

# Organization of Soviet Mountain Rifle Divisions, 1936–1945



Troops from a Red Army mountain rifle division defending a mountain pass in the Caucasus Mountains in 1942

The photograph was taken by Maks Albert, a Soviet wartime photographer. The posing of the soldiers and high quality of the photo for WW2 Soviet photograph indicate it is a staged propaganda shot.

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A 76-mm Mountain Gun M1938 being towed by horses

The gun could also be broken down into nine loads, with each load being carried by a pack animal for transport in steep terrain.

Introduction



There is plenty of information on the organizations of most Red Army forces in the Great Patriotic War<sup>1</sup>: the rifle troops, the mechanized forces, the cavalry, and the artillery. Information on the organization of mountain rifle divisions in 1942–1945 is much harder to come by, likely because the mountain troops were just a small force, dwindling from 18 divisions on 22 June 1941 to just a handful of division-sized units by 1945.

This document very briefly sketches the development of these divisions and lists their official organizations. The Soviets organized their military units based on official “staffing schedules”(also called “staffing prescriptions”). In Russian, a staffing schedule was a *shtatnoe raspisanie*, often just abbreviated as *shtat*, and was similar to a US Army “table of organization and equipment” (or a British “war establishment” or a German “*gliederung*”). On at the start of the war on 22 June 1941 the mountain rifle divisions were using Shtat № 04/140 of 15 August 1940,

<sup>1</sup> In this work, “the war” means what the Soviets called the Great Patriotic War of 1941–1945, which began with the German invasion of the USSR on 22 June 1941. This was just part of the greater war, World War II.

which is well known<sup>2</sup>. New shtats were apparently issued in 1942, 1944, and 1945 at a minimum, although full details on them are hard to find. In the unit organizations listed below, only the more important subunits are listed and lesser ones are ignored. For example, sometimes the mountain rifle regiments had their own engineer companies, which I do not list. (These were in addition to the division's engineer battalion.) I try to list all subunits with important weapons, down to antitank rifles. Sometimes antitank rifle troops were organized in their own subunits within the mountain rifle regiments, and I list them when they are. Sometimes they were just parts of the mountain rifle companies and not listed in this case (although the weapon totals still include them).

After the Russian Civil War of 1918–1922, the Soviet put the Red Army on a peacetime basis, with small active forces supplemented by a territorial/militia system in case of war. The USSR had several mountainous regions, with the Caucasus, Transcaucasus, and Central Asia being of particular concern. These areas had restive minorities that in times of revolt used the mountains for rebel hideouts. They were also along the southern borders of the USSR, which needed to be guarded against possible incursions from Turkey, Iran, Afghanistan, and China. Afghanistan was a particular problem for much of the 1920s and 1930s, as rebels fleeing Central Asia would use that country to launch raids into the USSR. The Red Army thus maintained several mountain rifle divisions in these three southern regions. (They also had a few small mountain cavalry divisions, a subject covered in an [appendix](#).) In the 1920s, the mountain divisions got by most with mountain weapons and equipment the Soviets had inherited from the Imperial Russian Army of World War I. By the mid-1930s, Soviet industrialization would beginning providing new weapons like mortars and, later, a new model of a 76.2-mm mountain gun.

Soldiers for mountain rifle divisions were typically drafted from the mountainous regions of the USSR, on the sensible theory theory that people from these regions were already used to mountainous terrain. Many European countries followed this practice. For example, German mountain divisions were staffed with people from mountainous regions (or at least hilly and forested areas). Most personal for the Soviet divisions typically from the very regions where the divisions were stationed. This did mean that the divisions often had large ethnic minority contingents in them, such as Armenians, Azerbaijanis, Georgians, Central Asians, and so on, but the divisions often had Slavic-dominated command staffs as well as ethnic Russians who had come as colonists to the southern regions in the 19th Century.

The foreign military threat in the southern border regions was quite low in the 1930s, so the mountain rifle divisions in peacetime were maintained at rather low levels of staffing, on average only 4,000 personnel, only about a third of their authorized strengths when mobilized for war. Unlike in some European armies, where the mountain troops were often highly-skilled or elite troops like the French *chasseurs alpins*, the German *Gebirgsjäger*, or the Italian *Alpini*, the pre-war Soviets made no serious attempts to train their mountain troops to elite mountain status.

<i>Abbreviations</i>			
<i>Unit Type</i>		<i>Unit Size</i>	
AA: Antiaircraft	HQ: Headquarters	Div: Division	Batt: Battery
Art: Artillery	Hwtzr: Howitzer	Rgt: Regiment	Sqdn: Squadron
AT: Antitank	MG: Machinegun	Btl: Battalion	Pltn: Platoon
Cav: Cavalry	Mtn: Mountain	Co: Company	
Eng: Engineer			

<sup>2</sup> Technically, Shtat № 04/140 only applied to the headquarters of a mountain rifle division, with its subunits having their own separate shtats. However, subunit shtats were typically issued at the same time as a division HQ shtat, so it is a convenient convention to just the number of the HQ shtat for an organization.

## The 1936 Mountain Rifle Division

In 1936, a full-strength mountain rifle division was authorized 12,506 personnel and had the following organization:

Mtn Rifle Div HQ (I do not have a shtat number for this organization.)

3x Mtn Rifle Rgt, each with:

5x Mtn Rifle Co (with rifles, machineguns, very likely rifle grenade launchers, etc.)

1x Art Batt (with 4x 76-mm mtn guns)

1x Mortar Co (with 4x 82-mm mortars)

1x Mtn Art Rgt, with:

3x Mtn Art Btl (each with 8x 76-mm mtn guns)

1x Hwtzr Btl (with 12x 122-mm hwtzrs)

1x Tank Co (10x T-26 light tanks)

1x Eng Btl

1x Cav Sqdn (for recon)

See the Appendix for the [weapon totals](#) for the division.

The Soviet mountain rifle division was somewhat different than the larger rifle division. One feature was that the mountain rifle regiment did not have any mountain rifle battalion HQs but instead directly controlled five mountain rifle companies along with other regimental units. In contrast, each rifle regiment had three rifle battalion HQs, each of which had three rifle companies. The lack of mountain rifle battalion HQs was not just due to the smaller size of the division because of the needs of mountain warfare. In mountainous terrain, the mountain troops of most countries were organized to operate as small unit rather than as large formations like in the conventional infantry. For example, the mountain battalion, not the regiment, was the basic maneuver formation of a German mountain division (which typically had two mountain regiments each with three mountain battalions). The Soviets followed a different but similar tradition, based on the mountain rifle regiment, which was intermediate in size between a rifle regiment and a rifle battalion.

Each mountain rifle regiment was authorized a mortar company of four 82-mm mortars. The 82 was not specifically designed for mountain warfare but nevertheless was quite suited for the mountain troops: it was a relative small and light weapon that could break down into loads carryable by soldiers or pack animals. It was much more mobile than a 76-mm mountain gun. Although 82-mm shells were not as powerful or accurate as 72-mm ones, the mortar compensated for this by having a much higher rate of fire.

It is very likely the mountain rifle regiments had few or possibly no mortars until the late 1930s. The 82-mm mortar had just gone into production in 1936, with only a few being made at first. It was in huge demand for the Red Army conventional rifle troops and likely was first allocated to rifle units in the most dangerous zones of the USSR: the Soviet West defending against a possible German invasion and the Soviet Far East when the Red Army was involved in border clashes with Japanese forces.

Note that the mountain rifle division was not allocated any 50-mm light mortars in 1936. The 50s were still under development and would only become available in the late 1930s. Instead, the division almost certainly had a number of Dyakonov rifle grenade launchers. (It was standard equipment in the conventional rifle divisions until it was started to be retired in 1942.) These fired 40.8-mm grenades at about the same range as light mortar. The Dyakonov design dated back to World War I and was inefficient, having just a low rate of fire unlike a mortar, but it was better than nothing. My sources on the Soviet mountain rifles do not directly mention the Dyakonov, but its light weight made it an obvious weapon for the mountain troops. However, some accounts of the mountain troops in 1942 fighting in the Caucasus Mountains mention mountain troops firing “41-mm” illumination grenades, and the Dyakonov did come with illumination grenades.



This is why mountain troops need their larger weapons to break down into loads

The mountain artillery regiment contained a mix of 76.2-mm mountain guns and 122-mm howitzers. The mountain guns could be broken down into loads for off-road transport by pack horses or mules in mountainous terrain. The best design for a mountain gun was that each load could be carried by a single pack animal. However, the Soviets in the mid-1930s were still using the 76-mm Mountain Gun M1909 that had been designed the Imperial Russian Army and used in World War I. It broke down into seven relatively heavy loads. A single pack animal could not carry a heavier load by itself, so instead the load was placed on a sling and carried by two animals<sup>3</sup>. This was rather inefficient, as it prevented animals from moving the gun in places where they had to move in single file. A team of two animals also had great trouble moving a load in the steeper mountain passes. Instead, the gun crew at times had to drag intact guns on their wheels, a very slow and fatiguing process. As of 1 November 1936, the Soviets had about 570 M1909s available for combat use<sup>4</sup>.

In addition to the M1909's heavy loads, its maximum elevation was restricted 28°, and its carriage had a unsprung suspension that severely limited its towing speed by a motorized vehicle. However, for lack of an alternative, Red Army mountain troops used this gun, and Soviet factories continued to make it in small numbers throughout the 1930s. The Soviets were well aware of its limitations, but the mid-1930s Soviet artillery designers were too inexperienced with mountain guns to design a modern one in an acceptable amount of time. Instead, the USSR in 1937 acquired the technical specifications and a license to make a modified version of a modern Czechoslovakian mountain gun, the Skoda 75 mm M1936. The Soviets changed the caliber to 76.2-mm, and the gun would be designated the 76-mm Mountain Gun M1938. Even with the Czech specifications, Soviet artillery designers still had great trouble in making an acceptable version. It only went into very limited production in 1938 (just five made) and was only approved for Red Army service use in 1939. It was a modern mountain design, able to be broken down into nine loads for pack transport, each load carryable by a single pack animal. It had a modern suspension and pneumatic tires for towing by motorized vehicles, and a maximum

<sup>3</sup> [https://dzen.ru/a/YZQGaD\\_3aj77b9M\\_](https://dzen.ru/a/YZQGaD_3aj77b9M_) (in Russian).

<sup>4</sup> Per [http://www.telenir.net/istorija/artillerija\\_v\\_velikoi\\_otechestvennoi\\_voine/p7.php](http://www.telenir.net/istorija/artillerija_v_velikoi_otechestvennoi_voine/p7.php) (in Russian): There were 622 total potentially available for combat purposes, but 50 needed major repairs, leaving 572 actually available for combat use. There were another 34 assigned to mountain training and 1 that was out of service, irreparable (and likely to be used for spare parts and then scrapped).

elevation of 65°. As the 76-mm M1938 guns arrived in the mountain troops, many 76-mm M1909 guns were progressively retired. Some M1909s may have gone to some newly-forming conventional rifle divisions as substitutes for 76-mm regimental guns, as some sources indicate the Red Army still had M1909s in service at the start of the war. Many 1909s went into storage. Some of these were reissued as substitutes for 76-mm regimental guns in the conventional rifle troops. Some might have been reissued to the mountain troops, but my sources do not mention this.

Some M1938 production went to the airborne troops instead of the mountain troops, as the gun's ability to break down made it quite suitable for air transport. Each airborne brigade was authorized six 76-mm guns, although some of these brigades may have been equipped with the 76-mm Regimental Gun M1927 instead, which did not break down into loads. By the start of the war, the Soviets had five airborne corps, each with three brigades.

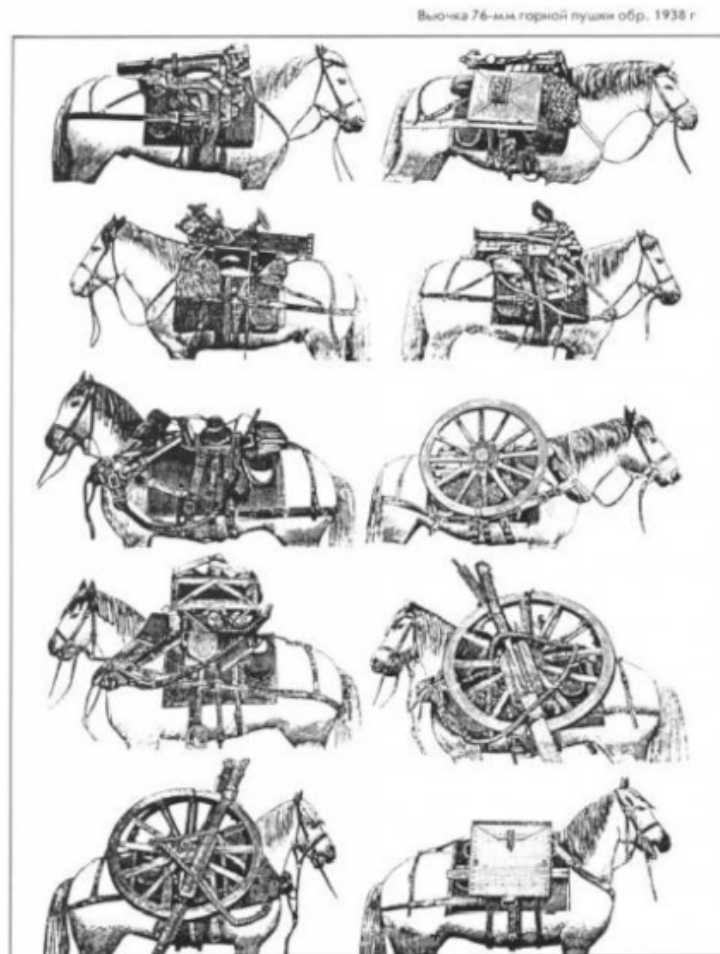


Illustration of a mountain gun broken down into loads for pack transport<sup>5</sup>

On 22 June 1941, some Soviet sources claim the USSR had 2,007 or 2,085 76-mm mountain guns, of which 366 were either at the factory awaiting delivery to the Red Army or were in warehouses<sup>6</sup>. Of the 2,085, 964 were

<sup>5</sup> Although the picture is labeled (in Russian) as the 76-mm Mountain Gun M1938, note that the illustration shows wooden wheels. The M1938 had metal wheels and pneumatic tires. The M1938 broke down into nine loads, and the illustration shows ten loads. (The older 76-mm Mountain Gun M1909 broke down into seven loads.) Perhaps this is an illustration of some other country's mountain gun, relabeled as the M1938?

<sup>6</sup> [http://www.telenir.net/istorija/artillerija\\_v\\_velikoi\\_otechestvennoi\\_voine/p7.php](http://www.telenir.net/istorija/artillerija_v_velikoi_otechestvennoi_voine/p7.php) (in Russian). This source claims 2,085 in one place and 2,007 in another. The difference is not explained, but 2,085 is possibly the grand total but only 2,007 were available for the field forces. The “missing” 78 might be guns in to the training units and/or guns unusable because they needed major repairs.

M1938s and 1,121 were M1909s.<sup>7</sup> Other sources give different different numbers or disagree on the status of the M1909s (implying that they had all be retired and were in storage). There is general agreement that there were about 1,000 M1938s made by start of the war.

The complicated design of the M1938 mountain gun, to allow it to break down into pack-transportable loads, made it expensive to manufacture, 80,000 rubles per gun compared to the 35,000 rubles for the simpler 76-mm Regimental Gun M1927. As we will see, this would make the gun a luxury, not a necessity, once the war began.

The 122-mm howitzers that equipped the mountain artillery regiments were just ordinary towed howitzers with no ability to break down into pack-transportable loads. This limited their utility in mountainous terrain, as in steeper areas they had little or no off-road mobility. This meant they sometimes could not be brought near enough the front lines to use direct fire (a common practice for Soviet howitzers) but had to held back for indirect fire. Lack of roads very mountainous areas could greatly limit or prevent the howitzers even from providing indirect fire to the mountain troops. However, the Soviets included 122-mm howitzers with the mountain troops for two main reasons: 1) The Soviets expected to use their mountain troops in all sorts of terrain, and the howitzers would be useful in most terrain. 2) When the howitzers could be used in mountainous terrain, they delivered much heavier firepower than the 76-mm mountain guns could (see the shell weight data in the following table).

### *Comparison of Artillery-Class Weapons in Mountain Rifle Divisions*

AT: Antitank; Auto AA: Automatic Antiaircraft; Co Mortar: Company Mortar; Btl Mortar: Battalion Mortar; Hwtz: Howitzer; MPR Mortar: Mountain-Pack Regimental Mortar; Mtn Gun: Mountain Gun; Wt: Weight

<i>Weapon</i>	<i>Fire Mode</i>	<i>Caliber, mm</i>	<i>Combat Wt, kg</i>	<i>Maximum Elevation</i>	<i>Maximum Range, km</i>	<i>Shell Wt, kg</i>	<i>Pack Transport?</i>
37-mm Auto AA Gun M1939	Dir eff	37	2.1	85°	5.0	1.43	No
Dyakonov Grenade Launcher	Dir eff	40.8	~11.7	variable	0.9	0.36	Yes
45-mm AT Gun M1932	Dir eff	45	425	25°	4.4	1.4	No
45-mm AT Gun M1937	Dir eff	45	560	25°	4.4	1.4	No
45-mm AT Gun M1942	Dir eff	45	625	25°	4.5	1.4	No
50-mm Co Mortar M1938	Ind only	50	12	75°	0.8	0.85	Yes
50-mm Co Mortar M1940	Ind only	50	9	75°	0.8	0.85	Yes
50-mm Co Mortar M1941	Ind only	50	10	75°	0.8	0.85	Yes
76-mm Mtn Gun M1909	Dir, (Ind)	76.2	627	28°	8.7	6.2	Partial
76-mm Mtn Gun M1938	Dir, (Ind)	76.2	785	65°	10.7	6.2	Yes
82-mm Btl Mortar M1937	Ind only	82	56	85°	3.0	3.4	Yes
82-mm Btl Mortar M1941	Ind only	82	58	85°	3.0	3.4	Yes
82-mm Btl Mortar M1943	Ind only	82	58	85°	3.0	3.4	Yes
107-mm MPR Mortar M1938	Ind only	107	170	80°	6.1	7.9	Yes
122-mm Hwtzr M1910/30	Dir, Ind	121.92	2,510	45°	8.9	21.8	No
122-mm Hwtzr M1909/37	Dir, Ind	121.92	2,480	43°	8.9	21.8	No
122-mm Hwtzr M1938	Dir, Ind	121.92	3,100	63°	11.8	21.8	No

<sup>7</sup> You might notice that 1,121 M1909s is considerably higher than the circa 600 M1909s claimed to be available in 1936, but the M1909 was kept in production until the M1938 became available.



*Model Designation:*

**M####** typically meant the year the weapon was approved for service use, although actually service acceptance could come later. The above 76-mm M1938, for example, received its model designation in 1938 but was only accepted for service in 1939.

**M####/##** meant an earlier model that was updated or modernized at a later date. For example, the M1909/37 was based on the 122-mm Howitzer M1909 and modernized in the 1930s as the M1909/37. A modernized design of an older weapon still had many of the limitations of the older model as can be seen in the above data when comparing either the M1910/30 or M1909/37 with the 122-mm M1938, a modern design of the 1930s.

The table does not list all the models of weapons that a mountain division could be equipped with, although each caliber known to be used in the division has at least one entry. The 1936 divisions, for example, could have had the older 122-mm M1909 and M1910 howitzers. The 82-mm M1936 mortar is not listed because only a few were made, and possibly none got to the mountain troops. The Soviet 37-mm mortar is not listed because relatively few were made; they were soon withdrawn from service; and possibly none reached the mountain troops.

*Fire Mode:*

**Dir:** Direct fire. Be aware that direct fire almost always occurred at shorter ranges than the weapon's maximum range.

**Dir eff:** Effectively direct fire only. AT and AA guns are listed as direct-fire only, since their primary mode of employment was direct fire on targets like AFVs and aircraft. They could in theory be used for indirect fire, although their crews were not trained or equipped for this. The Dyakonov grenade launcher is also listed as direct fire only. The launcher was an attachment that allowed the Soviet 7.62-mm Mosin rifle to fire grenades. In theory, troops could jury-rig the weapon to fire indirectly, but its only practical means of operation was direct fire.

**Ind:** Indirect fire.

**(Ind):** Capable of indirect fire but may not have been used much for indirect fire. 76-mm gun crews in the Red Army were often not equipped or trained for indirect fire. This was the case in most rifle divisions for most of the war, and likely was partially the case for the mountain rifle divisions, too. Each 76-mm and 122-mm artillery battalion in the divisional artillery of the 1940 mountain rifle division was supposed to have a "computer" troop for calculating indirect fire trajectories. The computers were not digital or even analog devices but instead mathematically-capable soldiers who computed trajectories using firing tables and indirect fire gear. However, it is unclear if all four battalions of the division actually were staffed and equipped for indirect fire. It took a long time to train indirect-fire specialists, and indirect-fire gear was in somewhat short supply. It is possible that many 76-mm battalions lacked their computer troops, and perhaps even some 122-mm battalions. In any event, the 76-mm artillery batteries in the mountain rifle regiments did not have computer troops. These batteries would have been incapable of indirect fire on their own.

**Ind only:** Indirect fire only; weapon elevation and firing mechanism did not support direct fire.

**Caliber:** Soviet calibers of 76.2 mm (often just called “76 mm”) and 121.92 mm (often just called “122 mm”) had been inherited from the Russian Empire, which did not use the metric system. They thus were based on Russian inches (which was the same length as a British inch), so 76.2-mm was 3-inches and 121.92 was 4.8-inches.

**Combat Weight:** The weight of the weapon when deployed to fire. (Transport weight, especially for the larger-caliber weapons, could be higher because it included other gear.) The Dyakonov grenade launcher is listed as “~11.7” because the number includes the weight of the rifle as well as the launcher (including its bipod and sighting mechanism). Rifle weight varied a bit based on rifle model.

**Maximum Elevation:** The greatest elevation the barrel of the weapon could be set at. 50-mm mortars are listed as 75° since that was the standard maximum setting, but some factories made some capable of 82°. The Dyakonov grenade launcher is listed as “variable” since it did not have an elevation mechanism. Instead, elevation was set by how the gunner manually set up the weapon, with the launcher supported on a bipod and the butt of the rifle embedded in a pit in the ground.

**Maximum Range and Shell Weight:** These actually depended upon the type of ammunition fired and are based on the weapon’s commonly-used shell. For mountain guns and howitzers, this was a high-explosive fragmentation shell; for mortars and grenade launchers, a fragmentation or HE-fragmentation shell; for antitank guns, an armor-piercing shot.

**Pack Transport:** **Yes** means the weapon could be carried by pack animals, usually broken down into multiple loads each carried by one animal. (A 50-mm mortar was so small and light that it did not break down.) **Partial** means the weapon broke down into loads but some loads were too heavy for a single animal. Instead, the load was carried in a sling between two animals, but this prevented it being pack carried in some mountainous terrain, where the animals could only move in single file. **No** means the weapon did not break down into load and had to be towed by a motorized vehicle or team of horses.

**Rate of Fire:** I do not include rate of fire data because of difficulties in ensuring ROF measures are consistent across all types of weapons. Maximum ROF is often a poor measure because it is sometimes a theoretical value rarely achievable in the field or at best for only a very short amount of time. Sustained ROF can be measured in different ways based on how long a period “sustained” means. Instead, here are some general remarks: The 37 AA gun had a very high rate of fire since it had an automatic fire mechanism (to be effective against aircraft, light AA guns needed to fire lots of rounds). All other weapons in the table needed to have their rounds loaded individually. The muzzle-loading design of mortars meant they had higher rates of fire than comparably-sized breech-loading guns and mortars. However, mortars were also less accurate than guns and mortars. Within a weapon class like mortars

or breech-loading artillery, smaller calibers often had greater rates of fire than larger calibers. The Dyakonov grenade launcher was an inefficient design dating to World War I and had a very rate of fire, far less than the 50-mm mortar.

Some sources claim the 1936 mountain rifle division was authorized to have 36 antitank rifles, and one source even implies that the division had 14.5-mm antitank rifles. If the status of the 1936 mountain rifle division did include antitank rifles, it must have been with the intention of equipping the division with the rifles once they became available, but none did. The Soviets in the early 1930s had been developing antitank rifles in the 12.7–25-mm caliber range. These designs entered testing in March 1936 but none were put into production. Soviet antitank rifles would only become available in 1941.

The most surprising subunit of the 1936 mountain rifle division was its tank company of ten T-26 light tanks. At times in the 1930s, the Soviets favored integrating tanks directly in the foot infantry forces, so that they had their own battlefield direct fire support. At these times, rifle and mountain rifle divisions received tank companies (and some rifle divisions even got tank battalions of 50 light tanks). The T-26 had no special mountain abilities. While it could operate in some mountainous areas, it was road-bound in the steeper terrain. This meant they were like the 122-mm howitzers: usable in flatter terrain but only in some places in the mountains.

It is unclear if the mountain rifle divisions actually received many if any tanks. I suspect other units had higher priority for receiving tanks, especially in the western and far eastern USSR, where there were real threats of war with Germany and Japan. Any mountain troops that did get tanks probably soon had to give them up. Starting in 1938, the Soviet began removing the tank units from the rifle divisions, and it is likely this decision also applied to the mountain troops.

### *The Numbering of Soviet Mountain Rifle Divisions*

Major powers numbered their mountain divisions using two different systems: either as part of their infantry division sequence or as a separate sequence just for mountain divisions. Germany, for example, used separate sequences and thus had both a 1st Infantry Division and a 1st Mountain Division.

The USSR used a single sequence. Thus, there was an 83rd Mountain Rifle Division but no 83rd Rifle Division. When a division converted from rifle to mountain rifle (or vice-versa), it simply retained its number. For example, when the 44th Rifle Division was ordered to convert to a mountain division in 1940, it became the 44th Mountain Rifle Division. When the 9th Mountain Rifle Division was ordered to convert to a rifle division in 1944, it became the 9th Rifle Division.

One wrinkle to the Soviet system occurred during the war, once the Soviets created Guards status as reward for regular units that gave outstanding combat performance. Guards units had separate numbering sequences from the regular units. Thus, when the 83rd Mountain Rifle Division was promoted to Guards status, it became the 128th Guards Mountain Rifle Division. Like with the regulars, the Guards used a single sequence for the Guards rifle and mountain rifle divisions. The 128th Guards Mountain Rifle Division was the only Guards mountain division.

## The 1940 Mountain Rifle Division



A 107-mm mortar being transported in mountainous terrain

The Red Army underwent great changes in 1937–1940. The massive Soviet industrialization drive instituted in late 1928 was now providing great numbers of weapons, vehicles, and aircraft. This was just in time, as the threat from Nazi Germany was growing alarmingly. With Hitler's well-known goal of taking lands to Germany's east for German *Lebensraum*, and contempt for Communism, the USSR was an obvious target for Nazi aggression. The Soviets embarked on a huge expansion of the Red Army, which did not stop when the USSR and Germany signed a non-aggression pact in August 1939. With the USSR now a semi-ally instead of a potential foe, Germany invaded Poland on 1 September 1939, starting World War II. Even though the two countries secretly divided up eastern Europe between them, neither side trusted the long-term intentions of the other.



Soviet annexation of eastern Romania, 1940

The Red Army's expansion included increasing the size and strength of the mountain troops. One first step was the creation of a new mountain rifle division. In September 1939, the 192nd Rifle Division was formed in eastern Ukraine (the Kharkov Military District) and in November was converted into the 192nd Mountain Rifle Division<sup>8</sup>. There aren't too many details about this division in 1939–1940, perhaps because it was part of the Soviets' secret plans to invade Bessarabia-North Bukovina, the parts of Romania allocated to the USSR<sup>9</sup>. Since the

<sup>8</sup> It is unclear why the Soviets decided to convert the 192nd to a mountain unit, since the Kharkov MD had no mountains. See the [Appendix](#) for a speculation on this.

<sup>9</sup> Bessarabia had been allocated to the Soviets in August 1939. Later Soviet-German negotiations added North Bukovina to the Soviet sphere.

Kharkov MD did not have mountains, it seems logical to assume the 192nd was sent elsewhere to equip and train as a mountain rifle division. The Caucasus Mountains would have been a logical selection, but I do not know if this occurred.

At some time before June 1940 the 192nd was ready for active operations and was moved to the Soviet-Romanian border by 24 June, as part of the invasion forces. The Romanians decided not to resist, so Soviet forces crossed the border without fighting on the 28th to occupy Bessarabia, North Bukovina, and Hertsa<sup>10</sup>. (The 192nd was then stationed in the western Ukraine and was still there when the Germans invaded in 1941.)

The next step in strengthening the mountain troops occurred on 15 August 1940. Shtat № 04/140 was issued to reinforce the mountain rifle divisions to 14,076 personnel each and to reorganize them as follows:

#### Mtn Rifle Div HQ

4x Mtn Rifle Rgt, each with:

5x Mtn Rifle Co (with rifles, 50-mm mortars, machineguns, likely rifle grenade launchers, etc.)

1x MG Co (with 12x MGs)

1x Art Batt (with 4x 76-mm mtn guns)

1x Mortar Co (with 12x 82-mm mortars)

1x AA Pltn (with 3x quad 7.62-mm AAMGs)

1x Mtn Art Rgt, with:

2x Mtn Art Btl (each with 8x 76-mm mtn guns and 6x 107-mm mtn mortars)

1x AA Pltn (with 2x quad 7.62-mm AAMGs)

1x Hwtzr Rgt, with:

2x Hwtzr Btl (each with 12x 122-mm hwtzrs)

1x AA Pltn (with 2x quad 7.62-mm AAMGs)

1x AA Btl (with 8x 37-mm AA guns and 12x 12.7-mm AAMGs)

1x Eng Btl

1x AT Batt (with 8x 45-mm AT guns)

1x Cav Sqdn (for recon, now also had five armored cars)

See the Appendix for the [weapon totals](#) for the division. The 14,076 personnel count was for a full-strength division. In peacetime, the divisions were maintained at a lower strength, about 8,800 personnel in 1941, which in itself was a great increase from the 4,000 peacetime state of the mid-1930s.

The division gained a fourth mountain rifle regiment. This not only increased the division's strength but added another maneuver combat unit gave the division greater operational flexibility in mountainous areas.

The direct and indirect artillery fire support of the division was greatly increased. One of the artillery battalions converted from 76-mm mountain guns to 122-mm howitzers, giving the division two howitzer battalions that were hived off into a separate howitzer regiment. The other two artillery battalions were reorganized by adding 107-mm mountain mortars to supplement the 76-mm mountain guns. This mortar was the 107-mm Mountain-Pack Regimental Mortar M1938, designed to break down into nine loads for pack transport in the mountains. However, some sources claim that 107-mm mortars were not actually sent to the mountain troops until some point in early 1941, as mass production of 107-mm mortar ammunition did not begin until 1941. One source claims that, in the meantime, 82-mm mortars were used as substitutes.

10 1) Hertsa was a small region the Soviets added to their land grab after the Red Army moved into Bessarabia and North Bukovina.

2) Whether the 192nd actually crossed the border on the 28th or soon thereafter is unclear from what I've seen.



Soldiers using a 50-mm mortar in mountainous terrain, perhaps 1942

The number of 82-mm mortars was increased in the mountain rifle regiments, and 50-mm mortars were introduced there. The 50 was a light mortar designed for the rifle troops but readily usable by the mountain troops. It could be carried by a single soldier in a custom-designed backpack (with a second soldier carrying its ammunition).



Left: The 37-mm Automatic Anti-aircraft Gun M1939



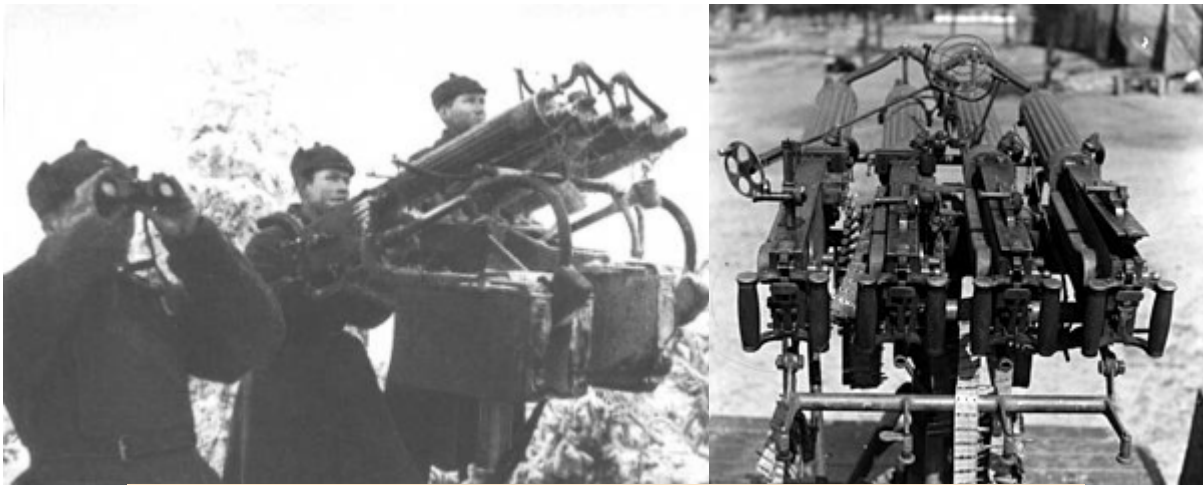
Right: The 12.7-mm DShK machinegun configured as an anti-aircraft machinegun (AAMG)

One seemingly significant addition was the addition of air defense weapons throughout the division: the division received an AA battalion and each mountain rifle regiment and artillery regiment received an AA platoon. Authorized weapons were 37-mm AA guns, 12.7-mm AAMGs, and quad 7.62-mm AAMGs, all light AA weapons that on paper give the division good protection against low-flying aircraft. The 37-mm AA gun in particular was a good air defense weapon with a practical maximum firing ceiling of about 3,000 meters (~9,800 feet), which gave some defense even against medium-altitude aircraft. It was an automatic-firing weapon with a practical

rate of fire of 120 rounds per minute<sup>11</sup>. There was just one major problem: the 37-mm AA gun was in extremely short supply. Production of the gun only began in 1940, and only 544 were made. Since it was authorized to equip the mechanized forces, the rifle troops, some artillery forces, and the mountain troops, units were lucky to get any 37s at all. Even by the start of the war in June 1941, Soviet forces had only about a quarter of the guns they were authorized. Based on the situation with the rifle troops, very few 37s likely had reached the mountain troops. Those that did were likely grabbed by higher headquarters and assigned to more important purposes like HQ and airbase defense.

This meant the AAMGs were the main air defense weapons of the mountain troops. The smaller-caliber ammunition of AAMGs made them less effective than AA guns, especially since many low-flying aircraft were armored to varying degrees as the war progressed. However, AAMGs tried to compensate for this by pumping many bullets into the air in a short amount of time, in hopes that a few might hit and actually cause some damage. Bombing and strafing attacks on ground units were most effective when conducted from very low altitudes, and the mere fact that AAMGs were filling the skies with bullets usually deterred most pilots from flying too low.

The 12.7-mm DShK machinegun was officially the 12.7 mm Large-Caliber Machinegun Degtyarev-Shpagin M1938, widely known by its initials DShK (for *Degtyarov-Shpagin-Krupnokalibernyy*, Degtyarev-Shpagin Large-Caliber) and nicknamed Dushka (“Darling”), based on its initials. This was a modern heavy machinegun with excellent characteristics, with the Red Army using it as an infantry MG, an AFV MG, and an AAMG (with an AA sight). The MG’s 12.7-mm ammunition was effective against unarmored aircraft but less so against armored aircraft. It is unclear, however, how many DShK AAMGs the mountain troops received. Only about 9,000 DShKs were made during the war, and they were in great demand for AFVs and as light air defense weapons for Soviet cities.



Left: Undated Soviet picture of a quad 7.62-mm AAMG and its crew

Right: German picture of a captured quad 7.62-mm AAMG mounted on a truckbed, October 1941<sup>12</sup>

The quad 7.62-mm AAMG officially was the Antiaircraft Machinegun Installation M4 M1931, also known as the ZPU-4 from abbreviating its Russian designation, *Zenitnaya Pulemotnaya Ustanovka M4 obraztsa 1931 goda*. It was the fall-back AA weapon of the mountain troops. The installation mounted four 7.62-mm Maksim (“Maxim”) machineguns on a stand with an AA sight. To reduce the number of times the MGs had to be reloaded, the M\$ was provided with 500-bullet belts rather than the standard 250-bullet belts, and 1,000-bullet belts were later

11 Its maximum (cyclic) rate of fire was 160–170 rounds per minute, but this was only possible under ideal conditions and ignored practical constraints like heat dissipation. Its practical rate of fire was 120 rounds per minute per Russian-language sources, although English-language sources often claim just 80 rounds per minute.

12 Bundesarchiv, Bild 121-1204 / CC-BY-SA 3.0; <https://www.bild.bundesarchiv.de/dba/de/search/?query=Bild+121-1204> (in German).

introduced. The M4 had a practical maximum firing ceiling of about 1,400 meters (~4,600 feet). In one sense, 7.62-mm AAMGs were rather poor air defense weapons, as from about 1941 increasing armor on low-flying aircraft rendered the relatively weak 7.62-mm bullets rather ineffective<sup>13</sup>. On the other hand, quad AAMGs fired quite a lot of bullets and were thus useful in discouraging aircraft from flying too low or staying around too long.

Although air defense was the main purpose of the AA guns and AAMGs, they were also used against ground targets when circumstances allowed. The 37s had armor-piercing rounds in addition to their fragmentation shells and so could be used against AFVs as well as soft targets, although it had lesser armor-piercing ability than the 45-mm antitank guns. Similarly, the 45s were also used against ground targets when circumstances allowed (such as when no AFVs were present). The 45s had fragmentation and shrapnel shells in addition to their armor-piercing rounds, allowing them to be used against soft targets.



Left: The BA-6 medium armored car

Right: The BA-10 medium armored car

The division's reconnaissance unit was allocated five BA-6 or BA-10 armored cars for reconnaissance purposes, supplementing the cavalry. These were  $\times 4$  medium armored cars armed with one 45-mm tank gun and two 7.62-mm machineguns. The  $6\times 4$  configuration gave them fair off-road abilities, better than the more-common Soviet  $4\times 2$  light armored cars, but they would have struggled in steep terrain. An all-wheel drive armored car would have been much better, but the Soviets were having trouble mastering all-wheel drive technology. It would take until 1942 to get a  $4\times 4$  light armored car into production, and they would not manufacture any  $6\times 6$  medium armored cars at all during the war.

The addition of armored cars also came with a loss: the division was no longer authorized a tank company (and it may have been de-authorized as early as 1938, like with the rifle division). However, the Soviets sometimes took a long time to fully implement shtat changes, especially in low-threat areas. Any mountain unit that had received tanks possibly kept them for a time. For example, various rifle divisions being transferred west in 1941 to fight the Germans sometimes arrived with a tank company or even a tank battalion, despite supposedly losing all their tanks in 1938.

The shtat did not authorize any antitank rifles for the division. Although the Soviets had been working on these rifles since the early 1930s, progress remained slow. The Rukavishnikov 14.5-mm antitank rifle had been accepted for production only in October 1939, as the 14.5-mm Antitank Rifle M1939. Events in 1940 mired it in

<sup>13</sup> 7.62-mm quad AAMGs had proven effective in the late 1930s when aircraft were less protected. The Soviets claimed they gave good service against Japanese aircraft in the 1938 Battle of Lake Khasan.



controversy and led to it being withdrawn from production and put back into development. Perhaps this situation influenced the Red Army to exclude antitank rifles in the April 1940 shtat.

Also, the Red Army command in 1940 came to believe that antitank rifles were no longer a priority. They had mistakenly concluded that the Germans were converting their panzer forces to heavily-armored tanks, with 60–80 mm of armor that would be too thick for 14.5-mm bullets to penetrate<sup>14</sup>. When the Germans invaded on 22 June 1941, it quickly became evident that they had not upgraded their tanks. The Germans were using plenty of light tanks like the Panzer II, whose armor could be penetrated by antitank rifles. Even the Germans' best tanks in 1941, the Panzer III and IV medium tanks, were vulnerable to antitank rifle fire in places, especially at short ranges. It became a scandal, fueled by Stalin's rage, that the Red Army lacked antitank rifles. As it happened, revised versions of the Rukavishnikov antitank rifle had become available for testing in June 1941, but the Rukavishnikov was rejected in early July as being too complicated and difficult to manufacture. With Soviet industry increasingly being disrupted by the invasion, new weapons were only approved for production if they were easy to make and could reach the field quickly.



Soviet diagram of the PTRD antitank rifle, 1942

Instead, an existing 12.7-mm antitank rifle design was put into production as a stop-gap weapon, even though 12.7-mm armor-piercing bullets were really on effective against light tanks at short ranges. Crash projects to design cheap but effective 14.5-mm antitank rifles were instituted, resulting in just several weeks of work in two acceptable rifles: Degtyaryov's single-shot, bolt-action PTRD, and Simonov's more-complicated, semi-automatic, five-shot PTRS. Mass production of the PTRD started in late September 1941. The first 50 were finished in October and were immediately sent to the field where they were in action by early November. Over 17,000 PTRD would be made in 1941 and almost 300,000 made during the war. The PTRS was more difficult to make and only entered production in November, with some at the front for field testing under combat conditions by

<sup>14</sup> There are many variations of this story in Russian works, including one which expected the Germans to have some heavy tanks but also medium and light tanks. The fact remains that in late 1940 G.I. Kulik, the head of Red Army Artillery, halted all production of 45-mm antitank guns and 76-mm divisional as being inadequate against tanks, even though the replacement 57-mm antitank gun and 107-mm divisional gun were not ready for mass production. This suggests a stronger version of the story was believed Kulik (who did have a well-earned reputation for incompetence). When the true situation with German tanks was discovered in June 1941, the 45 and 76 were put back into production.

The belief that the Germans would field heavy tanks was not irrational. The Soviet KV-1 heavy tank was used for the first time in December 1939 in the Winter War against Finland, and the Soviets expected the Germans knew about this and would decide to rush their own heavy tank into production. German deception measures also convinced the Soviets in 1940 that Germany was indeed on the brink of fielding heavy tanks. The German experimental *Neubaufahrzeug*, a flawed multi-turret medium tank, was used in Norway in 1940. German propaganda showed pictures of it with different types of turrets, leading Soviet intelligence to report that Germany had two models of heavy tanks under development. (The Germans actually were working on heavy tank designs, but with rather low priority that would only speed up once the 1941 Germans encountered KV-1s in combat. This would result in the Tiger I, which only went into production in August 1942.)

the end of the month. Only 77 PTRS rifles were made in 1941, but production quickly sped up in 1942, with almost 180,000 being made during the war. Once PTRD and PTRS production ramped up in 1942, manufacture of the 12.7-mm antitank rifle was discontinued.

The 12.7-mm and 14.5-mm antitank rifles were rushed to all sorts of Red Army units as quickly as they could be made. It seems quite possible that some mountain rifle divisions fighting at the front received some of these rifles in late 1941 or early 1942. They would have certainly needed them, as instead of fighting in the mountains, a place tanks mostly avoided, most of these divisions were now defending the Ukrainian steppes, prime tank territory.

The presence of armored cars in the mountain rifle division hints at a little-known fact for most World War II mountain forces: they had plenty of motorized vehicles in them. Besides armored cars, Soviets mountain rifle divisions had command cars, trucks, tractors, motorcycles, specialist vehicles for repair and maintenance, and so on. The mountain infantry, however, was foot mobile, and most large weapons were towed by horses or carried by pack animals when in combat conditions. The main exceptions were: 1) the 45-mm antitank tanks, which had fully tracked tractors to tow the guns plus trucks to carry the crews and ammunition, and 2) the 37-mm AA guns, which had trucks to carry the guns, crews, and ammo. If almost all of the division was foot or animal mobile in combat conditions, what were the trucks for? Most of them were tasked with carrying supplies from the rear area to the division.



Soviet tractors towing 45-mm antitank guns in a military parade

In peacetime, however, a division would not have all of its trucks and tractors. Simply put, the USSR did not have enough motorized vehicles for the civilian economy. They did not want many trucks and tractors tied up doing little in peacetime military units when vehicles could be helping the economy grow. Tractors in particular were needed for all sorts of uses in the agricultural sector. All but a few of the peacetime military units had only some of the vehicles they needed. When full mobilization for war was ordered, trucks and tractors were to be called up from the economy and sent to the military over a two-week period. The surprise German invasion disrupted this plan. Many units in the western USSR, including the mountain rifle divisions in Ukraine, initially went into combat without their vehicles, which hurt their ability to fight. One Russian source states that the Red Army command in September 1941 ordered the number of horses in a mountain division to be about doubled, perhaps as compensation for the lack of trucks and tractors<sup>15</sup>.

The mountain divisions at the front in June 1941 were also affected by lack of horses. A mountain rifle division needed thousands of horses, which were also needed in Soviet agriculture. A rifle or mountain division typically only had part of its horse complement in peacetime, with the rest arriving during mobilization. Lack of

<sup>15</sup> I have not yet been able to confirm the doubling of horses from other sources. If it did happen, this was perhaps temporary, as later in the war the mountain rifle divisions do not seem to have had thousands of additional horses.

motorized and animal transport meant a division had reduced mobility when try responding to an emergency like a surprise invasion. In the rifle divisions in 1941, and likely in the mountain rifle divisions, divisions responding to the German invasion sometimes had to leave some of their artillery behind. If the enemy then overran their peacetime bases, the weapons were lost.

It is unclear whether the many mountain divisions in the southern regions got their full complement of vehicles once the war started. They were outside the battle zone and thus not subject to the full disruption caused by the surprise invasion. However, many of these divisions remained in garrison in the south (including northern Iran, once Britain and the USSR occupied that country in 1941). It seems somewhat unlikely that these divisions would be allowed to have their full complement of vehicles, when trucks and tractors were desperately needed for units fighting in the combat zone.

The third major step in strengthening the mountain troops began in the autumn of 1940. The German-Soviet Non-Aggression Pact of August 1939 included a secret protocol that divided eastern Europe into German and Soviet spheres of influence. The Soviet sphere included parts of Poland and Romania, both of which had mountainous areas (see the [Appendix for a physical map of these countries](#)). In September–October 1939, the USSR occupied and annexed eastern Poland, and in June–July 1940, the USSR occupied and annexed eastern Romania. The westernmost border of the Ukrainian SSR was now pushed into the Carpathian Mountains.

The Soviets in 1940 began converting seven rifle divisions to become mountain rifle divisions: five in Ukraine plus one each in the Transcaucasus and in Central Asia<sup>16</sup>. It took considerable time to equip and train a rifle division to become an effective mountain rifle division. The 1940/41 mountain division conversion in Ukraine were all still various stages of converting when Germany invaded on 22 June 1941. Some of them had transformed so little that accounts of their actions in the summer of 1941 called them rifle divisions.



16 1) According to Mikhail Meltyukhov (*Upushchenny shans Stalina. Sovetskiy Soyuz i borba za Yevropu: 1939-1941* [*Stalin's Missed Chance: The Soviet Union and the Struggle for Europe: 1939-1941*; 2009]), the Soviet leadership ordered 10 rifle divisions to be converted to mountain rifle divisions, but I've found no evidence that more than seven ever started converting before the war with Germany started. The chapter with this statement can be found in <https://militera.lib.ru/research/meltyukhov/09.html> (in Russian). It is possible the original plan was for ten conversions but was cut back to seven later.

2) Some works claim the Soviets began converting eight, not seven, divisions to mountain rifle divisions in late 1940/early 1941. However, they include the 192nd in this batch, but the 192nd actually converted in 1939.

The mountain divisions in Ukraine were used for the defense of the Carpathian foothills, but the Soviets very likely also intended them for potential offensive operations in the Carpathians. Soviet 1941 defense plans called for the Red Army to halt any invasion in the western USSR, counterattack, destroy the invaders, and then advance into enemy territory. This likely would entail offensive operations in the Carpathian Mountains, with the Soviets knew full well could be a major defensive position. The Red Army had extensively studied the campaigns of the Imperial Russian Army in World War I. In 1914, the Russians had soundly defeated the Austro-Hungarians east of the Carpathians, but their drive to finish off the enemy failed when Russian troops were unable to force their way across the Carpathian mountain passes.

It's just speculation on whether Soviet mountain troops would have ended up fighting in the Carpathians in 1941. In the actual event, the Soviet defense plan failed to halt the Germans as planned. Soviet mountain troops in Ukraine were south of the main drive of the German Army Group South and at first all survived and retreated eastwards. Things then fell apart later in the summer, with many of these divisions being surrounded and destroyed in the Uman and Kiev pockets. Most of the rest were so badly mauled that the Soviets would rebuild them as rifle divisions.

Besides the mountain rifle divisions in the field forces, the Soviets in 1941 had a small mountain training establishment. There were also four mountain cavalry divisions (see the [Appendix on mountain cavalry](#)), which on the main front would operate the same as regular cavalry divisions. There was just one mountain rifle brigade in 1941, which once sent to the front lines never saw a mountain or even a hill over about 300 meters in height! This was the 1st Mountain Rifle Brigade, which began forming in May 1941 in Leningrad. Its intended deployment was the mountainous area of the Kola peninsula<sup>17</sup> near Finland, but it never got there. Instead, in July, the brigade was released from training, transferred to the active army, and rushed south to defend the approaches to Leningrad. In August, it was badly mauled and forced back to the east. The brigade likely lost most of whatever mountain equipment and abilities. It ended up defending low-lying swamps in the district south of Lake Ladoga, causing its soldiers to joke that the unit should be called the 1st Swamp Rifle Brigade. In March 1942, it was reorganized as the 1st Rifle Brigade.

The German invasion disrupted Soviet industry, at a time when huge numbers of weapons needed to be made to equip all the new units forming to replace those lost in the field. Since mountain weapons and equipment were relatively difficult and expensive to make, the Soviets simply stopped making almost all of them in the summer of 1941. Mountain troops by now were a luxury rather than a necessity, since there was no mountain fighting going on and no prospect of such for some time. The factories thus concentrated on making equipment and weapons needed by the much-larger rifle forces. This decision even extended to the 76-mm mountain gun. In August 1941, the Leningrad factory making the gun switched to other artillery weapons in greater demand. This ended mountain gun production for the entire war<sup>18</sup>. Even the 107-mm mountain mortar, which as a mortar was much cheaper and easier to make, was affected. The Leningrad factory making the mortar was switched to other weapons, leaving only the Kiev factory still manufacturing 107s. Once the Germans broke into central Ukraine in August, Kiev's mortar production equipment had to be evacuated, temporarily ending all 107 production. The equipment went to an artillery factory at Votkinsk near the Urals, and Votkinsk production quickly came online. 107 production crashed to just 5 units in August, rose to 51 in September, and reached full production in October with 100 units. The Soviets only made 100 more 107s in November 1941 and then ended deliberately ended 107 production. The forces defending Moskva had been taking huge losses of soldiers and weapons in the autumn trying to halt the German offensive on the city, and Votkinsk was ordered to concentrate on weapons for the regular rifle troops and artillery forces. (The 107 would be put back into production at some point in 1942.)

17 The specific region of employment in Kola is not given. The area around Kirovsk was mountainous, and this region also had Soviet mining operations, particularly for apatite. It seems likely the brigade would have been posted to this area.

18 [http://www.telenir.net/istorija/artillerija\\_v\\_velikoi\\_otechestvennoi\\_voine/p7.php](http://www.telenir.net/istorija/artillerija_v_velikoi_otechestvennoi_voine/p7.php) (in Russian) actually lists no wartime production at all for the M1938 mountain gun. This does not agree with other sources, which all state the guns were made until August.

Lack of new mountain equipment and weapons had profound consequences for the mountain troops. For many mountain rifle divisions, as they took losses their mountain gear was replaced by ordinary kit made for the rifle troops. As it took a long time to train conscripts into effective mountain soldiers, the Soviet training system mostly churned out quickly-trained rifle troops, especially in 1941, even as replacements for the mountain troops. All this meant most mountain rifle divisions became less and less mountain capable over time and sooner or later were converted to rifle divisions<sup>19</sup>. A few mountain rifle divisions were maintained as mountain units, and the Soviets during the war raised a very small number of new mountain divisional units.

Soviet units in the war zone were almost always understrength, including the mountain troops. Soviet units frequently took heavy losses in combat operations against the Germans, particularly in 1941–1942 when the Red Army was at its most inexperienced state. After 1942, the Soviets no longer had huge reserves of military-age civilian men to provide replacements for the Red Army, so for the rest of the war the mountain divisions (and rifle divisions) almost always were understrength<sup>20</sup>.



The mountain troops did have some successes in 1941. In August 1941, Britain and the USSR invaded Iran. Iran had a pro-German government, and occupation of that country helped boost British security of the Iranian oilfields and allowed Allied aid for the Soviets to be delivered via Iran (the “Persian Corridor”). Red Army mountain forces participated in the invasion of Iran and some remained there as occupation forces.

<sup>19</sup> Most likely, any mountain gear and weapons surviving in these divisions were eventually swapped out and sent to the remaining mountain forces. My sources do not go into enough details to be sure of this, but it makes the most sense.

<sup>20</sup> Soviet wartime shtats greatly reduced the number of soldiers in the rifle and mountain divisions from their pre-war levels. Even so, almost all divisions in the field typically had fewer soldiers than even the reduced shtats authorized.

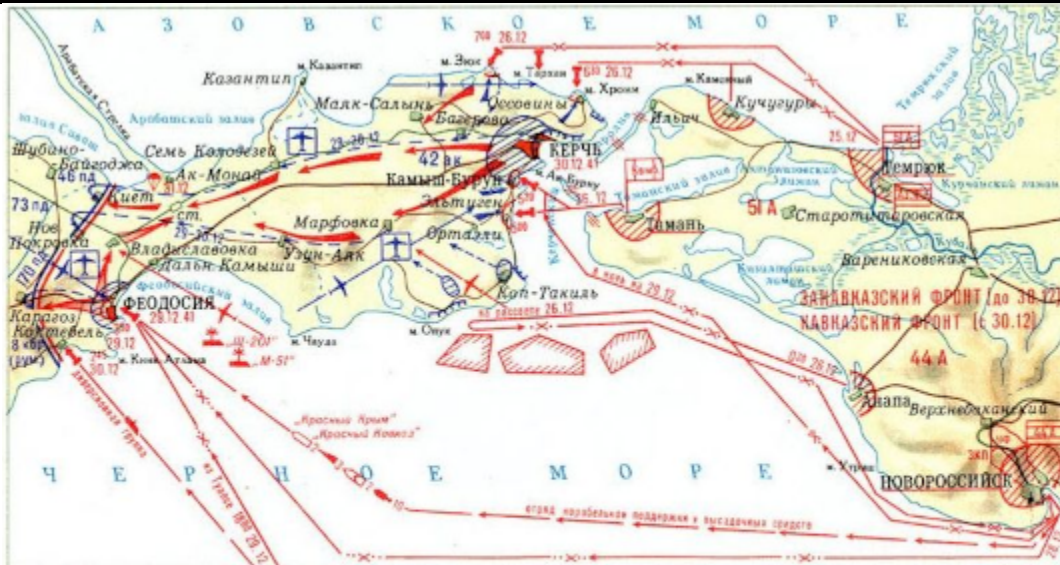


A Soviet horse-drawn artillery gun in Iran, 1941  
(unknown if from a mountain unit)



Crimea, with the Crimean Mountains in the south and the Kerch peninsula in the east

In the war zone with Germany, mountain troops comprised part of the forces that made successful naval landings on the German-occupied Kerch peninsula of Crimea starting in late December 1941. Mountain troops were likely used because their gear was easier to land from the ships and boats in the operation. However, they may have also been selected with an eye towards operating in the Crimean Mountains, a relatively small but rugged mountainous area in the Crimea. In the actual event, the Germans contained the invasion before it could reach the mountains.



Soviet landings on the Kerch peninsula

## The 1942 Mountain Rifle Division



Red Army mountain troops in the Caucasus Mountains, autumn 1942

The August 1940 mountain rifle shtat is well documented, but detailed information on new mountain shtats once the war began is hard to find. This is likely because the mountain troops received relatively little attention after the war. They were a relatively small force that did not have much effect in the major campaigns and battles of the war, unlike the mechanized forces, the rifle troops, and the artillery. The first new shtat since August 1940 apparently was Shtat № 04/830, issued either on 3 January 1942 or in March 1942 (sources disagree<sup>21</sup>). The shtat reduced the mountain rifle division to a full-strength state of 9,915 personnel (from 14,076), on these lines:

### Mtn Rifle Div HQ

4x Mtn Rifle Rgt, each with:

5x Mtn Rifle Co (with rifles, SMGs, MGs, 50-mm mortars, AT rifles, likely rifle grenade launchers, etc.)

1x MG Co (with 12x MGs)

1x Art Batt (with 4x 76-mm mtn guns)

2x Mortar Co (one with 12x 82-mm mortars, one with 12x 50-mm mortars)

1x AT Co (with 9x 14.5-mm AT rifles)

1x AA Pltn (with 3x 12.7-mm AAMGs)

1x Mtn Art Rgt, with:

2x Mtn Art Btl (each with 8x 76-mm mtn guns and 6x 107-mm mtn mortars)

1x Hwtzr Btl (with 8x 122-mm hwtzrs and 6x 107-mm mtn mortars)

1x AA Btl (with 8x 37-mm AA guns and 15x 12.7-mm AAMGs)

1x Eng Btl

1x AT Batt (with 8x 45-mm AT guns)

1x Cav Sqdn (for recon)

See the Appendix for the [weapon totals](#) for the division. The reduction from 14,076 personnel to 9,915 was not quite the cut it seemed. Mountain rifle divisions at the front likely were weaker than the 9,915 personnel of the new shtat and would mostly stay this way. Many mountain divisions in the inactive theaters were also weaker, having earlier released some of their soldiers and weapons to go to the front or to form new units.

<sup>21</sup> It is possible 04/830 was issued in January 1942 and then slightly modified in March without entailing a change of shtat numbers.



According to one source, in 1943 Shtat № 04/830 was modified to increase division strength to 10,066 personnel, without changing the shtat number. I have no reliable information on whether the organization of the division's subunits changed to any significant degree at this time.

The division's artillery underwent a most significant change from the 1940 shtat: The howitzer regiment was removed from the division. One of the regiment's two howitzer battalions did remain, now grouped with the 76-mm mountain guns in the mountain artillery regiment. This may not have been a major change for most divisions, either because of howitzer losses or because higher headquarters had already stripped out howitzers to reinforce the army- and front-level artillery forces. (Something similar happened with the rifle divisions in 1941. The pre-war rifle division had both an artillery regiment, of 76-mm field guns and 122-mm howitzers, and a howitzer regiment, of 122-mm and 152-mm howitzers. Heavy losses to army and front artillery caused headquarters to grab the howitzer regiment from many divisions, and this was later formalized in a new shtat that eliminated the regiment from the division.)

The howitzer battalion that remained in the division was reduced from 12 to 8 howitzers, but six 107-mm mountain mortars were added as compensation. This somewhat increased the battalion's mobility in mountains, as the mortars were pack-transportable unlike the howitzers.

In the field, the AA battalion likely still had few or no 37-mm AA guns. The 37 was still in quite short supply in 1942 and likely few went to the mountain troops.

The division saw significant changes to its AAMGs. The number of 12.7-mm AAMGs in the AA battalion was increased to 15 from 12. The mountain artillery regiment lost its AA platoon of two quad 7.62-mm AAMGs, and the AA platoon of the howitzer regiment was simply gone along with the regiment. The mountain rifle regiments did retain their AA platoons (each three AAMGs), but they were reequipped with 12.7-mm AAMGs in place of quad 7.62-mm AAMGs. The division thus officially went from having 12 quad 7.62-mm AAMGs and 12 12.7-mm AAMGs to having 27 12.7-mm AAMGs. In reality, the divisions likely kept their quad AAMGs for some time, as the 12.7-mm AAMGs probably just trickled in over time.



The 14.5-mm semi-automatic PTRS antitank rifle

The 1942 shtat authorized 14.5-mm antitank rifles for the mountain rifle division. A few antitank rifles had probably already reached some of the mountain troops in late 1941 or early 1942. The shtat now authorized the division to have 35 antitank rifles, and all the divisions at least at the fighting front likely received them over the course of 1942. These antitank rifles were not wonder weapons, especially as the Germans progressively retired their light tanks from use as main battle tanks. Against medium tanks, it took courage for an antitank rifleman to let a German medium tank get close enough for the rifle to have a good chance of effect. Since the antitank rifle had a loud report and a very visible muzzle flash, it gave away its position as soon as it was fired. An ineffective shot invited immediate return fire from the tank's machinegun and even main gun. Nevertheless, antitank rifles provided the mountain rifle troops with a minimal effective antitank ability, supplementing the sometimes-few antitank guns in the divisions.

The antitank rifle did remain useful later in the war, against light tanks (which were used for recon missions) and lighter AFVs like armored cars and halftracks. They were very effective against unarmored vehicles like trucks. The Soviets also found creative ways to use the rifles. During the Battle of Stalingrad, German medium tanks and assault guns gave close-range fire support to the infantry assaulting city buildings. The Soviets would deploy antitank riflemen on roofs, where they could fire down at the thin upper armor of the attacking AFVs.

The other major belligerents in Europe mostly or completely retired their antitank rifles from their front-line troops during the war, as better infantry-portable antitank weapons became available. For example, the British replaced the 0.55-inch (13.9-mm) Boys Anti-Tank Rifle in favor of their PIAT spigot projector with its HEAT warhead, and the Germans mostly relegated their 7.92-mm antitank rifles to second-line troops as their Panzerschreck and Panzerfaust HEAT rockets became available. The Soviets, however, failed to develop an effective infantry-portable HEAT weapon during the war and even rejected receiving the American bazooka as Lend-Lease<sup>22</sup>. Instead, their antitank rifles remained in service throughout the war in large numbers.

### *Spotlight: Antitank Defenses of Soviet Mountain Divisions*



A Soviet 45-mm antitank gun in winter

45-mm antitank guns were the main antitank defenses of the mountain rifle division, supplemented starting in late 1941 with 14.5-mm antitank rifles. The mountain troops certainly needed antitank defenses, as for most of the war the mountain rifle divisions fought in good tank country in the lowlands.

The mountain troops could also turn their 76-mm and 122-mm artillery against tanks: The 76-mm mountain guns had armor-piercing rounds, although the guns' short barrels and thus low muzzle velocities made them not quite as effective as the 45s. The 122-mm howitzers also had low muzzle velocities and did not even have antitank rounds. Instead, they fired fragmentation shells at enemy AFVs, which in the right circumstances could pierce the armor

<sup>22</sup> The Red Army at the time it tested the Bazooka apparently did not appreciate the value of a short-range HEAT weapon for infantry.

of light tanks (as well as armored cars and halftracks) and could damage the suspension or sights of medium tanks. The 122s also fired HE shells against medium tanks. While the HE blast was not able to pierce the armor, it could sometimes stun or injure the crew inside the tank or jam the turret.

In combat situations, the mountain guns and howitzers were typically quite busy in their regular artillery roles but would go over to antitank fire if the situation required, such as trying to fend off a tank assault on the division.



The mountain soldiers had a hand-thrown antitank grenade, the RPG-40. (RPG is the Russian abbreviation of **R**uchnaya **P**rotivotankovaya **G**ranata, Handheld Antitank Grenade, and does not mean Rocket-Propelled Grenade despite what many English-language works claim.) When a soldier threw the grenade, a cloth strip would automatically deploy from the handle, helping to stabilize the grenade's flight and ensuring the warhead was the first to strike the target. On impact, a fuse exploded the warhead, and the blast under good conditions could penetrate about 20–25 mm of armor<sup>23</sup>. Since the grenade was hand thrown, it had only a very short range, and the grenadier could be quite vulnerable to enemy fire, a problem with all close-range antitank weapons. The danger often was not just fire from the enemy tanks. Combined-arms combat tactics called for German tanks to be supported by infantry when possible, and they fired on any threats to the tanks.

The RPG-40 grenade was only partially successful; it became less so as the war progressed and German tanks became better armored. New antitank grenades would be introduced later (see below), but since the RPG-40 was also useful at field fortifications and exposed infantry it remained in service.

The engineer troops in the mountain division had various antitank capabilities. Antitank landmines were quite useful to channel or discourage enemy tank attacks when the division was on the defense, if the engineers had the time to lay minefields. The engineers along with the other troops also dug antitank ditches and erected various barriers to impede tank movement. The engineers were supplied various weapons for use against field fortifications,

<sup>23</sup> Under ideal conditions, if the grenade struck the armor just right, penetration could be 40 mm. This rarely happened.

enclosed structures, or exposed personnel, such as powerful satchel charges and short-range flamethrowers. In close combat situations, the engineers threw the satchel charges onto tanks, sometimes knocking them out. Burning fuel from a flamethrower attack might cause an engine fire or possibly seep inside the tank, injuring the crew or causing the gasoline fuel tank to explode<sup>24</sup>.



Left: Illustration of a Soviet RGD-33 stick-style antipersonnel hand grenade

Right: Bundle of several stick-style grenades were used against tanks

Once the war began, the Soviets quickly resorted to improvised antitank weapons. At the front, soldiers would tie their stick grenades into bundles and toss them (at very short ranges) at enemy tanks<sup>25</sup>. While they typically did not have much effect, they could sometimes damage a tank's suspension or outside equipment.

They also improvised petrol bombs by filling glass bottles with gasoline ("petrol" to the British, "benzin" to the Soviets), stuffing burning rags in them, and tossing them on tanks<sup>26</sup>. The bottles would break and spread burning fuel on the outside of the tanks. Like with a flamethrower, the burning fuel might cause an engine fire or seep inside the tank. These grenade and petrol bomb attacks were very dangerous to the Soviet soldiers, as they could be done only at extremely short ranges.

Petrol bombs were quite easy to make, and Soviet industry quickly began manufacturing for the field forces. The bombs rapidly evolved with improvements designed to make them more effective: adding chemicals to the fuel to enhance its ability to cling to the tank, and creating fuses that automatically ignited the mixture when the bottles smashed. This climaxed in 1941 in an entire petrol bomb weapon system, the *Ampulomyot* ("ampule thrower"). Ampules (glass spheres) 125 mm in diameter were designed containing the fuel-chemical mixture and the

24 German AFVs used gasoline engines.

25 This was not a wartime innovation. Red Army instructions from at least the mid-1930s instructed troops on how to make grenade bundles for antitank use.

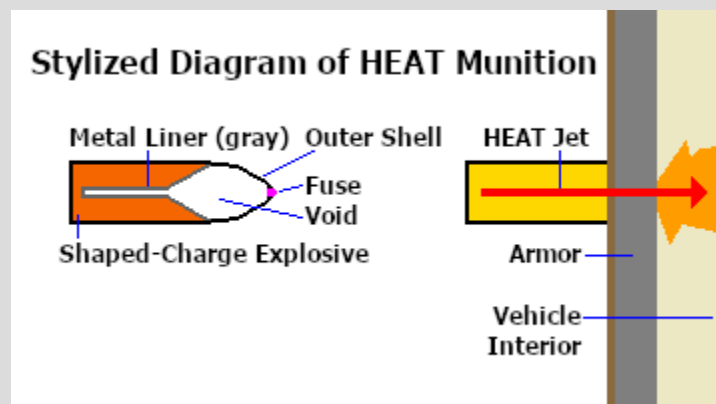
26 Petrol bombs are often called "Molotov cocktails", but the Soviets did not use this term. During the Winter War of 1939–1940, the Finns used petrol bombs against the invading Soviet tanks. At the start of the war, V.M. Molotov, the Soviet commissar of foreign affairs, denied that Soviet aircraft were bombing Finland. Instead, he claimed the Finns were starving and the bombers were air dropping food for the people. The Finns responded by mockingly calling a type of Soviet cluster bomb being used the "Molotov breadbasket", which in turn inspired them to called their petrol bombs "Molotov cocktails".

ignition fuse. A launcher was created that could fire the ampules at a rate of eight per minute, up to a maximum range of 250 meters (~820 feet). This was still a short range but much further than a soldier could throw a petrol bomb.



Ampulomyots (petrol bomb throwers) of a Soviet rifle regiment, 1942

The Ampulomyot was not particularly effective against tanks, but it was certainly better than grenade bundles and improvised petrol bombs. It was used as an antitank weapon mainly in the rifle and mountain troops into 1942 and then withdrawn as antitank guns became increasingly available. (Some troops kept their Ampulomyots as long as they had a supply of ampules, using them to make incendiary attacks on German infantry positions. The Soviets also kept producing petrol bomb bottles throughout the war, which some soldiers carried as emergency antitank weapons in case all else failed to stop the tanks.)



Later in the war, the Soviets introduced what they called “cumulative shells” (*kumulyatsionnyye snaryady*) for various artillery guns and howitzers. These were shaped-charged HEAT shells, which on impact shot a deadly jet of metal plasma through the armor into the tank. HEAT rounds began to reach the field in 1943, but they were only usable with howitzers and with short-barreled 76-mm guns like the regimental gun and the mountain gun. On longer-barreled guns like 76-mm divisional guns and 76-mm tank guns, the temperamental fuses sometimes

detonated while still in the barrels, rendering the guns unusable and possibly injuring nearby friendly soldiers. This problem was only fixed at the end of 1944<sup>27</sup>.

All wartime Soviet HEAT rounds were sometimes affected by poor quality. The inside of a HEAT round needed precision manufacturing in order to create the most effective plasma jet, and some sources indicate the Soviets had more dud HEAT rounds than other countries. Similarly, the explosive filler needed to be good quality, but Soviet chemical factories at times struggled to make explosives of consistent quality<sup>28</sup>.

HEAT rounds were expensive for the Soviets to make compared with other ammunition, so only a relatively few were made. For example, the Soviets made a bit over 1 million HEAT rounds for 76-mm guns, less than 1% of the almost 116 million 76-mm rounds of all types that they made during the war.

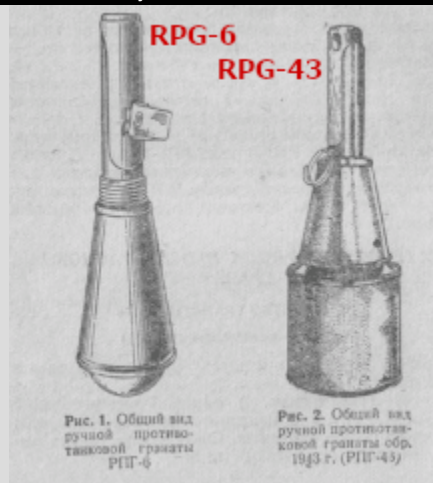
Another issue with HEAT rounds, which affected all WW2 combatants, is that they were not well suited for use with rifled artillery. Almost all WW2 artillery had rifled barrels, which imparted spin stability on the rounds and made them less likely to deviate in flight. HEAT rounds were highly dependent on hitting the armor just right so that the plasma jet could burn through the armor into the tank, but spinning rounds could cause the jet to deflect. (After World War II, the Soviets and many other countries would create smooth-bore tank guns for HEAT rounds.)

HEAT rounds were an obvious way to give Soviet fin-stabilized rockets a good antitank capability, since the rockets did not spin. However, these rockets were highly inaccurate and rarely achieved direct hits on tanks, which was crucial for HEAT rounds to be effective. After tests in which no rockets at all achieve a direct hit, they were not put into mass production. (One solution to the accuracy problem would have been to use the rockets at very short ranges, like American bazookas and German Panzerfausts, but the mid-war Red Army was interested only in longer-range HEAT rockets.)

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27 The longer-barrel guns fired rounds at high muzzle velocities and so were effective against tanks just with standard armor-piercing rounds. They did not need HEAT rounds as much as the shorter-barreled guns did.

28 By the time HEAT munitions became available, output from Soviet ammunition and chemical factories had increased in quality from its rather low state of 1941–1942. However, even late-war Soviet quality tended to be lower than that of Germany and the western Allies. This can be seen in another Soviet weapon: their artillery rockets. Poor quality rocket fuel could cause sometimes-dangerous misfires. Sources on the rockets state the Soviets successfully worked to improve fuel quality during the war, which is correct. However, this lessened the problem without solving it, as post-war memoirs of rocket artillery soldiers mention serious misfires occurring in 1944 and 1945.



HEAT munitions did allow the Soviets to improve their hand-thrown antitank grenades. The concept behind the RPG-40 was reused, this time with two stabilizing strips of cloth. Upon impact, the fuse triggered the grenade, which if it struck in the right configuration sent the plasma jet blasting through the tank's armor. The best way to achieve this was to throw the grenade so that it came down on top of the tank, as the strips caused the grenade to descend with the HEAT warhead first. If it landed right on a flat part of the upper hull or upper turret, the plasma jet could easily punch through the armor. If the grenade was thrown any other part of a tank, it was far less likely to hit in the proper configuration for the jet to be effective.

The first HEAT grenade was the RPG-43, which reached the field in 1943. Later that year, the RPG-6, an improved HEAT grenade with four cloth strips, arrived. HEAT grenades packed good punches but like all hand-thrown antitank weapons could only be used at very short ranges, making their users quite vulnerable to return fire.



HEAT rounds also revived an obsolescent Soviet weapon, the 40.6-mm Dyakonov rifle grenade launcher. This was a World War I Russian design partially modernized by the Soviets in the 1920s. It was difficult to aim accurately, fired fragmentation rifle grenades at a relatively slow rate, and required a team of two soldiers. The Red Army placed the Dyakonov in service

for lack of a better weapon. Dyakonovs went to the rifle troops and indirect evidence indicates the mountain troops had them, too. The grenade launcher became obsolescent once the 50-mm light mortar became available in the late 1930s. The 50 had much more powerful fragmentation shell and a much higher rate of fire, while also just requiring a team of two soldiers. The Dyakonov was kept in service, however, until there were plentiful numbers of 50s.

The Dyakonov thus was still in use in 1941. It was finally retired during the course of 1942, as 50-mm mortar production dramatically increased that year. The launcher was not forgotten, however, and the HEAT designers created a VKG-40 cumulative shell for the system, which could penetrate 50 mm of armor if it struck flat (90° angle) on the armor plate. This allowed the Dyakonov to be returned to service in 1944 as a portable infantry antitank weapon with a maximum range of 90 meters. The system still had all its issues of aiming and slow rate of fire. HEAT rocket like the bazooka and Panzerfaust with their larger warheads would have been much better, including the fact that a single soldier could fire a rocket.

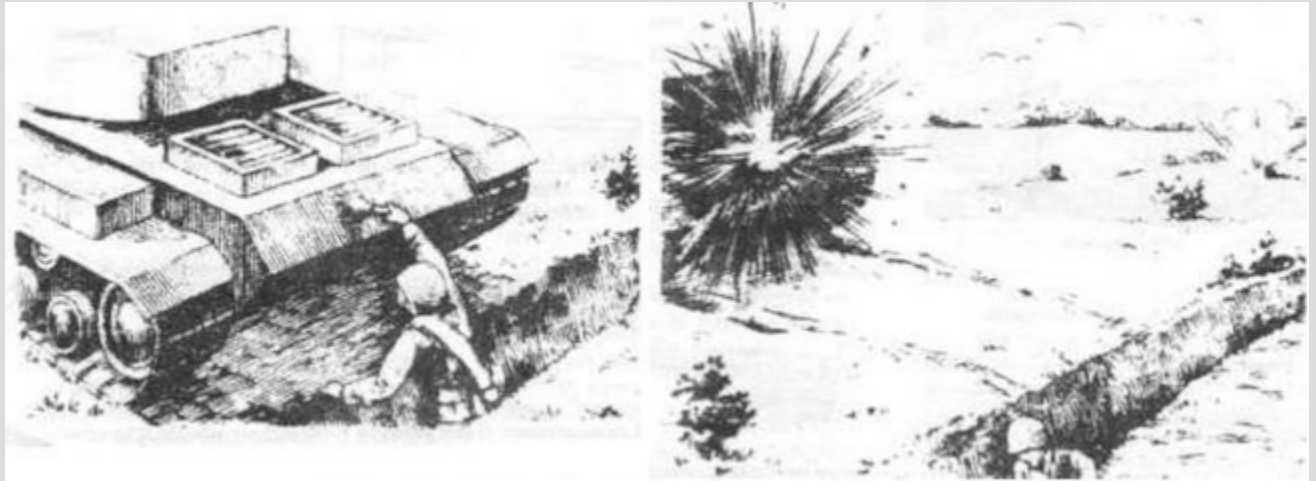
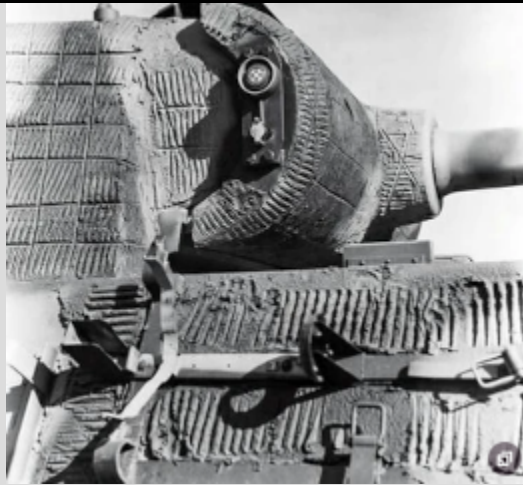


Illustration of a Soviet NNZ magnetic grenade-mine in use

One problem with using grenades against AFVs was that a grenade could hit the vehicle but bounce off before the fuse detonated. The Soviets designed hand-thrown antitank grenades coated with sticky substances to help the grenades adhere to their targets. Once Soviet HEAT munitions were available, they also created the NNZ magnetic “grenade-mine”<sup>29</sup>. Its intended use was for a soldier hidden in a trench as an enemy AFV passed over and then attach the munition to the rear of the vehicle. Magnets would hold the device in place, and a time delay fuse would trigger the munition after a few seconds. The delay hopefully allowed enough time for the tank to move away from the trench, allowing the soldier to crouch down and escape the blast. What could go wrong? Some soldiers preferred instead to throw the grenade-mine onto the AFV, but the chance that the magnets would latch on was quite unlikely.

<sup>29</sup> The NNZ was possibly inspired by the German “*Panzerknacker*” magnetic munition, which appeared in late 1942, although I have not researched this.





*Zimmerit* protective coating on a German tank

The Germans in turn created their *Zimmerit* paste to coat the outside of AFV. It was a non-magnetic material applied thick enough to weaken the attraction between the grenade-mine's magnets and the metal armor. It was applied in a grooved pattern that also helped to prevent magnetic devices from attaching. Soviet sources also state it was effective against sticky grenades as well.

Soviet mountain troops would have all of these antitank defenses, to varying degrees. At the start of the war, heavy losses of Soviet troops and weapons meant the mountain forces often had to fend for themselves. As the war went on, however, they increasingly could receive help against tanks from other Soviet forces, such as non-divisional antitank, tank, and self-propelled gun units as well as ground attack aircraft.



The German 11th Army with a single panzer division smashes the Soviet Crimean Front in May 1942.

The first half of 1942 was bad for the mountain troops. Those on the Crimean Front were frittered away in futile attacks trying to break out of the Kerch peninsula, as were the rifle troops there. Then in May a German offensive defeated and destroyed the Crimean Front in a matter of days, conquering all of the Kerch peninsula.

May also saw the mountain troops smashed in eastern Ukraine, when a German counteroffensive pocketed and eliminated Soviet armies conducting an offensive near Kharkov (now, Kharkiv, Ukraine). Why were the mountain troops here? This region had some hilly areas but was not mountainous by any measure. Nevertheless, outside of the inactive south, the Soviets had most of their mountain troops there rather than in more rugged terrain, where you might think they would have an advantage. In contrast, on the Eastern Front the Germans sent some mountain troops to operate in the Arctic and in the forests and swamp of the northwestern USSR, places where their organization and equipment gave them good abilities in rugged terrain with few roads. Why didn't the Soviets do the same? Most likely, deployment in Ukraine was just how things worked out. Several mountain divisions started the war in Ukraine and more were sent from the nearby Caucasus region. Once the troops were committed, the Soviets in 1941 and early 1942 did not have the luxury of withdrawing them for operations elsewhere.



The map shows the more rugged area of the Caucasus Mountains, roughly 3,000 meters elevation and above. A considerable region around the area also contained many lesser mountains and foothills.



The high Caucasus rivaled the Alps in height, ruggedness, and lack of good roads.

Although many mountain divisions had been decimated by mid-1942, the mountain troops went on to give good service in the second half of the year. The Germany's 1942 summer offensive sent Army Group B to capture Stalingrad and Army Group A to capture the oilfields of the North Caucasus and Baku. Baku was the big prize, the single biggest source of oil for the Soviets. However, the Caucasus Mountains lay between the Germans and Baku. These mountains rivaled the Alps in height, ruggedness, and lack of good roads. Many of the remaining Soviet mountain troops were sent there to block the Germans from forcing the mountain passes, joining the regular rifle divisions and brigades already there. Army Group A, now at the limits of its supply lines, dramatically slowed when it faced determined resistance in the mountains.

The battle for the Caucasus Mountains caused the Soviets to create more mountain-capable forces. One rifle division was converted into a mountain rifle division. Mountain engineer battalions were formed and sent to help fortify the passes. The 107-mm mountain mortar had been put back into production in 1942, and newly-made mortars were organized into mountain mortar regiments and sent the Caucasus. Troops in the Caucasus created improvised 82-mm mountain-pack rocket launchers, as the existing motorized rocket launchers were road-bound in the mountains, limiting their usefulness. These mountain launchers inspired Soviet weapon designers to create several types of more-powerful mountain rocket launchers, which would be used in mountainous areas for the rest of the war.

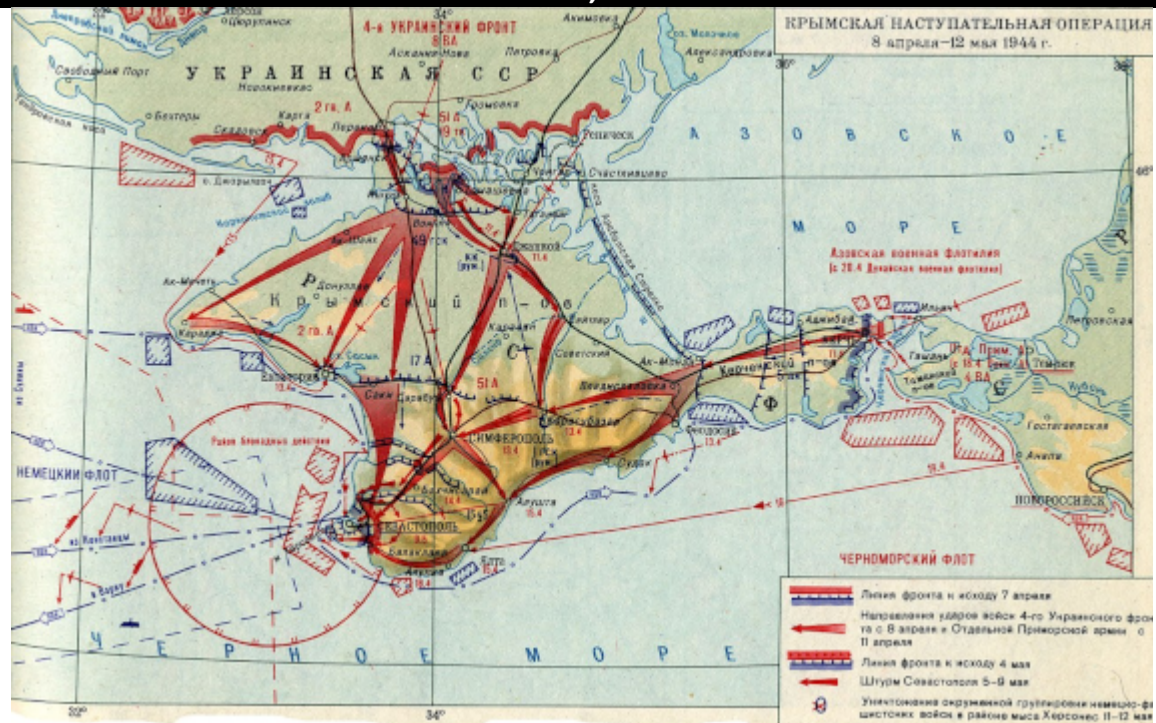
Army Group A attempted to force its way across the mountains several times in the autumn of 1942 but never achieved a breakthrough. Then, in late 1942, the Soviets surrounded the Germans at Stalingrad and crushed the pocket in early 1943. As the Red Army advanced west towards Rostov-na-Donu, Army Group A was now overextended and had to withdraw from the mountains lest it be cut off.



The map shows the more rugged area of the Caucasus Mountains, roughly 3,000 meters elevation and above. A considerable region around the area also contained many lesser mountains and foothills.

Some of the German forces fell back to the Taman Peninsula and dug in, pursued by Red Army forces including mountain troops. In February 1943, the front lines solidified for a long time just outside of Novorossiysk. This port city on the Black Sea was also in a mountainous area, although not as rugged as the high Caucasus. The mountain troops participated in the liberation of Novorossiysk in September 1943 and in the clearing of the Taman peninsula in October, with the Germans now retreating back to the Crimean peninsula.

Not quite two years after their first Kerch landings in 1941, in November 1943 the Soviets once again landed on the Kerch Peninsula. This time, mountain troops played only a small role in the landings, sending across just a single mountain mortar regiment. One of the landing sites was wiped out by the Germans. They failed to destroy the other landing site. The Germans landing, and Soviet reinforcements then expanded the bridgehead but were unable to break out. The Kerch stalemate would prevail until April 1944.



Most of the remaining mountain rifle divisions were now concentrated on the Taman Peninsula. They were placed under the 3rd Mountain Rifle Corps of the Soviet Coastal Army, awaiting commitment to the Crimea. The corps' plan was to join the forces on the Kerch Peninsula and advance west into the Crimean Mountains, clearing them, and then liberate Sevastopol, the great naval base in the southwest of the Crimea. The operations of the mountain troops and indeed the entire Coastal Army were just a minor part of the offensive that finally retook the Crimea. Soviet forces in Ukraine had early cut off the Axis in the Crimea, which were now only supplied by sea from Romania. An entire Soviet front, the 4th Ukrainian, was organized to make the main invasion from the north. Both the Coastal Army and the 4th Ukrainian Front launched their offensives in early April 1944, and they quickly swept across the entire Crimea in little more than month.

After the 1944 Crimean campaign, the Soviets would once again reorganize their mountain troops. A new task lay ahead: advancing at last out of the USSR and into the Carpathian Mountains.

## The 1944 Mountain Rifle Division



Soviet forces advancing into the Carpathian Mountains, 1944

Shtat № 04/650 was issued for the mountain rifle division in September 1944. The division's full-strength state was slightly decreased to 8,127 (from 9,915), and it was organized as follows:

### Mtn Rifle Div HQ

3x Mtn Rifle Rgt, each with:

1x Art Batt

1x MG Co

1x AT Co

2x Mtn Rifle Btl, each with:

3x Mtn Rifle Co

1x MG Co

1x Mortar Co

1x Mtn Art Rgt, with:

3x Mtn Art Btl (each with 76-mm mtn guns and 107-mm mtn mortars)

1x AA Btl

1x Eng Co

1x AT Batt

1x Recon Co

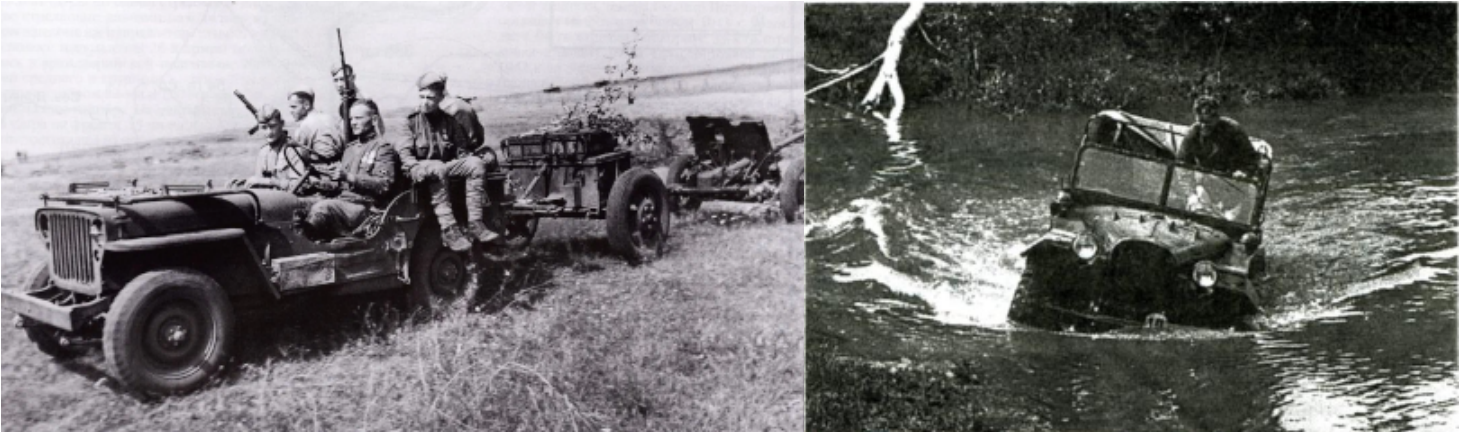
The mountain rifle divisions in the 3rd Mountain Rifle Corps switched to this organization. This corps contained all the Soviet mountain divisions fighting the Axis. There was one other division: The 68th Mountain Rifle Division was in Iran on occupation duties. (I have no information on whether this division went to the new shtat or remained on the older one).

I do not have weapon counts for Shtat № 04/650, but it was likely almost the same as the 1945 shtat (see the Appendix for the [weapon totals](#)), as sources say the two shtats differed only a little. The following comments are based on this assumption.

The division lost one of its mountain rifle regiments. The remaining three regiments were reorganized by each adding two subsidiary battalion HQs to control the mountain rifle companies. The division thus went from 20

mountain rifle companies in four smallish regiments to 18 mountain rifle companies in six battalions overseen by three regiments. This organization likely reflected changes that had already taken place in the field among at least some of the mountain divisions. Continual losses combined with insufficient replacements had forced some divisions to abandon the four-regiment organization<sup>30</sup>.

The mountain artillery regiment converted its sole howitzer battalion into another 76-mm mountain gun battalion. Perhaps this was done with an eye towards operations in the Carpathian Mountains, where pack-transportable guns would be much more useful than towed howitzers. It is likely that the artillery was reinforced at this time with more 107-mm mountain mortars to compensate for the loss of the howitzers: the 1942 shtat had 18 per division and the 1945 shtat had 36.



Left: A Lend-Lease jeep towing a 45-mm antitank gun; Right: A GAZ-67 crossing a stream

The mountain artillery regiment also became much more mobile. Just one of the battalions remained mountain-pack capable, retaining its horses for towing and for use as pack animals. The other two battalions became what the Soviets called “mountain-transportable” (*gorno-vozymyi*), as they were reequipped with small all-wheel drive vehicles, such as Lend-Lease jeeps and Soviet “goats” (GAZ-64, GAZ-67, GAZ-67B). These vehicles could operate off-road in all but the steepest terrain and on dirt roads almost anywhere, even in steep mountain passes. The goats were a bit heavier than jeeps, slightly less versatile, and much more prone to breaking down, so unsurprisingly the mountain troops preferred jeeps. As mountain rifle divisions advanced in combat, the mountain-transportable battalions usually could keep up with the troops and go into action much easier than the mountain-pack battalion, which had to disassemble its guns for movement and reassemble them again in the next firing position. The mountain-pack battalion still remained quite useful, especially on steep, narrow paths where the jeeps and goats could not go.

One thing to keep in mind with the wartime Red Army is that its units could differ from their shtats, sometimes significantly. For example, the mountain artillery regiment of the 318th Mountain Rifle Division was organized as one 76-mm mountain gun battalion and two 120-mm mortar regiments. This is likely the result of the division having been formed from the 318th Rifle Division<sup>31</sup>, which had plenty of 120-mm mortars (as well as 76-mm divisional guns and 122-mm howitzers, which were removed when the division converted) but no 76-mm mountain guns. Apparently only a battalion’s worth of mountain guns was sent to the division, necessitating the

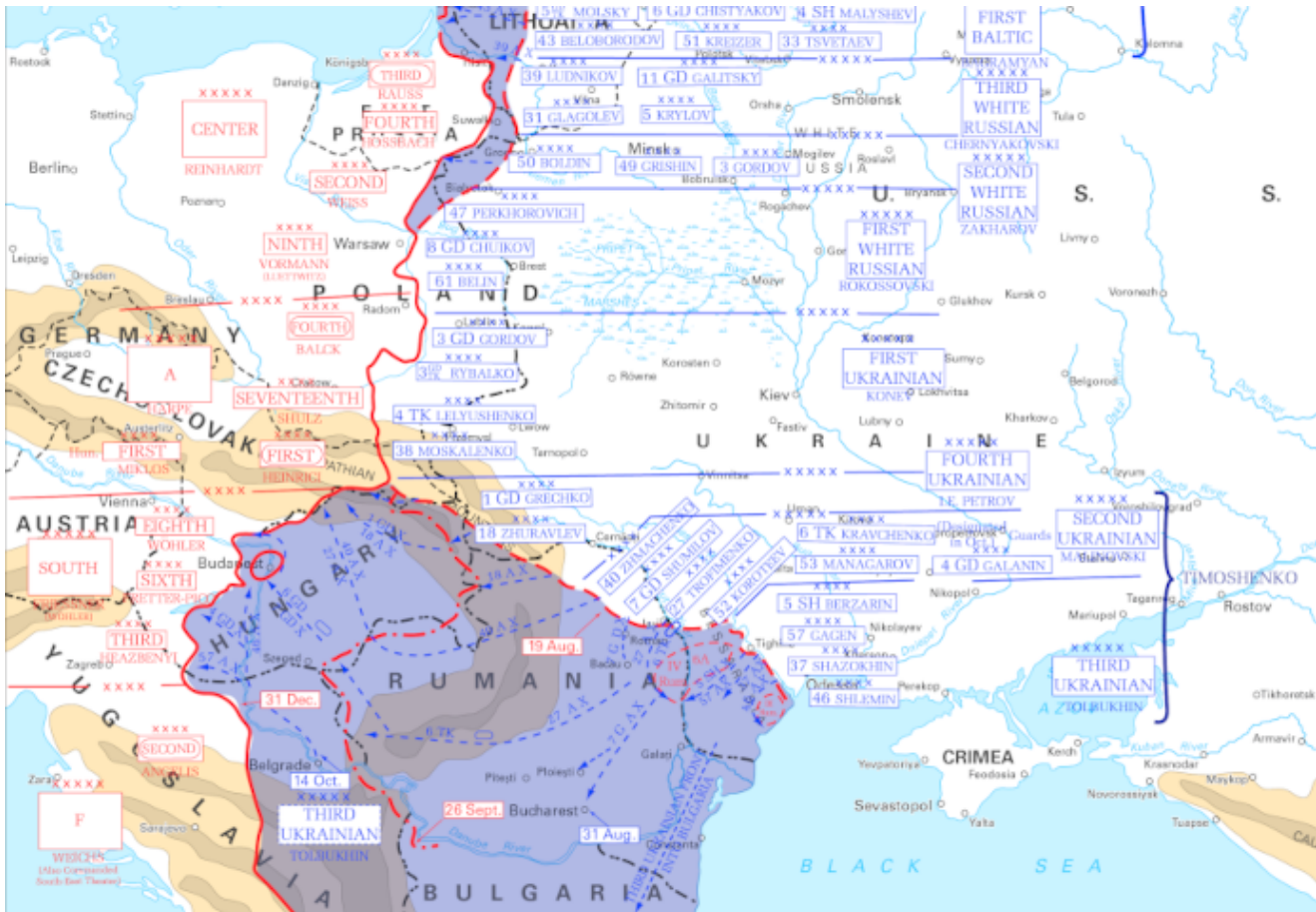
30 The Red Army had about 12 million personnel in 1944 and was by far the largest army in Europe, so it many seem strange that units were running out of replacements. In the later war years, the Red Army prioritized training replacements for the mechanized troop and artillery forces, at the expense of foot soldiers for the rifle and mountain rifle troops. A soldier carrying a rifle or submachinegun simply did not deliver anywhere near the same amount of military power as a soldier with the tanks, self-propelled guns, mortars, rifled artillery, or rocket artillery. Foot soldiers were still needed to help take and hold ground, but most rifle and mountain rifle units operated at reduced strength.

31 The 318th Rifle Division had fought in the 3rd Mountain Rifle Corps alongside the corps’ mountain rifle divisions for some time, and thus already had considerable experience in mountain warfare.

use of mortars in other two battalions. (It is possible the division's artillery slowly converted over to the standard mountain artillery organization over time, but my sources do not go into this.)

The divisional engineer battalion was downgraded to just a company.

The cavalry squadron that had been used as a divisional recon unit became a recon company. Although I do not have details on what the change entailed, it likely meant that the horses were replaced with jeeps or goats. This possibly meant the company was now entirely motorized with jeeps/goats, motorcycles, and maybe some armored cars.



It was clear by early 1944 that the Red Army would soon force the Axis out of Ukraine and then advance into eastern Europe. This would involve fighting in the Carpathian Mountains, a major barrier the Axis would certainly try to defend. Around this time, new mountain-capable rocket launchers were designed. The 1942 Battle of the Caucasus had resulted in the creation of mountain-pack rocket launchers, each capable of firing eight 82-mm artillery rockets. These were the Soviets' smallest, lightest rockets, which made 82-mm rocket ammunition most suited for pack transport. However, the rockets also had much weaker explosive effects than the 132-mm and 300-mm artillery rockets. To enhance rocket firepower for the upcoming Carpathian campaigns, the Soviets designed mountain launchers for both types of larger rockets and went on to produce a number of mountain launchers each capable of firing six 300-mm rockets. There are not many details on these launchers. Presumably they were designed for pack transport, but this is not definitely stated in any of my sources. It is unclear how many of these launchers were made. Sources on them claim they were used in the Carpathians but give no other details about their operations. This leaves open the possibility that only a few actually saw combat and accordingly had little effect.



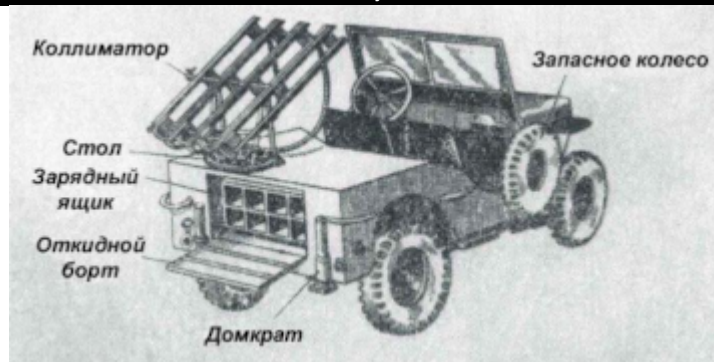


Diagram of an adapted M-8-8 mountain rocket launcher mounted on a Lend-Lease jeep

Once the 4th Ukrainian Front was engaged in the Carpathians, its troops would improvise a new type of 82-mm rocket launcher. They mounted 82-mm mountain-pack rocket launchers on all-wheel-drive jeeps (and possibly Soviet goats). This gave the troops an ability to rapidly deploy mountain rocket launchers up to 12 km (7.5 miles) away from a road in the mountains. The launchers themselves were easily detachable from the jeeps, allowing them to revert to pack-mobile launchers while the jeeps traveled to fetch more rockets. This launch vehicle is now mostly called the BM-8-8, a post-war coinage.

In the second half of April 1944, Soviet forces in Ukraine began planning for the upcoming campaign. The Red Army reorganized its ten mountain mortar regiments from 20 107-mm mountain mortars each to 24 mortars each<sup>32</sup>.

From B.S. Venkov; *V boyakh za Karpaty (In the Battles for the Carpathians)*; 1975<sup>33</sup>:

Given the increasing resistance of the Nazis, the great fatigue of our troops, as well as the complexity of hostilities in the conditions of mountain-forested terrain, [in August 1944] the Headquarters of the Supreme Commander-in-Chief [Stavka] ordered the troops of the 4th Ukrainian Front to temporarily switch to defense and begin careful preparation of the offensive operation for the eastern Carpathians.

We had to overcome really great difficulties. Ahead was a powerful mountain range, a whole system of mountains — several parallel ridges stretched from northwest to the southeast, dissected by transverse valleys. The main Carpathian ridge has several passes. The most important of them are Dulklinskiy, Lupkovskiy, Radoshitskiy, Russkiy, Uzhokskiy, Veretskiy, Vyshkovskiy, Yablonitskiy and Tatarskiy<sup>34</sup>.

The geographical features of the eastern Carpathians include the fact that they are almost completely covered with dense, difficult forests.

There are many rivers here. In the rainy period, the water level in them quickly rises to 3–5 m, and the current reaches 1.5–2.5 m per second.

<sup>32</sup> Each regiment now had in two 12-mortar battalions, per Shtat № 08/608.

<sup>33</sup> Available online at <https://booksonline.com.ua/review.php?book=161079> (in Russian). Despite being about operations in the Carpathian Mountains, the book does not have much information on the actions of the mountain rifle divisions. This is because the book is not a history of the campaign but a series of short memoirs of several soldiers who fought in the Carpathians, and almost all of them served in non-mountain units.

<sup>34</sup> These are the Russian names. I have not matched them with their local names. The “Russian” Pass is named for the “Russian Way”, an age-old trade route from eastern Europe to the lands of the Rus/Russians. It existed in Kievan Rus times even before “Russia” itself existed, and was a neolithic trade path for thousands of years earlier.

Although almost all of the mountain rifle divisions were assembled for the Carpathian offensives, they comprised only a small part of the forces that would operate there. Most of the troops to be committed there had little or no experience with combat in the mountains. They needed to be given training in basic mountain operations to avoid making costly mistakes that could stall the offensives. (This did not make them mountain troops, as they did not have mountain gear, and full mountain training would have required many months.)

From a section on the 18th Army of the 4th Ukrainian Front (B.S. Venkov; *V boyakh za Karpaty (In the Battles for the Carpathians)*; 1975):

The upcoming offensive required each soldier to have high skill, endurance, and knowledge of how to conduct combat operations in mountainous conditions. Therefore, the army's immediate rear areas resembled a huge training ground. For 11–12 hours a day, units practiced types of mountain combat. By rotating units in the front line with units in reserve, the entire army received good training in practical exercises.

On 9 September 1944, the troops of the 4th Ukrainian Front, which included our army, went on the offensive. In close cooperation with the advancing units of the 1st Guards Army, the troops of the 18th Army rushed in the Mukachevo-Uzhok direction on 20 September. In the new conditions of mountainous and forested terrain, the advance of our units was complicated by the fact that our tanks, artillery, vehicles and supply trains could not pass along the narrow country roads and paths. The only road seemed to snake its way into the sky and was blown up in many places by the enemy. Enormous efforts were required to repair it. The officers and soldiers of the Temryuk Engineering Battalion worked tirelessly and selflessly on the Uzhok serpentine curves. The command turned to the population for help. The residents of Uzhok, Nizhnyaya Rotoki, Stavnoe, Vyshka and other settlements unanimously responded to the call<sup>35</sup>: more than three hundred men and women came to the aid of our sappers. Through the joint efforts of soldiers and the local population, the road was restored. Ten hours later, a stream of tanks, artillery and vehicles poured towards the front to reinforce the advancing units.

Almost all of the artillery the Soviets used in the Carpathians was regular guns and howitzers rather than mountain guns that could break down into pack-transportable loads or could be towed by jeeps in mountainous terrain. Since these guns and howitzers had to be towed using horses, trucks, or tractors, they were neither pack-transportable nor mountain-transportable. The Soviets thus had to train the artillery for operations in the Carpathians, including preparing the artillery personnel to be able to lift entire artillery pieces up heights.

From a section on the 299th Guards Artillery Regiment of the 129th Guards Rifle Regiment (B.S. Venkov; *V boyakh za Karpaty (In the Battles for the Carpathians)*; 1975):

While conducting defensive battles, the division's units were intensively preparing for the upcoming offensive in the mountains. The artillerymen, along with studying the tactical use of artillery in mountainous and wooded terrain, studied the features of firing in the mountains, reconnaissance and the choosing of positions for artillery. Training was

35 As was typical of post-war Soviet works, *In the Battles for the Carpathians* was censored and infused with Soviet propaganda. While most of the local population, with its large Ukrainian contingent, would certainly have rejoiced at being liberated from Hungarian occupation, they were not unanimously pro-Soviet or pro-Communist. Sections of the book also invent ways to praise Leonid Brezhnev. Brezhnev had been a senior political officer in the 4th Ukrainian Front and was now the leader of the USSR.

conducted in raising guns to heights. Each battery manufactured blocks, winches, straps and brakes. The horses were reshod. The drivers of combat tractors trained in towing artillery on ascents and descents. Classes in the batteries were conducted by officers who had gained extensive practical combat experience in battles in the Caucasus.

One part the Carpathian Mountains quickly fell to the advancing Soviets. In late summer 1944, Soviet offensive operations overwhelmed the Axis forces in Romania, allowing the Red Army to cross the southern Carpathians with relative ease. By late September, the Red Army was in the Hungarian plain and advancing on Budapest. Further north, the going was harder.

From a section on the 18th Army of the 4th Ukrainian Front (B.S. Venkov; *V boyakh za Karpaty (In the Battles for the Carpathians)*; 1975):

When the main Carpathian ridge was forced, the soldiers of the 4th Ukrainian Front showed mass heroism. We had to win from the enemy literally every meter of the slope of the ridge... If at first the rate of the offensive was on average 5–8 km per day, then as it approached the main ridge, it began to fall and equal to no more than 2–2.5 km, and less on the ridge itself...

Mountain combat actions of troops in general are fraught with great difficulties, and in the bad weather of autumn these difficulties were complicated by impassible roads, frequent fog on the ridges and passes. All this limited the operations of the forces, especially aviation. In such conditions, military equipment and ammunition had to be lifted to the ridge gun by gun... To deliver combat equipment, especially artillery, to the heights of the main Carpathian ridge, any available means and all types of traction were used, right up to the commander's "Villis"<sup>36</sup>...

To 18 October 1944, front troops captured all the passes of the main Carpathian ridge and began to liberate Transcarpathian Ukraine<sup>37</sup>, leading successful battles on its territory.

On 26 October 1944, troops of the 18th Army and the 17th Guards Rifle Corps liberated Mukachevo, and on 27 October troops of the 18th Army, Uzhgorod...

As a result of 50-day tense battles in the foothills and the Carpathians, the troops of the 4th Ukrainian Front, in cooperation with other fronts, defeated a large German fascist group and broke through the fortifications of the Arpad line...

While the Soviets advanced into what is now the Transcarpathian region of Ukraine, the Soviet offensive soon stalled. Anti-fascist and pro-Communist Slovaks had rebelled in parts of Slovakia in late August 1944, hoping to take over the country with assistance from the Red Army. Unlike the Warsaw Uprising, which the USSR did not support, after some initial hesitation the Soviet Union was more inclined to support the Slovak uprising<sup>38</sup>.

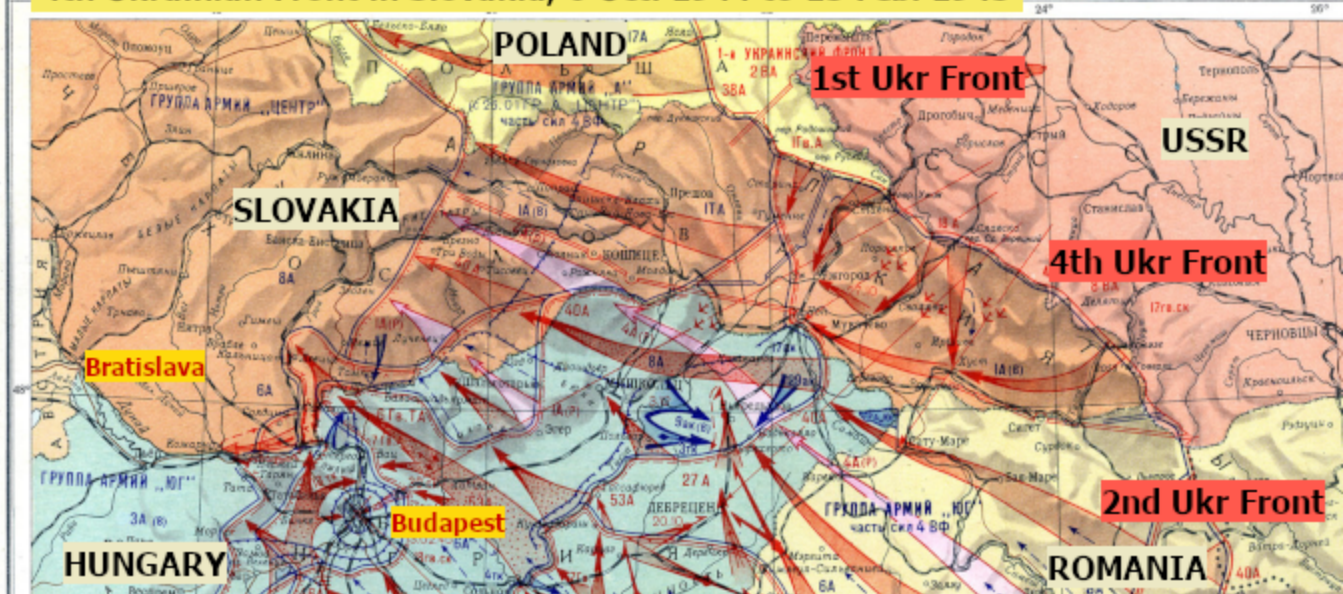
36 The Soviets received the Willys MB jeep (made by Willys-Overland Motors) and the Ford GPW (made by the Ford Motor Company) as Lend-Lease. In Russian, "Willys" became "Villis", which Soviets troops typically used for all their jeeps. Soviet troops typically called all Lend-Lease jeeps "Villis" regardless of manufacturer.

37 Transcarpathian Ukraine is the Soviet name for the easternmost province of Czechoslovakia. Outside of the USSR during and before World War II, it was better known by its local names, such as Carpatho-Ukraine, Subcarpathian Rus, Carpathian Ruthenia, Trans-Carpathia, Sub-carpathia, etc. Hungary annexed the region from Czechoslovakia in March 1939. After the war, the USSR would annexed it as Transcarpathian Ukraine, the westernmost part of the Ukrainian SSR.



The Soviets sent some air power to the Slovak insurgents and also airlifted in some airborne troops, weapons, and supplies. However, Red Army ground forces could not break into the region<sup>39</sup>. The 4th Ukrainian Front was committed to this action, and the front included the 3rd Mountain Rifle Corps with most of the remaining mountain rifle divisions. Later, two division-sized mountain rifle corps were sent here from the Soviet Arctic region (more on these corps [below](#)). Mountain engineers, mountain mortar regiments, and mountain rocket artillery units were all sent into the fight here. However, by the end of October 1944, the Germans had crushed the uprising, with the 4th Ukrainian Front stuck, holding only small parts of easternmost Slovakia.

#### 4th Ukrainian Front in Slovakia, 6 Oct. 1944 to 13 Feb. 1945



The 4th Ukrainian Front, however, would be stuck in the mountains until the spring of 1945.

<sup>38</sup> The Warsaw Uprising was dominated by the pro-Western Polish resistance, and the USSR did not want them to reestablish the Polish government in exile's control over any part of Poland. This government was quite hostile to the USSR over the 1939 Soviet annexation of eastern Poland and because of the Soviet massacre of Polish officers in 1940. The Slovak Uprising did include pro-Western "bourgeois" elements that the USSR distrusted, but pro-Communist elements also had an important presence in the uprising. After hesitating to support the uprising at first, the Soviet Union did make some genuine efforts to support it.

<sup>39</sup> During the war, the USSR raised some air units and ground forces staffed by Czechoslovakians. Czechoslovakian aircraft and airborne troops were flown into the uprising area. The 1st Czechoslovakian Army Corps was sent to join the 4th Ukrainian Front's offensive attempts to break into Slovakia in 1944.

## The 1945 Mountain Rifle Division



Claimed to be a recon group from a mountain rifle regiment in the Carpathians, December 1944

Shtat № 04/850 was issued for the mountain rifle division on 18 February 1945<sup>40</sup>. The division's full-strength state was slightly increased to 8,196 (from 8,127), and it was organized as follows:

### Mtn Rifle Div HQ

3x Mtn Rifle Rgt, each with:

1x Art Batt (with 4x 76-mm mtn guns)

1x MG Co

1x AT Co (with 12x 14.5-mm AT rifles)

2x Mtn Rifle Btl, each with:

3x Mtn Rifle Co

1x MG Co (with 12x MGs)

1x Mortar Co (with 9x 82-mm mortars)

1x Mtn Art Rgt, with:

3x Mtn Art Btl (each with 4x 76-mm mtn guns and 6x 107-mm mtn mortars)

1x AA Btl (with 6x 37-mm AA guns and 6x 12.7-mm AAMGs)

1x Eng Co

1x AT Batt (with 8x 45-mm AT guns)

1x Recon Co

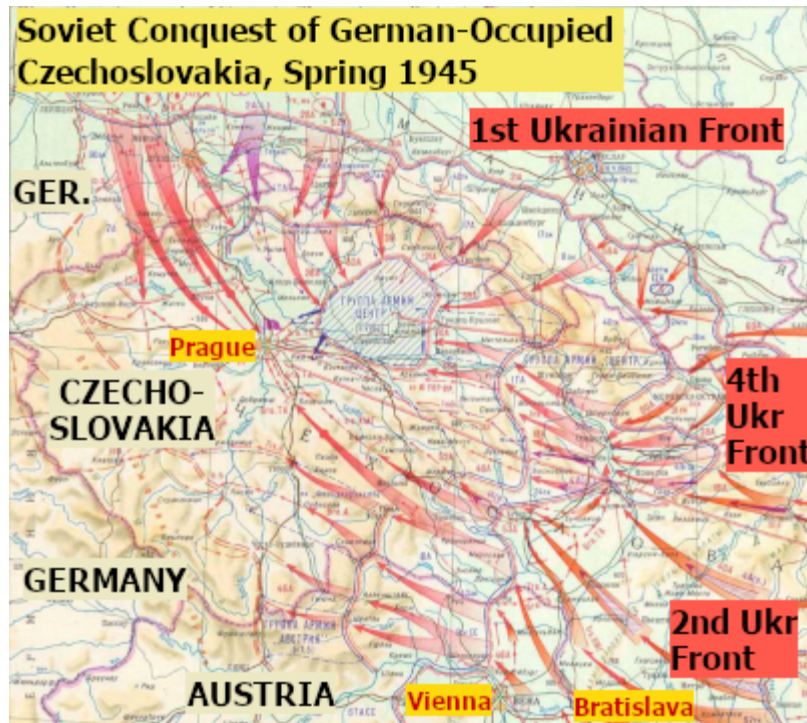
See the Appendix for the [weapon totals](#) for the division. If sources are right that this new shtat differed only slightly from the 1944 shtat, then the comments for the [1944 Mountain Rifle Division](#) apply here.

In the late war period, Guards rifle divisions were better equipped with weapons than the standard rifle divisions. I do not know whether this was the case with the single Guards mountain rifle division (the 128th) in existence. My guess without any evidence is that it used the same shtat as the standard mountain rifle divisions. If it was better equipped, then it might have had more mountain guns and mountain mortars, and it possibly had at least some 57-mm antitank guns in place of the 45-mm antitank guns. The 57-mm Antitank Gun M1943 was put into production in 1943, following the appearance of German Tiger I heavy tanks on the Eastern Front. The 45 was ineffective against the Tiger I (and the later Panther and Tiger II) at typical combat ranges. The 57s first

<sup>40</sup> One source claims the shtat was 04/650, the same number as the 1944 shtat. This may be an error or typo. If not, then the earlier 04/650 shtat must have been updated without changing its number.

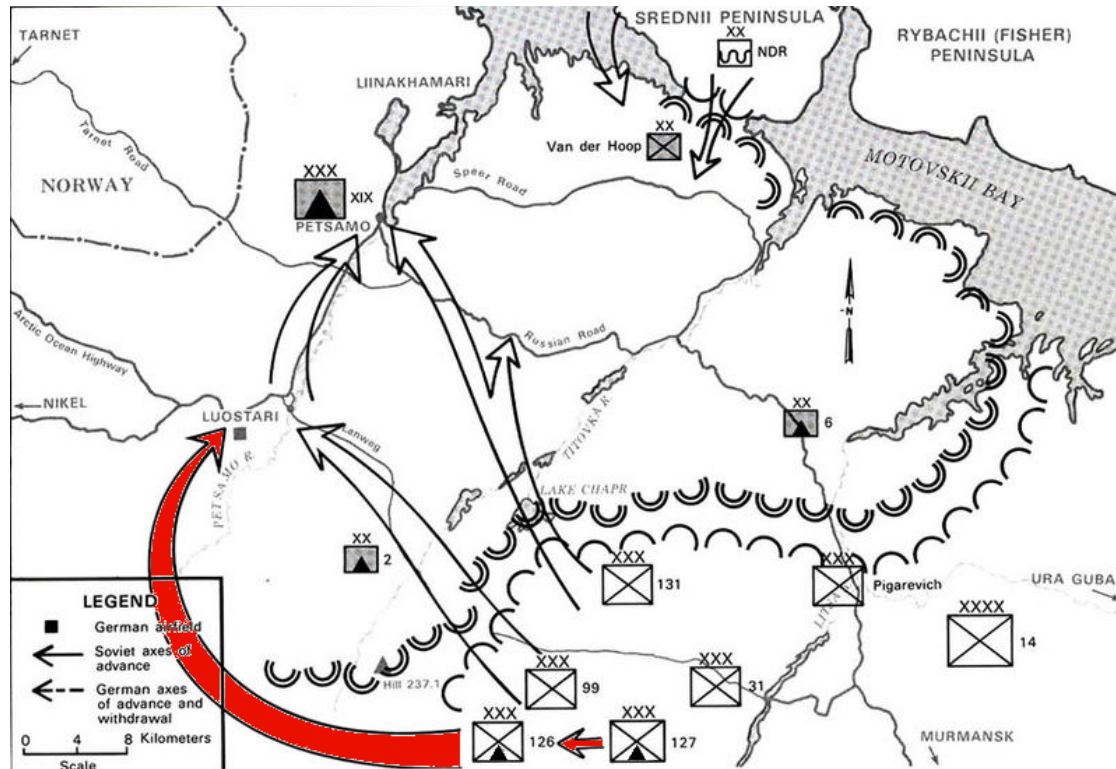
went into separate antitank regiments, but in December 1944 Guards rifle divisions were authorized to have them. (Standard rifle divisions would only be authorized 57s after the war in Europe was over.)

The 4th Ukrainian Front and its mountain troops began its final offensives starting on 24 March 1945. This front now had all the divisional-sized formations of the Red Army except for the 68th Mountain Rifle Division in Iran. The front's 3rd Mountain Rifle Corps had the 242nd Mountain Rifle Division, the 318th Mountain Rifle Division, and the 128th Guards Mountain Rifle Division. It also had the 126th and 127th Light Mountain Rifle Corps, which despite their "corps" designations were actually divisional-sized units. (These two corps are covered in the [next section](#).)



The Germans defending in the mountains against the 4th Ukrainian Front were now quite weak due to manpower losses, lack of weapon replacements, shortages of fuel, inadequate other supplies, and lack of air support. They finally gave way. The 4th Ukrainian Front advanced out of the mountains into the low hills and plateaus of central Czechoslovakia (now western Slovakia) in late March and April. In early May, the front continued to clear central Czechoslovakia while the 1st Ukrainian Front from the north and the 2nd Ukrainian Front from the south destroyed the Germans forces in western Czechoslovakia (now the Czech Republic), liberating Prague (Praha). This was the last offensive operation of World War II in Europe, ending only on 11 May 1945, days after the official German surrender.

## 126th and 127th Light Mountain Rifle Corps



Soviet plans for initial operations against German forces in the Arctic, October 1944<sup>41</sup>

Note that the 126th and 127th Light Mountain Rifle Corps are flanking forces.

The Soviets had two different types of corps. One was a traditional command headquarters that controlled the operations of two or more divisions plus non-divisional units, just like the corps HQs in most other armies. The Soviet 3rd Mountain Rifle Corps was this type of corps, as were most Soviet rifle corps, cavalry corps, and artillery corps.

The other type of corps was a combat unit equivalent to a division. In the Soviet system at least through World War II, a division was composed of regiments (and smaller units like battalions and companies) but not brigades. During the war, the Soviets ended up forming many brigades, which were about the size as regiments or a bit larger. When the Soviets wanted to build a division-sized formation out of brigades, their system did not allow them to call it a division, so they called it a corps. In 1942, for example, the Soviets began organizing their tank brigades and motorized rifle units into tank corps and mechanized corps, which were direct equivalents of German panzer divisions and western Allied armored divisions.

For operations in the Finnish/Arctic theater with its great tracts of almost-roadless swamps, forests, and tundra, the Soviets created two division-sized corps, the 1st and 2nd Light Rifle Corps in late February 1944. A few days in early March, the corps were redesignated the 126th and 127th Light Mountain Rifle Corps. I have not seen a reason why the corps were redesignated, but it was perhaps because each had a mountain artillery regiment of pack-transportable mountain guns, which allowed the formations to operate in terrain that formations with towed artillery regiments would struggle in. While in the Soviet north, each corps also

<sup>41</sup> Map is adapted from Leavenworth Papers Number 17: James F. Gebhardt; *The Petsamo-Kirkenes Operation: Soviet Breakthrough and Pursuit in the Arctic, October 1944*; 1989.

was composed of 2–4 maneuver brigades, which included ski brigades (that operated as light rifle brigades in the absence of snow), naval rifle brigades, and naval infantry brigades<sup>42</sup>.



Soviet soldiers moving a 7.62-mm machinegun over rocky Arctic terrain

These troops could have been soldiers from the 126th or 127th Mountain Rifle Corps, but it is possible they were other Soviet troops in the Arctic.

There were few actual mountains in their areas of operation, but there were many rocky hills and, in the far north, rocky tundra that were quite rugged. Pack-transportable mountain guns were suited to these types of terrains as well as any area that lacked roads. The standard shtats for ski brigades and naval rifle/infantry brigades included 76-mm regimental guns. These could not be broken down into pack loads like the mountain guns and would have found move through roadless and rocky terrain quite difficult. The question is, were regimental guns actually used in these regions? I speculate with little evidence that the brigades simply left their regimental guns behind when operating in such terrain<sup>43</sup>.

42 During the war, many sailors and base personnel of the Soviet Navy were sent to fight in the war as ground troops. Naval personnel who were incorporated directly into the Red Army were formed into “naval rifle brigades”. Naval personnel who remained as part of the Navy but fought in ground units under Red Army command were in “naval infantry brigades”. Despite the minor terminology difference, these naval troops earned a reputation for ferocious fighting, causing the enemy to call them the “black death” due to the black uniforms.

43 Another possibility is that the brigades’ 76-mm regimental guns were replaced with 76-mm mountain guns. This seems a bit less likely, as when the brigades were later reorganized into mountain rifle brigades, a new shtat was issued in January 1945 that specially gave them mountain guns (per [http://www.telenir.net/istorija/artillerija\\_v\\_velikoi\\_otchestvennoi\\_voine/p7.php](http://www.telenir.net/istorija/artillerija_v_velikoi_otchestvennoi_voine/p7.php)).



In some places in the Arctic, the two corps may have even left their 76-mm mountain guns behind in order to increase their mobility: “Bald, rocky hills, interspersed with ravines and swampy depressions, marked the terrain between Luostari and Nikel. The highest elevation, Hill 631, was 1,900 feet [~580 meters] above sea level, and several other hills along the axis of attack were over 1,000 feet. Numerous lakes at various elevations dotted the area... Due to the terrain, all vehicular movement was absolutely road bound. The only forces that could maneuver cross-country were *light units equipped with machine guns and 82-mm mortars* [emphasis added]. Marshy approaches or sheer, rocky banks turned even small streams into difficult obstacles.”<sup>44</sup>

These corps were quite useful when the Soviets drove the Germans out of the Soviet and Finnish Arctic in 1944. Their cross-country mobility made them excellent flanking forces in roadless terrain. In late 1944 once the Germans had withdrawn west into Norway, the two corps were withdrawn in the reserves and reorganized. This took several months and likely involved equipping and training the maneuver brigades for actual mountain operations. All the brigades were designated as mountain rifle brigades, with a new shtat (№ 04/77) being issued for them on 13 January 1945. The shtat authorized each mountain rifle battalion in the brigade to have nine 82-mm mortars, and the brigade also received a pack artillery battalion of twelve 76-mm mountain guns and a pack mortar battalion of twelve 107-mm mortars.

In the north, each corps had a varying number of brigades, from two to four. Now, their organization was fixed at three brigades. This made the late-war light mountain rifle corps similar in organization to the late-war mountain rifle division (three mountain rifle regiments and one mountain artillery regiment).

#### 126th Mountain Rifle Corps

- 31st Mountain Rifle Brigade
- 32nd Mountain Rifle Brigade
- 72nd Mountain Rifle Brigade
- 901st Mountain Artillery Regiment

#### 127th Mountain Rifle Corps

- 3rd Mountain Rifle Brigade
- 69th Mountain Rifle Brigade
- 70th Mountain Rifle Brigade
- 905st Mountain Artillery Regiment

Once ready for operations, both corps were sent to the 4th Ukrainian Front in the Carpathian Mountains, which also contained all Red Army mountain rifle divisions engaged in combat operations. The 4th Ukrainian Front and these mountain troops ended the war in Europe in central Czechoslovakia.

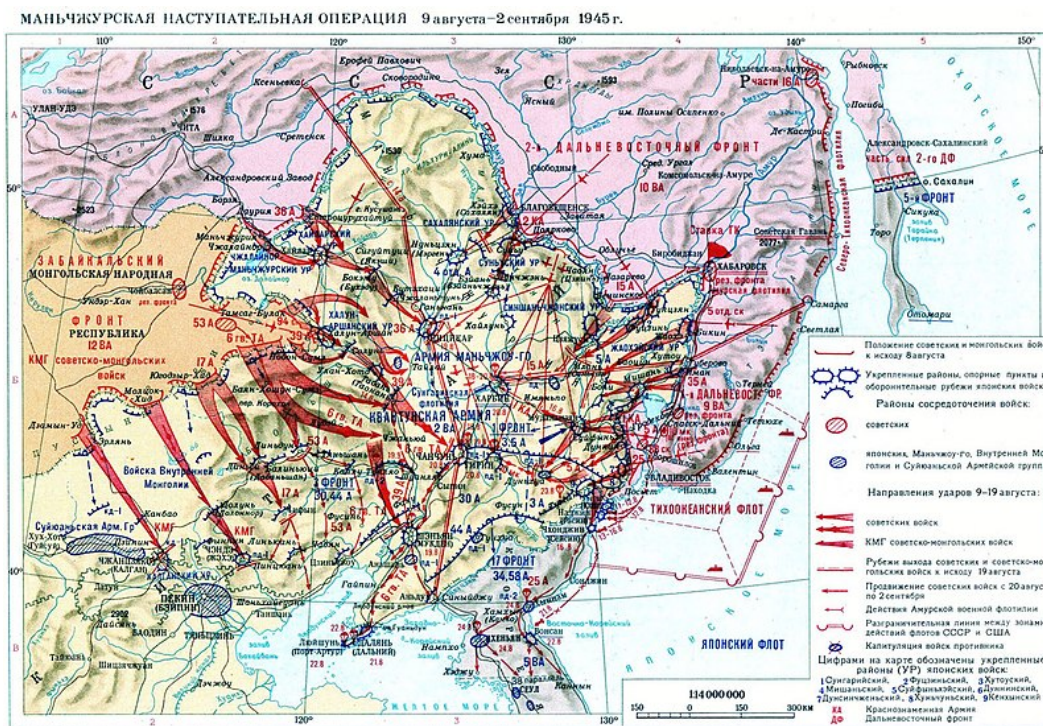
By accident, Czechoslovakia turned out to be the site of the final combat operations of the Soviet mountain divisional units in World War II. In early 1945 at the Yalta Conference with Britain and the USA, the Soviet Union secretly agreed to enter the war against Japan three months after its war with Germany ended. (The USSR and Japan were hostile strategic rivals but had negotiated a non-aggression pact in 1941 that allowed both of them to concentrate on other enemies.) The Soviet Far East, Sakhalin Island (which was split between the Soviets in the north and the Japanese south), Manchuria (Japanese controlled), and Korea

<sup>44</sup> Leavenworth Papers Number 17: James F. Gebhardt; *The Petsamo-Kirkenes Operation: Soviet Breakthrough and Pursuit in the Arctic, October 1944*; 1989.

(Japanese controlled) all had many mountainous areas<sup>45</sup>. The 126th Light Mountain Rifle Corps accordingly was chosen to transfer to the Soviet Far East for the upcoming campaign.

Starting on 8 August 1945, the Red Army invaded the Japanese-controlled territories of Manchuria, south Sakhalin, Korea, and nearby islands. The Soviets quickly overran these areas and by late August most fighting was over, with mopping up operations continuing into September. The 126th Light Mountain Rifle Corps only arrived in the Soviet Far East on 25 August, and there is no evidence that the corps participated in any combat.

With the many mountain regions of Manchuria, Korea, and south Sakhalin, why was the 126th sent so late? Why weren't more mountain troops sent to the Soviet Far East from the west? My sources do not go into these subjects, but it is obvious the Soviets did not consider the mountain troops to be a necessity in the far east. The Red Army plan for the Manchurian campaign was to conduct a rapid-moving mechanized war. The primary forces were tanks, artillery, aircraft, rifle troops, and airborne troops, all of which had to be sent east together with supplies. Almost of these forces and materials had to be sent on the Trans-Siberian Railroad, a journey of over 9,000 km from Moscow. It is likely that the 126th was sent east as soon as rail capacity opened up. Had the campaign become bogged down in the mountains, it seems almost certain that the 126th would have gone into combat, and it is possible more mountain troops might have been sent east.



Although this Soviet-era map does not show it, Soviet forces did attack the Japanese in southern Sakhalin, both from the north of the island and by naval landings along the coast.

<sup>45</sup> Despite these mountains, the pre-WW2 Soviets only had one semi-mountain division in their territory, the Sakhalin Rifle Division, which formed in August 1938. It was officially designated as the 79th Mountain Rifle Division in January 1939, but in April 1940 it was redesignated as the 79th Rifle Division. Details on this division are rather sparse before its operations in 1945, but it seems reasonable to assume the division had little actual mountain training or equipment. The Soviets' half of Sakhalin was less mountainous than the Japanese southern half, but it was also almost entirely covered with dense forests and swamps, and there were few good roads anywhere. Simply being experienced with operating in the Sakhalin terrain must have given the division some mountain-like abilities.

83rd Mountain Rifle Division / 128th Guards Mountain Rifle Division



**Terrain and Ethnolinguistic Groups of Central Asia, Early 20th Century**

■ Steppe (Temperate Grasslands)     **Kazakh: Turkic Group**  
■ Dry Steppe and Semi-Desert     **Tajik: Iranian Group**  
■ Desert     **Russian: Other Group**  
■ Agricultural Land  
■ Foothills  
■ Mountainous

Location of major ethnolinguistic groups is approximated before extensive Russian settlement in the region and before the 1930s demographic disaster in Kazakhstan.

Extent of steppe, dry steppe, and desert vary over time due to weather, climate, and water diversion. Extent of agricultural land varies over time based on climate and irrigation systems. Caspian and Aral Seas shorelines are approximately those of the 1930s.

The Soviet 83rd Mountain Rifle Division traces its history back almost to the creation of the Red Army in 1918: the Turkestan Rifle Brigade<sup>46</sup>. The brigade later became part of a Soviet mountain rifle division which through a series of redesignations ended up as the 83rd Mountain Rifle Division. When Germany invaded the USSR in June 1941, the divisional HQ was stationed at Krasnovodsk, Turkmenistan SSR (now Turkmenbashi, Turkmenistan), a port city on the eastern coast of the Caspian Sea. In August, the 83rd participated in the invasion and occupation of Iran by the USSR and Britain, invading Iran from the Ashkhabad region of the Soviet Union.

<sup>46</sup> Turkestan or “Russian Turkestan” was the Russian/early Soviet name for the southern half of Russian/Soviet Central Asia (approximately, the region south of what is now Kazakhstan). The Soviets in the 1920s and 1930s would reorganize Kazakhstan and Turkestan into five separate Soviet socialist republics, which are now the countries of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

The 83rd remained in northern Iran as part of the Soviet occupation forces into 1942. By the autumn of 1942, the 83rd was the only Soviet mountain rifle division not engaged in fighting the Axis. In early October, as German forces in the Caucasus continued their attempts to force a passage through the mountains, the division was ordered to prepare to transfer to the Caucasus. It moved back to Soviet Central Asia and from 16 October through 3 November was ferried across the Caspian Sea and took up defensive positions in the mountains. Once the German drive in the Caucasus petered out, the 83rd went over to offensive operations. Throughout 1943, the division was frequently used to assault the Germans in mountainous areas in the North Caucasus, helping to clear the enemy from the region and force them back across the Kerch Straits into the Crimea. On 9 October 1943 as rewarded for its offensive performance, the 83rd Mountain Rifle Division was promoted to become the 128th Guards Mountain Rifle Division.



Guards symbol

Guards status brought several privileges, including honor and higher pay. Just possibly, they might have received more weapons. Once Soviet industry had recovered from disruption caused by the German invasion, Guards rifle divisions were allocated more weapons such as mortars and artillery pieces than their regular rifle division counterparts. I do not know if this occurred with the 128th Guards Mountain Rifle Division. As the only Guards mountain division, it might have been more convenient to keep it equipped the same as the regular mountain divisions.

The 128th Guards participated in the liberation of the Crimea in 1944 and later that year advanced into the Carpathian Mountains with the 4th Ukrainian Front. In August, it reorganized from four mountain rifle regiments to three, and its engineer battalion was downgraded to a company (going over to the 1944 mountain rifle division shtat apparently a month before that shtat became official). The division remained in the 4th Ukrainian Front for the rest of the war, ending up in central Czechoslovakia in May 1945.

## Appendix: Authorized Weapons of the Mountain Rifle Divisions

The following table list the authorized weapon totals for full-strength mountain rifle divisions. Dates in the table are:

- 1936: The 1936 organization, no shtat number available.
  - 1940: The 1940 organization: Shtat № 04/140, 15 Aug. 1940. See Note B for the difference between the “early” and “later” versions.
  - 1942: The 1942 organization: Shtat № 04/830, 3 January 1942 or March 1942.
  - 1943: According to one source, division strength was raised without changing the shtat number. Weapon authorization levels are not known but are likely to be similar if not identical to the 1942 organization.
  - 1944: The 1944 organization: Shtat № 04/650, Sept. 1944. Weapon authorization levels are not known but are likely to be similar if not identical to the 1945 organization.
  - 1945: The 1945 organization: Shtat № 04/850; 18 Feb. 1945.
- (A), (B), etc., refer to notes following the table.

<i>Totals</i>	<i>1936</i>	<i>1940, early</i>	<i>1940, later</i>	<i>1942</i>	<i>1943</i>	<i>1944</i>	<i>1945</i>
Personnel	12,506	14,076	14,076	(A) 9,915	(A) 10,066	8,127	8,196
Light MGs	286	350	350	283			165
Heavy MGs	102	110	110	88			72
50-mm mortars	0	60	60	60			36
82-mm mortars	12	(B) 60	(B) 48	48			36
107-mm mortars	0	(B) 0	(B) 12	18			36
76-mm mtn guns (C)	36	32	32	32			24
122-mm howitzers	12	24	24	8			0
14.5-mm antitank rifles	(D) 0/48	0	0	36			(E) 80
45-mm antitank guns	0	8	8	8			8
quad 7.62-mm AAMGs	0	16	16	0			0
12.7-mm AAMGs	0	12	12	27			6
37-mm AA guns	0	(F) 8	(F) 8	(F) 8			6
T-26 light tanks	10	0	0	0			0
Armored cars	0	5	5	5?			?
40.5-mm Dyakonov grenade launchers	(G) ?	(G) ?	(G) ?	(G) ?		(G) ?	(G) ?

Note A: According to one source, total personnel was raised to 10,066 in 1943.

Note B: The 1940 shtat authorized 12x 107-mm mortars, but some sources state the units only received them in early 1941, as that was when 107-mm mortar ammunition went into mass production. One source claims the divisions in the meantime used 12x 82-mm mortars in their place. Assuming all this is correct, the “1940, early” column shows the 82s in place of 107s, and “1940, later” column shows the 107s.

Note C: 76-mm mountain guns were present in both the division’s artillery regiment and in each of its mountain rifle regiments.

Note D: The 1936 division may have been authorized 48 14.5-mm antitank rifles, but it could not have had any. Antitank rifles were still in development and did not become available until 1941.

Note E: Each of the three mountain rifle regiments had an antitank company with 12 14.5-mm antitank rifles. This totals 36. The other 44 antitank rifles must have equipped various other troops throughout the division.

Note F: 37-mm AA guns were in very short supply in 1941–1942, and it is likely that many mountain rifle divisions lacked most or all of these guns, leaving them with just AAMGs.

Note G: None of the shtats go into details on the grenade launchers, but indirect evidence indicates the divisions had some at least into 1942. Conventional rifle divisions did have grenade launchers into 1942 and then retired them as production of the much more useful 50-mm mortar dramatically increased that year. The Dyakonov was brought back into service in 1944 when the VKG-40 HEAT shell became available.

### Other Arms

The table does not list the numbers and types of firearm weapons smaller than light machineguns, partly because I do not have complete numbers for them for all the shtats. These arms used by the mountain rifle divisions are summarized here. The troops had bolt-action rifles, carbines, and sniper rifles. They had some semi-automatic rifles and likely a few semi-automatic sniper rifles. For automatic weapons, they had many submachineguns and possibly some assault rifles<sup>47</sup>. Officers had pistols or revolvers, which are not covered further.



Left: 7.62-mm Rifle M1891/30, regular version

Center: 7.62-mm Rifle M1891/30, sniper version

Right: 7.62-mm Carbine M1938

The Soviet rifles derived from the Russian Empire's 7.62-mm Rifle M1891, which was extensively used in World War I (along with specialty models derived from the M1891: carbines, dragoon rifles, and Cossack rifles, all of which were shorter and light than the M1891). The Russians often informally called the M1891 the "Mosin", after the designer of the rifle. The Russian Empire chose Mosin's rifle in a competition but also required some features of a competing Nagant design to be incorporated into the production version of the Mosin. This led to the rifle often being called the "Mosin-Nagant" elsewhere. During the Soviet period, the Soviets also informally called their 7.62-mm Rifle M1891/30 the Mosin, and other countries the Mosin-Nagant.

The mountain rifle divisions had some semi-automatic rifles and perhaps a few semi-automatic sniper rifles. The late 1930s Red Army had been planning to replace bolt-action rifles with semi-automatic rifles in almost all of their forces, but early Soviet semi-automatic designs were flawed. An acceptable semi-automatic, the SVT-40, only entered production in July 1940. Initial plans were to replace a third of the bolt-action rifles with SVT-40s, but by June 1941 when the war started most units had far fewer SVT-40s than this. Nevertheless, there were about one million SVT-40s with the troops, which came as an unwelcome surprise to the Germans. The vast

<sup>47</sup> Each bullet had to be manually loaded in a **bolt-action rifle** and fired with a pull of the trigger. A **semi-automatic rifle** came with a clip of bullets, with the next bullet automatically loading when the current bullet was fired. However, the trigger had to be pulled to fire each bullet. With a **fully-automatic rifle** (aka an assault rifle), holding down the trigger automatically loaded and fired the bullets until the trigger was released, like with a machinegun or submachinegun.

majority of the German infantry used bolt-action rifles, and they were outgunned when they encountered a Soviet unit with many SVT-40s. Despite its abilities, the SVT-40, like the T-34 tank, Il-2 shturmovik, and BM-13 rocket launcher, could not compensate for the Soviets' strategic mistakes and operational inexperience. Hundreds of thousands of SVT-40s were lost in 1941<sup>48</sup>.



Soviet soldiers with SVT-40 semi-automatic rifles

Despite the good performance of the SVT-40, once the war began in 1941 the Soviets soon greatly scaled back its production. The bolt-action M1891/30 was cheaper, easier, and quicker to make, and the Red Army now needed huge numbers of rifles to replace their losses. Also, the SVT-40 was harder to master than the Mosin, at a time when millions of newly-mobilized soldiers were being formed into new units and sent to the front with minimal training. The Soviets greatly scaled back SVT-40 production in order to concentrate on making cheaper bolt-action Mosins. Having fewer SVT-40s was not a great significant loss of firepower, however, as the Soviets instead would use great numbers of submachineguns.



Left: Victorious Soviet soldiers with a PPD-40 at Stalingrad

Right: Soviet soldier with a PPSH-41

The Soviets had submachineguns (SMGs) from the 1930s, but early models (the PPD-34 and PPD-34/38) were flawed and made in rather small quantities. They were somewhat difficult and expensive to make, and the Red Army at the time mostly regarded SMGs with their short ranges as police/security weapons rather than as military arms. They also believed the automatic-fire SMGs would waste huge amounts of ammunition, which would cause problems for the supply services and distort ammunition production. Many SMGs that were made went to NKVD border guards and security troops.

<sup>48</sup> Many were captured and reused by the Germans. The German Army did have a semi-automatic rifle, the Gewehr 41, but it was unreliable and only available in quite small numbers. German troops preferred to use SVT-40s as long as ammunition for it was available.

The Red Army changed its mind about SMGs during the Winter War of 1939–1940, when reports of SMG-equipped Finnish troops decimating Soviet rifle forces reached the high command. (The Finns actually had very few SMGs, but they made a big impression on Soviet soldiers who encountered them.) The Red Army authorized the use of SMGs for many Red Army formations, rushed SMGs stored in warehouses to the Finnish front, and ordered SMG factories onto three-shift schedules to make SMGs around the clock. They also started projects for better SMGs, resulting in the PPD-40 and PPSH-41. The PPD-40 was a good improvement over the PPD-34/38 and went into production. However, it was still expensive and somewhat difficult to make, as it used forged parts and its assembly required skilled labor. The PPD-40 would later be taken out of production in favor of the cheaper PPSH-41. This SMG used metal-stamped parts that were much easier to make and assemble. The PPSH-41 became the iconic Soviet combat SMG, and five million being made during the war. Tens of thousands of SMGs were with the rifle and mountain rifle troops at the start of the war. From 1942, these forces received substantial numbers of PPSH-41s. (A new SMG, the PPS-43, appeared later in the war but was a small self-defense SMG for recon units, vehicle crews, and rear-area troops.)



The pre-war Soviets developed assault rifles, which were capable of fully-automatic fire as well as semi-automatic. This resulted in the AVS-36, which went into production. The rifle, however, was problematic and withdrawn from production in 1940 with perhaps just 66,000 being made. The AVS-36 was used in the early years of the war but made little impact due to its problems and small numbers. In 1942, the Soviets started production of a new assault rifle, the AVT-40, a fully-automatic modification of the semi-automatic SVT-40. However, the AVT-40 proved to be too flawed for effective use as an automatic-fire weapon: parts broke, the barrel quickly wore out, and it was hard to control while firing. Troops were forbidden to use it in automatic mode and production ended in 1943 with only a few made. (The Soviets would finally succeed in making a successful assault rifle after the war, the AK-47.)





F: facing Finnish forces  
I: in Iran (8-9.41 active operations, then occupation duties)  
R: In the rear area, training  
S: Soviet Far East  
T: Transcaucasus  
U: Ukraine

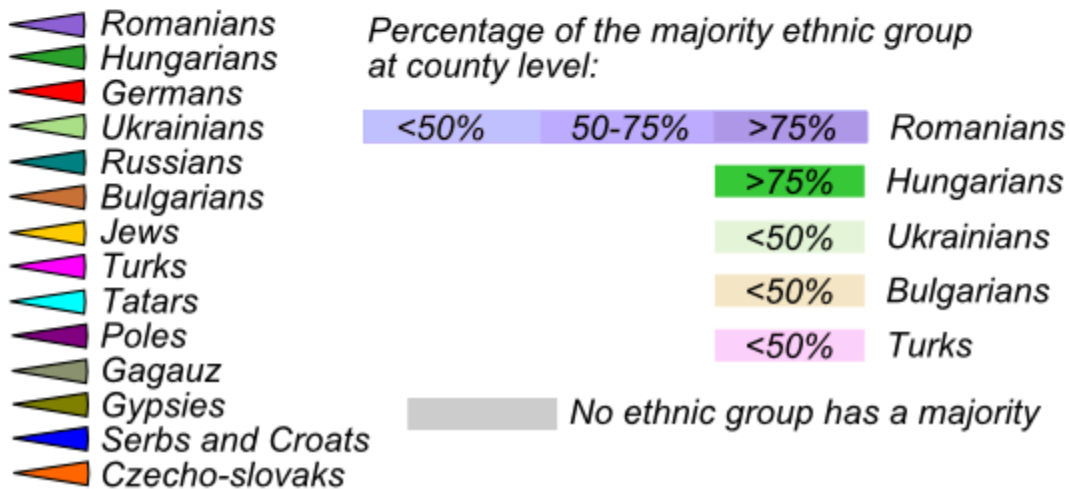
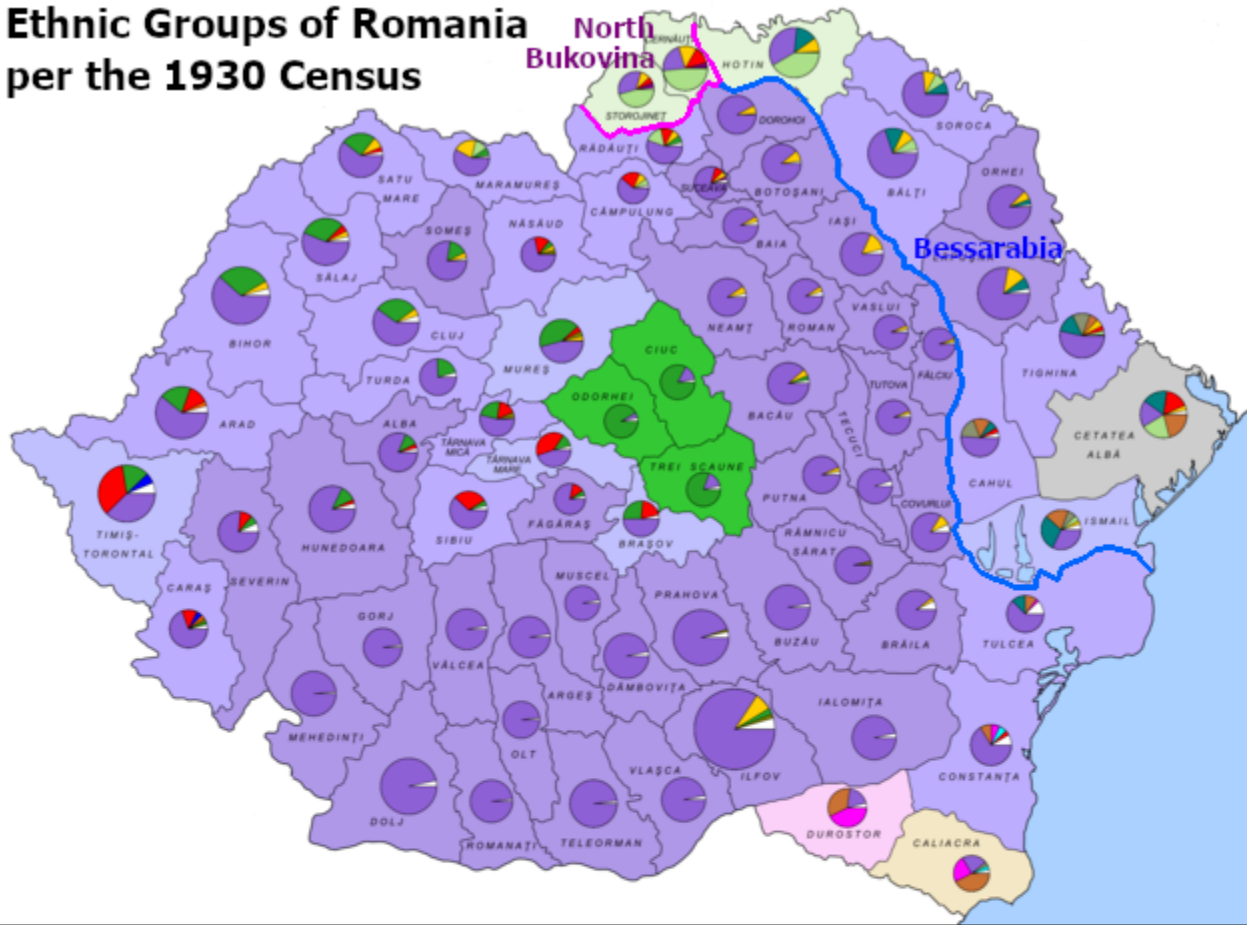
**Notes:**

- 1) The 20 total mountain rifle divisions in August 1941 is an artifact of the table summarizing the month as a whole. The 242nd MtnRD started forming near the end of the month, so its presence somewhat inflates the month's total. According to how the Soviets countered things, the peak number of mountain rifle divisions was 19, not. Even this number, however, implicitly overstates the strength of the mountain rifle divisions. The 302nd MtnRD had just started forming in July 1941 (from mobilized reservists) and would not be ready for action until late 1941. Many of the mountain rifle divisions in the combat zone were badly under strength due to heavy losses.
- 2) In 1941–1942, when the table states a MtnRD “became” a RD, what this means is that the MtnRD had taken many losses (usually very heavy losses) and had long lost its ability to function as a mountain rifle division. The Soviets would redesignate the division as a RD and would no longer send mountain weapons and equipment to it as replacement gear. (Likely, it also over time gave up whatever mountain gear it did have on hand, so that the remaining mountain forces could use it. My sources, however, do not go into this point.)
- 3) In 1943–1944, when the table states a MtnRD “became” a RD, what this means is that the Soviets were not producing enough mountain troop replacements and/or mountain weapons and equipment to continue maintaining all their remaining mountain troops. The 9th and 20th MtnRDs were thus converted to regular RDs, almost certainly giving up their mountain gear to help maintain the remaining mountain troops.
- 4) At the end of the war in May 1945, there were four mountain rifle divisions plus two division-sized mountain rifle corps each of three mountain rifle brigades and one mountain artillery regiment, for a total of six “divisional” units. Some sources ignore these division-sized corps and state the Soviets ended the war with just four mountain rifle divisions. This is technically correct but understates the actual divisional strength of the mountain forces. (There was also another type of mountain rifle corps: the 3rd Mountain Rifle Corps was a traditional command-style headquarters that coordinated the operations of several mountain rifle divisions.)



Appendix: Why the 192nd Rifle Division?

Ethnic Groups of Romania per the 1930 Census



From Wikipedia<sup>49</sup>

Why did the Soviets choose to convert the 192nd Rifle Division, being formed in the Kharkov MD, into a mountain rifle division? Since the Kharkov MD lacked mountains, almost all of the division's conscripts would

49 Image had minor format changes from the original; source and license at [https://commons.wikimedia.org/wiki/File:Romania\\_1930\\_ethnic\\_map.svg](https://commons.wikimedia.org/wiki/File:Romania_1930_ethnic_map.svg).

have had no civilian mountains experience, and the MD itself was not suited for mountain training. There were plenty of existing mountain rifle divisions in the Caucasus region, and more in Central Asia.



Map of the Red Army invasion plan, had Romania resisted<sup>50</sup>

I speculate that the reasons possibly concerned language and concerns about unit reliability. Since parts of North Bukovina were mountainous, the Soviets wanted a mountain division in the invasion forces. They probably also wanted the division's soldiers all to be fluent in Russian or Ukrainian. Many inhabitants of Bessarabia and North Bukovina spoke Ukrainian, Russian, Rusyn, or some other east Slavic language or dialect. Most of the rest of the local population spoke Romanian<sup>51</sup>, but Bessarabia itself had been a province of the Russian state until 1918, so even some Romanian speakers would have some Russian familiarity.

The Caucasus and Central Asian mountain divisions had many non-Slavic minorities in them. The ones in the Transcaucasus had many Armenians, Azerbaijani, Georgians and various other ethnic groups of the Transcaucasus. The North Caucasus division had many ethnic minorities of the North Caucasus. The Central Asian divisions had many Uzbeks, Turkmens, Tajiks, Kyrgyz, and Kazakhs. Many of these minority soldiers spoke little, often no, Russian. The Soviets might have been concerned that sending one of these divisions into Bessarabia or North Bukovina might have caused unnecessary problems with the local population.

50 From Mikhail Meltyukhov; *Upushchenny shans Stalina. Sovetskiy Soyuz i borba za Yevropu: 1939-1941* [Stalin's Missed Chance: The Soviet Union and the Struggle for Europe: 1939-1941] (in Russian); 2009. Available at <http://militera.lib.ru/research/meltyukhov/s04.gif>.

51 Many of these people spoke Moldovan (aka Moldavian), a dialect of Romanian. I note there is a long-standing politically-motivated controversy over whether Moldovan is its own language closely related to Romanian or is a dialect of Romanian.

It might seem strange that the Soviets were concerned over relations with the population of occupied territories, given their brutal treatment of hundreds of thousands of “class enemies” in occupied eastern Poland, Lithuania, Latvia, and Estonia in 1940. However, the Soviets in 1939 had not yet resorted to heavy repressive measures in occupied areas. The Red Army had been ordered to treat the civilian population relatively well during the invasion of eastern Poland, and the occupation there at first continued this policy. The 1939 Soviets likely planned to pursue similar policies for their sphere of influence in eastern Romania.

A Slavic-speaking mountain division would avoid this potential problem. The great majority of the inhabitants of the Kharkov MD spoke Russian, Ukrainian, or both. This thus might be the reason why the 192nd Rifle Division was selected to convert to a mountain division.

Yet another consideration is that, as of 1939, the mountain divisions of the Caucasus and Central Asia had never been deployed outside their home regions. Almost all of these divisions earlier had been part of the “national military units” (*natsionalnye voinskie chasty*) forces of the individual soviet socialist republics, rather than directly part of the Russian-dominated Red Army. “National” in Soviet usage meant ethnic, not country-wide, and the national units in part were a way to get inhabitants of restive regions used to a form of Soviet military service. Many ethnic minorities in the Caucasus and Central Asia had resisted the imposition of Soviet rule in 1920s, and the Chechens in the Caucasus had revolted in 1934 and some would do so again in 1940.

The national units were numbered separately from the Red Army and had “national” designations, like the 1st Georgian Mountain Division (later the 47th Mountain Rifle Division) and the 1st Turkestan Mountain Division (later the 83rd Mountain Rifle Division). (The divisions actually were indirectly under Red Army control, all had command staffs dominated by people loyal to the Soviet regime, and all had some Russian soldiers presumed to be loyal to the USSR.) Once the Soviets felt more confident of their control over these regions, the national units in 1936–1938 were incorporated directly into the Red Army, received Red Army numbers, and lost their ethnic designations. The 1939 Soviets possibly might have been concerned that deploying them outside their home regions could possibly have lead to mutinies or mass desertions among the ethnic minority soldiers. This may have even been the case in 1941, after the German invasion of the USSR: All of the former national mountain divisions were kept in their home regions until August 1941, despite the huge need for trained units to go fight the Germans<sup>52</sup>.

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52 The 28th Mountain Rifle Division in the North Caucasus was ordered to go fight the enemy in June 1941. However, the 28th was the only mountain division in the Caucasus that had not been part of the national military units. It did contain some ethnic minorities of the North Caucasus, but it also had many Russians.

**Appendix: The Mountain Cavalry Divisions**

All major combatants in the Europe-North Africa-Western Asia theaters of operations during World War II had cavalry divisions<sup>53</sup>. The Soviets not only had cavalry divisions, but they were the only power in these theaters to have mountain cavalry divisions. Horses could handle all sorts of difficult terrain including mountainous regions, dry steppelands, forests, and swamps. The Soviets thought that mountain cavalry divisions would be especially well suited in Soviet Central Asia with its many types of terrain (see above for a [map](#)) and very poor road network outside the cities and agricultural areas.

Five mountain cavalry divisions were formed in 1936 from smaller cavalry forces: one in the Transcaucasus and the rest in Central Asia. The mountain cavalry divisions were organized and equipped to extensively rely on horses and had minimal dependence on motorized vehicles. Some sources claim they did not have any motorized vehicles at all. Perhaps that was correct in the mid-1930s, but by 1940 they did have some trucks, tractors, cars, and even a few AFVs. Nevertheless, almost all combat elements of the division were horse mobile: the combat soldiers were mounted on horses, the artillery (except perhaps for specialty guns) was towed by horses, and some of the artillery could be broken down into loads for transport by pack animals. The trucks and tractors in the division were mostly there to help with hauling supplies and likely to tow the specialized antitank and AA guns (just like with the mountain rifle divisions).

At some point, each division was authorized an armored squadron of light tanks, later increased to a tank battalion. The battalion typical had 11–20 light tanks (at one point, 20 T-26s in the 17th and 11 BT-5s in each of the others) plus 16 or 17 “armored vehicles”, which possibly meant armored cars. The purpose of these AFVs was to provide direct fire support to the mountain cavalry, in areas where AFVs could operate. Most if not all of the mountain cavalry divisions actually did had their tanks in 1940–1941.

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53 Even the two most motorized armies in the war had at least one cavalry division. The British started the war with the 1st Cavalry Division on occupation duties in the British Mandate of Palestine. (It later converted to become the 10 Armoured Division.) The Americans sent their 2nd Cavalry Division from the USA to the Mediterranean region. However, the division was sent without its horses and was gradually broken up into construction and garrison units.

The divisions were relatively small, with about 6,500 personnel and 6,800 horses, smaller than a regular cavalry division (about 9,000 personnel) and much smaller than a 1940 mountain rifle division (about 14,100 personnel). In peacetime, they were kept at about 3,600–4,200 personnel, with many soldiers and horses only joining the division upon mobilization.



Soviet cavalry practicing a saber charge, implied to be in Central Asia (Tajikistan)

The basic organization of a mountain cavalry division at the start of the war was:

#### Mtn Cav Div HQ

3x Mtn Cav Rgt (each 4x 50-mm mortars, 4x 76-mm mtn guns, 4x 45-mm antitank guns,  
3x 12.7-mm AAMGs)

1x Tank Btl (varying number of T-26 or BT-5 light tanks and other armored vehicles, likely armored cars)

1x Horse Art Btl (8x 76-mm mountain guns, 8x 107-mm mountain mortars)

1x AA Btl (8x 37-mm AA guns, 24x 12.7-mm AAMGs)

1x Eng Sqdn

The horse artillery battalion had a mix of 76-mm mountain guns and 107-mm mountain mortars. These mortars were a recent addition to the division, perhaps arriving in early 1941 once production of 107-mm mortars and 107-mm ammunition scaled up. Earlier, it seems that the battalion had 4x 122-mm howitzers, which were removed when the mortars became available<sup>54</sup>. The howitzers were not capable of breaking down for pack transport, a drawback for a mountain units, whereas the mortars could be broken down. The 76-mm mountain guns must have been M1909 models at first, and they very likely were replaced by the more-capable M1938 models later.

It is very likely that the AA battalion actually lacked most if not all of its 37-mm guns, just like with the mountain rifle divisions<sup>55</sup>. It seems possible that some of the 12.7-mm AAMGs also were not present, as 24 AAMGs in the battalion (and another three in each of the mountain cavalry regiments) was quite a lot of AAMGs for divisions stationed in remote areas where the threat of enemy air attack was low<sup>56</sup>.

The mountain cavalry regiments were well equipped to operate on their own, since they had their own artillery, antitank guns, and 50-mm mortars. Some sources specifically claim their 76-mm guns were 76-mm regimental

<sup>54</sup> One source claims all four divisions still existing in 1941 each had four 122-mm howitzers that July but no 107-mm mortars. This might be possible but does not agree with other sources. I suspect the information is actually for 1940, not 1941.

<sup>55</sup> One possibly unreliable source claims the 17th division had six 37s and the others none. It also claims the 17th had no 45-mm antitank guns while the other divisions had six each. Six 37s/45s instead of eight, if correct, strongly suggests this was the peacetime complement, not full mobilization. (It would make some sense that a unit with 37-mm AA guns might not have 45-mm antitank guns, as the 37s had some armor-piercing ammunition.)

<sup>56</sup> The possibly-unreliable source claims the 17th division had just six AAMGs and the others none.



guns (M1927 model), while others claim they were 76-mm mountain guns (M1909 model). The M1927s could not break down for pack transport, which would be a serious limitation in mountains, so I suspect they had M1909s. It seems likely that the M1909s were later replaced by M1938s.

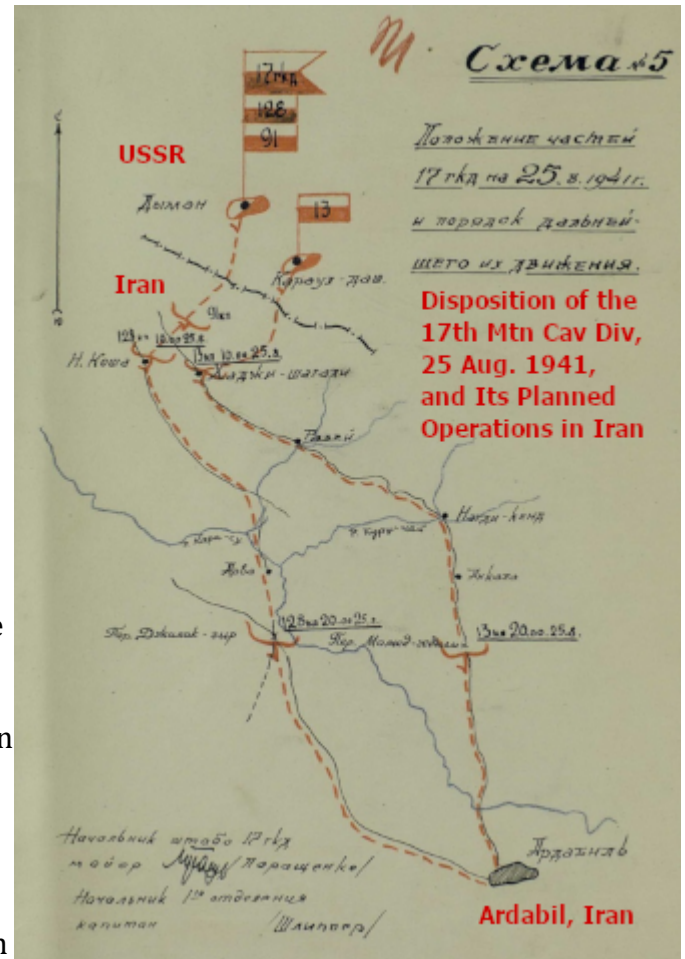
Mountain cavalry troopers operating in the steepest terrain would not have been able to use horses and would have to proceed on foot. Combat operations on foot, however, was the standard throughout the Soviet cavalry: troopers mostly used horses for transport and mainly operated as foot soldiers when in actual combat. A rider on a horse was a quite conspicuous target and very vulnerable to machinegun fire. However, cavalry troopers were also issued sabers (*shashki*) and were trained to make cavalry charges. Charging enemy troops armed with machineguns was suicidal and rarely occurred, but if the cavalry got loose behind enemy lines, charges sometimes wreaked havoc among poorly-armed service and supply troops.

The Soviets still had five mountain cavalry divisions in September 1939 when World War II began. None were used for any of the invasions and occupations the Soviets conducted in eastern Europe and Finland in 1939–1940. In March 1941, the Soviets decided to convert the 19th Mountain Cavalry Division in Central Asia into the 221st Mechanized Division. This left just four mountain cavalry divisions still in existence when Germany invaded in 1941. Only one of these (the 17th) ever actually conducted combat operations in mountainous terrain, but just briefly and against light opposition. The USSR and Britain launched separate but simultaneous invasions of Iran in August 1941, with Soviet forces occupying northern Iran. The 17th Mountain Cavalry Division concentrated on the Soviet-Iranian border and then crossed into Iran on 25 August, traveling on mountain roads. There was no resistance to its advance at first, and Ardabil was taken without a fight on the 26th. Over the next few days, the division spread out to take nearby mountain passes and to occupy more parts of northwestern Iran. This time there was some light opposition and even a short battle against Iranian forces. On 3 September 1941, the campaign was complete, with the division having taking 7 casualties: one killed and six wounded.

All four mountain cavalry divisions would end up in the main combat zone fighting fight the Germans, with mixed results.

All were in operations there by the late autumn of 1941. (By this time, heavy Soviet tanks losses meant that the cavalry and mountain cavalry divisions were some of the largest mobile forces still remaining in the Red Army.) Mountain cavalry divisions together with ski troops often spearheaded Red Army operations during the Soviet winter offensives of 1941/42. Their good mobility often let them slip around the flanks of German infantry forces, but they sometimes became caught behind enemy lines as the German defenses firmed up. One division (again, the 17th) took so heavy losses that the Soviets later broke it up, and another (the 18th) was destroyed when the Germans cleared the pocket it was caught in near Vyazma.

The other two divisions (the 20th and 21st) not only survived the winter offensive but gave good service. On 26th January 1942, the 20th and 21st Mountain Cavalry Division were redesignated the 20th and 21st Cavalry Divisions. What this probably meant is that both divisions had taken sufficiently heavy losses that they likely had



lost most of their mountain equipment and mountain abilities. They were switched over to the regular cavalry division organization, which by now was a much-smaller organization at about 3,500 personnel (compared to its pre-war size of 9,000 personnel). This cavalry “division” was effectively the strength of a cavalry brigade. It would later rise to about 5,200 personnel in 1943.

The Soviets really did not need to maintain these divisions as mountain-capable, since they were not operating in or anywhere near mountains. The 20th and 21st Cavalry Divisions would go on to give excellent service, which the Soviets rewarded in 1943 by promoting them to become the 17th and 13th Guards Cavalry Divisions.

The Soviets formed a new mountain cavalry division during the war, the 39th Mountain Cavalry Division. It began forming in Central Asia in July and joined the active army in September, as part of the garrison of Central Asia. In January 1942, it was sent to join the occupation forces in Iran. In February 1944, it was converted to a regular cavalry division (still numbered the 39th) and continued to stay in Iran throughout the war.

Two other divisions formed during the war were sometimes called mountain cavalry division, but neither actually was such. The 1st Mountain Cavalry Division was created on 19 January 1942 from the Stalingrad Don Cossack Militia Cavalry Division<sup>57</sup>. It really wasn’t mountain capable and a few days later on 26 January 1942 was redesignated the 15th Cavalry Division. The 44th Cavalry Division was formed in July 1941 in Central Asia, where most of the pre-war mountain cavalry divisions had come from. Some Soviet accounts refer to the 44th as a mountain cavalry division, but it was actually equipped and organized as a regular cavalry division.

**Summary of Mountain Cavalry Divisions**

The table summarizes the Soviet mountain cavalry divisional force on selected months from Sept. 1939 through Sept. 1945. Months that are excluded have no changes from the last listed month. For example, October through December 1939 have the same information as September 1939.

	War with Germany										War with Japan																					
	39	40	1941			1942					1943			1944		1945		Japan														
	9	1	1	3	4	5	6	7	8	9	10	11	12	1	2	6	7	8	1	2	3	1	2	1	5	6	7	8	9			
17 MtnCD	T	T	T	T	T	T	T	T	I	I	T	E	E	E	E	E	E	disbanded														
18 MtnCD	C	C	C	C	C	C	C	C	C	C	C	E	E	E	E	E	destroyed (officially disbanded in July)															
19 MtnCD	C	C	C	C	converted to 221 MechD																											
20 MtnCD	C	C	C	C	C	C	C	C	C	C	C	E	E	E	redesigned 20 CD; 9.43 became 17 GCD																	
21 MtnCD	C	C	C	C	C	C	C	E	E	E	E	E	E	E	redesigned 21 CD; 2.43 became 13 GCD																	
39 MtnCD	new formation					C	C	C	C	C	C	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	became 39 CD	

CD: Cavalry Division; GCD: Guards Cavalry Division; MechD: Mechanized Division; MtnCD: Mountain Cavalry Division

**Assignments:** C: Soviet Central Asia; E: on the main “Eastern Front” (facing Axis forces); I: in Iran; T: Transcaucasus

<sup>57</sup> Militia units were formed outside the Red Army structure in 1941 from volunteers. Starting later in 1941, many militia units were transferred to the Red Army and given Red Army designations.





Organization of Soviet Mountain Rifle Divisions, 1936–1945

Final Page



Red Army mountain troops of a mountain rifle detachment in the Caucasus Mountains, autumn 1942



Red Army mountain troops in the Caucasus Mountains, December 1942