artillery pieces.

d. *122-mm Howitzer Battalion.* This battalion has the same organization as the 85-mm gun battalion above.

e. *160-mm Mortar Battalion.* This battalion has the same organization as the 85-mm gun battalion above.

2.20. Rocket Launcher Battalion, Division Artillery, Mechanized Rifle Division

(fig. 16 and table XIII)

The principal units of the rocket launcher battalion are—

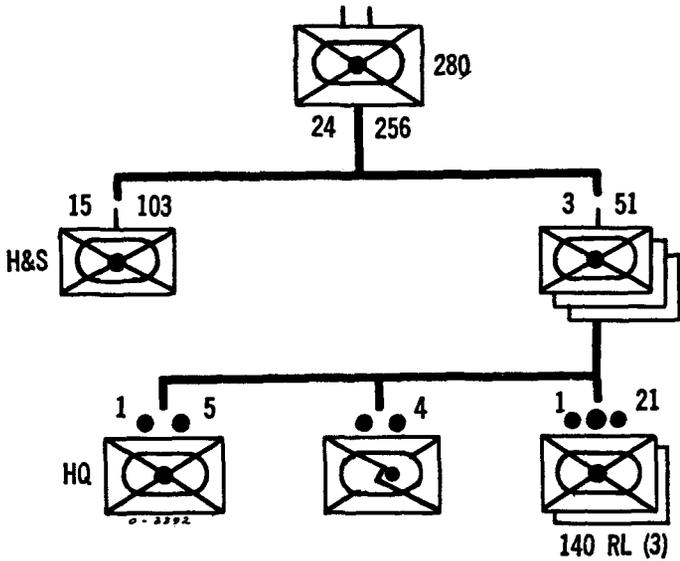


Figure 16. Rocket launcher battalion, division artillery mechanized rifle division.

a. *Headquarters and Service Battery.* This battery contains command and service elements.

b. *Three Rocket Launcher Batteries.* There are two light machineguns and six multiple rocket launchers in each battery. Each launcher can fire sixteen 140-mm nonnuclear rockets.

2.21. **Antiaircraft Artillery Regiment, Division Artillery, Mechanized Rifle and Tank Divisions**

(fig. 17 and table XIV)

The principal units of the antiaircraft artillery regiment are—

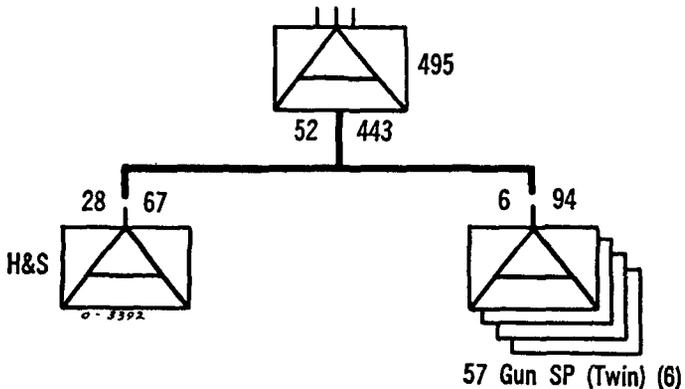
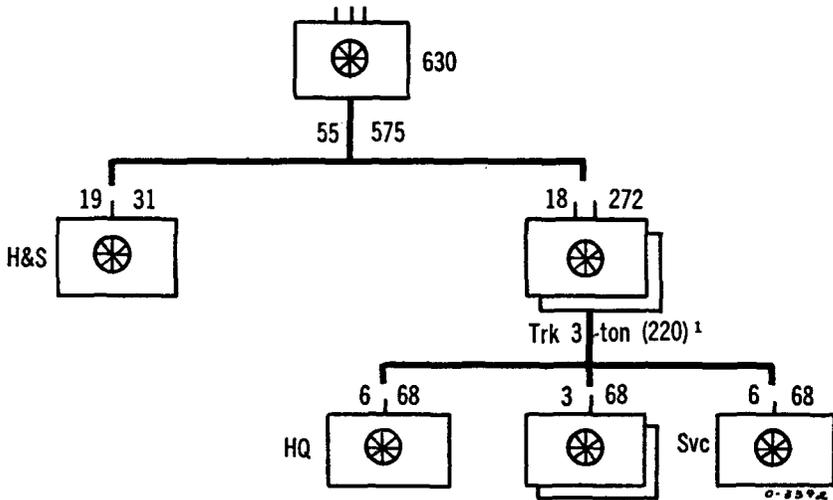


Figure 17. Antiaircraft artillery regiment, division artillery, mechanized rifle and tank divisions.

a. *Headquarters and Service Battery.* This battery contains a command and service element and two 14.5 AAMG (quad).

b. *Four 57-mm Gun Batteries.* Each battery has a headquarters with one 14.5 AAMG (dual) and fire direction section, and two firing sections with three 57-mm anti-aircraft guns (twin SP).



¹ Personnel capacity—25.

Figure 18. Transportation regiment, mechanized rifle division.

Section III. TANK DIVISION

2.22. Tank Division

The tank division is primarily a tank unit designed for great shock action and deep exploitation into enemy positions. It is not as well suited for independent operations or defense in position as is the mechanized rifle division (fig. 19 and table XV).

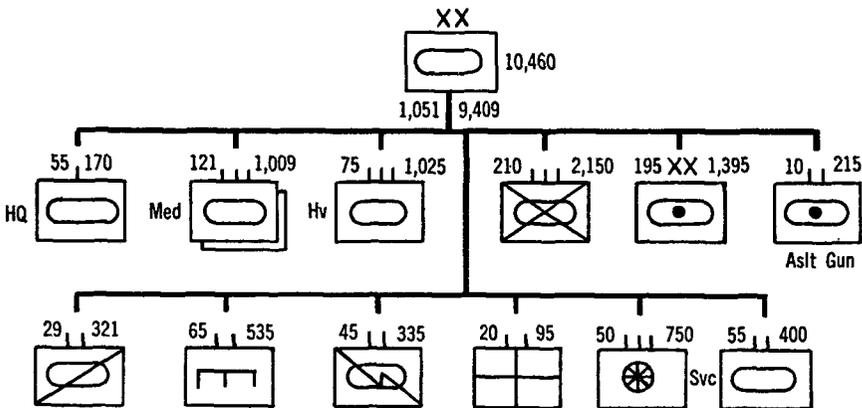


Figure 19. Tank division.

The principal units of the tank division are listed below. Many of these units are identical to those contained in the mechanized rifle division.

- a. *Headquarters Company* (par. 2.11a).
- b. *Two Medium Tank Regiments* (par. 2.14).
- c. *Heavy Tank Regiment* (par. 2.23).
- d. *Mechanized Rifle Regiment* (par. 2.12).
- e. *Division Artillery* (par. 2.24).
- f. *Assault Gun Battalion*. This battalion is organized exactly as the medium tank battalion (par. 2.15), except that it has 32 122/152-mm heavy assault guns in place of the medium tanks, and additional personnel.
- g. *Reconnaissance Battalion* (par. 2.16).
- h. *Engineer Battalion* (par. 2.11f).
- i. *Signal Battalion* (par. 2.11g).
- j. *Medical Battalion* (par. 2.11i).
- k. *Transportation Regiment* (fig. 18). This regiment is identical in organization to the transportation regiment of the mechanized rifle division (fig. 18) except that each of the two battalions contain 95 additional trucks and additional personnel.
- l. *Service Battalion* (par. 2.11h).

2.23. Heavy Tank Regiment, Tank Division (fig. 20 and table XVI)

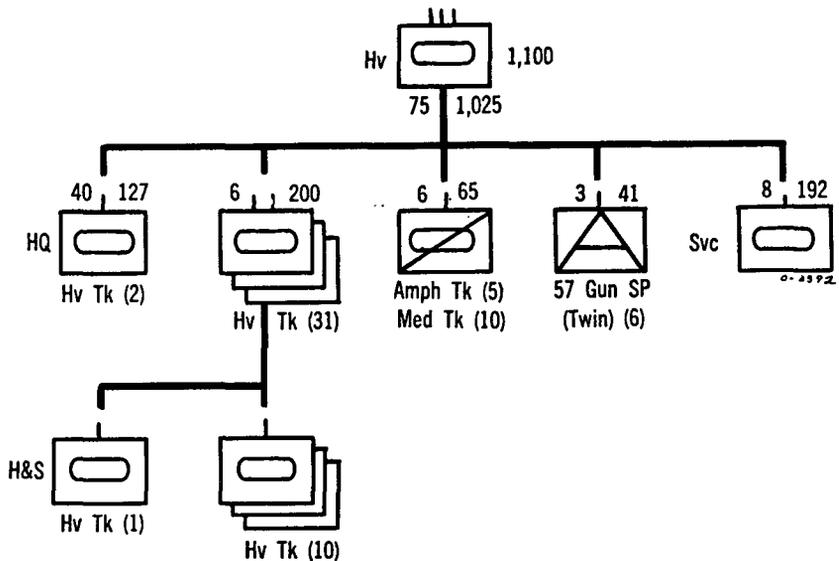


Figure 20. Heavy tank regiment, tank division.

The principal units of the heavy tank regiment are—

a. *Headquarters Company.* This company has a command and staff element and two heavy tanks.

b. *Three Heavy Tank Battalions.* Each battalion consists of a headquarters and service company and three tank companies. Each heavy tank company has two platoons, each equipped with five tanks. The battalion headquarters and service company has one heavy tank.

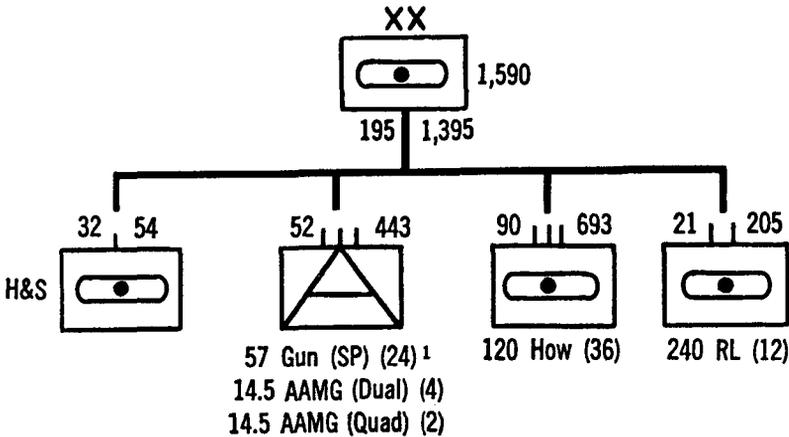
c. *Reconnaissance Company.* This unit is identical to the reconnaissance company in the medium tank regiment (2.14) except it has additional personnel.

d. *Antiaircraft Artillery Battery.* This battery has two firing platoons with three 57-mm SP twin-mount antiaircraft guns each.

e. *Service Company.* This company has a headquarters and service section and a maintenance and support section with three tank retrievers.

2.24. Division Artillery, Tank Division

(fig. 21 and table XVII)



¹ Twin.

Figure 21. Division artillery, tank division.

The principal units of the tank division artillery are—

a. *Division Artillery Headquarters and Service Battery* (par. 2.18a).

b. *Artillery Regiment* (par. 2.25).

c. *Rocket Launcher Battalion.* This unit is identical with the one in the mechanized rifle division (par. 2.20) except it has only

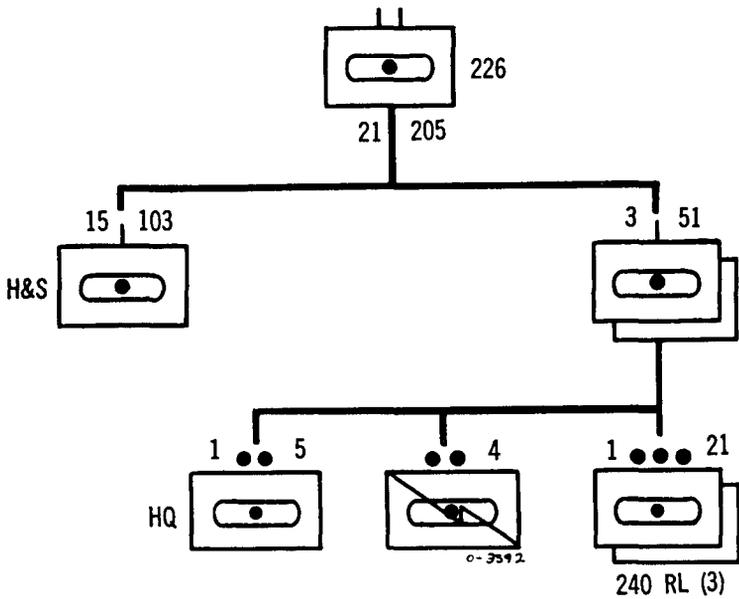


Figure 22. Rocket launcher battalion, division artillery, tank division.

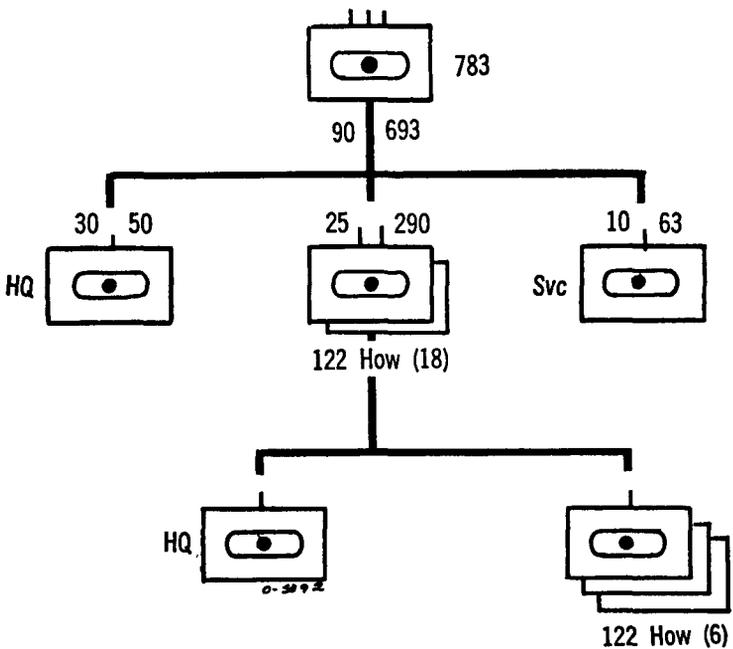


Figure 23. Artillery regiment, division artillery, tank division.

two firing batteries, each with six 240-mm launchers and fewer personnel (fig. 22).

d. Antiaircraft Artillery Regiment (par. 2.21).

2.25. Artillery Regiment, Division Artillery, Tank Division (fig. 23 and table XVIII)

The principal units of the artillery regiment, division artillery, tank division are—

a. Headquarters Battery. This battery consists of the command and reconnaissance, fire direction, and survey sections.

b. Service Battery. This battery has a supply and maintenance section.

c. Two 122-mm Howitzer Battalions. Each battalion has a headquarters battery with a reconnaissance squad, a signal platoon, and three firing batteries. Each firing battery has a command section and three firing platoons, each with two artillery pieces.

Section IV. THE AIRBORNE DIVISION

2.26. General

a. Aggressor airborne divisions have many of the same basic type units found in the mechanized rifle division but do not have any of the tank or other heavily equipped units.

b. Units of the airborne division (fig. 24 and table XIX) are—

- (1) *Airborne headquarters company.* This unit contains a headquarters section, a rear echelon section, and necessary company service elements.
- (2) *One airborne parachute regiment.* This regiment consists of a headquarters and service unit and three parachute rifle battalions. These battalions are similar to the mechanized rifle battalion (par. 2.13) in the mechanized rifle regiment of the mechanized rifle division.
- (3) *Two airborne mixed regiments.* This regiment consists of a headquarters and service company, one airborne rifle battalion (hel), and two airborne rifle battalions (prcht). Both battalions have the same organization and differ only slightly in equipment. With only minor modifications in equipment, the rifle battalion (hel) may be employed in parachute operations.
- (4) *Airborne reconnaissance company.* This company consists of a headquarters section with one 7.62 HMG and

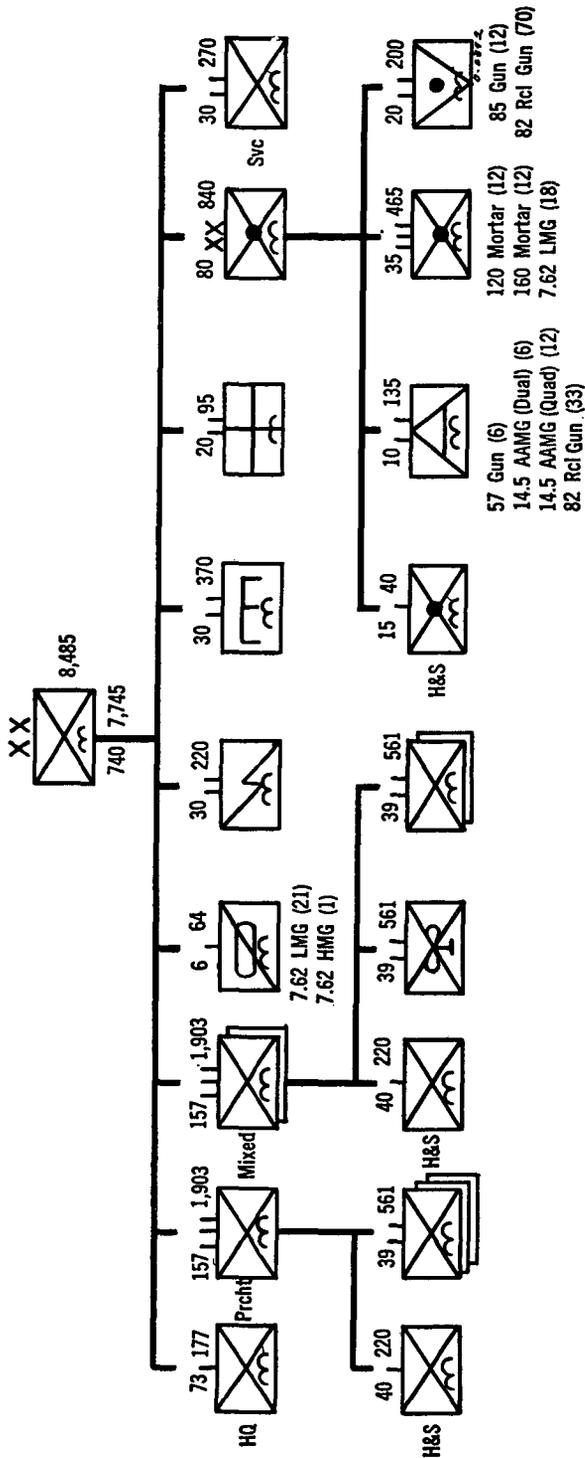


Figure 24. Airborne division.

three motorcycle platoons of seven motorcycles and seven 7.62 LMG each.

- (5) *Airborne signal battalion* (par. 2.11g).
- (6) *Airborne engineer battalion* (par. 2.11f).
- (7) *Airborne medical battalion* (par. 2.11i).
- (8) *Airborne division artillery*. The airborne division artillery (fig. 24) consists of a headquarters and service battery, an antiaircraft battalion, a mortar regiment, and an antitank battalion.
- (9) *Airborne service battalion*. The airborne service battalion has a headquarters company, an intendance company, a transportation company, a finance section, and a postal section. The transportation company is the same as the truck company in the transportation regiment of the mechanized rifle division (fig. 18).

2.27. Airborne Rifle Battalion
(fig. 25 and table XX)

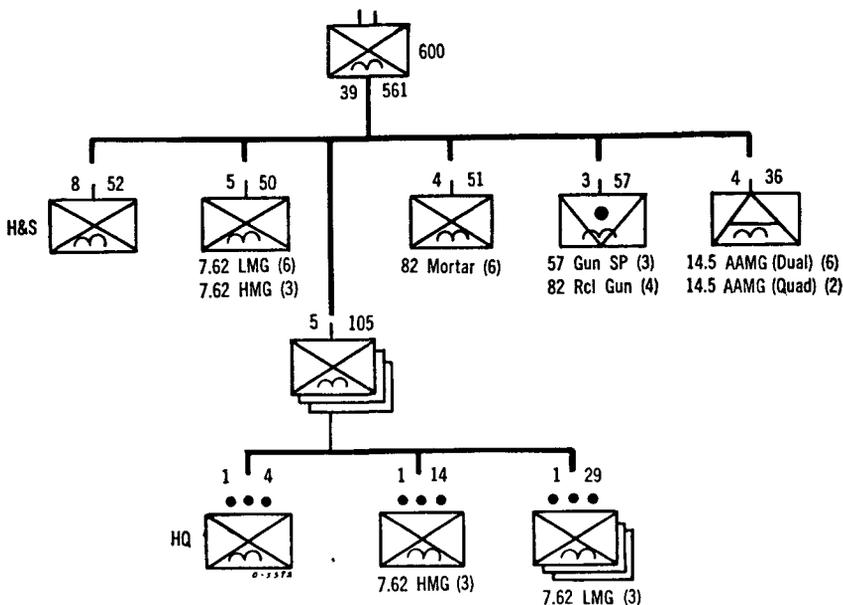


Figure 25. Airborne rifle battalion, parachute or airborne rifle battalion, helicopter.

The Aggressor airborne rifle battalion is organized along the same lines as the mechanized rifle battalion (par. 2.13) of the mechanized rifle regiment of the mechanized rifle division.

a. Headquarters and Service Company. The company consists of a command section and a service section and provides supply,

communications, maintenance, administration, and medical service for the battalion.

b. Machinegun Company. This company has a headquarters platoon and three machinegun platoons. Each machinegun platoon has two 7.62-mm machineguns (light) and one 7.62-mm machinegun (heavy).

c. Three Airborne Rifle Companies. Each company consists of a headquarters platoon, machinegun platoon with three 7.62-mm machineguns (heavy), and three rifle platoons. Each rifle platoon has three rifle squads and a headquarters section. In each rifle squad there are nine men, one 7.62 machinegun (light), two sub-machineguns, and seven rifles.

d. Airborne Mortar Company. This company has a headquarters platoon and three 82-mm mortar platoons of two mortars each.

e. Airborne Antitank Company. This company contains a headquarters platoon, a 57-mm antitank gun platoon, with three 57-mm antitank guns (SP), and a recoilless gun platoon with four 82-mm recoilless antitank guns.

f. Airborne Antiaircraft Company. This company has a headquarters platoon and two antiaircraft artillery platoons, each equipped with three dual and one quad 14.5-mm antiaircraft machineguns.

Section V. ARTILLERY UNITS

2.28. General

The artillery division is an administrative headquarters and not a tactical unit. It varies in composition depending on the situation and available artillery units and may control as many as six artillery brigades.

The following divisions and brigades are all GHQ troops and under the control of the Aggressor High Command for allotment to army groups and armies: The mixed artillery, gun artillery, and antiaircraft artillery divisions; the missile artillery divisions (light and heavy); and the heavy artillery, rocket artillery, and surface-to-air missile brigades (par. 2.32 and 2.33). Those artillery units which are not considered to be GHQ troops are listed below.

a. Artillery Brigade, Combined Arms Army (fig. 26). This unit consists of—

- (1) Headquarters and service elements.
- (2) 122-mm gun regiment with 24 guns.

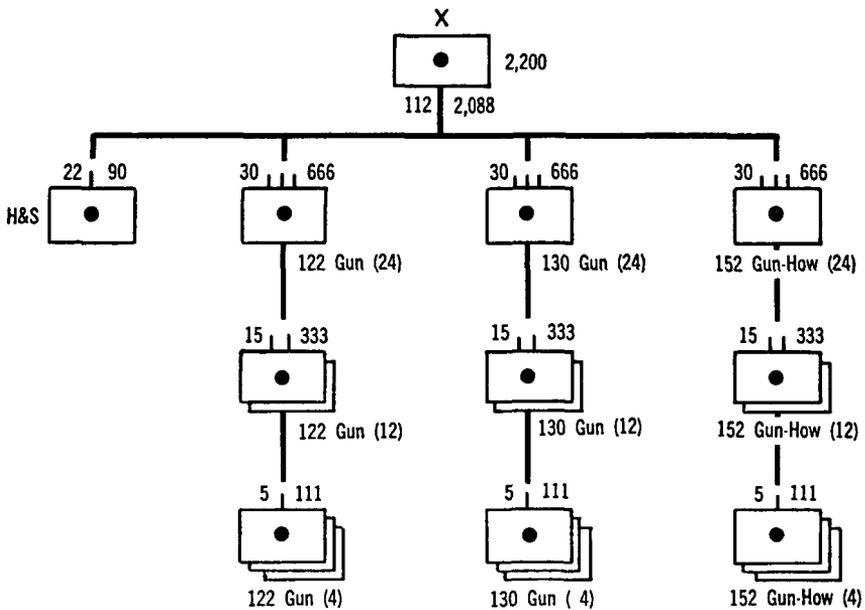


Figure 26. Artillery brigade, combined arms army.

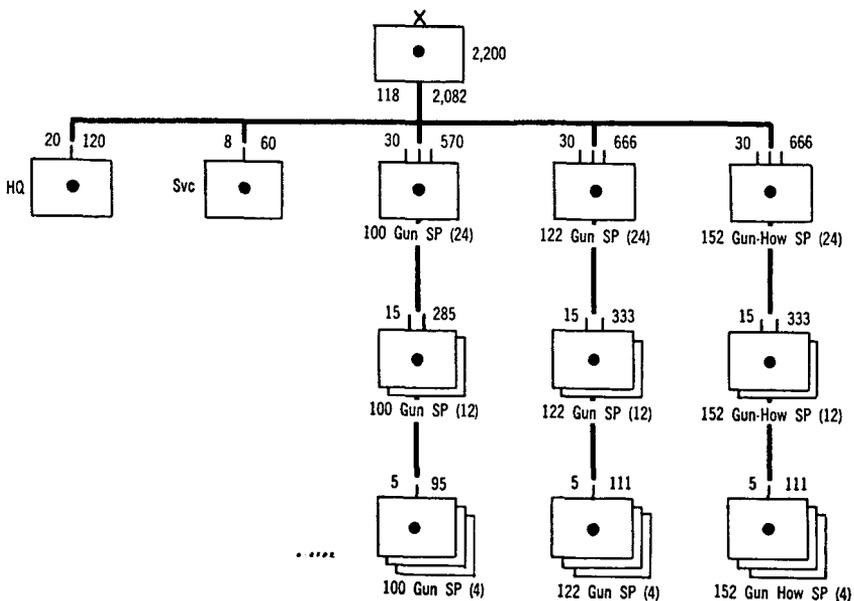


Figure 27. Artillery brigade, tank army.

(3) 130-mm gun regiment with 24 guns.

(4) 152-mm gun-howitzer regiment with 24 gun-howitzers.

b. *Artillery Brigade, Tank Army* (fig. 27). This unit consists of—

(1) Headquarters and service elements.

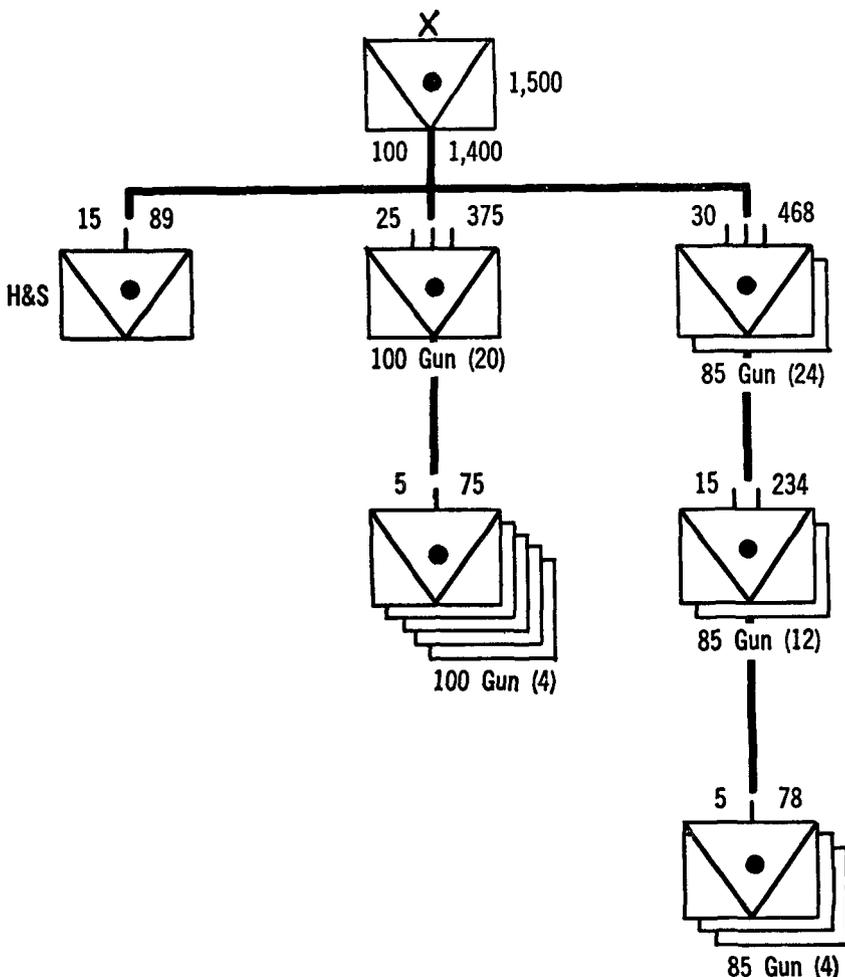
(2) Survey battery.

(3) 100-mm gun regiment (SP) with 24 guns.

(4) 122-mm gun regiment (SP) with 24 guns.

(5) 152-mm gun-howitzer regiment (SP) with 24 gun-howitzers.

c. *Antitank Artillery Brigade, Combined Arms Army* (fig. 28). This unit consists of—



• 2392

Figure 28. Antitank artillery brigade, combined arms army.

- (1) Headquarters and service element.
- (2) 100-mm gun regiment with 20 guns.
- (3) Two 85-mm gun regiments with 24 guns each.

d. *Rocket Brigade, Tank and Combined Arms Army* (fig. 29). This unit consists of—

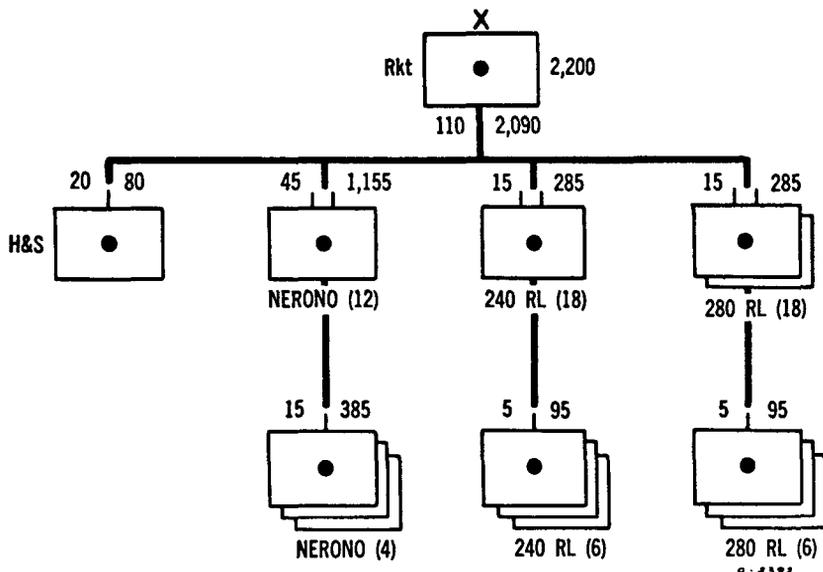


Figure 29. Rocket brigade, tank and combined arms army.

- (1) Headquarters and service elements.
- (2) NERONO rocket battalion with 12 amphibious launchers. (8–25 kilometers.)
- (3) 240-mm rocket battalion with 18 launchers.
- (4) Two 280-mm rocket battalions with 18 launchers each.

Section VI. GENERAL HEADQUARTERS TROOPS

2.29. General

GHQ troops are under control of the Aggressor High Command for allotment to army groups and armies. GHQ troops can be sub-allotted temporarily to divisions or specialized task forces for specific operations. The more common GHQ units are described in this section.

2.30. Rifle Units

a. *Mechanized Rifle Regiment (Separate)*. This regiment is the same as the mechanized rifle regiment in the mechanized rifle division (par. 2.12).

b. *Airborne Rifle Battalion (Separate)*. This battalion is the same as the airborne rifle battalion in the airborne division (par. 2.27).

c. *Ski Battalion (Separate—31 Officers and 627 Enlisted Men)*. The ski battalion consists of three ski companies, a weapons company, and a headquarters and service company. Transportation for the battalion consists of wide-track vehicles and powered sleds.

- (1) *Three ski companies (5 officers and 118 enlisted men)*. The ski company consists of a headquarters section, three ski platoons, and an 82-mm mortar section. Each ski platoon has three squads each with a light machinegun and eight submachinegunners. The mortar section has two 82-mm mortars.
- (2) *Weapons company (5 officers and 160 enlisted men)*. This company has a heavy machinegun, antitank, mortar, and antiaircraft platoons, and a headquarters section. Its armament consists of six heavy machineguns, three 57-mm antitank guns (towed), six 82-mm mortars, and three 37-mm antiaircraft guns.
- (3) *Headquarters and service company (11 officers and 113 enlisted men)*.

2.31. Tank Units

a. *Medium Tank Regiment (Separate)*. This regiment is the same as the medium tank regiment of the mechanized rifle division (par. 2.14).

b. *Heavy Tank Regiment (Separate)*. This regiment is the same as the heavy tank regiment of the tank division (par. 2.23).

c. *Reconnaissance Regiment*. This regiment consists of a headquarters and service unit and two reconnaissance battalions organized the same as the reconnaissance battalion of the mechanized rifle division (par. 2.16).

2.32. Field Artillery Units

(par. 2.28)

a. Aggressor has many separate field artillery units and their organization corresponds to the field artillery battalions and regiments of the mechanized rifle and tank divisions. Much of the Aggressor artillery is contained in units under the control of the Aggressor high command. These GHQ artillery units are listed below.

- (1) *Mixed Artillery Division (fig. 30)*.

This division consists of—

- (a) Headquarters and service units.

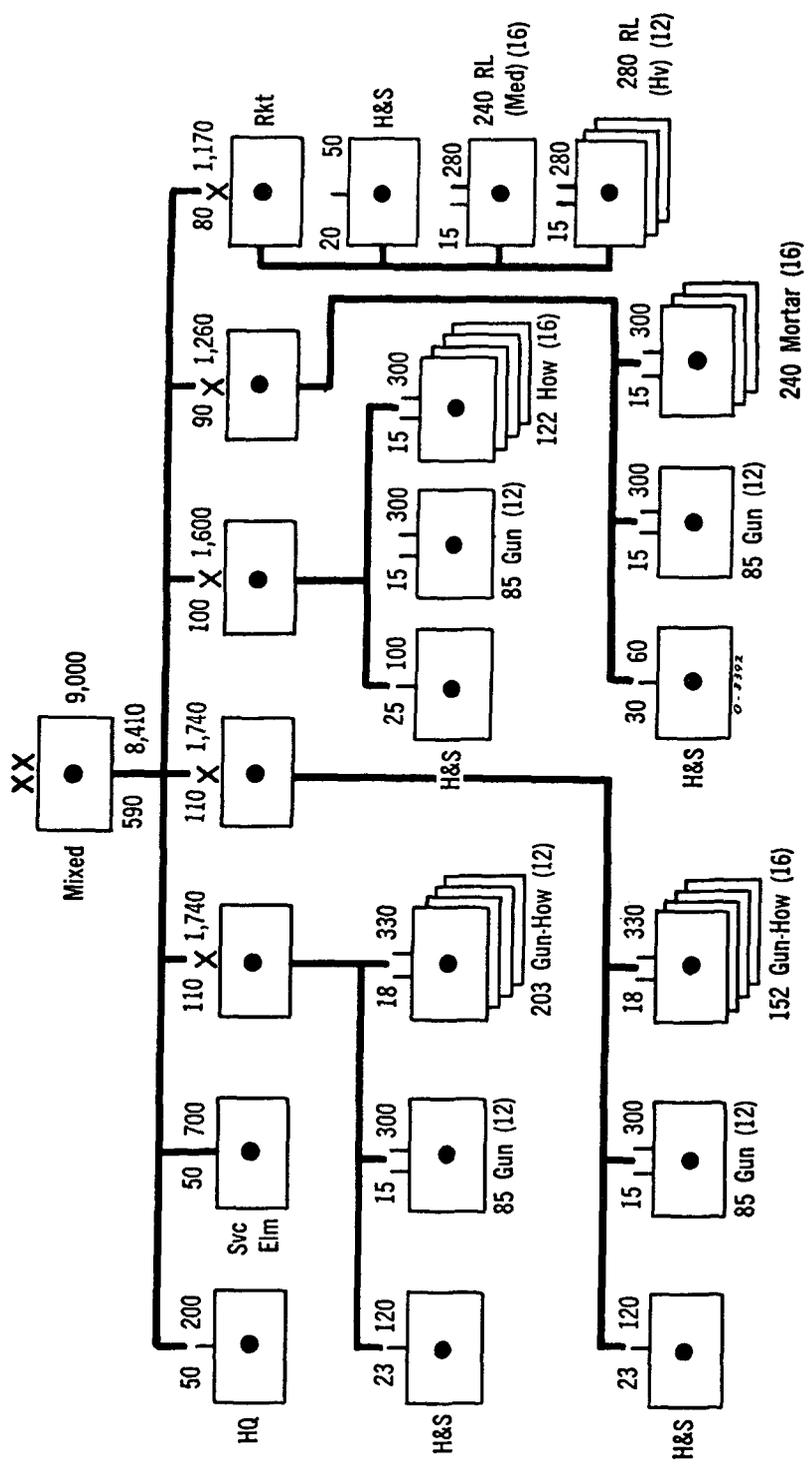


Figure 30. Mixed artillery division, GHQ troops.

- (b) 203-mm gun-howitzer brigade. This brigade has a headquarters and service battery, one battalion of twelve 85-mm guns, and four battalions of twelve 203-mm gun-howitzers each. Each battalion has six batteries of two guns each.
 - (c) 152-mm gun-howitzer brigade. This brigade has a headquarters and service battery, one battalion of twelve 85-mm guns, (four batteries of three guns each), and four battalions of sixteen 152-mm gun-howitzers each (four batteries of four guns each).
 - (d) 122-mm howitzer brigade. This brigade has a headquarters and service battery, a battalion of twelve 85-mm guns (four batteries of three guns each), and four battalions of sixteen 122-mm howitzers each (four batteries of four guns each).
 - (e) 240-mm mortar brigade. This brigade has a headquarters and service battery, a battalion of twelve 85-mm guns (four batteries of three guns each), and three battalions of sixteen 240-mm mortars each (four batteries of four mortars each).
 - (f) Rocket launcher brigade. This brigade has a headquarters and service battery, a medium rocket launcher battalion of sixteen 240-mm rocket launchers (eight batteries of two launchers each), and three heavy rocket launcher battalions of twelve 280-mm rocket launchers each (six batteries of two launchers each).
- (2) *Gun Artillery Division* (fig. 31). This unit consists of—
- (a) Headquarters and service elements.
 - (b) 130-mm gun brigade. This brigade has a headquarters and service battery, a battalion of eight 85-mm guns (four batteries of two guns each), and four battalions of twelve 130-mm guns each (six batteries of two guns each).
 - (c) 152-mm gun-howitzer brigade. This brigade has a headquarters and service battery, a battalion of eight 85-mm guns (four batteries of two guns each), two battalions of twelve 122-mm or 130-mm guns each (six batteries of two guns each), and two battalions of twelve 152-mm gun-howitzers each (six batteries of two guns each).
- (3) *Missile Artillery Division (Light)* (fig. 32). This unit consists of—
- (a) Headquarters and service elements.

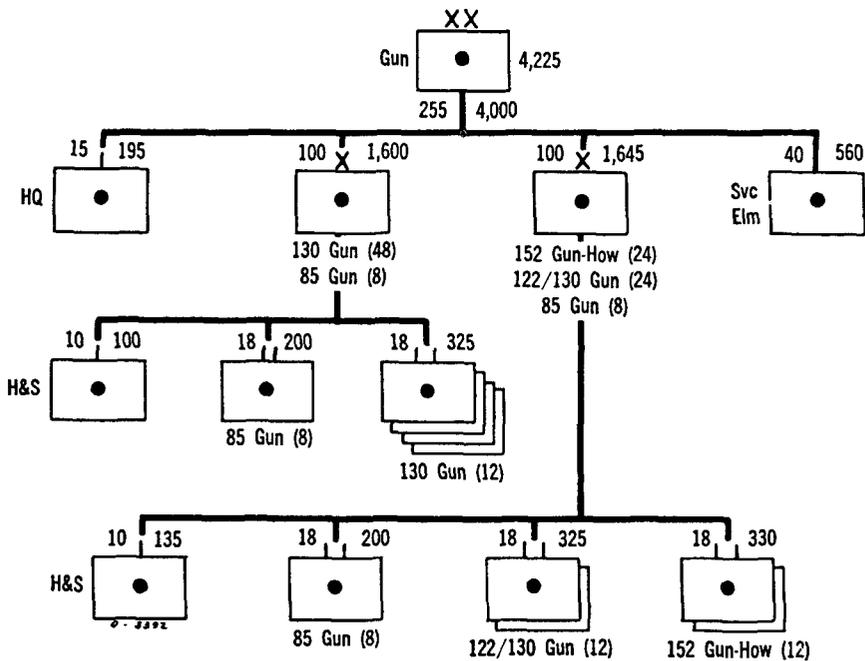


Figure 31. Gun artillery division, GHQ troops.

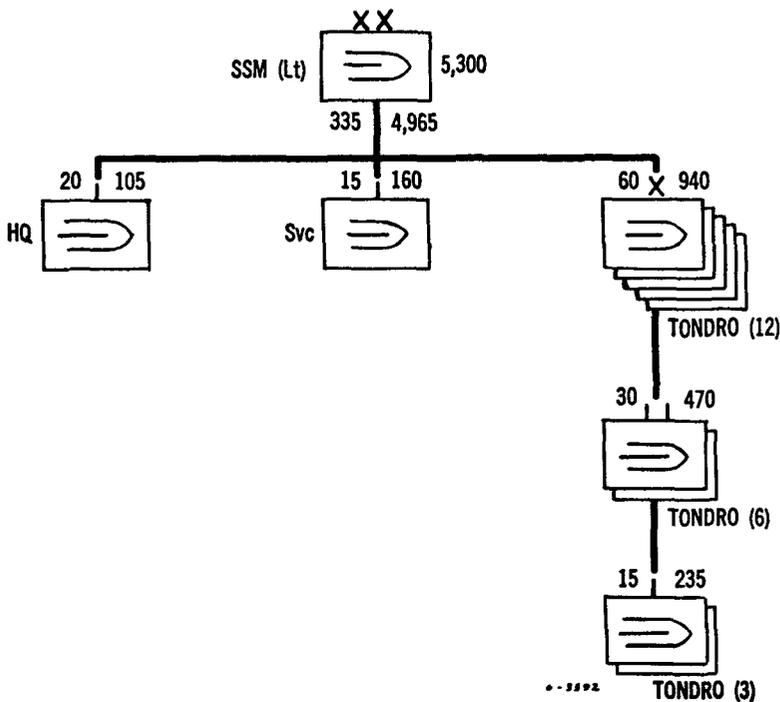


Figure 32. Missile artillery division (light), GHQ troops.

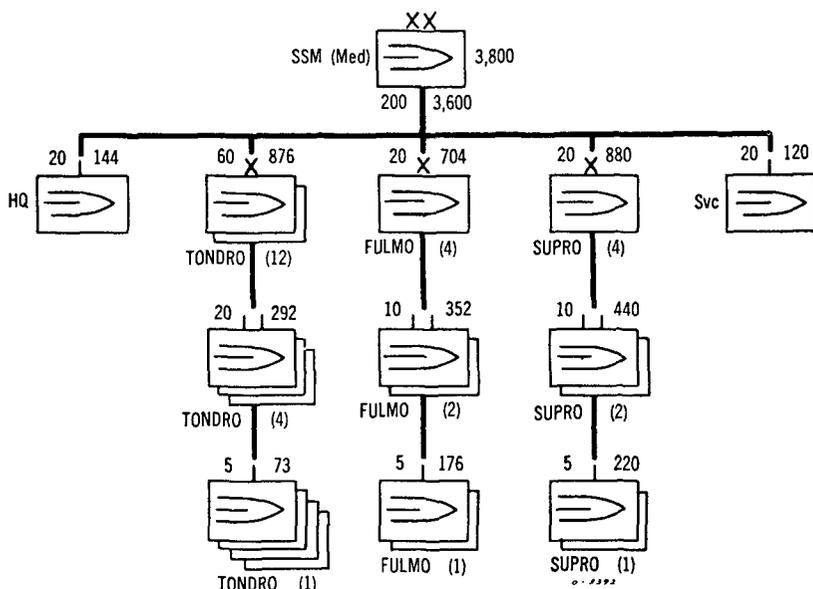


Figure 33. Missile artillery division (medium), GHQ troops.

- (b) Five TONDRO brigades with 12 launchers each (80–320 kilometers).
- (4) *Missile Artillery Division (Medium)* (fig. 33). This unit consists of—
 - (a) Headquarters and service elements.
 - (b) Two TONDRO brigades with 12 launchers each (80–320 kilometers).
 - (c) One FULMO brigade with four launchers (240–560 kilometers).
 - (d) One SUPRO brigade with four launchers (560–1120 kilometers).
- (5) *Rocket Artillery Brigade* (fig. 34). This unit consists of—
 - (a) Headquarters and service elements.
 - (b) Two NERONO battalions with 12 launchers each (8–25 kilometers). These launchers are mounted on amphibious carriers.
 - (c) One KOLOSSO battalion with six launchers (16–58 kilometers).
- (6) *Heavy Artillery Brigade* (fig. 35). This unit consists of—
 - (a) Headquarters and service elements.
 - (b) One battalion with eight 310-mm guns.
 - (c) Two battalions with eight 400-mm mortars each.

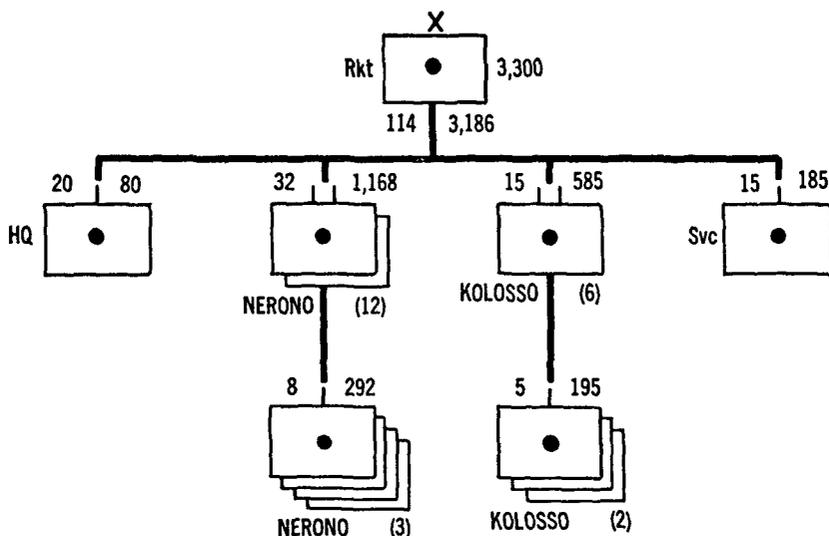


Figure 34. Rocket artillery brigade, GHQ troops.

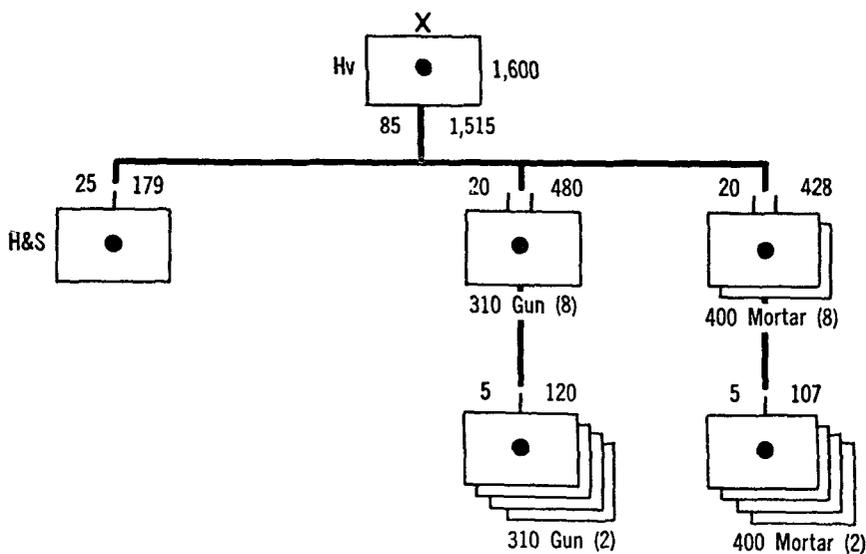


Figure 35. Heavy artillery brigade, GHQ troops.

b. In addition Aggressor has GHQ artillery units which are separate artillery ballistic missile battalions (nuclear). These ballistic missile battalions have the same organization as the TONDRO battalion (fig. 33) and may contain the TERURO missile. Missile regiments equipped with either the TONDRO, FULMO, or SUPRO missiles consist of a headquarters and service unit and two missile battalions. For characteristics, see paragraph 15.9, chapter 15.

2.33. Antiaircraft Artillery Units

(par. 2.21)

a. Aggressor antiaircraft artillery units with the army group and army correspond in organization to the antiaircraft artillery battalions and regiments of the mechanized rifle and tank divisions (par. 2.21). For the defense of key areas of the homeland and for field use. Aggressor also employs surface-to-air missile units. These GHQ units are listed below :

- (1) *Antiaircraft Artillery Division* (fig. 36). This unit consists of—

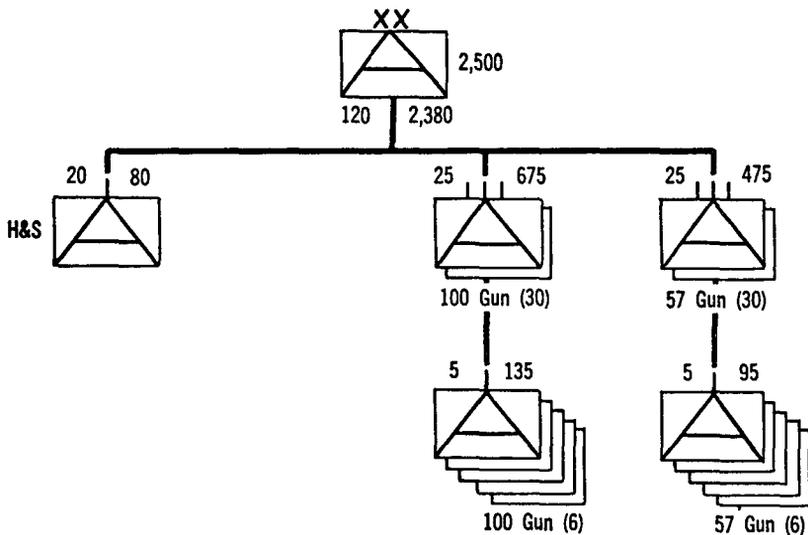
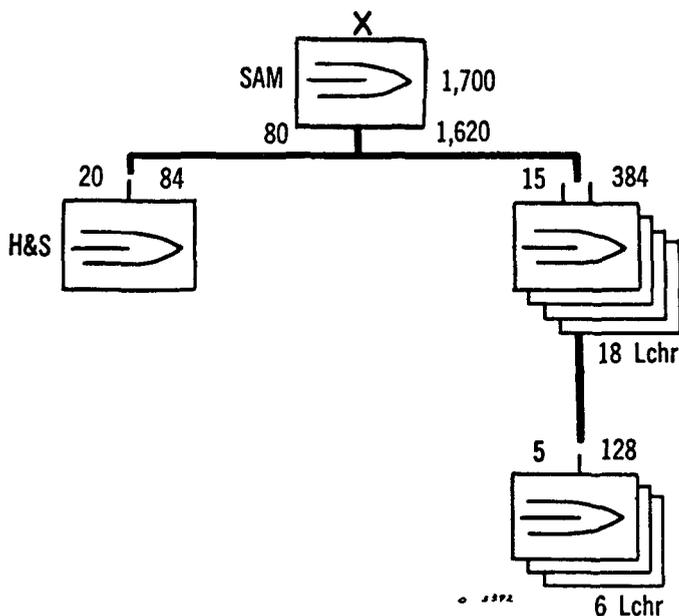


Figure 36. Antiaircraft artillery division, GHQ troops.

- (a) Headquarters and service elements.
 - (b) Two 100-mm gun regiments with 30 guns and four 14.5 AAMG (dual) each.
 - (c) Two 57-mm gun regiments with 30 guns and four 14.5 AAMG (quad) each.
- (2) *Surface-to-air missile brigade* (fig. 37). This brigade consists of combinations of BULTURO, JAGO, and AGLO missile battalions. The organization is flexible and depends on the tactical mission. For characteristics see paragraph 15.6, chapter 15. Each brigade has the following units :
- (a) Headquarters and service elements.
 - (b) Four battalions with three firing batteries each and each battery containing six launchers.



NOTE: Each battalion may contain the BULTURO, SAGO, or AGLO missiles.

Figure 37. Surface-to-air missile brigade, GHQ troops.

2.34. Antitank Artillery Units

(par. 2.28c)

Aggressor employs many GHQ antitank artillery units. The organization of these units corresponds to the antitank artillery units in the combined arms army (fig. 28) and the mechanized rifle division (fig. 9).

2.35. Engineer Units

a. *Engineer Brigade Headquarters.* This headquarters can control up to three engineer regiments.

b. *Engineer Regiment Headquarters.* This headquarters can control up to six engineer battalions of varying types.

c. *Pontoon Bridge Building Battalion (24 Officers and 296 Enlisted Men).* This battalion consists of a headquarters and service company, three bridge building companies, and an equipment transport company. It can build a 500-foot, 50-ton pontoon bridge in three hours.

d. *Bridge Building Battalion (Heavy) (26 Officers and 368 Enlisted Men).* This battalion consists of a headquarters and service company, three bridge building companies, and an equipment trans-

port company. It can build a 400-foot, 60-ton heavy pontoon bridge in four hours.

e. Road Construction Battalion (8 Officers and 520 Enlisted Men). This battalion consists of a headquarters and service company and three road building companies. Each road building company contains technical equipment and supervisory personnel to utilize several hundred civilian laborers or prisoners of war.

f. Assault Engineer Battalion (23 Officers and 276 Enlisted Men). This battalion consists of a headquarters and service company and three assault companies. The assault company has four assault teams and a company headquarters section. The assault teams are equipped for the destruction of enemy pillboxes.

g. Engineer Mine Battalion (18 Officers and 393 Enlisted Men). This battalion consists of a headquarters and service company and three mine-laying companies. The mine-laying company has a headquarters section and three platoons. Each platoon has three trucks for personnel and mines. Each company carries a basic load of 1,000 mines.

h. Engineer Construction Battalion (22 Officers and 501 Enlisted Men). This battalion consists of a headquarters and service company and three construction companies and is employed for general construction purposes.

2.36. Signal Units

a. Signal Communications Regiment (90 Officers and 780 Enlisted Men). This regiment consists of a regimental headquarters and three battalions and is used to augment communications capabilities of other units.

b. Signal Communications Monitoring Company (5 Officers and 109 Enlisted Men). This company consists of a company headquarters and three monitoring platoons and is usually assigned to an army group but may be attached to an army. It performs the counterintelligence functions of monitoring friendly communications.

c. Signal Communications Intercept Company (10 Officers and 162 Enlisted Men). This unit consists of company headquarters, an intercept, a direction finding, and analysis platoons. The mission of this company is the interception of enemy communications. It is normally assigned to the army and army group.

d. Signal Communications Countermeasures Company (8 Officers and 150 Enlisted Men). This company consists of the company headquarters, an intercept and control platoon, and three

jamming platoons. The mission of this company is the jamming of enemy communications by electronic means. It is assigned to the combined arms and tank armies and may be attached to divisions.

2.37. Chemical Units

a. Army Chemical Regiment (141 Officers and 1,460 Enlisted Men). This regiment consists of a headquarters and service element (45 officers and 170 enlisted men), a chemical reconnaissance company (4 officers and 70 enlisted men), two chemical battalions (33 officers and 485 enlisted men each), and a decontamination battalion (26 officers and 270 enlisted men). This regiment is normally assigned to the combined arms and tank armies and can be assigned to the army group.

b. Chemical Battalion (33 Officers and 475 Enlisted Men). This unit is composed of three chemical smoke companies, a chemical flamethrower company, and the battalion service troops. It is similar to the chemical battalion, chemical regiment and may also be attached to divisions. The chemical battalion is equipped to provide offensive and defensive support involving the employment of smoke, flame, toxic chemicals, and bulk contamination or decontamination materials.

- (1) *Chemical smoke company (5 officers, 105 enlisted men).* This unit consists of a company headquarters and three chemical smoke platoons. Each platoon has nine smoke generators.
- (2) *Chemical flamethrower company (5 officers and 105 enlisted men).* This unit consists of a company headquarters and three chemical flamethrower platoons armed with nine portable flamethrowers each.

c. The Biological Warfare Company (3 Officers and 50 Enlisted Men). This unit is located in the army group and has an offensive capability for biological warfare.

2.38. Transportation Units

a. Motor Transportation Brigade (353 Officers and 3,130 Enlisted Men). This brigade consists of three motor transportation regiments and is normally assigned to the army group and may be attached to a combined arms army to motorize it completely. The brigade is equipped with 720 three-ton trucks and 720 two-ton trailers, excluding its own service vehicles.

b. Army Motor Transportation Regiment (106 Officers and 985 Enlisted Men). This unit is the same as the motor transportation regiment of the motor transportation brigade (*a* above). It con-

sists of two motor transportation battalions. The regiment has 240 three-ton trucks and 240 two-ton trailers, excluding its own service vehicles.

c. The Motor Transportation Battalion (27 Officers and 285 Enlisted Men). This battalion consists of two motor transportation companies equipped with 60 three-ton trucks and 60 two-ton trailers each excluding their own service vehicles.

2.39. Psychological Warfare Units

Psychological warfare troops are organized into battalions which operate at army group level and into companies which operate at army level. The companies have teams which may be attached to divisions and other units.

a. Propaganda Battalion (37 Officers and 932 Enlisted Men). This battalion consists of three radio propaganda companies, three special operation companies and a signal radio company. The number of these companies may be increased to fit special situations.

b. Propaganda Company (8 Officers and 166 Enlisted Men). This company contains a publication platoon and three combat propaganda platoons.

2.40. Helicopter Units

Generally, helicopter units are organized into battalions and regiments according to the type helicopter employed. Composite helicopter battalions and regiments are formed on a provisional basis by temporary attachment and detachment of different types of helicopter companies and battalions. Helicopter regiments are part of Aggressor air forces and are normally assigned to the air army of the army group (par. 3.2 and fig. 38).

a. Heavy Helicopter Battalion (138 Officers and 502 Enlisted Men). This battalion consists of a battalion headquarters and service company and three heavy helicopter companies. The battalion has a total of 47 heavy transport helicopters (H7), and eight observation helicopters (H1). With all heavy transport helicopters operational this battalion can lift about 470 tons at one time. Heavy helicopter battalions are attached to the combined arms armies and army group as required. The battalion is normally employed to provide logistical support to tactical elements.

b. Heavy Helicopter Company (43 Officers and 94 Enlisted Men). This company consists of a company headquarters and three heavy helicopter platoons. Each heavy helicopter platoon has five heavy transport helicopters (H7). The company headquarters has two observation helicopters (H1). With all heavy

transport helicopters operational the company can lift about 150 tons of cargo at one time. This company is normally assigned to the heavy helicopter battalion but can be detached and placed in support of any element within the army group.

c. Medium Helicopter Battalion (138 Officers and 487 Enlisted Men). This battalion consists of a headquarters and service company and four medium helicopter companies. The battalion has a total of 61 medium transport helicopters (H6) and 10 observation helicopters (H1). This battalion can lift in one move the assault elements of a mechanized rifle regiment or 268 tons of cargo using all medium transport helicopters (H6). Two or more medium helicopter battalions are normally attached to each combined arms army and each army group.

d. Medium Helicopter Company (43 Officers and 94 Enlisted Men). This company consists of a headquarters and three medium helicopter platoons. Each medium helicopter platoon has five medium transport helicopters (H6). The company headquarters has two observation helicopters (H1). This company can lift in one move the assault elements of a mechanized rifle battalion or 66 tons of cargo using all medium transport helicopters. This company is normally assigned to the medium helicopter battalion but can be detached and placed in support of any element within the army group.

e. Light Helicopter Battalion (176 Officers and 452 Enlisted Men). This battalion consists of a headquarters and service company, three light helicopter companies, and one utility helicopter company. The battalion has a total of nine observation helicopters, 31 utility helicopters (H4), and 47 light transport helicopters (H5). This battalion can lift in one move the assault elements of one mechanized rifle battalion or 87 tons of cargo using all assigned helicopters. Two or more light helicopter battalions normally are attached to each combined arms army and army groups as required.

f. Light Helicopter Company (42 Officers and 90 Enlisted Men). This company consists of a headquarters and three light helicopter platoons. Each light helicopter platoon has five light transport helicopters. The company headquarters has two observation helicopters (H1) and one light transport helicopter (H5). With all helicopters operational the company can lift at one time 28 tons or the assault elements of one mechanized rifle company. The company is normally assigned to the light helicopter battalion but can be detached and placed in support of any element within the army group.

g. Utility Helicopter Company (41 Officers and 71 Enlisted Men). This company consists of a headquarters and three utility helicopter platoons. Each utility helicopter platoon has 10 utility helicopters (H4). The company headquarters has one observation helicopter (H2) and one utility helicopter (H4). With all helicopters operational the company can lift at one time about 12 tons or the assault elements of two mechanized rifle platoons. This company is normally assigned to the light helicopter battalion but can be detached and placed in support of any element within the army group.

h. Planning Guidance. Planning guidance factors for employment of Aggressor helicopter units are indicated on following page.

Helicopter Units

Unit	Composition	Number aircraft assigned (4)							Unit lift capability (1)	
		H1 (Obsn)	H2 (Obsn)	H4 (Util)	H5 (L-Trans)	H6 (M-Trans)	H7 (H-Trans)	Tons	Tactical elements	
Heavy Hel Bn	3 Heavy Co	8					47	352	Note (2)	
Heavy Hel Co	3 Heavy Plat	2					15	112	Note (2)	
Medium Hel Bn	4 Med Co	10				61		200	2 reinf mech rifle bn (3).	
Medium Hel Bn	3 Med Plat	2				15		50	2 reinf mech rifle co (3).	
Medium Hel Co	3 Lt Co & 1 Util Co	8	1	31	47			65	Aslt Elm 1 mech ri- fle bn (3).	
Light Hel Co	3 Light Plat	2			16			21	1 reinf mech rifle co (3).	
Utility Hel Co	3 Utility Plat		1	31				9	1 reinf mech rifle plat (3).	

1 75% of all assigned aircraft operational and available.

2 Normally employed to provide logistical support to tactical elements.

3 Minus heavy items of equipment.

4 For payload capacity of each type aircraft, see paragraph 15.11.

CHAPTER 3

THE AGGRESSOR AIR ARMY

3.1. General

a. Aggressor Air Forces are organized into naval aviation, tactical air armies, long-range aviation, the troop carrier command, and fighter units of the Home Air Defense Command. The latter three are under the operational control of the Armed Forces High Command. Naval aviation is under the Naval High Command.

b. This chapter deals only with Aggressor tactical air armies which are subordinate to the army groups.

3.2. Tactical Air Army

a. The air army is a composite force consisting of varying numbers of fighter corps, attack corps, specialized regiments, and necessary ground and air service support units. Normally one tactical air army is assigned to each army group.

b. A typical air army consists of an attack corps, two fighter corps, seven reconnaissance regiments, seven helicopter regiments, three transport regiments, two independent fighter regiments, four artillery observation regiments, three antiaircraft artillery missile brigades (BULTURO), and necessary ground and air service units (fig. 38).

3.3. Fighter, Bomber, and Attack Corps

a. The organization of a fighter, bomber, or attack corps is variable and consists of two or more divisions and necessary supporting troops.

b. A typical fighter or bomber corps is three divisions of the appropriate aircraft and the necessary supporting troops (fig. 38).

c. A typical attack corps is two attack divisions, two bomber divisions, and the necessary supporting troops (fig. 38).

3.4. Air Division

a. An air division is a tactical organization of two or more air regiments. The air division does not have a fixed table of organization.

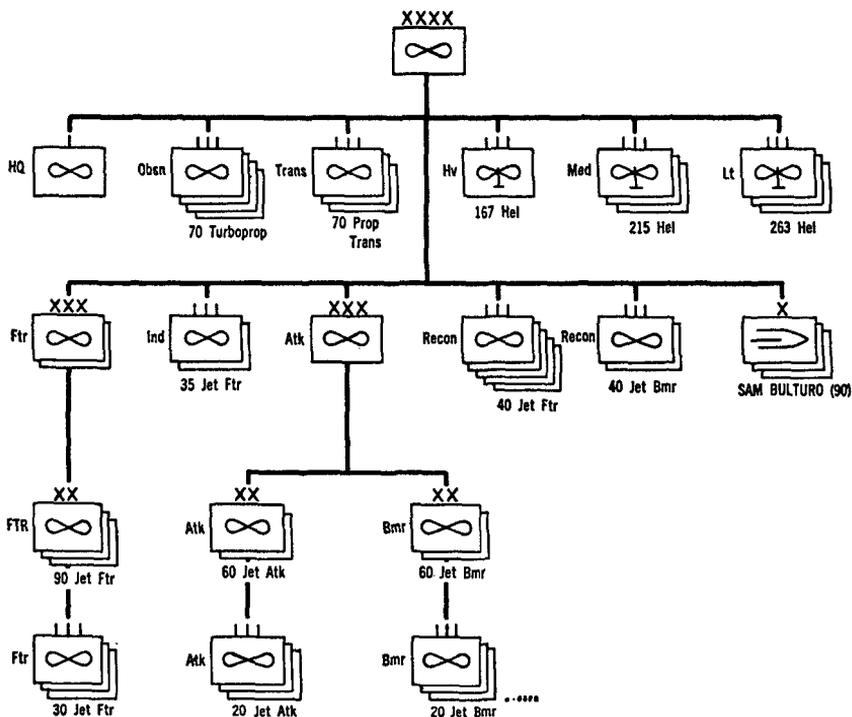


Figure 38. Typical tactical air army.

b. A typical air division is three air regiments and necessary supporting units.

3.5. Air Regiment

a. The air regiment is the largest flying unit with a fixed table of organization. Fighter, bomber, and attack regiments are usually assigned to air divisions. Specialized air regiments such as reconnaissance artillery observation and helicopter regiments are usually general headquarters units under control of the air army.

b. The more common air regiments are—

- (1) *Fighter regiment (244 officers and enlisted men).* This regiment has a headquarters squadron and three fighter squadrons with a total of 30 jet aircraft.
- (2) *Attack regiment (350 officers and enlisted men).* This regiment has a headquarters squadron and three attack squadrons with a total of 30 jet aircraft.
- (3) *Bomber regiment (350 officers and enlisted men).* This organization is identical with the attack regiment, except it is equipped with a total of 30 jet bombers.
- (4) *Artillery observation regiment (430 officers and enlisted*

men). This regiment has a headquarters squadron and four observation squadrons with a total of 70 aircraft. This regiment is usually under operational control of the army group artillery officer.

- (5) *Transportation and medical evacuation regiment*. This regiment has about 70 officers and 350 enlisted men and about 70 transport aircraft.
- (6) *Reconnaissance regiment (430 officers and enlisted men)*. The organization of this regiment varies slightly with the type of aircraft assigned to the regiment. The reconnaissance regiment is usually equipped with either jet fighters, jet attack, or twin jet bombers for a total of about 40 aircraft.
- (7) *Helicopter regiment (approximately 650 officers and enlisted men)*. This regiment has a regimental headquarters and service company and three type helicopter battalions. The type helicopter battalions are organized as indicated in par. 2.40. The composition of the helicopter regiment normally is tailored by the air army commander to best support the mission of the combined arms army to which it is attached.

CHAPTER 4

THE AGGRESSOR NAVAL FORCES

Section I. MAJOR UNIT ORGANIZATION

4.1. General

The Aggressor nation has a naval arm that ranks among the best in the world. The Navy is responsible for coastal defense, coast artillery, and coastal anti-aircraft defenses. The military districts in the maritime areas of the homeland are commanded by naval officers.

4.2. Naval Air

The Navy air arm is small compared to the tactical air force. The organization, training, and tactical operations of the Navy air arm are directly under the Naval High Command.

4.3. Naval Infantry

The Aggressor Navy maintains a well-trained marine force of naval rifle units.

Section II. NAVAL RIFLE ORGANIZATION

4.4. Naval Rifle Brigade

a. This brigade is a small combined arms force of naval personnel especially trained and equipped for amphibious operations. The total brigade strength is 375 officers and 4,722 enlisted men.

b. The principal units of the naval rifle brigade are—

- (1) *Four naval rifle battalions.* Each battalion has 58 officers and 874 enlisted men (par. 4.5).
- (2) *Amphibious tank battalion (22 officers, 184 enlisted men).* This battalion consists of a headquarters and service company and four amphibious tank companies. Each company is equipped with five amphibious tanks.
- (3) *Brigade artillery (42 officers, 436 enlisted men).* The brigade artillery consists of a headquarters and service battery, a howitzer battery with four 122-mm howitzers, an antitank battery with four 85-mm antitank guns, a

mortar battery with four 120-mm mortars, and an anti-aircraft battalion with four anti-aircraft batteries, each equipped with six 37-mm anti-aircraft guns.

- (4) *Engineer assault battalion (23 officers, 276 enlisted men)*. This battalion is similar to the engineer assault battalion (par. 2.35).
- (5) *Headquarters and service troops (53 officers, 280 enlisted men)*. Included in the service troops are a motor transport company with 60 three-ton trucks and trailers and an amphibious tractor company with 60 seven-ton amphibious vehicles.

4.5. Naval Rifle Battalion

a. The principal units of the naval rifle battalion are—

- (1) *Four naval rifle companies*. Each naval rifle company has eight officers and 162 enlisted men. The naval rifle company has four rifle platoons which have four seven-man squads with one light machinegun and six rifles each, an antitank platoon with four 82-mm launchers, and a mortar platoon with four 82-mm mortars.
- (2) *Heavy machinegun company (3 officers, 27 enlisted men)*. This company has four heavy machineguns.
- (3) *Antitank company (3 officers, 27 enlisted men)*. This company has four 57-mm AT guns.
- (4) *Mortar company (3 officers, 27 enlisted men)*. This company has four 82-mm mortars.
- (5) *Naval engineer assault company (6 officers, 75 enlisted men)*. This company has four assault platoons each armed with two light machineguns and 14 submachineguns.
- (6) *Headquarters and Service company (3 officers, 40 enlisted men)*.

b. The naval rifle battalion also exists as a separate organization.

4.6. Naval Amphibious Tractor Battalion

This is a separate naval amphibious unit consisting of 31 officers and 360 enlisted men. The battalion has a headquarters and service company and four amphibious tractor companies equipped with 60 amphibious vehicles.

PART TWO
TACTICAL DOCTRINE

CHAPTER 5
BASIC PRINCIPLES

5.1. General

a. The primary offensive mission of Aggressor forces is the destruction of enemy ground forces. Aggressor tactical doctrine is based on the principle that decisive victory on the battlefield is achieved only by the offensive. While Aggressor troops are well trained in defensive operations, Aggressor believes that only by the attack can the commander retain the initiative and control the vital factors of time and space.

b. The figures cited in chapters 7, 8, and 10 for depths and frontages for tactical operations are general guides. In combat, wide variations would be caused by such factors as: Terrain; weather; time of day and year; availability of troops; organization, strength, and mission of units; and organization, strength, and deployment of enemy forces. Aggressor experiments freely in the employment of units and formations to further develop offensive tactical doctrine and achieve surprise.

5.2. Mass

Aggressor achieves mass in decisive areas by rapid concentration of men, materiel, and firepower. His ability to mass conventional fires and small yield nuclear weapons in the forward battle area is supplemented by large yield nuclear fires for the attack of deep targets. The concentration of assault units and supporting arms is usually made under cover of darkness or reduced visibility by moving rapidly from march columns. This concentration is maintained only for the minimum necessary time. Large static concentrations of forces and equipment are avoided.

5.3. Dispersion

When not concentrated for a specific tactical mission, Aggressor units are dispersed to the maximum, consistent with the terrain

and anticipated employment. Wherever possible, Aggressor tries to have regimental assembly areas of a minimum of 20 to 25 square kilometers. Division assembly areas are a minimum of 100 to 125 square kilometers. Army concentration areas are a minimum of 750 to 1500 square kilometers.

5.4. Surprise

Surprise is sought at all times to paralyze the enemy's will to resist and deprive him of the ability to react effectively. Surprise is achieved by—

- a.* Strict security measures.
- b.* Concealment and rapid concentration of forces and materiel at the decisive point.
- c.* Use of airborne forces.
- d.* Sudden employment of mass fires, including air and missile fires, which may or may not be limited to nuclear fires, followed by rapid offensive action.
- e.* Exploitation of unfavorable weather and terrain.
- f.* Application of new combat methods.
- g.* Detailed tactical cover and deception measures.
- h.* Rapid introduction of large tank forces in battle.
- i.* Infiltration tactics.

5.5. Command

a. Unity of command at all echelons is practiced. A force of combined arms is commanded by the senior combat arms officer present. Air armies supporting ground forces are under the command of army group commanders. All commanders, up to and including those of the mechanized rifle division, are required to make detailed personal reconnaissance. All commanders exercise close personal supervision of critical actions.

b. Every commander of a battalion or larger unit has a political staff officer who has strong influence in personnel matters and at times, in tactical decisions.

c. Commanders are permitted considerable initiative provided the intent of the higher commander is not violated. In a sudden change in the situation where it is not possible to receive new instruction, the commander, on his own initiative, makes a new decision. This decision is transmitted at the first opportunity to the next superior and to adjacent units.

5.6. Control

- a.* Measures to insure continuity of operations in the face of

nuclear attacks are reduced to standing operating procedures. Divisions and larger units habitually establish alternate command posts far enough from the primary command post to prevent destruction of both by a medium yield weapon. Division and lower echelon units do not have sufficient staff personnel to fully man a duplicate command post, ready for immediate use. Armies and army groups maintain well separated duplicate command posts both continuously staffed and equipped with all necessary operational and communications equipment. In addition, army groups also establish a rear echelon of the main command post, not to be confused with the rear command post, to avoid an excessive concentration of personnel in a relatively small area. This rear echelon is not an integrated unit but consists of all staff elements not directly engaged in operational work scattered over a wide area 60 to 80 kilometers behind the area of contact. The alternate headquarters assumes command on order or when the main headquarters is inoperative.

b. Major reliance is placed on radio communications. Wire communications, although considered a secondary means, are used to the maximum permissible extent during the defense and during the preparatory phases of offensive operations. Cryptographic security is strictly enforced. Radio and wire communication nets are established on a multilateral network basis to insure maximum flexibility.

5.7. Control of Nuclear Weapons

a. Delivery means of tactical nuclear weapons, including air, are under direct command of the army group commander. He has the authority to further delegate their control and to allocate nuclear fires except those with delivery means whose ranges exceed 350 kilometers, as this is the limit of the armies' surveillance and acquisition capability. Control of nuclear fires and delivery means is usually delegated to armies. Armies may further delegate control to divisions. Normally control is not delegated to divisions except when operating on independent missions or in the exploitation phase of an attack. All commanders without control of appropriate delivery systems or nuclear fires recommend targets for nuclear fires to support their mission to the next higher commander. Such targets are incorporated into the overall nuclear fire support plan.

b. The lack of organic nuclear delivery systems at division level as a normal practice is a potential vulnerability. This vulnerability is increased in circumstances where the effectiveness of Aggressor communications has been appreciably reduced.

5.8. Unit Structure

Aggressor units are organized into reinforced companies, battalions, and regiments to permit the employment of mass and maneuver. Aggressor units are—

- a.* Heavily supplied with tanks, artillery, and automatic weapons to provide great firepower.
- b.* Designed to permit flexibility of operations by ready adaptability to varying combat organizations.
- c.* Equipped with transportation suitable for battlefield maneuver.
- d.* Capable of absorbing large numbers of supporting units, particularly nuclear artillery and tanks, to provide shock action and an overwhelming mass of fire.

5.9. Combined Arms

a. Military operations depend on the integrated combat employment of all arms with artillery, tanks, and airpower essential to success. These arms have as their primary role the support of mechanized rifle units. Mechanized rifle units provide the base of fire, manpower, and momentum which bring about the ultimate defeat of the enemy; artillery and nuclear weapons provide massed firepower; and tank forces provide mobile firepower and shock action.

b. Aggressor units are rarely employed without reinforcements or attachments. Mechanized rifle units are usually reinforced with tanks, engineers, and additional artillery of all types, including missiles. The mission, enemy, terrain, and forces available determine the amount and type of reinforcements or attachments.

5.10. Fire Support

a. In both the offensive and the defensive, full use is made of artillery and airpower. Nuclear weapons are integrated with other artillery and air delivered fires to achieve devastating massed fire support. When surprise is a major consideration nuclear fires may completely, or in part, replace nonnuclear artillery and air fires in preparations and counterpreparations. Surprise is further enhanced by the employment of tanks as an assault force when nuclear weapons are used to assist in the breakthrough.

b. Artillery at all levels is massed at the points of main effort but is echeloned in depth. To achieve the desired artillery concentration other areas may be relatively denuded of artillery support. Nuclear weapons supplement but do not replace nonnuclear weapons. They are employed for their mass and surprise effect with

the mass fires of conventional weapons. Nuclear weapons are employed only against carefully selected targets which permit the achievement of maximum effectiveness with minimum expenditure of nuclear resources, minimum danger to friendly troops, and minimum problems for the maintenance of control. Missile delivered small yield weapons, 2–5 kilotons, are not to be fired at targets closer than 2–5 kilometers to friendly troops unless the troops are well protected. The Aggressor gun artillery and mortar delivered weapons may be employed as close as 1½ kilometers. See chapters 9 and 11 for use of artillery.

c. Fighter units of the air army have as part of their mission the preventing of enemy delivery of air-dropped nuclear weapons. Attack and bomber units have the mission of destroying enemy nuclear delivery means as well as that of dropping nuclear weapons on the enemy.

5.11. Defensive Measures Against Nuclear Attack

a. Maximum defensive measures are taken against nuclear weapons effects consistent with accomplishment of the mission. Nuclear defense measures are detailed and reduced to standing operating procedures. These defense measures are a command responsibility with chemical and engineer personnel furnishing technical advice and assistance. In all operations battalions and larger units prepare detailed plans covering measures to be taken in an enemy nuclear attack.

b. In all operations maximum use is made of the terrain and weather for passive defense against nuclear effects. For example, artillery positions are selected to take advantage of terrain irregularities as a partial defense against thermal effects of nuclear detonations.

c. Maximum use is made of dispersion, which is achieved by increasing distances between units of battalion size. Within range of enemy tactical nuclear weapons, Aggressor battalion assembly areas are separated by two kilometers, wherever possible, and when on the march, battalion columns are separated by at least two kilometers of road space.

d. Deep entrenchments with overhead cover for personnel and subsurface shelters for tanks, vehicles, and supplies are provided where possible. Assembly and concentration areas are prepared, if the situation permits, with subsurface shelters before occupancy. Extensive organic mechanical means are provided to enable units to dig in rapidly for passive protection. Where extensive entrenchments have been vacated by first echelon units, rear echelon units move forward and occupy them.

e. Camouflage, deception, and concealment measures are emphasized. All major troop movements behind the area of contact are usually made at night or during other periods of limited visibility. Such movements are executed as rapidly as possible and are rigidly controlled to prevent undue massing. Extensive decoying, false rail and road movements, and radio traffic are incorporated into tactical cover and deception plans at all command levels in an attempt to make the enemy waste nuclear weapons.

f. Total radiological dose limits for individuals are announced by the Ministry of the Armed Forces but may be altered temporarily by army or army group commanders. Radiological detection and decontamination teams are provided in all task operations. Aggressor anticipates that tanks and armored personnel carriers provide a degree of protection to blast and fallout effects and will enable them to cross contaminated areas if the tactical situation requires.

5.12. Combat Intelligence and Counterintelligence

(For information on the characteristics of Aggressor surveillance, see ch. 15, sec. IV)

a. All units are trained in combat intelligence and counterintelligence. The Aggressor staff organization for combat intelligence compares to that of the U.S. Army. Intelligence activities of units are closely controlled by the next higher headquarters. Deep aerial reconnaissance is used extensively. Operational and tactical aerial reconnaissance for army groups and subordinate units will extend up to 350 kilometers from contact, while long-range aerial reconnaissance by jet aircraft regiments will be accomplished up to 500 kilometers from contact. In addition, 25 to 30 long-range agent teams, consisting of six to eight men each, will usually be sent out during static periods to establish passive networks within the immediate and subsequent army group zones of actions. These teams have the mission of locating enemy nuclear weapons and missile launching bases; observation of enemy movements and equipment; and determination of the enemy's defensive setup. They will operate up to a range of 1,000 kilometers.

b. In addition to normal intelligence objectives, the combat intelligence effort concentrates on the following:

- (1) Enemy nuclear attack and armor capabilities and indications of enemy use of nuclear weapons or armor.
- (2) Location and reporting of enemy reserves that will interfere with the main effort.
- (3) Changes in enemy deployment, particularly those indi-

cating withdrawals or requiring a change in Aggressor plans, (especially plans for use of nuclear fires).

- (4) Targets suitable for attack by nuclear weapons, to include locating enemy nuclear delivery means including air bases for planes capable of delivering nuclear weapons.
- (5) Location of major enemy radar and air defense installations.

c. Aggressor maintains large numbers of signal units capable of communication intercept, analysis, and electronic countermeasures. These units are usually assigned or attached to the army and army group. These units have the capability of short-range radio intercept and direction-finding, detection of moving ground objects and electronic countermeasures.

d. Clandestine agents are used in large numbers. They are normally controlled at the army and army group level. Wide use is also made of partisan groups and stay-behind elements for the collection of information, conduct of subversive activities, and sabotage.

e. Within divisions, emphasis is placed on scouting, patrolling, and ground reconnaissance. All reconnaissance units are used primarily for intelligence purposes. These units fight only to obtain information and are normally not used for sustained combat or as economy of force units.

5.13. Electronic Warfare Operations

Aggressor is capable of locating, identifying, and rapidly jamming all types of electronics communication devices over a wide range of frequencies. Aggressor uses either spot (one frequency) or barrage (band of frequencies) jamming of tactical radio nets when such jamming is more desirable than the intelligence which can be obtained from such nets. Airborne and ground-based electronic jamming equipment is used to jam and confuse enemy early warning, gun-laying, and missile-controlling radars. This permits surprise air attacks and denies the enemy the use of radar-controlled fires.

5.14. Chemical, Biological Warfare and Radiological Operations (CBR)

a. The initial use of CBR warfare is controlled by the Ministry of the Armed Forces. Once toxic chemical agents have been used, control of chemical operations involving such agents is delegated to the army. The use of smoke is controlled by divisions. Employ-

ment of biological agents normally is coordinated at army group level or higher, as delayed casualty effects are acceptable only on deep strategic type targets. When tactical nuclear weapons are employed, chemical weapons may be used as followup weapons. Aggressor stresses coordinated use of toxic agents and chemical support troops in a variety of offensive and defensive operations. (For information on dissemination means and characteristics of agents, see secs. I, II, and III, ch. 15.)

b. Aggressor plans to use several toxic agents at various points at the same time in order to gain maximum effect in the offensive. He may also use nontoxic chemicals to disguise the employment of toxic agents. Emphasis is on bulk dissemination, principally aircraft and also from munitions of simple design. Aggressor naval forces also have a limited capability to disseminate toxic agents. Aggressor CBR warfare tactics closely parallel those of the United States in many respects.

c. Aggressor uses CBR warfare to support his tactical offense as follows:

(1) Chemical warfare operations. Use of these agents is carried out quickly and without warning to inflict maximum casualties on opposing troops and restrict their use of important areas and facilities. Mechanized rifle troops protect chemical units engaged in disseminating toxic agents. Chemical warfare in support of offensive tactical operations is characterized by—

(a) Employment of chemical agents to restrict enemy movements is given special consideration. Chemical agents with a high persistency effect are used to contaminate obstacles on roads and routes used by advancing or retreating enemy troops, with special emphasis placed upon hindering their escape during withdrawal. Toxic smoke-filled hand grenades are used by platoon-sized units to help neutralize small fixed and fortified positions. Gas fragmentation bombs are used to reduce the will of opposing forces to fight through a combined harassment (or casualty) and fragmentation effect. Other important principles in the employment of chemical warfare are—

1. Aggressor will take a much higher calculated risk than U.S. forces in the use of chemical agents. He will attack over terrain that he has contaminated with mustard after a delay of several hours.
2. Low concentrations of toxic agents (used for low and high persistency effect) and nontoxic irritants are em-

ployed to exhaust enemy strength and reduce morale. By forcing continuous wear of masks, chances for face-piece leakage, canister breakdown, or general damage to the protective mask assembly is increased. Aggressor further complicates the situation by using mixtures of agents.

- (b) Dissemination of chemical agents in Aggressor offensive operations includes artillery, mortar, rockets, missiles, aircraft bombs and aircraft spray, ground spray equipment, and by means of underwater missiles launched by Aggressor submarines. Objectives for their use in offensive operations are outlined below.

1. Artillery, mortars, rockets, and missiles disperse toxic chemical agents as follows:

- (a) Chemical agents with a high persistency effect are used to contaminate enemy artillery and mortar positions and observation posts to decrease their usefulness. Agents employed for a low persistency effect are used against targets to inflict immediate casualties and used in support of assault operations. The agent is used repeatedly, even at night, to reduce the combat strength of opposing forces. Concentrations of the agent are maintained from one to two hours, and possibly as long as eight hours.
- (b) In the breakthrough, chemical agents with low persistency effect are used on objectives in direct support of breakthrough operations and against counterattacking troops. They are also used against resistance centers and reserves in bivouac or in movement.
- (c) In the destruction of enemy strategic reserves, chemical agents are used to neutralize approaching reserves. Agents employed for their high persistency effect are used on roads in the rear of engaged units to hinder disengagement and isolate them from some ground support. They are also used for flank protection.
- (d) In pursuit, chemical agents employed for their low persistency effect are used to inflict casualties on withdrawing enemy forces and agents of high persistency effect are used on escape routes to impede enemy withdrawal.

2. Aircraft use chemical agents either by bombs or spray

to aid Aggressor troops in the approach, by neutralizing and inflicting casualties on enemy targets which include troops back of the front troops at rest or on the march, and troops entraining and detraining. This offensive employment is the same as for artillery, except that aircraft can be used beyond artillery range.

3. Ground spray equipment and land mines, because of their short range, are limited to the contamination of terrain to protect flanks and to produce casualties on opposing troops during flanking movements.
 4. Submarines employ chemical agents either by underwater-to-surface missiles or chemical warhead torpedoes to harass troop transports and supply vessels and render these ineffective in troop and equipment resupply.
- (2) Flame warfare operations (combat with any type of incendiary weapon or ammunition) can be expected whenever practicable to Aggressor's plan of operations. It is most effective against static installations and prepared defenses. Flame weapons include static, portable, and mechanized flamethrowers. Each of these is designed to disperse toxic chemical agents of high persistency and smoke for screening purposes as follows:
- (a) Static flamethrowers are used primarily for defensive operations, but they are also used for clearing opposing forces located close to Aggressor jumpoff positions. For this purpose, static flame weapons are installed during the night prior to the attack, and are set off just before the Aggressor offensive gets underway.
 - (b) Portable flamethrowers may be attached to assault engineer brigades or selected mechanized rifle units usually of company size. Chemical units are used with assault units to help capture strongpoints and pillboxes, and in repelling counterattacks. Portable flamethrowers are also employed in various phases of street fighting.
 - (c) Mechanized flamethrowers in offensive operations are used to reinforce elements leading the main assault and to operate against reserves during the exploiting phase following a breakthrough in close coordination with regular tank weapons. They are also effective in street fighting to flush opposing troops from fortified buildings, bunkers, and other hiding places.
- (3) Biological warfare functions and responsibilities have

been incorporated into the mission of chemical units of the Aggressor Army. The purpose of Aggressor biological warfare is to attack opposing personnel, causing death or disability either directly by use of antipersonnel agents or indirectly by limiting his food supply.

(a) Employment. Although Aggressor propaganda may indicate that biological warfare will be used only as a means of retaliation, Aggressor is expected to use biological agents quickly and concurrently with all other means in general war. Selection of biological agents depends upon the target selected, type of operation, weather, and meteorological condition.

1. Aggressor's plans include massive biological warfare attack against large, well-defended cities. Before such an attack, the defenses of the city would be weakened by using biological agents in surrounding areas.

2. Aggressor uses biological agents to contaminate food, water, and air in densely populated areas only when he desires to create a dangerous or infected zone at the beginning of hostilities, or when he is retreating.

(b) Dissemination of biological agents is by airplane spray, aerosol bombs, artillery shell, aerosol generators, infected animals, vials, capsules, and hand aerosol dispensers. The Aggressor agents are not restricted to specific munitions.

(4) Radiological warfare operations are limited to contamination from surface and subsurface bursts of nuclear weapons. Radiologically contaminated barriers are used to slow advance of opposing troops and to canalize sizable elements into restricted pockets in order to create suitable targets for nuclear weapons. Tank or mechanized forces follow up nuclear strikes against the main defenses of the enemy to break through these defenses and to achieve quick control of the area.

d. Aggressor uses CBR warfare to support his tactical defense as follows:

(1) *Chemical warfare operations.* Large-scale use of chemical agents is indicated in the defense. Various types of agents, particularly those used for a high persistency effect, are used during all phases of combat—from the aerial gas attack on the enemy during his approach march, to the action after he has penetrated the main combat position.

- (a) Employment — Aggressor defensive use of chemical agents is similar to that prescribed for U.S. defense. Land mines filled with a blister agent may be used to impede the advance of opposing forces and to tie in obstacles. For harassing effects, Aggressor employs low concentrations of agents used for their low persistency effects and toxic smokes over large areas for long periods of time. Aggressor also uses bulk dissemination by ground spray equipment. Particular consideration is given to the use of agents for their high persistency effect to delay the advance of opposing troops by contaminating obstacles. These same agents are used to support Aggressor secondary attack elements which have been forced to go into the defense and they are also used to establish protective barriers on the flanks. Aggressor senior commanders stress the use of chemical and engineer units and equipment to reinforce troops deployed in defense of a wide front. Agents are used for a low persistency effect when Aggressor plans to capture the area in front of a position or to make a sudden frontal attack from the position. Agents are used for a high persistency effect when it is unnecessary to recapture a position or when abandonment of a position is planned. Contaminating with agents of high persistency is advocated during Aggressor withdrawal.
- (b) Dissemination of chemical agents in Aggressor defensive operations include artillery, mortars, rockets, missiles, mechanical spraying devices, land mines, aircraft, and submarines. Objectives for their use in defensive operations are outlined below.
1. Artillery, mortar, rockets, and missiles, filled with chemical agents, are used similarly to offensive operations.
 2. Mechanical spraying devices and land mines disperse agents for a high persistency effect. Spraying devices are used during withdrawal and for large-scale contamination. These munitions are also used to contaminate defiles, river crossing sites, prepared obstacles, and buildings which have been damaged or destroyed by demolitions or have been prepared as obstacles.
 3. Aircraft disseminate chemical agents by bombs or spray. Purpose of employment is similar to that for artillery, mortars, rockets, and missiles, except that

targets engaged are usually beyond the range of these weapons. Aircraft are used to establish a contamination with a high persistency effect on units on the march or in bivouac, on reserve concentrations, on command posts, and on supply facilities. Contamination of these objectives causes casualties, hinders movement, and interferes with support and supply of opposing forces. Aircraft also deliver agents for a low persistency effect to inflict casualties and harass attacking troops.

4. Submarines disseminate chemical agents by missiles or torpedoes. Purpose for employment is to block enemy attempts to resupply by sea. The major targets are transport ships and harbors to cause casualties, hinder loading and unloading of troops and equipment, and interfere with support and supply by means of sea vessels.
- (2) *Flame warfare operations.* Flame weapons are extensively used in defensive operations. Static flame weapons are employed primarily in defensive preparations. They are set out along expected routes of opposing troop advance or in front of Aggressor positions. They are fired by remote control, timing devices, or by pressure. Mechanized flamethrowers are used defensively to ambush advancing detachments and to support tank and mechanized rifle units. They are also used to cover the retreat of rear guard sections using either smoke screens or flame. In withdrawal operations all types of flame weapons are used to set fire to supplies, buildings, grain fields, and installations that are of potential use to opposing forces. Ampoule-type incendiaries are used extensively as fire weapons in defensive operations and are used like ordinary hand grenades.
 - (3) *Biological warfare operations.* Aggressor uses biological agents in the defense to contaminate opposing forces in reserve units, supply depots, and other rear area installations to decrease the support afforded opposing frontline troops. Dissemination is the same as for offensive operations. Covert operations (partisan warfare) are extensively employed (ch. 13, sec. VI).
 - (4) *Radiological warfare operations.* Radioactive contamination from nuclear weapons is used in support of defensive operations to restrict or deny the opposing force use of certain areas or to cause concentration and canalization

of attacking forces. This type of contamination can be expected in large-scale barrier and denial operations to delay the opposing force and hinder reconstruction of vital installations.

5.15. Individual Tactics

All troops are trained in patrolling, fieldcraft, camouflage, and night operations. The individual Aggressor soldier (par. 1.16) is clever at improvisation, adept at living off the land, and capable of enduring hardships. These characteristics are exploited to achieve surprise by attack over difficult terrain and adverse weather.

5.16. Administrative Support of Combat Operations

The chief of rear is the unit deputy commander for the rear of his unit. At division and lower levels he is charged with the entire logistical support of the unit to include command of the organic units engaged solely in logistical activities. At army and higher levels the chiefs of the technical branches are responsible for the supply of items pertaining to their services. The deputy commander for the rear at these levels is responsible for supply of common items, such as rations and petroleum products, and for the overall coordination of the logistical effort including transportation and evacuation. The impetus of supply is from rear to front. Within divisions, regiments and separate units draw supplies from the division distributing points using organic transportation. The Aggressor supply system is capable of supporting sustained operations over long distances (ch. 14).

5.17. Handling of Prisoners of War

a. Aggressor doctrine emphasizes the importance of prisoners of war as a source of enemy information. The system for evacuating and interrogating prisoners of war is designed not only to extract as much military information as possible, but to determine the political background of the individual as well. This information if obtained is used in the political re-education of POW and for psychological warfare purposes.

b. Immediately after capture, prisoners are disarmed, searched, and, in some cases, robbed of their personal belongings. They are separated into officer and enlisted groups, interrogated briefly by a company officer or an intelligence officer from a higher echelon and evacuated immediately to battalion or regiment in an attempt to gain intelligence of immediate tactical value. Battalion is sometimes bypassed and prisoners may go from battalion to division, bypassing the regiment. The procedure depends on such factors

as the number of prisoners, the SOP of the individual unit, or the availability of interrogators or interpreters. Speed in the evacuation of POW's is emphasized throughout the operation.

c. At battalion or regiment, a more thorough search is made and a brief, formal interrogation, confined to personal data and the immediate combat situation is conducted. These interrogations may be conducted by the regimental (bn) commander or his executive officer, or by an officer from the intelligence section of the regiment (bn). One copy of the interrogation report at this and succeeding echelons accompanies each prisoner to the rear. In theory, all prisoners are evacuated within 30 minutes, important prisoners by truck, if possible and the others on foot.

d. The main interrogation takes place at division. Officers from the military Intelligence Staff Section conduct the questioning of the majority of the prisoners, using a more elaborate questionnaire, but confining their interrogation to tactical or operational matters. Members of the counterintelligence section question those prisoners who have been singled out in the lower echelons for interrogation by this agency. A political interrogation is also conducted by an officer from the political section. The more knowledgeable prisoners and technical specialists are earmarked for questioning at higher echelons by specialists of the various arms and services. Each interrogating agency, either military or political, forwards its reports through its own channels. Prisoners are normally evacuated to army within one to three hours over the main supply route.

e. At any time during the interrogation process, certain categories of prisoners may be singled out for interrogation by the counterintelligence unit which is found at division and above. Individual representatives of this unit are also found at battalion and regiment. Prisoners of special interest include:

Lawyers, including judges and legal personnel.

Prisoners who had been in the Aggressor homeland prior to the outbreak of hostilities.

Interpreters or prisoners speaking Aggressor language.

Intelligence officers and members of intelligence branches of the service.

Members of police units.

Nationals of other nations born in the Aggressor homeland.

General officers and General Staff officers.

Members of military administration headquarters groups.

These categories of prisoners can expect to be convicted of war crimes and receive a sentence of 25 years at hard labor.

f. At Army, only the more important or knowledgeable prisoners are interrogated along with those whose forms indicate a need for future questioning. Specialists and technicians are interrogated by Aggressor specialists from the arms and services. Counterintelligence interrogators continue to seek out any special category POW who may not have been singled out in previous interrogations. All prisoners are turned over to the security forces at Army and are confined in the security forces prisoner cage. At regiment and division, prisoners are usually confined in stockades or assembly points in the rear areas of the unit.

g. Only very important prisoners are interrogated at army group. All prisoners are evacuated to the Zone of Interior as soon as possible. Prisoners in special categories are sent direct to punishment camps, the others to POW camps scattered throughout the ZI. The ultimate destination of the vast majority of the prisoners is the basic work unit of the POW camps, the camp brigade (30-35 men).

h. The security force operates all POW camps in the ZI. Aggressor attempts to get each person to fill out a personal history form upon arrival at a camp and he is interrogated at least once. The security force receives copies of all field interrogations and maintains dossiers on all prisoners. Specialists, technicians, military, and industrial specialists are questioned by experts in each field.

i. POW's are treated fairly well by the capturing units of the Aggressor Army, but intensive political training begins as the POW reaches the more permanent type camps. The initial steps in the political training which the POW is to receive are taken during the transient stages. Aggressor attempts to determine the social status and political views of the POW as an integral part of the interrogation process at all levels. Aggressor field regulations state that commanders and political workers must "organize political work among the prisoners prior to their evacuation to the rear." Every attempt is made to convert the POW to Aggressors political belief and substantial rewards are promised to the individual who renounces his own beliefs and participates in "re-education" programs by writing false statements and encouraging others to adapt Aggressors ideology.

CHAPTER 6

THE ADVANCE

Section I. ADVANCE TO CONTACT

6.1. General

a. Plans for the advance to contact are as detailed as time permits and are based on information of the enemy, weather, terrain, and the scheme of the anticipated battle to include planned nuclear fires. Particular attention is paid to passive defense measures against nuclear attack, antitank, antiaircraft, antiairborne security, and tactical cover and deception measures.

b. All available aircraft support the advance. Air support provides continuous reconnaissance, assists in destruction of forces interfering with the advance, attacks enemy reserves, delivers nuclear fires, and provides column cover. Air liaison officers who can either call for air support or direct column cover aircraft to specific targets, accompany all regimental and higher headquarters and principal security elements.

c. Marches are normally made at night or during limited visibility. Unopposed marches are continued without interruption until contact with the enemy is made. March deception plans are habitual. Feint marches on different routes may be made.

6.2. Security

All march elements are responsible for their own security in all directions. Security elements prevent surprise attacks by the enemy on the main body and permit deployment of the main body under favorable conditions. Security is furnished by advance, flank, and rear guards, and march outposts. Flank and rear guards move in coordination with the main body or establish a series of outposts protecting the passage of the main body. Strength and composition of security elements depend on the mission, enemy situation, terrain, size of the unit being protected, and the time it requires for deployment. Security elements are habitually reinforced with artillery, tanks, self-propelled guns, engineers, and chemical units as required.

6.3. Advance Guard

a. Advance guards normally are assigned the following missions:

- (1) Screen and secure the advance of the main body.
- (2) Seize key terrain features until the arrival of larger forces.
- (3) Determine the enemy composition, disposition, and defenses, with particular attention to the enemy's nuclear capabilities.

b. The composition of the advance guard varies with the tactical situation, terrain, and size of the unit. The advance guard is usually composed of reconnaissance, mechanized rifle, tank, engineer, artillery, and chemical units. The advance guard moves by bounds from one terrain objective to the next. Advance detachments from the advance guard may be sent forward to seize specific terrain features until the arrival of the advance guard. These terrain features include road junctions, obstacles, and defiles.

6.4. Antiaircraft Security

a. These measures include—

- (1) Ground and air observation and warning nets within all march elements.
- (2) Camouflage measures and using routes concealed from air observation.
- (3) Coordination of ground antiaircraft fires with employment of fighter aviation.
- (4) Preplanned actions to be taken by troops if attacked by enemy aircraft.

b. Antiaircraft artillery is considered the best means for protecting ground forces against low level air attack and for hampering enemy aerial reconnaissance. Elements at division, army, and army group level are formed into antiaircraft artillery groups to insure coordination with fighter air cover and other antiaircraft artillery. The basic mission of division antiaircraft artillery groups is the protection of division artillery, command posts, second echelons, reserves, and regimental rear areas. The mission of an army antiaircraft artillery group is protection of army artillery groups, command facilities, the second echelon, mobile groups, and reserves. Army group antiaircraft artillery groups also provide protection for supply routes and facilities. Antiaircraft artillery may be attached to battalions serving as advance guard or to any advanced detachment element. Organic antiaircraft artillery of less than 85-mm is dispersed within the columns of their organic

units. On receipt of an air alarm these weapons are halted at the roadside and prepare to engaged enemy aircraft. They may be sent ahead, protected by the advance guard, to cover the passage of the unit through defiles. Medium caliber and larger anti-aircraft artillery and missiles organic to the division and larger units protect columns by moving by bounds in echelon. Several parallel columns may be protected simultaneously.

6.5. Antitank Security

Antitank artillery is considered the primary means of defense against enemy armor counterattacks in the offense and the most important single type of weapon in the defense. Antitank warning nets are established within all march elements. All march elements contain self-propelled guns and/or antitank guns. When contact is imminent and the enemy has an armor attack capability, security elements are reinforced with additional antitank weapons. When an enemy armor attack is imminent, antitank guns take up firing positions. These positions may be in advance of the columns they are protecting. Hasty temporary minefields may be set out if time permits. These mines are recovered when the advance resumes.

6.6. Engineer Support

Engineers assist in reconnoitering roads, defiles, bridges, river crossings, bivouac sites, and water supply sources. They also mark march routes, prepare cross-country routes, repair and strengthen bridges and roads, and clear obstacles and passages through radioactive areas. Mobile obstacle detachments are formed from organic engineers as required. These detachments vary in strength from a platoon to a battalion and they may be reinforced by infantry and antitank weapons. Their mission is to provide immediate protection for the objective and the exposed flanks and approaches by laying hasty minefields.

6.7. Radiological Security Measures

All units are responsible for continuous radiological reconnaissance in their zone of advance or along their march route. Plans are made prior to the march for area decontamination. Announced total dose limits may be exceeded temporarily by the army commander to permit rapid passage of radiological contaminated areas that cannot be readily bypassed. This is done only when absolutely required to accomplish the mission.

6.8. Army Group

The advance to contact is made on a broad front in parallel

columns. All armies are usually assigned zones of advance. Armies normally screen their advance by employing mechanized rifle divisions of the forward combined arms armies. These mechanized rifle divisions are reinforced with tank, antitank artillery, self-propelled guns, and reconnaissance units.

6.9. Combined Arms Army

a. The combined arms army is normally assigned a zone of advance. The march formation normally consists of two or more main columns. The composition and number of columns are determined by the mission, road net, terrain conditions, enemy capabilities, and the anticipated tactical plan. All divisions, if possible, move on separate parallel routes. Two divisions may move in column on one route. The road space between divisions moving on the same route may be up to six kilometers. A mechanized rifle division normally screens the army advance.

b. Nondivisional elements of the combined arms army and attached artillery, tank, and other units may be attached to divisions for the advance to contact. Those elements not in division march columns move in separate columns on the same or different routes. Nondivisional columns are normally provided with anti-aircraft protection. The combined arms army antitank reserve is echeloned in the direction of the most likely enemy armor threat and it moves by bounds.

6.10. Mechanized Rifle Division

a. The mechanized rifle division is normally assigned either a zone of advance or a specific route. The march formation usually consists of two or more columns. A march formation of one column is avoided wherever possible. March columns are divided into march serials and march units. The time gaps between the columns of the division depend on enemy capabilities and march conditions. Most tactical marches are carried out under blackout conditions for maximum concealment against enemy air and nuclear attacks. Although individual vehicles must be separated by 40 to 50 meters in daylight, the distance may be as little as 15 to 20 meters in blackout. When immediate contact with the enemy is not expected during a night march, the regiment maintains a speed of 20 to 30 kilometers per hour. A 15-minute vehicle inspection halt is held 30 minutes after passing the initial point. A 30-minute halt is held after the first two hours, and 10-minute halts at the end of every 50 minutes thereafter.

b. When moving alone in one column, the division is extended 90–120 kilometers and when part of a large force it requires

35–70 kilometers. The division normally uses a reinforced mechanized rifle regiment as an advance guard. When the division moves on several routes, each leading mechanized rifle regiment uses a reinforced mechanized rifle battalion as its advance guard. A reinforced mechanized rifle regiment in an independent column, acting as the advance guard for a division without a reconnaissance screen, would extend over 20 to 30 kilometers of road space. When marching as part of the division main body in a single column, it extends 30 to 40 kilometers in road space. The distance between the advance guard and the main body may be as much as 45 kilometers.

c. The division rear guard is usually composed of a mechanized rifle regiment reinforced with artillery, tanks, assault guns, and small engineer and chemical units. The distance between the rear guard and the main body may be as much as 25 kilometers.

d. Flank guards and outposts are dispatched as required. Normally they are not more than five kilometers from the column. The composition of flank guards and outposts varies with the terrain and the situation.

e. Tanks and self-propelled guns move at the head of the main body. The bulk of the artillery marches with the main body and/or the advance guard to permit early deployment and rapid employment of artillery groups. The bulk of the available anti-tank artillery follows the advance guard along the principal route of march. The antitank artillery reserve is echeloned towards the direction of the most likely enemy armor threat and moves by bounds.

f. The division commander and his staff usually move at the head of the main body. The division rear follows the main body in separate columns. Regimental trains may be placed under division control.

6.11. Tank Division

a. The division is normally assigned a zone of advance. The march formation usually consists of two or more columns advancing on a front that may be 15 kilometers wide. The mechanized rifle regiment usually heads the march columns followed by the medium and heavy tank regiments. March columns of regimental size are preceded by an advance guard of a mechanized rifle battalion reinforced with tanks and artillery. The advance guard overcomes local opposition or bypasses it, if possible, and still keeps the main body from being forced to deploy. Every effort is made to advance as far as possible before deployment.

b. The flanks of the zone of advance are protected by supporting

aircraft and flank security detachments strong in tanks and anti-tank artillery.

c. Tanks and assault guns are carried on wheeled transports, whenever possible, until enemy contact is imminent.

6.12. Mechanized Rifle Regiment and Mechanized Rifle Battalion

a. The regiment is normally assigned one or more routes of march. While the regiment may march on two or more parallel routes, the battalion normally marches on only one route. When marching on a separate route, the regiment normally sends out an advance guard of reinforced battalion strength and a rear guard of reinforced company strength. The distance from the head of the main body to the rear of the advance guard may be up to 30 kilometers. Advance, rear, and flank guards send out advance parties which, in turn, send out points. A regiment marching as part of the main body of a division sends out local security only.

b. A battalion moving on a separate route or as the advance, rear, or flank guard of a regiment, sends out an advance party up to the size of a reinforced company. Other security detachments to the flanks or rear may be up to the size of a reinforced platoon. Such flank and rear security detachments are generally within one to two kilometers of the unit. These detachments move in coordination with the main body or establish temporary outposts. Outposts join the rear of the column.

c. The regiment acting as the advance, flank, or rear guards of a larger force is organized for the march in the same manner as though it were marching independently.

d. Battalion and regimental trains normally march in separate columns between the main body and the rear guard. Battalion and regimental trains may march under division control.

Section II. MEETING ENGAGEMENT

6.13. General

a. Meeting engagements are characterized by—

- (1) Rapid changes in the situation and fluid operations on a wide front.
- (2) Rapid changes in combat formations.
- (3) Open flanks for friendly and enemy forces.

b. Success in a meeting engagement is achieved by rapid and aggressive action and the coordinated use of all arms despite lack of detailed knowledge of enemy dispositions. The goal is to disor-

ganize, divide the enemy, and destroy the divided forces in turn. This may be accomplished by a smaller force if it acts aggressively and launches a coordinated attack faster than the larger force.

c. Air burse nuclear weapons are used to destroy enemy forces and their reserves. Delivery of nuclear weapons is usually effected by artillery, mobile rocket launchers, and light bomber and attack aircraft of the supporting air army. Small-yield nuclear weapons are usually used because of troop safety requirements.

d. In a meeting engagement, emphasis is placed on flank and rear security which is obtained by deep air and ground reconnaissance, and by the use of security detachments strong in antitank and antiaircraft artillery. Units are expected to be able to meet sudden enemy attacks from any direction.

6.14. Reconnaissance

Air and ground reconnaissance is intensified as contact becomes imminent. Enemy columns, particularly armor and artillery, are under constant surveillance and are attacked at the earliest practicable time.

6.15. Action Upon Contact With an Undeployed Force

a. The advance guard overruns the forward enemy units while tanks and self-propelled guns attack the enemy main body and artillery from the flanks and rear. Every effort is made to split the enemy column, destroy isolated elements, and attack from the enemy rear. Artillery and aircraft are used throughout the attack as they become available. Mechanized rifle units are deployed as close to the enemy and in as much depth as possible. Regrouping and centralization of fire support control are accomplished by successive commanders as soon as possible, but not at the expense of delaying combat operations. Uninterrupted pressure on the enemy is maintained.

b. Self-propelled guns and heavy tanks cover the advance by following closely and engaging enemy strong points and antitank weapons. Before the attack of enemy armor, efforts are made to separate any accompanying enemy infantry. If a strong enemy antitank screen is located, mechanized rifle elements attack first, followed by tanks and self-propelled guns. Against superior enemy armor, Aggressor medium tanks may withdraw, protected by fires of self-propelled guns and heavy tanks, and attempt to ambush the pursuing enemy tanks.

6.16. Action Upon Contact With a Deployed Enemy

a. The advance guard attacks and attempts to destroy the

enemy. If unsuccessful it then tries to locate the enemy flanks while the main body deploys. The main body attacks with the least practicable delay. The attack of the main body is supported by all available aircraft and artillery, including nuclear fires. A hasty coordinated attack from the march can be made by division-size units within about five to six hours. A similar attack by an army can be made within eight hours. A deliberate attack is made in accordance with normal offensive procedures if the available intelligence indicates that the enemy is defending in force.

b. If the attack of the advance guard is stopped and the enemy counterattacks, the advance guard holds sufficient ground to cover the deployment of the main body. If this fails the main body deploys on the nearest suitable terrain. Leading tank units may deliberately withdraw as a deception measure to lure the pursuing enemy into ambushes by self-propelled guns or heavy tanks.

CHAPTER 7 MAJOR OFFENSIVES

Section I. GENERAL

7.1. Basic Principles

a. Aggressor conducts major offensives by employing one or more army groups to capture objectives which may be more than 550 kilometers away and if the situation permits, continues the advance an additional 500 kilometers. The offensive takes the general form of deep tank thrusts, preferably through the weakest parts of the enemy defenses, combined with wide encirclements designed to trap and destroy large enemy forces and cause the collapse of resistance on a wide front.

b. When the enemy forward defenses have been breached by combined arms armies by either penetrations or flank attacks, the offensive is continued by tank armies and combined arms armies. These tank and combined arms armies defeat in detail those enemy reserves that can influence the battle or relieve enemy forces isolated in the forward areas.

c. Under conditions of nonnuclear warfare, the width of the attack zone and depth of the attack formation of the combined arms army and its subordinate elements are reduced as the situation permits.

7.2. Large-Scale Offensives

a. Large-scale offensives usually start after intensive artillery, nuclear, and air preparations. Mechanized rifle and tank forces are organized into echelons to break through the forward enemy defenses and push deep into the enemy rear. The number of echelons in the attack formation depends upon the mission, means available, terrain, and strength of enemy defenses. The greater the depth of the enemy defense, the greater the number of echelons in the formation. In an attack supported by nuclear weapons, a two-echelon formation is normally used. If the attack is not supported by nuclear weapons, a three-echelon formation may be used, particularly if the enemy is very strong. A one-echelon formation may be used against a very weak enemy or in a secondary attack.

b. In a large-scale offensive Aggressor usually attacks at a number of points on a broad front with heavy concentrations of artillery, tanks, airpower, and nuclear fires at the decisive points. Normally, Aggressor seeks a double envelopment to surround and destroy the enemy. If the enemy flanks are not assailable or cannot be bypassed the double pincer maneuver is used (fig. 43).

c. Mobility, fluid tactics, maintenance of the momentum of the attack, and close contact with the enemy are emphasized. Every opportunity to envelop the enemy and to attack him from the rear is exploited to surround and subsequently destroy him. Radioactive contaminated areas are bypassed or crossed rapidly in order to maintain the momentum of the attack. Although Aggressor does not needlessly expose his troops, he temporarily accepts considerable risk to accomplish his mission.

7.3. Nuclear Weapons Employment

a. Main efforts are supported by nuclear fires. If nuclear weapons are available in sufficient numbers, secondary efforts are also supported by nuclear fires. Targets selected for nuclear weapons must be of a type that cannot be handled more economically by nonnuclear means. Also they should not create control problems that will endanger the success of the operation.

b. In a major offensive, the principal uses of nuclear weapons are—

- (1) Destruction of enemy nuclear weapons delivery means including air bases that cannot otherwise be eliminated.
- (2) Initial preparation.
- (3) Reduction of enemy defenses or forces that may slow the offensive.
- (4) Prevention and destruction of enemy counterattacks.
- (5) Elimination of enemy troop concentrations and reserves.

c. The allocation of nuclear weapons for the above purposes varies with the strength of the enemy defenses and the scheme of maneuver. Normally the largest allocation is for destruction of the enemy tactical forces (usually the corps in contact). The next largest allocations are normally for destruction of large enemy reserves and enemy nuclear weapons delivery means. Some nuclear weapons are held in reserve to support the tank army when committed and for unforeseen contingencies.

d. Before the actual start of the offensive, only deep targets are attacked with nuclear fires to achieve surprise and to hide the location of the main effort. Suitable targets for such attack are enemy air bases, nuclear delivery means, storage sites, and

large troop and supply concentrations. Enemy forces in close contact are not usually attacked with nuclear fires. Nonnuclear artillery and air attacks are normally massed on such targets. Close-in targets are usually attacked last to achieve surprise as to the exaction location of the main effort.

7.4. Basic Maneuvers

a. To ultimately surround and then destroy the enemy, Aggressor employs these five basic maneuvers supported by secondary attacks:

- (1) Double envelopment (fig. 39).
- (2) Single envelopment (fig. 40).
- (3) Penetration (fig. 41).
- (4) Multiple penetration (fig. 42).
- (5) Double pincers (fig. 43).

b. The multiple penetration and double pincer maneuvers are normally used only by armies and army groups. The other maneuvers may be used by forces of any strength, with the size of the objective and the distance to it in keeping with the capabilities of the force.

7.5. Double Envelopment

Aggressor uses the double envelopment whenever possible. It is the most decisive maneuver and contributes most effectively to encirclement and destruction of the enemy. As this maneuver normally requires a preponderance of force, it is used only when the balance of forces is such that there is little risk of defeat in detail.

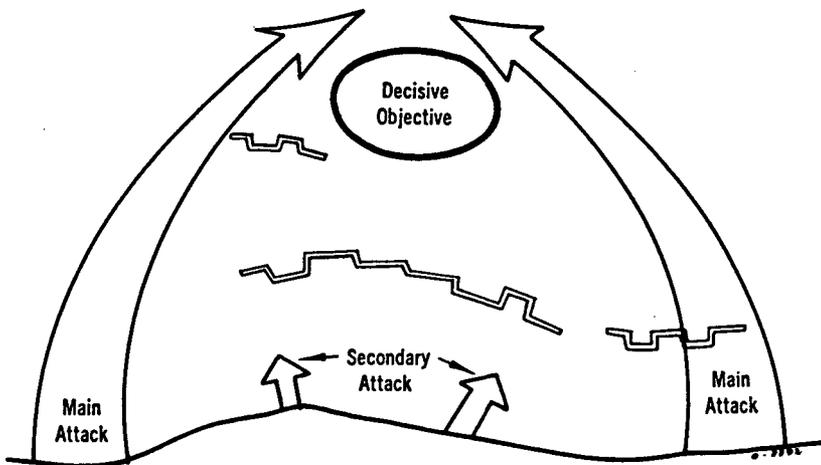


Figure 39. Double envelopment.

7.6. Single Envelopment

When there is an opportunity to pin hostile forces against an obstacle, the single envelopment may be used. This maneuver permits concentration of effort in one direction, thus helping to insure combat superiority over the enemy in the decisive area. The ultimate aim of the single envelopment is complete encirclement of the enemy, a task made easier if the obstacle is impassable.

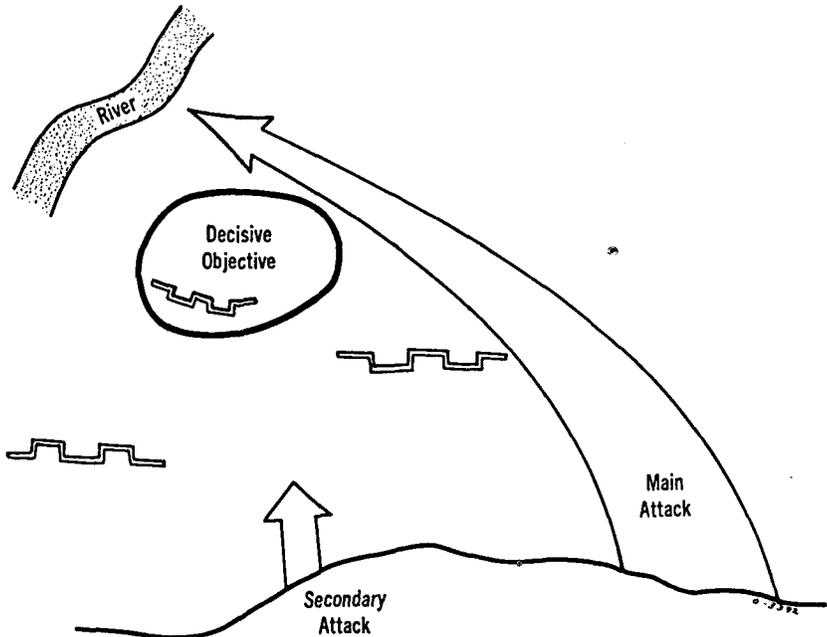


Figure 40. Single envelopment.

7.7. Penetration

A penetration on a relatively narrow front, with subsequent widening of the gap and exploitation, may be used to split the enemy. Forces on the flanks of the penetration are enveloped, isolated, and destroyed. This maneuver is especially well suited to the Aggressor concept of mass because it permits concentration of force in one direction and possible defeat of the enemy in detail. Nuclear fires facilitate this maneuver.

7.8. Multiple Penetration

When a double envelopment is not possible, Aggressor may use the multiple penetration if his forces are sufficiently strong. This maneuver consists of a series of penetrations to the depth of the enemy corps reserves with subsequent encirclement and de-

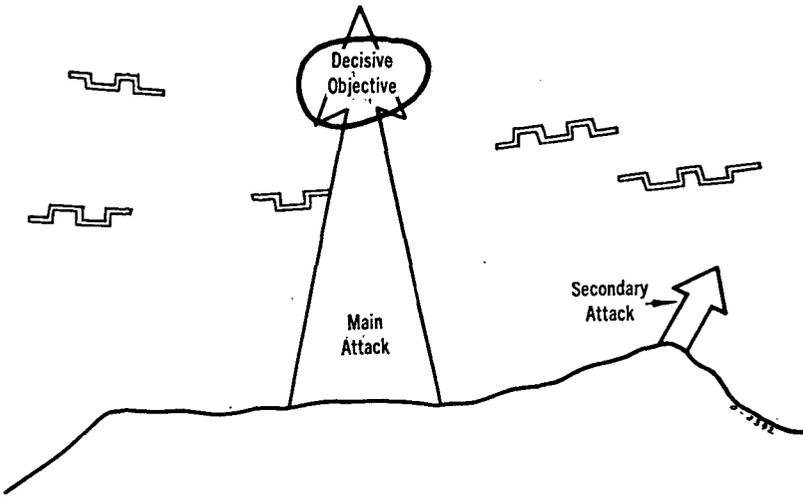


Figure 41. Penetration.

struction of the separated enemy forces. Large forces are required for this maneuver as encirclement of the divided enemy leads to considerable dispersion. This maneuver destroys the continuity of the hostile defense, leads to collapse of the defense in areas large enough to provide ample maneuver room for further operations, and reduces the effectiveness of hostile counterattacks. The availability of large numbers of nuclear weapons facilitates this maneuver.

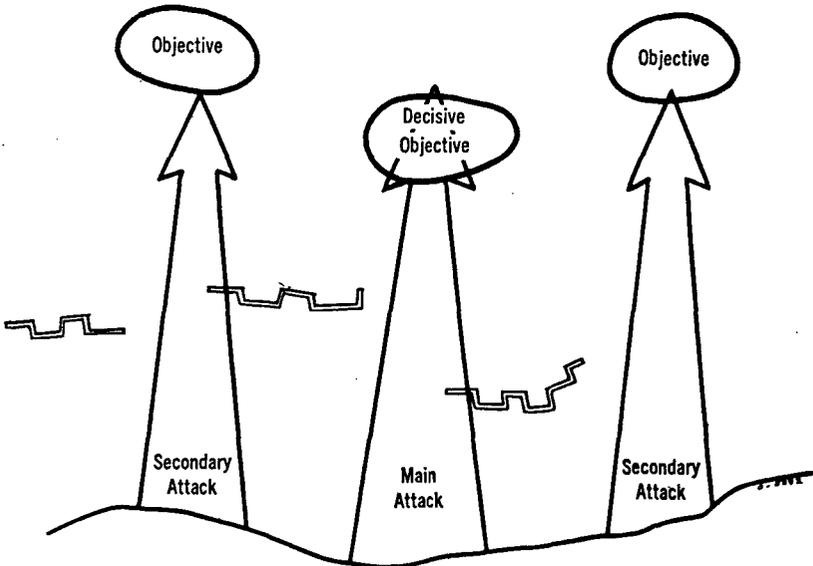


Figure 42. Multiple penetration.

7.9. Double Pincers

When a double envelopment is not possible because the enemy flanks are not assailable, Aggressor may use the double pincers maneuver. In this maneuver, two penetrations are made initially so as to create interior flanks that are assailable. Mobile forces attacking through the gaps make a deep envelopment of the hostile groups selected for destruction. The envelopment may be deep enough to include the enemy corps reserves. The mobile forces, when they meet, form outer pincers by facing outward and preventing enemy reinforcements from reaching the surrounding units. Nuclear fires are used to help accomplish this. Other forces, forming the inner pincers, operate within this perimeter to divide and destroy the isolated hostile forces. Inner pincer forces often try to compress the encircled enemy into nuclear targets.

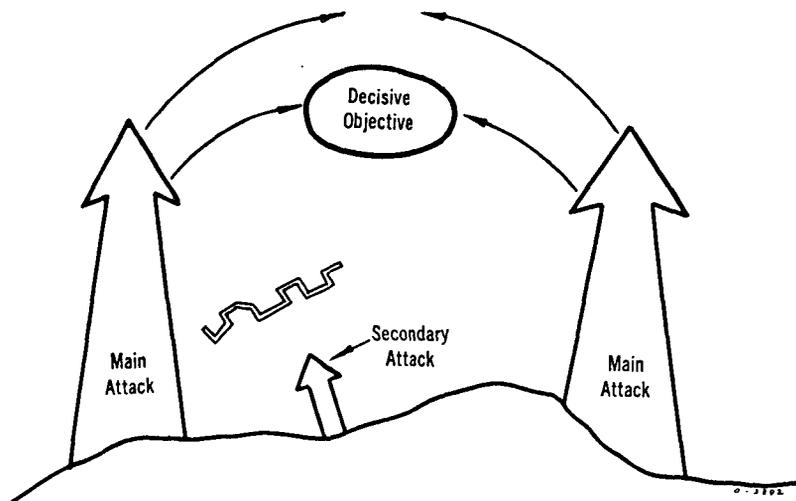


Figure 43. Double pincers.

7.10. Planning for the Offensive

a. Planning for the offensive by the army group is initiated in anticipation of or upon receipt of directives from the Ministry of the Armed Forces. The first stages of the offensive are planned in great detail. Subsequent stages are planned only in outline form. An army group can prepare a plan for a major offensive in two weeks or less when the planning is concurrent with the planning of subordinate headquarters, and can mount an offensive with one army in approximately eight hours.

b. Deception plans and detailed security measures are integral parts of all offensive planning. Information concerning the preparatory measures for the offensive are disseminated to the mini-

mum necessary personnel. The following security measures, among others, are rigidly enforced :

- (1) Ground reconnaissance into enemy areas is limited to the units already in contact. Reconnaissance by large advance parties is prohibited.
- (2) Normal radio traffic patterns and volume are maintained. Opening of new radio nets is prohibited.
- (3) Normal patterns and scale of weapons fires, air activities, and logistical activities are maintained.
- (4) Maximum use is made of liaison officers for transmitting orders and plans.
- (5) Newly arrived units, relocations of forces, engineer construction, and movements of supplies required for the offensive are carefully concealed.
- (6) Troop movement is conducted at night or during reduced visibility.

7.11. Phasing of Major Offensives

a. Major offensives normally consist of three phases—

- (1) The first phase consists of the breakthrough, encirclement, and destruction of the enemy forces in contact, to include enemy corps reserves. This phase lasts about three to seven days and is carried out to a depth of approximately 250 to 280 kilometers.
- (2) The second phase is the destruction of the enemy strategic reserves, i.e., the army or theater reserves, by tank and combined arms armies. This phase lasts about six to nine additional days and carries the advance approximately 250 to 280 kilometers farther.
- (3) The third phase is pursuit of enemy remnants and the securing of the army group objective by all armies spearheaded by the tank army. It may also consist of a deep pursuit into the enemy logistical base. The phasing of the offensive is flexible and depends on factors such as the nature of the enemy's defenses, terrain, and road net; and it could involve an advance of an additional 500 kilometers in 10 days.

b. Under conditions of nonnuclear warfare, the general phasing of a large offensive remains unchanged except the average rate of advance will be slower.

7.12. Army Group Frontages and Depths

a. The army group zone of action is usually about 150 kilometers wide and about 180 kilometers deep exclusive of the area for

administrative support units and installations. Under nonactive nuclear conditions, the width of the army group zone remains unchanged, however, additional combat power will be employed. Regardless of the environment, frontages for army groups are normally based on the number of divisions available for the operation.

b. The total width of the army group main effort area or areas is about 40 to 50 kilometers, but normally does not exceed one-third of the total width of the entire army group zone. The army group main efforts may be made at different parts of the army group zone. Usually not more than two main efforts are made.

7.13. Army Group Formation

a. The army group usually attacks in two echelons. A one-echelon attack, with all armies in line, is rarely employed and then only against an extremely weak enemy. The composition of each echelon depends on the nature of the enemy defenses, the terrain, and availability of nuclear fires.

b. In an offensive against a strong enemy in terrain not permitting use of large masses of tanks, or when available nuclear fires are limited, a typical army group will usually use the following formation:

First echelon—Two or three combined arms armies.

Second echelon—One or two combined arms armies and the tank army; or any combination thereof with those forces not employed in the second echelon being deployed in the third echelon.

c. In an offensive against a weak enemy or where terrain permits use of large masses of tanks and adequate nuclear fires are available, the army group will usually use the following formation:

First echelon—One or two combined arms armies and one tank army.

Second echelon—Two or three combined arms armies.

d. The depth of the army group attack formation depends on the terrain, weather, and available assembly and concentration areas. The ability of the enemy to attack units beyond the line of contact and interfere with their movements is also considered. Usually the depth of the army group first echelon formation extends to about 60 kilometers behind the forward edge of the battle area. The army group second echelon is usually located in assembly areas about 60 to 80 kilometers behind the area of contact to permit prompt commitment and still achieve dispersion in depth. Reserves may be located 30 to 180 kilometers in rear of the forces in contact.

7.14. Concentration for the Offensive

a. Units to participate in the offensive and not already in contact are concentrated at night 60 to 75 kilometers from the forward edge of the battle area. The location of assembly areas depends on terrain, type of operation, time, and other related factors. In general, the leading elements of first-echelon armies break out to forward positions from assembly areas located 20 to 30 kilometers from the forward edge of the battle area. Second-echelon armies and the tank army of the army group then move from concentration areas 60 to 80 kilometers from the forward edge of the battle area to assembly areas vacated by the first-echelon armies. In their forward assembly positions, assault divisions of the first-echelon armies are 3 to 10 kilometers from contact. Assembly areas are selected away from cities, important communication centers or other possible nuclear targets. Assembly areas are usually large enough to permit two kilometers between battalion-size forces. Passive measures against nuclear weapons in assembly areas are described in chapter 12.

b. Units move into assembly areas at the last possible moment. Movements to assembly areas and attack positions are made as far as possible by motor and are conducted in about the same manner as an advance to contact. Assembly areas are occupied just long enough to make last minute preparations. Movements from the assembly areas to attack positions are usually made during the night preceding the start of the offensive. The movement to the attack position, made in either regimental or battalion columns, is timed to reach the attack position just prior to the firing of the preparation. Tank and self-propelled gun units move from assembly areas to attack positions at such times that the noise of their movement is masked by preparatory fires. Artillery units will not move into position to support the attack until the last possible hour which will still enable them to be in position 24 hours prior to the launching of the offensive.

Section II. THE ARMY GROUP

7.15. Tactical Employment

a. The combined arms army in the first echelon of the army group attack formation is usually employed for—

- (1) Penetration and envelopment of the enemy forward defenses.
- (2) Destruction of encircled forces.
- (3) Consolidation of overrun areas.
- (4) Pursuit.

b. The combined arms army in the second echelon of the army group attack formation is employed for—

- (1) Support of first-echelon armies.
- (2) Pursuit.
- (3) Consolidation of overrun areas.
- (4) Outflanking of enemy defenses.
- (5) Protection of flanks against enemy counterattacks.
- (6) Reinforcement of the first-echelon armies.
- (7) Widening of gaps created by the first-echelon armies.

7.16. Combined Arms Army in the First Echelon of the Army Group Formation

a. The army is expected to advance in the first two days to a depth of 70 kilometers to destroy the enemy tactical defenses and operational reserves. This depth and tempo of attack takes maximum advantage of speed and surprise. Aggressor considers this operation essential to develop a secure penetration area for the commitment of the tank division of the combined arms army, which is the exploitation force.

b. The normal attack formation is in two echelons. The first echelon of this army usually consists of three mechanized rifle divisions. The second echelon of this army consists of one mechanized rifle division and one or two tank divisions if available. The reserves may include separate tank and mechanized rifle units made available by the army group. When no separate tank units are available, the combined arms army may retain control of elements of the mechanized rifle divisions in the second echelon. This reserve may be used for immediate replacement of mechanized rifle units destroyed by enemy nuclear fires.

c. This army normally has an attack zone about 17 to 25 kilometers wide when it is part of the army group main effort. If it is part of the army group secondary effort the frontage may be increased up to 55 to 65 kilometers and all mechanized rifle divisions may be in the first echelon of the army attack formation. The depth of the combined arms army attack formation is about 60 kilometers. Under conditions of nonactive nuclear warfare, the width of army attack zones remains unchanged. However, additional combat power will be employed.

7.17. Combined Arms Army in the Second Echelon of the Army Group Formation

Prior to commitment this army is normally held in large assembly areas 60 to 80 kilometers behind the forward edge of the

battle area. When committed it is reinforced with artillery, engineers, and provided air support.

7.18. Preparatory Fires

a. The initial preparation is coordinated and controlled by armies in the first echelon of the army group attack formation. Nuclear preparatory fires on relatively close-in targets are normally made immediately before the air nonnuclear artillery preparation. When nuclear fires are used in the preparation, the air and nonnuclear artillery preparation usually lasts about 20 minutes. This permits sufficient time for post-strike damage assessment and return of close-support aviation to the area, but does not allow the enemy enough time to recover from the effects of the nuclear fires. Preparatory fires are so intensive that they are often referred to as the "artillery offensive." The preparation is intended to silence the bulk of the enemy's supporting fires and neutralize the enemy forces in immediate contact. The exact duration of the preparation depends on the extent and type of the areas to be neutralized, available air and artillery support, and ammunition resources. When nuclear fires are not employed in the preparation, the air and conventional artillery preparation is longer, varying from 30 minutes to one hour or more.

b. The second-echelon combined arms army is usually committed after the army group has committed its tank army. The area of commitment is normally on the flank of a first-echelon army. A short but heavy preparation, including nuclear fires and air support, usually precedes the commitment. This preparation is fired by the organic and attached artillery of the army, reinforced by some of the artillery of the first echelon. At times nuclear fires alone may constitute the preparation.

c. The commitment of a second-echelon combined arms army is carefully coordinated by the army group to prevent lucrative nuclear targets for the enemy. Once committed, the second-echelon army rapidly deploys to an attack zone about 50 kilometers wide.

Section III. THE COMBINED ARMS ARMY

7.19. General

a. The mission of the combined arms army in the first echelon of the army group is to destroy enemy resistance to the front and to create gaps large enough to permit employment of large mobile forces of the army group such as the tank army or the second-echelon combined arms army. The army is expected to advance far enough in the first day or two of the offensive to destroy the

continuity of the tactical defenses of the enemy, including his corps reserves. In accordance with the army group scheme of maneuver, the advance is continued for further operations against deep enemy reserves and for destruction of the encircled enemy forces.

b. The combined arms army in the second echelon of the army group is used—

- (1) To widen gaps created by the first echelon.
- (2) To outflank enemy defenses.
- (3) To block counterattacks against the army flanks.
- (4) To destroy encircled enemy forces.
- (5) To reinforce the army group first echelon.

c. The following discussion of the combined arms army in this section deals with the combined arms army in the first echelon of the army group. It is generally applicable to the combined arms army of the second echelon of the army group, when committed.

7.20. Attack Formation

a. Usually the combined arms army attacks in two echelons. When attacking a weak enemy, or as part of a secondary effort, the combined arms army may attack in one echelon. The army usually does not attack in three echelons unless assigned a very narrow attack zone. The first echelon of the army usually consists of three mechanized rifle divisions. The second echelon consists of a mechanized rifle division and one or two tank divisions if available. The army second echelon is initially dispersed in assembly areas 15 to 25 kilometers in rear of the first echelon. The tank division(s) are located between 8 and 15 kilometers from the forward edge of the battle area. Both maintain close liaison with the first echelon and move on order. If the terrain, expected enemy resistance, and combat support permits the use of a tank division in the first echelon, it will replace a mechanized rifle division. In that event, the first echelon will consist of two mechanized rifle divisions and one tank division, and the second echelon will consist of two mechanized rifle and one tank division if available.

b. In nonnuclear warfare there is no change in the usual army attack formation except that a tank division is usually used in the first echelon only against weak enemy defenses.

7.21. Frontages and Depths

a. The combined arms army in the first echelon of the army group will usually have an attack zone up to 40 kilometers wide

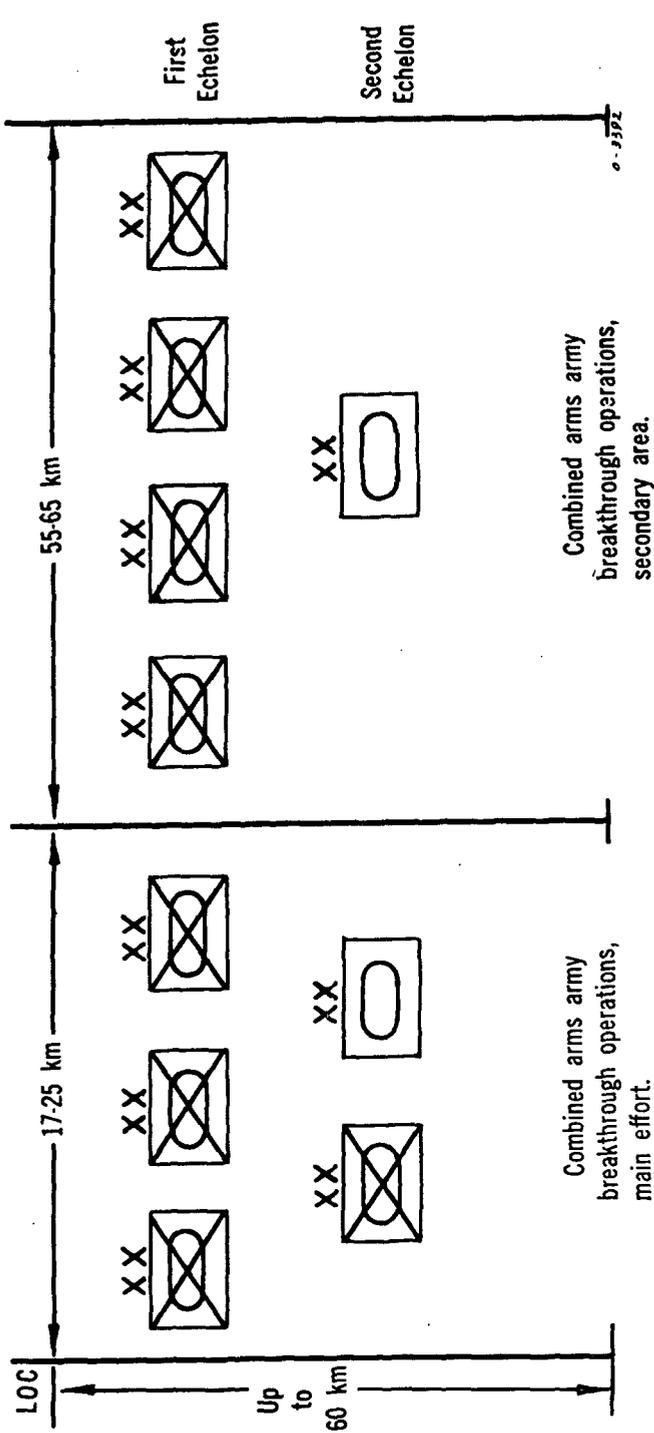


Figure 44. Typical combined arms army attack formations.

and with a tactical depth of about 60 kilometers. The width of the attack zone depends on the mission assigned to the army. If the army is making the main effort of the army group, the attack zone will usually not exceed 25 kilometers.

b. In nonactive nuclear warfare, the width of a combined arms army attack zone may be reduced by one-third in a main or a secondary effort. The depth of the army zone under these conditions remains unchanged.

7.22. Use of Nuclear Fires

The attack of an army as the main effort of the army group is usually supported by nuclear fires. Nuclear fires are normally used in the preparation to destroy enemy division and corps reserves and other targets beyond the reach of the mass of artillery. The nonnuclear artillery and air preparation concentrates on the forward enemy elements.

7.23. Combined Arms Army Reserves

The army second echelon is the reserve. In addition, the army commander may retain control of one mechanized rifle regiment of a subordinate division as a general troop reserve. This is usually done when the enemy is relatively strong in nuclear firepower. The general troop reserve is used to replace units made ineffective by nuclear fires, to protect flanks, and for anti-airborne, antiguerrilla, and similar operations.

7.24. Conduct of the Attack

Strong points that hold up the advance are bypassed and reduced by the second echelon. Strong enemy counterattacks are dealt with by nuclear fires or by the second echelon. The second echelon is committed without hesitation to maintain the momentum of the attack. If the enemy uses nuclear fires the offensive continues with minimum necessary reorganization. If necessary, unit replacements are made promptly from the general troop reserve or from the reserves of higher headquarters. Once the army objective has been captured, strong security detachments remain to secure the objective and the major elements move to dispersal areas.

Section IV. THE MECHANIZED RIFLE DIVISION

7.25. General

The mission of a mechanized rifle division in the first echelon of a combined arms army is to break through the defenses of the

opposing enemy forces. When this is done the division continues the attack against the enemy corps reserves. The object of the mechanized rifle unit attack is to destroy the cohesive defense of the enemy, dividing him into small isolated groups and destroying each group in turn and overrunning his division artillery. The medium tank battalions and the assault gun company of the medium tank regiment are normally attached to the mechanized rifle regiments. Any remaining tanks along with the reconnaissance company anti-aircraft artillery battery and service elements remain under control of the medium tank regiment prepared to support the reserve when committed.

7.26. Attack Formation

The division normally attacks in two echelons. The first echelon usually consists of two mechanized rifle regiments reinforced with tank companies and self-propelled guns. The second echelon consists of one reinforced mechanized rifle regiment.

7.27. Frontages and Depths

a. The maximum width of the attack zone of a mechanized rifle division of the first echelon in the main effort is about eight kilometers. The depth of the division tactical formation may be up to 18 kilometers when fully deployed. When the division is attacking as part of a secondary effort, the width of the attack

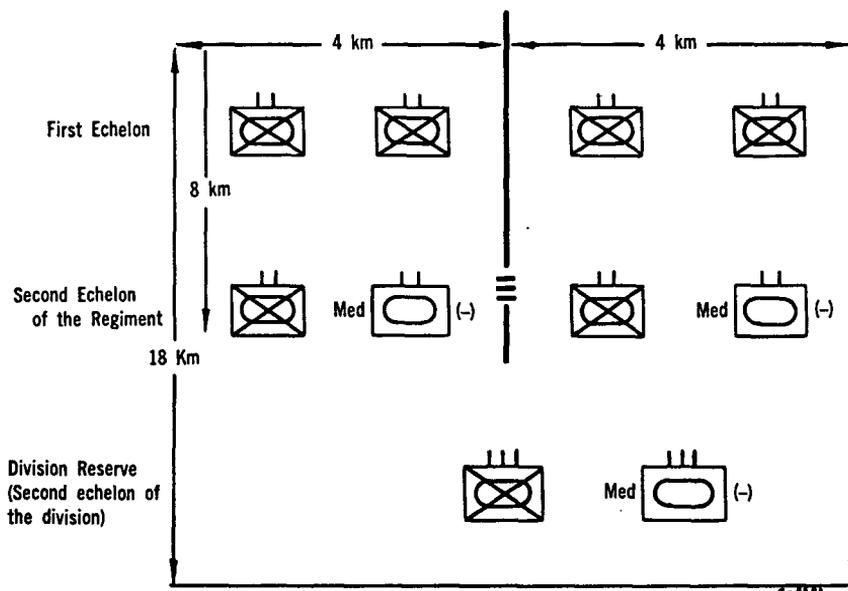


Figure 45. The mechanized rifle division attack formation.

zone may be increased to about 10 kilometers with no significant change in depth of the formation.

b. Under conditions of nonnuclear warfare, the mechanized rifle division of the first echelon in the main effort has an attack zone about five kilometers wide. The depth of the attack formation may be reduced with the division second echelon following the first echelon at a distance of about six to eight kilometers.

7.28. Preparation for the Attack

a. Maximum effort is made to conceal all preparations for the attack. Camouflage discipline is strictly enforced. Ground reconnaissance before the attack is deep and extensive. As a security and deception measure, intensive ground and air reconnaissance is carried out along the entire front and not just in areas of the main efforts. This reconnaissance is carried out by divisional, regimental, and battalion mechanized and reconnaissance elements of the units in contact. Reconnaissance seeks to obtain a complete and continuous picture of the enemy capability, vulnerability, and the terrain under his control. Ground reconnaissance is supplemented by all available intelligence information collection means. Reconnaissance is controlled so that plans for the offensive are not revealed.

b. The division moves by organic means into assembly areas about 30 to 40 kilometers from the area of departure. The stay in assembly areas is limited to the time necessary to assign missions to subordinate units, check preparations, and organize combat groups for the attack. On the night preceding the attack, the division moves by vehicle as close as possible to the attack positions in battalion and regimental columns. March columns are preceded by antitank units. Attack positions and assembly areas are prepared wherever possible, with subsurface shelters before occupancy. Arrival at the attack positions is timed to just precede the start of nuclear preparatory fires. The division medium tank regiment moves after the preparation has started so that the noise of its movement is masked.

7.29. Conduct of the Attack

a. Covered by the artillery preparation, mechanized rifle units and their accompanying tanks and assault guns move in previously cleared lanes through obstacles to close with the enemy. Assault units move within 100 meters of the artillery impact areas and take advantage of any limited visibility and surprise to close with the enemy. During the assault, antitank guns and 82-mm mortars are under control of the supported units. Regi-

mental artillery supports the assault in depth and prepares to displace forward promptly. Extended fire duels with enemy centers of resistance are avoided. Small detachments are left to contain the bypassed enemy.

b. Regimental and battalion artillery concentrates fire on enemy antitank defenses. Riflemen and engineers protect the tanks from hostile infantry, neutralize antitank minefields and other antitank obstacles, and help evacuate damaged tanks. Tanks do not normally outdistance their supporting mechanized rifle units by more than 400 meters.

c. During the advance through the enemy position, special anti-tank groups composed of antitank guns, self-propelled guns, and engineers armed with flamethrowers follow in rear of the assault groups. The antitank groups block frontal counterattacks while tanks engage the enemy from the flanks.

d. When the mechanized rifle unit has driven through the initial enemy positions and has reached the enemy light artillery positions widening of the breach, destruction of the bypassed centers of resistance, and exploitation of the breakthrough are undertaken by the second echelon, assisted by some of the assault groups. The remainder of the first echelon force consolidates captured positions, prepares to repel counterattacks, or regroups and continues the advance.

7.30. Second Echelon and Reserves

a. The second echelon is used to protect flanks, repel counterattacks, maintain the impetus of the assault, mop up centers of resistance bypassed by assault units, and exploit breakthroughs. In effect, the second echelon performs the tasks of a reserve. The second echelon normally follows the first echelon by about 6 to 18 kilometers and is usually committed from the march.

b. The medium tank regiment of the division is not normally kept in division reserve as a unit. One or two tank battalions and the assault gun company may be kept under division control for commitment with the second echelon.

c. When the mechanized rifle division attacks in one echelon, one or two reinforced mechanized rifle battalions are retained under division control as the division reserve.

Section V. THE MECHANIZED RIFLE REGIMENT

7.31. General

The mission of a mechanized rifle regiment in the first echelon of the division is to break through the enemy forward defenses

to at least the depth of the enemy light artillery positions. When this is done the regiment continues the attack against the enemy division reserves. The regiment in the attack is normally supported by artillery, tanks, self-propelled guns, and engineer troops. The amount and type of supporting units depend on the nature of the terrain and the expected enemy resistance. In an attack against a strong enemy, the regimental artillery group is supported by as many as four field artillery battalions as well as additional antitank and anti-aircraft artillery units and engineers.

7.32. Attack Formation

The attack formation of the reinforced regiment is determined after consideration of the mission, terrain, character of enemy defenses, and means available. Normally the regiment attacks in two echelons with two reinforced battalions in the first echelon and one battalion with the remainder of the support weapons in the second echelon.

7.33. Frontages and Depths

a. The attack zone of a regiment in the first echelon of the division main effort is about four kilometers wide. The depth of the attack formation is about eight kilometers when fully deployed. The attack zone of a regiment in the first echelon of the division secondary effort may be up to six kilometers wide without change in the depth of the formation.

b. In nonnuclear warfare, the attack zone of a rifle regiment in the first echelon of the division main effort will be reduced.

7.34. Regimental Second Echelon

The regimental second echelon, usually a reinforced battalion, is the regimental commander's reserve. It is used to reinforce the first echelon, to consolidate gains, to outflank enemy defenses, to mop up bypassed resistance, and to block counterattacks from the flanks. The second echelon follows the first echelon by three to six kilometers and is usually committed from the march.

7.35. Preparation for the Attack

In the preparation for the attack described in paragraph 7.28, attack positions for the battalions are selected by the regimental commander behind the last available terrain feature which can be reached without exposure to hostile observation and small arms fire. These positions may be in line or at varying distances from contact. The advance is so timed that all battalions of the regi-

mental first echelon cross the line of departure at approximately the same time.

7.36. Conduct of the Attack

a. The regimental attack is conducted generally as outlined in paragraph 7.29. The regimental commander uses the fire and movement capabilities of battalions and supporting units to maintain the momentum of the attack. Enemy strong points that cannot be immediately reduced are bypassed. Small elements are detached from the battalions of the first echelon to block these strong points. The regimental second echelon is used to destroy the isolated strong points.

b. As the second phase of the attack develops, the actions of the battalions are coordinated by changes of direction, where necessary, and by readjustment in supporting artillery fires. During this phase the regimental commander is particularly alert for enemy counterattacks from the flanks supported by armor. Regimental antitank reserves are used to counter such threats. Hasty antitank minefields are used to block approaches favorable to the enemy. When the enemy armor threat no longer exists, the antitank mines are recovered and moved forward by engineers assigned to the regiment assisted by rifle elements.

c. Should a weak point in the enemy defenses develop, the second echelon is promptly committed to encircle and destroy the enemy. Adjacent units, that may be held up, are assisted by fire only, provided it does not interfere with the advance of the regiment.

7.37. Regimental Fire Support Units

a. *Mortar Company.*

- (1) The regimental attack order normally prescribes general location of firing positions, sequence of firing missions, time to open fire, and communication coordination with rifle and tank units. Target distribution and displacement plans are prepared by the regimental artillery commander in coordination with the supporting artillery. After participation in the preparation, the mortar company is assigned a general support mission. As the attack develops, particularly during the second phase, one mortar platoon may be attached to each first-echelon battalion. One platoon is usually retained under regimental control for support of the second echelon when committed.
- (2) Mortars of the regiment in the second echelon of the

mechanized rifle division may be employed to support the initial phases of the attack of the first echelon. These mortars revert to control of their regiment when the regiment is committed.

b. Antiaircraft Artillery Battalion. The 57-mm gun battery is normally used to protect the regimental artillery. The 14.5-mm machinegun battery is used to protect rifle units. Firing positions of the 14.5-mm machinegun battery are close behind the supported units. When the enemy air threat is slight, both batteries are used for ground support fires. Platoons of both batteries are placed in direct support of rifle battalions. Firing positions are close behind the supported units.

c. Antitank Company. The six 85-mm self-propelled guns of this company are normally attached to the battalions of the first echelon. The number of guns attached to a rifle battalion depends upon which part of the regimental sector is considered most vulnerable to enemy armor. Normally, at least two antitank guns are kept in a regimental antitank reserve. Antitank guns follow close behind the battalions to which they are attached. They displace to successive firing positions for direct fire at enemy tanks and self-propelled guns. Antitank guns are also used for direct fire against strong points.

d. Medium Tank Battalion. Two of the three medium tank companies of this battalion normally support the mechanized rifle battalions in the assault. The third company is normally committed with the reserves. Wherever possible these tanks attempt to drive through and overrun enemy positions immediately in front of the battalion positions enabling the mechanized units to continue the assault.

7.38. Regimental Combat Support Units

a. Reconnaissance Company. Under the operational control of the regimental intelligence officer, this company is used to maintain contact with the enemy, to provide flank security, and to maintain contact with adjacent units.

b. Signal Company. This company is equipped for and provides both radio and wire communications.

c. Transportation Company. This company has sufficient vehicles to completely motorize the regiment.

d. Chemical Defense Squad. This squad performs radiological reconnaissance and decontamination.

Section VI. THE MECHANIZED RIFLE BATTALION

7.39. General

The mission of mechanized rifle battalions in the regimental first echelon is to break through the enemy forward regiments or battle groups. When this is done, the battalions continue the attack as directed. Battalions in the assault are normally supported by one tank company and an assault gun platoon from the regimental medium tank battalion.

7.40. Attack Formation

a. The attack formations used by the battalion are—

- (1) Line of companies.
- (2) Wedge of companies.
- (3) Inverted wedge of companies.
- (4) Column of companies (in the attack of heavily fortified zones).

b. A base company regulates the advance. The other companies guide on the base company.

7.41. Frontages and Depths

The attack zone of a battalion in the first echelon of the regimental main effort is about two kilometers wide. The depth of the tactical attack formation may be up to three kilometers. In nonnuclear warfare the attack zone of a rifle battalion will be generally the same.

7.42. Preparation for the Attack

Within the battalion attack position, the companies are placed, as far as possible, directly opposite their initial objectives. Supporting weapons occupy positions from which they can support the attack. Mortars, if attached, normally occupy positions not more than 400 meters behind the leading companies. Platoons and squads of the battalion machine gun company initially occupy positions on the flanks of the battalion or in the gaps between the mechanized rifle companies and platoons. Attached direct fire support artillery occupies camouflaged firing positions either directly behind the battalion, or on the flanks, or in the gaps between mechanized rifle companies.

7.43. Conduct of the Attack

a. The attack is conducted generally as outlined in paragraphs 7.29 and 7.36. Troops remain mounted until forced out of ar-

mored carriers. Thereafter armored personnel carriers follow and support the assault with fire. The attack is considered to start on crossing an assault line which is designated by the battalion commander. This assault line, about 200 meters from the enemy, is close enough to permit reaching the enemy positions in one bound, yet out of danger of friendly artillery firing on the enemy main battle zone.

b. When dismounted, the company, once through enemy forward obstacles, normally attacks in a line of skirmishers. It may also attack in two waves, using a shallow wedge or an inverted shallow wedge. The advance of the company is controlled by designation of a base platoon.

c. The platoon, on passing through the obstacles, usually takes up a skirmish formation with all squads abreast. A base squad is designated to regulate the advance. The platoon advances by squad bounds using fire and movement and covered by automatic fire of their personnel carriers. The platoon leader designates, by voice and hand signals, the firing positions and sequence of movement of squads. Squad leaders designate the firing positions of the members of the squad and guide on the base squad. Automatic weapons support the advance of the platoon from successive positions generally on the flanks of the platoon. Upon signal for the assault, the platoon advances using marching fire. Normally, the crossing of the assault line by tanks is the signal for the assault. If the assault fails, the platoon digs in as close to the enemy as possible and prepares to renew the assault. The assault is repeated until the attack succeeds or is cancelled by higher headquarters. Should the enemy counterattack, all units take up the defensive. Every means is used to hold the ground gained. If the enemy counterattack is with armor, the mechanized rifle units concentrate on destroying the accompanying enemy infantry. The advance is resumed at the first opportunity.

d. If the assault succeeds, the attack is continued. Halts for reorganization are held to the minimum. Gaps in the enemy fires and defenses are exploited in an effort to attack individual strong points and antitank gun positions from the rear. The advance is pushed vigorously, regardless of the progress of adjacent units. Where possible, movement is made in armored personnel carriers.

7.44. Separate Companies of the Mechanized Rifle Battalions

a. *Machinegun Company.* While normally employed for ground support missions, the machinegun platoons may be assigned a secondary mission of anti-aircraft defense. The machinegun pla-

toons are usually attached to mechanized rifle companies. The entire company may at times be under battalion control for general support missions.

b. Antitank Company. The battalion antitank company is usually held in reserve for employment in repelling counter-attacks. Attached direct fire guns usually support the mechanized rifle companies.

Section VII. THE TANK DIVISION OF THE COMBINED ARMS ARMY

7.45. General

Aggressor doctrine permits the tank division of the combined arms armies to be employed as a first-echelon unit when the mission, terrain, and opposing forces favor its employment. The mission of the tank division, when so employed, is to break through the entire zone defended by the enemy divisions in contact. The attack then continues to break through the entire zone defended by the enemy corps in contact.

7.46. Attack Formation

The tank division usually attacks in two echelons. The first echelon usually consists of either two medium tank regiments or one mechanized rifle regiment and a medium tank regiment. The second echelon consists of either the heavy tank regiment and one mechanized rifle regiment, or the heavy tank regiment and a medium tank regiment.

7.47. Frontages and Depths

The maximum width of the initial attack zone of a tank division in the main effort is about 12 kilometers. The depth of the division formation is about 60 kilometers. Once through the forward enemy defenses, the width of the attack may be extended to as much as 20 kilometers. The maximum width depends on the terrain and the enemy strength.

7.48. Conduct of the Attack

a. The attack position for the first echelon is normally about three to five kilometers from the line of departure. The tank division advances rapidly with the first echelon in two parallel regimental columns about four to six kilometers apart. Only the companies within the regimental columns are partially deployed. The columns are preceded by advance detachments which are

heavily reinforced with infantry and artillery. Flanks of the column are protected by reconnaissance units. Radiological reconnaissance is continuous by all elements. Deployment of the columns takes place only when necessary to overcome resistance that is holding up the advance and cannot be bypassed. The second echelon follows the first echelon in dispersed battalion columns at a distance of up to 20 kilometers.

b. Attacks are made on the flanks and rear of enemy positions wherever possible. Moving rapidly, the tank division overruns and destroys isolated enemy groups. If resistance is too great the assault is broken off. Containing forces are left to await the arrival of mechanized rifle units and the tank units move on. Crossroads, bridges, and other terrain features the retention of which will cut off the enemy are seized. Enemy command posts and logistical installations are overrun, and every effort is made to retain the initiative and maintain the impetus of the attack. The tank division concentrates on rapid, slashing attacks and leaves the destruction of strong centers of resistance to the following mechanized rifle divisions. If the enemy commits sizable reserves, the tank division attacks them with nuclear fires or uses minimum mechanized rifle forces to block them and continues the advance. The exploitation role is undertaken as soon as possible.

7.49. Medium Tank Regiments

The medium tank regiments may be employed independently under division control or medium tank battalions of these regiments may be placed in support of the mechanized rifle regiments. When the mechanized rifle division is attacking on a wide front, one or more of the tank battalions of the medium tank regiments are usually placed in support of the mechanized rifle regiments.

7.50. Heavy Tank Regiment

The heavy tank regiment may be employed independently under division control or the heavy tank battalions may be used to support the medium tank regiment and the mechanized rifle regiment. When the mechanized rifle division is attacking on a wide front, the battalions of the heavy tank regiment are usually used to support the medium tanks of the mechanized rifle regiment.

7.51. Mechanized Rifle Regiment

This regiment is organized for combat on the basis of battalion combat teams of all the arms and services represented within the regiment. The medium tank battalion normally supports the two

reinforced mechanized rifle battalions forming the regimental first echelon. The reconnaissance company and the 57-mm self-propelled antiaircraft battery are normally retained under regimental control.

Section VIII. THE TANK ARMY

7.52. General

a. The tank army is committed as early as possible in the offensive:

- (1) To catch the enemy off balance.
- (2) To encircle the enemy in the forward areas rapidly before they can be reinforced.
- (3) To exploit the effects of nuclear fires.

b. When not in the army group first echelon, the tank army is usually committed by the morning of the second day of the offensive. By this time the combined arms armies of the first echelon of the army group should have created a gap 20 kilometers wide and 40 kilometers deep in the enemy defenses.

7.53. Attack Formation

a. The tank army usually attacks in two echelons. A one-echelon formation may be used against a very weak or over-extended enemy. A three-echelon formation is rarely used. The first echelon of the tank army usually consists of two tank divisions. The second echelon usually consists of the remaining tank division.

b. The first echelon of the tank army usually attacks in parallel columns preceded by strong advance detachments reinforced with artillery. The second echelon is employed where its great shock action and mobility will best insure the uninterrupted advance of the tank army.

7.54. Frontages and Depths

a. In breakthrough type operations, the tank army is committed only after a breakthrough gap approximately 20 kilometers wide and 40 kilometers deep has been formed. This provides the tank army with approximately 15 kilometers of frontage to introduce divisions plus approximately two kilometers on either flank for protection. Once the breakthrough area has been passed, subsequent action may be carried out in column of divisions in a zone up to 50 kilometers wide.

b. The width of the attack zone of a tank army, once past the

forward enemy defenses, may increase up to 50 kilometers. The depth of the initial attack formation is about 30 to 60 kilometers, depending on the number of echelons.

7.55. Conduct of the Attack

a. When the situation will permit, a short but intense preparation of about 20 minutes is fired by all available air and artillery fires in the area, prior to the commitment of the tank army. If necessary, the artillery of the first echelon of the tank army participates in this preparation. Nuclear fires are delivered just before the preparation. If the enemy is very weak or has been completely neutralized by nuclear fires, the nonnuclear preparation may be omitted.

b. The tank army advances to forward positions with the divisions of its first echelon in column formation. Deployment of the first echelon takes place only when required by enemy resistance. The tank army maintains rapid and uninterrupted movement; resistance that cannot be quickly overcome is bypassed. Maintenance of close contact with the enemy is stressed. The tank army breaks contact with combined arms armies if necessary to maintain contact with the enemy. The tank army, depending on enemy resistance and terrain, has an organic capability of advancing 370–520 kilometers after commitment.

c. When the mechanized rifle division in the first echelon of the army group have completed an encirclement of the forward enemy defenses, the tank divisions then attack any enemy forces advancing to the relief of the encircled enemy. At the first indications of an enemy withdrawal, the tank army starts in pursuit. The destruction of encircled enemy forces is left to mechanized rifle divisions.

7.56. Employment of Tank Divisions

a. The tank division is used to create and maintain shock deep in the enemy rear; prevent or break up formation of hasty rear defense positions; disrupt enemy command, communications, and logistical installations; and overrun communications centers, airfields, and nuclear weapons launching sites. Its operations are closely coordinated with the operations of the mechanized rifle divisions. If the combined arms army is forced to assume the defensive, the tank divisions are used as mobile reserves.

b. The tank division organizes combat teams based on the two medium tank regiments supported by the mechanized rifle regiment battalions and the battalions of the heavy tank regiment.

7.57. Logistics

The tank army attaches sufficient transportation to the tank divisions to enable these divisions to carry enough supplies to be independent of army supply points for each phase of the offensive and resupply takes place at the completion of each phase. Tank divisions in a major offensive are logistically self-sufficient for about six days.

CHAPTER 8

PURSUIT

Section I. GENERAL

8.1. Basic Principles

Aggressor considers pursuit as an operation to complete the destruction of a retreating enemy. Pursuing Aggressor forces do not exclusively follow a retiring enemy, but parallel his retreat, cutting off segments of the withdrawing columns as the opportunity presents itself. The objective is to cut off and completely destroy the enemy. In pursuit operations, nuclear fires are employed on enemy concentrations, defiles, and possible enemy defense areas. Control and allocation of nuclear fires, particularly small-yield weapons with highly mobile delivery systems, may be delegated to division commanders.

8.2. Planning

a. Planning for pursuit is started before the attack. Plans include—

- (1) Consideration of possible enemy routes of withdrawal, and determination of critical terrain features to be seized.
- (2) Composition of pursuing forces, including attachment of artillery and supporting air units.
- (3) Schemes of maneuver for the delay of withdrawing forces and attack of hostile strong points and rear installations.
- (4) Allocation of nuclear weapons and delivery systems.

b. Subordinate echelons develop their own plans in accordance with those of higher commanders. Mechanized rifle and tank units plan the missions of artillery and air units that will be attached or supporting them when the pursuit is initiated.

Section II. MECHANIZED RIFLE UNITS IN THE PURSUIT

8.3. General

Mechanized rifle units used for pursuit operations are reinforced with additional tanks. They are usually used to follow tank

spearheads, consolidating the gains and reducing bypassed strong points. Mechanized rifle units are also used for maintaining steady pressure against the rear of the retreating enemy.

8.4. Pursuit by Mechanized Rifle Divisions

a. When the mechanized rifle division initiates pursuit, tanks of the medium tank regiment, supported by mechanized rifle units, parallel the lines of retreat to block, cut off, and destroy segments of the enemy columns. Direct pressure on the enemy by units in contact is increased across the entire zone of action so as to make the formation of enemy march columns difficult. Second-echelon regiments are moved forward for rapid advance in the main direction of pursuit and early commitment.

b. The division organizes pursuit groups to follow the tank spearheads. A pursuit group normally consists of a mechanized rifle company, a reconnaissance squad, an engineer squad, and an antitank gun platoon. Pursuit groups harass the flanks of the retreating columns. Strong points bypassed by the tank columns are attacked and destroyed. Hastily organized defenses are attacked without delay, the assault being launched directly from march column. When possible, hostile rear guards are bypassed and their routes of withdrawal blocked by mines and demolitions prepared by engineers of the pursuit groups.

c. Division artillery and mortar units are attached to mechanized rifle regiments. They interdict defiles on the lines of retreat to cut off the enemy and prevent the arrival of reinforcements. As the pursuit develops, they advance by bounds so that one echelon is in position to fire while the other is displacing. Attached nuclear delivery means, released by army, are retained under division control. Supporting air units interdict bottlenecks on the routes of retreat with nuclear and nonnuclear fires, keep the enemy under constant surveillance and attack, reconnoiter for advancing hostile reinforcements, and protect the pursuing units from hostile air attack.

d. Security is organized at the regimental echelon. Antitank units protect the flanks of the pursuing units against armored counterattacks. Flank and rear security is provided by mechanized rifle elements. Rear security groups keep the lines of communications free of enemy stragglers.

8.5. Pursuit by Mechanized Rifle Regiments

The mechanized rifle regiment, at the first opportunity, starts in pursuit. Pursuit operations continue until halted by the division commander. During the initial phase of a pursuit, the regi-

ment strives to prevent the enemy from breaking contact. Elements in contact with the enemy maintain pressure. Defiles on the enemy possible routes of retreat that are within range are taken under fire by the artillery and heavy weapons. Mortars, artillery, and second-echelon units are displaced forward. Small units attempt to infiltrate the enemy rear. If the enemy succeeds in breaking contact, mechanized columns reinforced with tanks and artillery are organized to pursue the enemy on routes parallel to the axis of his withdrawal while frontal pressure is continued. The mechanized columns cut off the enemy withdrawal from the rear, preferably at defiles. Small units are also employed to infiltrate the enemy area to create roadblocks, delay, and harass the enemy.

8.6. Termination of Pursuit

Pursuit is terminated only on orders of Army and higher commanders. Normally pursuit is terminated only when the enemy has been completely destroyed, when pursuing elements have outdistanced their logistical support or have exposed themselves to being cut off, or the enemy has succeeded in establishing a strong defensive position. When the pursuit ends, units are re-grouped and redeployed for the next operation. Artillery, air, tank, and transportation units are brought under centralized control.

Section III. TANK UNITS IN THE PURSUIT

8.7. General

Tank units are best suited for pursuit because of their mobility, shock action, and firepower. Tank units block the enemy retreat and attack enemy columns from the flanks. Mechanized rifle units, because of their rifle strength, are used for other more sustained operations such as the reduction of strong points bypassed by tank units, or for flank protection to block hostile counterattack.

8.8. Conduct of the Pursuit

a. Tank units are organized for the pursuit into balanced forces consisting of medium tanks, heavy tanks, self-propelled artillery, mechanized rifle, reconnaissance, and engineer units. Some forces maintain direct pressure on the retreating enemy while the bulk of the pursuing forces moves rapidly on routes parallel to the enemy columns, attempting to cut off and destroy them. At the same time, other forces drive quickly into the hostile rear and attack command posts, destroy supplies, rupture communications,

and create panic by surprise thrusts. Strong reserves of tanks, self-propelled artillery, and mechanized rifle units are held in readiness to engage enemy reserves. If separate strong points succeed in resisting direct assaults, they are bypassed and mechanized rifle elements are left to contain and destroy them.

b. Strong support is provided by artillery and air units. Long-range artillery is used for harassing and nuclear fires on crossroads and defiles. The supporting air units carry out similar tasks, reconnoiter for and attack advancing enemy reinforcements, and protect the pursuit forces from air attack.

8.9. Logistics

The impetus of supply is from the rear. Every expedient is employed to keep pursuing units supplied. Mobile supply units and additional transportation units are attached to divisions. Air drops and helicopter deliveries are used extensively. Captured supplies are used whenever possible. Local resources are exploited to the maximum.

8.10. Termination of Pursuit

When pursuit terminates, tank units normally revert to reserve and undergo necessary rehabilitation.

CHAPTER 9

ARTILLERY AND AIR SUPPORT IN THE OFFENSIVE

Section I. ARTILLERY

9.1. General

Aggressor uses the massed fires of artillery units to influence the course of battle. Artillery units of the GHQ Reserve reinforce the artillery of divisions, armies, and army groups. All Aggressor ground-launched missiles are subordinate to the artillery. Antiaircraft artillery units are controlled by the artillery officer of the command.

9.2. General Employment

a. Aggressor commanders allocate artillery under their control to subordinate units. The artillery units retained are organized into provisional groups for specific tactical missions. On completion of the mission, the artillery units may be reorganized into new provisional groups for different missions. Groups may change composition several times during an operation. They vary in size with the means available and the mission. A provisional group is commanded by the senior artillery commander of the units composing the group. The headquarters of this commander acts as the group headquarters.

b. Artillery divisions and brigades are administrative commands; however, both these artillery headquarters can perform tactical functions.

c. Artillery planning is detailed and control of fires is centralized to the maximum consistent with the tactical situation.

9.3. Army Group

a. The army group allocates its artillery and other available GHQ artillery units to the armies. The army group commander influences the battle by changing the allocations of artillery.

b. A typical army group has four mixed artillery divisions, three gun artillery divisions, two antiaircraft artillery divisions, and a light and medium missile division, a heavy artillery brigade, a rocket artillery brigade, and six antitank artillery brigades.

c. For a major offensive, the army group may initially allocate artillery as follows:

- (1) Army group artillery group.
 - (a) One mixed artillery division.
 - (b) Two antiaircraft artillery divisions.
 - (c) One rocket artillery battalion.
- (2) Each first-echelon combined arms army.
 - (a) One mixed artillery division.
 - (b) One gun artillery division.
 - (c) Two antitank brigades.
 - (d) One light missile brigade.
 - (e) One medium missile brigade.
 - (f) One heavy missile battalion.
 - (g) One rocket artillery battalion.
- (3) Second-echelon combined arms and/or tank army-one light missile brigade.

d. The antiaircraft artillery available to the army group will be used to defend critical targets in the army group or allocated to the subordinate commands.

e. On commitment of the second-echelon combined arms army it may be reinforced with the artillery units listed below which are taken from the artillery previously allocated to first-echelon combined arms armies.

- (1) The equivalent of one gun artillery division.
- (2) The equivalent of one mixed artillery division.
- (3) The equivalent of one antiaircraft artillery division.
- (4) The equivalent of one light missile regiment.
- (5) The equivalent of one medium missile regiment.
- (6) The equivalent of one heavy missile battalion.
- (7) Two antitank artillery brigades.

9.4. Combined Arms Army

a. The army may allocate assigned artillery and attached army group artillery as follows:

- (1) Each first-echelon division.
 - (a) One antitank artillery battalion.
 - (b) 6 to 12 artillery battalions.
 - (c) One antiaircraft artillery regiment.
- (2) Army artillery group.
 - (a) One mixed artillery division.
 - (b) One gun artillery division.
 - (c) One antitank artillery brigade.

- (d) One or two antiaircraft artillery divisions.
- (e) One rocket artillery brigade.
- (f) One heavy mortar battalion.
- (g) One missile artillery light battalion.

b. The army artillery group is formed into appropriate sub-groups for the following missions :

- (1) Long-range cannon artillery fires against deep enemy reserves and installations.
- (2) Counterbattery fires against enemy long-range weapons.
- (3) Support of the commitment of the tank army if made in or adjacent to the army zone.
- (4) Block areas which have been subjected to nuclear fires.
- (5) Antiaircraft protection of vital army installations and routes of communication.
- (6) Reinforce fires of first-echelon divisions.

c. Control of nuclear fires regardless of disposition is retained by the army group unless specifically delegated to the army or a lower echelon. Weapons having a nuclear capability are sited approximately one-third ($\frac{1}{3}$) of the maximum effective range from the leading elements.

d. Allocations of artillery units are changed, as required, to influence the battle. Elements of the army artillery group are used to reinforce second-echelon divisions when committed and to replace artillery units rendered ineffective by enemy fires.

9.5. Tank Army

a. The tank army allocates a portion of the assigned and attached artillery to first-echelon divisions. The artillery units remaining are formed into various tactical groups which are assigned the following type missions :

- (1) Counterbattery fires.
- (2) General support of the first-echelon division.
- (3) Antiaircraft defense of vital installations and routes of communications.
- (4) Antitank artillery reserve.
- (5) Support of second-echelon divisions when committed.

b. Artillery units of the army artillery groups may be used to replace divisional artillery units made ineffective by enemy fires.

9.6. Divisions

a. Divisions organize assigned and supporting artillery into groups to accomplish the following missions :

- (1) Direct support of specified first-echelon regiments.
- (2) General support of all regiments.
- (3) Countermortar fires.
- (4) Antitank defense in depth.
- (5) Antitank artillery reserve.
- (6) Support of second-echelon regiments when committed.
- (7) Antiaircraft defense of the division zone.

b. A typical artillery group in direct support of a first-echelon regiment may consist of two or more 122-mm howitzer battalions and a heavy mortar or rocket launcher battalion. Elements of the division artillery group are used to replace regimental artillery units made ineffective by enemy fires. Division may attach artillery battalions to regiments. The regimental commander may in turn place it in direct support of a battalion.

c. Division participation in artillery preparations is coordinated by the army. The artillery of second-echelon divisions usually participates in the artillery preparation.

9.7. Regiments and Battalions

Regimental and battalion organic artillery units are not formed into tactical artillery groups. They are usually used for direct fire and work in close coordination with the forward elements. Their fires may be coordinated with the fires of supporting division artillery groups during a preparation.

9.8. Artillery Offensive

Aggressor artillery support is based upon the concept that an artillery offensive is the continuous support of mechanized rifle elements and tanks with concentrated artillery, rocket, and mortar fire. This concentrated fire precedes these maneuver elements and tanks from one objective to the next. Artillery fires are laid down with such weight, volume, and accuracy that the artillery fire itself is an offensive. The artillery offensive, including nuclear fires, is coordinated with the air offensive to destroy or neutralize enemy weapons, units, defense installations, and to support advancing mechanized rifle and tank units. It constitutes a distinct part of an Aggressor offensive. The artillery offensive is divided into three phases: preparatory fires, fires supporting the attack, and fires to accompany mechanized rifle and tank units during exploitation.

9.9. Preparatory Fires

a. Preparatory fires are used to destroy enemy defensive installations, disorganize control and observation facilities, disrupt

defensive fire systems, and make passages through enemy obstacles.

b. Nuclear fires usually immediately precede the nonnuclear fires of the preparation. When nuclear fires are used in the preparation, nonnuclear preparatory fires usually do not last more than about 20 minutes. When nuclear fires are not used in the preparation, the length of the preparation may vary from 40 minutes to one hour or more.

c. Nuclear fires may be delivered from the forward edge of the enemy's defensive positions to his most rearward installations or units. Nonnuclear artillery and rockets will be used to supplement the nuclear fires. Patterns of fire are varied and false preparations are used for deception.

9.10. Fires Supporting the Attack

a. Prearranged and on-call fires are normally used in support of mechanized rifle and tank units after the preparation. Prearranged fires are delivered on call of the supported units. These fires are planned on the basis of the probable action of the supported units at each stage of the battle. This phase of the artillery offensive starts with the assault of mechanized rifle and tank units. Normally it includes only those fires required to support the attack through the enemy defensive positions and does not include fires in support of the exploitation.

b. Fires for protection of units advancing through the enemy defenses are planned to give uninterrupted support during the seizure of successive objectives and for protection on capture of the final objective. The planning involves the determination of displacement and integration of indirect fires of artillery units with the direct fire of accompanying self-propelled guns. Displacements are made so that not more than one-third of the artillery is out of action at any one time. When mechanized rifle and tank units have advanced as far as the enemy regimental reserve and main artillery areas, control of artillery is decentralized. Divisional artillery groups supporting regiments come under the control of the supported regiments which control their displacement.

Section II. AIR SUPPORT

9.11. General

a. Aggressor air armies are used to assist ground forces in accomplishing their missions. Tactical air armies are organized for combat to permit ready attachment to or support of ground forces.

b. In carrying out its close support mission, the tactical air army also uses fixed and rotary wing aircraft to execute such missions as reconnaissance, artillery observation, transport, communication, and medical evacuation.

9.12. Employment of Units

a. Fighter units patrol the battle area and enemy forward airfields. They provide close support for ground forces, especially tanks and motorized elements, and execute photographic and visual reconnaissance. As a secondary mission they provide escort to bomber and attack aircraft. In providing close support, fighter units normally maintain air cover over ground troops in the main effort.

b. Bomber units execute medium and low-level bombing attacks in close support of advancing troops and deliver nuclear fires. Bombers are employed singly or in groups in horizontal, glide, or dive-bombing attacks in daylight and in horizontal or glide-bombing attacks at night.

c. Attack units are used against enemy forward areas in cooperation with mechanized rifle and tank units. Attack aircraft are used for low-level close support and deliver machinegun fire, rockets, light bombs, and automatic light cannon fire. Attack aircraft also perform visual and photographic reconnaissance.

9.13. Preparation for Support of an Offensive

a. Preparation for an offensive may be divided into four phases :

- (1) Buildup of aircraft and supplies. Operations are cut to a minimum but reconnaissance is continued as well as diversionary attacks on adjacent fronts. Fighter effort is devoted to blocking enemy air attacks.
- (2) Bomber and attack sorties are used against the enemy to a depth of 600 kilometers or more. Reconnaissance is increased. Fighters operate against enemy air in greater intensity.
- (3) Transition from operations against the enemy rear to attacks against targets in the immediate battle area. Attack aircraft and fighters step up the tempo of their operations.
- (4) Attack and bomber operations are reduced while fighters intensify their efforts against enemy air to conceal the final preparations for the offensive.

b. Planning of air support is started as soon as the concept of the offensive is known. Command of air units is exercised by the

air army commander throughout the preparation period. After the offensive starts, command is decentralized to the extent necessary to insure full and immediate cooperation between ground units and the supporting air units. The operational plans of the air army are not drawn up by its commander, but by the army group commander. The army group and air army staffs work closely together in preparing the plans and the necessary orders. Commanders having air army units in support, assign missions to the supporting air units. The plans for air support are prepared by the ground forces staff in conjunction with the air staff.

9.14. Air-Ground Control System

Air-ground cooperation is insured by having the supporting air commander direct his operations from the command post of the supported ground unit or by having liaison officers from the supporting air unit with the supported ground unit. Joint air-ground control posts are located at all battalion and higher command posts of the supported unit. On occasion air-ground control posts may be at mechanized rifle or tank companies. Air-ground control posts control air attacks on targets within their sectors and may designate new targets in case of changes in the tactical situation.

9.15. Air Support of the Preparation

Before the firing of the preparation, fighter aircraft reduce the effectiveness of the enemy air effort so that it cannot interfere with the air assault that accompanies the artillery preparation. During the artillery preparatory fire, the air army attacks targets which are out of artillery range or cannot be observed from the ground. Aircraft concentrate on the enemy's frontline immediately prior to rifle and tank assaults. The air attack, supplementing the artillery fire, is of short duration. Simultaneously, specially detailed artillery batteries neutralize enemy antiaircraft guns.

9.16. Air Support of the Attack

a. Once the attack is launched, bombers attack rear area installations; attack aircraft execute strikes against targets whose destruction or neutralization assists ground assault units; and fighters supplement the bombers and attack aircraft and protect both air and ground units from hostile air attack. Ground units call for support through liaison officers and air-ground control posts. As the attack progresses into the depths of the hostile defensive system, small formations of planes remain constantly in the air to attack, on their own initiative or on instructions from the ground

forces, those targets which impede the attack of the mechanized rifle and tank units.

b. As in pursuit operations, the available air strength is used for attacks on the retreating forces and on advancing enemy reserves. The air effort adds impetus to the pursuit and helps prevent the enemy from establishing new defensive positions.

CHAPTER 10

THE DEFENSE

Section I. GENERAL

10.1. Concept of the Defense

Aggressor makes full use of his mechanized rifle and tank divisions to obtain a flexible and mobile defense. His defense consists of a series of defensive areas or strong points located laterally and in great depth. These defensive areas are so disposed that the attacker is forced to attack echeloned strong points, thus reducing his momentum and strength. When the attacker is extended and weakened by well-planned defenses, Aggressor initiates counter-offensive operations. Defensive battles are won only by resumption of the initiative and destruction of the enemy. The counter-offensive is normally supported by nuclear fires. Aggressor takes up the defensive when forced to do so, to gain time, or to economize in one area to provide more forces for another area.

10.2. Types of Defense

a. Positional Defense. This type of defense is designed to hold essential terrain and at the same time achieve passive defense by dispersion against nuclear weapons. In positional defense, forces are shifted to meet a threatened breakthrough and to block penetrations made by the enemy. Battalion-sized groups defend their assigned positions until completely overrun to channelize the attacker and to wear him down. Tanks form the principal counter-attack means. Maneuver of the various elements is the decisive factor in the conduct of this defense.

b. Mobile Defense. The purpose of this type of defense is to gain time and to conserve forces at the expense of loss of terrain, and to create favorable conditions for a nuclear strike on enemy elements which have been trapped in positions where dispersal is difficult. Battalion-sized groups defend in a series of actions fought in depth along previously prepared defense lines in combination with counterattacks. Battalion-sized groups so designated withdraw before becoming too heavily engaged and prepare to assist in the counterattack.

10.3. Organization of the Defense

In the organization of any defensive, emphasis is placed on protection of troops and material from the effects of enemy nuclear fires. The influence of terrain on effects of nuclear fires is considered in selecting the defensive areas. The entire defensive area is as heavily fortified as time permits, with priority given to the forward defensive installations. Obstacle belts forward of and within the position are constructed to hinder the enemy advance, canalize him into areas favorable to the defender, or cause him to mass into profitable nuclear targets.

10.4. Organization of Positional Defense

The positional defense is based on a series of defensive zones or belts designed to add depth and flexibility to the defense. Normally these consist of a security zone, a main defense belt, a second defense belt, and a third defense belt. Forces in the security zone delay the enemy. Forces in the main defense belt stop the enemy. Forces in the second defense belt either counterattack the enemy if he breaks through the main defense belt or contain him. Forces in the third defense belt strike the enemy with a major counter-attack if the second defense belt is penetrated or they launch a counteroffensive when the enemy offensive has been stopped or slowed.

10.5. Planning the Defense

The army group normally prescribes the general location of the forward edge of the main defense belt and the limits of the combined arms army zone of defense. The combined arms army designates the more important areas in the main defense belt to be defended, prescribes the antitank defense in depth and counter-attack plans. The combined arms army also plans for possible withdrawal of forces from forward positions in the main defense belt when close-in nuclear fires are used. Division commanders select the exact trace of the forward edge of the main defense belt. Division defense plans include the organization of the defense, allocation and use of artillery, antitank defense, use of air support, and priorities for the preparation of defensive works.

10.6. Conduct of the Defense

a. In the conduct of the positional defense, Aggressor habitually constructs supplementary and alternate defensive positions. These positions are so sited that they command the avenues of approach to key terrain to thwart the enemy target acquisition effort. The gaps between positions are sufficiently large to prevent the attacker from concentrating and organizing an attack against two adjacent

positions without changing his artillery positions. Aggressor frequently changes occupied defensive positions and the grouping of forces and weapons is not stereotyped. Under conditions of active nuclear warfare small forces are left in the previously occupied positions to simulate normal activity. Movements to alternate or supplementary positions are made at night or during conditions of reduced visibility.

b. If it is known or believed that the enemy will fire a nuclear preparation on the main defense belt, troops in the threatened area may, on authority of the army group commander, withdraw temporarily. A strong, well dug in covering force is left in place to conceal the withdrawal. The defensive position is reoccupied at the earliest possible time. The survivors of units attacked with nuclear fires continue the defense until properly relieved. Care of casualties is subordinated to continuation of the defense. Units on the flanks of forces subjected to enemy nuclear fires increase flank protection in that direction and prepare to attack the advancing enemy forces from the flank.

c. In all defense operations, close contact with the enemy is stressed. All units are alert for any signs of enemy withdrawal as a possible indication of preparation for close-in nuclear fires. Close contact with the enemy is considered excellent protection from nuclear attack.

10.7. Nuclear Fires in the Defense

In the defense nuclear fires are primarily used for—

- a. Destruction of enemy nuclear delivery means that cannot be otherwise destroyed.
- b. Counterpreparations.
- c. Support of counterattacks.
- d. Elimination of penetrations if troop safety permits.
- e. Denial of areas to the enemy by use of surface bursts.

10.8. Counterattacks

Major counterattacks are executed primarily by mechanized rifle and tank units under the control of either the combined arms army or the army group. Counterattacks, if necessary, cross radioactive areas. Greater troop safety risks are accepted to insure reduction of serious penetrations. Counterattacks against deep and wide penetrations may be made with nuclear fires and small airborne assaults. If airborne units are used they are dropped on the enemy side of the area subjected to nuclear fires, as an enveloping force

to seal off the penetration and thus permit destruction of the surrounded enemy.

10.9. General Withdrawals

a. Aggressor rarely executes general withdrawals. When retrograde action is required, Aggressor uses the mobile defense wherever possible. When a general withdrawal is required, it is planned in as much detail as time permits. Demolition and scorched earth plans are prepared for all withdrawals. Withdrawals normally take place on a broad front in darkness or under cover of smoke and artillery fires including nuclear fires. Limited tank counterattacks may also precede withdrawals.

b. The first units to withdraw are rear services units and army group artillery. These units usually move back under cover of darkness one or two nights before the withdrawal of the forward armies. The disengagement of the army normally takes place from rear to front in a manner generally similar to that used by U.S. forces.

c. In large-scale withdrawals, rear guards are normally formed from either army troops or division reserves. Rear guards normally consist of mechanized rifle units reinforced with tanks, engineers, and artillery. Rear guards normally occupy positions in rear of the main forces and cover their withdrawal. As the rear guard withdraws, it destroys bridges, executes demolitions, blocks side roads and parallel routes, and may emplace nuclear demolitions.

Section II. THE POSITIONAL DEFENSE

10.10. General

a. The positional defense is based on the mechanized rifle divisions of the combined arms army destroying the enemy from positions in a heavily fortified area. If the enemy penetrates this area, his attack will be slowed by the continuing resistance of the mechanized rifle divisions and nuclear fires. Large mobile reserves of tank and mechanized rifle units, under army or army group, counterattack and destroy the weakened and exhausted enemy. These counterattacks are supported by nuclear fires.

b. The positional defense consists of a series of strong points manned by reinforced mechanized rifle battalions or companies and is characterized by—

- (1) Strong points normally located to be mutually supporting.

- (2) Self-sufficient strong points with artillery, mortar, and tank support under control of local commanders.
- (3) Large mobile reserves at army and army group level.
- (4) Established communications nets, primarily by radio.
- (5) Small counterattacks by local reserves prearranged and executed on orders of strong point commanders.

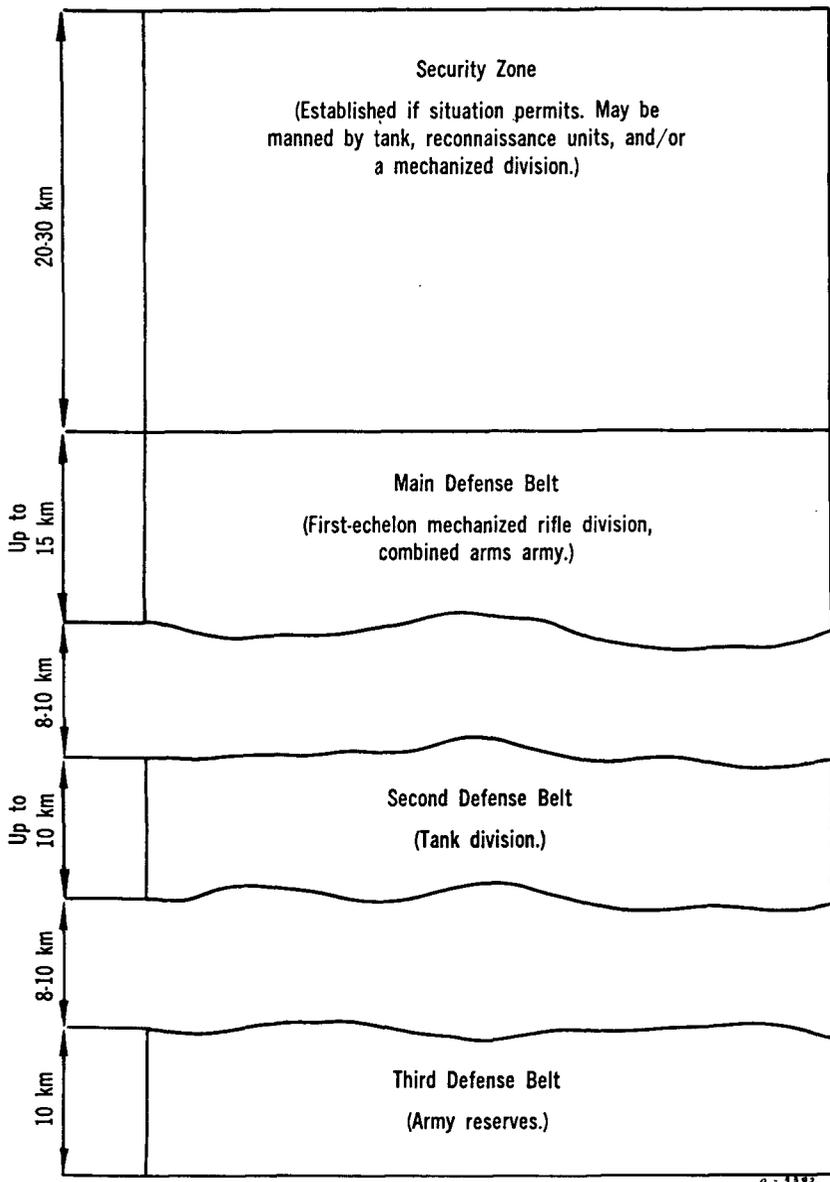


Figure 46. Schematic zone organization of positional defense (not to scale).

10.11. Security Zone

The combined arms army, if possible, establishes a security zone forward of the main defense belt. This security zone is about 20 to 30 kilometers deep. This is considered deep enough to prevent the enemy from delivering fire on the main and second defense belts with divisional weapons. The security zone is manned by tank, reconnaissance and/or mechanized rifle units reinforced with artillery, engineers, and other appropriate means. Security zone forces halt the enemy or delay him by forcing him to deploy and prevent enemy reconnaissance units from reaching the main defense belt. Close contact with the enemy is maintained as protection against enemy nuclear fires.

10.12. Main Defense Belt

This belt is the bulwark of the defense. It is selected to take advantage of natural obstacles and terrain that afford the maximum passive defense against nuclear attack. If possible it is located behind a natural obstacle and is designed to stop a hostile attack and destroy the attacking forces. This belt is up to 15 kilometers deep and is manned by the mechanized rifle divisions comprising the first echelon of the combined arms army. Within the main defense belt are artillery elements, reserves, division main and alternate command posts, antitank and anti-aircraft positions.

10.13. Second Defense Belt

The second defense belt, up to 10 kilometers deep, is located 8–10 kilometers to the rear of the main defense belt and usually has prepared, but unoccupied defensive positions in its forward area. A tank division can be located in the second defense belt. The tank division either counterattacks or occupies the prepared positions in the event the enemy breaks through the main defense belt. The army main and alternate command posts, tanks, anti-tank, engineer, reserves, and army artillery elements are located in the second defense belt.

10.14. Third Defense Belt

The third defense belt, 8–10 kilometers in rear of the second defense belt is about 10 kilometers deep. The army reserves are located in or near this belt and have the mission of preparing to counterattack. In the event a counterattack cannot be mounted, the reserves will man two or three lines of prepared defensive positions in the belt.

10.15. Army Group

The area defended by a typical army group may be up to 400 kilometers deep and 400 kilometers wide. The width of the area depends on the defensive strength of the area of operations and the composition of the army group. The army group normally defends in two echelons. The first echelon consists of two or three combined arms armies. The second echelon usually consists of the tank army, GHQ units available to the army group, and possibly one combined arms army. The second echelon is usually used for counteroffensives and is located well to the rear in or near the third defense belt and is widely dispersed.

10.16. Counterattacks

Major counterattacks are usually made by the tank army in the army group second echelon. When the army group does not have a tank army in the second echelon, the tank divisions made available from GHQ are used for counterattack. Counterattacks are the backbone of the defense and are planned in advance for second echelon and reserves. The commander responsible for the defense estimates the enemy probable courses of action and prepares counterattacks for each eventuality. The departure positions and directions of counterattack are selected in advance when possible. The counterattack is usually preceded by short, heavy, artillery and mortar preparations and supported by fires of adjacent units. Second echelons of reserves make numerous limited counterattacks. Counterattacks are made by a sudden thrust on the enemy's flanks and rear before he has had sufficient time to consolidate the positions he has captured. Counterattacks progressively involve larger and larger units and are delivered with more frequency as the depth of the enemy's offensive salient increases.

Section III. COMBINED ARMS ARMY IN POSITIONAL DEFENSE

10.17. Formation for the Defense

The combined arms army normally defends in two echelons. The first echelon usually consists of two to four mechanized rifle divisions. The second echelon usually consists of the remaining mechanized divisions, if any, and the tank division. The formation of the army for defense depends on the width and defensive strength of the assigned defense area and the means available. If assigned a wide defense area, the army may use two to four mechanized rifle divisions and two tank regiments in the first echelon and the remaining mechanized divisions, if any, and the tank

division, less two tank regiments, in the second echelon. A combined arms army rarely defends in a three-echelon formation.

10.18. Frontages and Depths

The typical combined arms army can defend an area about 30–90 kilometers wide and about 100–120 kilometers deep. If a security zone is not established, the depth of a combined arms army defense area is usually not more than 100 kilometers. If the width of the assigned defense area is more than 90 kilometers, the strength of the army first echelon is usually greater than two mechanized rifle divisions.

10.19. Organization for the Defense

a. The security zone is usually manned by the army tank division. On completion of its mission in the security zone the tank division withdraws to the second defense belt. On withdrawing from the security zone, the tank division often leaves stay-behind elements to execute intelligence and sabotage missions. Stay-behind elements attempt to locate enemy nuclear delivery means and to determine enemy attack formations and time of attack.

b. The combined arms army defends both the main defense belt and the second defense belt, and its general reserves are located in or near the third defense belt. The mechanized rifle divisions of the army first echelon defend the main defense belt. The second defense belt is manned by the tank division of the army second echelon when not employed or after completing its mission in the security zone.

10.20. Reserves

a. In addition to the second echelon forces, the combined arms army forms a general troop reserve. Both the army and divisions form engineer, antitank, and artillery reserves. The army general troop reserve may consist of a mechanized rifle regiment from one of the first-echelon mechanized rifle divisions. The general troop reserve is used to replace rifle units destroyed by the enemy, to protect the flanks, to participate in the counterattack, and for antiguerrilla and anti-airborne operations.

b. Antitank artillery reserves are held in readiness to move quickly to any threatened area. Artillery reserves are those elements of army and division artillery groups designated to replace the artillery of subordinate units rendered ineffective or to deliver fires to deny the enemy use of friendly areas subjected to nuclear fires. Engineer reserves are very small consisting of one or two

companies. They are used primarily for emergency construction or removal of obstacles.

10.21. Organization of the Second Defense Belt

The second defense belt proper has engineer prepared positions in the forward area which are normally unoccupied. The tank division is located in or just to the front of this belt in several dispersed but centrally located assembly areas from which it can counterattack in a number of directions. The tank division occupies the prepared defensive positions only when forced to by enemy action. The tank division is also prepared to counterattack, if necessary, in the adjacent army zones. The army artillery groups are also located in or to the front of the second defense belt. Elements of the field army artillery and the army main and alternate command posts may also be located in this belt. Army general reserves are located in or near the third defense belt.

10.22. Antitank Defenses

Protection against attack is emphasized in the positional defense. Strong antitank defenses in depth are made part of all defensive installations. Trenches, firing positions, belts of antitank obstacles, and antitank strong points covering likely avenues of approach are prepared. Antitank artillery reserves are held in readiness to move quickly to threatened areas, particularly likely avenues of approach for enemy armor. Antiaircraft artillery guns frequently are deployed with equal consideration for air defense and antitank missions.

10.23. Conduct of the Defense

a. As the enemy approaches the main defense position, he is subjected to continuous heavy fires from all available means. Reconnaissance is intensified to locate enemy nuclear delivery means which are taken under fire by appropriate weapons without delay. Troops are alerted to occupy prepared protective positions to minimize the effects of nuclear fires delivered by enemy weapons. The intelligence effort concentrates on determining enemy formations, locations of attack positions, and the time of the enemy attack, if possible.

b. Counterpreparatory fires are readied and fired on order of the army commander. Authority to fire a counterpreparation may be delegated to division commanders. Nuclear fires, as available, are included in the counterpreparation. Preferred targets for nuclear counterpreparatory fires are enemy units in assembly areas and nuclear delivery systems.

c. If the enemy should penetrate the main defensive positions of the first-echelon mechanized rifle divisions, the penetration is blocked. Some units may be withdrawn, if possible, to permit use of close-in nuclear fires. The tank division may be shifted in anticipation of a counterattack.

10.24. Combined Arms Army Counterattack

a. The combined arms army counterattack is usually carried out by the tank division. If the army general troop reserve has not been previously committed, it may also be used in the counterattack. Counterattacks are directed at the flank and rear of enemy penetrations. Nuclear fires are used on deep penetrations. If necessary, the counterattack forces pass through radiologically contaminated areas to reach the enemy.

b. Full use is made of armored carriers to speed the counterattack. Mechanized rifle units normally will not dismount from armored carriers until forced to do so by enemy fires. If the enemy penetration has been neutralized by nuclear fires, the mechanized rifle units may advance through this penetration in armored carriers. This type of carrier-borne counterattack is continued until stopped by the enemy or until the final objective is gained.

c. If the counterattack fails, Aggressor withdraws his forces from the main defense belt to take up positions in the second defense belt. From the third defense belt, the army group second echelon launches a counterattack to regain the lost territory. All withdrawals are protected by nuclear fires and counterattacks by elements of the army group second echelon.

Section IV. MECHANIZED RIFLE DIVISION IN POSITIONAL DEFENSE

10.25. Formation for the Defense

The mechanized rifle division in the army first echelon normally defends in two echelons. The first echelon usually consists of two mechanized rifle regiments reinforced with elements of the division medium tank regiment. The second echelon usually consists of one mechanized rifle regiment reinforced with elements of the medium tank regiment. Usually two or three companies of the medium tank regiment are used to reinforce each rifle regiment. The remainder of the medium tank regiment is retained under division control as the division tank reserve. The formation of the mechanized rifle division for the defense depends on the width and defensive strength of the assigned defense area. If assigned a very

wide defense area, the mechanized rifle division may use all regiments in the first echelon with a reinforced battalion in the second echelon. In active nuclear warfare the mechanized rifle division rarely uses a three-echelon defense formation.

10.26. Width and Depth of Defense Areas

The mechanized rifle division can defend an area about 12 to 30 kilometers wide and about 15 kilometers deep. If the width of the assigned area is more than 30 kilometers, the division may defend with more than two reinforced rifle regiments in the first echelon.

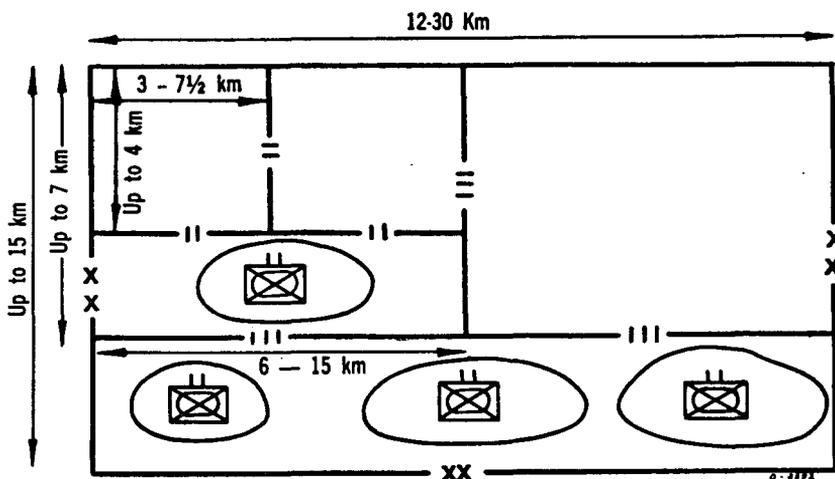


Figure 47. Schematic mechanized rifle division defense sector, positional defense (not to scale).

10.27. Organization for the Defense

a. The mechanized rifle division normally defends the main defense belt. The division first-echelon regiments defend up to about the forward seven kilometers of the division defense area. Regiments defending the most dangerous avenues of approach are usually assigned relatively narrower sectors. The reinforced second-echelon regiment occupies an area across the division front about four to eight kilometers in depth and about 10 kilometers from the forward trace of the main defense belt.

b. All mechanized rifle regiments organize the defense of their areas on the basis of battalion combined arms team defensive areas. Individual battalions are not permitted to withdraw from their defensive positions unless authorized to do so by higher headquarters. Battalion strong points are defended until the

enemy is repelled, or the battalions are ordered to withdraw to prepared positions. Company-size strong points may be established. Provision is made for their withdrawal into battalion defensive areas if required by the situation. The second echelon rarely occupies a regimental assembly area. It defends its area by organizing three battalion combined arms team defensive areas across the division front. These defensive areas of the second echelon are sited to protect critical terrain and control avenues of approach leading from the areas occupied by the first-echelon regiments.

c. The division commander is responsible for establishment of security forces forward of the main defense belt within the security zone. However, when the defending forces are not in contact with the enemy, the first echelon regimental commander has the responsibility for establishing a system of security outposts three to five kilometers in front of his forward battalions. Their mission is to protect the main defense belt against surprise attack, prevent enemy reconnaissance, locate hostile artillery firing on the main defense belt, deceive the enemy as to the true location of the forward edge of the battle area, and prevent the enemy from clearing obstacles. The security outpost line is manned by the regimental reserves and prepared to reassemble on the main defense lines. An outpost may consist of a mechanized rifle company reinforced by machineguns, mortar, antitank guns, recoilless guns, tanks, and engineers. The main body of the outpost is deployed across the main approaches to the battalion defense area and occupies an area up to 1200 meters wide. Areas not physically occupied are covered by patrols and observation. Local security is provided by reinforced squads placed from 660 to 880 meters ahead of the main body of the outpost to provide an early warning and observation over routes of enemy approach. These are supplemented by reconnaissance patrols and listening posts detailed by the main body of the outpost.

10.28. Organization of the Main Defense Belt

a. The division portion of the main defense belt is as heavily fortified as time permits. Obstacles of all types and underground shelters are constructed with engineer help and supervision. Maximum use is made of local civilian labor, construction equipment, and materiel.

b. The division main and alternate command posts, division anti-aircraft gun positions, antitank artillery reserve, tank reserve, switch lines, obstacles, and antitank strong points are located in the main defense belt behind the areas occupied by the first and

second-echelon regiments. Switch lines are prepared and defense positions are located to force a penetrating enemy into either unfavorable terrain and concentrations or to split his forces into unfavorable terrain where he can be destroyed by preplanned fires.

c. The division tank, antitank, and engineer reserves, and command posts of first-echelon regiments are usually located in the area between the first-echelon regiments and the second-echelon regiment. Light caliber regimental and division artillery is also located in this area.

10.29. Conduct of the Defense

a. The mechanized rifle division defends in place. Except for the ejection of small penetrations not reduced by fire, counterattacks are made by the army second echelon. The reinforced division tank reserve is used for ejecting these small penetrations. The division second echelon blocks enemy penetrations which have ruptured division first-echelon positions.

b. When troops are subjected to an enemy nuclear attack, the survivors continue the defense until properly relieved. Care of casualties is subordinated to continuation of the defense. If it is known or believed that the enemy will fire a nuclear preparation on the first echelon of the division, the troops in that area may withdraw temporarily, on authority of the army commander. A strong rear guard is left in place to conceal the departure of the main force. The defensive position is reoccupied at the earliest possible time.

Section V. FIRST-ECHELON MECHANIZED RIFLE REGIMENT IN POSITIONAL DEFENSE

10.30. Formation for the Defense

The mechanized rifle regiment in the division first echelon usually defends in two echelons. The first echelon usually consists of two reinforced battalions. The second echelon usually consists of the third battalion, reinforced. Mechanized rifle battalions are reinforced with tanks, self-propelled guns, antitank artillery, and anti-aircraft artillery available to the rifle regiment. If assigned a very wide area, the mechanized rifle regiment may defend with all battalions in the first echelon and a reinforced company in the second echelon. In active nuclear warfare, the mechanized rifle regiment rarely uses a three-echelon formation.

10.31. Frontages and Depths

A mechanized rifle regiment in the division first echelon usually

defends an area 6 to 15 kilometers wide and up to about seven kilometers deep. If the width of the assigned area is more than 15 kilometers, the regiment may defend with more than two reinforced rifle battalions in the first echelon.

10.32. Organization for the Defense

a. Figure 47 illustrates a typical defense organization by the rifle regiment in the division first echelon.

b. Battalion strong points are located on terrain features covering important enemy avenues of approach. The strong points are usually mutually supporting and are located so as to be able to deliver flanking fire on enemy units using avenues of approach into the defensive area. The battalion strong point does not occupy the entire area for which the battalion is responsible. Unoccupied areas are controlled by use of fires, patrols, and obstacles.

c. The regimental defense area is as heavily fortified as time permits. Barbed wire entanglements of various kinds, electrified wire, antitank and antipersonnel minefields, antitank ditches, abatis, prepared demolitions, and other obstacles to the movement of enemy armor and infantry are established to the front and flanks as well as inside battalion defense areas. Flamethrowers and smoke generators are placed to cover the approaches to the regimental area.

10.33. Separate Companies of the Mechanized Rifle Regiment

a. Mortar Company. Platoons of the company are normally attached to mechanized rifle battalions. Missions assigned to the mortar company include—

- (1) Attack of enemy personnel concentrating for the attack.
- (2) Smoke missions and neutralization of enemy weapons.
- (3) Participation in counterpreparation and firing normal barrages.
- (4) Support of battle outposts from supplementary positions.
- (5) Fires on enemy penetrations.

b. Antiaircraft Artillery Battalion. The employment of this battalion in the defense is similar to the employment in the offense (par. 7.36*b*).

c. Medium Tank Battalion. Two of the three medium tank companies of the battalion normally support the first-echelon mechanized rifle battalions. The third company is normally committed with the reserve or second-echelon force.

d. Antitank Company. Platoons are usually attached to the

mechanized rifle battalions. At least one reinforced platoon is retained as the regimental antitank reserve.

10.34. Conduct of the Defense

a. The mechanized rifle regiment begins its defense when the enemy makes contact with the battle outposts. Prior to this time the enemy will have been subjected to concentrations of nuclear fires; long-range artillery fire; air strikes while traversing defiles; harassment and delay by units of the security zone; and air strikes, artillery, and mortar concentrations, including nuclear fires, while in assembly areas. As hostile elements move within range, combat outposts take them under fire with mortars, small arms, and machineguns. Artillery places creeping barrages on the advancing enemy and covers the withdrawal of the combat outposts as the latter are forced back.

b. Artillery barrages are placed on the enemy as he reaches a line about 400 meters from the forward battalion defense areas. Here the enemy is brought under direct antitank and artillery gunfire as he encounters belts of antitank mines. If the enemy succeeds in penetrating the main defense belt, all weapons in range keep him under fire. Hostile infantry are separated from tanks, if possible, and tanks are taken under fire by antitank guns, self-propelled guns, and at times by anti-aircraft guns and other artillery in direct fire roles. Hostile penetrations of the forward companies of mechanized rifle battalion defense areas are blocked by rear companies.

c. Minor penetrations of the mechanized rifle regimental sectors are counterattacked by the reinforced division reserve. If these counterattacks fail to stop the enemy advance, permission may be granted to threatened units to withdraw to alternate positions.

Section VI. MECHANIZED RIFLE BATTALION AND COMPANY IN POSITIONAL DEFENSE

10.35. Formation for the Defense

The battalion defense is based on the battalion combined arms team defense area. If required by the terrain and the situation, company combined arms team defense areas may be organized. Provision is made for the withdrawal of these company combined arms teams into the battalion defense area if required. The battalion usually defends in two echelons. The first echelon usually consists of two companies. The second echelon usually consists of the third company. A three-echelon formation is rarely

used. The formation of the battalion depends on the width and defensive strength of the assigned defense area. If assigned a very wide area the battalion may defend with all companies in the first echelon and a reinforced platoon in the second echelon. The company formation for the defense is similar to that of the battalion.

10.36. Frontages and Depths

a. A mechanized rifle battalion usually defends an area about three to seven and a half kilometers wide and up to about four kilometers deep. If the width of the assigned area is more than five kilometers, more than two companies are usually used in the battalion first echelon. The area actually occupied by a battalion defense area, with two companies in the first echelon, may be only three kilometers wide and up to one and a half kilometers deep.

b. A mechanized rifle company usually occupies an area about one or two kilometers wide and up to about one-half kilometer deep.

10.37. Organization for the Defense

a. Detailed construction of defensive fortifications is undertaken in each battalion position. Normally three main lines of trenches are dug. Mechanical means are frequently used. The first two trenches are approximately 450 meters apart on a forward slope and are occupied by the two first-echelon companies reinforced with the bulk of the heavy machineguns and recoilless antitank weapons available to the battalion. Some tanks, self-propelled guns, mortars, and artillery batteries may be assigned those units for direct support. A third trench, approximately 900 meters behind the second trench, and frequently on a reverse slope, is occupied by the second-echelon company. Fixed machine-gun and antitank gun emplacements are provided in front of the first trench so those weapons can fire along the forward edge of the defense area. Portions of the first trench are provided with overhead cover. Usually such protection is located about every 50 meters along the trace of the trench. Alternate and supplementary positions are prepared as time permits.

b. Mechanized rifle companies are usually organized with two platoons in the first trench and the third platoon in the second trench. A secondary trench, a short distance behind each main trench, is occupied by the third squad of each platoon, the platoon command post, heavy machineguns, and recoilless antitank weapons. All platoon trenches are connected by communication trenches as time permits. A communication trench for each company leads back to the third main trench which also contains the battalion command post. The battalion, in turn, has similar com-

munication trenches leading back to the regimental command post in the regimental second-echelon position.

c. Weapons are placed so they can cover the entire company front and interlock with fires of adjacent companies. The third main trench does not support the first two trenches with any fires except mortar fires. If the enemy breaks through the second trench, troops occupying the third trench bring the enemy under fire while he is in the process of reorganizing to continue the attack. The gaps between battalions are covered with heavy artillery and antitank gunfire and heavy belts of obstacles designed to force the enemy into those areas covered by small-arms fire.

10.38. Separate Companies of the Mechanized Rifle Battalion

a. *Machinegun Company.* The machinegun platoons are normally attached to the mechanized rifle companies. The antiaircraft machinegun platoon of the headquarters company is normally employed under battalion control to protect the most critical installations or areas in the battalion defense area. One or more machinegun platoons may be assigned primary antiaircraft missions depending on the enemy situation and air threat.

b. *Antitank Company.* The platoons of the company are usually attached to the mechanized rifle companies. One platoon, however, is normally retained under battalion control as part of the battalion antitank reserve.

10.39. Conduct of the Defense

a. The battalion conduct of the defense is generally like that of the rifle regiment (par. 10.32).

b. The mechanized rifle battalion, under cover of darkness or reduced visibility, frequently moves to supplementary defense areas to thwart enemy target acquisition. Small forces are left in the former positions to simulate normal activity.

Section VII. TANK DIVISIONS IN THE POSITIONAL DEFENSE

10.40. General

Tank divisions are normally used for the counterattack. The tank division can be used in the security zone and may, on rare occasions, be used in the main defense zone when the combined arms army has an exceptionally wide front. The tank division is not normally used for defense in position. When intended for counterattack, tank divisions are located in or near the probable areas of hostile penetration. Counterattacks are carefully planned and coordinated and are executed in accordance with the principles of the offensive.

10.41. Tank Division in the Combined Arms Army First Echelon

If the tank division is employed in the army first echelon, it usually defends in the same general manner as a rifle division. The medium tank and mechanized rifle regiments are normally in the first echelon. The tank division second echelon usually includes the heavy tank units. Unlike the mechanized rifle division, the tank division second echelon may be employed for the counter-attack.

Section VIII. MOBILE DEFENSE

10.42. General

a. Mobile defense is used in nuclear or nonnuclear war. In this defense, ground is given up to gain time to stabilize a line to the rear. Aggressor believes that in modern defensive combat the use of wide spaces are predominant. Mobile defense is used where a large tank formation can be employed. In a defense over a large area, large mobile forces carry out a coordinated series of holding actions and counterattacks on successive lines to delay the enemy and to cause him maximum casualties. The counteroffensive is then launched primarily by tanks to destroy the overextended and weakened enemy. This defense gives Aggressor the opportunity to use the full mobility of his units with maximum efficiency.

The mobile defense is characterized by—

- (1) Shallow defensive areas normally located too far apart to be mutually supporting.
- (2) Decentralization in control of firepower with maximum firepower in the leading echelons.
- (3) Relatively large reserves.
- (4) Maximum use of combat deception measures.
- (5) Maximum use of improvised obstacles.
- (6) Withdrawal before becoming so heavily engaged that troops cannot be extricated even if supported by nuclear fires.
- (7) Maximum use of limited tank and mechanized counterattacks to permit and cover disengagements.
- (8) Use of surface burst nuclear weapons.

b. In the mobile defense, mechanized rifle and tank divisions are usually assigned defensive zones of action.

10.43. Use of Nuclear Fires

a. Nuclear fires are used extensively to—

- (1) Attack enemy reserves, particularly armored units.

- (2) Interdict defiles. Prepositioned weapons are frequently used.
 - (3) Destroy nuclear delivery systems.
 - (4) Destroy communication centers.
 - (5) Extricate forces that are closely engaged (small-yield weapons).
 - (6) Deny areas to the enemy by use of surface bursts.
- b.* Control of small-yield nuclear fires, which is normally held at the army group, will probably be decentralized to divisions.

10.44. Obstacles

Maximum use is made of all types of obstacles. Once chemical warfare is started, extensive use is made of toxic chemical agents for persistent effects (par. 5.14). Forward of a line of defense and between defense areas, all roads and tank approaches are mined or otherwise blocked with obstacles. Minefields containing both antitank and antipersonnel mines and defensive wire are placed along the front and on both flanks of each battalion defense area. Lanes are marked through these minefields to permit quick withdrawal of friendly units.

10.45. Organization for the Mobile Defense

a. The organization of a mobile defense differs from that of the positional defense in regard to field fortifications and the positioning of units. This defense is based on prepared battalion-size resistance points and resistance centers. These positions are organized at advantageous points to insure favorable defense conditions for a prearranged period. Sufficient time is allowed to withdraw to the next defensive position. The separate positions form defense lines. A position may be four kilometers deep, and the distance between positions is generally 6–8 kilometers. The total depth of the defense line normally is 14 kilometers or more. The defense system provides for specific units to fight a rear guard action while other units withdraw to the next line. Counterattacks are usually short and powerful and are supported by nuclear strikes.

b. The typical Aggressor combined arms army defends with three or four mechanized rifle divisions forward in the first echelon and a tank and mechanized rifle division in the second echelon along with the reserves. First-echelon forces on the forward line are deployed to cover the widest possible front and to deliver the maximum long-range firepower. First-echelon positions are shallow and provide only the minimum protection of flanks and rear. The division first echelon usually consists of all regiments. The division second echelon normally consists of a reinforced mecha-

nized rifle battalion from each regiment and elements of the medium tank regiment. The second echelon occupies the next line of defense to the rear of the first echelon with the reinforced mechanized rifle battalion behind its parent regiment. The second echelon supports by fire, and when necessary by counterattack, the withdrawal from the forward line of defense. When the units from the forward line complete their withdrawal through the line occupied by the second echelon, the division second echelon assumes responsibility for the defense of a part of the line and a new second echelon is constituted.

c. Regiments normally have a second echelon of a reinforced mechanized rifle company. Battalions usually have a platoon and elements of attached medium tanks as a second echelon. The battalion second echelon is located within the battalion defense area and is used to eject minor enemy penetrations and cover the battalion withdrawal.

10.46. Frontages and Depths

a. The frontages assigned to mechanized rifle and tank divisions depend on the terrain, composition of enemy forces, and the total frontage to be defended by the larger force (army group or army). Generally, the positions are smaller at the main defense line and larger in the secondary lines. Typical frontages for units in kilometers are—

Mechanized rifle battalion	3 to 7½
Mechanized rifle regiment	6 to 15
Mechanized rifle division	12 to 30
Tank division	12 to 30
Combined arms army	80 to 100
Army group	up to 400
Tank army	normally held in the army group reserve for the counteroffensive

b. Divisions achieve depth by locating the second echelon on the next line of defense to the rear. Distances between division lines of defense range from 6 to 8 kilometers.

10.47. Conduct of Mobile Defense

a. When attack is imminent, battalions in the first echelon occupy previously prepared positions and attempt to slow down the enemy advance. Antitank reserves try to block enemy penetrations. To avoid being overrun, individual battalions withdraw to the next defensive position according to a prearranged program. If these defensive positions are held, the enemy is channelized and becomes the target for Aggressor nuclear and nonnuclear weapons. Nuclear weapons are placed on the enemy after Aggressor has relinquished

a defensive line for the next one to the rear. Timing and movement according to a precise schedule plays an important part in the overall Aggressor conduct of the defense. One of the basic aims of mobile defense is to draw the enemy into positions where dispersion is difficult and then attack with nuclear weapons. Nuclear support is used extensively in mobile defense. The main targets are the enemy's armor, nuclear delivery systems, command posts, and communication centers.

b. The tank division is used primarily for counterattacks to destroy enemy forces which have succeeded in penetrating the main defense positions. Tanks move up under cover of darkness and attack from the flanks with support from mechanized rifle units. Prior to the attack, the enemy is subjected to nuclear strikes. Aggressor tanks are prepared to attack through contaminated areas and if necessary, Aggressor can launch a counteroffensive of the rear position without occupying the forward defensive positions.

c. Counterattacks are the backbone of the defense and are planned in advance for the second echelon and the reserves. In planning the defense the commander estimates the probable course of action and prepares counterattack plans for each eventuality. The departure positions and direction of attack are selected in advance when possible. The counterattack is usually preceded by short, heavy, artillery and mortar preparations and the supporting fires from adjacent units. Second-echelon reserves are expected to make numerous limited counterattacks. Sudden thrusts on the enemy flanks and rear before he has had time to consolidate any position he has captured are the rule. Counterattacks progressively involve larger units and become more frequent as the depth of the enemy's effective salient increases.

CHAPTER 11

ARTILLERY AND AIR SUPPORT IN THE DEFENSE

Section I. FIELD ARTILLERY

11.1. General

Artillery, including mortars, rockets, and missiles, is considered by Aggressor as the main defense arm. In all types of defense, artillery fires are used to disrupt and weaken the enemy so that the surviving elements can be destroyed by rifle and tank troops in close combat. Nuclear fires are integrated into the scheme of defensive fires. Control of artillery is patterned to fit the requirements of the tactical situation. Weapons having a nuclear capability are sited approximately one-half of their maximum effective range from the forward edge of the battle area. The employment of nuclear warheads is rigidly controlled by the allocating headquarters. Targets are selected from those which pose the greatest threat to the overall defense.

11.2. Fire Missions

Artillery fire missions common to all types of defense include—

- a. Fire against enemy march columns and troop concentrations.
- b. Support of units in forward positions.
- c. Interference with the deployment of the attacking enemy.
- d. Counterpreparations.
- e. Counterbattery and countermortar fire.
- f. Firing of smoke against enemy observation posts.
- g. Destruction of the enemy in front of the forward defense areas.
- h. Destruction of enemy units which have penetrated the defenses.
- i. Preparation fires for and support of counteroffensives and counterattacks.

11.3. Organization for Combat

The organization for combat of field artillery in the defense is similar to that for the offense as described in chapter 9. Groups are located so they can execute their primary mission and yet be

capable of massing their fires in support of forward defense positions, particularly against armor attack. Each artillery battery, and where possible each piece, prepares primary, alternate, and night-firing positions.

11.4. Planning and Control

a. Artillery plans are prepared at the highest artillery echelon consistent with the tactical situation. The plans are based on continuous zones of fire forward of the leading defense areas. Fires are also planned throughout the depth of the defenses, including plans for massed fires on threatened defense areas.

b. The artillery commander develops a fire plan for each sector covering all phases of the defense. This plan includes—

- (1) Concentration by long-range artillery and other nuclear delivery means on enemy artillery positions and nuclear weapons delivery systems, approach routes, defiles, troop concentrations, and important installations in the enemy rear.
- (2) Massed fires on enemy tanks, assembly areas, command posts, and observation posts.
- (3) Direct fire against tanks which have penetrated the position.
- (4) Barrages in front of the forward defense areas and in the depth of the main battle position.
- (5) Fires in support of counterattacks.

c. Fire plans include a counterpreparation. The counterpreparation, controlled by a carefully prepared fire plan and detailed time schedule, starts usually on army order when the enemy moves into forward assembly areas and begins attack preparations. To obtain complete surprise, registration fires may be prohibited. Nuclear fires normally precede nonnuclear artillery counterpreparations.

Section II. ANTITANK ARTILLERY AND ANTITANK DEFENSE

11.5. General

Aggressor antitank defense is usually planned and coordinated at army level. Division and regimental commanders are responsible for the antitank defenses in their sectors. Antitank defense is provided by antitank artillery units, antitank mines, tanks, artillery, and obstacles. In addition, air units give high priority to attacks on hostile tanks.

Antitank defense plans are based on—

a. Locating defensive positions in terrain unfavorable for the operation of armor.

b. Attachment of additional antitank units to frontline defensive positions to cover the most dangerous avenues of approach. In areas where there is a serious armored threat, 25 antitank guns for every 1,000 meters of front may be used.

c. Placing extensive minefields on avenues of approach.

d. Destroying enemy armor with nuclear fires while in rear areas and attack positions.

e. Concentrating artillery fire on enemy tanks as they approach the defensive position, and separating accompanying infantry.

f. Opening fire with antitank guns on enemy tanks as they approach within effective range.

g. Using artillery, antiaircraft artillery, tanks, and self-propelled guns in direct fire on tanks that have penetrated the defense position.

h. Counterattacking armored penetrations with tanks and self-propelled artillery.

11.6. Employment of Antitank Artillery

a. Mechanized rifle battalion antitank guns are usually located in concealed positions within the areas of the rear platoons of forward mechanized rifle companies, and in the area of the battalion second-echelon mechanized rifle company. Fields of fire of antitank guns overlap and extend 300 to 400 meters forward of the battalion strong point. Some antitank guns may be located along the forward edge of strong points to deliver flanking fire in front of the strong point.

b. Division antitank artillery adds depth to the antitank defense. These weapons are sited to protect battalion antitank guns from assault. Part of the division antitank artillery is held in mobile reserve in rear of the division artillery positions, to be moved to threatened sectors or to establish antitank positions in depth.

c. Antitank artillery units from higher headquarters, when allocated to a mechanized rifle division, are usually located in the division reserve area, if not suballocated to first-echelon regiments. Alternate positions are prepared to meet enemy penetrations. These antitank artillery units are deployed to form antitank strong points consisting of mutually supporting platoon areas sited in depth. The guns in an antitank platoon are located in a

diamond formation with about 200 meters between guns. Anti-tank artillery units retained under army control are usually positioned in the second and third defense belts.

11.7. Employment of Division Artillery

a. Division artillery units are assigned the following antitank tasks:

- (1) Long-range fires.
- (2) Concentrations on tanks in assembly areas and at lines of departure.
- (3) Creeping barrages.
- (4) Fixed barrages.
- (5) Direct fires.

b. Long-range fires are placed on approaching armored units to cause dispersion, delay, and destruction. Ideal target areas are defiles. All artillery and mortars are used for fires on assembly areas and attack positions. They also fire creeping barrages covering probable routes from the attack positions to the forward edge of the defense areas. These barrages separate the tanks from their accompanying infantry. When the attack reaches the forward defense areas, the barrage may remain fixed upon the last position to prevent reinforcements from coming up. Creeping barrages begin as soon as the leading enemy tanks enter the pre-selected area and are timed to move forward with the enemy advance.

c. All field artillery pieces habitually have at hand several rounds of armor-piercing ammunition. For antitank purposes, an alternate position for each artillery piece is prepared near each firing battery. The 85-mm and 122-mm guns are particularly valuable in direct fire roles. Antiaircraft artillery may also be employed in antitank roles if required.

11.8. Employment of Tanks and Self-Propelled Artillery

Aggressor self-propelled artillery pieces, 85-mm, 100-mm, and 152-mm are essentially armored fighting vehicles and are usually so used. In antitank defense, tanks and self-propelled artillery are normally used as part of the counterattack forces against armored penetrations. Aggressor medium tanks and self-propelled artillery may support mechanized rifle battalions when it is believed the enemy armor attack is too strong for the normal anti-tank defenses. Heavy tanks and self-propelled guns may be employed to establish ambushes for enemy tank units. These ambushes are set up in horseshoe shape with the open side toward the enemy

on a good avenue of approach. The positions are frequently dug in and well concealed.

11.9. Employment of Mines and Obstacles

a. Aggressor makes extensive use of mines and obstacles both in the offense and in the defense. In the offense, mines are used to cover positions held by reorganized troops or to protect flanks. Their greatest employment is in the defense against tanks, vehicles, and personnel. Antitank minefields are laid with a minimum average density of one mine per meter of front. Since the average distance between mines is three meters, three rows of mines are required for minimum density. Minefields are laid in great depth.

b. In the defense, antitank minefields are normally placed in belts across likely tank approaches about 400 meters in front of the forward defenses, across approaches to strong points, and across approaches to the division artillery areas. Controlled mines, detonated by concealed observers, are placed in gaps in standard minefields to be used by Aggressor units traversing the minefield. Delayed mines are used along railroads, at road intersections, at destroyed bridges, in probable assembly areas, and other localities where enemy concentrations might take place. Antipersonnel mines are laid on the approaches to and within antitank minefields.

c. Obstacles other than mines are placed to cover all probable enemy avenues of approach. Extensive improvisation is used. Local civilian resources are used extensively in construction of obstacles. Principal obstacles are antitank ditches, tank traps, and abatis. Obstacles and minefields are covered by fire whenever possible.

Section III. ANTI-AIRCRAFT ARTILLERY DEFENSE

11.10. General

The employment of anti-aircraft artillery, guns, and missiles in the defense and the offense differ little. Generally, missiles and anti-aircraft artillery guns are employed in concentric circles around critical areas or targets.

11.11. Employment in Rear Areas

a. Anti-aircraft artillery guns protect troop assembly areas, lines of communication, logistical installations, artillery position areas, missile sites, and other rear area installations. Guns normally are deployed in concentric circles around the defended area.

The distance between batteries is approximately one-third the maximum range of the weapons. Antiaircraft units are dug in and camouflaged. Alternate and dummy positions are prepared. If fire against ground targets is anticipated, special dual purpose emplacements are prepared. The diameters of the circles depend on the extent of the area to be defended, the number and range of the available antiaircraft weapons, the terrain, and the enemy's tactics and capabilities. In protecting assembly areas and forward installations, antiaircraft artillery is deployed in concentric circles. Heavy antiaircraft guns are usually not employed further forward than the location of army artillery groups.

b. The AGLO missile units furnish long-range, high altitude protection for critical installations within the army group area. A distance about two-thirds of the maximum range of the weapon separates the batteries. Only one battery at a time is out of action during movements to new positions. These missiles can be used in a surface-to-surface capacity if required.

c. The SAGO missile units are normally deployed across the width of the army area and are generally located immediately behind the second defense belt. The launching batteries are located at a distance about two-thirds the maximum range of the weapon from each other. Forward displacement is by battery, with batteries moving about 40 to 60 kilometers. No more than one-sixth of the missile units displace at one time. During withdrawals displacement is by battalion. Defensive firepower is maintained at all times.

d. The BULTURO missile units are deployed throughout the area to provide low altitude protection for critical installations, troop assembly areas, and to complement the SAGO missile units. BULTURO missiles normally are deployed in two lines. The first line is near the rear of the main defense belt with a distance between the batteries about two-thirds to one and one-half times the maximum range of the weapon. The second line is located in the second defense belt, and the distance between these batteries is about two-thirds of the maximum range of the weapon. Displacement is similar to that of the SAGO missile battalions.

e. All positions are dug in and camouflaged. Alternate and dummy positions are prepared. Movements and preparation of emplacements are accomplished at night or during reduced visibility.

11.12. Employment in Forward Areas

a. In forward areas, antiaircraft artillery protects troop concentrations, forward area installations, and lines of communica-

tion. Antiaircraft artillery is also used for ground fires, primarily for direct fires.

b. In protecting troops deployed in forward areas, antiaircraft artillery is usually deployed in lines. Antiaircraft machineguns are used by platoons from 300 to 500 meters in rear of the protected elements. Light antiaircraft guns (37-mm) are employed by batteries on a line 1,000 to 1,500 meters from the forward elements. The distance between batteries is from 1,000 to 2,000 meters. The distance between platoons is from 100 to 150 meters. The distance between individual pieces is at least 30 meters. The light antiaircraft guns (57-mm) are emplaced by batteries on a line approximately from 2,000 to 3,000 meters from the forward elements. The distance between batteries is also from 2,000 to 3,000 meters, and the distance between individual pieces is at least 30 meters. The medium antiaircraft guns (85-mm) are emplaced by batteries, either on a line or in rectangle, approximately 5,000 meters from the forward elements. The distance between batteries is approximately equivalent to one-third the maximum range of the weapon, and the distance between individual pieces is at least 40 meters. If fire against ground targets is anticipated, special dual-purpose emplacements are prepared.

c. In protecting assembly areas and forward installations, antiaircraft artillery is deployed in concentric circles. Distances between batteries, platoons, and individual pieces remain unchanged. Heavy antiaircraft guns (100-mm) are usually not employed further forward than the location of army artillery groups. They are deployed by battery in rings around the defended area with about 6,000 meters between batteries. For employment of these missiles see paragraph 11.11.

11.13. Command

The commander of antiaircraft artillery is subordinate to the air defense commander of the force. The antiaircraft artillery commander coordinates the fires of his elements with the air defense activities of the elements responsible for air defense. The artillery commander, not the antiaircraft commander, may change the missions of the antiaircraft artillery and shift its effort to ground support missions. The commander of the antiaircraft artillery maintains communication with the artillery commander. The commander of the organic antiaircraft artillery unit establishes the antiaircraft warning service for the command.

11.14. Tactics

Antiaircraft artillery tactics are not stereotyped or passive. Based on enemy tactics and habits, the antiaircraft artillery com-

mander maneuvers his batteries, employs ruses, and in cooperation with light aviation, lures enemy aircraft into firetraps.

11.15. Fire Control

In tracking individual targets, an antiaircraft artillery battery fires as a unit from data computed by a rangefinder and director or by radar and computer. In firing moving and stationary barrages, the batteries use precalculated data based on anticipated enemy actions. These fires can begin on order from the battalion or higher headquarters, or if need be, can begin on order from the battery commander. These barrages are used only when tracking is impossible because of meteorological conditions or other causes. In direct fire against land targets, fire is controlled by individual gun commanders. When massed fire is desired, a battery is used as the firing unit.

11.16. Support of Operations

a. In the offense, antiaircraft artillery protects march columns, units, and materiel in assembly and deployment areas, and supports the assault by fires against ground targets. During the artillery preparation for the assault, antiaircraft artillery, in addition to its primary mission, is used in fire against enemy fortifications, firing positions, and observation posts. During the assault, light antiaircraft artillery guns and machineguns accompany the assault teams to protect them against air attacks. Usually, antiaircraft weapons are concentrated in the sectors where the assault is most successful.

b. In the defense, priority for antiaircraft protection is given to major rear installations and rail centers. Divisional antiaircraft units protect only selected installations or positions within the division area. Priority in the division is in this order; division artillery, second-echelon forces, forward positions, and support of counterattacks. Reinforcing or attached antiaircraft artillery units assist in protection of first-echelon forces and in support of counterattacks. Direct and indirect observed fire against ground targets is used as part of artillery counterpreparations. Antiaircraft artillery guns are assigned targets whose destruction requires high velocity projectiles. Observed indirect fire is controlled in the same manner as field artillery.

Section IV. AIR SUPPORT

11.17. General

Air forces in the defense use the same tactics as in the offense. However, different types of missions are emphasized.

11.18. Missions

In supporting the defense, air armies carry out the following specific missions—

- a.* Reconnaissance to locate enemy dispositions and to obtain early warning of the direction and strength of attacks.
- b.* Attacks on enemy concentrations to include delivery of nuclear fires.
- c.* Air strikes in close support of forces in contact.
- d.* Support of counterattacks.
- e.* Destruction of enemy nuclear delivery systems.
- f.* Destruction of enemy airbases.
- g.* Counterreconnaissance.
- h.* Attack of enemy penetrations.

11.19. Air-Ground Coordination and Priorities

Air-ground control posts are established in the same manner as in the offense. Priority of air support is given those units in the path of major enemy forces and is established by the army group.

11.20. Mutual Air-Artillery Support

a. As in the offensive, artillery is supplemented by airpower and assists air units. As the enemy approaches main defense positions, artillery and the Air Force render mutual support by—

- (1) Artillery marking air targets and neutralizing enemy anti-aircraft guns.
- (2) Aircraft reporting to the artillery targets which have been spotted from the air but cannot be observed from the ground.

b. Assignment of targets to the Air Force or the artillery depends on the nature of the target and on the observation available from the ground and in the air. Sorties to be flown within the effective range of artillery fire are coordinated with the army artillery commander. Air participation in counterpreparations is coordinated by the army commander.

c. Air support of counterattacks is essentially the same as support of an offensive. Air elements supporting counterattacking forces are committed to action on orders of air liaison officers with the ground force commander.

CHAPTER 12

DEFENSE AGAINST NUCLEAR EFFECTS AND TOXIC CHEMICAL AND BIOLOGICAL AGENTS

12.1. General

Aggressor has developed specific measures to reduce the effects of blast, thermal, and radiation effects of nuclear weapons, and the effects of toxic chemical and biological agents against command structures, personnel, and materiel. These measures are detailed and complete and are used by all units in all types of operation, both in rear and forward areas, with technical assistance of chemical and engineer troops. Such specific measures are used with other protective measures such as continuous contact with the enemy, withdrawal from expected target areas prior to enemy nuclear attack, dispersion, rapid movement, camouflage, and deception.

12.2. Aggressor Chemical and Biological Protective Measures

a. To insure adequate protection against chemical and biological warfare attacks, Aggressor has developed, produced, and supplied its army with a variety of means for individual and collective protection which include—

- (1) Protective masks which afford respiratory protection against all known chemical agents; protective covers (also used as ground sheets) chemical protective capes, boot covers, and special protective clothing for operations in contaminated areas.
- (2) Shelters providing an uncontaminated atmosphere for use of individuals, groups, small units, headquarters and command posts, and medical aid posts. In these shelters normal duties can be continued, wounded and gas casualties can be treated, and essential staff and supply functions carried out.
- (3) Personal decontamination equipment, decontamination stations, and medical facilities for evacuation. Initial aid for gas casualties is provided by the individual soldier from his first aid packet. Medical treatment may be provided at company level. During combat, personnel who

have been contaminated will not be evacuated immediately unless also wounded.

b. Aggressor's defense against biological warfare attack is based on attempts to minimize rather than prevent effects of such attacks. Items and measures used in chemical warfare defensive protection are adequate for biological warfare protection.

c. Aggressor organization and training for toxic chemical and biological warfare protection is a responsibility of every commander and is included in the planning and preparation for any action. Training programs stress gas discipline and rapidity in masking. Toxic chemical defense measures are carried out by chemical personnel of all units. Technical units up to and including army will have organic chemical units and staffs.

d. Chemical observation is conducted by all troop units, and by chemical troops where available, on a continuous basis. The mission of observers is to determine enemy preparations for chemical or biological attack and to warn units upon indication or initiation of such attacks.

12.3. Defense Measures Against Nuclear Effects

a. Aggressor defense against nuclear bursts is much the same as defense by US forces. Particular attention is given to dispersal of forces to preclude destruction of large concentrations by a single nuclear blast. Aggressor has radiation detection devices similar to types used by the US. These devices are used by special reconnaissance teams to detect the presence of radioactive contamination. These teams also attempt to discover nuclear warfare intentions of opposing forces. Aggressor permits higher radiation dosages for troops than those permitted by the United States, even allowing lethal dosages when the situation requires. To facilitate maneuver and dispersion of defensive forces, Aggressor advocates an increase in tactical frontages and depths. Standard defense measures of this type include—

- (1) Concentration of the intelligence effort to determine the enemy's intention to use nuclear weapons in specific areas.
- (2) Detection of radiological contamination.
- (3) Troop warning systems.
- (4) Individual and unit measures to reduce nuclear effects when subjected to nuclear fires.
- (5) A prescribed system to insure continuity of command and operations.
- (6) Procedures for decontamination of personnel, weapons,

equipment, and supplies exposed to radiological contamination.

12.4. Responsibility for Nuclear Effects Defense Measures

a. The Aggressor intelligence organization is responsible for detecting enemy intentions regarding the use of nuclear weapons. Regimental and higher headquarters are responsible for insuring uninterrupted control of operations.

b. Chemical troops are used for—

- (1) Detecting radiological contamination, and surveying to determine the extent and intensity of contamination.
- (2) Warning troops of the presence of contamination.
- (3) Assisting in training troops in nuclear effects defense measures.
- (4) Supplying protective equipment and radiation survey instrument and personnel to units.

c. Engineer troops are used for—

- (1) Selecting and preparing sites for attack positions, deployment areas, command posts, and rear area installations which offer maximum passive defense against the effects of nuclear weapons.
- (2) Clearing debris resulting from nuclear attacks.
- (3) Constructing and maintaining roads, bridges, and detours necessary to bypass areas made unusable by effects of nuclear fires.
- (4) Decontaminating routes through areas subjected to radiological contamination.
- (5) Testing water sources to detect nuclear contamination, and decontaminating water supplies when necessary.

12.5. Radiological Reconnaissance

a. Unit commanders are responsible for radiological monitoring which is performed on a continuous basis whether or not nuclear weapons have been used. The actual monitoring is done by chemical troops under the supervision of the unit chemical officer. Chemical and biological reconnaissance are carried out concurrently.

b. Three types of radiological reconnaissance are—

- (1) *Chemical observation posts.* These posts consist of three individuals who periodically check their unit areas for the presence of radioactivity and chemical agents. There is at least one post per battalion. The battalion com-

mander is responsible for warning his unit and higher headquarters.

- (2) *Dosimeter patrols.* Four or more dosimeter patrols are formed by the chemical detachment of each regiment. Each patrol contains an officer or noncommissioned officer and three to five enlisted men. They operate on foot, or use motorcycles, vehicles, armored carriers, tanks or aircraft to carry out radiological survey for the regiment. These patrols have more elaborate detection equipment than chemical observation post personnel.
- (3) *Individual radiological specialists.* These personnel or teams are attached to advance guard, reconnaissance, security, quartering, or any other special details which may need the services of personnel trained in radiological detection methods.

12.6. Warning Systems

Aggressor uses two types of nuclear effects warning systems. One system warns of the presence of radiation and the other warns of the imminent use of friendly nuclear weapons. Chemical troops issue the warning of radiological contamination, using all available means of communication. Care is taken to insure that every soldier is warned. The air warning service system is used to warn of the imminent use of nuclear weapons.

12.7. Individual and Unit Protective Measures

Continuous individual measures for protection against nuclear effects include the use of cover and concealment, chemical protective clothing and equipment, and the use of special protective clothing for decontamination work. Unit measures consist of extensive use of camouflage, night operations, dispersion, construction of shelters and installations capable of withstanding the effect of nuclear weapons, and alternate command posts. Engineer troops assist in the construction of suitable trench works and shelters. Elaborate underground shelters are prepared whenever possible.

12.8. Decontamination

Aggressor employs either complete or partial decontamination. Neither type is used if it interferes with the mission. If possible, units are relieved and moved to the rear for decontamination. Every unit prepares detailed decontamination plans and complete decontamination is performed only in the rear areas after the unit has been relieved. Partial decontamination is done at unit level to the extent of available time and equipment.

12.9. Fire Prevention and Damage Clearing Measures

Aggressor units form special fire-fighting details and prepare plans to limit the damage created by fires caused by nuclear effects. Positions are made as fireproof as possible and areas subjected to nuclear attack are cleared of refuse and rubble as soon as possible. Combat units do much of this work. Engineer troops perform major repair, debris removal, and area decontamination. Chemical and medical troops handle other decontamination and treatment of casualties.

CHAPTER 13

SPECIAL OPERATIONS

Section I. AIRBORNE OPERATIONS

13.1. General

Aggressor airborne forces are an offensive arm for use in special operations and are invaluable adjuncts to all types of operations under nuclear warfare conditions. Airborne operations are conducted in cooperation with other ground force operations. Operations involving airborne forces of corps strength are usually controlled directly by the army group. Airborne divisions are usually reinforced with appropriate GHQ units. An antiaircraft artillery missile battalion is usually attached to each airborne division. Airborne tasks are of short duration and usually require the link-up of the airborne tactical force with other ground forces within two or three days. Helicopters are used for many airborne operations and mechanized rifle division troops are trained in air-landed operations.

13.2. Missions of Airborne Forces

a. Aggressor airborne missions support operations of specific ground units. Airborne missions are normally executed by separate airborne divisions, regiments, battalions, and companies employed independently or as part of an airborne force. Typical airborne missions include—

- (1) Support of ground troops in surrounding or destroying an enemy force.
- (2) Seizure of defiles and sectors in enemy rear areas to prevent his withdrawal, blocking of reinforcements, or facilitating the advance of friendly ground forces.
- (3) Seizure of the area of a proposed junction of two ground forces to expedite the final stages of an envelopment and to prevent the escape of enemy forces.
- (4) Seizure of river crossing sites deep in enemy territory to deny them to the enemy and to facilitate the advance of Aggressor forces.
- (5) Destruction or capture of important command and communication centers.

- (6) Seizure of coastal areas to secure landing sites for sea-borne troops.
- (7) Reconnaissance missions deep within enemy lines.
- (8) Support of night combat operations by seizing objectives to be occupied by advancing ground forces.
- (9) Seizure of water and fuel supplies in the enemy rear when operating in desert or thinly populated areas where such supplies are scarce.
- (10) Outflanking mountainous areas or enemy fortified areas to isolate the enemy.
- (11) Sabotage or seizure of enemy nuclear weapons sites and forward airbases from which aircraft delivering nuclear weapons can operate.

b. Airborne missions of strategic significance are carried out in support of the army group. Typical strategic missions are—

- (1) Seizure or destruction of important industrial targets, centers of communication, electrical power production and distribution centers, and nuclear weapons storage areas.
- (2) Seizure or destruction of centers of government or other important control centers.
- (3) Capture or destruction of important experimental, testing, production, or storage facilities for nuclear, chemical, or biological weapons and agents.

13.3. Employment of Airborne Corps

Airborne troops are rarely employed in corps strength. In the initial phase of a major offensive, the airborne corps may be employed to destroy road and rail communications and to seize terrain to prevent the enemy from moving reserves and supplies. During the penetration phase of the attack, the airborne corps may be used to occupy positions in rear of the enemy defensive zone to isolate the battle area.

13.4. Reconnaissance for Conduct of Operations

The army group's reconnaissance plan provides for airborne assaults in the enemy rear. Once it has been decided to launch an airborne operation, extensive reconnaissance takes place. The first object of reconnaissance is to select suitable objectives and drop zones, and then to reconnoiter for enemy forces and defenses within striking range of the chosen area. Reconnaissance is carried out by air, clandestine agents, and parachutists. The latter are given the minimum information about forthcoming operations.

Other groups of parachutists are often dropped outside the area of proposed operation as a deceptive measure.

13.5. Flight

Routes are chosen to avoid enemy antiaircraft and fighter defenses, and to reach the objective as soon as possible. Secrecy and deception are emphasized. If the commander of an airborne regiment or higher unit receives information during flight to the effect that the air or ground situation has altered, *he* may change the drop zone or landing point of his unit. His decision is reported to the next higher commander without delay.

13.6. Landing

Aggressor airborne troops can be dropped in any season of the year and at any time of the day or night. However flight and landing by night are usually carried out by small independent units. Troops are dropped from minimum safe heights and supplies follow immediately after them. Supplies are normally dropped from heights of from 100 to 200 meters. Supply-carrying aircraft normally fly from three to five minutes behind troop-carrying aircraft. Parachutes are either concealed or destroyed after landing. Aircraft land as soon as the necessary ground has been secured by paratroops.

13.7. Conduct of Operation

a. Nuclear fires may precede the airborne assault. After landing, airborne troops overcome local enemy resistance and occupy previously selected areas. Their employment is centralized or decentralized depending on their mission and situation. The first airborne wave contains a specially trained detachment to seize all communications means in the objective area, to prevent the enemy from learning about the landing, and to spread false information.

b. Decentralized action is used in large areas to disorganize enemy control and command, to hinder movements of troops and supplies, and to destroy small enemy detachments. The force is divided into battalions, platoons, and even squads which are allotted independent tasks. Provision is made to assemble the force if necessary.

c. In airborne operations of larger units, several airborne assaults are made in different localities. The more successful assaults are reinforced and subsequently merged into one airhead if adequate dispersion can be maintained. When the assaults do not meet with initial success, the surviving airborne units conduct

guerrilla-type operations until they are rescued or return to friendly lines.

d. Long-range missile units are used extensively to support airborne operations with either nuclear or nonnuclear fires.

13.8. Logistics

a. Resupply is by air, usually by night or at dawn. Supply dumps are established in uninhabited places and under cover. Technicians equipped to carry out minor repairs accompany the force. Troops are trained in the use of captured enemy weapons, vehicles, and equipment.

b. Medical aid stations are set up in concealed localities. Wounded are evacuated by air, if possible, and usually at night. Normally, airborne units rely on link-up with ground forces so that the wounded may be evacuated by the organizational means of the link-up forces.

13.9. Air Support During Operation

Fighter aircraft escort the transport aircraft. During the landing, fighters protect the landing zone from enemy air attack, engage enemy antiaircraft positions, give close support to the troops that have landed, engage approaching enemy reserves, and provide smoke screens when required. Bombers may also be allotted for close support and for delivery of nuclear fires. Attack aircraft provide close support to the landed units.

Section II. AMPHIBIOUS OPERATIONS

13.10. General

a. Aggressor's amphibious tactics and material are similar to those of the United States. His amphibious landings are generally carried out in direct support of ground operations. Typical missions are—

- (1) Seizure of important objectives in enemy rear areas.
- (2) Seizure of areas which cannot be captured through direct ground action.
- (3) Aid in completing encirclements.
- (4) Carrying out raids and sabotage.
- (5) Collection of intelligence.

b. Nuclear weapons are used to destroy enemy shore batteries and fixed coastal defenses, and to protect beachheads from counter-attack. Aggressor may use airborne forces in coordination with amphibious landings.

13.11. Troops Employed

Aggressor amphibious operations are carried out by specially trained ground and naval forces. Army ground forces rarely exceed the size of an army. One or more naval rifle battalions are usually attached to each ground division for the operation.

13.12. Command

Landings in direct support of an army group operation are usually carried out under control of the army group commander. Other landings are usually under naval command. Once a beachhead is established, control of the operation is transferred to the commander of the ground forces that participated in the landing.

13.13. Defense Against Amphibious Operations

a. Aggressor coastal defense or counteramphibious operations involve ground, naval, and air forces, with nuclear support, to include the surface-to-surface fires of anti-aircraft missile units within range. Aggressor coastlines are fortified with fixed and mobile artillery, with ground defenses protected against enemy nuclear attack, and with underwater and onshore obstacles at all points where enemy landings are feasible. The main line of defense is the first high ground paralleling the shoreline.

b. Ground forces to defend coastal areas are designated by the army group controlling the coastal area. The army group controls all naval, ground, and air elements assigned to the coastal defense. In those areas which are not within an army group zone, a special combined arms force under naval command defends the area. A combined arms army engaged in coastal defense will usually be assigned an area comparable in width and depth to the combined arms army defense area in a mobile defense. If there is an extremely good road net in the coastal area, a wider front may be assigned.

c. Units defending coastal sectors organize their defenses into two echelons. The first echelon contains mechanized rifle divisions, field and coastal artillery units, and an armored counterattack reserve. This echelon prevents enemy landings and the establishment of a beachhead. The second echelon and reserves consist largely of tank units. Its mission is to combat enemy airborne landings and to counterattack major lodgements.

d. Aggressor uses clandestine agents and long-range aerial and naval reconnaissance to locate enemy amphibious forces. When detected, the enemy amphibious force is subjected to attack. Air and naval forces attack before the enemy beach assault is launched.

The enemy forces that succeed in landing are cut off from further support from the sea and destroyed.

Section III. COMBAT IN SNOW AND EXTREME COLD

13.14. General

a. Aggressor forces are trained and equipped to operate in extreme cold and heavy snow. Cold is counteracted by the following methods:

- (1) Troops are kept under shelter as much as possible. Improvised shelters are used whenever troops occupy temporary positions. Inhabited localities are avoided.
- (2) Special clothing is used.
- (3) Strong points and pillboxes are heated.
- (4) Attacking troops move from improvised shelters in assembly areas to the line of departure at the last moment.
- (5) Tanks, vehicles, and guns are enclosed as much as possible with snow walls and tree branches.
- (6) Warming posts are established all along lines of communication and in rest areas where drivers can stop and warm themselves.
- (7) Casualty clearing stations are sited well forward so that wounded can be treated early.
- (8) Helicopters are widely used for casualty evacuation.

b. Aggressor considers that only tanks with special snow tracks and rifle units on skis can operate in snow two-thirds of a meter deep, and one meter of snow is considered the upper limit for possible movement. All units improvise sleds for machineguns and mortars and for carrying supplies. Artillery is fitted with runners, and tractors may have spikes fitted to their tracks.

13.15. Ski Troops

a. Ski troops are characterized by their high mobility. They are able to move across country and appear suddenly in enemy rear areas. Although possessing great firepower for close combat, ski units are not suitable for attack of strong defensive installations and fortifications, nor for use in sustained defense.

b. Ski units achieve surprise in attack by deep envelopment of enemy flanks, by infiltration between enemy strong points, and by effective counter reconnaissance and security measures. Ski units pursue and destroy a retreating enemy. When the enemy succeeds

in organizing a defense, ski units maintain contact until they are relieved by rifle units.

c. Ski units can carry out operations at great distances from their own bases under difficult and quickly changing circumstances. Their operations must be carefully coordinated with other arms, especially aviation and artillery. A ski unit can operate up to about four days while separated from its base.

d. Ski units up to battalion size are able to carry out reconnaissance deep in the enemy rear and may operate jointly with guerrilla detachments. Ski units reach enemy rear areas by infiltrating in small groups by moving around exposed flanks or through gaps created by attacking forces. Isolated routes are used when possible. Laying of false ski trails to conceal the true direction of movement of ski units headed into enemy rear areas is accomplished by specially designated elements. While moving toward enemy rear areas, ski units seek to avoid combat with strong forces. Small enemy groups interfering with accomplishment of the mission are destroyed. When the ski unit cannot avoid combat with a strong enemy force, it attacks the enemy quickly and with full force. If the attack fails, a part of the force may be left to harass, confuse, and contain the enemy while the main force disengages.

e. When operating in enemy rear areas, assembly points near the objective are established before the attack. After action is broken off, small groups, under cover of darkness or broken terrain, assemble at the previously designated assembly points.

13.16. Artillery

Movement of motorized artillery in snow more than 30 centimeters deep is usually confined to roads. Aggressor artillery may be mounted on sleds or corduroy and mat roads may be prepared. Tractors are often equipped with grousers. In snow less than 30 centimeters deep, cross-country movement is possible but engineers may have to break a path. Mortars and rockets having greater mobility than towed artillery are used extensively in areas of snow and extreme cold. The 76-mm mountain gun (how) may be dismantled and transported by 10 men.

13.17. Tanks and Self-Propelled Guns

Tanks and self-propelled artillery are frequently used to replace towed field artillery because of greater maneuverability in snow. Aggressor equips tanks with grousers for movement over slippery terrain. In addition, special mats are used for movement over snow slopes. Since tank tracks are clearly visible in fresh snow,

Aggressor moves tanks in column during the night or in snowstorms. Often the last tank in the column drags sleds or trees to erase the tracks and create the appearance of an ordinary trail.

13.18. Offensive Operations—General

The objectives of offensive operations remain unchanged. Seizure of road nets and envelopment tactics are of greater importance. Offensive operations are often conducted during blinding snowstorms or at night to achieve surprise. Lines of departure are as close to the enemy as possible to avoid tiring the troops before the assault. Trenches are cleared of snow and are extended as close as possible to enemy positions, sometimes encircling them. Troops use these trenches to launch their attack and leave them only at the last moment.

13.19. Defensive Operations

a. The organization of the defense is generally unchanged. Extensive use is made of snow and ice obstacles. Defense installations avoid inhabited areas. Adequate troop shelter is provided to maintain combat efficiency.

b. The conduct of the defense is generally unchanged. During an enemy attack, Aggressor artillery slows the advance by interdicting roads and thus forces the enemy to advance across country. Counterattacks are carried out in the usual manner except they are more shallow because of terrain and climate. Whenever possible, in the counterattack, Aggressor uses ski units to move downhill with the wind and sun at their backs.

Section IV. COMBAT IN WOODS AND SWAMPS

13.20. General

Operations in wooded and swampy terrain are carried out by small self-sufficient units. Objectives are roads, clearings, road junctions, small woods, heights, and inhabited places. Engagements occur at short distances, visibility is limited, observation is difficult, and infiltration by small units is relatively easy. Movement of large forces is canalized and supply and evacuation must take place over the same routes. Large-scale offensives under conditions of nuclear warfare bypass extensive wooded or swampy areas.

13.21. Swamp Crossing

In crossing swamps, Aggressor makes maximum use of local

resources for the construction of improvised aids. Many improvisations have been developed into standard methods.

a. The individual soldier uses short branches or bunches of twigs to make two mats about two meters long and up to one meter wide. He crosses the swamp by alternately placing one and carrying the other. A squad uses similar methods and larger mats.

b. Floating bridges are constructed from light logs and branches. These bridges will support light antitank guns.

c. Diagonally constructed floating corduroy roads, from seven to eight meters wide, will support from 8 to 10 tons. A similar bridge, about two to three meters wide, can be used by a mechanized column.

13.22. Employment of Mechanized Rifle Units

Mechanized rifle units usually operate in self-sufficient units of reinforced battalion size. Companies attack in a line of platoons. Second echelons are close to the first echelon. Flanks and lines of communication are protected. Units are used in small groups (platoon or smaller) to infiltrate and prepare ambushes. Direct-fire artillery weapons are attached to battalions. High-trajectory weapons are normally retained under centralized control. Armored personnel carriers are not employed.

13.23. Employment of Tanks

Aggressor considers that the effort expended in making possible a tank maneuver in apparently inaccessible terrain is warranted by the surprise achieved. After careful terrain and route reconnaissance, engineer and mechanized rifle units construct river and swamp bridges, fill holes, and lay corduroy roads when necessary. Tank units are assigned special engineer and mechanized rifle detachments which follow the tanks. A typical tank assault team consists of an engineer squad, a tank platoon, and one or two mechanized rifle platoons.

13.24. Defensive Use of Swamps

Small swamps are integrated into the system of defensive obstacles. Large swamps are used to cover frontal or flank approaches to the main defensive zone. The battle outpost line is placed within the swamp. Artificial islands of logs and branches are used to float security detachments and forward observation posts. The main defense belt may be established within a large swamp area.

Section V. NIGHT COMBAT

13.25. General

a. Aggressor prefers night operations when terrain, dense minefields, and other obstacles eliminate the possibility of surprise, and will cause heavy casualties in daytime operations. Round-the-clock operations are habitual to maintain the uninterrupted momentum of the offensive. Aggressor units are well trained in night operations. Objectives for night attacks unsupported by nuclear fires may be as deep as 8 to 15 kilometers.

b. Aggressor units are equipped with devices to aid in night fighting, including gun laying telescopes, night viewers, night driving and aiming equipment, and sniperscopes. Battlefield illumination is used frequently to help night attacks.

13.26. Timing of Night Attacks

The attack is launched at a time when the enemy least expects it or is least ready to repel it. For example, after a quiet period the attack might be launched at 0200 hours, or after a hard day's fighting, at 2300 hours when tired enemy troops will be seeking rest. Apart from the consideration of surprise, the attack may begin two or three hours before dawn to permit daylight exploitation of success.

13.27. Preparation and Planning

Preparations for night attacks are made in detail and plans are based on careful reconnaissance, simplicity of maneuver, speed of execution, and surprise. Two phase lines are selected. The first is located within the forward defense area of the enemy and is used to regroup assault teams and establish coordination with the supporting artillery for the attack of the next objective. The second phase line is selected so that its capture will force the enemy to displace his division artillery. Orientation points for mechanized rifle and tank units are carefully designated.

13.28. Conduct of Attack

a. The deployment area is occupied secretly during twilight hours so that the commanders of assault teams may familiarize themselves with orientation points, phase lines, and avenues of approach. To achieve surprise, artillery preparation is often omitted during the initial assault.

b. The mechanized rifle battalion attacks in a single echelon preceded by a small advance guard. Companies are deployed in line, each company being deployed in a line of platoons. Individual

riflemen wear white armbands. Squads advance in wedge formation.

c. If the assault zone is narrow (500 to 600 meters), a battalion may attack in two echelons. The second echelon then consists of a reinforced company whose mission is to protect the flanks of the battalion. For raiding missions, a special detachment is formed to evacuate captured documents, equipment, and prisoners. The assault team principle is followed in grouping elements of the battalion. For example, assault teams include company and battalion weapons and engineers, as required by the mission of each assault team.

d. Tanks are frequently employed in night attacks with mechanized rifle units. Careful terrain reconnaissance and close cooperation with mechanized rifle units are considered essential for successful use of tanks at night. Each tank is assigned a route, mission, and specific assault team. Several riflemen are assigned to each tank to aid its crew in locating antitank weapons and obstacles. When the situation permits, tank headlights and searchlights are used to illuminate enemy firing points to blind the enemy and to assist obstacle-clearing parties.

Section VI. PARTISAN OPERATIONS

13.29. General

a. In partisan operations, Aggressor uses generally accepted methods to reduce the enemy's combat effectiveness. Partisan operations are based on the concept of working against an enemy from within and then striking ruthlessly at his weakest point. Supporters of the Circle Trigon Party provide a worldwide network of undercover movements which are at the continuous disposal of the Aggressor Armed Forces High Command. In the event of hostilities, these party sympathizers make an easy transition to partisan forces. Their tactics are generally hit-and-run actions with limited objectives. The purpose of these attacks is to extend the depth of the combat zone by diverting combat troops to security missions, and to disrupt the enemy's supply and communication networks.

b. Aggressor stresses that successful partisan operations depend on a sympathetic local population and terrain suitable for concealing the partisan bands. The absence of either or both of these factors reduces the chances of a successful Aggressor partisan movement. Official Aggressor histories, books on partisan achievements, and songs about partisan heroes have all been aimed at making the Aggressor partisan a romantic legend.

13.30. Concept of Organization and Control

a. There are two types of Aggressor partisan groups. One usually incited by Aggressor-trained personnel arises in enemy-held territory and the other is specifically trained in Aggressor's rear area to be infiltrated into the enemy's rear. At the beginning of hostilities and particularly against a strong enemy, partisan groups may consist of only five or six members. As the enemy becomes weaker or curtails his antipartisan effort, the size of detachments may reach 50 to 200. Eventually these light and mobile groups may form basic subdivisions of brigades which may contain 3,000 members. If Aggressor's conventional forces are successful or if for any other reason the enemy directs fewer forces against the partisans, these partisans will continue to grow in strength and may develop well organized division units.

b. The command of partisan units is centralized under the authority of the Commander in Chief of the Ground Forces through the intermediary of his General Staff for Partisan Operations. (GSPO.)

c. The GSPO divides the whole enemy territory, usually that of a country, into several operational regions. These regions usually correspond to the political subdivision of the territory but may be dictated by geographical conditions. Each will have its own headquarters which will be under the direct control of the GSPO. This control is maintained by the element of the GSPO established in the territory. This element will not have a permanent location for security reasons and because it must be in constant movement to meet the requirements of the operation in the several sectors of the territory.

d. The GSPO will have at least four principal sections.

- (1) *Operations Section.* This section is headed by the Chief of the GSPO element. It directs the planning and supervises the execution of all operations in its operational region.
- (2) *Propaganda Section.* This section maintains the morale of the troops, rouses the sympathy of the civilian population in the theater of partisan operation and cantonment, enlists the favor of the international public toward the partisan cause, and maintains the political indoctrination of personnel. In addition, the Political Officer, who is the commander of this section, is responsible for ferreting out the politically unreliable and the enemy agents infiltrated into the unit. This section is normally augmented by three or four specially trained counter-intelligence agents.

- (3) *Training Section.* This section prepares the cadres of commands of the partisan units, either through special courses or by improvised schools. The formation of new cadres is very important due to great losses sustained by partisan units in the course of operations in which commanders must serve as examples of courage to their subordinates. Accordingly, each headquarters of a partisan unit must have a training center for the formation of subordinate cadres of command and for replacement of technicians and other specialists (engineers, signal, etc.). This section is also responsible for the preparation and revision of all manuals and handbooks pertaining to training and partisan warfare.
- (4) *Administrative Section.* This section creates and organizes the civilian authority in Free Territories. It acts as the organ of liaison between the civil authority and the partisan military authorities and forms the basis for the organization of the future administration of the country. When in a combat zone, this section does not move with the GSPO, but maintains constant liaison with it.

e. The GSPO establishes and maintains direct control of a regional headquarters in each of the operational regions. These headquarters control all partisan units permanently or temporarily located within the territory of their operation except those units which are controlled directly by the GSPO. The organization of this headquarters is similar to that of the GSPO.

13.31. Personnel

a. Generally, the rural and poorer city dwellers, former soldiers, and fanatical idealists comprise the bulk of the partisan forces. The more prosperous and sophisticated groups usually prefer to support the movement in a covert role or join after the movement is strong. As a general rule, the Aggressor partisan is at least a semispecialist. His trade requires such technical abilities as good marksmanship and intimate knowledge of explosives and communications. An Aggressor partisan is tough, clever, and usually fanatical.

b. Partisans' ranks include active fighters as young as 11 and as old as 80. The young, the old, and the women partisans serve mainly as scouts, couriers, low level espionage agents, and service forces. Many of the partisans leaders are either Aggressor army regulars or Circle Trigonists. Others are former civil leaders and battle-tested veterans. Aggressor prefers to utilize a strong local

leader as a focal point around which determined resistance may be organized. If such a leader lacks military background, Aggressor may infiltrate qualified personnel to serve as military and technical advisers. Thus, the military capabilities of the partisan forces are exploited efficiently without destroying the command structure of an established organization.

13.32. Supplies and Equipment

a. Initially, most partisan supplies are secured locally or from supplies abandoned by the retreating Aggressor armies. Aggressor has been known to leave caches of supplies for possible use of partisans. Because of the ease of obtaining ammunition, Aggressor partisans prefer enemy weapons. Partisans have been known to capture and use enemy tanks and armored cars. Partisan weapons vary almost as much as does the size of each unit. The most commonly used weapons are automatic rifles, light machine-guns, and light mortars. Demolitions are usually of the homemade variety and include box charges, antitank mines, and "Molotov Cocktails." It may be expected that partisan units controlled by Aggressor organizers may employ man-portable nuclear demolitions on a limited scale.

b. Aggressor, if possible, resupplies partisan units by air. In some instances, the partisan controlled area is large enough and sufficiently secure to justify the construction of landing strips.

c. Partisans obtain food from the local population through a levy system or donations and from raids on enemy food stocks. Their clothing is mostly civilian though Aggressor and enemy uniforms are frequently used.

13.33. Training

a. The Aggressor partisan is usually given basic training in weapons, security, fieldcraft, and political indoctrination (par. 13.30*d*(3)). The training is accomplished when possible at concealed bases not readily accessible to enemy forces. Under conditions where training organizations and bases are not available, partisan training is accomplished by active participation in operational missions.

b. Advanced and specialized training in partisan schools stresses sabotage, low level espionage, and continued political indoctrination. The following subjects are covered:

- (1) Demolitions (including use of nuclear demolitions and attack of airfields).
- (2) Communications.

- (3) Tactics.
- (4) Intelligence nets.
- (5) Counterintelligence.

13.34. Tactics

a. The principal tasks of Aggressor partisans are to disrupt the enemy's logistical system, to destroy his forces, to engage in propaganda and counterpropaganda, to locate nuclear weapons delivery systems and storage sites, and to furnish intelligence to the Aggressor Armed Forces. Aggressor has efficient communications between partisan groups and the regular forces. The outstanding characteristics of partisan attacks are thorough reconnaissance, excellent camouflage, surprise night attacks, initiative in action, and speedy withdrawals. The partisans' will to resist and their determination to inflict damage, regardless of infractions of international conventions, compensate in part for deficiencies in equipment and number. The success of partisan operations depends upon the ability of the commander to act independently under entirely unexpected conditions. New tactics are developed continually to meet these needs.

b. Some specific tactics developed by Aggressor are as follows:

- (1) Railroad tracks are destroyed over large areas. Multiple breaks are made in areas where relatively large groups of partisans can keep the track out of operation for long periods of time. Isolated destruction of railroad tracks is accomplished by smaller teams or individuals in those areas not accessible to large partisan forces. Destruction of railroad tracks is coordinated to insure that breaks are repetitive and, where possible, are made in areas accessible to repair crews with difficulty. Partisans breaching rail lines use security elements on the flanks, along the tracks, and on roads leading to the area. Withdrawals from the area are carefully planned to avoid fire fights. Rendezvous points are established for control of the withdrawal. Partisans may attack rolling stock simultaneously with demolition of rails. Heavier weapons are used in such attacks and measures are taken to avoid becoming heavily engaged with well-armed forces. Partisans also harass repair crews with small arms and other fires to lower morale and slow rail reconstruction.
- (2) Partisans attack bridges by demolition and elimination of bridge guards. Man-portable nuclear demolitions may be used against large and critical bridges.
- (3) Partisans use mines and roadblocks to attack vehicle

road traffic. Mines placed in defiles and covered by fire are extensively used. Demolitions are used to cause landslides blocking roads and bridges. Wires are frequently stretched across roads at appropriate heights to disable drivers. Wires are usually located just around blind curves.

- (4) Wire communications are destroyed by fire and cutting. Radio communications are disrupted by attack of power sources.
- (5) Partisans attack water supply systems with explosives and nuclear munitions. The effect on civilian populations is considered before such attacks are made. Pipelines carrying oil and natural gas are attacked by weapons fire as well as demolitions. Contaminating agents are frequently injected into pipelines. Storage tanks are attacked by incendiary projectiles.
- (6) Isolated tanks, guard posts, and small supply installations are favorite targets for partisan attack which is usually made by stealth. Overt attacks against such targets usually are based on use of diversionary, destruction, and security elements.

c. Although partisan forces are responsible for supplying intelligence to the armed forces, their deployment and tactics as stated above will preclude their extensive use in collecting combat intelligence. When specifically employed to collect information, Aggressor uses two distinctive types of units. One is the long-range patrol, the raid intelligence group, which is air-dropped, air-landed, or infiltrated into the enemy rear. It seizes and interrogates prisoners and transmits information gained directly by radio to the army or army group headquarters to which the group is attached. In addition to these overt uniformed groups, covert intelligence groups are trained and equipped to operate espionage nets in enemy rear areas and communicate with parent headquarters. Neither type of group contains more than 12 individuals. Twenty to thirty groups are contained in a brigade at army group level. Groups may be attached to lower headquarters for specific operations.

Section VII. MOUNTAIN OPERATIONS

13.35. General

Mountainous terrain seriously limits military activity by channelizing maneuver, complicating control and fire support, reducing communications efficiency, impairing logistical support, and

providing the defender with excellent observation. Aggressor does not consider large-scale use of nuclear fires in mountains to be practical.

13.36. Concept

Aggressor considers that the principles of the offensive and the defensive are applicable in mountain warfare with some modifications necessary because of the nature of the area. Flank security is emphasized. Second echelons are disposed in depth and follow the first echelon closely to meet enemy counterattacks in minimum time. The normal maneuver of Aggressor units in the mountains is a combined frontal and flanking attack, the latter being executed by a force larger than that employed frontally. Efforts are made to avoid the enemy's outposts, to infiltrate through his positions, and to emerge in his rear areas. Simultaneous attacks are made from several directions on principal strong points.

13.37. Characteristics of Mountain Operations

Characteristics of mountain operations common to both the offensive and the defensive are:

a. Gaps between friendly sectors which may be occupied by the enemy are blocked by second-echelon forces to counter enemy attempts to envelop, outflank, or infiltrate through the gap.

b. Snipers play an important role in preparing ambushes and infiltrating through enemy lines. Close fighting with small arms and hand-to-hand fighting are of increased importance. Since combat in mountains frequently assumes a piecemeal character, initiative on the part of subordinate commanders is stressed.

c. Whenever conditions permit, narrow-gage railroads are built for divisions and larger commands to transport supplies and evacuate casualties. Tractors are used in large numbers to haul supplies over difficult areas. Air supply is used extensively. Regiment and division supply and evacuation installations are located well forward. The division service area is within two hours foot march of the first-echelon regiments.

13.38. Employment of Weapons

Heavy machineguns, heavy mortars, field guns, and light artillery follow rifle units closely. Uninterrupted ammunition supply is of primary importance. Direct-fire artillery plays an important part in mountain fighting. Guns of various types are located on forward mountain slopes for direct fire. In operations against a strong enemy defensive position, artillery control is centralized at

regiment and division. In pursuit, operations control is decentralized to lower echelons. Antiaircraft artillery units are deployed to protect defiles. The 76-mm pack howitzer is used extensively.

13.39. Employment of Tanks

When terrain permits, Aggressor uses tanks extensively in mountain fighting. Tanks are used in small groups to reinforce rifle elements. An assault group may include from two to three tanks, a rifle platoon, a squad of engineers, and an antitank platoon. Tanks are used for night attacks, approach enemy positions under cover of darkness, and then deliver a sudden assault. Night attacks by tanks require careful preparation. If possible, tanks occupy positions by daylight which permit them to move directly into the attack from the march.

13.40. Control and Communication

a. Command posts are located near forward elements. Security of command posts is provided by detachments occupying the heights commanding the approaches. To keep abreast of rapidly changing combat conditions, commanders at regimental and lower levels usually stay at their command observation posts. They move forward to new command observation posts immediately after the seizure of crests and spurs which obstruct observation.

b. Radio is the basic means of communication in the mountains. Reliability of radio communication is increased by special training, careful selection of frequencies, siting of radios, and adjustment of antennas. Visual signaling and liaison planes are also widely used.

13.41. The Offensive

Aggressor offensives in mountains are based on a series of attacks to seize heights, ridges, passes, and valleys. Maneuvers generally consist of isolation of separate tactical objectives by double or single envelopment. Main efforts are generally supplemented by several secondary efforts. In attacking enemy positions arranged in altitudinal levels, the fire of all weapons is first concentrated on the lowest level. While rifle units attack that level, artillery and mortars shift their fires to enemy positions at the next higher level. Normally, however, attacks are made along ridges.

13.42. Attacks Along a Ridge and Valley

Attacks along ridges combine a breakthrough in the valley with an encircling maneuver over the ridges in order to seize command-

ing heights and road junctions in the enemy rear and on his flanks. The breakthrough is accomplished by a heavy concentration of artillery, tanks, and aviation. In the exploitation of the breakthrough by mobile units, seizure of road junctions deep in enemy rear areas is stressed since such seizure may also lead to the isolation and defeat of enemy forces in other sectors. In advances along valleys, Aggressor flanks and rear are secured by airborne troops and mountain rifle units who seize heights on the ridges commanding the valley. Flank security units are supported by aerial attacks, artillery fire, and other forces operating in the rear of the enemy defending the heights. Flank security units assist the advancing main body by fire and maneuver on the flanks and in the rear of enemy units in the valley.

13.43. Attacks Across a Ridge

Attacks across ridges are based on the possession of mountain passes which are secured by the seizure of the heights commanding them. Seizure of heights is accomplished by attacking the enemy's rear in a rapid outflanking maneuver by landing airborne troops in the rear of enemy units defending the pass, and by simultaneously launching an aggressive frontal assault in coordination with air support.

13.44. Advance Detachments

In the offensive, rifle battalions and in some cases companies use rifle detachments to precede the attack. An advance detachment for a battalion normally consists of a rifle platoon reinforced by a mortar squad or section. Before a height is assaulted, advance detachments infiltrate behind the enemy and open fire on the enemy positions. The height is then attacked from the flanks, where possible, by the main body. An artillery preparation, supplemented by air attacks, usually precedes the coordinated attack.

13.45. Infiltration Detachments

Infiltration detachments are used to penetrate deep into the enemy rear. Their main task is to control or harass enemy lines of communication. These detachments seize the high ground overlooking these routes. A few riflemen are assigned the task of moving from place to place where they can suddenly open fire to create the impression of greater strength. Infiltration detachments also establish roadblocks at defiles. Infiltration detachments may be built up to sufficient strength to permit their use in pursuit operations following an Aggressor offensive.

13.46. Reorganization After the Attack

Every captured height or area is immediately consolidated. Supporting weapons are displaced forward to support further advance. Positions are strengthened by antipersonnel mines, field works, and antitank mines. Special emphasis is placed on strengthening strong points on the flanks and covering the intervals between attacking units. Security measures, including patrols, observation posts, and outposts, are immediately taken to prevent surprise by sudden enemy counterattacks.

13.47. The Defensive

a. Aggressor mountain defense operations stress thorough reconnaissance, well-organized outposts, continuous flank security, and swift counterattacks by the second echelon.

b. Observation posts are established 9 to 12 kilometers in front of the forward defenses. Communication is maintained by radio and visual signaling. Relay points are established when necessary. In the outpost area, security elements block roads and other approaches, secure flanks, salients, and intervals between defensive positions. Outpost security elements delay enemy attacks until reinforced by support troops. Support troops in the outpost area counter enemy outflanking maneuvers, destroy small groups attempting infiltration, and when necessary, cover the withdrawal of friendly elements. In defense of the outpost area ambushes are used extensively.

c. The main defensive positions are organized along or across a mountain ridge. In either case, the forward edge of strong points is situated on forward slopes although a portion of the forces are usually also on reverse slopes. Firing positions are echeloned vertically as well as in depth. In defending a mountain valley strong points are located on adjacent heights that permit covering the valley with crossfire. In wooded terrain defensive positions are organized at the forward edge of the woods or on commanding heights. In the latter case the woods are used as a natural obstacle. Elevated platforms are built in trees for heavy machineguns and observation posts. Antitank and antipersonnel mines, obstacles of all types, and artificial landslides are widely employed.

Section VIII. COMBAT IN TOWNS AND CITIES

13.48. General

a. When possible, Aggressor avoids offensive combat in built-up areas under active nuclear conditions. Built-up areas that Aggres-

sor intends to use after capture are not subjected to nuclear attacks.

b. Aggressor considers the attack on a city as comparable to the assault of a fortified zone, but with certain advantages for the attacker. The civilian population imposes a burden on the defending military forces with respect to food, water, health, and shelter. On the other hand, the offense in city warfare has handicaps not found in open terrain. The rubble of destroyed buildings affords the defenders easily adaptable defensive positions with excellent camouflage. The ease of mining and boobytrapping, the presence of traps for armor and artillery, and the danger of collapsing structures favor the defense and must be overcome by specially trained assault groups. The presence of unsuspected passages, such as subways and sewers, and the ease of interior communications facilitate infiltration, counterattacks, and breakout offensives by the defending forces.

13.49. Reconnaissance

Detailed intelligence is prepared of the main fortified city zones, to include firing positions and approaches affording the best cover. The ease of concealing weapons in city warfare makes their location especially important. Combat reconnaissance detachments may operate in a city for six days before an assault. Reconnaissance is continued during the assault. Combat reconnaissance is supplemented by studying city plans and locating utility systems, subways, and sewers. Special patrols are organized to capture prisoners for interrogation.

13.50. Assault Formations

The basic unit in city warfare is the reinforced mechanized rifle battalion. The battalion is deployed for assault in a column formation composed of four distinct groups. The leading or infiltration group usually consists of a mechanized rifle company and antitank gun platoon. The main body is the assault group and is similar in strength and composition to the mechanized rifle battalion assault group organized for the assault of fortified zones. It consists of a mechanized rifle company, about one-half of the battalion heavy weapons, and a detachment of demolition engineers from the mechanized rifle regiment. Supporting weapons include two to three battalions of direct-fire guns and a platoon of self-propelled guns. The third group is the support group which includes the remainder of the battalion heavy weapons, three to four direct-fire guns, and one platoon of medium tanks or self-propelled guns. The last group is one mechanized rifle company which pro-

vides flank security patrols and acts as the battalion reserve. Subgroups of varying size and composition are detached for separate assault missions on isolated structures.

13.51. Conduct of Attack

a. The first phase of the attack consists of driving in outposts and surrounding the built-up area. Some portions of the attacking force are used to prevent enemy counterattacks from interfering with the assault of the city. Tanks cover all exits from the city, and a tank reserve is held to engage enemy counterattacks.

b. The city is divided into battalion areas. The attacks, launched after artillery and air preparations, is supported by artillery fire and air strikes. The battle then takes the form of a number of independent actions by small units which attack one block of buildings after another, consolidating their gains, and cleaning all houses, tunnels, and sewers as they advance.

13.52. Use of Artillery

a. Light artillery is used to destroy enemy firing positions by direct fire. Batteries attached to mechanized rifle units conduct direct fire at embrasures, windows, and other enemy firing positions. In addition to neutralizing enemy firing positions, direct fire is used to create breaches in buildings, walls, and barricades. Guns are displaced forward alternately under cover of heavy fire from other guns and mechanized rifle units. Large-caliber howitzers are used to destroy buildings.

b. Mortars cover avenues of enemy troop movements such as street intersections, trenches, and alleys. Mortar-firing positions are placed behind walls or inside buildings close to their targets. Their mobility and effective fire from concealed positions provide strong fire support for the assault groups.

c. The artillery reserve is used for counterbattery and counter-mortar fire. Massed fire from heavy batteries of the artillery reserve is used against forts or the other strong enemy fortified positions. Other missions for the artillery reserve include interdiction and destruction of enemy supply installations, headquarters, and communication centers. The artillery reserve is retained under centralized control by army and division.

13.53. Organization for Defense of Towns and Cities

a. The city is organized for defense in depth and districts are allotted to units. Groups of buildings at crossroads and squares are transformed into mutually supporting strong points, and every

house in these groups is organized for defense. Solid buildings are connected by holes made through the walls. Ceilings are strengthened by beams and earth, and by pulling down the upper stories. Cellars are connected and are used for intercommunication as well as the sewers, subways, and trenches. Streets are mined and blocked with any available material. Strong points are stocked with supplies.

b. Artillery, air, and tank support do not differ materially from the normal defensive support. Artillery support is also provided by single guns firing directly from strong points. An artillery group outside the city provides fire on call from observers with strong points. Single tanks and self-propelled guns are sited in strong points, but tanks are normally kept in reserve for counter-attack.

Section IX. OPERATIONS AT RIVER LINES

13.54. General

a. Aggressor uses both deliberate and hasty river crossings. Under nuclear warfare conditions, emphasis is placed on hasty crossings. Hasty crossings permit Aggressor units to maintain the momentum of the attack and prevent development of a nuclear target at the site of the obstacle. Aggressor usually makes river crossings on a broad front. Diversionary or feint crossings are made in considerable strength. These crossings also provide alternative crossing sites to which the main forces can be diverted should the main crossings fail or be held up. Once the assault has begun, every effort is made to carry it through to its conclusion. If unsuccessful, no further attempts are made in that area, and the main effort is shifted to an area where the operation has been more successful.

b. Aggressor river-crossing operations are characterized by large-scale employment of amphibious vehicles, tanks, rafts, bridge sections, and boats or ferries to transport tanks, artillery, and loaded vehicles without waiting for the completion of bridges. Maximum use is made of field expedients and locally procured boats, rafts, and other material. Bridge construction is usually done at night. To hide the bridges from observation, Aggressor frequently constructs them beneath the surface of the water. Smokescreens are used to mask bridge construction sites and the adjoining countryside.

c. During the advance to contact or pursuit, tanks and mechanized units are sent ahead to seize bridgeheads. Airborne units

may be used. If the leading units fail to capture bridgeheads, then a hasty assault crossing is organized by the following division or regimental commander. If the hasty assault fails, forces are regrouped and plans initiated for deliberate crossing.

13.55. Hasty River Crossings

a. Aggressor tank or mechanized rifle divisions and regiments can make hasty river crossings independently from the march. Crossings made against strong resistance are usually conducted under division control, while those against weak resistance are usually made under regimental control. Units are assigned definite crossing sites whose widths are determined by the existing situation. Within a division, regimental crossing sites are three to five kilometers apart. Aggressor prefers to carry out hasty crossings at night or in first light.

b. If the division advance guard units cannot seize a bridgehead, they secure the near bank so the assault crossing can be made by the division. Advance guard units send out reconnaissance elements to reconnoiter the river and to select crossing points for amphibious vehicles, ferries, and bridges. Tanks with the advance guard are positioned to protect the division flanks. Antitank, assault, and heavy machineguns, and light antiaircraft artillery are moved to the riverbank where they can deliver direct fire on the opposite bank.

c. First-echelon regiments move into assembly areas two to five kilometers from the far bank of the river during darkness, and the second echelon regiment goes into assembly areas 10 to 13 kilometers from the river. Crossing equipment joins the units in their assembly areas. Engineer troops prepare the riverbank for easy entry of units into the river. Each first echelon regiment designates an assault battalion which, in turn, designates an assault company. The assault company is usually reinforced by a platoon of amphibious tanks, an antitank gun, a squad of engineers, and a radiological reconnaissance squad. The company is also assigned amphibious armored carriers to permit crossing the river in one wave. The remainder of the assault battalion crosses behind the assault company in amphibious armored carriers or in pneumatic boats. Assault companies load into amphibious carriers in their assembly areas, move to the riverbank, and cross directly behind the amphibious tanks during the artillery preparation. The artillery preparation, if any, usually lasts about 10 to 15 minutes, and is fired while the amphibious carriers are moving up to the riverbank or as the vehicles enter the water and cross the river. On reaching the far bank, the company disembarks

and attacks enemy positions that can bring direct fire to bear on the river. Vehicles return to the near bank to ferry across heavier equipment. Landing points are prepared for following units. The remainder of the assault battalion then crosses and within about an hour can attack to enlarge the bridgehead. When the first elements of the assault company reach the far bank, engineer units start assembling ferries and ponton bridges on the near bank. Heavy equipment can usually start to cross in about three hours. With heavy equipment across, the first-echelon regiments attack to deepen the bridgehead and to secure the crossing of the rest of the division.

d. Construction of heavy ferry or ponton bridge for the division's heavier equipment is begun when direct fire into the site is eliminated. Divisions are usually across the river less than eight hours after the crossing operation starts. The division objective will be the same as in a normal operation; the river is considered an obstacle—not an objective. The divisions immediately deepen the bridgehead to at least 10 to 15 kilometers. The army second echelon crosses the river when the first-echelon divisions break out of the bridgehead. Army uses its second-echelon forces to widen the bridgehead and to encircle and destroy enemy forces along the river to permit commitment of the tank division.

13.56. Tank Army in the Hasty Crossing

a. Tank divisions carry out the initial crossing. The assault unit for the tank division may be a special reconnaissance detachment consisting of a reinforced tank company. As it normally operates with an advance guard well forward of its parent regiment, reinforcements and crossing equipment are assigned for an entire operation, not for just a single crossing. These detachments also have mechanized rifle, artillery, and mortars, and may have assault guns. Pontoon equipment is allocated. The basic task of these detachments is to reconnoiter the river, establish bridgeheads, and to secure uninterrupted crossing for the regiments.

b. While still about eight kilometers from the river, the reconnaissance detachment is given a specific sector of the bank to reconnoiter. It bypasses enemy resistance and presses to the riverbank. Small combat and reconnaissance patrols, reinforced by engineers, precede the main body of the detachment, seize existing bridges, crossings, or fords, and establish a small bridgehead. The remainder of the detachment remains under cover until the results of this reconnaissance are available. The detachment crosses the river on amphibious vehicles under cover of tank and artillery fires and smoke provided by the attached artillery and

tanks. The detachment forms a bridgehead, organizes its defenses, and holds it until the following regiments can cross and extend the bridgehead.

13.57. Use of Helicopters

Helicopters are used for reconnaissance to lift reconnaissance detachments across rivers and to move engineers and equipment to ferry and bridge sites. Helicopters are also used to lift assault elements across rivers and thus avoid actual water-crossing operations until a beachhead has been established and secured.

13.58. Use of Nuclear Weapons

a. Priority for nuclear attacks in a hasty river crossing is given the enemy forces directly covering the crossing site, followed by the reserves of those forces. Once the crossing has been made, the priority for nuclear attack shifts to those enemy tactical and operational reserves constituting a major threat to the bridgehead. In executing nuclear attacks on the enemy forces holding the far side of the river, the Aggressor forces on the near side may, if required for safety, withdraw the minimum necessary distance.

b. Vulnerability to enemy nuclear fires at a crossing site is reduced by—

- (1) Crossing at times of reduced visibility.
- (2) Extending bridgeheads as rapidly as possible to avoid troop concentrations.
- (3) Establishing antiaircraft defenses early.
- (4) Maintaining reserves of crossing equipment to replace losses.
- (5) Maximum use of camouflage.
- (6) Extensive use of smoke and deception measures.

13.59. Antitank Defense Priority

To prevent enemy armor from overrunning bridgeheads, Aggressor sets up antitank defenses as soon as the equipment has crossed the river. The division antitank artillery and engineer mobile obstacle detachments cross immediately after the first-echelon regiments. Army antitank units may cross before second-echelon divisions.

13.60. Deliberate River Crossing Operations

a. Aggressor undertakes deliberate river-crossing operations only when hasty river crossings fail or are not possible. The

deliberate crossing is carried out in a manner similar to the hasty crossing; however, more detailed planning, reconnaissance, and preparation are involved. Centralized control of the crossing is exercised at army level and much nuclear fire support is used. Crossings, closely controlled, are made on a broad front.

b. Thorough reconnaissance, and assembly and equipping of forces are accomplished during the preparatory phase. Every intelligence means available is used to get complete information of the enemy. Units are reinforced in the same manner as for a hasty crossing. A combined arms army usually crosses with three divisions in the first echelon. Divisions cross with two regiments in their first echelons, and the regiments cross with two battalions in the first echelon. The leading battalions cross in waves of reinforced companies.

c. First-echelon battalions are moved into assembly areas under cover of darkness about 1½ kilometers from the river. Artillery is positioned to place fire throughout the enemy forward defenses. The actual assault crossing is usually made just before dawn, preceded by nuclear strikes and an intensive air and artillery preparation of about 30 minutes. The actual crossing is conducted in about the same manner as for a hasty river crossing.

13.61. Defense of a River

In establishing a defense, Aggressor uses rivers as obstacles. Normally, when a river is so used, Aggressor retains bridgeheads on the far side to facilitate later offensive operations. These bridgeheads are not withdrawn unless authorized by the army commander.

Section X. ATTACK AND DEFENSE OF FORTIFIED AREAS

13.62. General

a. Combat formations of mechanized rifle, tank artillery, engineer, and aviation units are used to break through fortified zones. Aggressor doctrine stresses the intensive training of assault groups together with the supporting arms as the most important single factor in the successful assault of heavily fortified zones. Where possible, at least two rehearsals by assault groups and supporting arms are held in rear areas prior to actual assault.

b. The assault is usually made with the main effort along a single front from 10 to 15 kilometers wide or in multiple thrusts each approximately three to five kilometers wide. Secondary at-

tacks are made simultaneously for diversion and to seize isolated fortified positions. Emphasis is placed on attacks against the flanks of the penetration area. Against fortified areas, mountains and swamps, assaults are generally made on a narrower front.

c. The destruction of enemy forces in a fortified zone is accomplished by the complete breakthrough of the enemy defensive positions in the sector of the main effort and by subsequent flank attacks against adjacent sectors to clear the entire fortified zone. Mechanized rifle and tank divisions exploit the breakthrough.

13.63. Organization for Assault

Mechanized rifle assault groups are composed of balanced forces of all arms. The composition of the assault groups provides for the immediate replacement of losses in the leading elements. Organization of assault groups begins with the assault division. The basic element is the assault battalion. While some details of the assault organization vary with the situation, the basic structure of assault groups is standard.

13.64. Assault Division

a. The assault division normally consists of a mechanized rifle division reinforced with an engineer regiment. Normally one regiment of heavy tanks, some self-propelled artillery, and about a company of mineclearing, flamethrowing, and bridging tanks support the assault. Division artillery is reinforced by battalions of heavy artillery and mortars. The assault engineer regiment includes flamethrower operators and other special engineer troops such as demolitions personnel.

b. The assault division is deployed in two or three echelons depending on the strength of the enemy fortifications and the width of the assigned zone. Small general troop and antitank reserves are provided. The assault division in the main effort has a zone about 3,000 meters wide. In secondary efforts the zone is about 6,000 meters wide.

c. Four artillery groups operate under division control. The division artillery support group (heavy mortars and medium howitzers) is responsible for neutralization of the forward enemy defenses and for reinforcement of the regimental artillery groups after the assault is launched. The division artillery countermortar group (heavy mortars and medium howitzers) and the division artillery destruction groups (heavy howitzers and guns) have the missions indicated by their names. The destruction group concentrates on the destruction of permanent fortifications. The

fourth division artillery group is the artillery reserve. It is also used for general support of the division.

13.65. Assault Regiment

a. Each regiment of the mechanized rifle division used in the assault is usually reinforced with—

- (1) One battalion of the organic division artillery, one battery of the organic division antitank artillery battalion, a heavy mortar battalion, and a medium gun battalion.
- (2) Two companies of medium tanks, one battery of medium self-propelled guns, and a platoon of mine-clearing tanks.
- (3) A battalion of combat engineers.

b. The regimental artillery group consists of one organic battalion of division artillery and battalion of heavy mortars. This group is under division control during the artillery preparation but passes to control of the regimental commander during the assault phase.

c. The mechanized rifle regiment formation in the assault is usually in two echelons. If the enemy fortifications are in considerable depth, the regiment may attack with three echelons. The first echelon clears passages through obstacles and minefields and assaults specified fortifications. The succeeding echelons provide security for the regiment's flanks, widen the gaps created by the first echelon, and pass through the preceding echelon to extend the depth of the penetration. The assault regiment in the main effort may be assigned a frontage to 1,500 meters.

13.66. Assault Battalion

The assault battalion is the basic unit in the assault of fortified positions. It consists of a mechanized rifle battalion reinforced by two batteries of light guns or medium howitzers, a company of 100-mm or 85-mm self-propelled guns, and a company of engineers. The assault battalion deploys on a front approximately 750 meters wide and about 400 meters deep. The assault battalion forms two assault companies. The third company is used to reinforce assault companies and the direct-fire artillery group, and to act as the battalion reserve. Each assault company deploys two platoons abreast. Infiltration and trench-clearing teams, as well as personnel for flank security, are organized from the third platoon. Each assault company is reinforced by an obstacle-clearing group of one engineer and one rifle squad, and a direct-fire artillery group of light guns or a medium howitzer battery, an 85-mm antitank gun platoon, and a rifle squad for security. Direct-fire artillery does not participate in the artillery preparation.

13.67. Tactical Preparations

Tactical preparations consist of preparatory fires, breaching of obstacles and final preparation by assault units. The nuclear preparation is greater than that used in a normal attack. Nuclear fires are used to destroy obstacles and minefields, and to reduce the need for extensive use of engineer troops to clear the way into the main fortified area. The air and artillery preparations are of sufficient length to neutralize enemy defenses that may survive the nuclear preparation but not so long as to permit remnants of the defenses to recover from the nuclear attack. Artillery and air units attack all known enemy fortifications on a front wider than the sector of the main effort to neutralize enemy positions which can direct flanking fire on the penetration area. Obstacle-clearing groups prepare lanes through minefields and wire entanglements during the night preceding the assault, and move forward during the artillery-air preparation to continue obstacle clearance.

13.68. Defense of Fortified Areas

Aggressor defense of permanently fortified areas is based on the battalion or regimental defensive position. Special battalions are often organized for this purpose. Such battalions are equipped with a high proportion of automatic weapons, medium mortars, and antitank weapons. The defense of permanently fortified areas is conducted in about the same manner as the decentralized position defense.

Section XI. OPERATIONS BY ENCIRCLED FORCES

13.69. General

Aggressor has specific tactics designed to extricate his forces encircled on the battlefield. These tactics are a combination of defensive-offensive actions.

13.70. Preliminary Preparation

Aggressor forces which find themselves in a position of imminent encirclement take immediate steps to prepare for an all-round defense. If the possible encirclement is detected in time, all excess units and personnel are evacuated from the area. Stocks of essential supplies, if possible, are built up. In the event the encirclement is accomplished before excess personnel and service units can be evacuated, they are assigned to combat units, especially engineer units. Strong mobile reconnaissance and screening units

are placed outside the main defense perimeter to delay the enemy attack as long as possible.

13.71. Organization of the Defense

a. Depending upon the size of the encircled force, a first echelon consisting of mechanized rifle elements, reinforced with antitank units and a tank reserve, is established. If sufficient forces are available, a second echelon, composed primarily of antitank forces, is formed. The reserve of the first echelon is a major element of the defense because the success of the operation depends upon successful counterattacks. An encircled army places its entire tank division in the reserve, reinforcing it with most of the tanks from the mechanized rifle divisions as well as some of the mechanized rifle units.

b. The entire perimeter of the encircled force is not manned. The first echelon establishes battalion-sized strong points along the most likely avenues of approach. Alternate positions are prepared in less dangerous areas. These areas are covered by observation posts and patrols. Antitank strong points are placed in the second echelon behind likely avenues of enemy armor attack. The second echelon is also prepared to occupy first-echelon positions if enemy nuclear fires destroy a first-echelon unit. The reserve is held deep within the encircled area in numerous assembly areas ready for use at any point.

13.72. Support

a. Units within the encircled area retain control of their artillery. If sufficient artillery is available, a mobile artillery group is formed to provide additional support for the first-echelon units. This group also supports the reserve, replaces artillery units destroyed by nuclear fires and provides fire cover for units and sectors of the perimeter subjected to enemy nuclear attack. When artillery is not available in sufficient quantity to form this group, flank units provide the fires needed by units under attack. All units in the encircled area form anti-aircraft artillery groups and a central group is formed for defense of the entire command. Command and logistical installations receive top priority for anti-aircraft protection.

b. Engineer units construct fortifications along the most likely avenues of approach and obstacle belts both within and without the area. Wide use is made of available natural materials for obstacles.

c. Air and nuclear support is provided by the command to which the encircled force is subordinate. Air elements are stationed

within the encircled area if the area is sufficiently large to contain dispersed airfields. All passive means of protection against nuclear attack are observed and strong protective positions are constructed.

13.73. Control

Encircled Aggressor forces normally remain under the control of the headquarters which controlled them prior to their encirclement. That command is responsible for the defense and extrication of the encircled forces. Command of the encircled force is exercised by the senior officer present. Radio communication is maintained with the control headquarters and an active air liaison system is established.

13.74. Conduct of the Defense

a. Detailed defense plans are prepared, including provisions for meeting single or multiple enemy thrusts into the area. In the event of single thrusts, the threatened area is immediately reinforced with additional troops. Antitank and artillery weapons as well as the reserve elements counterattack if the enemy succeeds in penetrating the area. The first echelon holds and attempts to beat the enemy back, withdrawing to the second-echelon defenses only upon order. Nuclear attacks are used to disrupt enemy attack, but close in nuclear strikes are not used if they require units to withdraw from prepared positions.

b. Simultaneous enemy attacks in several sectors are met by moving perimeter forces to the threatened areas, leaving only skeletal defenses in some areas. The reserve is deployed close to the most threatened sector. Counterattacks are made as soon as possible and before the enemy attack can become critical. Such counterattacks are preferably carried out at night supported by nuclear fires. If the enemy attack is halted, the reserve attempts to drive the enemy back to his former positions. If the enemy attack cannot be completely halted, the reserve counterattacks to disrupt the enemy attack. The reserve then moves to another threatened sector. The mechanized rifle elements clear up the disrupted enemy attack. Surprise attacks to prevent the enemy from launching his attacks are made if Aggressor forces have sufficient reserves of fuel and ammunition.

13.75. Organization of the Offensive

a. Encircled Aggressor forces always attempt to break out. The breakout may be accomplished with strong outside support or with little or no outside support. A breakout with little outside

support is attempted only when the encircled force is small and only a short distance is involved. In both types of breakouts, the enemy is compelled to fight on two fronts and the time and place of the breakout are a surprise. The headquarters controlling the encircled force plans the breakout as part of the overall defense plan.

b. Encircled forces are organized for the breakout into an assault group, a covering force group, a flank security group, and an artillery and reserve group. The assault group forms two echelons, one of tanks with most of the artillery and all of the nuclear support, and the other of mechanized rifle units to mop up enemy bypassed by the first echelon. The covering force group is composed of mechanized rifle units reinforced by engineers, chemical warfare troops, and as much field and antitank artillery as can be spared from the assault group. A minimum number of troops are placed in the flank security group. The artillery and reserve group is usually placed to the rear of the assault group so that it can deliver fire to support either the assault group or the covering force group.

13.76. Conduct of the Breakout

Breakout attacks are coordinated with attacks by forces outside the perimeter. Missions assigned to the assault group of the encircled forces depend upon the distance to friendly units outside the perimeter. When the distance is short, only an initial and final objective are assigned. The final objective is the junction area between the two attacking forces. When distance is greater, specific daily objectives are assigned. The assault group moves into attack positions at the last possible moment. The attack is usually launched at night without artillery preparation to achieve surprise. If the attack starts during daylight, it is preceded by a short intensive artillery, air, and nuclear preparation. The attack of the first echelon of the assault group forms an escape corridor through the enemy positions. Strong enemy resistance is bypassed. These centers of resistance are reduced by the second echelon. The second echelon keeps the escape corridor open. Rear echelon elements form and move through the corridor as soon as possible. Maximum amounts of equipment and supplies are evacuated. What cannot be moved is destroyed. The covering force withdraws last.

CHAPTER 14

LOGISTICS

Section I. GENERAL

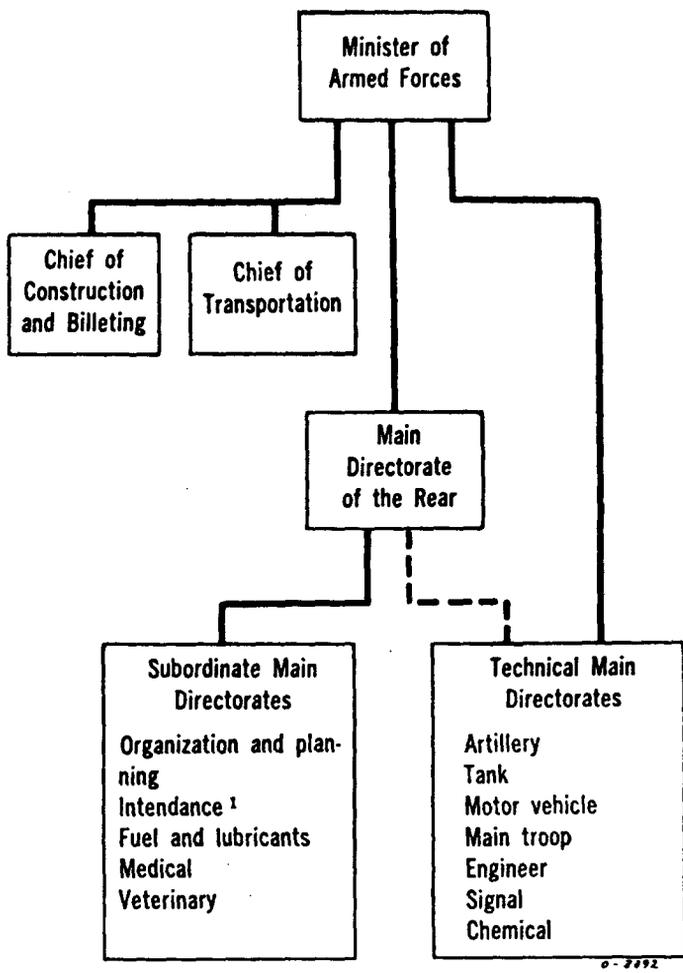
14.1. Responsibilities

a. Logistics is a command responsibility at all echelons. In every command at regiment and higher levels, the principal logistical assistant to the commander is the unit deputy commander for the rear. He prepares the logistical plans to support the operation and supervises their execution. The chiefs/commanders of arms and of the technical services assist in logistical planning. The deputy commander of the rear has direct responsibility for items common to all units such as food, clothing, equipment, fuel and lubricants, military medicine and veterinary supplies. He also supervises and maintains rear area installations, is responsible for the physical movement of all classes of supplies, and has additional duties such as traffic control, handling of replacement personnel, rear area security and area damage control, and control of civilians excepting civil affairs.

b. The chiefs/commanders of arms and of the technical services at all levels are responsible, under the supervision of the unit deputy commander for the rear, for the supply, maintenance and repair of weapons, equipment, and technical supplies pertaining to their arm.

14.2. Organization

a. The logistical organization at the national level is illustrated in figure 48. At this level the chief of the rear supervises directly those agencies responsible for the procurement, storage, and distribution of supplies and equipment that are common to the ground, naval, and air forces. These supplies include common use categories such as rations, POL, quartermaster, and medical supplies. The supply of combat-type items such as weapons, ammunition, and other technical equipment is not a direct function of the chief of the rear but rather of the chiefs of the arms and technical services. The chief of the rear coordinates their logistical activities.



0-2292

LEGEND

----- Coordination.

———— Subordination.

¹ Controls the ration directorate and the clothing and equipment directorate.

Figure 48. Organization for Logistics.

b. Generally, a similar organization exists at army group, army, division, and regimental level.

c. The supply responsibilities of the directorates listed in figure 48 are as follows:

- | | |
|-----------------------------------------------------|---------------------------|
| Artillery, small arms, and all types of ammunition. | Artillery Directorate |
| Combat vehicles..... | Tank Directorate |
| Noncombat vehicles..... | Motor Vehicle Directorate |

Engineer equipment	Engineer Troop Directorate
Signal equipment	Signal Troop Directorate
Chemical supplies	Chemical Troop Directorate
Food, clothing, and equipment	*Intendance Directorate
Fuel and lubricants	*Fuel and Lubricants Directorate
Medical supplies	*Medical Directorate
Veterinary supplies	*Veterinary Directorate

* Subordinate to the Chief of the Rear

14.3. Principles of Logistic Support

a. Aggressor logistic concepts reduce requirements to a minimum and aim at relieving combat troops of logistic problems to the maximum extent.

b. Detailed and long-term planning of Aggressor logistic support is carried out at the highest practicable level. Supply and transportation are coordinated with the production program of civilian ministries and state committees. At all levels the logistic staffs are brought into the planning at the earliest possible date, both to advise the commander and to insure that his plans are implemented.

c. The Aggressor Armed Forces have attained a high degree of standardization of equipment, and their equipment is rugged and of high quality. This standardization not only eases manufacture but also simplifies maintenance.

d. There is a strict order of priority for the delivery of supplies which is normally as follows: ammunition, POL, technical stores, rations.

e. Aggressor utilizes a distribution forward principle of supply in the field. Normally the higher echelon is responsible for supplying forward. However, divisions and regiments under certain circumstances may pick up their own supplies from rear area installations.

f. The salvage and use of local and captured materials follows a definite plan; and the procedure is standard at all levels. Special staffs and units are allocated to this task at army and army group levels in wartime.

g. The following factors also play a part in Aggressor logistic support.

- (1) *Improvisation.* The Aggressor forces are accustomed to improvisation which has an important influence on Aggressor logistics. Full use is made of local materials, food, and labor.

- (2) *Natural Characteristics of Troops.* (par. 1.16.)

14.4. Field Supply

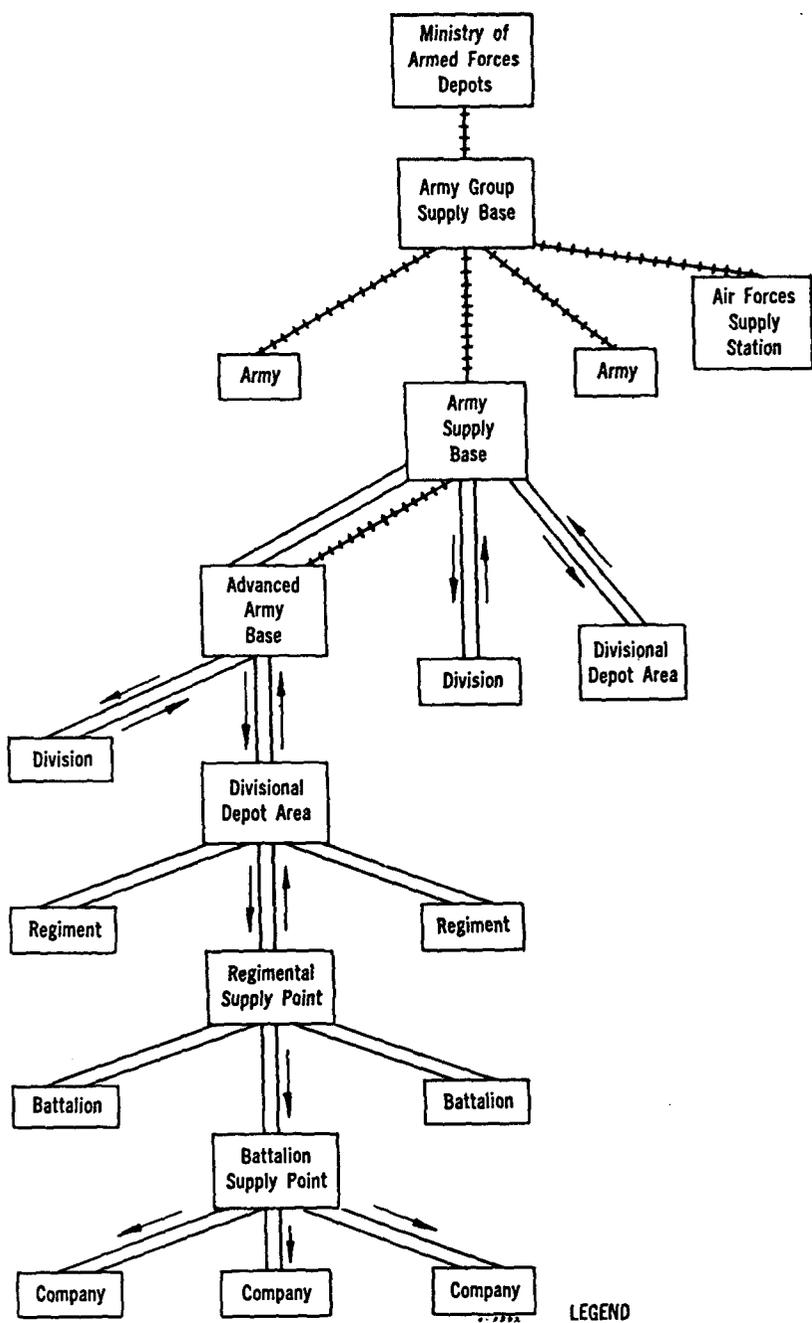
a. General. The displacement of Aggressor service units and installations varies according to the nature of the threat. Installations are generally well dispersed, camouflaged, and away from possible nuclear targets. Supplies are placed underground or dug in wherever possible. Rear services personnel prepare plans for damage control. Fire fighting and decontamination are emphasized in damage control planning.

b. Army Group Supply Base. This base is usually located near rail junctions because of the importance of rail transport at this stage in the supply system. It is usually about 160 kilometers from the rear boundary of its subordinate armies, but the distance varies depending upon the situation and availability of rail facilities. The army group base is generally an extensively developed depot complex made up of branch depots for each of the services. The army group supply base complex also contains medical installations, workshops, and maintenance units. The base commander is responsible for the administration of the base and is directly subordinate to the army group chief of the rear. Supplies come in by rail, either from the home depots or directly from factories or refineries. Fuels are stored in large tanks in one or more POL depots. Both fuel and ammunition storage are well separated from other types of storage installations.

c. Army Supply Base.

- (1) The army supply base is similar to that of army group but is smaller. The base is located in the vicinity of a rail net and like the army group base, consists of the appropriate branch depots. The distance behind the firing line is usually about 100 kilometers. Storage is similar to that at the army group supply base. If large POL tanks are not available, railroad tank cars are used. Bulk fuels are broken down into drums and cans at this level.
- (2) The army usually establishes forward supply bases near the forward boundary of the army rear area, generally one for each two or three divisions. The base commander is subordinate to the army chief of the rear.

d. Divisional Depot Area. The divisional depot area is usually located near a road junction or main road. Supplies are generally kept on wheels, but dumps on the ground may be established. Petroleum products are kept in tank trucks, drums, or cans. The depot area is administered by a chief who is subordinate to the division chief of the rear.



LEGEND
 - - - - - Rail transport (air, inland water, and pipeline also).
 = = = = = Road transport.
 → Direction of flow.

Figure 49. Flow of Supplies within Aggressor Field Forces.

e. Regimental Supply Point. The regimental supply point is usually on a supply road from the division. Its facilities and functions are similar to the division depot area, but it operates on a much smaller scale. Supplies in the point are usually maintained on trucks. At regiment there is no depot chief for administration as in division, and administration is conducted by the regimental deputy commander for supply.

f. Flow of Supplies. The flow of supplies within Aggressor field forces is depicted in figure 49.

Section II. SUPPLY

14.5. Classes of Supply and Supply Channels

a. Aggressor classes of supply are referred to by type, i.e., rations, supplies and equipment, fuels and lubricants (POL), and weapons and ammunition.

b. At army group and army levels, supply is coordinated by the chief of the rear. The agencies responsible for supply at army group are analogous to those at ministry level and are operationally subordinate to their counterpart at ministry level (par. 14.2). The same supply agencies exist at army level as at army group level, but they are smaller and are operationally subordinate to their counterpart at army group level. At army group and ministerial levels, the supply agencies for food, clothing, and equipment are subordinate to a main intendance directorate. This main directorate is not found below army group.

c. At divisional and regimental levels, the same supply channels exist as at army level, except that combat and noncombat vehicles and parts are combined into one channel which is headed by a deputy for technical matters. This officer is also in charge of the motor vehicle and tank repair facilities and depots. Each chief of service (engineer, signal, and chemical) is responsible for the supply of items pertaining to his service. At division and regimental level these supplies are stored in a combined technical supply depot. The specialized supply channels end at regimental level. At battalion all supply is handled by the commander, his executive officer, and the leader of the battalion service platoon. At company level the commander and the first sergeant perform all supply functions.

d. Aggressor supply channels are illustrated in figure 50.

14.6. Weapons and Ammunition Supply System

a. The commander of artillery troops at all echelons down through regiment is responsible for the supply of small arms and

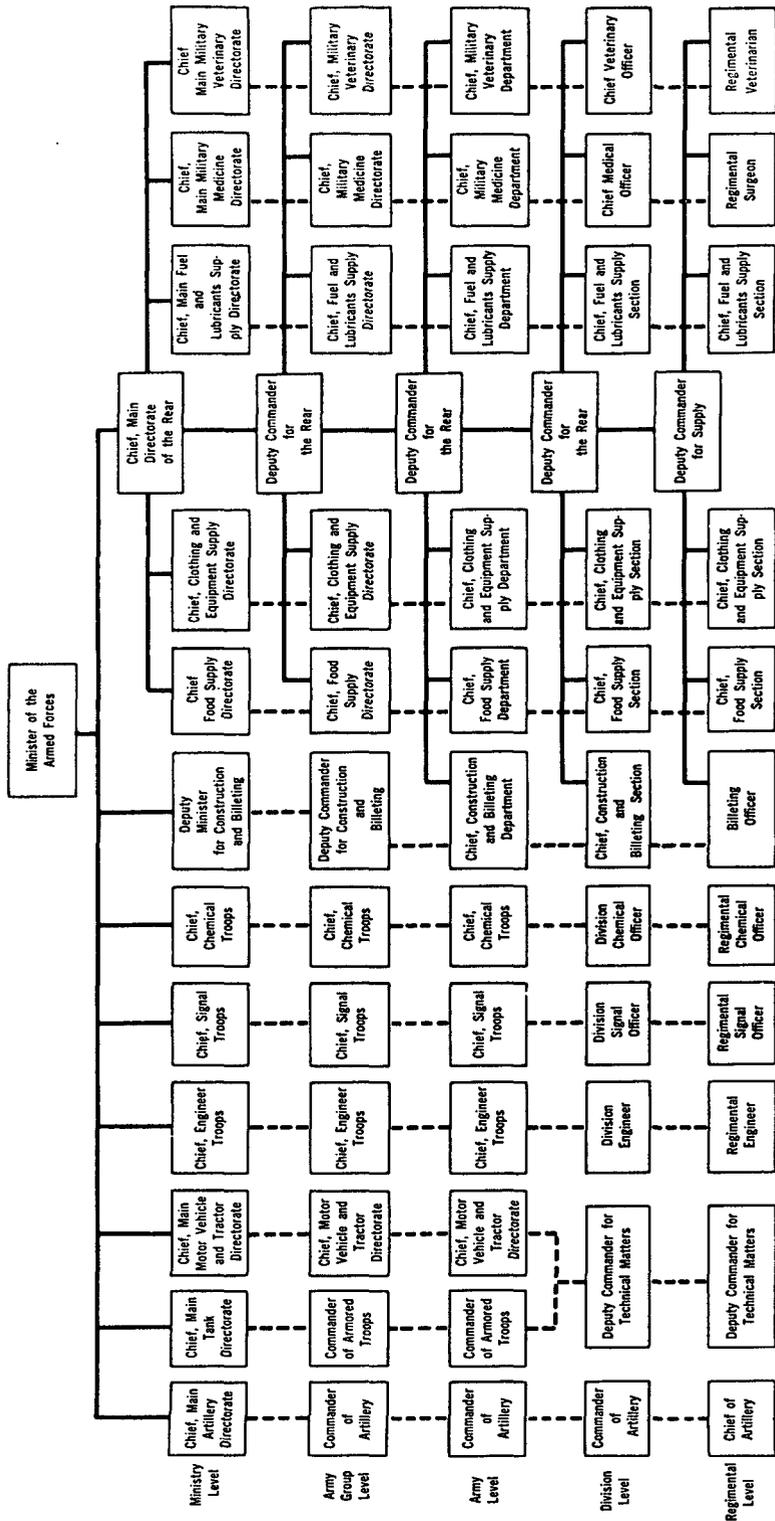


Figure 50. Supply Channels in the Aggressor Army.

Legend
 — Control Channels.
 - - - Supply Channels.

NOTE: At ministry and group levels, the Chiefs of the Food Supply Directorate and the Clothing and Equipment Supply Directorate are subordinate to the Chief, Main Intendance Directorate.

artillery materiel and ammunition, except assault guns. Nuclear ammunition follows the same supply channels as all other ammunition. Ammunition depots and dumps, as necessary, operate small sections to handle nuclear ammunition. Since these supplies usually have the highest priority for movement forward, close coordination with transportation elements is necessary. Each artillery staff has a supply and maintenance element through which weapons and ammunition are requisitioned and supplied. This element operates artillery depots and repair shops at each level of command and supervises similar activities at the next lower echelon.

b. Aggressor measures ammunition requirements in units of fire. A unit of fire is an arbitrary number of rounds per weapon which varies from weapon to weapon. The basic load for a unit is the amount of ammunition authorized to be in the unit expressed in units of fire. The basic load includes ammunition with the weapon and in unit trains or depots. Ammunition depots are maintained by the army group and army, dispersed in their supply bases. Aggressor maintains reserves of ammunition in those depots equivalent to one unit of fire for the army group or army. In preparation for specific operations, these stocks may be increased to four to six units of fire. Levels of supply are also influenced by distance from home base and threats to the line of communication. Ammunition is moved into army group and army depots primarily by rail. It is moved forward to division dumps by truck or rail, where available. Within the divisions, ammunition is moved by truck. At each echelon units maintain reserves of ammunition in unit trains or dumps. Within the division the complete basic load is not always maintained on vehicles but at times is kept in unit dumps.

c. Listed below are the usual locations of the normal basic loads of ammunition in short tons in selected Aggressor organizations:

	<i>One unit of fire</i>	<i>With weapon</i>	<i>In unit trains, depots or dumps</i>
Combined Arms Army -----	9,000	6,500	30,000
Tank Army -----	8,000	5,500	25,000
Mechanized Rifle Division -----	1,500	1,100	3,000
Mechanized Rifle Regiment -----	200	180	150
Mechanized Rifle Battalion -----	20	15	10
Tank Division -----	1,500	1,200	3,400
Tank Regiment -----	200	200	110
Tank Battalion -----	60	60	1

14.7. POL Supply

a. Divisions receive their POL supplies by vehicle from army depots. These depots normally stock sufficient POL to refuel all elements of the army twice. In preparation for specific operations,

army depots may build their refueling capability to three or four times the amount required to refuel all elements of the army. At army, army group, POL depots, and supply points fuel is stored in tanks. Oil and lubricants are stored in 40 to 130-gallon drums. Divisions use tank trucks, 50-gallon drums, and five-gallon cans for supply. In addition to maintaining full tanks on all vehicles, the divisions maintain varying POL reserves. The mechanized rifle and tank divisions retain sufficient reserves to refuel their units one or two times. Regimental reserves are sufficient to refuel regimental elements up to 70–75 percent capacity.

b. Listed below is the normal distribution of POL supplies in short tons in selected Aggressor organizations.

	<i>In vehicles</i>	<i>In unit trains, depots, or dumps</i>
Combined Arms Army -----	5,000	17,500
Tank Army -----	4,000	11,000
Mechanized Rifle Division -----	700	1,450
Mechanized Rifle Regiment -----	90	160
Mechanized Rifle Battalion -----	9	11
Tank Division -----	800	1,700
Tank Regiment -----	120	240
Tank Battalion -----	25	40

14.8. Ration and Water Supply

a. Aggressor units carry enough regular and dry rations to assure several days subsistence without resupply. Nevertheless, the exploitation of local resources to supply food is a standard practice. The standard soldiers ration weighs about 5–5.5 pounds and contains about 3,000 calories. A special dry ration of about two pounds is used as an emergency ration. Most meals are prepared in the form of soups and stews. Aggressor tries to serve two hot meals daily. When this is not possible the dry ration is issued. Hot meals are usually prepared at battalion level in rugged equipment of simple design. When necessary the food is carried to the troops in large thermos containers. Bread is baked in the division field bakery and issued directly to regiments. Rations are normally distributed throughout the Aggressor army as follows:

- (1) Army Depots—four dry and six regular rations.
- (2) Division—four or five rations.
- (3) Regimental Supply Points—approximately two rations.
- (4) Battalion and smaller units—one ration.

b. The water supply in the field is organized according to plans prepared by engineer units in cooperation with the medical service. When time permits, a water-supply plan is drawn up to include

a survey, a water-supply chart, and a work schedule. The location of existing water resources in the expected zone of operations is established by the survey. The water-supply chart indicates which water wells will be used, where new wells will be dug, and how water-supply stations will be deployed. The work schedule designates water points and the specific troops assigned thereto. The schedule also shows daily water requirements, indicates transportation requirement for hauling the water, and provides for equipment relative to water availability.

c. Engineers organize water-supply points in the rear of army groups and armies. Water-supply points for all lower echelons are organized by engineer units or the troops themselves under the direction of the local commander. The daily requirements for areas where water points are few or widely scattered are carefully computed to determine the amount of transportation needed.

d. The normal rate of water consumption per man is about three gallons a day. This figure includes drinking, food preparation, washing, laundry, and bathing. Under restricted water conditions, the daily allowance is reduced to about $1\frac{1}{2}$ gallons, and washing, laundry, and bathing are eliminated. The absolute minimum which covers only drinking water and which normally cannot exceed three days is about $3\frac{1}{2}$ quarts. The amount of water required for the engine-cooling systems varies according to terrain, road conditions, and temperature.

14.9. General Purpose Transportation and Combat Vehicles

Trucks, tractors, sedans, special-purpose wheeled vehicles, and motorcycles are supplied at army group and army levels by the motor vehicle-tractor directorate at each level. Tanks, assault guns, and armored vehicles are supplied by the commander of armored troops at army group and army level. At division and regimental levels the supply of all vehicles, both armored and non-combat, is consolidated under the deputy for technical matters. Agencies responsible for vehicle supply are also responsible for maintenance and spare parts.

14.10. Specialized Equipment

Specialized equipment such as engineer, signal, and chemical is supplied by separate supply channels within each branch of service which extend from army group to regimental level. Medical, veterinary, and billeting supplies have their own supply channels. The medical and veterinary services are subordinate to the main directorate of the rear.

Section III. REPAIR, MAINTENANCE, AND EVACUATION

14.11. General

Unit repair shops are organized to repair all types of combat materiel and armament. Mobile shops are assigned to unit service elements and are available to effect rapid "on-the-spot" repairs. Units are expected to salvage any of their equipment that is disabled in combat. Equipment exposed to nuclear contamination is evacuated to decontamination points for cleaning, and then to repair shops for repair or salvage. Collection, salvage, and evacuation of Aggressor and enemy materiel are the responsibility of salvage agencies subordinate to the rear commander at division and higher echelons.

14.12. Field Maintenance

a. It is Aggressor practice to repair tanks and vehicles as close to the front as possible. Depending upon the situation and the repairs required, mobile repair units are sent out by regiment, division, and army. When on-the-spot repair is not feasible, vehicles are evacuated. At company level no repair units are found, although some drivers are qualified mechanics and are capable of carrying out low-echelon maintenance. At battalion level there are small repair units in all line divisions which contain at least a shop truck and four or more mechanics. Tank battalions have larger repair units than mechanized rifle battalions. These units are part of the service platoon and are capable of performing light repairs on trucks and armored vehicles. Repair units at battalion level through division are mobile and are organized around two basic types of shop trucks. The type A shop contains basic tool sets, has limited spare parts, and can accomplish only light repairs. The type B shop contains a lathe, electric grinder, drill, battery charger, a generator for power tools and lights, welding equipment, and a one-ton hoist. At regimental level there is a repair unit which consists of several shop trucks of both types. This unit can do light and medium repairs. Mechanized rifle regiments have a combined motor-vehicle-tank workshop and tank regiments have separate tank and motor vehicle tractor workshops. Each line division has a motor-vehicle repair workshop and a tank repair workshop. These workshops consist of several shop trucks, many spare parts, supply trucks, tank retrievers (in the case of the tank repair workshop), and more than 100 men. These workshops can perform major repairs on trucks and medium repairs on armored vehicles. Field armies generally have two or more tank and motor-vehicle repair battalions, respectively. An army

group has several independent repair battalions, which are at least semimobile. Permanent plant facilities are used when available.

b. Aggressor pays particular attention to the operation of armored vehicles in winter. Preheating devices for fuel injectors and motors are installed in tanks in extremely cold areas. Coils carrying heated water are installed in crew compartments. Idlers and bogies are cleaned and tracks are loosened for movement over ice and snow.

c. The chief of artillery at regiment and above is responsible for the maintenance of small arms, automatic weapons, mortars, and artillery. The line regiments usually have two or three armorers located at the regimental ammunition dump to perform light repair on small arms and some automatic weapons. Armorers in artillery regiments can effect low-echelon maintenance on artillery pieces as well as on small arms. Artillery repair in tank and tank assault gun regiments is established in the tank workshop. In the mechanized rifle regiment some artillery repair is conducted in the motor vehicle-tank repair shop. At division level there is a weapons repair shop mounted in one or more shop trucks with a good assortment of tools and several repair specialists. At this level, light to medium repairs are made. Artillery repair at regiment and division consists primarily of replacing parts. At army level there is a mobile artillery repair shop with several trucks and about 30 ordnance specialists, including two or three opticians. This group can do light and medium repair on infantry and artillery weapons. It can perform electric welding and riveting, disassemble and assemble mechanical and optical parts, mount parts, and adjust fire-control equipment. At army group level the artillery repair capability includes complete overhauling of some types and major repairs on the heaviest types of artillery.

d. Signal repair units are not found at regiment and division levels. Signal equipment is repaired, when possible, by the signal units themselves. Radio, telephone, and radar units generally have some testing equipment and spare parts for light repairs. Medium repairs on telephone and some radio equipment are performed by signal technicians at the division motor vehicle-tank repair bases. These bases also carry out some repairs on quartermaster equipment. Medium and major repairs are performed at army and army group levels by signal repair units located at signal depots. Engineer and chemical equipment maintenance and repair are effected in the same manner as for signal.

e. Higher units are responsible for evacuating troops and materiel from subordinate and attached units. This is usually done

with the returning supply trucks of the higher unit which carries supplies forward. If lower unit supply trucks are used in their own supply, they evacuate equipment and wounded when they go to the rear.

f. Evacuation up to army level is usually by road, and rail or road is used from army to the rear. Armies use separate supply and evacuation routes, whenever possible, and usually have three or more evacuation routes.

g. Collection and evacuation of captured or abandoned weapons, equipment, and supplies are the responsibility of all unit commanders. In practice, this responsibility is delegated to the appropriate chief of service. Heavy equipment, such as tanks, vehicles, and field artillery, is evacuated in an established manner. Artillery is evacuated by the recovery vehicles of the next higher artillery repair shop. Tanks and trucks in the units are removed ordinarily by vehicles in the regimental motor vehicle or tank workshop to the regimental collection point for damaged vehicles. If regimental evacuation is not feasible, evacuation is made by the division, but normally the division evacuates from the regimental collection point to the appropriate division workshop or to the divisional collection point if the vehicle is to be evacuated farther. Special evacuation battalions at army level normally evacuate from the divisional collection point, but they may also evacuate from the regiment when necessary. The army-level collection point arranges the loading and evacuation by rail to army group, from where evacuation to the interior is by rail. Vehicles which can be repaired on the spot or repaired at a particular stage in the evacuation route are not evacuated farther. Evacuation procedures can be altered to meet the situation.

Section IV. MEDICAL SERVICE

14.13. General

The mission of the Aggressor Army Medical Service is to bring medical aid as far forward as possible and to expedite the evacuation of casualties. In addition, the service is responsible for epidemic control, general preventive medicine, maintenance of sanitary conditions, and the inspection of food and water supply.

14.14. Organization

a. The chief of the rear administers the medical activities of the Aggressor army through the main directorate of medical service. During wartime, general and specialized hospitals are located in

the zone of the interior and at army group and army levels. The Ministry of Health controls hospitals in the zone of the interior.

b. The army group medical directorate is responsible for the medical services of the entire army group. In addition, it administers several hospitals for screening, special surgery, convalescent care, and evacuation to the interior.

c. At army level a medical department is responsible for medical services. The army hospital base usually contains eight mobile field surgical hospitals, a medical ambulance company, and a medical replacement company for doctors, medical assistants, and nurses. In addition, an army has eight or more additional hospitals of a semipermanent type for minor wounds, infectious diseases, internal medical treatment, special surgery, and evacuation. A combined arms army's total facilities normally consist of about 5,000 beds and 6,000 attending personnel. A tank army has about one-half the medical facilities and personnel normally found in the combined arms army. The field surgical hospitals, which have a capacity of 200 beds, are deployed to division to assist the division medical station. The ambulance company is likewise deployed to assist the division in evacuation.

d. Medical services at division level consist of a medical battalion which is controlled by the chief surgeon. The medical battalion operates the division medical station, which can accept a flow of about 400 patients in 24 hours and is equipped to provide major surgery but not special surgery. The station has a capacity of 60 beds and is divided into a receiving section, surgical section, and medical section.

e. The regiment has a medical company staffed with doctors, medical assistants, nurses, and drivers. The company organizes a medical point which normally classifies and prepares patients for evacuation to division. Blood transfusions and emergency surgery can be given if required. A dispensary is normally available.

f. The battalion medical platoon is commanded by a medical assistant, who is not a doctor but has had a training course in medical practice. The medical platoon has first aid supplies, stretchers, and sedatives. When necessary, bandages are changed before evacuation to the regimental medical point. At company level medical aidmen administer first aid and remove wounded to the medical collection post for evacuation to the battalion.

g. Medical supplies are issued within the medical channel down to company and the higher unit is responsible for supplies in the

subordinate units. Medical supply is supervised by the chiefs of the rear at division level and above, and by the deputy for supply at regimental level.

14.15. Treatment and Evacuation

a. First aid is administered by available personnel from the individual's first aid packet, or it is given by platoon or company medical aid men who carry first aid bags which contain splints, bandages, disinfectants, etc., to those who are unable to walk to the battalion vehicle. Evacuation from the battalion to the regimental medical point is carried out normally within an hour after arrival at the battalion medical point. Evacuation is normally by regimental vehicle, although vehicles from the first-echelon army field surgical hospital sometimes assist if the number of casualties at battalion is unusually heavy. At this stage casualty cards are filled out to indicate the urgency and type of wounds. Emergency surgery, injections, and transfusions may be given.

b. Evacuation from the regiment is carried out by division vehicles to the division medical station. Evacuation may be made directly to the first-echelon army field surgical hospital. Normally the army surgical hospitals pick up casualties from the division medical station when the number of casualties is too large for the station to handle. Another function of these surgical hospitals is to take over any wounded who are still in the division medical station when the latter is scheduled to advance. The medical station does not normally release those expected to recover in about 10 days or those whose condition does not permit them to be moved.

c. Evacuation to the army hospital base, located 48–56 kilometers behind the line, is carried out by army ambulances or empty supply vehicles which are returning to the army supply base. Sometimes helicopters may be utilized. Casualties who are expected to recover in 15–30 days are kept at the hospital base. Those whose convalescence will be longer and those requiring special treatment are evacuated to the army group hospital base, usually by converted hospital train.

d. At army group level, after passing through the army group receiving hospital, casualties are either retained or evacuated by standard hospital trains to hospitals inside the zone of interior. Evacuation from army group level is regulated through evacuation points at main railroad junctions by representatives of the main military medical directorate. Convalescent care in an army group hospital may vary from six weeks to eight or more months.

Section V. REPLACEMENT SYSTEM

14.16. General

a. Aggressor forces in the field are supplied with replacement personnel from replacement units located in the zone of interior. Personnel from these sources flow into replacement units activated by each army group or army. These replacement units, which incorporate elements of all arms and services, form a pool of officers and EM located near the front lines. Replacement units range from company to regiment in size.

b. The replacement system in the zone of operations operates on the principle of unit replacement, but when the number of field units is insufficient or when the sector held by a unit is relatively quiet, replacements are sent direct to the frontline units, either as individuals or in small units. If possible, the unit is withdrawn from action and rehabilitated behind the front. Here they receive replacements and, if the tactical situation permits, undergo intensive training. The unit is normally withdrawn while it still has a strong enough skeleton on which to build; the Aggressor does not make a practice of exhausting a unit before it is withdrawn. In general, divisions are considered capable of offensive combat at 75 percent of authorized strength.

c. Requisitions for replacements are consolidated by occupational speciality at the lowest level of command and sent forward periodically through statistical control channels at each level of command. Officers are replaced on an individual basis. Field grade officers are assigned to army group replacement regiments from which they are individually assigned. General officers are held in a pool under the Ministry of the Armed Forces and assigned directly from the pool.

CHAPTER 15

REFERENCE DATA

Section I. AGGRESSOR WEAPONS

15.1. Small Arms

a. The rifle is semiautomatic and similar to the United States M-1. The light machinegun is a BAR-type automatic weapon. The heavy machinegun is simply constructed, water-cooled, and belt-fed. The barrel of this machinegun can be changed in a few seconds. The submachinegun is actually a rifle by United States standards. All of these weapons fire the same cartridge.

b.

<i>Type</i>		<i>Effective range in meters</i>
Submachinegun	7.62-mm	Up to 400
Light machinegun	7.62-mm	Up to 1,000
Heavy machinegun	7.62-mm	Up to 1,000
Rifle	7.62-mm	Up to 400
Pistols	9-mm	Up to 100

15.2. Mortars

<i>Weapon</i>	<i>Maximum range meters</i>	<i>Transportation</i>
82-mm ¹ -----	3,040-----	Hand carry, hand-drawn cart, within a vehicle.
120-mm ¹ -----	5,700-----	Vehicle towed by means of a muzzle clamp.
160-mm ¹ -----	8,070-----	Vehicle towed by means of a muzzle clamp.
240-mm ¹ -----	9,700-----	Vehicle towed by means of a muzzle clamp.
400-mm (SP) ^{1 2} -----	21,000-----	Vehicle towed by means of a muzzle clamp.

¹ Used to disseminate biological and chemical agents of high and low persistency.

² This weapon can fire nuclear rounds with yields of 0.5 KT, 1 KT, 2 KT or 20 KT.

15.3. Field Artillery (Towed Cannon)

<i>Weapon</i>	<i>Maximum range (meters)</i>	<i>Penetration centimeters, 500 meters, at 0°</i>
76-mm mountain gun (How)-----	10,100-----	
85-mm gun ^{1 3} -----	15,500-----	14.0
122-mm howitzer ³ -----	11,800-----	
122-mm gun ³ -----	21,900-----	21.0

<i>Weapon</i>	<i>Maximum range (meters)</i>	<i>Penetration centimeters, 500 meters, at 0°</i>
130-mm gun ³ -----	26,700 -----	
152-mm gun-howitzer ³ -----	18,300 -----	
203-mm gun-howitzer ^{2 3} -----	29,250 -----	

¹ Exists in an auxiliary-propelled version having an auxiliary engine which permits movement for short distances without a prime mover. Can be employed for indirect or antitank fire.

15.4. Self-Propelled Artillery (Cannon)

a. All Aggressor self-propelled artillery, unless otherwise specified, is heavily armored and can exist on the tank vs tank battlefield. Essentially, they are tanks with nonrevolving turrets. Guns of 122-mm caliber, or greater, are mounted on modified heavy tank chassis. Guns of smaller caliber are mounted on modified medium tank chassis or on new carriages.

b.

Note. The maximum range given is the ballistic capability of the gun without considering elevation limits.

<i>Weapon</i>	<i>Maximum range (meters)</i>	<i>Penetration centimeters, 500 meters, at 0°</i>
57-mm self-propelled gun ^{1 3} -----	8,400 -----	11.0
85-mm self-propelled gun ³ -----	15,500 -----	14.0
100-mm self-propelled gun ³ -----	21,000 -----	16.0
122-mm self-propelled gun ³ -----	20,800 -----	21.0
152-mm self-propelled gun ³ -----	17,265 -----	13.0
310-mm gun ^{2 3} -----	22,900 -----	

¹ Lightly armored w/no overhead cover.

² It can fire nuclear rounds with yields of 10 KT, 20 KT, or 50 KT.

³ This weapon can be used to disseminate biological and chemical agents of high and low persistency.

15.5. Antitank Artillery and Recoilless Rifles

a. All Aggressor antitank artillery guns can be employed for indirect fires. Recoilless weapons fire HE as well as HEAT ammunition.

b.

<i>Weapon</i>	<i>Maximum range (meters)</i>	<i>Penetration centimeters, 500 meters, at 0°</i>
57-mm antitank gun ¹ -----	8,400 -----	11.0
85-mm gun ² -----	15,500 -----	14.0
100-mm antitank gun -----	21,000 -----	16.0

Weapon	Maximum range (meters)	meters, at 0°	
		centimeters, 500 Penetration	
82-mm recoilless gun ³ -----	390 (effective against moving armor).	30.0	} At any range at which a hit can be obtained.
82-mm AT rocket launcher ³ -----	275 (effective against armor).	23.0	
82-mm Squad AT launcher ⁴ -----	100-150 (effective)	18.0	
107-mm recoilless gun ³ -----	6,650 (HE)	-----	
	457 (effective against moving armor).	38.0	

¹ May be towed or mounted in a lightly armored tracked carrier or in a wheeled vehicle without change in ballistic characteristics.

² Exists in an auxiliary engine which permits moving the piece for short distances without a prime mover.

³ Equipped with a two-wheeled mount for towing.

⁴ Squad antitank launcher fires 82-mm shaped charge projectile from a 40-mm launcher.

15.6. Antiaircraft Artillery

Weapon	Practical rate of fire rd per min	Maximum effective vertical range in meters	Maximum horizontal range in meters
14.5-mm (quad) ¹ -----	150 (per gun)	1,160	2,000
14.5-mm (twin)-----	150 (per gun)	1,160	2,000
37-mm antiaircraft gun ---	70	1,600	8,000
57-mm antiaircraft gun ² -----	60	4,900 (off carriage radar control).	12,000
		1,830 (on carriage control).	
85-mm antiaircraft gun ---	20	8,400	15,500
100-mm antiaircraft gun .	15	13,700 (with VT fuse)	21,000
Surface-to-air-missile ³ -----	5	15,000	20,000
SAM 1 (BULTURO)			
Surface-to-air-missile ⁴ -----	1	19,000	64,000
SAM 2 (SAGO)			
Surface-to-air-missile ⁵ -----	0.5	30,000	130,000
SAM 3 (AGLO)			

Note. All of these weapons can be used to disseminate biological and chemical agents of high and low persistency.

¹ May appear in towed or self-propelled version.

² Also appears in a twin version mounted in a modified medium tank chassis. This version is issued to mechanized and tank units.

³ The BULTURO is a single stage, solid fuel propellant missile designed for low altitude protection. The missile and its associated equipment are normally mounted in the amphibious armored carrier (AC3) described in paragraph 15.12. For airborne operations the missile and its associated equipment are mounted in light trucks. A battery can engage up to five targets simultaneously. BULTURO does not have a surface-to-surface capability.

⁴ The SAGO is a two stage, solid fuel propellant missile. It can be employed from field or permanent installations. It can engage airborne targets above the radar horizon. The fire control system has a capacity of eight simultaneous targets at maximum altitude and range. SAGO can fire a nuclear warhead of 0.5 KT, 1 KT, or 2 KT, and can be used for surface-to-surface fires.

⁵ The AGLO is a two stage, solid fuel propellant missile. It can be employed from a field or permanent installation. The missile is designed for high altitudes and long range surface-to-air missions. It can fire a nuclear warhead of 2 KT or 10 KT and can also be used for surface-to-surface fires.

15.7. Artillery Rocket Launchers (Nonnuclear)

Type of weapons	Number of rockets	Maximum range (meters)	Mount
140-mm rocket launcher *	16	9,000	6 x 6 truck chassis
240-mm rocket launcher *	12	9,000	High speed tractor
280-mm rocket launcher *	6	23,000	6 x 6 truck chassis

* Can be used to disseminate biological and chemical agents of high and low persistency.

15.8. Artillery Rockets (Nuclear)

Weapon	Range	Mount	Yield	Minimum time between successive rounds
NERONO ³ (R 1) 1-rd rocket launcher.	8-24 kilometers	Full-tracked amphibious tank chassis ¹ .	2, 10, 20 KT	30 min.
KOLOSSO ³ (R 2) 1-rd rocket launcher.	16-58 kilometers	Heavy tank chassis ² .	10, 20, 50, 100-KT	40 min.

¹ Cannot be fired while afloat.

² Rocket is raised to vertical position by hydraulic jacks for firing.

³ This weapon can be used to disseminate biological chemical agents of high and low persistency.

15.9. Artillery Ballistic Missiles (Nuclear)

a. All Aggressor ballistic missiles can fire nuclear warheads. TONDRO and FULMO can also fire high explosive, BW, or CW warheads. TONDRO and FULMO missiles employ solid fuel propellants while SUPRO and TERURO missiles employ liquid fuel propellants.

b.

Weapon	Range	Mount	Yield	Minimum time between successive rounds
TONDRO (ABM 1)	80-320 km	Heavy tank chassis ¹ .	10, 20, 50, 100, 200, and 500 KT; 1, 5 MT	1 hr
FULMO (ABM 2)	240-560 km	SP chassis	50, 100, 200, and 500 KT; 1, 5, MT	1 hr
SUPRO ² (ABM 3)	560-1120 km	Towed on trailer.	100, 200, 500 KT, 1 MT, 5 MT	2 hr
TERURO ² (ABM 4)	2400-12,000 km	Towed or rail mobile.	500 KT; 1, 5, 20 MT	4 hr

¹ The missile is carried in an external container and has a built-in pedestal for vertical launching.

² Cannot be fired from mount. Requires permanent installation for firing except that the SUPRO may be adapted for firing from a submarine.

15.10. Tanks

a. *Fuel.* All Aggressor tanks used diesel fuel. Angles of armor increase protective effectiveness, particularly on turrets and front hull.

b. *General.*

Type	Main Armament	Maximum road speed	Maximum range (in board fuel)	Penetration centimeters, 500 mtrs at 0°	Weight (tons)
Heavy	122-mm gun	35 KPH	225 km	21.0	54
Medium	100-mm gun	48 KPH	400 km	16.0	40
Amphibious *	76-mm gun	33 KPH	256 km	12.0	16

* Water speed is 10 KPH.

c. *Armor Thickness, Centimeters.*

Type	Turret	Front	Side
Heavy	22 centimeters *	14 centimeters	8 centimeters
Medium	17 centimeters *	10 centimeters	7 centimeters
Amphibious	2.5 centimeters	1.6 centimeters	1.2 centimeters

* This is not actual thickness, but is the armor basis, (calculated from combination of thickness and slope).

Section II. AGGRESSOR EQUIPMENT

15.11. Helicopters

Name	Type	Max speed in KPH with full load	Max range in NM with full load	Max payload in pounds or combat equipped troops for 50 NM radius	Lb	Trps
H1 ¹	Obsn Hel	65	100			
H2	Obsn Hel	87	180	200		1
H3 ^{2, 3}	Util Hel	108	200	350		2
H4 ³	Util Hel	81	270	750		3
H5 ⁴	Lt Trans Hel	101	200	3,500		16
H6 ⁴	Med Trans Hel	120	220	8,800		40
H7 ⁴	Hv Trans Hel	150	250	20,000		70

¹ Pilot only. H1 can land on water.

² Equipped with pods to carry two litter casualties externally. Primarily employed as an air ambulance.

³ Can be equipped with machineguns and cannons.

⁴ Equipped with rear doors/ramp for rapid loading and unloading. Can be equipped with external bomb racks with bomb capacity of approximately 50% of the maximum cargo payload.

15.12. Armored Carriers

a. Aggressor armored carriers do not have permanent armored overhead covers. They can be fitted with blanket-type overhead covers that afford protection against shell fragments. All Aggressor armored carriers can be armed with machineguns, equipped with radios, and can be used as prime movers.

b.

Type	Passenger capacity	Road speed	Armor thickness
Light armored carrier, 4 x 4 (AC 1)	8	77 KPH	1.25 centimeters
Medium armored carrier, 6 x 6 (AC 2)	12	69 KPH	1.25 centimeters
Amphibious armored carrier * (AC 3)	12	34 KPH	2.0 centimeters

* Track-laying vehicle. Water speed is 10 KPH.

15.13. Amphibious Vehicle

Type	Road speed	Water speed	Passenger capacity	Cargo capacity
Light amphibious truck, 4 x 4 (LACERTO).	100 KPH	8 KPH	4	1,000 lb
Medium amphibious truck, 6 x 6 (LIMO).	80 KPH	9 KPH	25	2.5 tons
Tracked amphibious vehicle ^{1, 2} (ARANEO).	40 KPH	9 KPH	50	7 tons

¹ Equipped with tail gate and ramp to facilitate loading.

² Can carry a 152-mm gun-howitzer or a two-ton truck.

15.14. Aircraft

Type	Engine	Maximum speed	Maximum range
Fighter ¹ (PAFAJO).	Single jet	850 knots	1,280 kilometers
Attack ^{1, 2} (DETRUIJO).	Single jet	750 knots	960 kilometers
Bomber ³ (FORVISO).	Twin jet	900 knots	1,600 kilometers
Assault Transport (PORTIJO).	Twin turboprop	300 knots	3,200 kilometers
Artillery Observation (VIDO).	Turboprop	275 knots	640 kilometers
Observation Liaison (OBSERVO).	Single	140 knots	250 kilometers

¹ May be used for photographic reconnaissance.

² Capable of carrying nuclear bomb and biological and chemical agents externally.

³ Capable of carrying nuclear bombs and biological and chemical agents.

Section III. CHEMICAL AND BIOLOGICAL AGENTS DISSEMINATED BY AGGRESSOR

15.15. Chemical Agents

Aggressor chemical agents which are disseminated in various munitions are as follows:

a. Agents employed for low persistency effect include nerve gas, hydrogen cyanide, cyanogen chloride, phosgene, and diphosgene.

b. Agents employed for high persistency effect include mustard, lewisite, and other arsenicals.

c. Toxic Smokes include adamsite, diphenylcyanoarsine, and choroacetophenone.

15.16. Biological Agents

In the event of biological warfare, Aggressor will employ anti-personnel and antianimal biological agents as well as anticrop agents and chemical defoliants. For biological warfare play, the use of one or both of the anti-personnel agents listed below should be assumed. Information on the agents is as follows:

a. *Lugo Fatigue (Common Name)*. A vegetative incapacitating type agent.

- (1) *Scientific name.* *Bacterium fatigum*.
- (2) *Description.* Is a gram-negative, nonsporulating, motile, rod-shaped, aerobic bacterium, 0.5 by 1.0 microns.
- (3) *Disease produced.* Lugo Fatigue is a chronic, contagious, debilitating disease of man characterized by lesions of the nasopharynx passages.
- (4) *Mode of transmission.* Is by ingestion or inhalation of organisms.
- (5) *Incubation period.* Is from two to five days.
- (6) *Susceptibility.* Susceptibility is general, about 90 percent, among unexposed individuals. Recovery from an attack results in temporary immunity lasting up to six months.
- (7) *Prevalence.* The disease is almost unknown in the United States but is common in Aggressor nation.
- (8) *Mortality.* In untreated individuals mortality ranges from 0 to 10 percent.
- (9) *Immunization.* Is temporary only. Is effective in 40 percent vaccinated individuals for a six-month period.
- (10) *Treatment.* Appropriate antibiotics lower mortality and shorten the course of disease.
- (11) *Epidemicity.* Is high in presence of carriers and absence of sanitary controls and where no protection has been provided by immunization.
- (12) *Stability.* Is viable two to three weeks in water; one to two months in fecal matter. Pasteurization (exposure to 142° F. (61.1° C.) for 30 minutes), cooking, or boiling are effective measures of decontamination.
- (13) *Probable mode of dissemination.* Is by airplane spray tank, aerosol bomb, or aerosol generator.

b. *Toledo Infection (common name)*. A sporeforming lethal type biological agent.

- (1) *Scientific name.* *Bacillus pneumosporus*.
- (2) *Description.* Is a gram-positive, sporulating, nonmotile,

rod-shaped, aerobic organism, 1.0 to 1.3 by 3.0 to 10 microns.

- (3) *Disease produced.* Toledo Infection is a pulmonary infection characterized by high fever, glandular swelling, coughing, pneumonia, and cutaneous lesions.
- (4) *Mode of transmission.* Is by ingestion or inhalation.
- (5) *Incubation period.* Is from one to three days.
- (6) *Susceptibility.* Is general among previously unexposed personnel.
- (7) *Prevalence.* The disease is widespread in animals rare in man.
- (8) *Mortality.* In untreated personnel mortality ranges from 90 to 100 percent.
- (9) *Immunization.* None has been developed for man.
- (10) *Treatment.* Cutaneous infections can be effectively treated by some antibiotics (penicillin, terramycin). Similar treatment for respiratory infections may be effective in early stages.
- (11) *Epidemicity.* Is not epidemic in man.
- (12) *Stability.* Is very stable and may remain viable in soil and water for years. Steam under pressure or dry heat at 165° C. for 1½ hours; is necessary to kill spores. Ordinary disinfectants have a limited effect.
- (13) *Probable mode of dissemination.* Spores are disseminated in vials or capsules from airplane spray tanks or from other dry agent disseminators. They may be dispersed from an aerosol dispenser when suspended in a liquid solution.

c. September Fever (Common Name). A viral incapacitating type biological agent.

- (1) *Scientific name.* September fever virus.
- (2) *Description.* Is a virus 10 to 20 millimicrons in diameter.
- (3) *Disease produced.* September fever is an acute, infectious disease of field mice (*Mus agressoris*) transmissible to man. It is characterized in humans by high fever (103° to 104° F.), muscular aches, vomiting, diarrhea, and extreme prostration. The symptoms last from 6 to 10 days and recovery is normally uneventful.
- (4) *Mode of Transmission.* In nature, is by inhalation of dust containing contaminated rodent feces.
- (5) *Incubation period.* Is from one to three days.

- (6) *Susceptibility*. Is general, about 95 percent, among unexposed individuals. Recovery from an attack results in immunity lasting from 10 to 30 years.
- (7) *Prevalence*. This disease is found only in the plains area of the Aggressor nation.
- (8) *Mortality*. Fatalities are low (two to three percent), even in untreated individuals.
- (9) *Immunization*. None.
- (10) *Treatment*. There is no specific treatment; supportive only.
- (11) *Epidemicity*. Disease is not communicable from man to man.
- (12) *Stability*. Is viable in dried rodent feces for one to three weeks. Exposure to direct sunlight kills the organism in $\frac{1}{2}$ to 1 hour. It may be killed by heating to 176° F. for three minutes. Formalin is an effective decontamination agent.
- (13) *Probable mode of dissemination*. Is by airplane spray tank, air delivered munitions, or aerosol generator.

Section IV. AGGRESSOR SURVEILLANCE EQUIPMENT

15.17. General

Aggressor uses the following equipment in combat surveillance operations:

a. MANKO. A short range ground surveillance radar having a range of 1,200 meters for the detection of moving personnel and 4,500 meters for the detection of vehicular movement. This radar has a beam width of 6°, a traverse of 360°, and is manually scanned in the manner of a spotlight. It weighs 90 pounds and can be mounted on two standard boards or installed in vehicles. This radar is provided on a basis of three per front line regiment and its normal employment is at the company level. Normal employment will be at night or during periods of reduced visibility. An average of 15 minutes processing time delay is normally allowed for information to reach the company commander.

b. MEZA. A medium range ground surveillance radar. It will detect moving personnel to a range of 3,500 meters and moving vehicles to a range of 12,000 meters. This radar set is equipped with a device whereby the operator can cause it to scan and search an area automatically. When movement within the area is apprehended, the operator can stop the scan and search and plot the location of the movement accurately. This radar also gives the

operator an aural indication of movement. It has a 12° beam width, and a traverse of 360° . Two of these radars are allocated to each front line regiment and they are normally kept under regimental control. These radars may be employed well forward within the regimental area, taking advantage of local security provided by one of the companies of the regiment, and of terrain that will afford it a maximum field of view. An average of 20 minutes processing time delay should be allowed for information to reach the regimental commander. The total weight of the radar and power unit is 250 pounds, and may be carried on pack boards.

c. LONGA. A long-range ground surveillance radar. It has a range of 12,000 meters for the detection of personnel movement and a range of 25,000 meters for the detection of moving vehicles. The set is equipped with a view scope, earphones, and a plotting board. The radar can automatically scan a 35° sector of the battlefield. It can be used to scan a very small sector or it can scan throughout the entire 360° traverse. When the operator detects a suspicious motion, he can narrow the radar beam and zero it on the target. An indicator light mounted under a map of the area shows the object's position while numerical dials show the target's exact position. It provides a significant amount of information on enemy activity, at considerable depths. One of these sets is allocated to division artillery of each division. This radar is normally employed continuously to provide constant surveillance of the division area. An average of 15 minutes processing time delay should be allowed for information to reach the commander. The total weight including power and control shelter is 2500 pounds.

d. AERO. Side view radar. It has a range of 60 kilometers. Normally mounted on light aircraft, usually helicopter, but can be mounted on land vehicles, such as tanks and armored carriers. When mounted on land based vehicles, range is somewhat decreased. Presentation by view scope and 35mm film recording. Processing time delay 90 minutes. Allocated one per division and normally used most profitably in general support of the division. Can be employed either night or day. Weight 450 pounds. The great amount of territory that the equipment can survey, the requirement for a good landing strip, the necessity for very careful processing of film and the requirement for skilled interpretation of the film, point to the desirability of employing this equipment under centralized control of the division.

e. TN-2. A lightweight 10 x 10 inch format camera designed for use in drones. It is also capable of pod-mounting on the wings

of light aircraft, including helicopters. Film has a one hour processing time. It can be employed night or day. Allocated as needed to division and army.

f. VIDO. The army's medium observation airplane, called VIDO, is capable of operating from small fields and unimproved runways. It has a capability of performing aerial observation, surveillance and target location missions under all weather and light conditions. It is designed to cruise at approximately 190 knots at 1,500 meters for a minimum of two hours with a sensory equipment load of approximately 1,200 pounds. Its surveillance capabilities will include infrared mapping, photography, side-view radar, and television coverage. This aircraft is allocated to division and army level.

g. S-100—P SENPILOTA. To augment the army's observation airplanes, this drone is used. It has a speed of 150 knots, a payload of 65 pounds and an endurance capability of 45 minutes. It is light-weight and propeller driven with a simple radio command guidance. The maximum control range is about 125,000 meters by radar or about 5,000 meters visually. Recovery is by parachute. Component equipment consists of one TN-2 camera, one zero length launcher, radar equipment for tracking, and accessory equipment. Equipped with the TN-2 camera, this drone can be used for day or night photography in good weather and under conditions of hostile anti-aircraft defense that would preclude penetration of enemy territory by manned aircraft. An average of 1½ hour processing time delay should be allowed for information to reach the division G2. One surveillance drone system (10 drones, two drone launchers, two guidance-control equipment) is normally allotted to each division.

Table II. Typical Combined Arms Army Principal Weapons and Transportation

Unit	Mort		Artillery					Rockets			Antiaircraft				Antitank						Armored vehicles										
	120-mm	160-mm	85-mm gun	122-mm how	122-mm gun	180-mm gun	152-mm gun-how	140-mm rocket lchr	240-mm rocket lchr	280-mm rocket lchr	NERONO	14.5-mm AAMG (dual)	14.5-mm AAMG (quad)	57-mm AA gun SP	85-mm AA gun	100-mm AA gun	57-mm AT gun	82-mm Rcl AT gun	82-mm sqd AT lchr	85-mm AT gun SP	100-mm AT gun	107-mm Rcl AT gun	Amphibious tank	Medium tank	Heavy tank	122/152-mm aslt gun	Tank retriever	Armd carr (all types)			
Mech Rifle Div (4)	72	72	72	72							348	72	192			144	240	1008	72			72	100	864				40	104	1624	
Tank Division (1)	6		36					12			38	6	48	12		12	12	162	6		6		25	271				52	35	263	
AAA Division											8	8	60	60					48	20										17	
Army AT Arty Brig																															
Army Arty Brig (3)																															
Rocket Brigade																															
Army Recon Regt																															
Total	78	72	72	108	72	72	72	72	30	18	12	12		12	60	156	252	1170	126	20	78	135	1157	95	92	143	1986				

Table III. Typical Tank Army Principal Weapons

Unit	Mor- tar	Artillery				Rockets			Antiaircraft					Antitank					Armored vehicles							
		100-mm gun	122-mm how	122-mm gun	152-mm gun-how	NERONO	240-mm rocket lchr	280-mm rocket lchr	14.5-mm AAMG (dual)	14.5-mm AAMG (quad)	57-mm AA gun	57-mm AA gun SP (twin)	85-mm AA gun	100-mm AA gun	57-mm AT gun	82-mm sqd AT lchr	82-mm rcl AT gun	85-mm AT gun SP	107-mm rcl AT gun	Amphibious tank	Medium tank	Heavy tank	Tank retriever	122/152-mm aslt gun	Arm carr (all types)	
Tank Division (4)	24		144			48		152	24	192	48			48	648	48	24	24	24	100	1084	380	140	208	1052	
AAA Division								8	8			60														
Rocket Brigade						12	18																			
Army Arty Brig		24		24	24																					6
Army Recon Regt								12												10	22		4			32
Total	24	24	144	24	24	12	66	18	32	60	48	60	48	60	648	48	24	24	110	1106	380	144	208	1090		

Table IV. Mechanized Rifle Division Principal Weapons and Transportation

Unit	Small arms					Mortar			Artillery			Antiaircraft			Antitank				Armored vehicles					Vehicles		Act
	Rifles	Pistols	SMG	LMG	HMG	120-mm	160-mm	85-mm gun	122-mm how	140-mm rocket launcher	14.5-mm AAMG (dual)	14.5-mm AAMG (quad)	57-mm AA SP (Twin)	57-mm AT gun	82-mm sqd AT launcher	82-mm rcl AT gun	85-mm AT gun SP	107-mm rcl AT gun	Amphibious tank	Medium tank	122/152-mm aslt gun	Tank retriever	Armd carr (all types)	Trucks & tracked PM	Motorcycles	
Mech Rifle Regt (3)	3297	1089	2694	255	54	18					72	18	18	36	243	36	18	18	15	96		12	312	669	39	
Medium Tank Regt	474	142	514	9						3	6				9				5	109	10	6	22	104	16	
Division Artillery	1482	376	167	33		18	18	18		4	24												268	2		
Recon Battalion	184	29	137							3									5	11		1	24	18	24	
Others	1388	305	822	5						5					24							7	48	526	54	
Total	6825	1941	4334	302	54	18	18	18	18	18	87	18	48	36	232	60	18	18	25	216	10	26	406	1555	135	

Table V. Mechanized Rifle Regiment, Mechanized Rifle Division, Principal Weapons and Transportation

Unit	Small arms					Mor-tar	AA			AT					Armored vehicles				Vehicles	
	Rifles	Pistols	SMG	LMG	HMG		120-mm	14.5-mm AAMG (dual)	14.5-mm AAMG (quad)	57-mm AA gun SP	57-mm AT gun	82-mm sqd AT lehr	82-mm rcl AT gun	85-mm AT gun SP	107-mm rcl AT gun	Amphibious tank	Medium tank	Tank retriever	Armd carr (all types)	Trucks
Mech Rifle Bn (3)	717	183	639	81	18		18			12	81	12		6		32	1	87	117	3
Tank Bn (Med)	80	25	94				1	6	6									2	7	7
AA Arty Bn	50	20	24										6					2	14	14
Signal Company	31	10	8															2	4	4
Antitank Company	32	10	8			6												2	1	1
Mortar Company	34	8	8				2								5			7	7	8
Recon Company	28	10	37	4														7	3	3
Trans Company	33	5	50				2											2	50	50
Hq Company	72	52	8				2											2	2	2
Svc Company	22	40	22				1										3	2	18	2
Total	1099	363	898	85	18	6	24	6	6	12	81	12	6	6	5	32	4	104	223	13

Table VI. Mechanized Rifle Battalion, Mechanized Rifle Regiment, Principal Weapons and Transportation

Units	Small Arms						AA	AT				Armed Veh	Veh
	Rifles	Pistols	SMG	LMG	HMG	14.5-mm AAMG (dual)		57-mm AT gun	82-mm Sqd AT Lehr	82-mm Rcl AT gun	107-mm Rcl AT gun		
Mech Rifle Co (3)	138	27	165	27				27			18	30	
AT Company	37	10	8				4		4	2	2	1	
MG Company	24	8	6		6						3		
Hq & Svc Co	40	16	34			6					6	8	
Total	239	61	213	27	6	6	4	27	4	2	29	39	

Table VII. Medium Tank Regiment, Mechanized Rifle and Tank Division, Principal Weapons and Transportation

Unit	Small arms				AA		AT	Armd veh					Veh	
	Rifles	Pistols	SMG	LMG	14.5-mm AAMG (dual)	57-mm AA gun SP		82-mm sqd AT	Amphibious tank	Medium tank	122/152-mm aslt gun	Tank retriever	Armored carrier	Trucks
Tank Bn (3)	240	75	282						96		3	6	21	9
AA Btry	31	6	4		1	6			10			1	1	5
Recon Company	29	8	30									5	1	
Aslt Gun Co	10	5	40							10			1	
Signal Company	20	6	6									2	4	
Transportation Co	26	8	14										53	
Hq Company	52	33	100						3			1	6	1
Service Company	66	1	38	9	2		9				3	7	17	1
Total	474	142	514	9	3	6	9	5	109	10	6	22	104	16

Table VIII. Medium Tank Battalion, Medium Tank Regiment, Principal Weapons and Transportation

Unit	Small arms			Armored vehicles				Vehicles	
	Rifles	Pistols	SMG	Medium tank	Tank retriever	Armored carrier	Trucks	Motorcycles	
Tank Co (3) Hq & Svc Co	69 11	15 10	75 19	30 2	1	2	2 5	3	
Total	80	25	94	32	1	2	7	3	

Table IX. Reconnaissance Battalions, Tank and Mechanized Rifle Division, Principal Weapons and Transportation

Unit	Small arms			Arm'd veh				Veh		
	Rifles	Pistols	SMG	AA	Amphibious tank	Medium tank	Tank retriever	Armored carrier	Trucks	Motorcycles
Tank Co (Med) Recon Company Motorcycle Co Hq Company Service Co	90 25 44 21 4	6 6 6 10 1	35 35 26 12 29	----- 3 ----- ----- -----	5 ----- ----- ----- -----	11 ----- ----- ----- -----	----- ----- ----- ----- 1	----- 16 1 4 3	1 1 1 5 10	1 1 21 ----- -----
Total	184	29	137	3	5	11	1	24	18	23

Table X. Antiaircraft Artillery Battalion, Mechanized Rifle Regiment, Principal Weapons and Transportation

Unit	Small arms			AA			Veh
	Rifles	Pistols	SMG	57-mm AA gun (SP)	14.5-mm AA MG (dual)	14.5-mm AA MG (quad)	
	57-mm Gun Btry	19	11	11	6	1	
MG Btry	23	5	9	---	---	6	4
Hq & Svc Btry	8	4	4	---	---	---	7
Total	50	20	24	6	1	6	14

Table XI. Division Artillery, Mechanized Rifle Division, Principal Weapons and Transportation

Unit	Small arms					Arty			AA		Veh	
	Rifles	Pistols	SMG	LMG	Mort	85-mm gun	122-mm how	140-mm rocket launcher	14.5-mm AA MG (dual)	57-mm AA gun SP	Trucks	Motorcycles
	Arty Regt	839	240	21	27	18	18	18	---	---	---	181
Rocket Bn	185	42	53	6	---	---	---	18	---	---	42	---
AA Arty Regt	383	39	73	---	---	---	---	---	4	24	25	2
Obsn Btry	35	20	10	---	---	---	---	---	---	---	10	---
Hq & Svc Btry	40	35	10	---	---	---	---	---	---	---	10	---
Total	1482	376	167	33	18	18	18	18	4	24	268	2

Table XII. Artillery Regiment, Division Artillery, Mechanized Rifle Division, Principal Weapons and Transportation

Unit	Small arms				Mortars		Arty		Veh Trucks
	Rifles	Pistols	SMG	LMG	160-mm	85-mm gun	122-mm how		
Gun Bn (85-mm)	249	56	---	9	---	18	---	35	
How Bn (122-mm)	249	56	---	9	---	---	18	35	
Mortar Bn (160-mm)	242	48	---	9	18	---	---	35	
Hq Btry	48	40	12	---	---	---	---	37	
Svc Btry	51	40	9	---	---	---	---	39	
Total	839	240	21	27	18	18	18	181	

Table XIII. Rocket Launcher Battalion, Division Artillery, Mechanized Rifle Division, Principal Weapons and Transportation

Unit	Small arms				Rocket lahrs		Veh Trucks
	Rifles	Pistols	SMG	LMG	140-mm rocket lahr	Trucks	
RL Btry (3)	93	27	42	6	18	18	18
Hq & Svc Btry	92	15	11	---	---	---	24
Total	185	42	53	6	18	18	42

Table XIV. *Antiaircraft Artillery Regiment, Division Artillery, Mechanized Rifle and Tank Division, Principal Weapons and Transportation*

Unit	Small arms			AA		Veh	
	Rifles	Pistols	SMG	14.5-mm AAMG (dual)	57-mm AA gun SP	Trucks	Motorcycles
Gun Btry, 57-mm (4)	328	20	52	4	24	5	
Hq & Svc Btry	55	19	21	-----	-----	20	2
Total	383	39	73	4	24	25	2

Table XV. Tank Division Principal Weapons and Transportation

Unit	Small arms					Mort	Arty	Antiaircraft				Antitank				Armored vehicles					Vehicles		Acft					
	Rifles	Pistols	SMG	LMG	HMG			120-mm	122-mm how	240-mm rocket launcher	14.5-mm AAMG (dual)	14.5-mm AAMG (quad)	57-mm AA gun SP	57-mm AA gun	85-mm AA gun	57-mm AT gun	82-mm sqd AT launcher	82-mm rd AT gun	85-mm AT gun SP	107-mm rd AT gun	Amphibious tank	Medium tank		Heavy tank	Tank retriever	122/152-mm aslt gun	Armd carr (all types)	Trucks & tracked PM
Tank Regt (Med) (2)	948	284	1028	18					6	12				18					10	218		12	20	44	208	32		
Tank Regt (Hv)	607	156	337						6	6	6								5	10	95	3	18	113	19			
Mech Rifle Regt	1099	363	898	85	18	6			24	6				81	12	6		6	5	32	4	104	223	18				
Div Artillery	839	211	540	16		36			4	24	12											1	32	4	18	2		
Aslt Gun Bn	143	15	67	1					1										5	11		1	24	18	24	5		
Recon Bn	184	29	137						3					63								14	69	981	62	3		
Others	2305	150	120	34																								
Total	6125	1208	3127	154	18	6	36	12	38	6	48	12	12	162	12	6	6	25	271	95	35	52	263	1741	157	3	3	

Table XVI. Heavy Tank Regiment, Tank Division, Principal Weapons and Transportation

Unit	Small arms			AA 57-mm AA gun SP (twin)	Armored vehicles					Veh		
	Rifles	Pistols	SMG		Amphibious tank	Medium tank	Heavy tank	Tank retriever	Armored carriers	Trucks	Motorcycles	
Tank Bn (Heavy) (3)	333	90	195			93						
Recon Co	33	8	30		5	10			5	24	1	9
AA Btry	13	15	16	6						12	12	5
Service Co	125	8	67				3		3	64		
Hq Co	103	35	29			2			10	12		5
Total	607	156	337	6	5	95	6	18	113	19		

Table XVII. Division Artillery, Tank Division, Principal Weapons and Transportation

Unit	Small arms				AA			Arty		Veh
	Rifles	Pistols	SMG	LMG	14.5mm AAMG (dual)	57mm AA gun (SP)	122mm how	240mm rocket lehr	Trucks	
AAA Regt	383	39	73		4	24			25	2
Arty Regt	261	104	418	12			36		110	
Rocket Lehr Bn	154	33	39	4				12	35	
Hq & Svc Btry	41	35	10						10	
Total	839	211	540	16	4	24	36	12	180	2

Table XVIII. Artillery Regiment, Division Artillery, Tank Division, Principal Weapons and Transportation

Unit	Small arms					Arty		Veh
	Rifles	Pistols	SMG	LMG	122-mm how	Trucks		
Howitzer Bn (2)	170	60	400	12	36	60		
Service Btry	43	21	9			30		
Hq Btry	48	23	9			20		
Total	261	104	418	12	36	110		

Table XIX. Airborne Division Principal Weapons and Transportation

Unit	Small arms					Mortars			AA		AT		Veh		Helicopters					
	Rifles	Pistols	SMG	LMG	HMG	82-mm	120-mm	160-mm	14.5-mm AAMG (dual)	14.5-mm AAMG (quad)	57-mm AA gun	82-mm rd AT gun	86-mm AT gun	Trucks	Motorcycles	H2	H4	H6	H6	
Mixed Regt (2)	2084	594	1442	198	72	36			36											
Prcht Regt	1042	297	721	99	36	18			18											
Div Arty	645	141	134	51					6											
Mortar Regt	(358)	(74)	(68)	(18)																
AT Bn	(161)	(26)	(33)	(15)																
AA Bn	(86)	(26)	(33)	(6)					(6)											
H&S Btry	(40)	(15)	(12)																	
Recon Company	38	6	26	21	1															
Others	600	295	420	6	12				6											
Total	4409	1333	2743	375	121	54	12	12	66	30	33	191	12	556	32	16	34	72	14	14

Table XX. Airborne Rifle Battalion, Parachute or Airborne Rifle Battalion, Helicopter-Principal Weapons and Transportation

Units	Small arms					AA		Mort	AT		Vehicles				Helicopters (*)			
	Rifles	Pistols	SMG	LMG	HMG	14.5-mm AAMG (dual)	14.5-mm AAMG (quad)	82-mm	57-mm AT gun SP	82-mm rcl AT gun	Trucks	Motorcycles	H2	H4	H6	H6	H6	
Rifle Co (3)	141	27	162	27	9								3	12	21			
MG Co	30	10	15	6	3						6		1	1	3			
AAMG Co	26	8	6			6	2				6		1	1	3			
AT Co	37	10	13						3	4	7		1	1	3			
Mortar Co	36	8	11					6			7		1	1	3			
HQ & Svc Co	44	16									8	1	1	1	3			
Total	314	79	207	33	12	6	2	6	3	4	24	1	8	17	36			7

(*) Airborne Rifle Battalion, Helicopter only.

Table XXI. Rates of March (Time and Space Factors)

Column	1	2	3	4	5	6	7
Line	Type Unit	Rate of March KPH 1					
		On roads		Cross-country		Lengths of march on road (daily average) 2	Forced march 4
		Day	Night	Day	Night		
1	Foot troops 3	4	3	2	1	30	50
2	Artillery, towed	30	25	15	10	200-280	380-420
3	Motorized 5	30	25	15	10	240-320	480-550
4	Tanks and SP guns 6	25	15	10	6.5	200-280	300-320
5	Armored carrier (personnel)	40	25	15	10	300-350	500-550
6	Motorcycles	65	25	15	---	500-550	750-850
7	Individual trucks	50	25	25	10	300-350	500-550

1 Rate of march is average speed over a period of time including halts.

2 Average day's march is eight hours.

3 For movement over mountainous terrain add one hour for each 300 meters of climb or 500 meters for descent.

4 Forced march is calculated at average rates for 12 hours' marching time.

5 Includes mechanized rifle divisions.

6 Includes tanks and self-propelled guns.

For tanks in mechanized rifle divisions use table XXII.

Table XXII. Mechanized Rifle Division March Table

1	2	3	4	5		6		7
				Road space (Km) Vehicles in march column		Time length (min) Vehicles in march column		
Unit	Personnel	Org veh (including trk, mtchl, AC, tk, and SP guns)	Close column 70 veh per km (20 KPH) 1	Open column 35 veh per km (25 KPH) 2	Close column 70 veh per km (20 KPH) 1,3	Open column 35 veh per km (25 KPH) 2,3		
1 Mech Rifle Div	13,100	2,479	35.4	70.8	108.0	168.0		
2 Mech Rifle Regt (ea)	2,360	388	5.5	11.0	16.8	26.4		
3 Mech Rifle Bn (ea)	513	68	1.0	1.9	3.0	4.8		
4 Med tk bn	199	42	0.6	1.2	1.8	3.0		
5 Med tk regt	1,130	258	3.7	7.4	10.8	17.4		
6 Med tk bn (ea)	199	42	0.6	1.2	1.8	3.0		
7 Arty regt	1,100	181	2.6	5.2	7.8	12.6		
8 122mm how bn	305	35	0.5	1.0	1.2	2.4		
9 85mm gun bn	305	35	0.5	1.0	1.2	2.4		
10 160mm mortar bn	290	35	0.5	1.0	1.2	2.4		
11 140mm rkt bn	280	42	0.6	1.2	1.8	3.0		
12 AA arty regt	495	101	1.4	2.9	4.2	7.2		
13 Recon bn	350	83	1.2	2.4	3.6	6.0		
14 Engr bn	600	150	2.1	4.3	6.6	10.2		
15 Sig bn	400	70	1.0	2.0	3.0	4.8		
16 Others	1,665	430	6.1	12.3	18.6	29.4		

1 Refers to movement at night.

2 Refers to movement in daylight.

3 Time intervals within a serial average one minute per 25 vehicles (not considered when serial consists of less than 50 vehicles). Time interval between serials is 10 minutes.

Table XXIII. Tank Division March Table

1	2	3	4		5	
			Road space (km)		Time length (min)	
			Close column 70 veh per km (20 KPH) ¹	Open column 35 veh per km (25 KPH) ^{2,3}	Close column 70 veh per km (20KPH) ²	Open column 35 veh per km (25 KPH) ^{2,3}
Unit	Personnel	Organic motor (includes trk, motorcycles, AC, tk, and SP-guns)	Vehicles in march column		Vehicles in march column	
1						
Tank division	10,460	2,732	36.2	72.4	108	150
Med tk regt (each)	1,130	258	3.7	7.4	10.8	17.4
Hv tk regt	1,100	169	2.4	4.8	7.2	12
Mech rifle regt	2,360	388	5.5	11.0	16.8	26.4
Div arty	1,590	241	3.4	6.8	10.2	16.2
Recon bn	350	83	1.2	2.4	3.6	6
Others	2,800	1,126	16.1	32.2	49	78

¹ Refers to movement at night.

² Refers to movement during daylight.

³ Time intervals within a serial average one minute per 25 vehicles (not considered when serial consists of less than 50 vehicles). Time interval between serials is 10 minutes.

Section VI. AGGRESSOR TIME AND SPACE FACTORS

15.19. General

a. Calculations. Tables XXII and XXIII give time and space factors for units of the mechanized rifle and tank divisions, respectively. If the strength in personnel and vehicles of other units is known, time and space factors may be readily determined through use of basic road spaces as shown in paragraph 15.20.

b. Explanation of Factors. Factors given are based on Aggressor marching capabilities under the following conditions:

- (1) Favorable weather and terrain.
- (2) Troops physically fit and trained in the type of march which is under consideration.
- (3) Road marches made on average improved roads.
- (4) No interference with the march because of enemy actions or threats.

15.20. Basic Road Spaces

a. Foot Troops. The following factors for foot troops are based on an average distance of two meters between men for route marches and five meters for tactical marches:

<i>Formation</i>	<i>Meters per man</i>	
	<i>Route march</i>	<i>Tactical march</i>
Single file -----	3.0	6.0
Column of twos -----	1.5	3.0
Column of threes -----	1.2	2.0
Column of fours -----	1.0	1.5

b. Vehicles. The following road spaces are the lengths to the nearest meter of individual vehicles commonly employed by Aggressor.

<i>Vehicle</i>	<i>Road space meters</i>
Armored carrier -----	7
Motorcycle -----	3
Tanks:	
Heavy -----	11
Heavy, with towed load -----	15
Medium -----	10
Medium, with towed load -----	14
Tractor, heavy, with towed load -----	9
Tractor, medium, with towed load -----	9
Trucks:	
Average for all trucks -----	8
Average for all trucks with towed load -----	11

<i>Vehicle</i>	<i>Road space meters</i>
Weapons, self-propelled:	
85-mm self-propelled gun -----	9
100-mm self-propelled gun -----	10
122/152-mm self-propelled gun -----	11
Average per vehicle in mixed column -----	10

c. Use of Basic Road Space Tables.

- (1) To determine the road space of a column of vehicles—
 - (a) Multiply the number of each type of vehicle by the road space of each vehicle of that type.
 - (b) Add the products thus obtained.
 - (c) Multiply the distance in meters between vehicles by the total number of vehicles less one.
 - (d) Add (b) and (c) above.
 - (e) An alternative and more rapid solution is to multiply the average length per vehicle in a mixed column (10 meters) by the total number of vehicles, and add the resultant product to the total distance in meters between vehicles ((c) above).
- (2) Normally, the distance in meters between vehicles will equal the speedometer reading (kilometers per hour) multiplied by a speedometer multiplier (SM) of two for night marches and an SM of four for daylight marches.

d. Rules for Calculating Aggressor March Capabilities. Following are rules for calculating Aggressor capabilities:

- (1) Starting time and place are the time and place unit was last reported.
- (2) Select a logical point the unit must reach to start a particular course of action.
- (3) March distance is distance from (1) to (2) above.
- (4) Arrival time is starting time plus march time plus closing time. This total time is rounded off to the nearest five minutes. In case of a withdrawal, closing time is not computed. In a piecemeal action, compute the arrival time of the nearest Aggressor unit that can initiate the action; closing time is not computed.
- (5) Consider motor march of over 225 kilometers as a forced march for tank and mechanized units. This cannot be continued indefinitely but must be adjusted to actual conditions. The rate of march is not changed. See table XXI for forced march capabilities.
- (6) At the beginning of morning nautical twilight (BMNT) if the column is not closing, change the rate of march from night to day. If the column is in the process of

closing at BMNT, continue to close the column at the night rate of march.

- (7) At the end of the evening nautical twilight (EENT), if the column is not closing, change the rate of march from day to night. If the column is in the process of closing at EENT, continue to close the column at the day rate of march.
- (8) To move an Aggressor mechanized rifle battalion, move and close entire unit.
- (9) To move an Aggressor mechanized rifle regiment, not moving as part of a division movement, move and close two battalions.
- (10) To move an Aggressor mechanized rifle division, move and close two entire regiments.
- (11) To move an Aggressor tank regiment, move and close the entire unit.
- (12) To move an Aggressor tank or mechanized rifle division:
 - (a) On one road, move and close two-thirds of division's time length.
 - (b) On two or more roads (approximately equal distance), move and close one-third of division's time length.
- (13) When a unit is less than full strength, close it as though full strength, irrespective of the amount of the shortage.
- (14) Aggressor units are considered ready for coordinated action when the rules listed in (8) through (13) above have been complied with.

e. March Tables. The following tables for Aggressor divisions and their major subordinate elements are based on the basic time and space factors shown in *a* through *d* above (tables XXII and XXIII).

15.21. Rates, Length of Marches, and General Rules

a. Under Favorable Conditions. (table XXI).

b. Marches in Snow.

- (1) Foot troops marching in snow will have their rate of march decreased depending on the nature and depth of the snow. Normally snow of two-thirds of a meter or more in depth prevents foot marches unless skis or snowshoes are used. For troops equipped with skis or snowshoes and adequately trained in their use, the following rates of march are applicable:

<i>Snowshoes</i> -----	2.5 to 4 kilometers per hour
<i>Skis</i> -----	2.5 to 6 kilometers per hour

(Small bodies of well-trained troops are capable of moving 65 kilometers a day on skis under favorable conditions.)

- (2) Wheeled motor movements can be made across country, depending on the terrain. However, special measures to permit movement must be adopted.

<i>Snow depth, centimeters</i>	<i>Measures required for movement</i>
8	None
15	Chains on rear wheels
15-45	Chains all-around; special traction grousers on trail-breaking vehicles
45 and over	Snowplow

- (3) Tracked vehicles are not impeded to any appreciable degree by new-fallen snow up to two-thirds of a meter in depth. Icing conditions or layers of crusted snow may require the use of tank dozers or snowplows.

c. Forced Marches of Foot Elements. Seasoned troops, when well rested and moving on good roads in good weather, are capable of marching 12 hours per day at an overall daily average rate of two kilometers per hour, or 50 kilometers for the 24-hour period.

Section VII. AGGRESSOR ACTIVITIES

15.22. Attack

Attack indicated by:

<i>Activity</i>	<i>Explanation</i>
Massing of mechanized rifle elements, tanks, artillery, and logistical support.	Areas of secondary importance are often denuded to mass maximum strength for main effort.
Deployment of combat elements (mechanized rifle, armor, antitank units) in echelon.	Normal attack formation provides for the second echelon of the regiment to be located initially up to 3-6 kilometers in rear of the line of contact; division second echelon from about 6-18 kilometers in rear of the line of contact; and army second echelon about 15-25 kilometers in rear of the line of contact.
Forward units disposed on relatively narrow fronts.	Normal frontage of mechanized rifle battalions for assault is about 3-5 kilometers.
Concentration of mass toward either or both flanks.	Single or double envelopment is normally attempted in the offense. Tanks and mechanized units on either or both flanks may indicate single or double envelopment.

<i>Activity</i>	<i>Explanation</i>
Extensive artillery preparation.	Offensive built around the striking power and shock of massed artillery. Preparations of ¼ to ½ hour normally precede offensive.
Artillery positions well forward and concentrated.	Artillery positions for the attack are well forward, with direct fire weapons, artillery pieces, and large numbers of mortars concentrated.
Dispersal of tanks and self-propelled guns to forward units.	Tanks accompany leading waves of assault rifle units. Self-propelled guns follow tanks closely by bounds.
Medium antiaircraft guns located in forward areas.	Medium antiaircraft guns displaced forward prior to attack to protect assault forces and to facilitate forward displacement during the attack.
Clearing lanes through obstacles within own position.	Lanes are cleared and marked through mined areas, and ramps and bridges prepared over ditches and trenches within Aggressor's own position. This is done prior to attack to facilitate forward movement and grouping, particularly at night.
Reconnaissance and destruction of obstacles which are part of enemy defenses.	Usually on night preceding attack, Aggressor patrols reconnoiter enemy obstacle to determine plan for clearing lanes. Patrol destroys only such obstacles as will not disclose direction of main effort.
Demonstrations and feints.	Local, small-scale attacks of demonstrations involving rifle units, tanks, and artillery frequently precede a general attack.
Conducting drills and rehearsals in rear areas.	Major attacks may be preceded by rehearsals. This is particularly true of attacks against fortified positions or strongly defended river lines.
Establishment and strengthening of counterreconnaissance screen.	Counterreconnaissance screens are used to cover possible assembly areas, routes of troop movement, or regrouping of forces to be used in the attack.
Movement of hostile units forward.	Prior to launching an attack, troops may be moved to assembly areas from which they can deploy.
Location of enemy troops in forward assembly areas.	Troops are assembled in areas from which they can launch the attack.
Increased patrolling.	Patrolling by rifle units is usually more active before an attack.

<i>Activity</i>	<i>Explanation</i>
Increased activity in rear areas.	Before an attack, supply and administrative activities increase in the rear areas.
Location of supply and evacuation installations well forward.	Supply and evacuation installations are usually located well forward for an attack.
Increased air reconnaissance.	Air reconnaissance is usually more active before an attack.
Systematic air bombardment.	Before the attack, Aggressor may engage in systematic "softening up" of enemy position by bombardment.

15.23. Positional Defense

Positional defense indicated by:

<i>Activity</i>	<i>Explanation</i>
Formulation of antitank strong points.	Antitank strong points are formed along logical avenues of approach for armor. These are made up of mechanized rifle, engineer, and antitank gun units with positions strengthened by mines, ditches, and other obstacles.
Artillery positions in depth and disposed laterally.	In the defense, artillery position areas are in depth from about 3,000 to 8,000 meters behind the forward edge of the main defense zone and are laterally disposed.
Preparation of alternate artillery positions.	In normal defensive operations, three positions are prepared for each firing battery.
Employment of roving artillery.	Roving guns are part of normal defensive operations.
Forward rifle battalions disposed for all-around protection.	Rifle battalion strong points are organized for all-around defense.
Large tank units located well to the rear.	Tanks are held beyond enemy artillery range for employment in counterattack roles.
Preparation and occupation of successive defense lines.	In the defense, separate and distinct defense lines are prepared and occupied.
Presence of demolitions, gassed areas, obstacles, and minefields.	Demolitions and minefields and other obstacles are placed to cover approaches to the position.
Deployment of rifle units on good defensive terrain.	Dominating terrain having good fields of fire and relatively inaccessible to tanks is usually selected for a defensive position.
Dumping ammunition and engineer supplies and equipment and fortifying buildings.	Engineer tools and equipment may be used to dig trenches and to erect obstacles.

<i>Activity</i>	<i>Explanation</i>
Entrenching and erecting bands of wire.	Digging of trenches and the erection of wire indicate preparations to hold the position.
Location of command posts and supply and evacuation installations to rear.	Command posts and supply and evacuation installations are usually located well to the rear.

15.24. Mobile Defense

Mobile defense is indicated by:

<i>Activity</i>	<i>Explanation</i>
Unoccupied artillery positions prepared in depth and stocked with ammunition.	Facilitates speedy displacements and permits relatively large expenditure of ammunition by covering forces.
Long-range artillery located well forward.	Artillery fire is used to force early deployment and disruption of advancing enemy force.
Movement of forward elements to the rear.	Forward units seek to effect maximum deployment and disruption of enemy forces.
Measures taken to improve routes and protect communications bottlenecks to the rear.	Measures are taken well in advance to facilitate and protect movements of units.
Surprise mechanized rifle and artillery attack from an apparent defensive position.	Sudden mechanized rifle unit and artillery attacks are launched to disrupt the enemy and thereby cover immediate movement or switch positions.
Preparation of extensive demolitions, obstacles, minefields, and gassed areas behind or on flanks of present line of contact.	This action will delay penetrating forces when enemy forward units commence movement to previously prepared routes.

15.25. Withdrawal

Indications for withdrawal are the same as those for the mobile defense with the addition of the following:

<i>Activity</i>	<i>Explanation</i>
Rearward movement of long-range artillery and supply echelons.	In withdrawal, the first units to be withdrawn are long-range artillery and the supply echelons which move back under cover of darkness one or two days before the main withdrawal.

15.26. Reinforcement

Reinforcement indicated by:

<i>Activity</i>	<i>Explanation</i>
Movement of additional troops toward the front.	This action could increase enemy's present strength.

<i>Activity</i>	<i>Explanation</i>
Increased traffic toward present position.	This increased traffic may bring up additional troops and supplies.
Identification of new units in combat zone.	The presence of new units in addition to units already present will increase enemy's strength.
Additional command posts and supply and evacuation installations.	Presence of additional units could cause an increase in number of these installations.

15.27. Nuclear Warfare

Nuclear warfare indicated by:

<i>Activity</i>	<i>Explanation</i>
Heavily guarded movement of supplies, equipment, and materiel.	Movement of supplies, equipment, and materiel of nuclear nature requires special security measures.
Heavily guarded areas of installations.	Sites for storage of nuclear supplies and the locations of delivery units are heavily guarded.
Presence of special troops or special troop units.	Specialists and special troop units are required to handle nuclear weapons.
Evacuation of an exclusion of civilians from specific areas suitable for nuclear storage or delivery sites.	Civilians may be evacuated from areas selected for nuclear storage or delivery sites.
Increased or unusual air activity.	Delivery of nuclear weapons by air may require a temporary degree of local air superiority, special photo missions, and/or practice flight pattern runs by the delivery aircraft.
Location of missile and/or free rocket units within striking range of enemy areas.	Missile and free rocket units must be located within a certain distance from the frontlines.
Use of missiles and/or free rockets with high explosive warheads.	Missiles or free rockets may be used to deliver high explosive warheads either in a normal support role or a registration.
Preparation of very heavy artillery positions.	Primary and alternate positions for nuclear delivery artillery are prepared prior to movement of the units.
Location of very heavy artillery within supporting distance of frontlines.	Nuclear delivery artillery must be located within a certain distance from the frontlines.
Registration of very heavy artillery.	Registration may be required, using smoke, low charge, or high explosive projectile, prior to firing a nuclear projectile.
Special or unusual activity by front-line troops.	Frontline troops may construct special positions, usually deep or covered foxholes, or special shelters deflated just in rear of frontline positions.

<i>Activity</i>	<i>Explanation</i>
Limited withdrawal of frontline units without apparent tactical reason.	Frontline units may withdraw for a limited distance to avoid casualties from close-in nuclear explosions.
Large concentrations of radio and other electronic equipment located in the vicinity of suitable sites for guided missile launching.	Concentration of equipment is necessary to guide and control the guided missile, and must be located in close proximity of the launching site.
Sudden increase in communications and electronic activity.	Increase may be incident to delivery of nuclear weapons, for example, last minute orders and warning and use of electronic guidance and control.
Use of smoke cover on frontline troops.	Smoke may be used to protect troops against thermal effects of weapons used in close support.
Disappearance of known enemy agents from specific areas.	Prior to nuclear attack of an area, agents may be ordered to leave the area.
Movement of small but heavily guarded convoys.	Small convoys carrying nuclear weapons or delivery means will be heavily guarded.
Sudden and energetic digging in enemy areas.	Prior to use of nuclear weapons, frontline units may be ordered to dig deeper foxholes or take other individual protective measures.
Tank divisions well forward in offensive operations.	Tank divisions will usually be employed in offensive operations to promptly exploit effects of nuclear fires.
Elements of tank army well forward in offense.	In offensives conducted by larger units, the tank army is usually committed on the first day of the offensive.

APPENDIX
REFERENCES

- DA Pam 108-1 Index of Army Motion Pictures, Film Strips, Slides and Phono-Recordings.
- DA Pam 310 Series—Military Publications Indexes (as applicable).
- AR 220-55 Field Exercises and Maneuvers.
- AR 320-5 Dictionary of United States Army Terms.
- AR 320-50 Authorized Abbreviations and Brevity Codes.
- ATP 20-5 Army Training Program for Field Exercises and Maneuvers.
- FM 3-5 Tactics and Techniques of Chemical, Biological and Radiological Warfare.
- FM 21-5 Military Training.
- FM 21-6 Techniques of Military Instruction.
- FM 21-30 Military Symbols.
- FM 30-101 Aggressor, The Maneuver Enemy.
- FM 30-103 Aggressor Order of Battle.
- FM 105-5 Maneuver Control.

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[AG 353 (22 April 60)]

By Order of *Wilber M. Brucker*, Secretary of the Army:

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☆ U. S. GOVERNMENT PRINTING OFFICE: 1960—520523