

Tactical Structure in World War II

Finland

Leland Ness

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GENERAL	2
The Coming of War – September 1939	4
The Winter War	5
The Continuation War	9
INFANTRY	13
The Infantry Battalion of the 1930s	13
The Infantry Regiment Base	15
Division Artillery	17
The Light Infantry	19
The 1941 Reorganization	20
The New Infantry Battalion & Regiment	21
Fire Support for the Division	22
Revising the Infantry 1942	26
Reservist Infantry Brigades	29
Light Infantry Brigade	30
Fortress & Border Infantry	32
CAVALRY	34
ARMOR UNITS	37
Armor in 1940	38
The Armored Division	39
ARTILLERY	44
Heavy Artillery	44
Anti-Aircraft	47

GENERAL

With the White forces successful under Marshal Mannerheim, the Finns began the laborious task of creating a permanent peacetime army in the early 1920s. In common with other European armies a regional format was adopted in which each of nine military districts (roughly corresponding to the provinces) provided an infantry force variously designated a regiment or a brigade at different times, which were, in turn, subordinated to three higher HQs. In addition, of course, other units such as artillery and cavalry were raised and apportioned among the districts.

Finland faced only one threat, the Soviet Union. The Soviets had never accepted Finnish independence and claimed, at a minimum, that some Finnish lands belonged to them, in particular the isthmus between the Gulf of Finland and Lake Ladoga and some of the offshore islands in the Gulf.

Due to Soviet hostility the Finns divided their army into two groups, the field army, representing the six districts in the interior, and the covering force, comprising two provinces on the Soviet-Finnish border. Thus, the basic organization of the army in 1924 was as follows:

- Covering Force
 - 2nd Division
 - 5th Brigade (3 battalions)
 - 6th Brigade (3 battalions)
 - 1st, 2nd & 3rd Bicycle Battalions
 - Cavalry Brigade
- Field Army
 - 1st Division
 - 1st Brigade (3 battalions)
 - 2nd Brigade (3 battalions)
 - 3rd Brigade (3 battalions)
 - 4th Brigade (3 battalions)
 - 3rd Division
 - 7th Brigade (3 battalions)
 - 8th Brigade (3 battalions)
 - 9th Brigade (3 battalions)
- Heavy Artillery Regiment

Through the late 1920s, numerous changes were made to this organization. The use of what were essentially reserve formations on the frontier was not effective. A full-time force was required and under the 1930 reorganization a major realignment of forces was undertaken. The whole force as previously constituted was moved into the field army and a new border command HQ was formed. This covering force would now consist of battalions and HQ elements detached from their base districts for active service on the frontier.

Their role was to slow down an advancing enemy until the field army had time to mobilize.

At the same time the district infantry forces were given honorific names in place of the brigade numbers with the resulting force structure in 1930:

Border Command HQ

1st Division

Finnish White Guards (*Suomen Valkoinen Kaarti*)
Nyland-Vasa Regiment(*Nylands och Vasa Regemente*)
Tampere Regiment (*Tampereen Rykmentti*)
Field Artillery Regiment 1
Heavy Artillery Regiment

2nd Division

Karelian Guards (*Karjalan Kaartin Rykmentti*)
Pori Regiment (*Porin Rykmentti*)
Bicycle Battalion 1
Bicycle Battalion 2
Koivisto Battalion (*Koiviston pataljoona*)
Field Artillery Regiment 2
Pioneer Company 1

3rd Division

Savo Jäger Regiment (*Savon Jääkäriykmentti*)
Central Finnish Regiment (*Keski-Suomen Rykmentti*)
Viipuri Regiment (*Viipurin Rykmentti*)
Field Artillery Regiment 3
Pioneer Company 2

Light Brigade

Uusimaa Dragoons (*Uudenmaan Rakuunarykmentti*)
Häme Cavalry (*Hämeen Ratsujääkäriykmentti*)
Bicycle Battalion 3
Light Brigade Armored Car Detachment
Light Brigade Battery

Pioneer Battalion

Anti-Aircraft Regiment

The strength of a peacetime infantry regiment was set at 1,025, of which 837 were conscripts doing their initial tour of duty before being released into the reserves. On mobilization each of the district forces (infantry regiments) was to be expanded to a division through the recall of reservists, with proportional contributions from the artillery regiments and other units. This yielded a wartime field force structure of nine divisions.

The border command had a total strength of 21,825 of which 17,514 were conscripts. Each of the nine military districts was responsible for maintaining one infantry battalion and one artillery battery in the Karelian border command area (between the Gulf of Finland and Lake Ladoga) at full strength. Thus, the conscripts of a particular district would pass through that district's regiment for training and then be sent to the associated infantry

battalion or artillery battery in the border area to finish out their tour. This arrangement resulted in the assignment of nine battalions of infantry and three battalions (nine batteries) of artillery to the Karelian border area, where they were grouped into brigades.

The mobilization force structure was thus as follows:

Karelian Sector

Three infantry brigades, each of three infantry battalions (each 3 rifle companies, MG company, and infantry gun platoon), a field artillery battalion (of two gun batteries and a howitzer battery), and a signal company

Light Brigade: two cavalry regiments (each 4 rifle squadrons, and MG squadron), a bicycle battalion (of 3 rifle companies, MG company, and armored car detachment)

Two independent bicycle battalions (as in the light brigade)

Koiviston (bicycle) battalion

Four pioneer companies

Eastern Border Sector

Karelian Group (4 infantry battalions)

North Karelian Group (2 infantry battalions)

Kainu Group (2 infantry battalions)

Lapland Group (2 infantry battalions)

Field Army

Three Corps HQs

Nine divisions, each 3 infantry regiments, a field artillery regiment, mounted squadron, bicycle company, 2 signal companies, 2 pioneer companies, field replacement battalion

GHQ troops: 3 bicycle battalions, 1 infantry battalion, 4 heavy artillery battalions, 20 AA batteries, 9 pioneer companies, 1 field replacement battalion

The Coming of War - September 1939

The army was mobilized with the outbreak of the war in September 1939. As planned, the Karelian Sector HQ was redesignated I Corps to control its three brigades. In addition, a fourth brigade was formed for this corps to

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strengthen the defenses of this critical sector, this brigade consisting of two battalions drawn from GHQ reserve. The field army consisted of three corps HQs and nine divisions, one from each of the military districts. In addition, a coastal defense command was activated to control the small units assigned to littoral defense.

The Soviet pressures on the Baltic states of Latvia, Lithuania and Estonia, resulting in the signing of dictated military treaties in October 1939, worried the Finns considerably. The obvious territorial ambitions of Stalin's regime brought about a consolidation of the border defense forces, in the form of the creation of the new 1st Division out of elements of the three prior brigades, yielding a force structure of four corps HQs and ten divisions, plus the cavalry brigade, border groups and other smaller elements.

The Winter War

The Soviets began their assault on Finland on 30 November 1939. Although greatly outnumbered, the Finns had one advantage on their side, geography. Practical routes into Finland were limited to the Karelian Isthmus and a fifty-or-sixty-mile wide stretch north of Lake Ladoga. These would be the critical battlefields.



Infantrymen in December 1939

Against meager Finnish defenses, the Red Army launched over a million men and over a thousand tanks. The war evolved into three separate stages. In the first phase the Soviets launched massive artillery bombardments against targets well identified, followed up by waves of massed infantry and armor. Under this pressure the Finns broke.

Attempts to stabilize the front by conventional means were only partially successful, but commanders with initiative soon began launching spoiling attacks of their own through the winter snow against the unprepared Soviets. In this second phase of the war Finnish infantry in company and battalion strength took off on skis through trackless terrain, encircling the Soviet forces from behind and launching furious small-scale surprise attacks. Repeated

ambushes were the fate of Soviet reserve units sent to rescue cut-off formations. Many Red Army units were cut off and decimated, others

panicked and ran.

These had disoriented the Red Army command and brought the advance into the Karelian Isthmus to halt. This gave the Finns some time to reorganize their badly battered formations. For lack of material, many of the changes were necessarily cosmetic. The 6th Division was renamed the 3rd, for instance, and several other divisions had their designations changed as well. Thus, by mid-January, the Finnish forces on the isthmus comprised the following (from south to north):

II Corps

4th Division

3rd Division (former 6th Division)

1st Division

2nd Division (former 11th Division)

III Corps

7th Division (former 10th Division)

8th Division

In addition, two new divisions, the 21st and 23rd, were being formed, although practically no equipment could be found for them.

These spoiling attacks, deadly as they were, could not affect the outcome against a determined foe. They were most effective, of course, north of Lake Ladoga where space to maneuver was available. Even up there, however, given the size of the Red Army element they could only demoralize, not stop. Stalin demanded a full-scale resolute offensive along the Karelian border between the gulf and the lake. On 1 February 1940, the Soviets signaled the start of the third phase with a blanket bombing of Finnish rear forces. This was followed by an unprecedented artillery barrage that blasted the Finnish field positions to pieces.

On 11 February the Soviets finally achieved the breakthrough on the Karelian Isthmus. As losses piled up and artillery ammunition started running low the Finns sued for peace and signed the Moscow Peace Treaty on 12 March 1940.

Following the conclusion of the war a massive military reorganization was undertaken. In place of the former nine military regions, which paralleled the civilian administrative districts, the high command now formed sixteen districts more closely aligned with the population distribution in the country. Twelve of these districts were responsible for each maintaining a brigade at full strength, this to be expanded to a division on mobilization. To manage this much larger standing army five corps headquarters were permanently established.

Under this new force structure the I, III and V Corps each had two brigades, while the II and IV Corps each had three, and the navy had one for coast defense. In addition, I Corps held the Cavalry Brigade and II Corps the Jäger Brigade.

The peacetime organization of the Finnish ground forces was thus as follows

during 1940-41:

I Corps

- 1st Brigade
- 2nd Brigade
- Cavalry Brigade
- 2nd Heavy Artillery Battalion
- 1st Fortress Artillery Battalion
- 1st Light AA Battalion

II Corps

- 3rd Brigade
- 4th Brigade
- 5th Brigade
- Jäger Brigade
- 3rd Heavy Artillery Battalion
- 2nd Fortress Artillery Battalion
- 2nd Light AA Battalion

III Corps

- 6th Brigade
- 7th Brigade
- 3rd Fortress Artillery Battalion
- 4th Fortress Artillery Battalion
- 3rd Light AA Battalion

IV Corps

- 8th Brigade
- 9th Brigade
- 10th Brigade
- 1st Heavy Artillery Battalion
- 5th Fortress Artillery Battalion
- 4th Light AA Battalion

V Corps

- 11th Brigade
- 12th Brigade
- 6th Fortress Artillery Battalion
- 5th Light AA Battalion

Naval Command

- 13th Brigade

Air Force

- 11th-14th AA Battalions

Mobilization from this force structure was a fairly complicated matter. The most basic element was the expansion of each of the thirteen regional brigades into a division contribution through the recall of reservists. Each brigade was to yield three infantry regiments and an artillery regiment as well as a division HQ, for instance. The infantry regiments were raised in waves using the arbitrary number 21 as a base, thus the 1st Brigade raised Infantry Regiments 1, 22, and 43; while the 2nd Brigade raised Infantry Regiments 2, 23, and 44; and so on with only a few exceptions.

A second element was the raising of three additional divisions (14, 15, and

16) in the three districts (Lounais-Suomen, Satakunnan, and Vaasan) of western Finland that did not have peacetime brigades. At the same time the Jäger Brigade was to form a second such brigade, although the Cavalry Brigade did not.

A third element was a complete redesignation of units at corps and division level, apparently to confuse Soviet intelligence. The peacetime corps were redesignated (now being numbered II through VI) and the divisions given numbers different from their parent peacetime brigades (now numbered 1-8, 10-12, 14, 15, and 17-19).¹

Division	Inf Regts	Art Regt	Lt Bn
1st	14th, 35th, 56th	5th	8th
2nd	7th, 28th, 49th	15th	7th
3rd	11th, 32nd, 53rd	16th	5th
4th	5th, 25th, 46th	1st	9th
5th	2nd, 23rd, 44th	3rd	4th
6th	12th, 33rd, 54th	14th	3rd
7th	9th, 30th, 51st	2nd	15th
8th	4th, 24th, 45th	11th	14th
10th	1st, 22nd, 43rd	9th	12th
11th	8th, 29th, 50th	4th	10th
12th	3rd, 26th, 47th	7th	1st
14th	10th, 31st, 52nd	18th	2nd
15th	15th, 36th, 57th	12th	16th
17th	13th, 34th, 55th	8th	19th
18th	6th, 27th, 48th	19th	6th
19th	16th, 37th, 58th	10th	18th

Since the end of the Winter War the procurement arm had not been idle either, although many nations refused exports of weapons to fill their own needs. Although many deliveries had been made the situation as of 1 July 1941 still did not meet the authorized requirements of the army as the table below shows:

WEAPON	ACQUIRED SINCE 13 Mar 40	INVENTORY 1 Jul 41	SHORTAGE
Submachine Guns	9,007	13,711	12,787
Rifles	140,010	556,084	(+ 9,252)
Light Machine Guns	2,846	14,493	3,015
Medium Machine Guns	1,960	5,435	658
Light (8-14mm) Anti-Tank Rifles	263	424	2,647
Heavy (20mm) Anti-Tank Rifles	483	487	551
Anti-Tank Guns	644	941	288

¹If the purpose of the redesignation was to fool Soviet intelligence the ruse was fairly transparent, for no actual realignment of troops took place. Due to the nature of the numbering system, the numerical designation of the lowest-numbered infantry regiment in each division was identical to the number of the peacetime brigade from which the division was formed.

81mm Mortars	123	911	(+ 24)
120mm Mortars	161	162	62
40-70mm Guns	45	45	(+ 5)
75-90mm Guns	307	982	(+ 16)
105-122mm Howitzers	49	190	74
105-122mm Guns	200	259	(+ 85)
150-155mm Howitzers	99	160	22
150-155mm Guns	54	144	32
203-210mm Howitzers	32	36	3
+200mm Mortars	11	11	5
Armored Cars	0	22	n/a
Light Tanks	-6	42	75
Heavy Tanks	0	2	n/a
Amphibious Tanks	0	42	n/a

Having been crushed by Soviet might once before Finland was initially reluctant to join in Germany's crusade against the Bolshevik threat. The allure of winning back Finnish territory lost in the Winter War, however, finally overcame their military reservations and in the spring of 1941 they began planning for the reconquest of the Karelian isthmus and other lost lands.

The Continuation War

On 17 June the Defense Ministry ordered full mobilization, recalling all males in the age groups 1896-1918. These supplemented the conscripts from the 1919-1920 groups and the first half of the 1921 age groups, already doing their active duty. There were thus now 25½ age groups on active duty.

The mobilization plan was carried out and the troops moved to the frontier, being deployed, from north to south, as follows:

III Corps	6th Division 3rd Division
VII Corps	14th Division 7th Division 11th Division
II Corps	2nd Division 18th Division
V Corps	5th Division 10th Division
IV Corps	4th Division 12th Division 8th Division

The 17th Division was concentrated in the southwestern corner of the country, the cavalry brigade screened in front of V Corps, and the remainder were in general reserve. The bulk of the forces, comprising IV and V Corps and the 18th Division of II Corps, were poised to retake the Karelian Isthmus by driving east and then south.

The Finns launched their attack on 16 July 1941. By this time, three weeks after the German assault had begun, the Soviets had already begun to strip the Finnish front of troops to meet the threat further south. Similarly, the Finns had engaged in some redistribution of forces as well.

Farthest south, IV Corps (now consisting of the 8th, 4th, 10th, and 12th Divisions, from south to north) was to march down the south-western half of the Karelian Isthmus against the Soviet 50th Corps (43rd and 123rd Rifle Divisions); while II Corps (now the 2nd, 15th and 18th Divisions) marched down the north-eastern half against the Soviet 19th Corps (115th and 142nd Rifle Divisions and 5th and 102nd Border Divisions). North of Lake Ladoga the Karelian Army (consisting of the VII Corps with 7th and 9th Divisions, and V Corps with 1st, 5th, and 11th Divisions) would move around the north shore of the lake against elements of the Soviet 7th Army, particularly the 71st Rifle Division and the 3rd Marine Brigade. Further north was the 14th Division, and further north yet the III Corps with the 6th Division and German troops.

The Finns quickly gained their objectives, although not without cost, and halted on the old Soviet-Finnish border in early September. There, having achieved their objectives and despite frantic German calls for an advance on nearby Leningrad, they stayed for the next two and a half years.

The shift to the defensive had an immediate impact on the casualty rates. The Army had suffered 24,000 casualties in July and 23,000 in August. By September the rate had fallen to 14,000, and then 8,000 in October, 6,000 in November and under 4,000 in December. During the 29 months from January 1942 the monthly casualty figures only exceeded 3,000 twice, and never exceeded 2,000 after September 1942.

The dramatic decline in casualties, however, could not compensate for the fact that little Finland had simply over-mobilized. The 17 June mobilization order had called to active duty almost all the males between the ages of 19 and 45 in the country. This gave the armed forces a total of about 625,000 in uniform (including about 37,000 women) and to this had to be added replacements for the dead and disabled from the first few months of the war. Thus, by mid-September the armed forces were taking about 15-17% of the entire population of Finland (which then stood at 3,884,754), and about a third of the entire male population.

The predictable result was that the Finnish economy quickly ground to an almost complete standstill. Women were brought into the workplace in record numbers, but lacking experienced workers to train or supervise them

efficiency suffered. Even were casualties to cease entirely Finland could not keep its 16-division army in the field. Yet the length of the front and the nature of the opposition, as well as the lack of substantive German assistance, dictated that the basic force structure could not be changed.

Planning to meet this impasse had begun as early as August 1941. It was recognized that if the Soviets did not surrender or the front removed by winter hard decisions would have to be faced. On 30 September 1941 Marshal Mannerheim accepted a general staff plan that called for the release from active duty of the bulk of the reservist classes of 1896-1911, and of selected portions of the reservist classes of 1912-18 and the conscript classes of 1919-22.

There followed a massive reshuffling of troops within divisions to segregate the different groups of soldiers. An influx of the remainder of the 1921 and the 1922 classes helped minimize the losses to the divisions, but the net result was an order in November for each division to disband two of its infantry battalions. The disbandings began in late 1941 and continued through the spring of 1942.

Army strength fell steadily, from a then-high figure of 490,000 in November to about 380,000 in September 1942. As the decline continued through the spring of 1942 it proved impossible to maintain even the reduced-strength divisions. On 5 March 1942, the general staff directed each division to additionally disband its light battalion, one of its regiment HQs and a regimental supply column. The net result was that each division lost one of its infantry regiments.

The older reservists and the younger soldiers with job-related exemptions were released from active duty to rejoin the crippled civilian economy, but were not released from their military obligation. Instead, each of the sixteen military districts set up a reserve infantry brigade of four infantry battalions and two artillery battalions to be mobilized if needed. On mobilization, such a brigade could be fielded either as a brigade or as the reconstituted missing third regiment of its parent division depending on operational requirements. To ensure confusion the brigades carried the numerical designation of the original peacetime brigade in each district, rather than the new divisional designation of their parent formation, but were often synonymous as well with the missing infantry regiments as follows:

- 1st Brigade = 43rd Inf Regt (10th Div)
- 2nd Brigade = (5th Div)
- 3rd Brigade = 47th Inf Regt (12th Div)
- 4th Brigade = 45th Inf Regt (8th Div)
- 5th Brigade = 25th Inf Regt (4th Div)
- 6th Brigade = 27th Inf Regt (18th Div)
- 7th Brigade = 28th Inf Regt (2nd Div)
- 8th Brigade = 29th Inf Regt (11th Div)
- 9th Brigade = 51st Inf Regt (7th Div)
- 10th Brigade = 31st Inf Regt (14th Div)
- 11th Brigade = 32nd Inf Regt (3rd Div)
- 12th Brigade = 33rd Inf Regt (6th Div)
- 13th Brigade = 34th Inf Regt (17th Div)

14th Brigade = 14th Inf Regt (1st Div)
15th Brigade = 36th Inf Regt (15th Div)
16th Brigade = 37th Inf Regt (19th Div)

The force structure of 16 divisions remained relatively intact through 1942 and 1943, although the armored component was gradually increased to a division, which included incorporating the 1st Jäger Brigade into the division and the dissolution of the 2nd Jäger Brigade. Some regiments were switched around among divisions, but this appears to have been relatively infrequent.

As the prospect of a German victory faded the Finns were forced to expand their army in response to increasing Soviet capabilities. The army's strength reached its nadir in September 1942, having fallen to about 380,000. Thereafter it climbed, as recruits were brought in and older age classes released on a more drawn-out schedule. Similarly, brigades were brought onto active duty on a rotating basis on a more frequent basis and for longer periods as the war continued. Thus, army strength climbed to 400,000 in late 1942 and early 1943; 430,000 in mid-1943; 450,000 in late 1943 and early 1944, and by May 1944 had reached 490,000.

The end was clearly approaching. In late March 1944 the Finns sent a two-man delegation to Moscow to sound out peace terms and came away with disappointing news, the Soviets wanted restoration of the 1940 borders, the internment or expulsion of German troops in Finland and payment of \$600 million in war indemnities. In April the parliament rejected these terms.

For this second invasion of Finland the Soviets were prepared. Under the Leningrad Front (to fight on the Karelian Isthmus) and the Karelian Front (north of Lake Ladoga) they massed 41 rifle divisions, 10,000 guns and over 800 tanks. The Soviet offensive opened on 9 June with a massive day-long bombardment that smashed Finnish positions and crushed potential resistance. An even more severe bombardment was fired early on the 10th, followed by an infantry assault. By 15 June the Soviets had torn through Finnish positions on the Isthmus and on 20 June Viipuri fell. The Finns managed to stabilize the line there, but exhausted all their reserves to do so. A German contribution of an infantry division helped, but when the northern offensive by the Soviet 7th Army began the day after Viipuri fell, there was little with which to stall it.

The Finns fought ferociously but to little avail. Casualties, of course, skyrocketed dramatically. From slightly over a thousand in May 1944, the figure had shot up to 34,000 in July and 31,000 for August. On 1 August the President of Finland resigned and on 25 August the government asked Moscow for a cease-fire. Aside from some skirmishes with departing Germans Finland's war was over.

INFANTRY

The 1927 TO&Es provided for a mobilized infantry regiment of 98 officers, 409 NCOs, and 2,255 other ranks divided into a headquarters, headquarters company, a supply platoon, and three 820-man infantry battalions. The regimental HQ company was made up of signal, mounted scout, pioneer, and trains platoons, while the supply platoon had three sections each with three horse-drawn wagons. The battalion consisted of a headquarters and HQ company (similar to the regimental HQ company), three rifle companies, a machine gun company, and an infantry gun platoon. The rifle company was built around four platoons, each of which was made up of a platoon leader and four 9-man squads. The machine gun company had three platoons, each of a platoon leader, six messengers and rangefinders, two section leaders, and four 6-man gun squads. The infantry gun platoon had ten men in its HQ and two 10-man sections.

The Infantry Battalion of the 1930s

The new TO&Es promulgated in December 1931 changed some elements of the infantry while leaving other, distinctively Finnish, elements in place. The infantry gun was discarded and its place was taken by a new regimental-level mortar company with four 81mm weapons. Retained was the "square" company structure that was to survive through the coming wars of four platoons each of four squads, but now two of the squads were to be equipped with light machine guns.

Under the December 1931 TO&Es the rifle platoon consisted of a lieutenant platoon leader, a platoon sergeant, and two runners, along with two rifle squads and two light machine gun squads. A rifle squad consisted of a sergeant and nine privates, all but one armed with bolt-action rifles. One man in each rifle squad was allotted a submachine gun, and this was usually regarded as quite an honor. The light MG squad comprised a sergeant and six privates and was armed with five rifles, two pistols (for the MG crew), and an m/26 light machine gun. Thus, despite the fearsome reputation gained during the winter war by the Finnish submachine gunners, these weapons were only in fact issued to two men per platoon at the start of the war. Further, unofficial, accretions of these weapons during the fighting, however, appear to have taken place.

The rifle company headquarters consisted of the company commander, his aide (a private) and three teams. One team consisted of a sergeant and four privates and provided runners for communications and liaison, the only signal assets within the company. Two of the runners were provided with

bicycles for use when weather permitted. The second team was made up of a sergeant and three privates and were designated as scouts and intelligence gatherers. The third team, also a sergeant and three privates, specialized in anti-gas procedures.

The company trains platoon included an ammunition squad with two 1-horse carts, a six-man medical squad, and a 13-man trains section. The trains

	Officers	Warrant Officer	NCOs	Other Ranks	Pistols	Submachine Guns	Rifles	Light MGs	Medium MGs	Riding Horses	Draft Horses	Carts	Bicycles
Battalion Headquarters	5	2	0	0	7	0	0	0	0	5	0	0	2
Headquarters Company													
Company Headquarters	0	0	1	0	1	0	0	0	0	1	0	0	0
Headquarters Platoon													
Staff Section	0	0	2	8	0	0	10	0	0	2	0	0	0
Scout Squad	0	0	1	9	0	0	10	0	0	2	0	0	8
Anti-Gas Squad	0	0	1	9	0	0	10	0	0	0	1	1	0
Signal Platoon													
Platoon HQ	0	0	1	0	1	0	0	0	0	0	0	0	1
Three Wire Teams, each	0	0	1	8	0	0	9	0	0	0	1	1	0
Radio Team	0	0	1	3	0	0	4	0	0	0	0	0	4
Trains Platoon													
Platoon HQ	0	0	1	0	0	0	1	0	0	0	0	0	0
Ammunition Section	0	0	3	9	0	0	12	0	0	0	8	8	0
Medical Section	0	0	2	8	6	0	4	0	0	0	2	2	0
Combat Trains	0	0	2	7	0	0	9	0	0	1	5	5	0
Field Trains	0	0	2	15	0	0	17	0	0	0	10	10	0
Three Rifle Companies, each													
Company Headquarters	1	0	3	11	1	0	14	0	0	1	0	0	2
Four Rifle Platoons, each													
Platoon HQ	1	0	1	2	1	0	3	0	0	0	0	0	0
Two Rifle Squads, each	0	0	1	9	0	1	9	0	0	0	0	0	0
Two LMG Squads, each	0	0	1	6	2	0	5	1	0	0	0	0	0
Trains Platoon													
Platoon HQ	0	0	1	1	1	0	1	0	0	0	0	0	0
Ammunition Squad	0	0	1	2	0	0	3	0	0	0	2	2	0
Medical Squad	0	0	1	5	6	0	0	0	0	0	0	0	0
Trains Section	0	0	1	12	0	0	13	0	0	0	7	7	1
Machine Gun Company													
Company Headquarters	1	0	5	15	1	0	20	0	0	2	0	0	0
Three Machine Gun Platoons, each													
Platoon HQ	1	0	2	2	1	0	4	0	0	0	0	0	0
Four MG Squads, each	0	0	1	5	5	0	1	0	1	0	1	1	0
Trains Platoon													
Platoon HQ	0	0	1	1	1	0	1	0	0	0	0	0	1
Ammunition Section	0	0	1	28	0	0	29	0	0	0	3	3	0
Medical Squad	0	0	1	2	3	0	0	0	0	0	0	0	0
Trains Section	0	0	2	10	0	0	12	0	0	0	5	5	1

Infantry Battalion, 1931-1940

section comprised a combat trains with a kitchen wagon and three cargo carts (one each for cooking gear, tents, and baggage), and a field trains with three cargo carts (two for rations and fodder and one for equipment).

The machine gun company provided the battalion's base of fire and was built around three line platoons each of four squads. Each squad consisted of a squad leader sergeant, four gun crew manning a water-cooled Maxim, and a carter. That of these, only the carter had a rifle, meant that the gun had to be collocated with regular infantry to provide local security. The platoon headquarters consisted of the platoon leader (a lieutenant), two section leader sergeants, and two runners. The company HQ included a 4-man signal team (presumably with optical devices), a 3-man dispatch runner team, a 4-man anti-gas team, a 3-man rangefinder team, and a 5-man survey/FDC team for indirect fire. In the company trains the ammunition squad provided three carts and 24 privates as porters. The combat trains lacked the tentage and baggage carts found in the rifle company, this equipment presumably being carried with the gun crews in their carts.

The infantry battalion consisted of three rifle companies and a machine gun company, along with a headquarters company. Command and control was exercised through the signal platoon, which provided three 9-man wire teams, each with a cart, and a 4-man radio team.

The Infantry Regiment Base

An infantry regiment was made up of three such battalions, supplemented by a headquarters company, a mortar company and a supply column. The mortar company was a relatively large formation, at 83 men, considering it operated only four 81mm mortars. Part of the reason for this was the large crew size, ten men per mortar, necessitated by the need to backpack the mortar and some ammunition when only skis could be used for mobility in the winter. Another was the provision for a five-man FO/signal team for each mortar. Although the presence of four dedicated FO teams for the regiment undoubtedly potentially increased the mortars' effectiveness, the lack of modern signal gear to send their calls for fire back to the company must have negated many of the benefits.

The Finnish line infantry regiment of the 1930s was, thus, a very light formation. Fire support for the regiment was limited to four 81mm mortars and no anti-tank weapons of any kind were provided. It was, however, a mobile formation in the winter. Every man in the regiment, except the carters, was assigned a pair of skis and expected to know how to use them. An invading army would be well advised to attack in the summer, when these lightly-armed infantry formations had no greater mobility than the aggressors.

	Officers	Warrant Officers	NCOs	Other Ranks		Pistols	Rifles	81mm Mortars		Riding Horses	Draft Horses	Carts	Motorcycles	Cars	Bicycles
Regiment Headquarters															
Command Section	5	0	0	0		5	0	0		5	0	0	0	0	0
Logistics Section	4	4	0	0		4	0	0		4	0	0	0	0	0
Headquarters Company															
Company Headquarters	1	0	1	0		2	0	0		1	0	0	0	0	0
Staff Platoon	0	0	6	30		2	34	0		18	0	0	2	1	15
Signal Platoon															
Platoon Headquarters	1	0	2	5		1	7	0		1	2	2	0	0	0
Four Wire Teams, each	0	0	1	8		0	9	0		0	1	1	0	0	2
Radio Team	0	0	3	7		0	10	0		0	1	1	0	0	9
Pioneer Platoon															
Platoon Headquarters	1	0	0	0		0	1	0		1	0	0	0	0	0
Four Pioneer Squads, each	0	0	1	10		0	11	0		0	2	2	0	0	0
Trains Platoon															
Platoon Headquarters	0	0	1	0		0	1	0		0	0	0	0	0	1
Combat Trains	0	0	6	11		1	14	0		1	3	3	0	0	0
Field Trains	0	0	1	9		0	0	10		0	9	9	0	0	0
Mortar Company															
Company Headquarters	1	0	1	4		1	5	0		1	0	0	0	0	0
Two Mortar Platoons															
Platoon Headquarters	1	0	0	1		1	1	0		1	0	0	0	0	0
Two FO/Signal Teams, each	0	0	2	3		2	3	0		0	0	0	0	0	0
Two Mortar Squads, each	0	0	1	9		3	7	1		0	2	2	0	0	0
Trains Platoon															
Platoon Headquarters	0	0	4	0		2	2	0		0	0	0	0	0	2
Combat Trains	0	0	0	6		0	6	0		0	2	1	0	0	0
Field Trains	0	0	0	3		0	3	0		0	2	1	0	0	0
Supply Column															
Ammunition Column	1	0	5	52		3	56	0		3	49	49	0	0	0
Transport Column	1	0	5	42		3	45	0		3	38	38	0	0	0

Infantry Regiment Base, 1931-1940

An infantry division of the field army consisted of three such infantry regiments, an artillery regiment, a light (reconnaissance) battalion, two pioneer companies, two signal companies, a field replacement battalion and service support elements.

Division Artillery

The fire support element for the division was the artillery regiment, which provided three mixed battalions, each of two batteries of light field guns and one of howitzers. Both types of batteries were equipped with ex-Russian guns taken over on Finnish independence, the field gun batteries with the 76mm M02, and the howitzer batteries with the 122mm M09 and M10.

	Officers	Warrant Officers	NCOs	Other Ranks	Pistols	Rifles	Machine Guns	Artillery Pieces	Riding Horses	Draft Horses	Carts	Motorcycles	Cars	Bicycles
Regiment Headquarters	6	0	8	15	12	17	0	0	9	4	4	1	2	4
Three Field Artillery Battalions, each														
Battalion Headquarters	2	0	2	7	3	8	0	0	8	1	1	0	0	2
Signal Platoon														
Platoon HQ	1	0	0	4	1	4	0	0	2	3	3	0	0	0
Wire Section	0	0	5	41	0	56	0	0	0	5	5	0	0	5
Radio Section	0	0	4	13	1	16	0	0	8	2	2	0	0	0
Armorer/Anti-Gas Platoon	3	0	3	20	10	16	0	0	8	2	2	0	0	0
Trains Platoon														
Platoon HQ	3	3	2	5	7	6	0	0	6	0	0	0	0	3
Medical Squad	0	0	1	7	4	4	0	0	0	2	2	0	0	0
Supply Squad	0	0	1	3	2	2	0	0	0	1	1	0	0	0
Combat Trains	0	0	1	8	0	9	0	0	0	4	4	0	1	1
Field Trains	0	0	3	16	0	19	0	0	1	16	16	0	0	0
Two Field Gun Batteries, each														
Battery Headquarters	1	0	0	1	1	1	0	0	2	0	0	0	0	0
Forward Observer Section	1	0	3	6	3	7	0	0	6	0	0	0	0	0
Main Observer Section	1	0	4	23	3	25	0	0	2	4	4	0	0	2
Firing Battery														
Firing Battery HQ	1	0	0	0	1	0	0	0	1	0	0	0	0	0
Fire Direction Center	0	0	4	7	1	10	0	0	4	1	1	0	0	0
Firing Section	1	0	7	53	1	60	0	4	8	33	9	0	0	0
Machine Gun Squad	0	0	1	7	4	4	2	0	0	1	1	0	0	0
Trains Platoon														
Platoon HQ	0	0	1	1	1	1	0	0	1	0	0	0	0	1
Medical Squad	0	0	1	2	3	0	0	0	0	0	0	0	0	0
Veterinary Squad	0	0	1	1	1	1	0	0	0	0	0	0	0	0
Anti-Gas Squad	0	0	1	1	0	2	0	0	0	1	1	0	0	0
Armorer Squad	0	0	1	5	0	6	0	0	0	1	1	0	0	0
Combat Trains	0	0	1	6	0	7	0	0	0	3	3	0	0	1
Field Trains	0	0	3	12	0	15	0	0	1	12	12	0	0	1
Field Howitzer Battery														
<i>as above, except</i>														
Firing Section	1	0	7	57	1	64	0	4	8	37	13	0	0	0
Supply Column														
Ammunition Platoon	1	0	4	68	3	70	0	0	3	64	64	0	0	0
Two Supply Platoons, each	0	0	2	27	3	26	0	0	3	22	22	0	0	0

Divisional Field Artillery Regiment, from 1931

In either case a gun crew consisted of a sergeant piece commander, eight

cannoneers, and three riders for the six horses that pulled the gun. Other elements of the firing section were eight one-horse carts for ammunition (twelve in the case of the howitzer battery) and two half-section commanders. The firing battery also included an FDC section with its own 4-man telephone team and a machine gun squad for local defense. The gun or howitzer battery included two forward-deployed elements. The smaller, FO, section provided an observer officer, a rangefinder NCO, a survey NCO and a four-man radio team. The larger, main observer, section supported the battery commander and was probably colocated with the supported infantry battalion HQ. It was commanded by the assistant observer officer and was similar to the FO section but included a large 15-man telephone section with two carts in lieu of the radio. The bulk of the fire control traffic between the gun position and the forward elements thus appears to have traveled by land

Division Headquarters (116)
Signal Battalion (456)
 Battalion Headquarters
 Two Signal Companies
Light Battalion
 Battalion Headquarters
 Bicycle Rifle Company [8 LMG]
 Mounted Squadron
 Machine Gun Platoon
Three Infantry Regiments, each (2,954)
 Regiment Headquarters & Company (181)
 Three Infantry Battalions, each (845)
 Battalion Headquarters (118)
 Three Rifle Companies, each (191) [8 LMG]
 Machine Gun Company (154) [12 MG]
 Mortar Company (83) [4 81mm mortars]
 Supply Column (156)
Artillery Regiment (2,363)
 Regiment Headquarters (29)
 Three Field Artillery Battalions, each (778)
 Battalion Headquarters (167)
 Two Field Gun Batteries, each (162) [2 MG, 4 76mm guns]
 Field Howitzer Battery (166) [2 MG, 4 122mm howitzers]
 Supply Column (131)
Two Pioneer Companies, each (280)
Service Support Elements

Total Strength: 14,200

Infantry Division, Winter War

lines set up by the main observer section telephone group.

The field artillery battalion provided logistical support to its three batteries with a supply column and exercised command and control through its signal platoon. The supply column included an ammunition platoon that provided 32 one-horse carts for 76mm ammunition and 24 more for howitzer ammunition. It also had two supply platoons each of which provided 5 carts for rations and 14 for fodder. The battalion signal platoon consisted of a wire section with five teams and a radio section with four teams.

The regimental headquarters was a very small unit, geared towards providing specialist support rather than active command. It included an intelligence section of three officers and a sergeant, a "correction" section with a meteorologist officer and two sergeants, and an adjutant.

The Light Infantry

The divisional light battalion, using bicycles in the summer and skis in the winter, consisted of a headquarters, three light companies, and a machine gun company. The most critical element of the headquarters company was its bicycle-mounted signal platoon, which included a radio section of a sergeant, three teams each of a corporal and

	Officers	Warrant Officers	NCOs	Other Ranks	Pistols	Submachine Guns	Rifles	Light MGs	Medium MGs	Riding Horses	Draft Horses	Carts	Bicycles	Motorcycles
Battalion Headquarters	8	4	0	0	11	0	0	0	0	7	0	0	2	0
Headquarters Company														
Company Headquarters	0	0	1	0	1	0	0	0	0	1	0	0	0	0
Headquarters Platoon														
Staff Section	0	0	3	10	0	0	13	0	0	3	0	0	0	0
Scout Squad	0	0	1	10	1	0	10	0	0	2	0	0	8	1
Anti-Gas Squad	0	0	1	9	0	0	10	0	0	0	1	1	0	0
Pioneer Squad	0	0	1	9	0	0	10	0	0	0	1	1	9	0
Signal Platoon														
Platoon HQ	0	0	1	1	2	0	0	0	0	0	1	1	1	0
Three Wire Teams, each	0	0	1	8	0	0	9	0	0	0	1	1	8	0
Radio Section	0	0	4	11	0	0	15	0	0	0	2	2	13	0
Trains Platoon														
Platoon HQ	0	0	1	0	0	0	1	0	0	0	0	0	1	0
Ammunition Section	0	0	3	9	0	0	12	0	0	0	8	8	4	0
Medical Section	0	0	2	8	6	0	4	0	0	0	2	2	6	0
Combat Trains	0	0	2	7	0	0	9	0	0	1	5	5	4	0
Field Trains	0	0	4	17	1	0	20	0	0	0	11	11	0	0
Three Rifle Companies, each														
Company Headquarters	1	0	3	11	1	0	14	0	0	1	0	0	14	0
Four Rifle Platoons, each														
Platoon HQ	1	0	1	1	1	0	3	0	0	0	0	0	4	0
Two Rifle Squads, each	0	0	1	9	0	1	9	0	0	0	0	0	10	0
Two LMG Squads, each	0	0	1	6	2	0	5	1	0	0	0	0	7	0
Trains Platoon														
Platoon HQ	0	0	1	1	1	0	1	0	0	0	0	0	2	0
Ammunition Squad	0	0	2	3	0	0	5	0	0	0	3	3	1	0
Medical Squad	0	0	1	6	6	0	1	0	0	0	1	1	6	0
Trains Section	0	0	1	12	0	0	13	0	0	0	7	7	6	0
Machine Gun Company														
Company Headquarters	1	0	5	15	1	0	20	0	0	2	0	0	19	0
Three Machine Gun Platoons, each														
Platoon HQ	1	0	2	2	1	0	4	0	0	0	0	0	5	0
Four MG Squads, each	0	0	1	5	5	0	1	0	1	0	1	1	5	0
Trains Platoon														
Platoon HQ	0	0	1	1	1	0	1	0	0	0	0	0	1	0
Ammunition Section	0	0	1	29	0	0	30	0	0	0	3	3	26	0
Medical Squad	0	0	1	2	3	0	0	0	0	0	0	0	3	0
Trains Section	0	0	2	10	0	0	12	0	0	0	5	5	7	0
Supply Column														
Ammunition Section	0	0	1	13	0	0	14	0	0	1	13	13	0	0
Two Transport Sections, each	0	0	1	11	0	0	12	0	0	1	11	11	0	0
Trains Section	0	0	2	10	2	0	10	0	0	2	6	6	0	0

Light Infantry Battalion, 1931-1940

3 privates, and two men with one-horse carts, a tripling of wireless assets compared to the line infantry battalion. The platoon also included three wire teams, each of nine men with a cart.

The light rifle company was almost identical to the regular infantry company, but provided with bicycles and skis for added mobility, and a slightly larger ammunition squad for greater autonomy.

Using their greater mobility, communications and ammunition carriage the light battalions were able to conduct both reconnaissance and raiding operations.

Once these divisions moved from static defense to active defense, launching spoiling attacks in the Soviet rear using their mobility, they were successful. When the Soviets launched frontal attacks against these under-armed formations despite the spoiling attacks, however, the divisions suffered terribly. Even in the active defense role, however, the Finnish divisions were not as effective as they could have been. Communications, particularly the vital infantry-artillery link, were conducted primarily by telephone. The individual companies and battalions that launched the spoiling attacks were often limited to the weapons they carried with them and could only rarely exploit their successes.

The 1941 Reorganization

Following the conclusion of the war the infantry was reorganized. An anti-tank company was formally added to the infantry regiment structure using the 37mm Bofors AT gun. In addition to the 216 of these weapons delivered before and during the Winter War a further 725 had been ordered and delivered by July of 1941. This new company consisted of three platoons, each with a five-man HQ and two 12-man gun teams. Each gun was towed by a single horse, with a caisson as an intermediary, and was accompanied by two one-horse carts for ammunition. The anti-tank company also included a close-protection platoon with four squads equipped with small arms but, surprisingly, not light machine guns as was common with other armies. The company carried no reserves of ammunition, nor did it include any signal assets other than two runners in each platoon HQ.

The mortars were reallocated and new weapons introduced. The 81mm medium mortars were decentralized to the battalion level, each battalion receiving a platoon of three such weapons. Apparently, it was planned that the mortars be able to operate independently, for squad size increased to no less than twenty. A mortar squad, manning a single weapon, now comprised a sergeant squad leader, a forward observer team of a corporal and three privates, a telephone team of a corporal and four privates, the gun crew of a

corporal and seven privates, and two carters, one for the mortar cart and the other for the ammunition cart. The mortar platoon HQ consisted simply of the platoon leader and two runners.

At the regimental level the mortar company was completely restructured. The Finns had been impressed with the Soviet 120mm M38 mortar and had ordered their Tampella works to produce a copy of the weapon. Until production could yield results, however, the army had to make do with what weapons it had captured during the Winter War. Thus, the initial plans to provide each regiment with a six-gun heavy mortar company to complement the battalion 81mm mortars had to be postponed. Instead, the revised mortar company had an interim organization of one 81mm medium platoon and one 120mm heavy platoon. The medium platoon was identical to that in the infantry battalion. The heavy platoon was similar to the medium platoon, but added a private to the gun crew and two carters, with ammunition carts, to the squad to accommodate the heavier ammunition. Apparently, little centralized control of these weapons was envisioned, for the company HQ consisted simply of the company commander and two runners, a similar state to the platoon HQs. The company trains provided only four one-horse carts for support, two for kitchen duties and two carrying rations and fodder. Significant changes were also made to the infantry battalion organization besides the added mortar platoon.

The New Infantry Battalion & Regiment

At the lowest line level, the former distinction between rifle and LMG squads was abolished and the squad was now standardized as a corporal and eight privates with a light machine gun, thus effectively doubling the automatic weapons firepower of the platoon and company. At the same time a one-horse cart was added to the platoon HQ to carry weapons, ammunition and equipment. Another significant change was the addition of an anti-tank section to the rifle company, this composed of a sergeant section leader, two 4-man gun teams, and a carter with a one-horse cart. Each team manned a light (7-20mm) anti-tank rifle (at the outbreak of the continuation war Finland had 424 such weapons in its stocks, a mix of British weapons supplied during the Winter War, German 7.9mm weapons, and the indigenous 20mm L/39). The gun itself was carried by the crew members, while ammunition and gear were carried in the section's cart.

In the machine gun company a private was added to the crew of each gun and an anti-tank platoon to the company structure. In this case the weapon was the Lahti 20mm, derived from, and firing the same ammunition as, the widely-used Solothurn SS-18-1100. The gun crews were significantly larger here, each consisting of a sergeant and nine privates, while the rest of the platoon was made up of the platoon leader, two runners, and two carters.

Despite the increased weaponry the company's ammunition squad was reduced by six men.

In the battalion HQ the scout squad was upgraded to a platoon and the signal platoon reinforced. This may have permitted the extension of the radio net to the company level, a great improvement. Surprisingly, the battalion ammunition squad was not enlarged despite the additional weapons now held by the battalion.

At the regiment level communications were significantly improved. There were now five 4-man bicycle-mounted radio teams, a doubling of strength, and six carts were provided, two for radios and four for telephone equipment. The regimental supply column was much reduced in size, to a total of 36 one-horse carts and reorganized as four mixed sections rather than functional ammunition and general transport columns.

The infantry regiment emerged from the post-winter-war reorganization a much more capable formation. Fire support was considerably improved through the expansion of the mortar component from six 81mm to twelve 81mm and three 120mm. Anti-tank protection, previously completely lacking, was now provided for in the form of thirty AT rifles and six 37mm AT guns.

The reorganization gave the infantry regiment the following strength in 1941:

	Off	SGT	Other	Total
Regiment Headquarters	15	38	155	208
Anti-Tank Company	5	20	111	136
Mortar Company	3	30	121	154
Supply Column	0	8	41	49
Three Infantry Battalions, each				
Battalion HQ	8	23	114	145
Three Rifle Companies, each	5	28	172	205
Machine Gun Company	5	30	162	197
Mortar Platoon	1	12	50	63

Fire Support for the New Division

The artillery component of the division was also reorganized under TO&Es issued in July 1940. Gone were the mixed battalions each of two field gun and a howitzer battery, replaced by homogeneous battalions, two of field guns and one of howitzers.² Fire control was dramatically improved through

²It would seem that at least some of the regiments retained their mixed-battalion organization notwithstanding the new TO&E. Volume 10 of *Suomen Sota 1941-45* shows an organizational chart on p.135 for the field artillery regiment with three mixed battalions,

a reconfiguration of the observer elements into two forward observer squads, each with its own 4-man radio team, the addition of a survey party,

	Officers	Warrant Officers	NCOs	Other Ranks	Pistols	Submachine Guns	Rifles	Artillery Pieces	Riding Horses	Draft Horses	Carts	Motorcycles	Cars	Trucks	Bicycles
Regiment Headquarters	7	1	4	10	9	0	13	0	1	2	2	1	2	2	5
Flash-Spotting Section	2	0	9	41	2	0	49	0	0	0	0	0	0	2	31
Two Field Gun Battalions, each															
Battalion Headquarters															
Command Section	4	1	2	6	6	0	6	0	2	2	2	0	1	0	7
Survey Section	1	0	2	7	1	0	9	0	0	1	1	0	0	0	9
Signal Platoon															
Platoon HQ	1	0	1	6	2	0	6	0	0	6	6	0	0	0	2
Four Wire Teams, each	0	0	1	8	2	0	7	0	0	0	0	0	0	0	2
Telephone Central	0	0	1	4	0	0	5	0	0	0	0	0	0	0	0
Radio Team	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
Trains Platoon															
Platoon HQ	3	3	2	3	6	0	5	0	0	0	0	0	1	0	9
Anti-Gas Squad	0	0	1	1	0	0	2	0	0	1	1	0	0	0	0
Medical Squad	0	0	2	5	4	0	3	0	0	3	3	0	0	0	1
Veterinary Squad	0	0	2	2	1	0	3	0	0	2	2	0	0	0	2
Armorer Squad	0	0	3	2	0	0	5	0	0	0	0	0	0	1	2
Trains Section	0	0	3	7	1	0	9	0	0	0	0	0	0	0	3
Three Field Gun Batteries, each															
Battery Headquarters	1	0	1	3	1	0	4	0	2	0	0	0	0	0	2
Two Observer Teams, each	1	0	3	6	2	0	8	0	0	1	1	0	0	0	8
Survey Team	0	0	1	4	1	0	4	0	0	0	0	0	0	0	5
Telephone Section	0	0	1	17	1	0	16	0	0	5	5	0	0	0	0
Firing Battery															
Firing Battery HQ	1	0	0	1	1	0	1	0	2	0	0	0	0	0	0
Fire Direction Center	0	0	5	12	1	0	16	0	0	3	3	0	0	0	13
Firing Section	1	0	7	40	1	3	47	4	5	26	2	0	0	0	3
Ammunition Section	0	0	1	8	0	0	9	0	0	8	8	0	0	0	0
Trains Platoon															
Platoon HQ	1	0	1	0	1	0	1	0	0	0	0	0	0	0	2
Medical Squad	0	0	1	2	3	0	0	0	0	0	0	0	0	0	1
Veterinary Squad	0	0	2	1	1	0	2	0	0	1	1	0	0	0	2
Trains Section	0	0	2	14	0	0	16	0	0	10	10	0	0	0	2
Supply Column	0	0	2	10	1	0	11	0	0	0	0	0	0	5	0
Field Howitzer Battalion as field gun battalion, except															
Firing Battery Ammunition Section	0	0	1	12	0	0	13	0	0	12	12	0	0	0	0
Supply Column	0	0	3	16	1	0	18	0	0	0	0	0	0	8	0

Divisional Field Artillery Regiment, from July 1940

and the incorporation of a four-man radio team into the firing battery. A small flash-spotting section with four 5-man spotting teams, a 3-man plotting

each of a 114-man HQ, two 149-man field gun batteries and a 153-man howitzer battery, with a 14-man supply column.

team, an 18-man telephone section, and two 3-man radio teams was also incorporated into the regiment to facilitate counter-battery operations, although given the limited ranges of the divisional artillery pieces the utility of such a section must have been questionable. Savings in manpower were effected through the replacement of the former 131-man horse-drawn battalion supply columns with 12- or 19-man motorized columns, a savings of 350 men.

Each division was also now to include a heavy artillery battalion, although only nine such battalions were available for the 15 divisions. Such a battalion consisted of three batteries, usually one of heavy field guns and two of heavy field howitzers, although the ratio was sometimes reversed. The unit was horse-drawn and was provided with only a single motorcycle, two field cars, and twelve trucks, the latter presumably for the transport column. Its main transport assets were its 259 horses, supplemented by 169 bicycles.

In spite of these changes, which greatly increased the organizational effectiveness of the divisional artillery, the fact remained that the weapons themselves were simply obsolete. The most common light field guns were the 76mm K/02 (the ex-Russian M1902) and the 75mm M17 (the US 75mm M1917) with ranges of 9.9 and 10.6 km, respectively. The field howitzers were usually ex-Soviet 122mm models with a range of only 7.7 km, with one division using the 114mm H/18 (the British 4.5" howitzer), with a range of only 6 km. The heavy artillery battalions were equipped with the 120mm K/78-31 (the ancient deBange weapon with a range of 10.8 km on a new carriage) or the 105mm K/29 (the modern Bofors Model 27 with a range of 15 km) in the gun role, and a variety of elderly 150-155mm howitzers with ranges of 6.5 to 11.5 km.

An anti-tank company was added to the division, similar to those in the infantry regiment, with three 2-gun platoons, but was a motorized formation with 117 men and 15 submachine guns as well as six 37mm Bofors or 45mm ex-Soviet AT guns.

The divisional pioneer component was restructured from two separate companies into a 579-man battalion with 36 one-horse carts. It now consisted of a headquarters, three line companies, and a small park.

Similarly, the two separate signal companies of the winter war divisions were consolidated into a signal battalion consisting of a headquarters, a central signal company (three switchboard platoons and a radio platoon) and two wire companies (each three platoons). Although the need for motorization was recognized, the assets were simply not available. Instead, wire-laying

was accomplished mostly by bicycle, the battalion having a total of four motorcycles, four field cars, 23 trucks, 143 bicycles, and 43 horses.

	Officers	Warrant Officers	NCOs	Other Ranks	Pistols	Submachine Guns	Rifles	37mm AT Guns	120mm Mortars	Riding Horses	Draft Horses	Wagons/Carts	Motorcycles	Cars	Trucks	Bicycles
Regiment Headquarters																
Command Section	8	0	0	0	1	3	4	0	0	4	0	0	0	0	0	2
Logistics Section	3	5	0	0	6	0	2	0	0	0	0	0	0	0	0	5
Staff Platoon	0	0	5	19	3	0	21	0	0	3	0	0	3	2	0	8
Bicycle Scout Platoon																
Platoon HQ	1	0	1	3	0	2	3	0	0	0	1	1	0	0	0	4
Three Scout Squads, each	0	0	1	8	0	3	6	0	0	0	0	0	0	0	0	9
Signal Platoon																
Platoon HQ	1	1	2	8	0	0	12	0	0	0	8	8	0	0	0	3
Four Wire Teams, each	0	0	1	8	0	1	8	0	0	0	0	0	0	0	0	2
Five Radio Teams, each	0	0	1	3	0	0	4	0	0	0	0	0	0	0	0	4
Pioneer Platoon																
Platoon HQ	1	0	5	14	0	1	19	0	0	0	9	9	0	0	1	2
Four Pioneer Squads, each	0	0	1	8	0	1	8	0	0	0	0	0	0	0	0	2
Trains Section	0	0	7	8	1	0	14	0	0	0	0	0	0	0	4	4
Anti-Tank Company																
Company Headquarters	1	0	1	2	2	1	1	0	0	2	0	0	1	0	0	0
Three Anti-Tank Platoons, each																
Platoon HQ	1	0	1	3	0	0	4	0	0	0	1	0	0	0	0	4
Two Gun Squads, each	0	0	1	11	2	2	8	1	0	0	3	3	0	0	0	0
Close Protection Platoon																
Platoon HQ	1	0	1	6	0	1	7	0	0	0	2	2	0	0	0	4
Four Rifle Squads, each	0	0	1	6	0	1	6	0	0	0	0	0	0	0	0	0
Trains Section	0	0	5	6	1	0	10	0	0	0	1	0	0	0	2	3
Mortar Company																
Company Headquarters	1	0	1	2	1	0	3	0	0	2	0	0	0	0	0	1
1 st Mortar Platoon																
Platoon HQ	2	0	0	2	0	1	3	0	0	2	0	0	0	0	0	0
Three Mortar Squads, each	0	0	4	19	0	1	22	0	1	0	4	3	0	0	0	0
2 nd Mortar Platoon																
Platoon HQ	2	0	0	2	0	1	3	0	0	0	0	0	0	0	0	2
Three Mortar Squads, each	0	0	4	16	0	1	19	0	1	0	4	2	0	0	0	0
Trains Section	0	0	5	10	3	0	12	0	0	0	4	4	0	0	0	5
Supply Column																
Column Headquarters	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1
Four Transport Sections, each	0	0	1	9	0	1	9	0	0	0	9	9	0	0	0	0
Trains Section	0	0	3	5	0	0	8	0	0	0	3	3	0	0	0	3

Infantry Regiment Base, from October 1942

Throughout the division the new TO&Es had dramatically improved the division's flexibility, responsiveness, and firepower control. Unfortunately, the equipment was not always present to implement these changes. On 1 July 1941 the army's inventory of backpack radios, for use by infantry companies and similar-size units, stood at only 196 out of a requirement for 4,352, less than five percent of the TO&E fill requirements. The larger sets were more available. The inventory of the Type C infantry radio, used at

battalion and regiment level, stood at 96% of the 550 required, although that of the Type D artillery radio was at 12.5% of the required 792.

With one major exception, few changes were made to the divisional organization during the continuation war. In May 1942 the 81mm mortar platoon in the regimental mortar company was officially rearmed with 120mm weapons although, surprisingly, it retained its original organization and did not adopt the heavy mortar structure with its additional crewman and two additional ammunition carts per mortar. In August of that year a second officer, designated a forward observer, was also added to each of the mortar platoons. A month later eight of the rifles in the mortar company were replaced by submachine guns to improve close-in defense. At the same time the number of submachine guns in the anti-tank company was increased to seven, and then shortly thereafter to fifteen.

Revising the Infantry 1942

A new TO&E for the infantry battalion was issued in October 1942 that made detail changes to the organization, although without substantially changing the personnel strength. The most significant was an increase in the number of submachine guns in the rifle squad from one to two. The only change to the battalion organization after the issuance of this TO&E was the addition of a 50mm mortar to the rifle company anti-tank section to be used as a supplemental weapon.

The one major change in infantry organization came in the spring of 1942. With their major objectives realized and facing a severe manpower shortage, the Finns reduced the size of their divisions by demobilizing the light battalion and the HQ and two battalions of one infantry regiment in each. The remaining infantry battalion from the demobilized regiment replaced the light battalion as a reconnaissance force and as a division reserve. The mortar and anti-tank companies of the lost infantry regiment became divisional troops, with the AT company being reorganized as a motorized unit to conform to the existing divisional AT company.

It was with this organization that the Finns finished the war. The binary structure of the division imposed, of course, tactical limitations on their employment, but equally severe were the repercussions of the lack of an adequate industrial base. This left the Finns largely dependent on the largess of the Germans and the capture of battlefield booty for much of their armament. To the end the Finnish divisions remained underarmed, with small-caliber short-range artillery and obsolete anti-tank weapons. They survived on the battlefield for so long as the Germans drew off all the available Soviet forces. Once the Red Army could allocate resources to the Finnish front the end would not long be delayed.

	Officers	Warrant Officers	NCOs	Other Ranks	Pistols	Submachine Guns	Rifles	Light MGs	Medium MGs	20mm AT Rifles	81mm Mortars	Riding Horses	Draft Horses	Wagons & Carts	Bicycles
<u>Battalion Headquarters</u>															
Battalion Headquarters	4	2	4	8	3	2	12	0	0	0	0	5	0	0	6
Anti-Gas Squad	0	0	1	9	0	0	10	0	0	0	0	0	1	1	9
<u>Bicycle Scout PLatoon</u>															
Platoon Headquarters	1	0	1	3	0	1	4	0	0	0	0	0	1	1	4
Three Squads, each	0	0	1	8	0	2	6	1	0	0	0	0	0	0	9
<u>Signal Platoon</u>															
Platoon Headquarters	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Three Wire Teams, each	0	0	1	9	0	1	9	0	0	0	0	0	1	1	0
Radio Team	0	0	1	6	0	0	7	0	0	0	0	0	0	0	7
<u>Trains Platoon</u>															
Platoon Headquarters	0	1	1	1	1	0	2	0	0	0	0	0	0	0	1
Ammunition Squad	0	0	3	9	0	0	12	0	0	0	0	0	8	8	1
Medical Squad	0	0	2	13	8	1	8	0	0	0	0	0	5	5	0
Combat Trains	0	0	1	6	0	0	7	0	0	0	0	0	4	4	1
Field Trains	0	0	4	8	0	0	12	0	0	0	0	0	5	5	2
<u>Three Rifle Companies, each</u>															
Company Headquarters	1	0	4	14	1	2	16	0	0	0	0	0	0	0	5
Anti-Tank Section	0	0	1	9	2	2	6	0	0	2	0	0	1	1	0
<u>Four Rifle Platoons, each</u>															
Platoon Headquarters	1	0	1	3	0	1	4	0	0	0	0	0	1	1	0
Four Rifle Squads, each	0	0	1	8	1	2	8	1	0	0	0	0	0	0	0
<u>Trains Platoon</u>															
Platoon Headquarters	0	0	1	1	1	0	1	0	0	0	0	0	0	0	1
Ammunition Squad	0	0	1	2	0	0	3	0	0	0	0	0	2	2	0
Medical Squad	0	0	2	4	4	0	2	0	0	0	0	0	0	0	0
Trains Section	0	0	1	8	0	0	9	0	0	0	0	0	5	5	1
<u>Machine Gun Company</u>															
Company Headquarters	1	0	3	10	1	0	13	0	0	0	0	1	0	0	1
<u>Three Machine Gun Platoons, each</u>															
Platoon Headquarters	1	0	2	2	0	0	5	0	0	0	0	0	0	0	0
Four MG Squads, each	0	0	1	6	2	0	5	0	1	0	0	0	1	1	0
<u>Anti-Tank Platoon</u>															
Platoon Headquarters	1	0	0	4	0	2	3	0	0	0	0	0	2	2	0
Four AT Squads, each	0	0	1	9	1	0	9	0	0	1	0	0	0	0	0
<u>Trains Platoon</u>															
Platoon Headquarters	0	0	1	1	1	0	1	0	0	0	0	0	0	0	1
Ammunition Squad	0	0	1	22	0	0	23	0	0	0	0	0	3	3	1
Medical Squad	0	0	1	2	2	0	1	0	0	0	0	0	0	0	0
Trains Section	0	0	2	9	0	0	11	0	0	0	0	0	5	5	2
<u>Mortar Platoon</u>															
Platoon Headquarters	2	0	0	2	0	0	4	0	0	0	0	1	0	0	0
Three Mortar Squads, each	0	0	4	18	0	1	19	0	0	0	1	0	2	2	0

Infantry Battalion, from October 1942

Division Headquarters (195)
 Signal Battalion (436)
 battalion headquarters
 central signal company
 two wire companies
 Separate Infantry Battalion (1,022)
 battalion headquarters (146)
 three rifle companies, each (205) [16 LMG, 2 ATR, 1 50mm mort]
 machine gun company (197) [12 MG, 4 ATR]
 mortar platoon (64) [3 81mm mort]
 Two Infantry Regiments, each (3,618)
 regiment headquarters (211)
 three infantry battalions, each (1,022) *as above*
 anti-tank company (136) [6 37-45mm AT]
 mortar company (156) [6 120mm mort]
 supply column (49)
 Divisional Mortar Company (156) [6 120mm mort]
 Field Artillery Regiment (1,814)
 regiment headquarters (22)
 flash-spotting platoon (51)
 two field gun battalions, each (574)
 battalion headquarters (115)
 three batteries, each (149) [4 76mm field guns]
 supply column (12)
 field howitzer battalion (593)
 battalion headquarters (115)
 three batteries, each (153) [4 122mm howitzers]
 supply column (19)
 Heavy Artillery Battalion (642)
 battalion headquarters
 two howitzer batteries, each [4 155mm howitzers]
 gun battery [4 105mm guns]
 supply column
 Two Anti-Tank Companies (mot), each (117) [6 37-45mm AT]
 Pioneer Battalion (582)
 battalion headquarters
 three pioneer companies
 Supply Command (860)
 Medical Command (288)
 Veterinary Company (68)
 Anti-Gas Company (144)
 Police Platoon (28)
 Postal Platoon (21)

INFANTRY DIVISION, 1944

Reservist Infantry Brigades

The demobilization efforts of early 1942 yielded not only reductions in the size of the infantry divisions, but also a new type of unit. Although mobilization on the scale carried out in June 1941 clearly was not sustainable it was equally apparent that a general mobilization might be needed again in the future if the Soviets launched a major offensive. The sixteen military districts thus each established an infantry brigade (*jalkaväkikiprikaati*) in which demobilized reservists could continue their reserve training and simultaneously provide a pool of units available to the GHQ in an emergency.

Using the standard field TO&Es these brigades had the following organization:

- Brigade HQ (75)
- Signal Company (185)
- Four Infantry Battalions, each (1,022)
- Field Artillery Battalion (580)
- Heavy Artillery Battalion (mot) (521)
- Mortar Company (156)
- Anti-Tank Company (138)
- Pioneer Company (238)
- Supply Company (158)
- Medical Unit (177)
- Brigade Column (49)

There were some minor variations between two groups of brigades. Infantry brigades 1 through 10 each also included a field hospital, while numbers 11 through 16 had only two batteries instead of the standard three in their heavy artillery battalion.

These reservists could be mobilized to meet specific emergencies in two different ways. The brigade could be mobilized as a whole and committed to combat as a unit, or selected components of the brigade (particularly, the brigade HQ, three infantry battalions, the mortar company, anti-tank company and column) could be mobilized to form the missing third infantry regiment of its parent division, with the remainder of the brigade unmobilized or forming separate units for GHQ use. The latter use appears to have been the more common.

Light Infantry Brigade

A second, and much-heralded, type of infantry force was the light infantry. A jäger brigade (*Jääkäriprikaatin*) had been formed during the 1920s but was

	Officers	Warrant Officers	NCOs	Other Ranks	Pistols	Submachine Guns	Rifles	Light MGs	Medium MGs	20mm AT Rifles	50mm Mortars	81mm Mortars	Motorcycles	Cars	Trucks	Bicycles
Battalion Headquarters																
Battalion Headquarters	5	2	2	9	6	3	9	0	0	0	0	0	3	1	0	12
Anti-Gas Squad	0	0	1	9	0	0	10	0	0	0	0	0	0	0	1	9
Signal Platoon																
Platoon Headquarters	1	0	1	2	0	0	4	0	0	0	0	0	0	0	2	2
Three Wire Teams, each	0	0	1	8	0	1	8	0	0	0	0	0	0	0	0	9
Radio Team	0	0	1	6	0	0	7	0	0	0	0	0	0	0	0	7
Trains Platoon																
Platoon Headquarters	0	0	2	1	1	0	2	0	0	0	0	0	0	0	2	3
Ammunition Squad	0	0	3	3	0	0	6	0	0	0	0	0	0	0	2	4
Medical Squad	0	0	2	10	8	1	3	0	0	0	0	0	0	0	2	2
Combat Trains	0	0	4	6	0	0	10	0	0	0	0	0	0	0	2	4
Three Rifle Companies, each																
Company Headquarters	1	0	2	8	1	1	8	0	0	0	0	0	1	0	0	9
Anti-Tank Section	0	0	1	9	2	2	6	0	0	2	1	0	0	0	1	9
Four Rifle Platoons, each																
Platoon Headquarters	1	0	1	2	1	0	2	0	0	0	0	0	0	0	0	4
Four Rifle Squads, each	0	0	1	8	1	3	5	1	0	0	0	0	0	0	0	9
Trains Platoon																
Platoon Headquarters	0	0	2	1	1	0	2	0	0	0	0	0	0	0	0	3
Ammunition Squad	0	0	1	1	0	0	2	0	0	0	0	0	0	0	1	1
Medical Squad	0	0	2	4	4	0	2	0	0	0	0	0	0	0	0	6
Trains Section	0	0	1	6	0	0	7	0	0	0	0	0	0	0	2	2
Machine Gun Company																
Company Headquarters	1	0	1	5	2	0	6	0	0	0	0	0	1	1	0	4
Three Machine Gun Platoons, each																
Platoon Headquarters	1	0	2	2	0	0	5	0	0	0	0	0	0	0	0	5
Four MG Squads, each	0	0	1	6	2	1	4	0	1	0	0	0	0	0	1	3
Anti-Tank Platoon																
Platoon Headquarters	1	0	0	4	0	2	3	0	0	0	0	0	0	0	2	3
Four AT Squads, each	0	0	1	9	1	0	9	0	0	1	0	0	0	0	0	7
Trains Platoon																
Platoon Headquarters	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	2
Ammunition Squad	0	0	2	20	0	0	22	0	0	0	0	0	0	0	1	21
Medical Squad	0	0	1	2	2	0	1	0	0	0	0	0	0	0	0	3
Trains Section	0	0	2	6	0	0	8	0	0	0	0	0	0	0	2	3
Mortar Platoon																
Platoon Headquarters	2	0	0	3	0	0	4	0	0	0	0	0	0	1	0	2
Three Mortar Squads, each	0	0	4	15	0	1	18	0	0	0	0	1	0	0	1	10

Light Infantry Battalion, from November 1943

disbanded in May 1934. This left the four bicycle battalions (*Polkupyöräpataljoona*) as the representatives of the light infantry. In 1936 these battalions were officially redesignated as jäger battalions (*Jääkäripataljoona*) to preserve the traditions of the 27th Jäger Battalion of the civil war, but this redesignation does not appear to have taken hold, for in

practice they continued to be referred to as bicycle battalions until after the Winter War. These light battalions were used as the reconnaissance elements of the infantry divisions.

On the conclusion of the Winter War, the bicycle battalions were again designated jäger battalions and their numbers enlarged to six. These were used to form the 1st and 2nd Jäger Brigades, each of three battalions.

New TO&Es were issued for the jäger battalion that continued to mirror those of the regular infantry battalion, but this time with some significant differences. The squad size was identical, a sergeant and eight privates, but there were only three such squads in the platoon, as opposed to four in the regular infantry. The rifle company anti-tank section was also the same size, but in the case of the jäger company it was provided with a truck that enabled the section to man four 8mm anti-tank rifles instead of the normal two.

The jäger machine gun company was also similar to that of the regular infantry, differing in that light trucks replaced the horse-drawn carts and that, as in the line companies, each man other than a truck driver had a bicycle. Signal facilities were, surprisingly, no better than those of the regular infantry.

A jäger brigade consisted of a headquarters, three jäger battalions, a field artillery battalion, and service elements. The field artillery battalion was similar to those in the infantry division but was provided with trucks rather than horses for mobility.

A minor reorganization of the jäger battalion was mandated with the issuance of new TO&Es in November 1943. According to the TO&Es the anti-tank rifles were removed from the AT section of the rifle company and replaced by a single German 50mm mortar. The provision of ten men to man a single 50mm mortar, however, seems wildly wasteful and excessive and it seems more likely that in practice the four light AT rifles formerly held were, in fact, replaced by two 20mm models and a 50mm mortar.

By this time the overall jäger structure had been completely revised. The 2nd Jäger Brigade had lost one of its battalions in October 1941 and a second in March 1942, both to serve as independent units. Finally, in June 1943 the third battalion was detached to reinforce the Cavalry Brigade and the 2nd Jäger Brigade effectively ceased to exist. The 1st Brigade lasted longer. In April 1942 it gained the 5th Jäger Battalion (formerly with the 2nd Brigade) to become a four-battalion formation. In July it lost its artillery battalion and was incorporated into the new armored division. Thus through the latter

half of the Continuation War the jäger force consisted of the Jäger Brigade (with Battalions 2, 3, 4, and 5) in the Armored Division and two battalions (1 and 6) in the Cavalry Brigade.³

Fortress & Border Infantry

A type of unit that did not show up until after the Winter War was the fortress infantry.

To man the initial border positions the army created 21 (later 24) units of a new type, the border company (*Rajajääkärikomppania*) in mid-1940. Each of these had a strength of about 250 men divided into a company headquarters, four rifle platoons, a machine gun platoon, a light AT section, two heavy AT sections, and a trains platoon.

The decision was made in late 1941 to consolidate the border companies in border battalions (*rajajääkäripataljoonaa*). The first two battalions were formed in early November 1941 and the remainder in December of that year and January 1942. The new units were:

- 1st Border Battalion (Companies 12, 22 and 52)
- 2nd Border Battalion (Companies 13, 23 and 33)
- 3rd Border Battalion (Companies 11, 21 and 31)
- 4th Border Battalion (Companies 14, 44 and 53)
- 5th Border Battalion (Companies 24, 32 and 42)
- 6th Border Battalion (Companies 15 and 34)
- 7th Border Battalion (Companies 16, 26 and 46)
- 8th Border Battalion (Companies 25, 35 and 36)

There appear to have been few changes to the company organization, although the anti-tank sections were now grouped under an anti-tank platoon headquarters. The strength of such a battalion was:

	Off	SGT	Other	Total
Battalion Headquarters	13	33	182	228
Three Border Companies, each	7	37	233	277
Mortar Platoon	1	12	50	63
Supply Column	0	3	18	21

Each of the border companies was provided with 16 light machine guns, 4 medium machine guns, 4 light (8-14mm) anti-tank rifles (rarely actually present) and two 20mm heavy anti-tank rifles. The mortar platoon had three 81mm mortars. For individual weapons, the battalion had a total of 221 pistols, 69 submachine guns, and 853 rifles (including 51 sniper rifles).

³The 7th Jäger Battalion had apparently been disbanded in 1942.

For transport the battalion was provided with 118 one-horse carts, 8 riding horses, 128 bicycles, a motorcycle, a car, and 6 trucks, along with 1,013 pairs of skis. Radios were provided for the company and battalion HQs.

For the most part these battalions served as corps troops although the 6th Battalion was formed under the auspices of and remained with the 14th Division through the war. To create a substantive reserve in the desperate days of the final Soviet offensives a border brigade was formed in July 1944 out of the 3rd, 4th, 7th, and 8th Border Battalions plus the 17th Field Artillery Battalion, and the 5th Border Battalion joined the Brigade in September after the fighting had ended.

With the concentration of the light battalions into jaeger brigades new units had to be raised to take over the independent raiding mission. The vehicle chosen was the new guerrilla battalion (*sissipataljoona*) and three were activated during early 1941, the 1st and 2nd Battalions under the VII Corps and the 3rd Battalion under the II Corps. Each of these units had the following strength:

	Off	SGT	Other	Total
Battalion Headquarters	9	23	114	146
Three Guerilla Companies, each	5	28	172	205
Machine Gun Company	5	30	162	197
Mortar Platoon	2	12	50	64

Each of the guerrilla companies had 16 light machine guns (4 per platoon), an anti-tank rifle, and a 50mm mortar. The machine gun company, as usual, had four platoons each with three medium machine guns., while the mortar platoon had three 81mm weapons. Individual weapons comprised 113 pistols, 694 rifles (including 51 sniper rifles), and 215 submachine guns. For transport the battalion had 99 horses, 73 bicycles, and 923 pairs of skis.

Faced with a pressing need for additional line troops the army in mid-1943 converted the guerrilla battalions to infantry units, with the 3rd Battalion, for instance, becoming the I Battalion of the 15th Brigade.

CAVALRY

The Finnish Army included only two cavalry regiments, the Uusimaa Dragoons (*Uudenmaan Rakuunarykmentti*) and the Häme Cavalry (*Hämeen Ratsujääriykmentti*). Under the 1927 TO&Es a cavalry regiment consisted of a headquarters, HQ squadron, four rifle squadrons, a machine gun squadron, and a service squadron. The regiment HQ squadron was composed of a signal platoon, a medical/veterinary platoon, and a trains platoon. The rifle squadron was made up of a headquarters, three rifle platoons and a trains platoon. The rifle platoon, in turn, consisted of a three-man headquarters, three rifle squads (each a sergeant and seven privates), and a base detachment of sixteen men to act as horse-holders for the line elements of the platoon. The machine gun squadron had four line platoons, each of a commander, two five-man gun teams, four pack horses with handlers, and six horse-holders.

These two regiments were formed together into the mounted brigade (*Ratsuväkiprikaatin*), supported by a horse artillery battery. To the brigade structure was added in April 1936 an armored detachment, and a month later a bicycle battalion and a pioneer company. At the end of 1937, the armored detachment was retitled an armored car squadron, and then an armored squadron.

The armored squadron was apparently intended originally to be equipped with Landsverk Model 181 armored cars, but only one such vehicle was purchased. Instead, the armored squadron had to make do with the one armored car, two Vickers 6-ton tanks, and eight Renault FTs, although it is difficult to envision a situation where the latter, unreliable and slow-moving museum pieces, could make any contribution to the brigade's efforts.

By the time the Winter War started few changes had been made to the cavalry organization. An anti-tank section had nominally been added to each cavalry regiment, although these do not appear to have reached the regiments before the start of the war. The machine gun squadron had been reduced to three platoons, their composition is unclear.

The brigade fought bitterly on the Karelian Isthmus during the Winter War, often on skis, leaving their horses in field stables, but was gradually forced back, along with the rest of the army.

It was brought back up to strength, but with a field artillery battalion in lieu of the earlier battery, for the Continuation War. They participated in the original advance back to the original borders. There they settled down until

the crushing Soviet advance of 1944.

By this point, the cavalry regiments had been restructured and modestly reinforced. A heavy weapons platoon with two medium machine guns and two 50mm mortars was added to each rifle squadron, the former representing a decentralization from the former machine gun squadron.

Fire support was the responsibility of a heavy weapons squadron, with only one machine gun platoon, but reinforced with an anti-tank platoon with four marginal AT rifles and a mortar platoon with three 81mm weapons. Although not heavily armed the mortar platoon was impressive for its fire control assets, with two observer/fire control teams, each of two sergeants and four privates, and a 14-man signal section.

Aside from the poor anti-tank weaponry the cavalry regiments were probably the equal of anyone else's, but the fact remained that their age had passed.

	Officers	Warrant Officers	NCOs	Other Ranks	Pistols	Submachine Guns	Rifles	Semi-Auto Rifles	Light MGs	Medium MGs	20mm AT Rifles	50mm Mortars	81mm Mortars	Motorcycles	Cars	Trucks	Riding Horses	Pack Horses	Draft Horses	Carts	Bicycles	Sleighs
Regiment Headquarters																						
Command Group	3	2	0	0	0	1	4	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Staff Group	4	4	0	0	3	0	4	0	0	0	0	0	0	0	0	0	7	0	0	1	0	0
Headquarters Squadron																						
Squadron Headquarters	1	0	5	21	0	2	24	0	0	0	0	0	0	0	3	0	9	0	2	2	0	4
Pioneer Platoon																						
Platoon HQ	1	0	1	2	0	1	3	0	0	0	0	0	0	0	0	0	2	9	2	2	0	0
Two Pioneer Squads, each	0	0	1	11	0	1	11	0	0	0	0	0	0	0	0	0	12	0	0	0	0	1
Signal Platoon																						
Platoon HQ	1	0	2	1	0	1	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Two Mot Wire Teams, each	0	0	1	9	0	1	9	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Mounted Wire Team	0	0	1	11	0	1	11	0	0	0	0	0	0	0	0	0	12	0	0	0	0	2
Two Radio Teams, each	0	0	1	4	0	1	4	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1
Transport Team	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0
Transport Platoon																						
Platoon HQ	1	0	0	6	0	0	7	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Ammunition Column	0	0	1	3	0	0	4	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
Rations Column	0	0	1	5	0	0	6	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Trains Platoon																						
Platoon HQ	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Ammunition Section	0	0	3	2	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0
Rations Section	0	0	2	3	0	0	5	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0
Medical Section	0	0	3	13	8	0	7	0	0	0	0	0	0	0	1	0	0	0	4	4	0	0
Veterinary Section	0	0	5	12	0	0	17	0	0	0	0	0	0	0	1	0	0	0	5	5	0	0
Administrative Section	0	0	2	12	0	0	14	0	0	0	0	0	0	0	0	0	1	0	7	7	0	0
Four Rifle Squadrons, each																						
Squadron Headquarters	1	0	2	7	0	2	8	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Three Rifle Platoons, each																						
Platoon HQ	1	0	2	6	0	3	6	0	0	0	0	0	0	0	0	0	7	0	2	2	0	0
Three Mounted Squads, each	0	0	1	11	1	3	6	1	1	0	0	0	0	0	0	0	12	0	0	0	0	3
Heavy Weapons Platoon																						
Platoon HQ	1	0	2	5	0	3	5	0	0	0	0	0	0	0	0	0	7	0	1	1	0	0
Two MG Squads, each	0	0	1	9	1	1	8	0	0	1	0	0	0	9	0	0	9	0	1	1	0	2
Mortar Squad	0	0	1	9	0	1	9	0	0	0	0	2	0	0	0	0	9	0	1	1	0	1
Trains Platoon	0	0	9	28	4	0	33	0	0	0	0	0	0	0	0	0	7	6	15	15	12	6
Heavy Weapons Squadron																						
Squadron Headquarters	1	0	2	7	0	2	8	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Machine Gun Platoon																						
Platoon HQ	1	0	3	7	0	3	8	0	0	0	0	0	0	0	0	0	9	0	2	2	0	2
Four MG Squads, each	0	0	1	9	1	1	8	0	0	1	0	0	0	0	0	0	9	0	1	1	0	1
Anti-Tank Platoon																						
Platoon HQ	1	0	2	4	0	2	5	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0
Four AT Squads, each	0	0	1	8	1	0	8	0	0	0	1	0	0	0	0	0	8	0	1	1	0	1
Mortar Platoon																						
Platoon HQ	1	0	2	5	0	3	5	0	0	0	0	0	0	0	0	0	7	0	1	1	0	1
Observer Section	1	0	4	8	0	1	12	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0
Signal Section	0	0	1	13	0	0	14	0	0	0	0	0	0	0	0	0	12	0	2	2	0	0
Three Mortar Squads, each	0	0	1	10	0	0	11	0	0	0	0	0	1	0	0	0	9	0	2	2	0	0
Trains Platoon	0	0	9	27	2	0	34	0	0	0	0	0	0	0	0	0	6	8	14	14	11	5

Cavalry Regiment, from April 1943

ARMOR UNITS

A nominal tank regiment (*Hyökkäysvaunurykmentin*) was formed in October 1919 with 32 Renault FT-17 tanks purchased with French credits. Of these, 14 were armed with the short Puteaux 37mm cannon and the remaining 18 with Hotchkiss machine guns.

During the next twenty years trials were carried out with a small number of more modern vehicles but purchases were few. Among the trials vehicles purchased were single examples of the Vickers 6-ton tank and the Landsverk 181 armored car. Finally, in 1938, an order was placed for sixteen Vickers 6-ton Type E tanks, followed shortly by a second similar order. To reduce the logistics burden the unfortunate decision was made to arm these tanks with the ineffectual Puteaux 37mm so that only one type of ammunition would be required.

The plans also called for the procurement of 27 Landsverk 181 armored cars, a single example of which had been purchased for trials in 1938, but funding was not available. These vehicles were to have been used to form an armored car squadron for the cavalry brigade.

By October of 1939 the Finns had 62 armored vehicles on strength, comprising 28 remaining Renaults, 33 Vickers 6-tonners, and the one Landsverk armored car. With the regiment as an administrative grouping, these tanks were organized into five independent tank companies (*Erillinen Hyökkäysvaunukomppani*). The 1st and 2nd Companies were each equipped with 14 Renault tanks, the 3rd and 4th Companies were each to be equipped with 16 Vickers tanks, and the 5th Company was a training unit. In fact, there were delays in installing the armament in the Vickers tanks, and some tanks were diverted to the training company and to a new armored squadron for the cavalry brigade, so the companies were rarely up to strength.

In October 1939 the regiment was redesignated a battalion to consist of a headquarters and five companies, with the 1st and 2nd Companies under the operational control of II Corps, the 3rd Company as the former Cavalry Brigade Armored Squadron, and the 4th and 5th Companies as Vickers units. On 5 December 1939 the unit was officially redesignated the armored battalion (*Panssaripataljoona*).

On 11 January 1940, the 6th Tank Company was formed as a personnel replacement unit. The Renault companies were unsuitable for modern combat, and indeed they were disbanded in late January and their personnel fed into the new 6th Company. Only the 4th Company saw any significant

action during the Winter War, taking 13 Vickers tanks into an attack towards Viipuri on 25 February. The attack was not a success, as the tanks performed poorly on the snow (due in part to poor training), difficulties in coordinating with the infantry, and the inadequate performance of the 37mm Puteaux guns.

Armor in 1940

By 13 March 1940 the authorized and actual strengths of the tank battalion were as follows:

	Authorized			Actual		
	Off	NCO	OR	Off	NCO	OR
Headquarters	6	6	12	9	16	57
3rd Tank Company	9	38	73	9	38	75
4th Tank Company	9	38	73	4	26	74
5th Tank Company	9	38	73	6	23	93
6th Tank Company	9	38	73	6	19	81
7th Ind Tank Platoon	1	5	8	1	5	8
8th Ind Tank Platoon	1	5	8	1	5	8
9th Ind Tank Platoon	1	5	8	1	5	8
Tank School	12	53	97	6	21	84
TOTAL	57	226	415	43	158	499

A number of Soviet tanks were captured during the Winter War, notably T-26 and T-26A medium tanks, four OT-130 flamethrower tanks, 30 T-37 and T-38 light tanks, and a small number of armored cars. The Vickers tanks were now given the designation T-26E (not altogether surprising since the Soviet T-26 was itself derived from the Vickers design)⁴ and on 6 August 1940 the tank battalion was ordered reorganized. The former 5th Company was redesignated the 1st, the 4th Company redesignated the 2nd, and the 6th (replacement) Company dissolved. At the same time two anti-tank companies were added to the battalion to give the following configuration:

Battalion HQ
 1st Tank Company [8 T-26E, 5 T-26, 3 T-26A]
 2nd Tank Company [8 T-26E, 5 T-26, 3 T-26A, 1 armored car]
 3rd Tank Company [16 T-26E/T-26, 1 armored car]
 1st Ind Tank Platoon [5 T-37/T-38]
 2nd Ind Tank Platoon [5 T-37/T-38]
 Heavy Tank Platoon [2 T-26, 2 T-28]
 1st Anti-Tank Company

⁴At the same time, the Vickers tanks were rearmed, some with Bofors 37mm guns (like those used in the anti-tank role by the infantry) and some with Soviet 45mm guns taken from burned-out T-26s.

2nd Anti-Tank Company
Training Center
Repair Shops
Trains Platoon

Note: depot/training holdings of 2 T-26E, 6 T-26, 2 T-26A, 3 OT-130

Later in 1940 the OT-130 flamethrower tanks were used to form a flamethrower tank platoon (*liekinheitinpanssarivaunuajoukkue*, or *Lh.Joukkue*) and the number of anti-tank companies increased to six.

Each tank company consisted of a headquarters, three line platoons, a signal section, a pioneer section, a trains platoon, and a repair section. Each line platoon consisted of five tanks with their crews. The company headquarters was provided with a single tank for the commander, an armored car, a field car, and three motorcycles. The signal section had a truck, while the repair section had two shop trucks. The trains platoon was provided with eight trucks (one for the field kitchen, two for ammunition, two for fuel, one for office use, one for tents, and one for baggage).

The tank battalion participated in the initial offensives of the Continuation War and proved itself a very useful formation. A few additional Soviet tanks were captured during this phase. These included a handful of BT-7 models that were rearmed by the Finns with British 4.5" (114mm) howitzers, now obsolete in the field role for lack of range, as fire support vehicles with the designation BT-42. The years of position warfare that followed reduced losses in the tank force but also eliminated the Finn's most reliable source of supply, booty from defeated Soviet units. As a result, the Finnish tank park grew increasingly obsolete.

Nevertheless, the captured vehicles from the initial offensive enabled the Finns to expand their tank force to a full regiment in 1942. The regiment consisted of three battalions each of three companies. The first two battalions each had two light companies (T-26 models) and one heavy company (with mixtures of T-26s and various captured Soviet heavier tanks), while the third battalion was equipped with the converted BT-42s. This third battalion was also known as the assault gun battalion (*Rynnäkötykkipataljoona*) and it served frequently in this role. In mid-April 1942 an armored anti-aircraft battery (*panssari-ilmatorjuntapatteri*) was added using six Landsverk ITPSV self-propelled 40mm AA guns.

The Armored Division

The next step was obvious, and in mid-1942 the armored division (*panssaridivisioona*) was formed. For this, the tank element was redesignated the tank brigade (*panssariprikaati*) and it was joined by the Jäger Brigade (with

the 2nd, 3rd, 4th, and 5th Jäger Battalions)⁵, an anti-tank battalion of three companies, the 14th Heavy Artillery Battalion with three batteries of modern German 150mm truck-drawn howitzers, the 6th Signal Battalion, the 2nd Pioneer Battalion, and service troops.

There were few changes to the armored brigade organization during the latter half of 1942 and the first eight months of 1943, except for the apparent loss of about half of 15-20 BT-42 conversions in combat. Thus, on 26 August 1943 the brigade had the following vehicle strengths:

	BA-32	T-38	T-50	T-26	T-28	KV-1	T-34	BT-42	ITPSV
Brigade HQ	1	4	0	0	0	0	0	0	0
I Battalion									
Battalion HQ	1	0	0	2	0	0	0	0	0
1st Company	1	0	0	17	0	0	0	0	0
2nd Company	1	0	0	17	0	0	0	0	0
3rd Company	1	0	0	7	3	0	3	0	0
II Battalion									
Battalion HQ	1	0	0	2	0	0	0	0	0
4th Company	1	0	0	6	4	2	0	0	0
5th Company	1	0	0	17	0	0	0	0	0
6th Company	1	0	0	17	0	0	0	0	0
Assault Gun Battalion									
Battalion HQ	3	0	0	3	0	0	0	0	0
1st Company	1	0	0	0	0	0	0	3	0
2nd Company	0	0	0	0	0	0	0	2	0
3rd Company	0	0	0	0	0	0	0	4	0
Armored AA Battery	0	0	0	0	0	0	0	0	6
Signal Company	0	4	0	0	0	0	0	0	0
Maintenance Company	0	0	0	5	0	0	0	0	0

The light tank company organization, with a strength of 123 men, was little changed from the 1940 model except for the addition of a second T-26 tank in the company headquarters. A heavy company had a strength of 134 men but had two different organizations. That of the I Battalion had one platoon each of T-26s, T-28s, and T-34s (plus two T-26s in company HQ), while the heavy company of II Battalion had a 2-tank platoon of KV-1s, a 4-tank platoon of T-28s, and a 5-tank platoon of T-26s.

The tank battalion also had a headquarters with two T-26s and an armored car for command purposes, and four motorcycles, four field cars and a signal truck. The battalion also included a trains group with twelve trucks. These elements gave the battalion a total strength of 484 men.

⁵The organization of the jäger units are further discussed in the infantry section.

The most pressing need, from the point of view of filling out existing formations, was for a new assault gun. The BT-42 fleet, never reliable to start with, had been subjected to combat and maintenance losses to the point where the assault gun battalion was actually a company in terms of vehicles fielded by mid-1943. Earlier Finnish attempts to obtain tanks from the Germans had been rebuffed, but this time they were able to squeeze thirty StuG-III assault guns out of their allies. Using this equipment they were able to rebuild the assault gun battalion with new vehicles, assigning the old BT-42s to a new independent tank company.

An assault gun company from September 1943 had a strength of 81 men in a headquarters, three line platoons, a 13-man maintenance section and a trains platoon. Two of the three line platoons were each provided with three StuG-III assault guns, while the third platoon functioned as a personnel reserve. The company HQ had another StuG-III, an armored car, a field car, and two motorcycles. The assault gun battalion was led from its headquarters, which included a command section (with two assault guns, an armored car, two field cars, and three motorcycles), a signal squad (with a radio truck), and a trains section. The battalion support company was provided with twelve trucks for logistics and maintenance purposes.

In early 1944 the armored cars were deleted from the division's organization. A few other organizational changes were made, such as the redesignation of the heavy company of II Battalion as the 6th Company, but few were significant. Thus, by 1 June 1944 the armored vehicle strength of the armored division was as follows:

	T-38	T-50	T-26	T-28	KV-1	T-34	BT-42	StuG-III	ITPSV
I Tank Battalion									
Battalion HQ	0	0	2	0	0	0	0	0	0
1st Company	0	0	16	0	0	0	0	0	0
2nd Company	0	0	17	0	0	0	0	0	0
3rd Company	0	0	7	3	0	3	0	0	0
II Tank Battalion									
Battalion HQ	0	0	2	0	0	0	0	0	0
4th Company	0	0	15	0	0	0	0	0	0
5th Company	0	0	16	0	0	0	0	0	0
6th Company	0	1	6	3	1	0	0	0	0
Assault Gun Battalion									
Battalion HQ	0	0	0	0	0	0	0	2	0
1st Company	0	0	0	0	0	0	0	7	0
2nd Company	0	0	0	0	0	0	0	8	0
3rd Company	0	0	0	0	0	0	0	8	0
Independent Tank Company	0	0	0	0	0	0	14	0	0

Maintenance Company	0	0	0	0	0	0	0	0	0
Anti-Aircraft Battery	0	0	0	0	0	0	0	0	6
Signal Company	4	0	0	0	0	0	0	0	0

It was with this organization that the division faced the final Soviet offensive of June 1944. Once the offensive began the Germans hurriedly shipped an initial batch of 15 more StuG-IIIs, followed by a second batch of 14 more, but this was too little too late. The armored division fought hard in the coming months but to no avail. The T-26s were hopelessly obsolete as battle tanks, leaving the assault gun battalion to carry the weight of the division in armored combat. This battalion accounted for over eighty T-34s and KVs destroyed in combat, but this could be only a pinprick to the massive Red Army forces driving inexorably forward.

This formation was not, of course, an armored division in the contemporary sense of the word. Indeed, in some respects, it was reminiscent of the ill-fated French DCR of 1940, designed for the infantry support role. It had no organic reconnaissance assets, rendering it blind in a mobile environment, and artillery support was limited to a single battalion. It had a significant infantry component in the form of the jäger brigade, but this was a bicycle formation that would have had difficulty keeping up with even the relatively slow-moving T-26s of the tank brigade. The anti-aircraft component, although equipped with fine weapons, was far too small to protect the division, and it seems likely that the logistics elements would have been overwhelmed by anything other than intermittent actions on interior lines of communications.

Division Headquarters (262)
 Signal Battalion (282)
 Battalion Headquarters
 Telephone Company
 Radio Company
 Armored Brigade (1,170)
 Brigade Headquarters
 Two Battalions, each (484)
 Battalion Headquarters [2 light tanks]
 Two Light Companies, each (123) [17 light tanks]
 Heavy Company (134) [7 light tanks, 5 heavy tanks]
 Maintenance Company
 Jäger Brigade (3,401)
 Brigade Headquarters
 Four Jäger (Bicycle) Battalions, each (836)
 Battalion Headquarters (97)
 Three Rifle Companies, each (163) [12 LMG, 2 ATR, 1 50mm mort]
 Machine Gun Company (186) [12 MG, 4 ATR]
 Mortar Platoon (63) [3 81mm mort]
 Assault Gun Battalion (437)
 Battalion Headquarters [2 assault guns]
 Three Assault Gun Companies, each [7 assault guns]
 Artillery Battalion (mot) (518)
 Battalion Headquarters
 Three Batteries, each [4 150mm howitzers]
 Anti-Aircraft Battery (90) [6 SP 40mm AA]
 Anti-Tank Battalion (596)
 Battalion Headquarters
 Light AT Company [6 37mm AT]
 Two Heavy AT Companies, each [6 75mm AT]
 Pioneer Battalion (577)
 Battalion Headquarters
 three Pioneer Companies
 Bridging Column [1 LMG]
 Smoke Platoon (59) [8 smoke throwers]
 Transport Battalion (641)
 Transport Column
 Fuel Transport Column
 Ammunition Supply Company
 Three Maintenance Companies
 Medical Group (188)
 Anti-Gas Platoon (23)
 Field Post Office (27)
 Replacement Company (95)

Totals: 8,286 men

3,410 Bicycles 132 Motorcycles 808 Cars & Trucks

ARMORED DIVISION, 1944

Artillery

Heavy Artillery

Prior to the Winter War heavy field artillery was largely neglected in the Finnish army. Army structure during the 1930s called for a single heavy artillery regiment (*raskas tykistörykmentti*) of three battalions each of two batteries.

Finland's meager holdings of artillery were supplemented somewhat during the Winter War. Unfortunately, few nations could provide modern weapons. The main suppliers (Britain, France and Germany) were themselves at war and could spare little from their own mobilization efforts. Italy was in the midst of its own artillery modernization program, the US had few weapons to spare, and the Czech factories had been taken over by the Germans. With a few exceptions what Finland did receive were batches of old cast-off weapons no longer needed by the major powers. The artillery purchased by Finland during the Winter War was as follows:

Sweden	56 75mm M02 guns and 27,000 rounds 17 105mm M29 guns and 5,200 rounds 12 150mm howitzers and 4,000 rounds 4 210mm howitzers and 400 rounds
France	12 75mm M97 guns 12 105mm L M13 guns and 54,000 rounds 12 155mm C M17 howitzers and 12,000 rounds 136 ancient guns and 300,500 rounds
Norway	12 75mm field guns and 7,166 rounds
UK	30 84mm (18pdr) guns and ammunition 25 114mm (4.5") howitzers and 25,000 rounds 12 152mm (6") coastal guns
USA	200 75mm M1917 field guns 32 203mm (8") Mk 8 howitzers

The "ancient guns" from France consisted of 12 107mm Model 77, about 70 120mm deBange Model 78, 45 155mm deBange Model 77, 4 229mm Model 77 and 4 280mm Model 77, all museum pieces without recoil mechanisms or accurate sights. Twenty of the 120mm guns were given more modern carriages as the K/78-31 but the rest of these relics were emplaced in static mounts for the fortress artillery.

The bulk of the heavier weapons were used to form ten heavy artillery battalions (*raskas patteristo*)⁶(numbered 21-30) for use as divisional general support elements. Such a battalion was horse-drawn and generally consisted of one battery of heavy field guns (105-120mm) and two batteries of heavy field howitzers (150-155mm).

⁶These were also known as heavy field artillery battalions (*raskas kenttätäkistöpatteristo*)

GHQ troops

Extra-Heavy Art Bn 1 9 x 203mm H/17 (tractor)
Extra-Heavy Art Bn 2 9 x 203mm H/17 (tractor)
Extra-Heavy Art Bn 3 9 x 203mm H/17 (tractor)
Heavy Art Bn 1 12 x 155mm H/17 (truck)
Heavy Art Bn 2 12 x 150mm H/40 (truck)
Heavy Art Bn 3 12 x 105mm K/34 (truck)
Heavy Art Bn 4 12 x 150mm H/06 (truck)
Light Art Bn 10 12 x 105mm H/41 (truck)
Light Art Bn 14 12 x 76mm LK/13 (truck)
Light Art Bn 15 12 x 76mm RK/27 (horse)
Railway Art Bty 2 x 152mm 45-C (rail)
Extra-Heavy Art Bty 103 x 210mm H/17 (tractor)

II Corps

Heavy Art Bn 12 12 x 105mm K/29 (truck)
Fortress Art Bn 3 12 x 75mm K/97, 8 x 120mm K/78, 2 x 152mm 45-C, 12 x 155mm K/77 (static)
Fortress Art Bn 4 1 x 105mm K/36, 8 x 120mm K/78, 2 x 152mm 45-C, 4 x 155mm K/77, 4 x 229mm K/77 (static)

III Corps

Heavy Art Bn 16 12 x 105mm K/29 (truck)
Fortress Art Bn 6 12 x 120mm K/78 (static)

IV Corps

Heavy Art Bn 13 12 x 150mm H/40 (truck)
Heavy Art Bn 15 12 x 150mm H/40 (truck)
Fortress Art Bn 1 14 x 75mm K/97, 4 x 120mm K/78, 4 x 152mm K/04, 2 x 152mm 45-C, 4 x 155mm K/77, 4 x 280mm K/77 (static)
Fortress Art Bn 2 20 x 155mm K/17 (static)

VI Corps

Heavy Art Bn 14 12 x 150mm H/40 (truck)

VII Corps

Heavy Art Bn 17 12 x 105mm K/29 (truck)
Fortress Art Bn 5 12 x 107mm K/77, 16 x 120mm K/78, 4 x 155mm K/77 (static)

NON-DIVISIONAL ARTILLERY, JUNE 1941

A further six battalions (numbered 12-17) were raised for use as corps support elements. Unlike the divisional heavy battalions, these were truck-drawn and homogenous, three of the battalions being equipped with Bofors 105mm K/29 field guns and three with 150mm H/40 (German sFH.18) field howitzers. A motorized heavy field artillery battalion consisted of a 109-man headquarters, three 128-man 4-gun batteries, and a 19-man supply column. It was provided with four motorcycles, 10 field cars, 53 trucks and 12 tractors.

Four more battalions (numbered 1-4) were raised as GHQ reserve. These were similar to the corps battalions but used a wide variety of equipment.

Finally, the American 8" howitzers (copies of WW I British weapons) were used to form three extra-heavy artillery battalions (*järeät patteristot*), each consisting of three 3-gun batteries.

The six fortress artillery battalions

(*linnoitustykistöpatteristo*) had no fixed

composition, Such a battalion would have

five to eleven batteries, each with two to four guns. The battalion HQ held four tractors so that the guns could be moved to new locations in the same general area, but by and large these were static formations set up along the frontier.



A Finnish crew with their 155mm M17 Schneider howitzer in February 1940

Also established were four target observation batteries (*mittauspatteriin*) as GHQ assets. Each battery consisted of an operations platoon (with survey, plotting, alarm, and generator sections), two observation platoons (each with a flash-ranging section and two sound-ranging sections) and a trains platoon.

Few changes were made to the artillery organization during the Continuation War. During the first year of the Continuation War the Finns captured 811 Soviet artillery pieces, most of them 76mm guns and elderly 122mm howitzers, both of which the Finns already had in substantial numbers. Much more useful were 96 modern 152mm weapons, 56 Model 38 howitzers and 40 Model 37 gun-howitzers. The former were used in divisional and brigade heavy battalions, the latter by corps and GHQ units. The Germans were exceptionally stingy with the Finns given their fighting performance, but did provide 150 artillery pieces during that period. The bulk of these, however,

were represented by slightly over a hundred ex-French 155mm C M17 (Finnish H/17) howitzers which were used to rearm some of the divisional heavy battalions and to form the infantry brigade heavy battalions. The only Finnish weapon to see service was the 105mm H/37 howitzer, which married a 105mm barrel to the carriage of the Soviet 76mm gun. Tampella produced 140 of these conversions during the war, of which 104 saw service.

The Finnish artillery had certainly "heavied up" from the pre-war configuration. The ratio of light to heavy⁷ artillery in the field forces was 9 : 1 at the start of the winter war and 6.2 : 1 at the end of that war. By the start of the continuation war it had fallen further to 2.7 : 1 and then to 1.6 : 1 by mid-1944. Nevertheless, some 47% of the field and fortress artillery batteries in June 1941 were equipped with light field guns (mostly old Soviet 76mm and ex-US 75mm weapons) and only 14% with the 122mm howitzers. The short ranges of these obsolete weapons also placed the Finns at a disadvantage, since 43% of the field army's artillery inventory had ranges under 10 km in 1941 and an astounding 83% had ranges under 12 km.

During the continuation war efforts were made to redress some of these problems. Some 200 of the 500 light field guns were retired, while the number of light field howitzers was doubled to 300 (largely through the addition of 104 M37 weapons), which increased firepower but not range. The acquisition of over a hundred old 155mm ex-French howitzers from German had the same effect, that of increasing firepower but not range. In fact, by the start of the 1944 offensive the only weapons in the Finn's inventory with a range over 15 km were 36 105mm guns and 40 152mm gun-howitzers. Given that even these could not reach beyond 17 km it was clear that the Finns were in no position to counter enemy artillery.

⁷The Finns defined light artillery as guns up to 84mm and howitzers up to 122mm. Heavy or heavy field artillery were larger.

Anti-Aircraft

The Finns inherited only a single battery of anti-aircraft on independence, but in 1928 expanded it slightly to form the 1st and 2nd Fixed AA Batteries at Viipuri (each four 76mm fixed Bofors m/27 guns⁸) and the Mobile AA Battery (four 76mm Bofors m/28 guns) in the 2nd Division area, with the mobile battery reequipping with new m/29 in 1929 and the m/28s being handed over to the Helsinki defense force for training purposes. All personnel had been drawn from the 2nd Coast Artillery Regiment and the units served under that regiment until 1930 when they were grouped together under the new Anti-Aircraft Battalion. In 1933 it was redesignated the Anti-Aircraft Regiment (*Ilmatorjuntarykmentti*).

This signaled a considerable expansion in the air defense arm, including the purchase of twelve 76mm guns from Vickers and 40mm guns from Sweden. By mid-1934 the air defenses of Finland consisted of the following units:

	West Finland	Isthmus	East Finland
mobile 76mm batteries	1	2	0
static 76mm batteries	7	3	0
light mobile batteries	2	2	2
light static batteries	2	1	1
AA machine gun companies	3	2	1
fixed AA machine gun platoons	11	10	8

In 1938 the force structure was revamped to give a total of 18 heavy and 13 light batteries, along with 8 AA machine gun companies, 34 separate AA platoons (heavy and light) and 3 searchlight batteries. Two regimental headquarters were set up, the 1st and 2nd, to provide administrative control. Evolution of the force structure, however, outstripped the procurement of equipment for even at the outbreak of the war in 1939 there were only 28 modern and 28 obsolescent guns for the 18 heavy batteries and the separate platoons. Sixteen of the guns were Bofors models (eight static and eight mobile), twelve were Vickers 76mm m/34 models, 8 were 76mm 02/34 converted Russian coastal guns, two were 76mm Putilovs, and the balance old Russian Canet guns captured in 1918.

The Finns had not overlooked the need for medium AA. They had ordered license production of the 40mm Bofors gun at the state artillery factory in 1938 but production was slow getting off the mark, so they ordered a hundred directly from Bofors and another 42 from Hungary. Sweden had delivered 53 by the end of 1939, along with 24 from Hungary. It seems likely, however, that only a small percentage had been placed into service.

In addition, they had four 20mm Oerlikon guns, with many Madsens on order, but those would not arrive in time for the Winter War. Supplementing those were 125 7.62mm machine guns.

⁸These were the standard Bofors 75mm AA guns rechambered for the standard Finnish 76mm ammunition.

Some of the units were found under the field army, but the bulk of the air defense units were retained under GHQ control for the defense of the homeland. Since they were too scattered about for effective regimental control a new level of command was instituted at the beginning of the war, the IPAK (*Ilmapuolustusalueet johtokeskuksineen*, or regional air defense HQ). The distribution of air defense artillery at the start of the war was:

Helsinki	HQ IPAK 15, three heavy batteries, one heavy platoon, one light platoon, one MG company, one searchlight battery
Viipuri	HQ IPAK 2100, three heavy batteries, one MG company, one searchlight battery
Tampere	HQ IPAK 51, one heavy battery, one light platoon, one heavy MG platoon
Turussa	HQ IPAK 11, one heavy platoon, one light battery, one MG platoon
Riihimäki	one heavy battery, one light platoon
Kouvola	one heavy battery
Karjala area	two heavy batteries
elsewhere	one heavy battery, two light batteries, five light platoons, seventeen MG platoons

In addition, the Navy manned eight 105mm guns, two 40mm guns and twelve 7.62mm machine guns in defense of its bases.

In 1940 the anti-aircraft forces were reorganized. For the field army each division received an 89-man anti-aircraft machine gun company (numbered 251-266) with three 2-gun platoons of 20mm Madsen guns. Each of the five corps received a light anti-aircraft battalion (carrying the same number as the corps) consisting of three medium AA batteries and an AA machine gun company. Each of the small medium AA batteries consisted of two 2-gun platoons of 40mm Bofors guns. An unknown number of heavy and light batteries were held by the field army itself for distribution as needed.

By the time the Winter War ended international demand for heavy AA guns was booming and few were to be had for a country that did not manufacture them. They did buy a dozen old 76/40 guns from Italy in 1940 and 24 Vickers 3" guns at the same time, both of them dated designs of marginal value. They captured 46 76mm Obr31 guns from the Soviets in 1941 and bought 72 more from Germany in 1944. The Germans also provided 18 mobile and 72 fixed 88mm Flak 36 and 18 Soviet guns relined to 88mm, these being formed into six-gun batteries.

For territorial defense the country was divided up into six regions that exercised tactical command over the elements of the two AA regiments with a total of 28 heavy batteries (numbered in the 1-96 series), 2 light batteries

(81 and 82), 69 light AA platoons (numbered in the 1-102 series), 20 AA machine gun companies (numbered in the 1-30 series) and 12 searchlight batteries (numbered in the 1-30 series). As a reserve the new AA brigade controlled four AA battalions (numbered 11 to 14) each with two heavy and one light batteries. As before, force structure outstripped equipment until German deliveries began to flow. The holdings at various points during the continuation war were as follows:

7.62mm AA Machine Guns

	29Jun41	4Jan42	3Jan43	1Jan44	4Sep44
Field Army	82	177	173	132	114
Territorial	41	37	65	68	134
Airfield Defense	37	27	168	175	0
Navy	41	27	127	90	66
reserve weapons	2	14	66	46	6
<i>Total</i>	<i>203</i>	<i>282</i>	<i>599</i>	<i>511</i>	<i>320</i>

20mm Light AA Guns

Field Army	105	144	143	226	204
Territorial	20	3	29	60	135
Airfield Defense	17	17	21	26	0
Navy	0	0	221	353	368
reserve weapons	0	0	4	27	13
<i>Total</i>	<i>142</i>	<i>164</i>	<i>418</i>	<i>692</i>	<i>720</i>

37-40mm Light AA Guns

Field Army	132	108	121	106	99
Territorial	58	92	94	112	135
Airfield Defense	12	12	22	20	0
Navy	24	26	73	40	38
reserve weapons	0	0	6	6	6
<i>Total</i>	<i>226</i>	<i>238</i>	<i>316</i>	<i>284</i>	<i>278</i>

75-88mm Heavy AA Guns

Field Army	34	27	5	8	12
Territorial	67	86	105	146	239
Airfield Defense	0	0	0	0	0
Navy	3	3	30	30	21
reserve weapons	0	0	2	4	3
<i>Total</i>	<i>104</i>	<i>116</i>	<i>142</i>	<i>188</i>	<i>275</i>

The increase in anti-aircraft strength is notable, but the Finns remained fortunate in that although the Soviets did bomb them, they received nothing like the pounding that Germany got from the western Allies.