



THE RUSSIAN WAY OF WAR

FORCE STRUCTURE, TACTICS, AND MODERNIZATION OF THE RUSSIAN GROUND FORCES



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Chapter 3

The Defense

Defensive Theory

The Goals of the Defense

- Deflect attacks by superior enemy forces
- Inflict maximum losses
- Retain important areas, objects, and key terrain
- Create favorable conditions for the conduct of an offensive¹

Requirements for the Defense

The main requirements for the defense are that it is stable and active. In terms of stability, the defense should be able to withstand any type of enemy assault, including attacks by massed tanks and infantry and airborne/air assault landings. It must protect vital areas and destroy any enemy elements that penetrate the defense. In order to fulfill these requirements, the defense must have:

- In depth echelonment, prepared for an extended defense against an enemy with weapons of mass destruction, precision-guided munitions, and electronic warfare
- Antitank Capabilities
- Air Defense Capabilities
- Anti-Assault Capabilities

Achieving Stability in the Defense

Stability in the Defense is achieved by the accomplishment of a number of objectives:

- It must be able to withstand the effects of nuclear weapons.
- It must have a low vulnerability to enemy precision weapons. In order to protect against precision weapons, forces must be dispersed, covered and concealed. Forces must have means of obscuring their positions from radar and thermal imaging devices, and means of protection from precision weapons using electronic warfare.
- It has to be antitank capable, able to repel assaults by tanks and armored vehicles.
- It must be capable of defending against tactical and operational air strikes.
- It has to be capable of repelling airborne (parachute) and air assault attacks, and handling sabotage and reconnaissance groups.

Characteristics of an Active Defense

The characteristics of an Active Defense:

- Places the enemy under constant fire
- Creates unfavorable conditions for the enemy to conduct battle
- Conducts extensive maneuver of forces and systems in the conduct of fires and assaults
- Conducts decisive counterattacks.

¹ This section, including graphics, has been compiled from many sources to include:

"Requirements for the Defense" [Требования предъявляемые к обороне], as found on *Studiopedia*, <<http://studopedia.info/1-67775.html>>, accessed on 1 July 2016.

V.N. Zaritski and L.A. Kharkevich, *General Tactics* [Общая Тактика], Tambov: Tambov Government Technical University, 2007.

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Source material has also been obtained from a variety of training documents produced by Russian military academies and military departments in civilian academic institutions.

Achieving an Active Defense

The Active Defense is achieved by:

- Careful organization of the means of nuclear and conventional fires to destroy the enemy and the skillful implementation of this during combat.
- Timely maneuver of forces and systems, fires and obstacles against a threatened axis.
- Jamming of enemy C2 systems, weapons, and aircraft.

The maneuver of forces and systems involved in the transfer of reinforcements and their deployment on a new axis of advance, line or area is carried out to create a more advantageous grouping of forces to fulfill a military mission. The maneuver of forces and systems in the defense may be carried out along the front line of the defenses, from the rear to the front or from the front to the rear, and includes units and subunits of all branches.

Types of Defense

Positional- This is the primary type of defense that more fully achieves these goals. This defense inflicts maximum losses upon the enemy by stubbornly holding prepared defensive positions.

Maneuver- The purpose of this defense is to inflict losses on the enemy, gain time and preserve one's own force. This defense is conducted by successive defensive battles, planned in advance and echeloned throughout the depth of the defense. Short counterattacks augment the defense of the security zone.

Forms of Maneuver Defense

- The maneuver force has means to prevent attacks in the threatened area in order to prevent an enemy breakthrough on the axis of the main attack, eliminating the threat of being flanked and exploiting an enemy flank or boundary.
- Maneuver of the second echelon (reserve) for employment on a prepared firing lines to close any gaps in the defense resulting from massive air strikes and enemy precision munitions, in order to repel any enemy breakthroughs.
- Maneuver strikes and fires on essential enemy formations.
- Maneuver of antitank artillery and antitank guided missiles subunits, attack helicopters, the antitank reserve, and the mobile obstacle detachment on the axes of deployment in threatened areas to prevent enemy tank breakthroughs.
- Anti-airborne/air assault maneuver by the reserve or an element of the second echelon, as well as attack helicopters with goal of destroying the enemy air assaults.

Motorized Rifle Subunits in the Defense

Motorized rifle battalion- defends a fortified area 3-5 kilometers wide and 2-2.5 kilometers in depth. It is a unified position with the strong points of the battalion's motorized rifle companies, which are prepared for 360° defense. In those areas where the terrain is not all accessible for attacking forces and in a security zone defense or with a forward position, the defense width may increase. The battalion position has three or four trenches, consisting of company strong points and positions for TO&E and attached weapons. These positions are linked by a unitary fire plan, obstacles and communications trenches.

THE DEFENSE

Motorized rifle company- defends a strong point up to 1.5 kilometers wide and one kilometer deep. It consists of two trenches and includes the strong points of the company's motorized rifle platoons and fighting positions for company weapons and attached subunits. These positions are linked by a unitary fire plan, obstacles and communications trenches.

Motorized rifle platoon- defends a strong point up to 400 meters wide and up to 300 meters deep. The strong point consists of squad positions, fighting positions, and firing positions for BMPs or BTRs and attached weapons. The strong point for a tank platoon consists of firing positions for the tanks and attached weapons.

Conditions for the Transition to the Defense

In the absence of contact with the enemy (in advance), forces may transition to the defense for the following reasons and/or under the following conditions:

- To protect the state border
- On an axis where one's offensive forces are not engaging, but where enemy forces may attack
- On the coastal areas where there is a threat of enemy landings
- When assigned to the second echelon (reserve)
- On an axis required to transition to the offensive.

In direct contact with the enemy (forced), forces may transition to the defense for the following reasons and/or under the following conditions :

- To repel counterattacks
- To secure and retain captured defensive lines
- To cover the flanks of an advancing force on a threatened direction
- Due to the results of an unsuccessful meeting engagement
- During an offensive when the force has suffered heavy losses.

Preparation of the Defense

Preparation of the defense begins with receipt of orders from the senior commander. It includes:

- Organizing for combat
- Decision making
- Giving the orders to subordinate units
- Reconnaissance
- Organization of cooperation and an integrated system of fires, comprehensive logistic support and C2
- Development of diagrams for the battalion's area of defense, company strong points
- Preparation to carry out combat missions
- Conduct of the defense, creation of combat orders and systems of fires
- Engineering support in the area of defense (strong point)
- Organization and conduct of morale and psychological work
- Practical work of the commander, his deputies, the battalion staff with the subordinate subunits, and other activities.

The Defense in Special Conditions

Defense in a City (Village)

A battalion in a city (village) usually defends one or more blocks, a company a quarter or more of the buildings (defended by the battalion), and the platoon - one or two buildings. Every populated area and separate building held by a battalion (company) must be turned into an impregnable fortress with all-around defense, that can hold on, even when fully surrounded by the enemy.

Defense in the Mountains

Defense in the mountains, as a rule, is built on a broad front, intercepting the most accessible areas of enemy action, plateaus, and valleys, as in normal conditions. The main efforts are concentrated on the defense of the commanding heights, passes, road junctions and other important terrain. Strong points are prepared for a circular (360°) defense. Reconnaissance, patrols and ambushes and obstacles cover the areas between them.

Defense in the Forest

Defense in the forest is based on company and platoon strong points, prepared for a circular (360°) defense and on road intersections, clearings, and gorges between lakes and swamps. Reconnaissance, patrols and ambushes and obstacles cover the areas between them.

Defense in the Desert

Defense in the desert is established on the most probable direction of enemy advance. It is based on a well-organized system of fire and maneuver and a wide second echelon (reserve). Availability of rugged terrain with dunes and salt flats allows the battalion to build defenses on a broad front in one echelon with more gaps between strong points than usual.

Defense in the Northern Regions and Winter

Defense in northern regions is organized on a broad front on the axes available for an enemy attack. The defense usually consists of company and platoon strong points that are prepared for a circular (360°) defense. Efforts are focused upon securing roads and adjacent heights, settlements, gorges, crossings over water barriers and other important objects.

Squad in the Defense

A motorized rifle squad in the defense works, as a rule, as part of a platoon, and can also be assigned as an ambush party. A BMP without dismounts can conduct a fire ambush, serve as a roving firing platform, and be part of a group of BMPs or part of the *bronegruppa* of a battalion or company. A squad defends a fighting position with up to a 100-meter frontage. A defense requires a combat formation, system of strong points and firing positions, and an integrated fire plan.²

Elements of the Combat Formation

The combat formation includes:

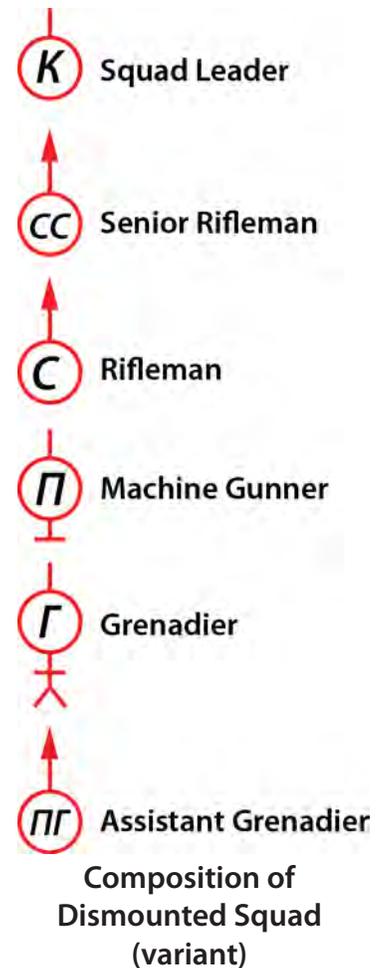
- Maneuver group
- Fire group
- BMP or BTR

System of Strong Points and Firing Positions

A motorized rifle squad consists of primary and alternate (temporary) firing positions for BMPs (BTRs), machine guns, grenade launchers and locations for rifle firing, in conjunction with adjacent squads destroying the enemy in front and on the flanks of the platoon's strong point. The distance between the main and reserve positions for machine guns and rocket-propelled grenade launchers (sometimes riflemen) must be at least five meters. The fighting position of the squad may be co-located with weapons controlled by the senior commander. If time permits, the BMP (BTR), should be dug in.

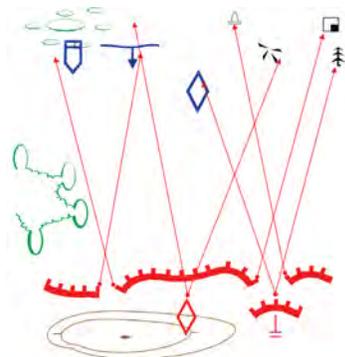
Integrated Fire Plan

A system of fire for a motorized rifle squad includes a zone of fire for the duty weapons, a zone of continuous multilayered squad fire to the front and on the flanks and planned maneuver fire on threatened axis of advance. The squad commander commands by radio, voice, signals, and personal example. The squad leader is positioned where he can best ensure effective fires.

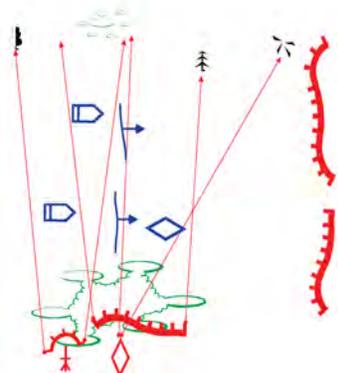


² This section, including graphics, has been compiled from many sources to include: "Squad in the Defense" [Отделение в обороне], as found on *Studiopedia*, <<http://studopedia.info/1-67776.html>>, accessed on 1 July 2016. V.N. Zaritski and L.A. Kharkevich, *General Tactics* [Общая Тактика], Тамбов: Тамбов Government Technical University, 2007. *Field Manual: Preparation and Conduct of Combined Arms Warfare* [Боевой Устав: По Подготовке и Ведению Общевоинского Боя], Moscow: Ministry of Defense of the Russian Federation, 2005. Source material has also been obtained from a variety of training documents produced by Russian military academies and military departments in civilian academic institutions.

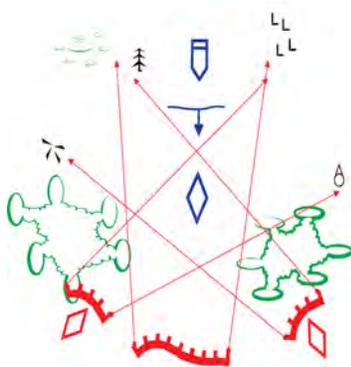
Aspects of Fire for a Motorized Rifle Squad



Frontal



Flank



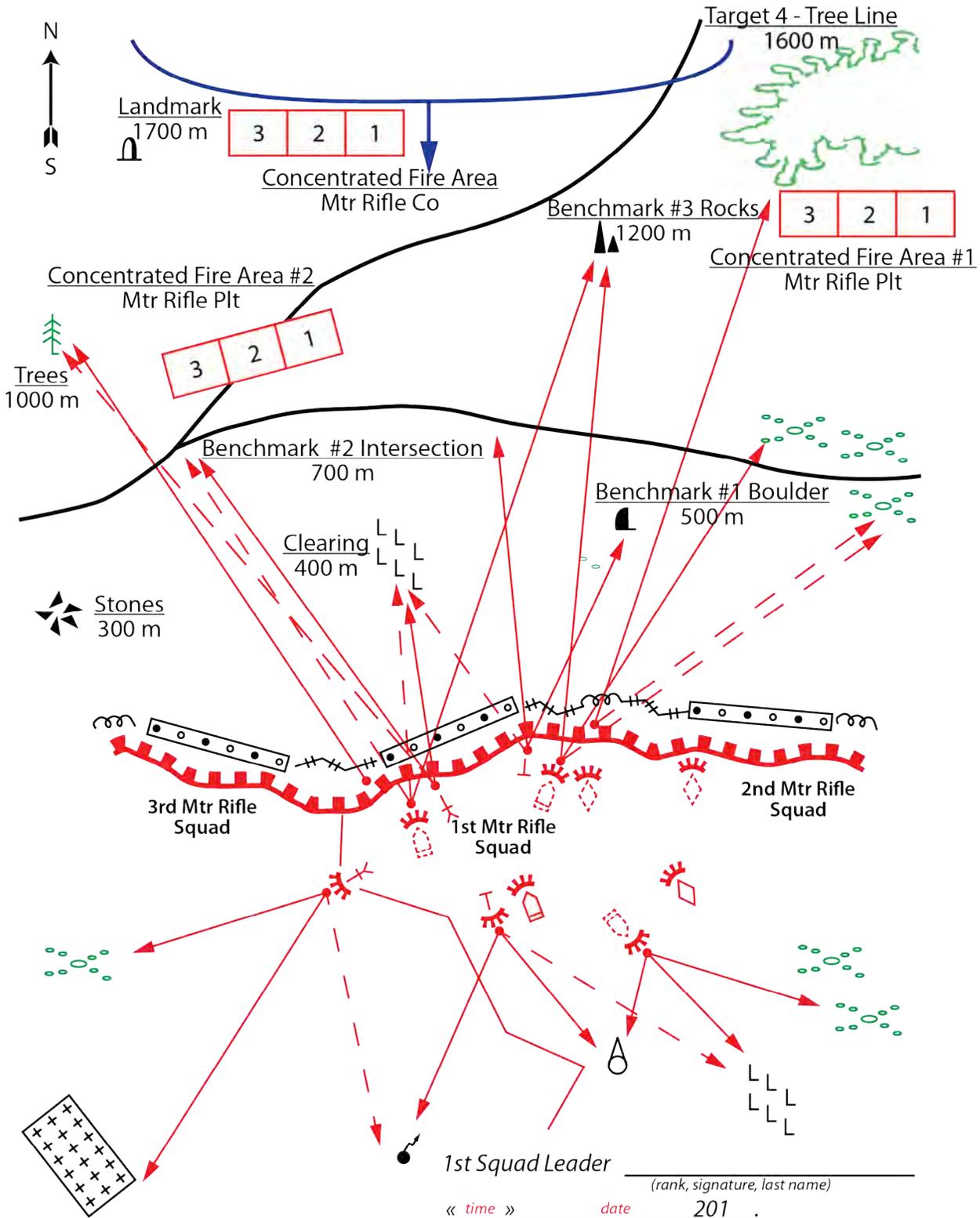
Enfilade

(Left) The defending motorized rifle squad conducts frontal, flanking and enfilade fire. In the frontal example, the squad is the center squad of a platoon defending on line. It is supported by a tank and a medium machine gun from the platoon or company. Each has its limits of fire and these limits overlap with those of the flanking squads. In the flanking example, a motorized rifle squad, a tank and an AGS-17 automatic grenade launcher crew have dug in at a position flanking an expected enemy axis of attack. As the enemy attacks the main defensive position, the defending flanking force takes the enemy under fire. In the enfilade example, the defending motorized rifle squad holds against a frontal attack while two tanks open enfilade fire from dug-in positions.

The graphic on the facing page depicts the 1st Motorized Rifle Squad's range card which the squad leader prepares and uses to ensure that there are no gaps or unintentional overlapping fields of fire. He is defending as part of a platoon and company defense, so necessary details from his neighboring squads and the company fire plan are included. The squad defends in the middle of the platoon defensive position. It is deployed in a fighting trench with an antipersonnel and antitank minefield and barbed wire to its front. Its RPG and squad machine gun have their primary positions in the trench line and their alternate positions dug in against a rear or flanking attack. The squad BMP is dug in about 200 meters behind the trench. It has three alternate prepared fighting positions. Two are located just behind the trench on the left and right flanks of the squad. The third is located to the rear as part of a 360° defense. There are also prepared primary and alternate fighting positions for a tank on the squad's right flank. The squad's sector of fire is marked by landmark limits—the right limit is Target 4, the left limit is some trees. Crew-served weapons (RPG, machine gun and BMP) are assigned sectors of fire based on landmarks with a right and left limit. The squad and its crew served weapons may extend their sectors of fire on order. The new limits are drawn with dashed lines. Limit stakes, or the machine

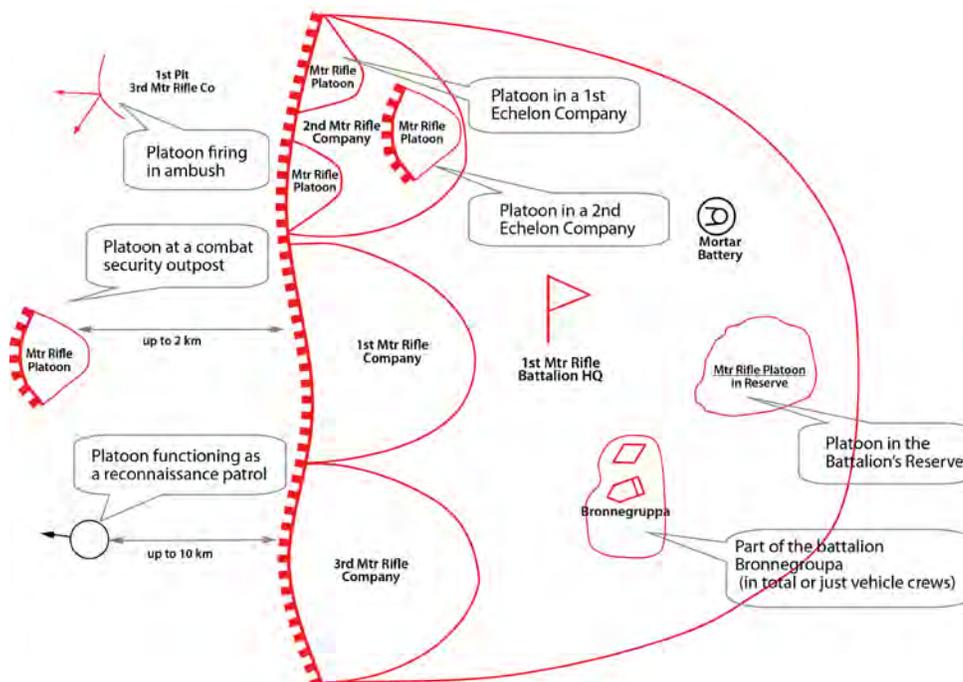
gun's T&E mechanism, mark the sector limits for night firing or when firing through smoke. Part of the preparation includes walking the area forward of the trench to determine dead space that should be covered by rifle or hand grenades. The platoon leader has determined two concentrated fire areas in his sector. These areas are designed to stop an enemy advance on a likely axis of advance by focusing the entire platoon's direct fire power on a line approximately 400 meters long. The first squad fires into box one. The company commander has also determined a company concentrated fire area for his company. Each platoon fires into its designated box.

Motorized Rifle Squad Range Card



Platoon in the Defense

A motorized rifle or tank platoon can occupy the defense in a first- or second-echelon company, be part of a combined arms reserve of a battalion or company, be in a combat



Positions for a Motorized Rifle Platoon in the Defense

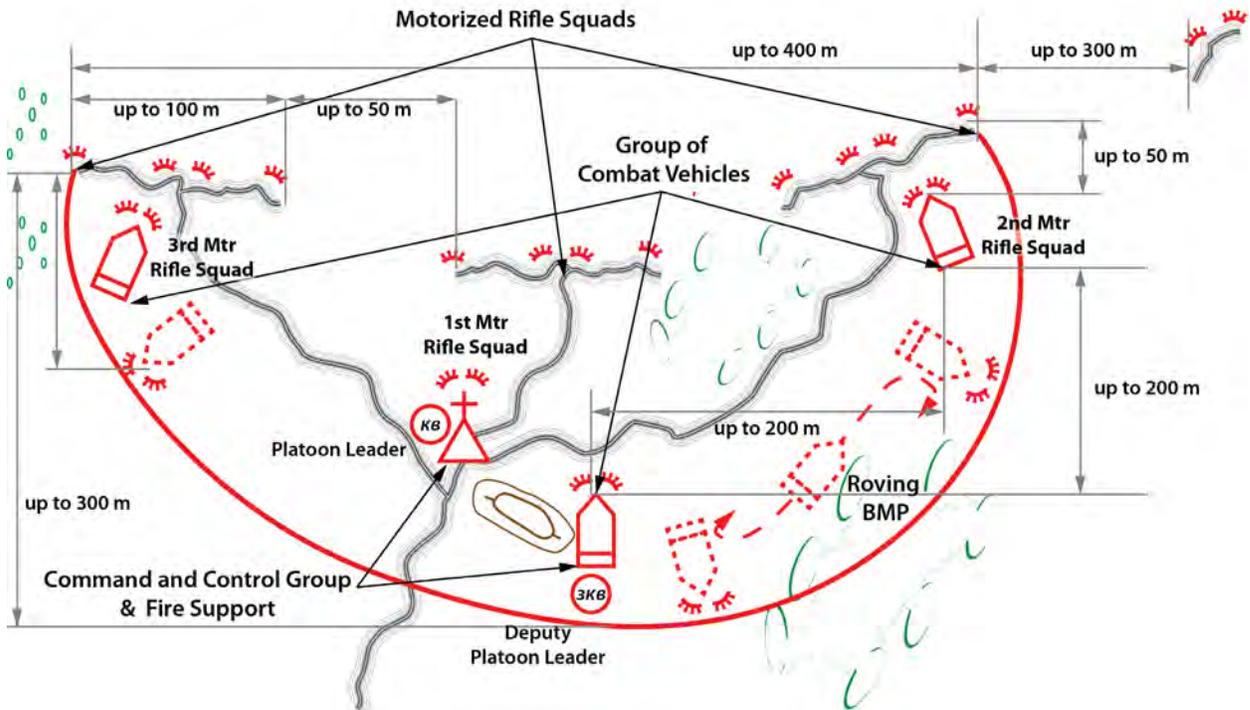
security outpost, be a combat reconnaissance patrol and conduct ambush by fire, or be in a battalion or company *bronegruppa*. The defense must support the repulse of the enemy's attack, and destruction of the enemy's tanks and personnel on the forward edge of the defensive area, on the flanks, and throughout the depths of the defense. A motorized rifle or tank platoon is assigned to a strong point with a field of fire, a supplemental field of fire and one or two areas of concentrated fire. The platoon, when part of a battalion combined arms reserve, may have an additional one or two firing lines and routes of travel to them. A motorized rifle (tank) platoon defends a strong point up to 400 meters wide and 300 meters deep. A defense includes a platoon combat formation, system of strong points and firing positions, and integrated fire plan.³

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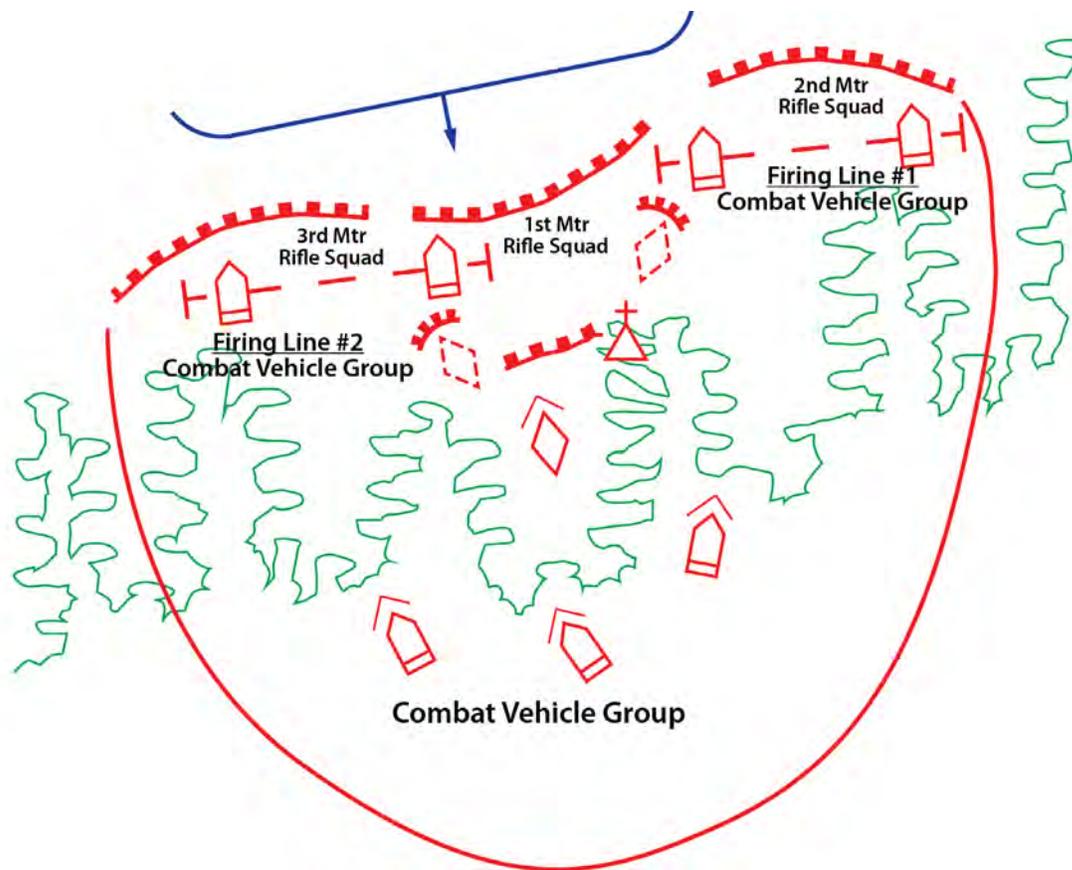
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Motorized Rifle Platoon in the Defense

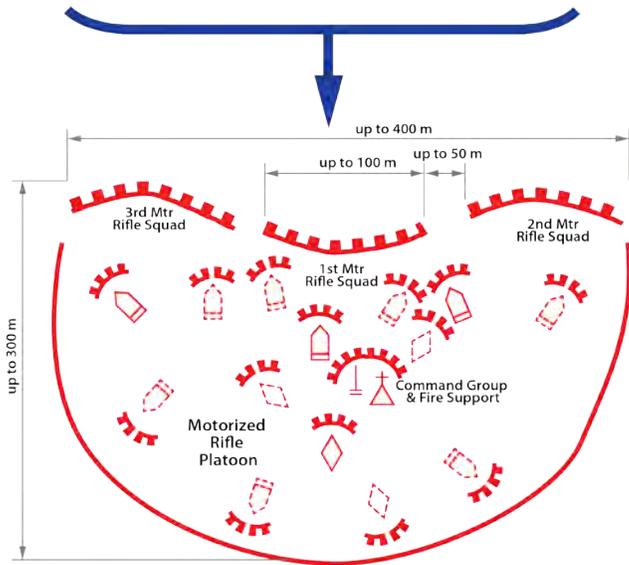
(Above) The motorized rifle platoon defends with two or three squads forward, and usually creates alternate positions for a 360° defense. The BMPs or BTRs have primary and alternate fighting positions, or may be withdrawn into a company bronegrupa (mobile armored reserve). In this case, the platoon defends with three squads forward. The BMPs of the 2nd and 3rd squads have fighting positions directly behind their squads, while the BMP of the 1st squad backs up the 1st squad and has a contingency mission to rove from position to position, securing the right rear of the platoon position. The 3rd squad BMP has an alternate position securing the left rear of the platoon position. The first squad BMP serves as an alternate platoon CP. The main platoon CP is located by the juncture of the communications trenches from the squads and leading to the company CP.



Motorized Rifle Platoon in the Defense

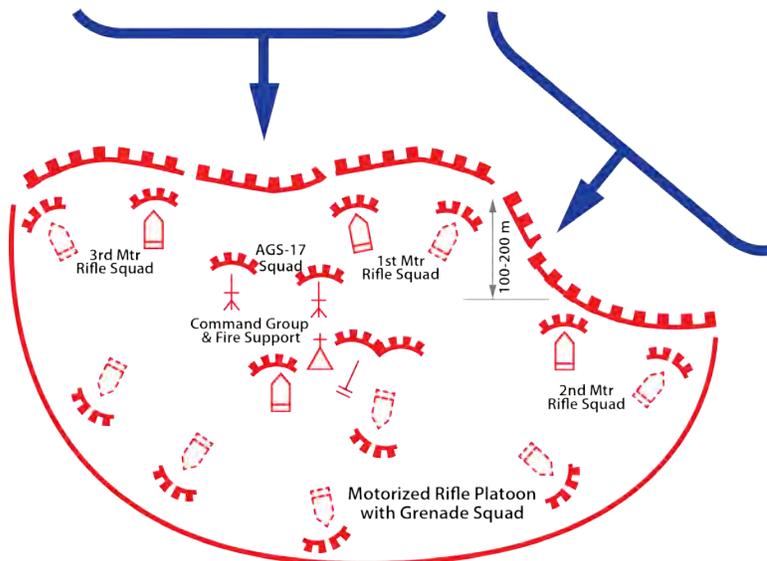
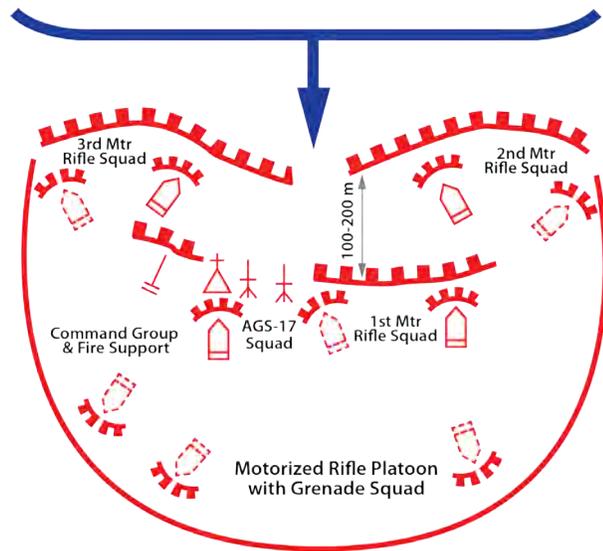
(Above) This graphic shows a motorized rifle platoon defending along a wood line. There is a tank dug in supporting the platoon. The tank has two alternate fighting positions. The BMPs are dug in back in the woods, but the intent is not to fight them from three individual positions. Rather the BMPs will be committed behind the 2nd or 3rd squad in a firing line. The tank has three prepared fighting positions. (Described in more detail on page 72.)

The graphics on the facing page depict three variants of a platoon defense. The first has three squads forward. The second has two squads forward and one back. The third has three squads forward with the right flank refused. All have a 360° defense and the second and third examples are reinforced with a medium machine gun and an AGS-17 automatic grenade launcher squad.



Combat Formation of a Motorized Rifle Platoon in the Defense (with one echelon)

Combat Formation of a Motorized Rifle Platoon in the Defense (with two echelons)



Combat Formation of a Motorized Rifle Platoon in the Defense (refused right flank)

Elements of the Combat Formation

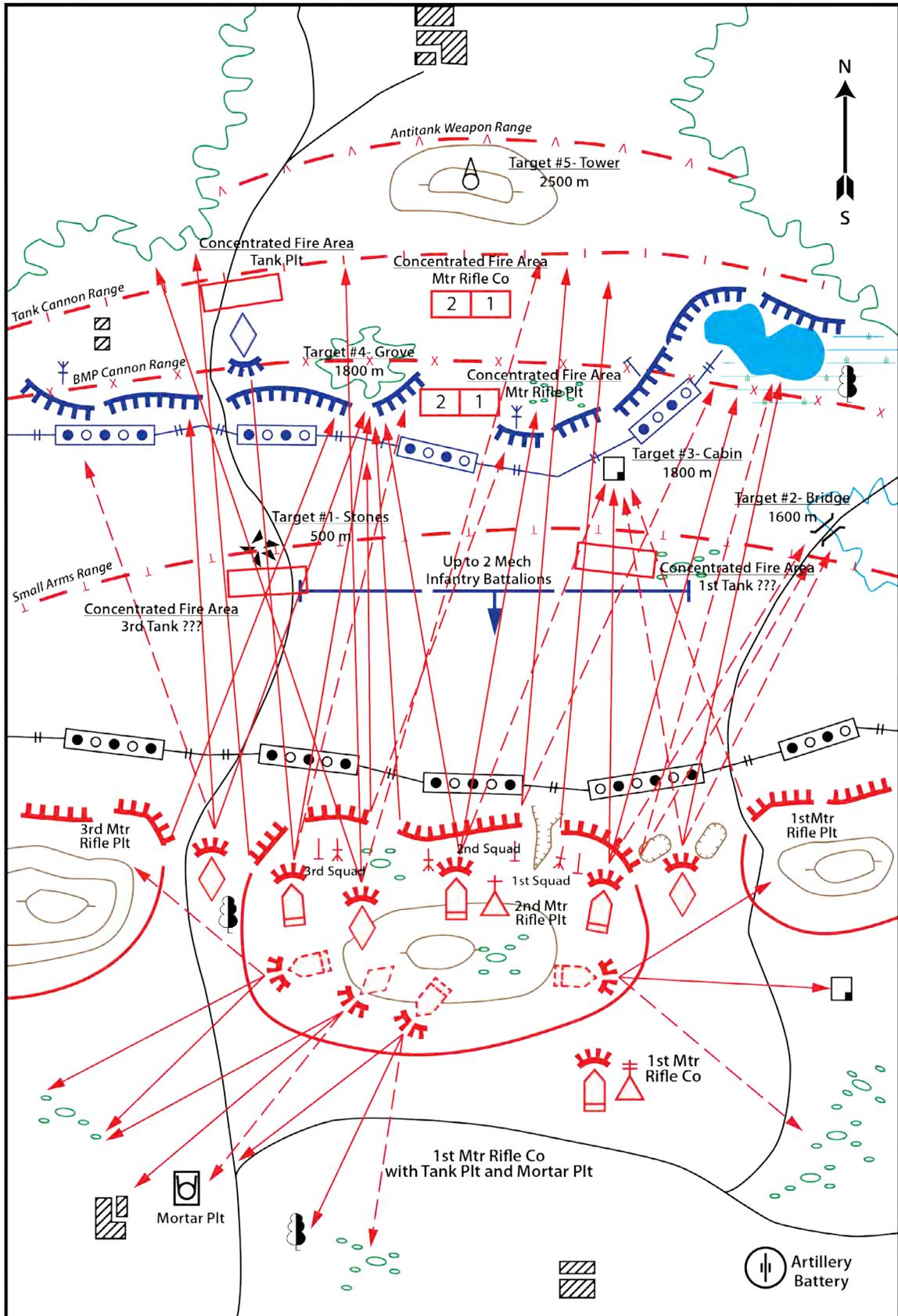
- Squads in position
- BMPs (BTRs) in firing position
- Weapons fire controlled by the platoon leader

In addition, the platoon can constitute a grouping of military vehicles. Motorized rifle squads are usually located in a single trench in a line. In order to reinforce the stability of the defense, one of the squads of the platoon may be set back within the strong point and fight from a 100-200-meter trench. If there is a threat of attack from the flanks, the combat formation can be laid out as an echelon right or echelon left. The command and control element and fire support is designed to control subunits and fire support during the battle, as well as to address a requirement for rapid response fires. It consists of weapons and firepower directly subordinate to the platoon commander and attached firepower. A group of combat vehicles is used to improve the stability and provide an active defense and support motorized rifle subunits on their firing line from previously selected positions. The group is located in a designated locale (back in the forest, on the heights of the opposite slope). On the command of the platoon commander, the group goes forward to a designated firing line and from that line defeats the enemy and returns to its original position, and is once again ready to act when needed. Every combat vehicle has a prepared fighting position in the designated firing lines. The group is controlled by the platoon commander's deputy. (Graphic on page 70)

System of Strong Points and Firing Positions

The platoon's strong point includes the platoon's squad firing positions, the platoon command-observation post, the platoon's organic and attached weapons and a deployment area for the group of combat vehicles. The gap between platoon strong points can be up to 300 meters and up to 50 meters between the squad positions. A continuous trench may be dug across the front of the platoon strong point, which joins the squad fighting positions. Communications trenches [not shown] join the fighting trench with the vehicle fighting positions and extend into the depth of the defense to the next trench line. The trenches provide communication and move personnel to protected areas, fighting bunkers, squad sheltered quarters, ditches and dugouts for ammunition and rocket storage. The platoon commander controls his subordinates from the command-observation post, which is dug into the trench network communications (located either in a squad fighting position or deeper within the strong point). The commander of a tank platoon commands from inside his tank.

Scheme of Fire for a Platoon in the Defense



Integrated Fire Plan

- Participation in concentrated fire along the forward edge of the defense
- Zones of antitank fires conducted by BMPs (tanks) and continuous multilayered fires by other platoons' weapons along the forward edge of the battle area, in the gaps, on the flanks, and throughout the depth of the defense
- Prepared maneuver fire by BMPs, tanks and other weapons systems on threatened axes.

The system of fire for a motorized rifle (tank) platoon is an integral part of the system of fire for its company (battalion) and includes preparatory fires by duty weapons,⁴ antitank and platoon multilayered continuous fire zones, concentrated fire sectors, and planned maneuver by fire. The system of fire is organized to take into consideration the combat potential of all the weapons of the platoon, attached weapons and integrated fires of neighboring units, all tied into engineer and naturally occurring obstacles. The system of fire should ensure the defeat of the enemy, particularly its tanks and other armored vehicles, on the approaches to the defense, on the forward edge of the defense, between squad fighting positions, and on the flanks of the platoon's strong point throughout the depth of the defense, with the potential of conducting effective fire to the front, flank and overlapping fires. An all-round defense of the strong point is also conducted. The readiness of the system of fire is determined when the BMPs, tanks, crew-served weapons and other weapons are in their prepared firing positions, range cards and firing data are prepared and verified,⁵ and ammunition and rocket round supply points are dug in. Infantry fighting vehicles and tanks are located along the front and in the depth of the platoon fighting position, with at least a 200-meter interval between each other. Fields of fire for platoons and squads are determined by left and right boundaries. Each boundary is specified by two points (benchmarks). BMPs, tanks, antitank missile systems, grenade launchers, flamethrowers and machine guns have specified primary and secondary sectors of fire, and their firing positions have ranges and type of fire coverage indicated. These fields of fire should overlap.

Means of Reinforcement

Common Attachments for a Motorized Rifle Platoon

- A Tank
- Antitank subunit
- AGS-17 subunit
- Flamethrower subunit
- Anti-aircraft subunit
- NBC Recon personnel

⁴ Duty weapons are weapons deployed out of their primary firing positions for the purpose of drawing enemy fire and engaging enemy targets before the main battle is joined. Russian troops are trained to not respond to enemy probing fires or the appearance of enemy vehicles, since the enemy is hoping to determine the location and outline of the defense, location of crew-served weapons and vehicles, and the type and readiness of the defending unit. Duty weapons will fire from a temporary position and then move to another temporary position. On order, the duty weapons will reoccupy their primary fighting positions.

⁵ Range cards are prepared for each primary and alternate firing position. Ranges are walked to identify dead space and other areas where the enemy may escape detection and destruction. Tranverse and elevating mechanisms are used on machine guns, particularly at night, to prevent weapons from being fired over the heads of the advancing enemy.

Sequence of Work after Receipt of Mission

In the absence of direct contact with the enemy, the platoon leader receives an order and does the following:

- Makes his decision and draws his plan of defense on his map
- Briefs his squad leaders
- Guides the platoon to its specified strong point or from concealed places on the approaches to the platoon position and covertly organizes its security
- Together with the squad and attached forces leaders, conducts on-site reconnaissance
- Gives his combat order
- Organizes his system of integrated fires, support and C2
- Organizes the occupation of the strong point
- Sites in positions of the combat formation and checks range cards and integration of fires
- Organizes observation and engineer field fortification of his platoon strong point.

Having received the orders to transition to the defense while in direct contact with the enemy, a platoon commander must:

- Quickly make his decision for the conduct of the defense
- Give his orders to his squads to occupy the positions in the designated platoon strong point
- Organize surveillance to the front and on the flanks of the platoon's strong point
- Coordinate platoon interaction and the platoon system of integrated fires, as well as logistic support, C2 and engineer field fortification of his platoon strong point
- Subsequently study the terrain, clarify squad missions and platoon layout, coordinate platoon interaction and if necessary, deal with other matters.

Considerations of the Platoon Leader

- Missions of subordinate squads, their positions, fields of fire and additional sectors of fire
- Main and reserve (temporary) firing positions of BMPs (BTRs), their primary and secondary sectors of fire from each position
- Platoon zones of concentrated fire and each squad's portion of the zone where it must fire (similar to final protective fire)
- Missions of attached weapons, their primary and reserve firing positions, and their primary and supplementary sectors of fire for every position
- Designated marksman missions, their primary and alternate firing positions, and sequence of observation and fire
- Missions for the combat medic and the sequence for the provision of medical assistance to the wounded
- Which weapons will cover gaps with their neighboring units and secure flanks. The platoon commander's orders specify the time to occupy the defense, prepare a system of fires, and the sequence and timing of engineering support.

Company in the Defense

A motorized rifle (tank) company may be part of a first or second echelon battalion in the defense, be in the security zone, occupy a forward position, or be a combined arms reserve or antilanding reserve. When breaking contact and withdrawing, a company may be designated as a point security march detachment, rear guard security detachment or flanking march security detachment. A motorized rifle (tank) company in the defense can occupy strong points up to 1.5 kilometers wide and 1 kilometer deep. Platoons in company strong points may be angled backwards, allowing them to be echeloned in various locations. A defense includes a combat formation, system of strong points and firing positions, integrated fire plan, and engineer obstacle system.⁶

Elements of the Combat Formation

The elements of the combat formation are structured as follows:

- The first echelon consists of two platoons
- A second echelon or reserve consists of one platoon
- An artillery subunit (artillery battery or mortar platoon, attached company) remains subordinate to the company commander and is used to support the first-echelon motorized rifle platoons
- Subunits and weapons (ordnance) subordinate directly to the company commander.

Depending on the situation, a *bronegruppya* or ambush team may be formed. The combat formation of companies in the defense usually consists of two echelons. In some cases, the combat formation can consist of just one echelon, with a combined arms reserve.

System of Strong Points and Firing Positions

The system of strong points and firing positions are created to support the defense mission of the company in accordance with the commander's decision, the combat capabilities of subunits, the time available and the nature of the terrain. They include:

- Combat security positions
- Firing positions for tanks, BMPs, BTRs, antitank missiles, TO&E and attached weapons
- Trenches and communications trenches
- Platoon and company strong points united in the battalion defensive area.

A company strong point has two trenches and consists of strong points of the company's subordinate platoons, firing positions for the company weapons and those of attached subunits, and a *bronegruppya* staging area. In addition, it is equipped with a command-observation post.

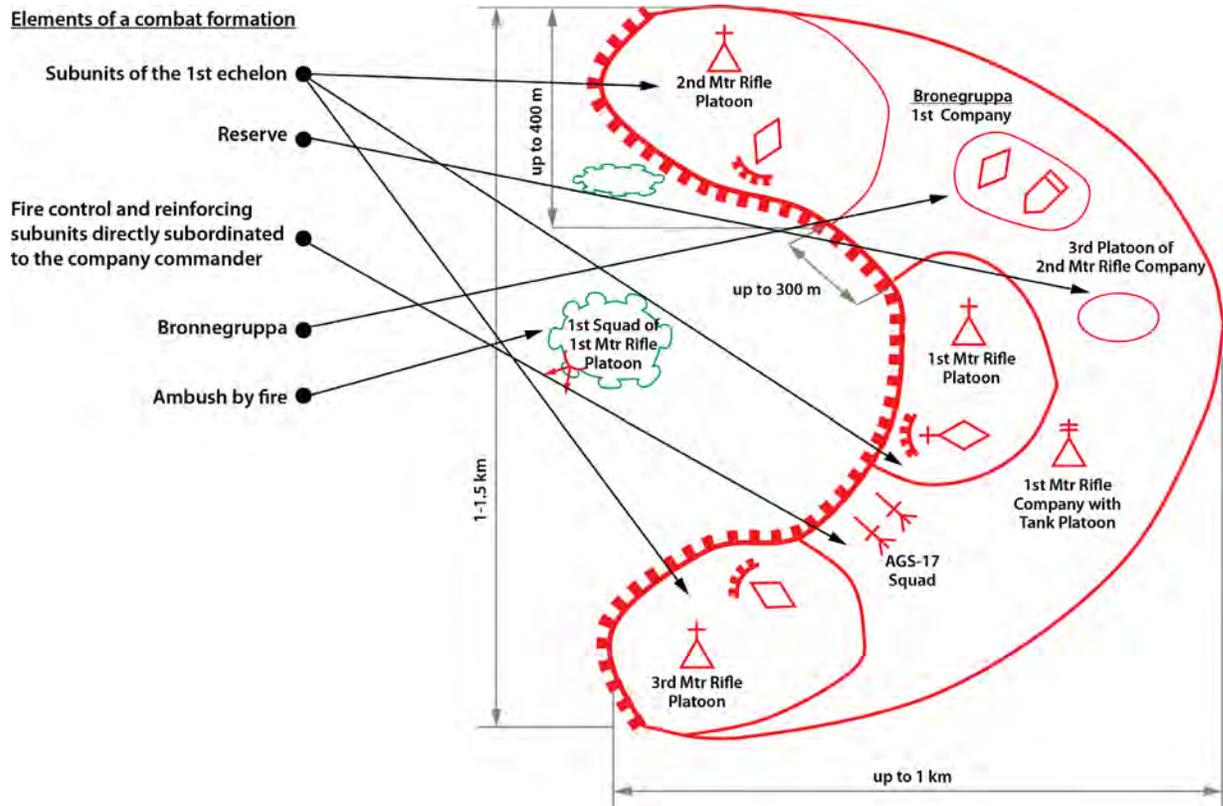
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Combat Formation of a Motorized Rifle Company in the Defense (in the first echelon)



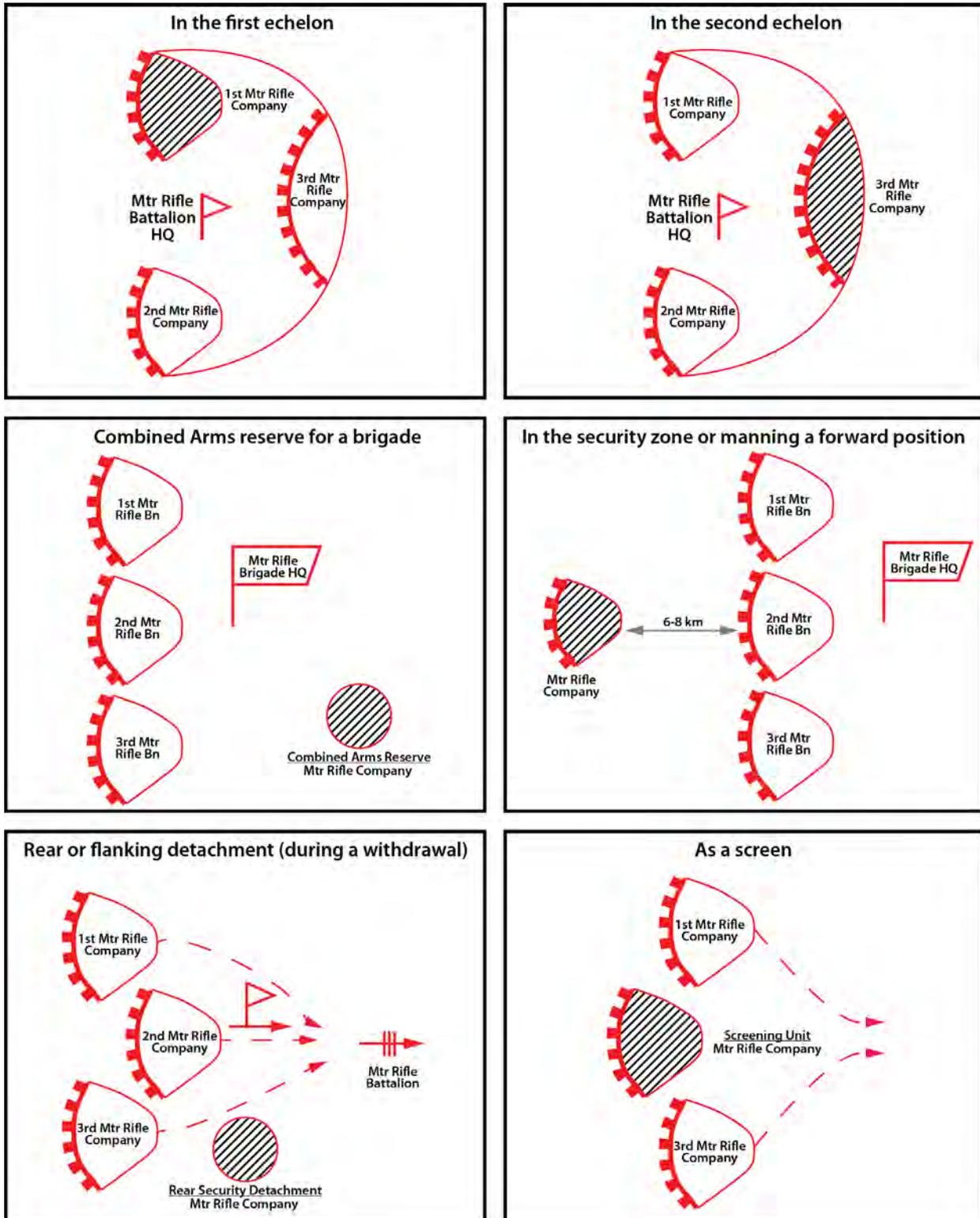
(Above) This graphic depicts a typical layout of a defending first echelon motorized rifle company with an attached tank platoon. The commander defends with three motorized rifle platoons on line, but has refused the center to create a fire sac. A lone squad is positioned within the sac to deceive the enemy as to the defense's forward edge and the presence of the fire sac. The plan is to pull the enemy attack within the sac where it will be decimated by enfilade fire. The company has two reserves—a motorized rifle platoon from another company and the company bronnegruppa which is a mobile maneuver reserve.

The gaps between the platoon strongpoints are up to 300 meters. The platoon strong points are placed on the most probable axes of enemy advance in order to intercept the enemy.

The first trench is the front edge of the defense. In front of the trench are mines and obstacles. The first trench is selected with consideration of the presence of natural antitank obstacles, ability to provide good observation of the enemy, and the best position to lay all types of continuous fire at the forward edge of the defense, the flanks, and in the gaps throughout the depth of defense.

The second trench is placed at a distance of 400-600 meters from the first trench, with an expectation that defending units can support subunits in the first trench, lay fire onto the approaches to the forward edge of the defense and provide covering fires onto the forward obstacles.

Positions for a Motorized Rifle Company in the Battalion Defense



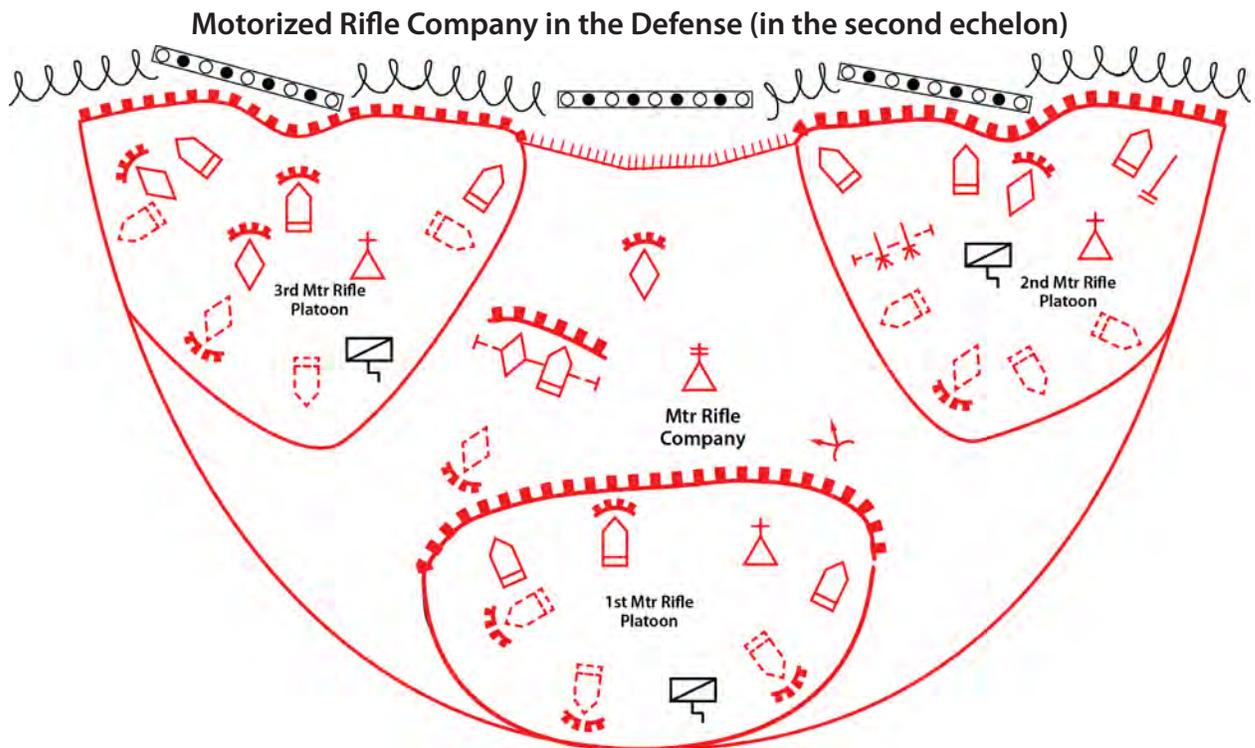
(Above) The motorized rifle company can be positioned in a variety of locations in the defense. The rear or flanking detachment is used during a fighting withdrawal while the screening detachment is used during a break in contact.

The command-observation post of the company is placed in the depth of the defense up to 800 meters from the forward edge of the defense, where the terrain is best for observation and command and control.

Integrated Fire Plan

The system of fire of a company consists of the massing the various weapons' fires by the senior commander to destroy the enemy. The system of fire must be carefully integrated with the obstacle system. It includes:

- Zones of concentrated fire and lines of anti-aircraft gun fire on the approaches to the defense, in front of the forward edge of the defense, on the flanks and throughout the depth of the defense
- Antitank zones of fire and continuous multilayered fire by all types of weapons before the forward edge of the battle area, in the gaps, on the flanks and throughout the depths of the defense to destroy the first wave of tanks and other armored vehicles of the enemy
- Prepared maneuver fire.



(Above) This graphic shows a second echelon motorized company with an attached tank platoon defending in the second echelon of a battalion defense. It has incorporated a fire sac in its defense that is initially held by a tank. There is a fall-back position where a dug-in firing line of tanks and BMPs (a company bronegruppa) and an ambush prevent breakthrough.

The system of fire is formed by taking into account the following:

- The firing capabilities of all the types of weapons involved
- Their close integration of these weapons
- Their effect of these weapons when combined with the engineering obstacles and natural barriers.

Readiness of the system of fire is determined by:

- Manning of the firing positions
- Prepared range cards and firing data
- The presence of missiles and ammunition.

Means of Reinforcement

The following are common attachments for a motorized rifle company:

- Tank platoon
- Artillery battery/platoon
- Antitank platoon (crew)
- Anti-aircraft squad
- Engineer squad.

A company defending on a main avenue of approach may be reinforced with attached artillery units (mortar platoon or artillery battery), an AGS-17 grenade launcher and antitank subunits. A motorized rifle company may have an attached tank platoon, while a tank company may have an attached motorized rifle platoon.

Sequence of Work after Receipt of Mission

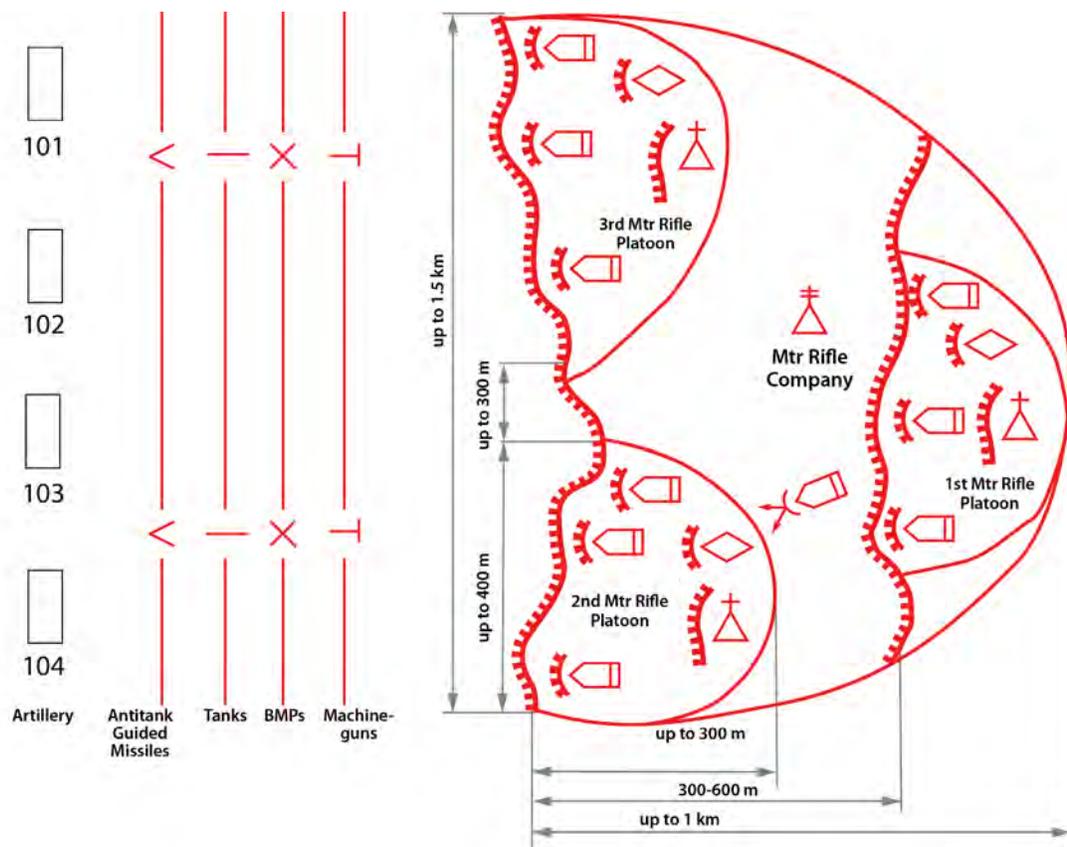
In the absence of direct contact with the enemy, the commander of a company:

- Makes his plan of defense
- Briefs his deputies and subordinate commanders
- Conducts reconnaissance during which he refines his decision
- Gives his combat order
- Organizes cooperation and an integrated system of fires, support, and C2
- Guides the company onto a specified area of defense (strong point) and organizes its engineer support.

After receiving an order to transition to the defense, while in direct contact with the enemy, the commander of the company:

- Organizes the seizure and fortification of designated (advantageous) lines
- In the course of fortifying the lines, makes his decision on the plan of defense
- Gives his combat order to his subordinate units
- Organizes cooperation and an integrated system of fires, NBC defense, and countermeasures against enemy precision weapons
- Gives orders on the basic issues of comprehensive combat support
- Organizes engineering support in the area of defense (strong point)
- Conducts reconnaissance, in course of which, he refines the subunit's order, the order of cooperation and, if necessary, other matters.

System of Fires for a Motorized Rifle Company



(Above) This graphic shows typical distances for laying out a company defense, but they will be modified to fit the demands of the situation, forces available, threat and terrain. The engagement lines for various firing systems is based on the location of the weapons systems closest to the front line and indicates the point where various weapons systems will begin engaging the advancing enemy. Individual range cards will be modified for those weapons positioned further back

Considerations of the company commander:

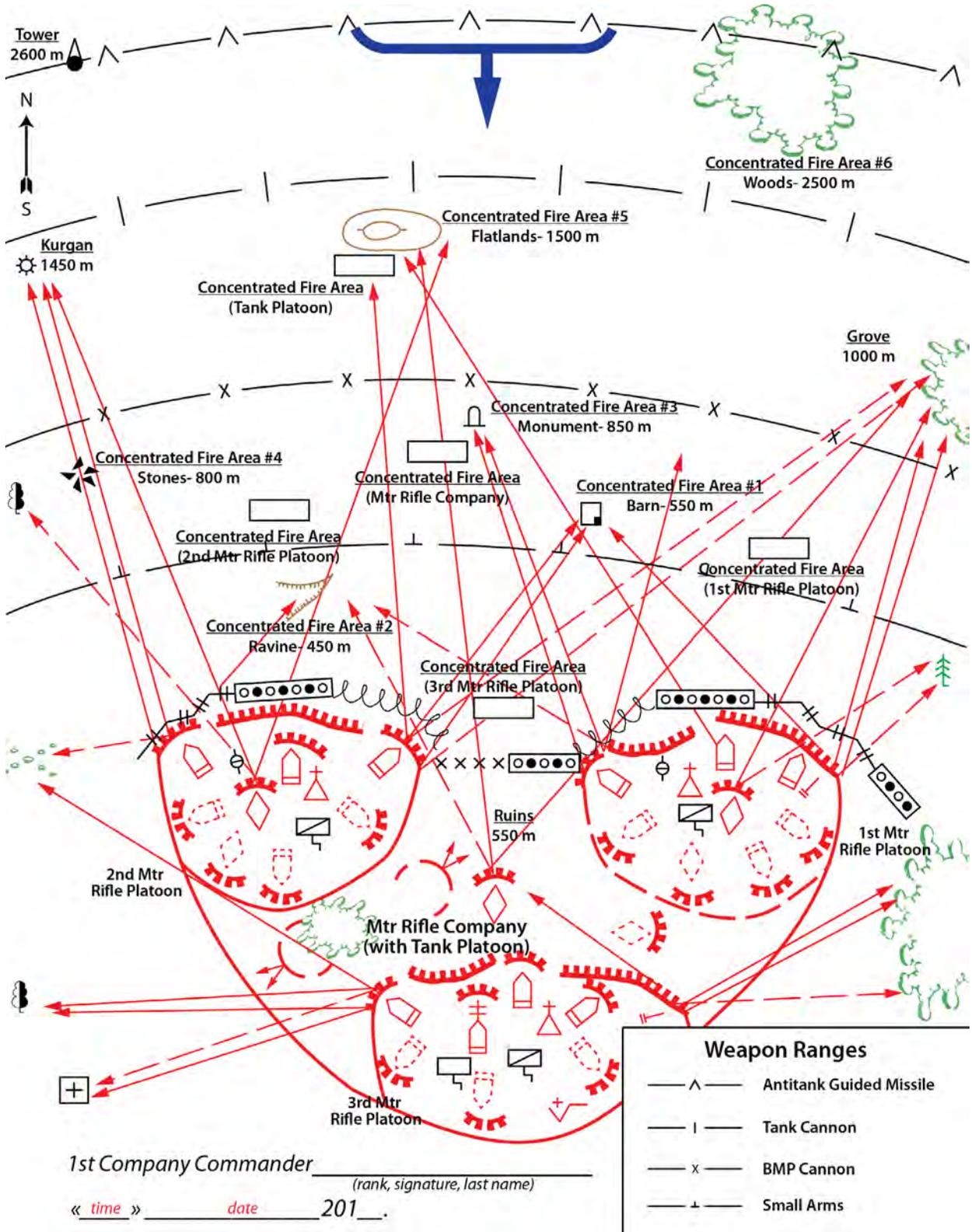
- Platoons of the first echelon – reinforcements; strong points and direction on which to concentrate the main effort; tasks to repulse the offensive and destroy the enemy which has penetrated into one's defenses; the number of trenches (including their physical location and layout); fields of fire, additional sectors of fire and zones of concentrated fire; what forces and means are needed to secure the flanks, joints, and gaps, and who is responsible for them; who provides support;
- Platoon of the second echelon - the same duties as that of their platoons of the first echelon, plus, for companies, their lines of deployment for counterattack; for tank companies and motorized rifle companies with BMPs, their firing lines;
- Reserve - assembly area (strong point), on-order missions to prepare for; additionally, for tank companies and motorized rifle companies with BMPs, their firing lines;
- *Bronegruppa*- composition, assembly area and time to occupy it, firing lines and on-order missions to prepare for;
- Ambush – composition, place, mission for engaging an advancing enemy and sequence of withdrawal;

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- Attached artillery and mortar battery support – sequence of supporting fire for the security zone; fire missions during enemy movement to the forward edge of the defense and deployment and transition to the attack; fire against enemy stuck into the defense; support of the counterattack of the second echelon, main, alternate and temporary firing positions;
- Grenade launcher (AGS-17) - missions supporting companies of the first echelon and repelling enemy infantry assaults; main and reserve positions; belts of fire; additional sectors of fire; zones of concentrated fire; lines of barrier fire.
- Antitank subunits - the place in the defense and the direction of the enemy advance; the line of deployment; the sequence for occupying positions and on-order missions to prepare for; the signal for opening and ceasing fire; actions after mission accomplishment;
- Anti-aircraft units - launch (firing) positions; sectors of reconnaissance to detect enemy aircraft; time and degrees of readiness; sequence of conduct of fire;
- Security subunits forward of the defense – position; mission; weapons designated for support; sequence of calls for fire; sequence of withdrawal - Concluding the order- the time to be ready to fulfill the order, the time to occupy the defense, the time for readiness of the scheme of integrated fire and time for engineering obstacle work to be completed, the order and sequence for camouflage and field fortification of the area of defense (strong point).

(Right) The graphic on the facing page shows the scheme of fire for a company strong point defense. It is defending with two platoons forward and one back and is configured for a 360° defense. There are an additional tank platoon and two flame projectors (the RPO shoulder-fired rocket launcher has the RPO-Z flame round, RPO-A thermobaric round and the RPO-D smoke screen round). There is the company medical point and feeding point in the second echelon platoon. The company commander has determined sectors of fire and marked the platoon and company areas of concentrated fire on the map. He has drawn the lines where ATGMs, tank main guns, BMPs and small arms and machine guns may open fire. As before, landmarks and benchmarks play a prominent role in laying out the range card.

Motorized Rifle Company in the Defense



Battalion in the Defense

A motorized rifle or tank battalion can serve in either the first or second echelons of the brigade, in the security zone, in a forward position or as part of the combined arms reserve. A battalion of the first echelon prepares and occupies the first defensive position. The battalion is assigned a defensive region. The width of the battalion defensive area is up to five kilometers and the depth of the defensive area is up to three kilometers. A battalion of the second echelon prepares and occupies the second defensive position. The mortar battery and AGS-17 grenade launcher platoon are, as a rule, directly subordinate to the battalion commander and remain intact to support the defending subunits. A defense includes a combat formation, system of strong points and firing positions, integrated fire plan, and engineer obstacle system.⁷

Elements of the Combat Formation

- 1st echelon motorized rifle companies with reinforcements
- A second echelon motorized rifle company or reserve platoon
- Weapons fire controlled by the battalion commander (artillery battalion, mortar battery, antitank platoon, AGS-17 platoon, air defense platoon)
- *Bronegruppa* (Armored Group)
- Ambush team

The motorized rifle or tank battalion in the defense, as a rule, consists of two echelons, but sometimes one echelon, and has a combined arms reserve of at least one motorized rifle platoon. The combat formation consists of a first echelon comprising two-three motorized rifle companies. The second echelon consists of a motorized rifle company or combined arms reserve of at least one motorized rifle platoon. Artillery subunits include the mortar battery (an artillery battalion may be attached to a maneuver battalion). Subunits that are directly subordinate to the battalion commander include the: AGS-17 grenade launcher platoon, antitank platoon, and attached flamethrower company. Depending on the situation, the formation may include a *bronegruppa* and/or an ambush team. A *bronegruppa* is a mobile reserve that is formed primarily from the infantry fighting vehicles after the motorized rifle soldiers have dismounted from them. It occupies an assembly area and has designated firing lines and blocking positions within the defense.

A first echelon battalion is designed to:

- Defeat the enemy during his deployment and transition to the attack
- Repel the offensive
- Prevent the breakthrough of the forward defense
- Retain strong points
- Prevent an enemy breakthrough into the depths of the battalion defensive region.

⁷ This section, including graphics, has been compiled from many sources to include:

"Battalion in the Defense" [Батальон в обороне], as found on *Studiopedia*, <<http://studopedia.info/1-67779.html>>, accessed on 1 July 2016.

V.N. Zaritski and L.A. Kharkevich, *General Tactics* [Общая Тактика], Tambov: Tambov Government Technical University, 2007.

Field Manual: Preparation and Conduct of Combined Arms Warfare [Боевой Устав: По Подготовке и Ведению Общевоинского Боя], Moscow: Ministry of Defense of the Russian Federation, 2005.

Source material has also been obtained from a variety of training documents produced by Russian military academies and military departments in civilian academic institutions.

A second echelon battalion is designed to:

- Prevent an enemy breakthrough of the first position.
- Destroy or counterattack an enemy breakthrough across the forward edge of the defense.

A motorized rifle company of the second echelon prepares strong points at full speed at the third trench, and then the fourth trench.

The combined arms reserve of a motorized rifle battalion occupies a staging area behind the subunits of the first echelon, prepares a strong point, and prepares to carry out sudden developing missions.

The artillery subunits of a motorized rifle battalion remain intact and are used to support the companies in the first echelon. A battery from an artillery battalion may be attached to a motorized rifle company.

The grenade launcher (AGS-17) subunit, flamethrower subunit, and different means of fires remain subordinate to the battalion commander, occupy positions in the company strong points or between them, and remain intact to concentrate on the direction of the main enemy effort to cover flanks and support counterattacks.

The antitank reserve consists of the antitank platoon. It is designed to destroy tanks and other armored vehicles that penetrate into the depth of the defense and cover tank avenues of approach and the flanks.

The bronegruppa is established for the purpose of closing gaps that formed due to enemy fire strikes, as well as other tasks. It consists of tanks, BMPs, and BTRs from first- and second-echelon units and defends against the main avenues of approach. It is commanded by the commander of a platoon of a first-echelon company.

An ambush team attempts to inflict maximum destruction by sudden direct fire and use of minefields. It may consist of a motorized rifle platoon or squad reinforced by flamethrowers and sapper subunits. The firing positions for the fire ambush are put in fortified positions on tank avenues of approach, on the flanks, and on the outskirts of populated areas.

System of Strong Points and Firing Positions

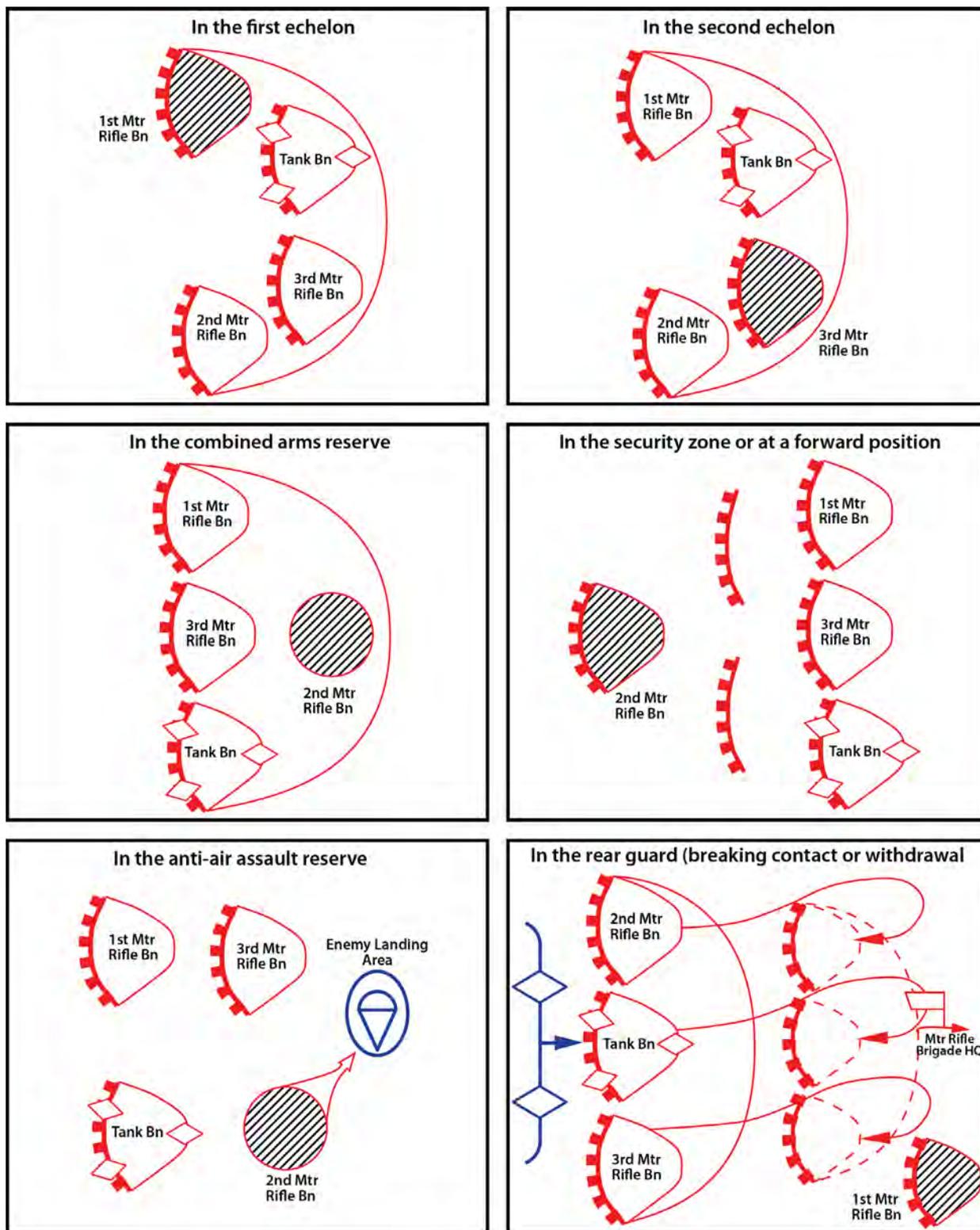
The system of strong points and firing positions of the battalion includes:

- The strong points of companies, connected to each other along the front and throughout the depth, with an integrated system of fires and obstacles
- Primary, alternate and temporary positions for artillery, tanks, infantry fighting vehicles, and other organic and attached firepower
- The positions of combat security outposts.

The battalion defensive area is based on its defensive positions. It has three or four trenches and consists of company strong points, firing positions for artillery subunits, firing positions for other weapons which remain under the direct command of the battalion commander, the assembly area and the firing line for the *bronegruppa*. The gaps between the company strongpoints are up to 1000 meters, and between platoon strong points are up to 300 meters.

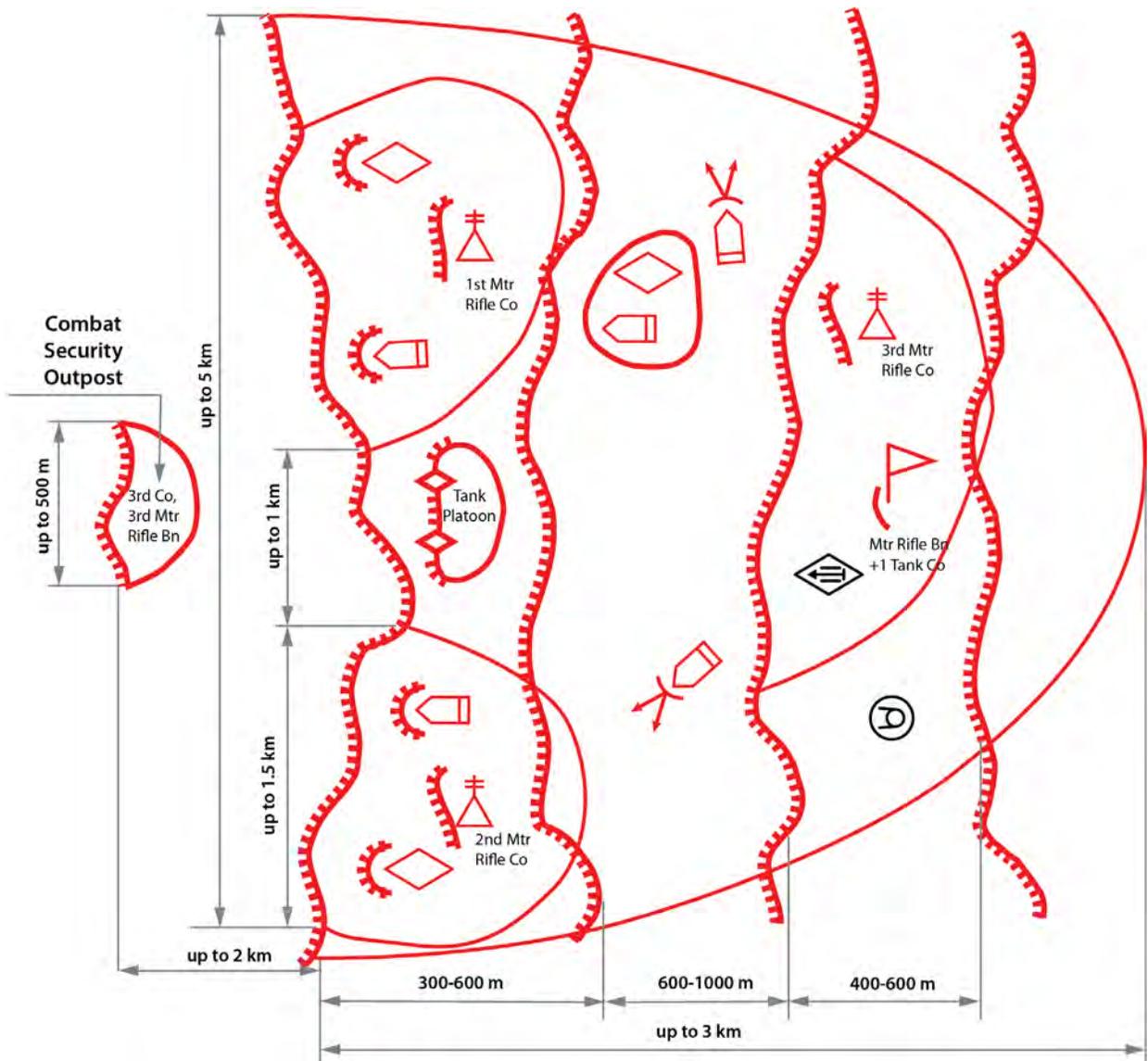
The first trench is on the forward edge of the defense. The second trench is 400-600 meters from the first trench, the third trench is 600-1000 meters from the second, and the fourth is 400-600 meters from the third trench.

Positions for a Motorized Rifle Battalion in the Brigade Defense



(Above) This graphic shows the possible locations and missions for a motorized rifle battalion in the defense.

Motorized Rifle Battalion in the Defense



(Above) This graphic gives a range of distances involved in a defense by motorized rifle battalion with an attached tank company. This battalion is defending in two echelons and incorporates a fire sac. It has constituted a bronegruppa with the tanks and BMPs of the second echelon company and has positioned the primary firing positions for its mortar battery fairly deep. A battery of 2S6 Tugunskia self-propelled anti-aircraft gun and missile systems are deployed in the rear company. The location of systems and distances will be adjusted to fit the demands of the situation, threat, forces available and terrain.

Integrated Fire Plan

The system of fire of a battalion consists of the massing the various weapons' fires by the senior commander to destroy the enemy. The system of fire must be carefully integrated with the obstacle system. It includes:

- Zones of concentrated fire and lines of anti-aircraft gun fire on the approaches to the defense, in front of the forward edge of the defense, on the flanks and throughout the depth of the defense
- Antitank zones of fire and continuous multilayered fire by all types of weapons before the forward edge of the battle area, in the gaps, on the flanks and throughout the depth of the defense to destroy the first wave of tanks and other armored vehicles of the enemy
- Prepared maneuver fire.

The system of fire is formed by taking into account:

- The firing capabilities of all the types of weapons involved
- Their close integration
- Their effect when combined with the engineering obstacles and natural barriers.

Readiness of the system of fire is determined by:

- Manning of the firing positions
- Prepared range cards and firing data
- The presence of missiles and ammunition.

Battalion command-observation posts are usually dug-in within the area of the first echelon companies or in the vicinity of the second echelon (reserve) company strong points two kilometers from the forward edge of the battalion's defenses.

Engineer Obstacle System

Obstacles are objects prepared for on-order destruction (mining). They are emplaced in front of combat security outposts; on the forward edge of the battle area; in gaps between subunits; and on the flanks of the battalion (company) throughout the entire depth of the battalion defensive area in accordance with the planned system of fires and natural obstacles, and after considering the maneuver of subunits and neighboring units.

The system of engineer obstacles includes:

- Minefields
- Mine clusters
- Choke point obstacles
- Locally fabricated obstacles
- Different types of antitank and antipersonnel obstacles.

Means of Reinforcement

The following are common attachments for a motorized rifle battalion:

- Tank company
- Artillery battalion/battery
- Anti-aircraft battery
- Engineer platoon
- NBC reconnaissance subunit.

Sequence of Work after Receipt of Mission

In the absence of direct contact with the enemy, the commander of a battalion:

- Makes his decision of the plan of defense
- Briefs his deputies and subordinate commanders
- Conducts reconnaissance, during which he refines his decision
- Gives his combat order
- Organizes cooperation and an integrated system of fires, support, and C2
- Guides the battalion (company) onto a specified area of defense (strong point) and organizes its engineer support.

After receiving an order to transition to the defense, while in direct contact with the enemy, the commander of the battalion:

- Organizes the seizure and fortification of designated (advantageous) lines
- In the course of fortifying the lines, makes his decision on the plan of defense
- Gives his combat order to his subordinate units
- Organizes cooperation and an integrated system of fires, NBC defense, and countermeasures against enemy precision weapons
- Gives orders on the basic issues of comprehensive combat support
- Organizes engineering support in the area of defense (strong point)
- Conducts reconnaissance, in course of which he refines the subunit's order, the order of cooperation and, if necessary, other matters.

Considerations of the battalion commander:

- Companies of the first echelon – reinforcements; strong points and direction on which to concentrate the main effort; tasks to repulse the offensive and destroy an enemy which has penetrated into one's defenses; the number of trenches and their trace; fields of fire, additional sectors of fire and zones of concentrated fire; what forces and means are needed to secure the flanks, joints, and gaps, and who is responsible for them; who provides support;
- Company of the second echelon - the same duties as that of the companies (platoons) of the first echelon, plus, for companies, their lines of deployment for counterattack; for tank companies and motorized rifle companies with BMPs, their firing lines;
- Reserve - assembly area (strong point); on-order missions to prepare for; additionally for tank companies and motorized rifle companies with BMPs, their firing lines;
- *Bronegruppa* - composition; assembly area and time to occupy it; firing lines; on-order missions to prepare for;
- Ambush team – composition; place; mission for engaging an advancing enemy; sequence of withdrawal;
- Attached artillery and mortar battery support – sequence of supporting fire for the security zone; fire missions during enemy movement to the forward edge of the defense; deployment and transition to the attack; fire against enemy wedged into the defense; support of the counterattack of the second echelon; main, alternate and temporary firing positions;
- Grenade launcher (AGS-17) - missions supporting companies of the first echelon and repelling enemy infantry assaults; main and reserve positions; belts of fire; additional

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- sectors of fire; zones of concentrated fire; lines of barrier fire;
- Antitank subunits - the place in the defense; the direction of the enemy advance; the line of deployment; the sequence for occupying positions and on-order missions to prepare for; the signal for opening and ceasing fire; actions after mission accomplishment;
- Anti-aircraft units - launch (firing) positions; sectors of reconnaissance to detect enemy aircraft; time and degrees of readiness; sequence of conduct of fire;
- Security subunits forward of the defense – position; mission; weapons designated for support; sequence of calls for fire; sequence of withdrawal;
- Concluding the order-the time to be ready to fulfill the order, the time to occupy the defense, the time for readiness of the scheme of integrated fire and time for engineering obstacle work to be completed, the order and sequence for camouflage and field fortification of the area of defense (strong point).

Brigade in the Defense

A motorized rifle (or tank) brigade defends in either the first or second echelon of an Army Group, or Army Corps. (A Russian Army Group has approximately the same combat power as a small U.S. Army Corps.) It can also serve as a reserve or defend a separate axis. A first-echelon brigade defends on the first defensive axis, where it occupies two to three defensive positions. A motorized rifle brigade defending in the first echelon of the Army Group on the enemy main axis of attack may be reinforced with two or more artillery battalions, antitank subunits and subunits of rocket-propelled flamethrowers. If the brigade is part of an army, it constitutes a defensive belt. If it is serving independently on a separate avenue of approach or in a separate armed conflict, the brigade constitutes a zone of responsibility. The defensive belt or the zone of responsibility are assigned based upon the range of the reconnaissance systems and the flanks and rear of the boundary line that separates the brigade from neighboring units. The assigned size of the zone and area of defense must facilitate the counteraction against the attacking enemy and tactical cooperation between the combat elements of the brigade, and allow adequate space for the freedom of maneuver and dispersion of subunits.⁸

A motorized rifle or tank brigade in the defense includes:

- Brigade combat formation
- Integrated defensive positions, areas and lines
- "Kill zones" for destruction of the enemy
- Integrated air defense
- Integrated antitank defense
- Integrated obstacles
- Integrated air assault/air drop defense
- Integrated command and control.

Elements of the Combat Formation

Depending on the situation, the brigade combat formation in the defense can consist of one or two echelons. A combined arms reserve of at least a motorized rifle company should be constituted from one of these echelons.

The brigade combat formation in the defense includes:

- The first echelon (two or three motorized rifle battalions)
- The second echelon (or combined arms reserve) - one or two battalions, including a tank battalion. The anti-assault reserve is at least a motorized rifle or tank company
- Brigade artillery group
- Air defense subunits
- Antitank reserve
- Obstacle construction detachment
- Anti-air assault subunits.

The combat formation can include a forward detachment, tactical air assault units, and electronic warfare subunits, depending on the situation.

⁸ "Composition of a Brigade in the Defense" [Построение обороны мотострелковой], as found on *Studiopedia*, <<http://studopedia.info/1-67780.htm>>, accessed on 1 July 2016.

Battalions in the first echelon are intended to:

- Engage the enemy as it deploys and transitions from column movement to attack formation
- Repel assaults by the enemy in order to avoid enemy pockets in the defensive area
- Deny enemy breakthrough into the depths of its defense
- Destroy enemy subunit pockets at established kill zones and lines.

The second echelon (or reserve) is intended to:

- Deny the enemy's seizure of strong points throughout the depth of the defense
- Prohibit enemy breakthroughs throughout the depth of the defense
- Defeat pockets of the enemy through actions of subunits at designated positions and lines, conduct counterattacks, and reoccupy contested positions at the forward edge of the defense.

The combined arms reserve of the brigade is intended to:

- Deal with unexpected problems
- Reconstitute first echelon units in the event of their loss of combat effectiveness.

Artillery- A motorized rifle or tank brigade in the defense will be supported by a Brigade Artillery Group (BrAG). The BrAG is usually composed of the maneuver brigade's organic two self-propelled artillery battalions and one MLRS battalion. It is intended to defeat the enemy in the approach march, on the line of deployment, in the attack staging area, or, should the enemy penetrate the first defense positions, defeat them from temporary firing positions. The artillery primary fire positions are usually located 2-4 kilometers from the forward edge of the defensive and occupy an area of 3-5 kilometers wide and 1-2 kilometers in depth.

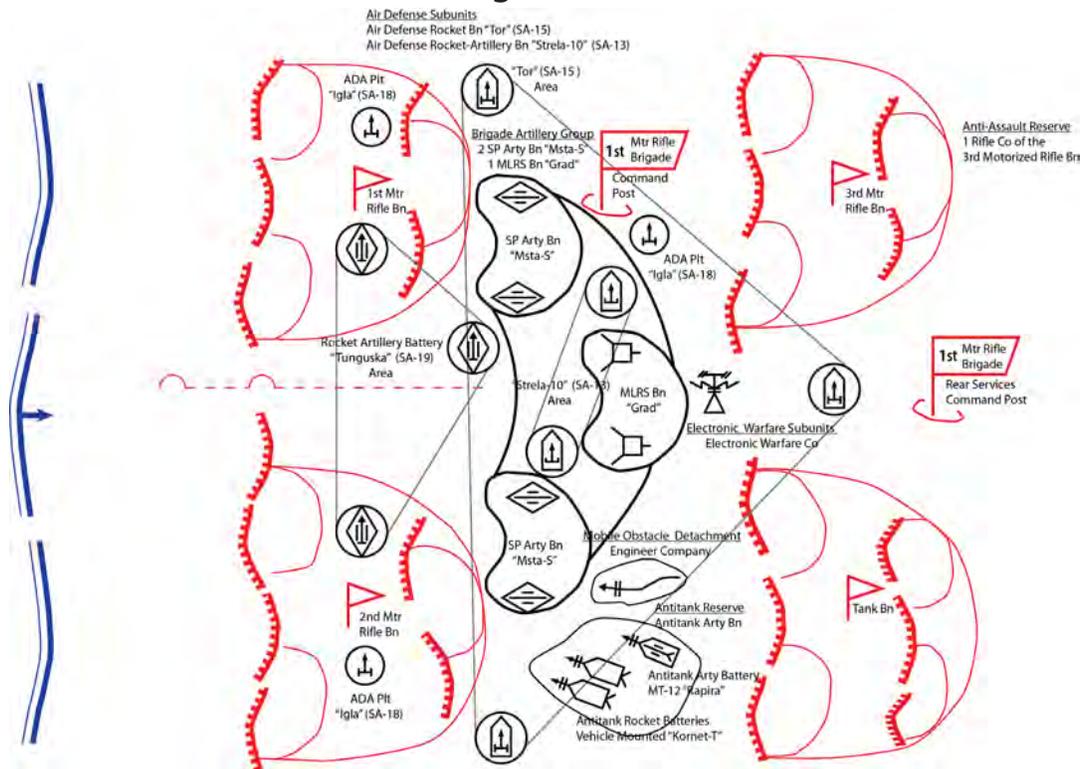
Air Defense- A defending brigade will be supported by its organic anti-aircraft and missile systems. These air defenses are designed to protect the brigade from air strikes and cruise missiles. The air defense missile battalion will provide zonal coverage to protect the brigade's subunits and command post from air strikes. A battery of "Tunguska" rocket artillery protects the first-echelon forces. Two platoons of the "Strela-10" missile battery protect the BrAG. Two platoons equipped with "Igla" MANPADS cover the first echelon, while the third platoon in the "Igla" company protects the brigade command post.

Antitank Reserves- The antitank reserve is designed to destroy tanks and other armored vehicles that breach the defense, and cover other hazardous areas on the flanks. The basis of the antitank reserve is the brigade's organic antitank artillery battalion.

Mobile Obstacle Detachment – The mobile obstacle detachment weakens the enemy by the emplacement of minefields. It works in conjunction with the antitank reserve. It is constituted from the brigade's organic engineer company, particularly incorporating its mobile mine-layers.

Anti-Assault Reserve- The anti-assault reserve is designed to destroy enemy assaults in areas where sabotage and reconnaissance activities are expected. It usually consists of a motorized rifle company from the second echelon.

Motorized Rifle Brigade in the Defense



(Above) This graphic shows a notional laydown of additional forces, including the antitank reserve, the mobile obstacle detachment, the anti-assault reserve, the electronic warfare subunits and air defense subunits.

Forward Detachment in the Security Zone- This subunit delays the arrival of the enemy or makes him deploy and attack prematurely in an unfavorable direction for him. The forward detachment is constituted using subunits from a motorized rifle battalion in the second echelon.

Air Assault Detachment- This unit is part of a reinforced motorized rifle company designed to conduct an air assault into the rear area where an enemy has broken through. The air assault detachment will cooperate with subunits of the brigade's second echelon in the conduct of a counterattack.

Electronic Warfare Subunits- These subunits are intended to suppress enemy radios and electronics and protect the brigade subunits from electronic proximity fuses and other signal-detonated munitions.

Integrated Defensive Positions, Areas and Lines

The system of defensive positions, areas and lines include:

- Forward security zone
- Forward security outpost position
- Two to three defensive positions
- Alternative positions
- Separate areas and centers of resistance
- Areas for the firing positions of the BrAG and other artillery and initial positions for anti-aircraft assets.
- Second echelon (reserves) assembly areas
- Firing lines for tanks and BMPs (infantry fighting vehicles)
- Counterattack deployment lines
- Antitank reserve deployment lines
- Mobile obstacle detachment deployment lines
- Anti-assault reserve assembly area
- Places for the construction of fire sacs
- Landing zones and ambush sites for combat helicopters
- Locations for troop control points
- False and reserve defensive areas (strong points, positions).

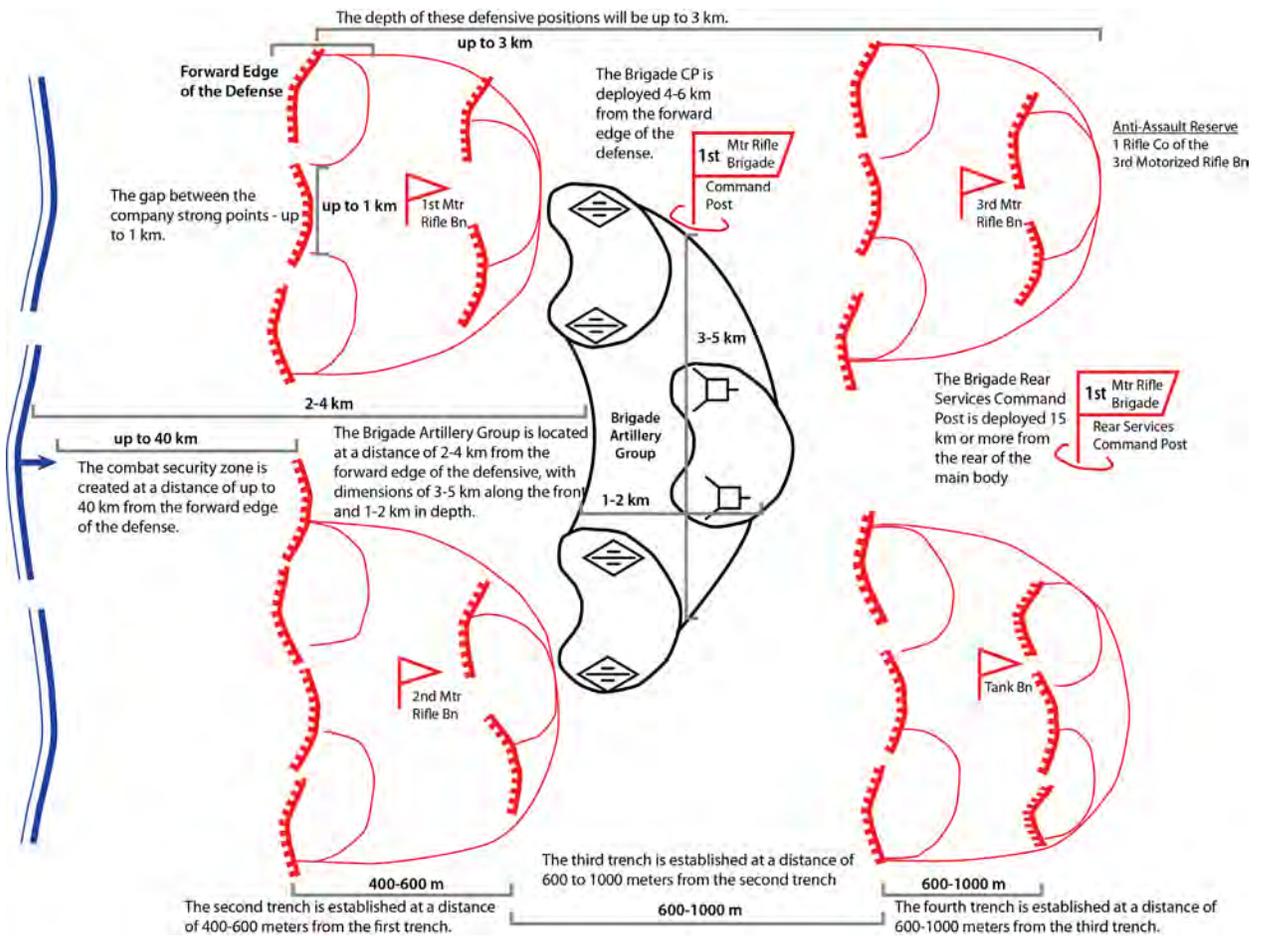
The security zone is created at a depth of up to 40 kilometers in front of the forward edge of the defense, when the defending force is not in immediate contact with the enemy. Within the security zone there are 5-6 positions, 6-8 kilometers from each other. Separate company (platoon) strong points designed to hold important areas are constructed and fortified with engineering obstacles in the defensive area.

When there is no combat security zone, a motorized rifle or tank brigade will establish a forward position 6-8 kilometers in front of the forward edge of the defense to deceive the enemy as to the location of the forward edge of the defense, to repulse sudden attacks on the first-echelon subunits, and to cause the enemy to prematurely deploy the main body of his force. Reinforced companies are dispatched from the first-echelon motorized rifle battalions to defend the forward positions by creating separate company and platoon strong points.

The combat security zone is created at a distance of up to two kilometers from the forward edge of the defense on those approaches where there are no forward positions and where there is no contact with the enemy, with the goal of preventing a surprise attack and preventing enemy ground reconnaissance of the first-echelon motorized rifle battalions. In the event of no direct enemy contact, the mission of the combat security zone is accomplished by subunits from the first positions of the first trench. The combat security zone will be formed by reinforced motorized rifle platoons dispatched by the brigade's subordinate battalions.

The main defensive position consists of combined company strong points joined within the battalion defense area. The depth of these defensive positions will be up to 3 kilometers. They will be established within 3-4 trenches.

Relative Positions of a Motorized Rifle Brigade in the Defense



This graphic shows the considerations and relative positioning of a brigade defending in two echelons with two battalions forward and two back. The location of forces, systems and distances will be adjusted to fit the demands of the situation, threat, forces available and terrain.

The First Trench- The first trench is located in the first defensive position on the forward edge of the defense, the trace of which is determined by the brigade commander. The exact location of this position is determined by the battalion commander and is defended by platoons of the first echelon. Mines are emplaced in front of this first trench.

The Second Trench- The second trench is established 400-600 meters from the first trench. The positions of subunits occupying the first trench are covered by fire from the second trench. The second echelon subunits also cover the approaches to the forward edge of the defense and the obstacles arrayed in front of it.

The Third Trench- The third trench is established 600-1000 meters from the second trench and is situated so its subunits can conduct direct fire on the zone between the second and third trenches, on separate sections and in front of the forward edge of the defense. The third trench can also be used as a starting position for maneuver against threatened areas in the event of an enemy counterattack.

The Fourth Trench- The fourth trench is established 600-1000 meters from the third trench. The positions of subunits occupying the third trench are covered by fires from the fourth trench, and the fourth trench also covers the approaches to the forward edge of the defense and the obstacles arrayed in front of it.

The first position in the brigade defensive belt is the most important. It is defined by the brigade's first-echelon battalions. The second brigade position is defended by the brigades' second-echelon battalions. The defensive positions of the brigade are the battalions' areas of defense. The battalion areas consist of company strong points connected from the front to the depth by interlocking fires, obstacles, trenches and connecting passageways for the conduct of 360° defense. The gap between the company strong points is up to 1 kilometer.

Channeling and blocking positions are spread throughout the depth of the defense to deter enemy maneuver toward the flanks and drive them onto obstacles and blocking positions. These may be lines for commitment of a counterattack, as well as firing lines for tank units (subunits) located in the second echelon. These consist of 1-2 trenches and connecting communications trenches linking the front to the rear.

Individual areas of defense (intersections) are created for the protection and support of intrapositioning stretches between road intersections, built-up areas, crossings and other important objectives for an air assault.

The BrAG's firing positions are assigned to those axes that could be threatened by enemy tanks (a Russian artillery mission is direct lay fire against armor). For the BrAG of an army's first-echelon brigade, the firing positions are located between the first and second positions. The BrAG's firing positions are selected based on the range of its artillery systems, 2-6 kilometers from the forward edge of the defense. Reserve and temporary firing positions and routes to them are prepared for the BrAG's artillery.

A defending brigade will also be supported by its organic anti-aircraft systems. The Strela-10 (SA-13) and Tor-M1 (SA-15) air defense missile systems are deployed in initial firing positions three-four kilometers along the front and in depth. The distances between the air defense batteries are eight kilometers or more. The initial positions of the Tor-M1 systems assigned to the first position are sited 5-10 kilometers from the forward edge of the defense, and the separation between them along the front and in depth are from 5-10 kilometers. Initial positions of a first-echelon motorized rifle or tank brigade's anti-aircraft missile batteries and anti-aircraft artillery batteries are established at 0.5-1.5 kilometers from the forward edge of the defense.

The reserve assembly area is held in pre-combat order as it prepares the second (and sometimes third) brigade defensive belt.

The firing lines of tanks, BMPs, and BTRs of the second echelon (combined arms reserve) are focused on areas where precision weapon or massed tank assaults are expected. Tank

battalions (or motorized rifle companies on BMPs) of the second echelon have one or two firing lines immediately behind the first strong point, and then between the first and second strong points.

A tank company (or motorized rifle companies on BMPs) is deployed on firing areas at the front, with 1-1.5 kilometer intervals between companies, with the total length of the firing line extending up to five kilometers. The firing line may coincide with the commitment line for the conduct of counterattacks.

To carry out counterattacks in the defense, the second echelon battalions plan one or two areas for a counterattack on the probable axes of enemy attack. On each avenue of approach the counterattack has a main and back-up line of deployment for counterattack, with 2-3 kilometers between them.

Lines of deployment of the antitank reserve are assigned against probable areas where enemy precision weapons and large tank attacks will occur. In the defense, the antitank reserve is located in an assembly area. The brigade antitank reserve assembly area is located on an armor avenue of approach between the second and third positions or within the second position.

The antitank reserve may be assigned 3-5 deployment lines or more between the first and second positions. An antitank guided missile (ATGM) battery is deployed up to 2 kilometers from the front, the antitank battalion - up to 5 kilometers. The mobile obstacle detachment must protect the line of deployment of the antitank reserve. It is located in reserve close to the antitank assembly area and sometimes in it.

Designated equipment is prepared to ambush by fire on the enemy unit's flanks throughout the depth of the defense to limit the enemy's ability to maneuver. The most appropriate places for these ambushes are the reverse slopes of hills, outskirts of populated areas, the forest edge, and at road junctions.

The anti-assault reserve assembly areas should provide rapid access to those objectives most likely to be assaulted by air. The brigade anti-assault reserve is located within the boundaries of the second (or third) position.

Designated control points (primary and reserve) are selected throughout the depth of defense in areas where tank assaults are difficult, away from the direction of the enemy main attack.

The brigade command post- is deployed 4-6 kilometers from the forward edge of the defense. From this point the commander can view the most likely enemy avenues of approach, 1-3 kilometers from his forces.

The brigade rear services command post is deployed 15 kilometers and sometimes more from the forward edge of the defense. It is located with the brigade trains (maintenance and

logistics elements).

The command-observation post for the motorized rifle battalion is located behind the first-echelon motorized rifle companies or in the vicinity of the battalion's second-echelon company, which is approximately two kilometers from the forward edge of the defense.

False strong points and false firing positions are constructed throughout the defense in between the defending units, on the flanks, and in unoccupied areas.

Fire Support

Fire support includes:

- Aviation strikes
- Direct and indirect fires from the BrAG
- Integrated fires from the maneuver battalions.

Air Defense

The air defense system is created throughout the entire defense, and includes:

- An integrated system of radar reconnaissance and early warning
- An integrated system of anti-aircraft missile and anti-aircraft artillery cover
- An integrated command and control system for air defense units.

The integrated reconnaissance of the aerial enemy is based on army radar sites. They are supplemented by the reconnaissance of the radar control posts of the brigade air defense subunits. The integration of missile and antiaircraft coverage includes the combat formation of brigade air defense forces and their integrated fires, coordinated by direction, height, lines, points to be protected, types of targets and time.

The system of command and control unites the command posts, communication systems and computers with the air defense units and subunits to support the control of units and subunits and to direct their fires.

Integrated Antitank Defense

Integrated antitank defense includes:

- Artillery fire against tanks and other armored vehicles from concealed locations;
- Integrated antitank fires (planned fires of antitank weapons, tanks and BMPs in direct lay) by subunits on armor avenues of approach.

The antitank reserve and mobile obstacle detachment prepare an assembly area and lines to mine plus lines of deployment during combat, starting at the security zone and forward position, to defeat a massed tank attack and destroy it as it attempts to wedge into the defense.

Integrated Engineer Obstacles

Obstacles can be made from anything that hinders movement (mines, electrified fences, etc.) to protect company strong points, areas between them, artillery emplacements, command posts, unit boundaries, and other points. These obstacles can be employed in conjunction with direct and indirect fires, as well as with naturally occurring obstacles.

Integrated Air Assault Defense

The air assault defense force prevents enemy air assaults and destroys enemy forces before they land, during their landing and after they land, as well as countering airborne and airmobile sabotage and reconnaissance efforts. The integrated air assault defense includes:

- Anti-air assault defense reserve
- Subunits of the second echelon (reserve)
- Air strikes and air defense weapons fire
- Integrated direct and indirect fires, and anti-landing obstacles in potential landing zones.

Fire Destruction of the Enemy by the Defense

Fire destruction of the enemy is the coordinated fires directed on the enemy by the designated forces and means of destruction using ordinary and incendiary ammunition to fulfill the tactical mission and achieve the aims of the battle. The goal of fire destruction is to diminish the combat potential of enemy subunits to the degree that it will guarantee that friendly subunits achieve their assigned missions without losing their combat capability. Fire destruction is organized by the senior commander with the agreement of the subunits that will carry it out during the period of fire destruction:

- Fire preparation to repel the advancing enemy
- Fire preparation to support the defending force

Fire preparation to repel the advancing enemy is conducted with the goal of disrupting his advance, deployment and transition to attack in order to inflict destruction on his first-echelon units and subunits. This phase continues until the enemy transitions to the attack. Fire preparation to support the defending force is conducted with the goal of inflicting maximum damage on the enemy and preventing his breakthrough into the depths of the defense. This phase continues throughout the entire defensive combat by friendly subunits.

During the conduct of counterattack, fire destruction of the enemy is accomplished in the periods of fire preparation for a counterattack and fire support of the counterattacking force. In order to achieve the effective destruction of the enemy by fire in battle, the brigade, battalions and companies create a system of fire which the senior commander uses as the basis for his unit's system of fire destruction of the enemy. It includes the fires of artillery, tanks, BMPs, BTRs, antitank missiles, grenade launchers, and small arms, and also the use of flame and incendiary weapons [thermobaric]. The system of fire for the brigade (battalion) must include aviation strikes within the range of designated aviation resources.

The brigade's (battalions', companies') integrated fires are organized as a strong response, using integrated fire destruction planned by the senior commander, with coordination with radio-electronic destruction and integrated engineer obstacles. The mission is to destroy enemy artillery subunits, command and control elements, troop control, the forces and weapons of the mechanized infantry and tank subunits of the first echelon and other enemy targets. For a discussion of artillery types of fire, see the artillery section in Chapter six.

Commentary on Brigade in Defense

The motorized rifle brigade may defend with two or three motorized rifle battalions forward, depending on the situation. Its tank battalion may have platoons forward, but is usually located in the second echelon or reserve in the defense. When possible, the brigade creates a security zone. When it is not in direct contact with the enemy, this may be as deep as 40 kilometers with five or six fallback positions. As a minimum, the brigade will man a forward position 6-8 kilometers in front of the main defense. The reason for the security zone or forward position is to deceive the enemy as to the location of the main defenses, slow and disrupt the enemy approach and make the enemy disclose his force disposition and strength. If the security zone or forward position actions can cause the enemy to deploy early (especially his artillery), it is well worth the effort.

Depending on the time available to prepare the defense, much of the brigade defense will be dug in. The work of trenching machines and bulldozers will be supplemented with old-fashioned shovels to provide protection for men and equipment. Land mines and other obstacles will protect the forward edge of the defense and canalize the enemy into fire sacs within the defense. Priority of effort will be to the first-echelon defenses and BrAG. Work on the defenses will continue throughout their existence. The emphasis on going underground is based on the requirement that coherent portions of the defense will survive a tactical nuclear strike.

The BrAG consists of, at a minimum, the brigade's organic two howitzer battalions and multiple rocket launcher battalion. Other nonorganic artillery battalions may be attached as necessary and other artillery battalions may provide support to the BrAG if in range. The organic antitank artillery battalion is normally not part of the BrAG, but serves in the brigade antitank reserve. The battalion mortars normally remain with the motorized rifle battalions in direct support of them, but are hooked into the brigade fire control net.

The brigade has the 2S-19 "Msta-S" howitzer (named after the Russian Msta River). It is a 152mm self-propelled howitzer that entered the inventory in 1989, just before the Soviet Union collapsed. It is based on the T-80 tank chassis, but uses the T-72 tank diesel engine. It has a semi-automatic laying system, automatic loader, NBC protection system, wading kit, dozer blade, smoke generator and 81mm smoke launchers. It has an elevation of -4° to +68° and can traverse 360°. It fires 6-8 rounds per minute and can fire HE, HEAT, smoke, chemical, illumination, precision-guided and, theoretically, tactical nuclear rounds. It has a 29-kilometer range with base-bleed ammunition and 36 kilometers with a RAP round. It carries 50 rounds on board and has a five-man crew. There are 18 howitzers per battalion, and 36 per brigade.

The brigade also has a battalion of 18 BM-21 "Grad" multiple rocket launchers (*grad* is Russian for hail). The BM-21 has been around since 1963. It is basically a truck with 40 launch tubes that fire 122mm rockets. The system may be old, but the rockets are new and can project a 20-kilogram warhead out to 45 kilometers. The warheads are HE, FRAG, chemical, smoke, antitank mines, antipersonnel mines and incendiary. It has a three-man crew and there are 18 BM-21 Grads in the battalion. A launcher vehicle can clear the rack of all 40 rounds in 20 seconds, and the battalion can fire a 720-round volley in close to the same time.

The antitank artillery battalion has an antitank artillery battery of six MT-12 "Rapira" antitank guns. The towed MT-12 antitank gun fields a 100mm smoothbore gun and has a six-man crew (commander, driver of the towing vehicle, gun layer, loader, and two ammunition handlers). When the MT-LB is used as the tow vehicle, 20 rounds are typically carried (10 APFSDS, 4 HE-Frag, 6 HEAT). The standard equipment consists of the panoramic PG-1M sight for indirect fire and an OP4M-40U telescope for direct fire. The APN-5-40 or APN-6-40 night sight is used for direct fire. The gun can be fitted with the LO-7 ski gear for travel across snow or swampy ground.

The brigade antitank battalion also has two batteries of 9P162 Kornet-T self-propelled heavy antitank guided missile vehicles (*kornet* means cornet in Russian). The Kornet missile entered the Russian inventory in 1994, and the 9P162 Kornet-T is on a BMP-3 chassis. It has two launchers and an autoloader and carries 16 missiles. The two launchers can engage the same target or two targets simultaneously. It is a fire-and-forget laser-guided missile with a range of 100-5,500 meters. It has tandem HEAT and thermobaric warheads. It has a two-man crew. There are six 9P162 Kornet-T in a battery, and 12 in the brigade.

Russia has fielded the most modern integrated ground-based tactical air defense system on the planet. There are two air defense battalions in the brigade. The schematic shows a missile battery of "Tunguska" protecting the first-echelon battalions. Two platoons of the "Strela-10" rocket battery protect the BrAG. Two platoons equipped with "Igla" MANPADS also cover the first-echelon battalions, while the third platoon in the "Igla" company protects the brigade command post. The "Tor-M1" anti-aircraft missile battalion provides zonal cover for the brigade to defend it from air strikes. The intent of this dense air defense is to deny the enemy use of helicopter gunships, fighter bombers, cruise missiles and unmanned aerial systems. Missiles are being upgraded to compensate for the increased range of some aerial ordnance.

This motorized rifle brigade defense has a stationary and a mobile component. It provides strong points designed to stop and destroy an enemy attack. Should the enemy break through, there are a series of fire sacs, canalizing obstacles, firing lines, counterattacks, and reserves. Some of the graphics and concepts for employing the Russian maneuver brigade are familiar to those students of the Soviet Army, but much is new. Fully integrated combined arms organization is becoming the standard at the battalion level. The brigade has four maneuver battalions, four artillery battalions, two air defense battalions and a more robust combat support and combat service support package. Equipment upgrades are evident throughout the brigade. Officer and NCO training has improved, with single-tracked officers who are commanders or chiefs of staff throughout their career. NCOs now attend a formal academy, which may take three years to complete. The force still has short-term conscripts, but the jobs requiring more skill and training are held by long-term contract soldiers. Brigade annual training usually requires a long-distance move by ship or rail, testing the unit's ability to deploy on short notice.