

An **S&T** Game Feature



Eastfront Armored Combat with Miniatures (TAC-3 20mm)

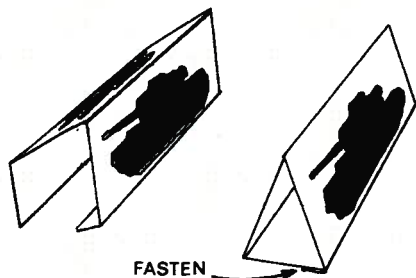
Arnold Hendricks

Many gamers hold that there is no basic difference between board and miniatures type games, aside from the superficial changes in scale and the use of models instead of counters. To try and determine, one way or another, if this is true the following game has been developed from the TSG Tactical Game 3. The designer, Mr. Hendricks, is basically a miniatures gamer with a wide background in board games. He does not consider this game as one of the "best" miniatures games around, but it should suffice to introduce the "miniatures" approach to those not familiar with it. We have other miniatures type games in progress. Your response to this one will decide what will be done with them. Reply on your FEEDBACK.

T-34 TEST COUNTERS

For those of our readers who do not have the inclination or the cash and/or the mechanical skill to obtain and assemble the plastic models usually used in games such as "T-34," the ever-thoughtful editors of STRATEGY & TACTICS have included with this issue a reasonable facsimile of some of the units in "T-34." Readers who are not miniatures "freaks" should use these paper facsimiles to test "T-34" before investing in a plastic armored division.

To assemble the counters, cut them out along the solid black lines, and fold them along the dotted black lines so that each counter forms a tent-like structure. Glue or tape them together at the base (see diagram).



GAME SITUATIONS

Miniatures lend themselves particularly well to use in tactical level games. Perhaps the main advantage of miniatures is the potential of the game situations to be easily put together by the players themselves. And that's what you can do with "T-34." That's what you do in miniatures.

DESIGNER'S COMMENTS

Tac 3/20mm isn't exactly the most detailed miniature WWII land wargame around. In fact, it is really just a direct steal from TACTICAL GAME No. 3 of the TSG. What I hope it will do is provide that real bridge between board and miniatures, to get each side of the fence partly on the other. Miniature wargamers are going to find having combat factors and a CRT a bit strange, while board wargamers are going to find all those tank models and painted figures weird too. In fact, the lack of hexagons alone is startling enough.

The rules are neither complex nor comprehensive, if anything they were designed to be clear. This game is a 'quickie', fast to set up, almost as fast to play. For those tactical historians with the "what if--", it is a tool for endless answers. By now you should have enough organizational information to be able to set up various German and Russian formation using platoons and companies as building blocks. Pick your terrain and objectives, and have at it. If your imagination fails you, some reading into the real campaign and some of the battles should produce enough food for thought. For the fun-minded, I personally have a set of "orders" cards each containing an order of battle and a mission for one side. I set up a Russian and German deck before each battle, and thus players remain in the dark about enemy forces and objectives

For those who find Tac 3/20mm just a nice take-off point for 1944 vintage land miniatures, note that S&T does indeed have considerably more detailed and simulation-oriented rules around. I know because I have designed and tested one set myself! Naturally, all it takes is a lot of little notices from you to produce them in an upcoming issue.

RULES OF PLAY

VOCABULARY

Unit: one playing piece (either a stand of men or a vehicle)

AFV: Any vehicle other than a truck or halftrack

Infantry: any infantry unit, including engineers and special types of foot troops

Heavy Weapons: any unit with an artillery piece, mortar, anti-tank gun, rocket, etc., etc.

PROCEDURE OF PLAY

Usually the Russian player will move first. Then the German player. After each player moves, both players fire all their units they wish to at the enemy. The moving player fires all his units he desires first, then the other player fires his survivors. Thus the procedure for a full turn is:

Russians move, Russians fire, Germans fire; Germans move, Germans fire, Russians fire. This is a complete turn, which has two "moves" (one for each side) and four "rounds" of firing (two for each side).

Scale: each turn is 6 minutes of battle, each inch is about 85 meters.

MOVEMENT OF UNITS

You may move during your "move" as many of your units as you wish, including all or none. However, you must finish the move of one unit before starting that of another.

You may move a unit any speed up to its top speed, but never faster, and must take into account all delays and movement restrictions as given below:

You may never move through or onto any other unit friendly or enemy.

Certain terrain features will effect the movement of a unit:

HILL SLOPES: any unit, but infantry, going up a hill slope takes three times as long. Thus for every one inch of slope climbed three inches of regular cross-country movement are used. There is no delay for moving across the flat tops of hills, or moving downhill.

STREAMS: crossing streams imposes the same delay as climbing slopes except infantry too are effected.

RIVERS: rivers are impassable. Fords are considered streams for movement purposes.

FORESTS: only infantry and heavy weapons are allowed in forests. There is no speed reduction for forests.

BUILDINGS: any unit can move through buildings, and there is no speed reduction for moving through it.

ROUGH TERRAIN: rocky and badly broken ground normally will prohibit the movement of any vehicles in it. This is up to the individual players since no general rule can be honestly formulated in this department to ANY degree.

ROADS will allow units to move more quickly than normal:

INFANTRY, HEAVY WEAPONS, AND HALFTRACKS move 2" on the road for every 1" of cross-country move expended. (Otherwise saying, they double their speed.)

TRUCKS triple their cross-country speed while on roads. Both these categories can combine cross-country and road movement in any way they desire.

AFV's have a 17" road bonus. However, to receive this bonus they MUST move at least half their movement rate on the road. When they finish moving this distance they are free to move up to 17" more free of charge to their cross-country rate.

All units, regardless of situation (unless pinned, see optional rules) may move at least 1" if they so desire.

Trucks and Halftracks may each carry one infantry or heavy weapon unit each. Tanks can carry only infantry units. Picking up (embarking) and dropping off (disembarking) a unit costs 4" of the carrying vehicle's move. This vehicle must have 4" of cross-country movement left in order to embark or disembark units. Remember that you must move one unit at a time, and complete the move of one before starting another. Thus a unit cannot move "at both ends of the line" in the same turn, so to speak. Units that were both embarked and disembarked in the same turn cannot fire, and should have their weapons pointed away from the enemy to signify this. German tanks carrying infantry cannot fire while infantry are aboard, and also should have their weapons pointed away to signify this. While a unit is being carried it is helpless and without defensive value, if the unit carrying it is destroyed, so is the unit being carried.

FIRING

To fire at the enemy a unit must have the target visible to it, must have an unobstructed line of fire, and must be within the maximum range of the firing unit.

In the basic game all units are deemed fully visible.

Most weapons have a flat trajectory of fire. Thus you may not fire through other units, buildings, or terrain features (such as hills, intervening forests, etc.). To make sure of this, sight from the firing unit to the target, if more than a quarter of the target is not visible from one point of view of the firing unit, assume it cannot be hit. You must have a CLEAR shot.

Then measure the range from the firing unit to the target, if the distance is greater than the maximum range of the firing unit, the target cannot be hit.

You are allowed to have several units combine their firing factors at one target.

You are allowed to fire at the same target more than once provided you use separate units or groups of units, because each unit can only fire once per round.

When firing you announce the target for each unit or group of units before checking line-of-sight and range. If for some reason the target selected cannot be hit, the firing units are assumed to have fired for that round and missed. You then go on to the next unit or group of units and select their target—it can be the same one!

To resolve firing that is legal, total the firing values of the units shooting. Compare this to the defensive value of the target (which may be doubled in certain circumstances, see below). This gives you a shooter-defender odds comparison, which you must reduce to its simplest form. Divide the defensive value into the firing value, and drop any fractions. Compare this number to "1" and you have it in its simplest form. Two PzKw tanks firing at a Russian infantry company have odds of 26-16, which is rounded to 1-1.

After determining the odds, consult the survival table and roll the die. Depending upon the odds and die roll, the target may survive or be destroyed. Don't forget, if one unit misses, you can always have someone else who hasn't fired yet, shoot at it.

TERRAIN AND DEFENSIVE VALUES

In a building all units inside combine their defense values into one number, which is then doubled. This is the only effect buildings have in the game.

In forests each individual unit is doubled. Units may fire into forests or buildings, but may not fire through them at targets beyond.

Units on a hill slope that are fired on from ABOVE have their defensive values cut in half. If the firing units are both above and below the target on the slope, the target keeps its normal defensive value.

TERRAIN AND FIRING VALUES

Any units that are firing at a range of 3" or less triple their firing value.

Any units that finish their turn in a stream AND are firing at 3" or less have their firing values only multiplied by 1½ (ignore fractions) instead of 3.

Any AFV's or Anti-Tank guns firing at any vehicle will double their firing values when firing at ranges over 3" but at or under half their maximum range.

RUSSIAN INFANTRY

Russian infantry always lacked good anti-tank weapons. Therefore, when firing at any AFV these units have a firing value of 2 instead of 5. This new value is still subject to all terrain and range alterations. Optionally guard Russian infantry can be given a value of

3 (depending upon whether you believe Soviet historians or not).

OVER-RUNNING

Any AFV or halftrack can overrun any one enemy infantry or heavy weapons unit. The victim must be on flat, open ground; not on a hill slope (but it can be on a hill top), not in rough terrain, nor in a building or a forest. The overrunning unit may not cross a bridge or stream and overrun the enemy in the same move.

To overrun a unit, simply move the over-running unit directly onto your victim and finish your turn touching your victim and going further. You may not finish the turn upon the victim. No other unit can drive through the space of a dead overrun unit the turn it was overrun, but a unit can be overrun more than once (even if killed the first time).

When a unit is overrun, the "crushing" effect is immediately evaluated. The firing value of the overrunning unit is tripled, and compared to the regular defense value of the victim. The result is resolved like normal firing, but immediately after the overrunning unit finishes its particular move. Any other unit passing through the area of the overrun victim must behave as if it was overrunning, even if the victim was already killed. Thus you cannot overrun a unit successfully and open up a hole for other units to move through.

MINEFIELDS

When a unit runs into a minefield the opponent (who had them all marked on a secret map before the game started) tells him of this fact. The victim must immediately stop once fully into the field. During the next firing round the owner of the field gets, he may "fire" the minefield just like a normal gun at the trespassing unit. The minefield has a value of 20, and other units are allowed to join in. On the next move for the trespassing unit, it can move 3" (or less if its maximum is less). If still in the minefield it must again stop and be attacked once more by the minefield, if not, it may continue. A minefield only attacks once between moves of the trespassing unit, on the first firing round immediately after the contact is made. A minefield can attack an unlimited amount of times, and an unlimited amount of units in any one turn.

An engineer unit can lay an area of mines equal to its own size in 5 turns. It can clear an area equal to its own size in 2 turns. Only engineers can lay or clear mines. To do this they must not fire before or after the move, and may not move. This is one "turn" of clearing. If an Engineer unit is destroyed by fire before its task is completed, the job must be started all over again. Engineers should not be allowed to lay mines during the game because the troops don't usually go around carrying a dozen or so mines all the time. But in special situations this may be altered.

OPTIONAL RULES

The following optional rules are designed for miniature wargamers who desire a more complex and variable battle. Games using these rules to any degree will take longer, and are best handled with multiple commanders on each side. Players are encouraged to choose their own rules, but from a realism standpoint "High Trajectory Fire" and "Pinning Fire" should be the first to be used.

HIGH TRAJECTORY FIRE

German artillery (mortars, howitzers, rockets) operating with infantry units maintained good enough communication procedures in fluid situations so that the infantry could often call up for artillery support and guide the fire to target although the firing guns could not see the target. Therefore, any target able to be fired upon by German infantry can also be fired upon by German artillery. The artillery firing upon the target do not have to be able to see the target in order to fire. But remember, the target does have to be within range of the infantry.

In multi-player games, German commanders can use artillery units under their own command only: they may never fire at targets visible only to someone else's command, and cannot "borrow" artillery support or guns from someone else.

In single player games players with a passion for complexity can also recreate this lack of cross-command artillery support networks. At the start of the game organize for each battalion certain artillery units, and give regimental artillery to a battalion also. The guns of each battalion operate separately, as in the multi-player game, under the visual direction of the infantry of that battalion.

Russians are considered to have such a poor communications system that no fire of this nature is allowed.

German artillery, because of its high trajectory, can fire over any friendly or enemy units, but the target has to be visible to the directing infantry unit (and within the firing range of that infantry unit).

ARTILLERY OBSERVERS

Individual men are used in this rule as artillery observers. These, instead of infantry units, direct the artillery fire. Artillery observers may travel with any unit they so desire, and when one unit passes next to the other and touches, the figure of the observer may be transferred to the next unit. Observers have no combat or movement power of their own, and share the fate of the unit they are attached to. Observers can see 20"; in buildings this is increased to 25", and on high hills to 30".

German observers are attached at the rate of 2 per battalion, and 1 extra (the artillery officer) per regiment of infantry. Separate artillery battalions also have observers (1 for each). In the battalion each observer has the ability to call down all artillery in that battalion. Any regimental or independent guns attached to the battalion he also controls. At the beginning of the game the German commander should make clear secretly just who controls what. Regimental and independent artillery can remain under the control of their commanders, or be farmed out to the battalions.

Russians are allowed 1 observer for each infantry brigade, and 1 observer for each independent artillery battalion.

With observers all the other high-trajectory rules for both Russians and Germans are in effect. Note that observers considerably complicate the whole game, and should not be used by anybody less than an experienced die-hard artilleryman.

PINNING FIRE

Infantry and heavy weapons, being directly exposed to fire, will often take cover in battle situations and advance slowly or not at all. It is

assumed in this game that all troops are well enough trained to continue to move under fire to some degree. A poorly trained unit will stop completely when pinned down.

Whenever a "pinned down" result comes up on the survival table the unit is still living but pinned. Units that this happens to should be so noted (a straight pin stuck in the troop stand is a handy symbolic note). Pinned infantry units can only move 1" a turn and have no road bonus. Pinned heavy weapon units cannot move at all. After the movement turn for a player is finished all "pinned" markers from his troops should be removed. Unless the unit(s) are again pinned they are free to move their full rate on their next move. Pinned units are allowed to board trucks or halftracks, but not tanks.

AFV's can support infantry, thus protecting them from being pinned. To support an infantry unit, the AFV must finish its turn adjacent to the infantry, and vice versa. During the firing after the move, the infantry and/or heavy weapons cannot be pinned so long as they survive an AFV touching them.

Pinned units are unable to construct or clear minefields, and cannot dig in (fortify).

DIGGING IN

At the start of the game players may sometimes wish to fight a more static battle situation. In this case they might allow units to be dug in. In other games more daring players might allow digging in during the game. Units digging or dug should have imitation raw dirt, and perhaps camouflage nets on and about them to signify this fact. In the rules below, digging in and fortification is considered one and the same.

At the start of the game units are allowed to be fortified in a hasty or prepared manner. During the game units will only be allowed to make hasty fortifications. Construction of hasty fortifications takes 5 turns of work. Procedure for infantry building hasty fortifications is the same as for engineers laying mines (see Minefield rules, last paragraph). Only infantry and heavy weapons can make hasty fortifications during the game.

Prepared fortifications are just like having a building around you.

Hasty fortification will double the unit fortified, but there is no combination of defense factors.

Fortification in houses or forests is not normally allowed because it takes a very long time. However, players may allow this, in which case units triple.

Fortified units can be considered to be worth twice their normal point value.

Once enemy units occupy the fortifications they are automatically destroyed.

BLOWING BRIDGES

After any engineer unit passes over a bridge it may try to blow it. When a bridge is declared "blown", roll the die:

1,2,3,4: bridge is completely destroyed

5: bridge collapses, only infantry and 81 or 82mm mortars can cross it, and only at 3" per turn. (These units can be pinned while crossing, of course.)

6: charge fails and bridge remains intact.

If one engineer unit fails to do the job right, the next to pass over the bridge can try again. Remember though, the bridge must be blown immediately after the move of that engineer unit.

SOFT GROUND & MUD

In soft ground or mud all units but infantry and mortars are slowed down. If the mud is bad enough to slow infantry and mortars, it is probably so bad that vehicles and other heavy weapons couldn't get through at all.

In soft ground or mud new overland movement speeds are in order, as follows:

Heavy Weapons (besides mortars): 0"; Trucks: 1"; Halftracks: 12"; AFV's: 20"; T-34/c; 16"; T-34/85, SU-85, PzKw V, J.Pz V; 12"; JS-II, JS-III, SU-100, PzKw IV, J.Pz IV, StuG III; 11"; PzKw VIa, Hetzer; 8"; PzKw VIb, J.Pz VI.

ARMORED CARS

Armored cars have the same movement rate and movement rules as trucks.

RULES FOR THE GAME TABLE

CAPACITIES

It is suggested that individual buildings should be allowed to hold any 3 German units or any 2 Russian units, but never troops of the same side. Buildings in a town should be within 3" of each other. Factories, state farms, and other conglomerates of buildings (perhaps 3-6 buildings large) should be formed so almost all the buildings are within 3" of each other so an accurate picture of street fighting can be formed.

FORESTS

It is also suggested that forests be given capacities and organized into sections, each section corresponding to the capacity of one building. This will simplify forest battles considerably. Forests in this game are considered to be relatively dense stands of trees.

HILLS

The common method of making hills on the game table: contours, leads to problems as to what is slope and what is hilltop. Players may wish to specify this before the game starts or use an alternate system. This writer builds up hills of wood and books, and then stretches over the top an imitation grass mat (as used in HO train layouts) which is carefully tacked down to the table at various key points so that ridges, valleys, slopes, and hill tops are all easily formed.

MULTI-COMMANDER GAMES

It is not recommended that players have more than one commander for every two feet of table space available. Players should also have at least a brigade (Russian) or regiment (German) of troops to command in an interesting game. With artillery rules command systems take on a vital role. Communication between commanders on the same side should either be during enemy moves via secret notes (can write one note per enemy move) or by verbal communication that can be clearly heard by the enemy.

UNIT CONSTRUCTION-using models

All vehicles are generally assumed to be 2½" x 1½". The slight variation in size from this norm by 20mm vehicles is not important. The "Minitanks" line of vehicles is suggested as excellent and cheap scaled models, although they are more and more difficult to find. Some players may also prefer to glue pieces of figures realistically into turret hatches and driver's seats.

All German infantry and heavy unit stands should be 2½" x 1". The 3 figures (a good norm for representative purposes) should be arranged so they are facing lengthwise down the stand, and the "front" is a 1" side of the stand. This is because the 1" side will probably be often facing the enemy in concentrated attack dispositions.

All Russian infantry and heavy weapon units should have stands 2½" x 1½". These stands should have 5 figures each, facing in the same way as the German stands.

3/16" balsa wood makes good stands. Imitation HO scale grass glued to the top around the feet of the men makes a realistic appearance, while sides of the stand should be painted a shade of green close to the color of the grass.

German uniforms were Feldgrau (Gray-Green) which was closer to dark green than anything else. Russian uniforms were khaki, although often dirty, which is close to a tan color. Details of the figures and guns is up to the individual players, of course.

German vehicles were painted camouflage colors individually by their crews, and have no set color. Russian tanks were mostly forest green without any visible insignia. The Russians, fortunately for us, made extensive use of U.S. trucks (easy to find items in hobby stores).

Using 20mm scale, the rest of the game table can be set up using HO scale equipment.

Artillery observers are individual men without stands.



T-34

("•" indicates unit-types given as paper models)

UNIT COMBAT FACTORS

RUSSIAN UNITS	SPEED (inches)	RANGE (inches)	ATTACK FACTOR	DEFENSE FACTOR
• Infantry	3"	12"	5	16
• 82mm Mortar	3"	36"	6	8
120mm Mortar	1"	60"	26	5
57mm Gun	1"	12"	6	3
• 76mm Gun	1"	24"	9	2
85mm Gun	1"	36"	11	2
Engineers	3"	6"	3	8
T-34c	30"	24"	9	9
• T-34/85	27"	36"	11	10
JS II	21"	60"	14	12
JS III	21"	60"	14	16
• SU 85	27"	36"	9	12
SU 100	25"	42"	14	14
• HalfTrack	30"	12"	2	4
Truck	21"	0	0	1

GERMAN UNITS	SPEED (inches)	RANGE (inches)	ATTACK FACTOR	DEFENSE FACTOR
• Infantry	3"	18"	3	8
• 81mm Mortar	3"	36"	6	6
120mm Mortar	1"	60"	20	1
75mm Howitzer	1"	36"	13	2
150mm Howitzer	1"	36"	24	2
• 75mm Gun	1"	36"	12	1
88mm Gun	1"	60"	20	1
Engineer	3"	6"	2	6
• Pz IV	22"	36"	13	8
Pz V	25"	36"	16	12
Pz VIa	17"	36"	15	12
Pz VIb	17"	60"	20	16
• StG III	22"	36"	11	12
PzJg IV	22"	36"	16	13
PzJg V	25"	60"	20	14
PzJg VI	17"	60"	20	16
Hetzer	17"	36"	11	12
Nashorn	22"	60"	20	6
• HalfTrack	30"	12"	2	4
Truck	21"	0	0	1
Armd Car/20	20"	24"	6	6
Armd Car/50	20"	36"	8	6
Armd Car/75	20"	36"	10	6
Rkt Battery	1"	60"	35	1

SURVIVAL TABLE

Die Roll	Basic odds:						EXPLANATION:
	DA	1-1	2-1	3-1	4-1	5-1 or greater	
	1	D	D	D	D	D	
2	s*	D	D	D	D	D	
3	s*	s*	D	D	D	D	
4	s	s*	s*	D	D	D	
5	s	s*	s*	s*	D	D	
6	s	s	s*	s*	s*	D	

EXPLANATION:

"DA": defender's value is greater than that of the attacker. If the defender's value is more than twice that of the attacker, the attacker automatically has no effect.

"D": as a result, this signifies that the target is destroyed.

"s": as a result, this signifies that the target survives.

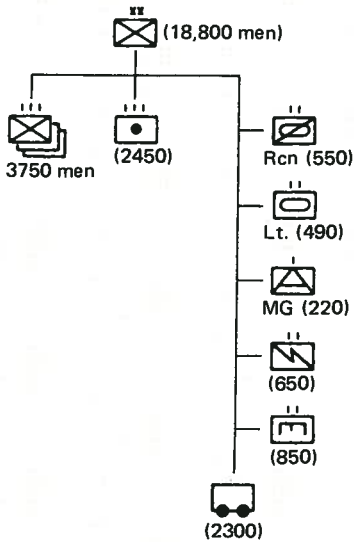
"s*": as a result, this signifies that the target survives, however, using the optional "Pinned Down" rule it also means that infantry or heavy weapons units as targets are pinned down.

EASTFRONT ANALYSIS: Part I

Organization of Soviet Ground Forces

1

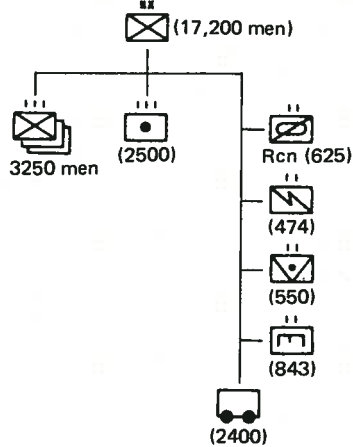
9/39 SOVIET RIFLE DIVISION



9/39 SOVIET RIFLE DIVISION—On paper it was a contemporary of the '39 German infantry division. In fact, it was more lavishly equipped than its German counterpart, having a light tank battalion the German unit lacked. Despite its bulk, it did not possess either the structural "unity" or the trained personnel to be as effective as the German division. This was shown when this type of division was severely mauled by the Finns during the 1940 war.

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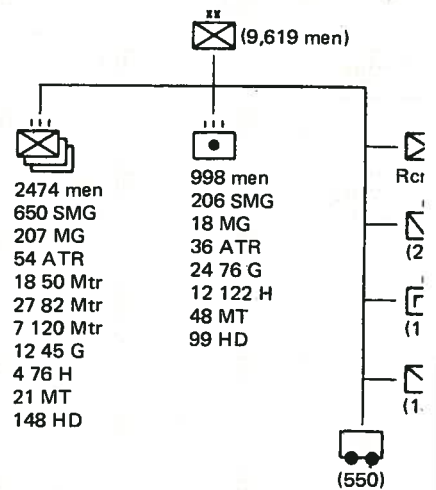
1939 GERMAN INFANTRY DIVISION



1939 GERMAN INFANTRY DIVISION—An updated version of the highly successful 1918 German STOSS (assault) DIVISION. Its major drawback was that it was not motorized. But in situations that did not require tactical mobility this unit was, in 1941, unbeatable. It possessed a highly efficient and powerful artillery component. Between 1941 and 1943 the size of various weapons, particularly anti-tank, increased from 37mm to 75 mm. Also, in late 1943 more 120mm mortars (direct copies of the original Russian design) appeared. This unit had about eight times as many radios as its Soviet equivalent.

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12/42 SOVIET RIFLE DIVISION

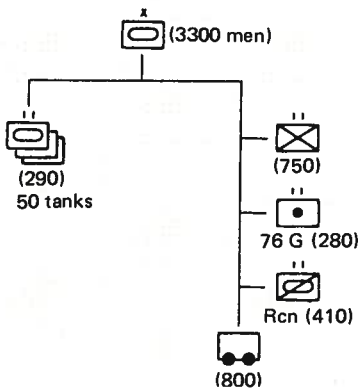


12/42 SOVIET RIFLE DIVISION—Compared to the 9/39 division this unit was: 50% weaker in manpower, had 15% fewer infantry, 2200 more SMG's, 17% fewer MG's, 250% more anti-tank rifles, 31% fewer 50mm mortars, 360% more 82mm mortars, 75% more 120mm mortars, 7% fewer anti-tank guns, 24% fewer 76mm guns, 70% less artillery, 77% fewer motor vehicles, 69% fewer horse drawn vehicles, 17% more "guns" and 18% less firepower. Man for man, the 12/42 division had 64% more firepower than the 9/39 division. By the end of the war there were some 400 divisions of this type. Few were ever at their

"authorized" strength very little "fat" was wasted away quickly few days of inter rifle division would half its "paper strength" ally stripped of infantry then either be completely wiped out or pulled out of (a process that could a few weeks). Soldiers were not kept replacements as v divisions.

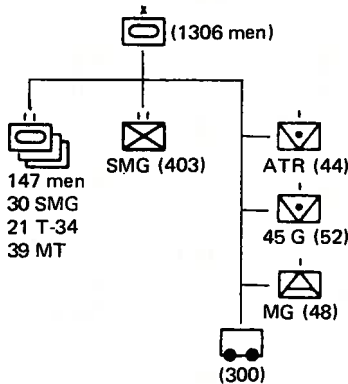
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1941 SOVIET MOTO-MECHANIZED BRIGADE



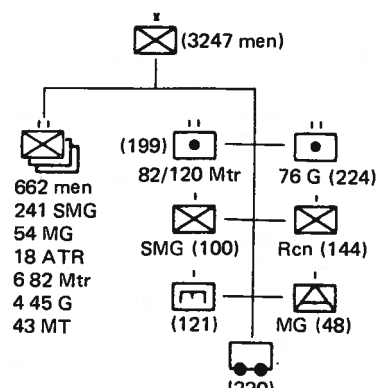
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1942-45 SOVIET TANK BRIGADE



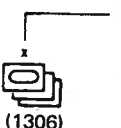
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1942-45 SOVIET MOTORIZED RIFLE BRIGADE



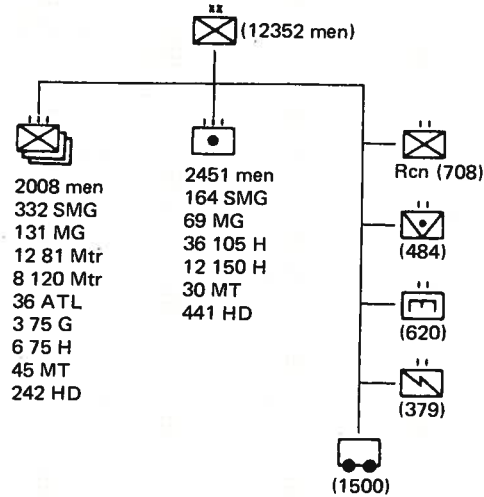
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1942-45 SOVIET



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1944 GERMAN INFANTRY DIVISION

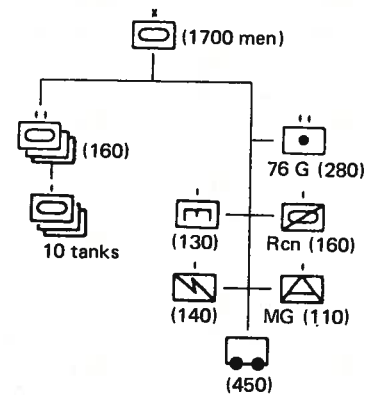


1944 GERMAN INFANTRY DIVISION—The Germans had suffered enormous personnel losses during their first two years in Russia, and could no longer keep their infantry units up to strength. Therefore, in late 1943, the "1944" infantry division was authorized. Practically every German infantry division reorganized under the new plan and as a result most divisions were "brought up to strength". In addition, 16 new infantry divisions were organized (only 24 had been raised since June '41 and 15 of these were "static" divisions for the west front). The major change was a reduction of the number of infantry battalions from nine to six (each regiment lost one battalion). The number of rifle platoons per company was reduced from four to three. In early

'44 further changes were made, with the number of men in the infantry squad reduced from 10 to 9 and the number of machineguns reduced from 15 to 13. Following the Russian model, the number of rear echelon personnel was cut considerably. The net result was that the total manpower was reduced 27% while the total "firepower" increased 25% (based on the original 1939 armament, but this had been increased because of an increase in the caliber of certain weapons, such as anti-tank guns and 120mm mortars. The actual increase in firepower was probably closer to 10%). The amount of artillery stayed the same while the amount of infantry decreased 32%. It was an emergency measure and it worked.

5

1941 SOVIET TANK BRIGADE



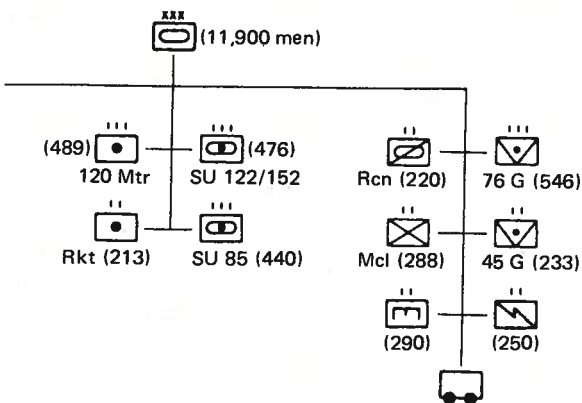
1941 SOVIET TANK BRIGADE—Basically, the problem with this unit was too many tanks and practically no infantry at all. Most units of this type were destroyed during '41. The "new" '42 tank brigade replaced it. The main changes were the addition of an infantry element and the elimination of the "fat" support troops. The 76mm gun battalion was also lost.

or long. Having n, the divisions combat. After a rbat the 12/42 wn to less than and be practic- The unit would il it was com- hen disbanded, : for rebuilding mpleted in Rifle Divisions line and fed estern infantry

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1942-45 SOVIET MECHANIZED CORPS

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1941 SOVIET MOTO-MECHANIZED BRIGADE—Basically a component of the Moto-Mechanized Corps of 1941, this unit had too many tanks and too little infantry and support troops. By 1942 it had disappeared.

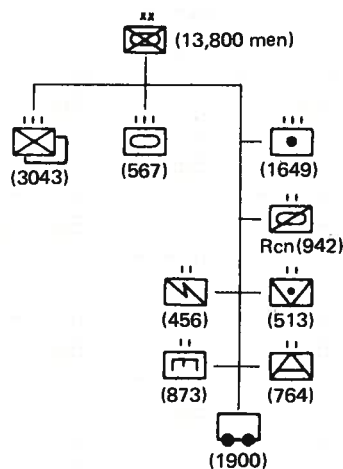
1942 SOVIET TANK BRIGADE—Actually, in western armies this would be considered a tank battalion with two companies of infantry plus small anti-tank and anti-aircraft units attached. This combination of tanks and infantry (all armed with SMG) was ideal, for the infantry's sole duty was to protect the tanks from enemy infantry. The lack of organic infantry in other nation's tank units often caused tanks to be caught without infantry, an event which would often cause more damage to the tanks than to the infantry.

1942 SOVIET MOTORIZED RIFLE BRIGADE—Basically nothing more than a reinforced rifle regiment. In practice it was much more. Because it was a "mobile unit" it received the best in men and equipment. Compared to a German panzergrenadier regiment it had: 5% more men, 210% more SMG, 12% fewer MG's, 16% more mortars (although only half as many 120's), 20% fewer "guns" and 41% fewer motor vehicles. In other words, it was about equal in firepower but inferior in mobility and flexibility. With the addition of a 543 man Tank Regiment (41 T-34 tanks) this unit became a **MECHANIZED BRIGADE**; which made it more than a match for the panzergrenadier regiment.

1942 SOVIET the Russian armor panzerdivision. composed of ("brigade") an ized rifle) bat were smaller artillery. In te the German un and an advan vehicles. But

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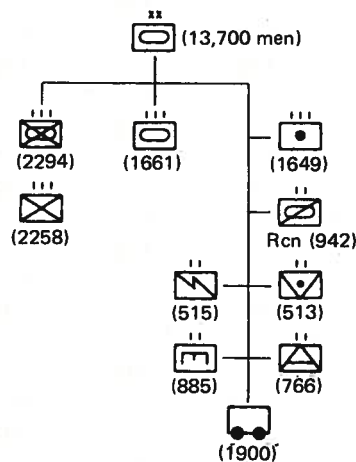
1943-44 GERMAN MOTORIZED INFANTRY DIVISION



1944 GERMAN PANZERGRENADIER DIVISION—The "panzer" connection was slight. The unit had 92 AFV, usually all were assault guns (although on paper 40 or so were supposed to be tanks). The unit was actually a "motorized infantry division" although the Germans often used it as they would a pure panzer unit. Being primarily an infantry unit, the panzergrenadier division had more staying power than the panzer division. For each panzergrenadier division on the east front there were usually about 3 panzer divisions. The Russian ratio was closest to 1 to 2. The panzer and panzergrenadier divisions had identical "support" units, only their major (infantry and tank) units differed.

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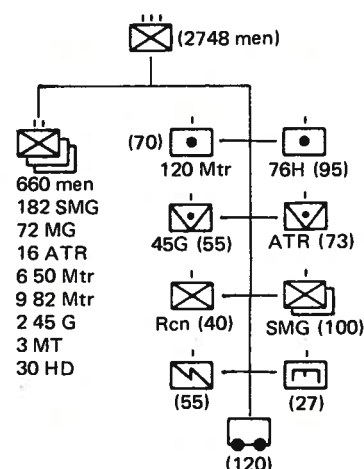
1943-44 GERMAN ARMORED DIVISION



1944 GERMAN PANZER DIVISION—The chief difference between German and Russian tank units lay in the superior "balance" of the German unit. It had a large artillery component, as well as a full battalion of engineers. The German unit did not contain such a multiplicity of units as the Russian Tank Corps, and this aided control of the unit in combat. Like all other German units, this one had a greater capacity to re-build itself while in action through the maintenance of a large (1,000+) man replacement battalion. A Russian rifle division had a 100 man replacement unit.

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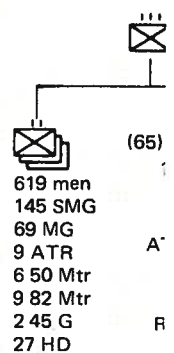
12/42 SOVIET GUARDS RIFLE REGIMENT



12/2 SOVIET GUARDS RIFLE REGIMENT—As a means of encouraging, rewarding and calling attention to superior battlefield performance, the title "Guards" was awarded to numerous units of the Soviet armed forces (over 20% in some branches). With the title went the privilege to obtain better personnel and equipment. The 12/42 Guards rifle regiment shows how the material improvement usually took place. Its "regular" counterpart was the 12/42 rifle regiment. Most of the additional equipment found in a Guards rifle division would be in the rifle regiments. Aside from the better and more numerous equipment, it was the upgrading of personnel which probably contributed more to the Guards' units superior performance.

14

12/42 SOVIET R



12/42 SOVIET The 12/42 rifle considerable advantage "44 German eq more men, 36% more SMG, 57% deficient only in weapons it had. I German's main 12/42 Russian r 18% of its firepower artillery, the ' division had 55% artillery. Therefore comparing the regim will naturally cor common Russian of its firepower this practice cau take enormous ca the Russians to i firepower and, them out of Russ

AK CORPS—This was part of the German eastern front. In terms of tank battalions, it had more infantry (motorized). Added to these were assault guns and overall firepower an advantage of 8% of 40% in motorized units. A Soviet unit had 240

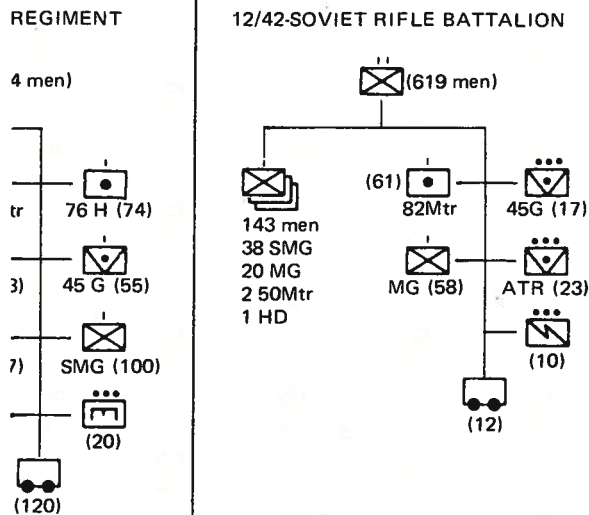
AFV to the German's 150 although the Germans also had 20% more infantry and 12% more men overall. Like all other Soviet mobile units, this one usually had better men and equipment than non-motorized units. The Guards Tank Corps were particularly well off, as they were equipped with the best and newest armored vehicles. Throughout early 1944 they were about the only units with the T-34/85.

1942 SOVIET MECHANIZED CORPS—At first glance it appears to be the Russian equivalent of the German panzergrenadier division. But its large tank component puts it in the same category with most German armored divisions. Probably the most powerful division size unit to be raised by the Russians. In terms of firepower it was superior to the German panzergrenadier division, and in almost all other categories it was superior. For example: 26% more manpower, 17% more infantry, 152% more AFV and 68% more "guns." But the Russian unit had 19% less motorized transport. And this, coupled with its lack of overall firepower (due to the lack of any real artillery), did not give it the "depth" of the German unit. Still, it was one of the most efficient units to be produced by the Russians.

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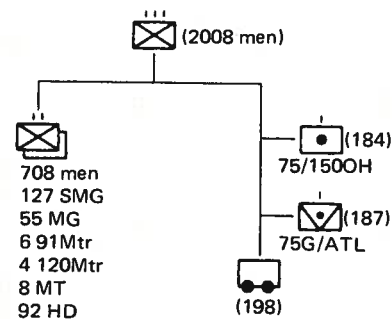
12/42-SOVIET RIFLE BATTALION



12/42 RIFLE BATTALION—On paper, the Soviet battalion was about equal to the German '44 battalion in firepower, although it had some 90 fewer men. What gave the Germans an edge was their numerous divisional artillery, which was accustomed to working closely with the divisional infantry battalions. This was not the case with the numerous non-divisional artillery which often worked with Soviet rifle battalions. What this points up is that the infantry does most of the dying and the artillery most of the killing. Thus, despite the efficient organization of the 12/42 Soviet rifle battalion, these units were still smashed with depressing regularity by the more efficient German artillery. It was common for rifle battalions to be reduced to a few dozen men after a few weeks action.

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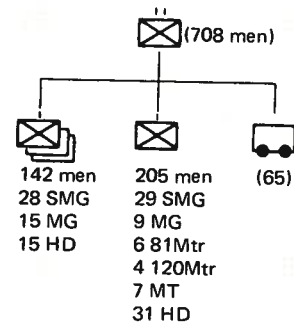
1944 GERMAN INFANTRY REGIMENT



1944 GERMAN INFANTRY REGIMENT—The chief differences between the '39 infantry regiment and the '44 version were a reduction of 45% in the infantry and a reduction of 38% in total manpower. The firepower of the new regiment, however, was 6% greater than the '39 unit. This was accomplished through the introduction of 120mm mortars and by not reducing the "heavy weapons" (75mm and 150mm infantry guns) belonging to the regiment, despite the fact that the regiment now had only two (17% smaller) infantry battalions where there were once three. One important weapon was reduced: the 75mm anti-tank gun. German tank production was increasing so quickly that there were not enough of these weapons (which were used on almost all tanks) for the infantry divisions. Three were still allocated to each regiment, plus 36 88mm rocket launchers.

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1944 GERMAN INFANTRY BATTALION

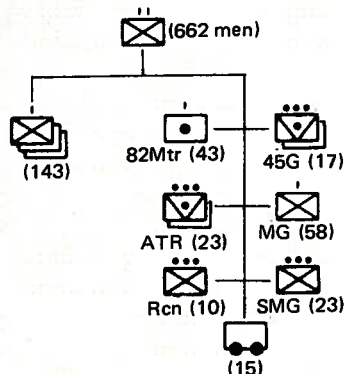


1944 GERMAN INFANTRY BATTALION—The only advantage the old '39 infantry battalion had over the Soviet rifle battalion was its greater manpower (850 to 619). In number of weapons it was almost identical, and the same applied to firepower. Were it not for the more effective German divisional artillery, the Germans would have been losing men at the same rate as the Russians. This was something the Germans could not afford. By 1943 the effectiveness of the German artillery was becoming less and less. When the infantry division was reorganized four 120mm mortars were added to the infantry battalion (they were equal, in an emergency, to a battery of four 105mm howitzers). This restored the advantage the Germans were beginning to lose. For a few months.

GERMAN INFANTRY REGIMENT—The regiment had a concentration of firepower over its front. It had 25% more infantry, 58% more MG and was short of artillery. This was where the difference was. The division had only one in the divisional German infantry. Firepower in its own right when just compared to the Russian one was ahead. It was a mistake to put most of the front. Although the regiment's artillery, it also allowed the Germans in a battle, to throw

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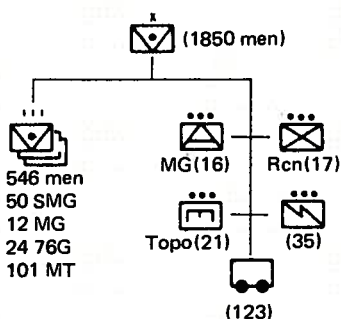
1942-45 SOVIET MOTORIZED RIFLE BATTALION



1942-45 SOVIET MOTORIZED RIFLE BATTALION—This was more than a "motorized" version of the 12/42 rifle battalion. It had about 40 extra men and 43 vehicles. It had 33% fewer 82mm mortars, 35% fewer machineguns and no 50mm mortars. It did have 66% more SMG and twice as many anti-tank rifles and 45mm guns. Compared to its German equivalent, the '44 motorized infantry battalion, the Russian unit was completely outclassed. The German unit had the strength of the old '39 infantry battalion (868) and the armament of the newer '44 battalion. In addition it had, man for man, 150% more vehicles. Yet the Soviet motorized rifle battalion served its purpose. It motorized the Soviet infantry, something the Germans thought the Russians would never be able to do successfully.

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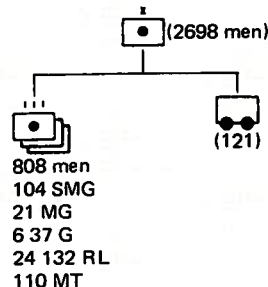
1942-45 SOVIET MOTORIZED ANTI-TANK BRIGADE



1942-45 SOVIET ANTI-TANK BRIGADE—These units first proved their worth on a large scale during the Battle of Kursk (July 1943) when they shattered division after division of German tank troops. Properly deployed, an anti-tank brigade would usually destroy or disable half the AFV in a full strength German armored division before being destroyed itself. These brigades were usually used in this fashion, to deliberately sacrifice themselves in order to weaken the attacking German armor. The Russian tank forces would then counterattack and drive the Germans back. The attrition among these brigades was much higher than among any other type of artillery brigade. Up until late 1944 there were never more than 20 or 30 of them available at any one time. By the end of the war they were being used as regular artillery. The Germans had run out of tanks before the Russians ran out of 76mm guns.

20

1942-45 SOVIET ROCKET LAUNCHER (M-13) BRIGADE



1942-45 ROCKET LAUNCHER (132mm) BRIGADE—The customary use of Soviet artillery was a large scale bombardment of enemy positions with many guns firing as large a number of shells as possible in the shortest possible time. This was the lesson learned during World War I and was about where the Soviet artillery was at. Naturally, rockets fit perfectly into this type of operation. Each launcher fired all ten of its rockets at the same time. Thus one 132mm launcher could fire in a few seconds the same weight of shell as a 122mm howitzer would fire in ten minutes. Because the rockets had only about half the range of regular artillery they had to emplace closer to the front. The prominent back-blast of the rockets when they fired also gave away the units' positions. For these reasons the rocket units were usually only used for large offensives and/or when the Russians had sufficient ground forces at the front to provide proper security for the rocket brigades and divisions.

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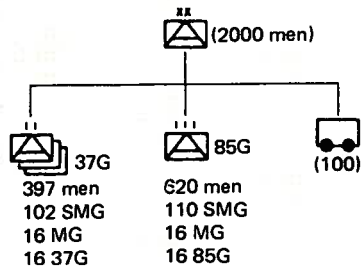
1942-45 SOVIET ANTI-TANK REGIMENT



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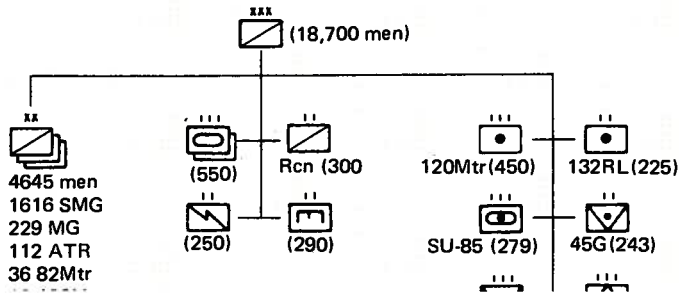
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1942-45 SOVIET ANTI-AIRCRAFT ARTILLERY DIVISION



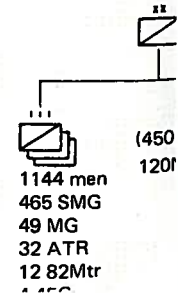
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1942-45 SOVIET CAVALRY CORPS



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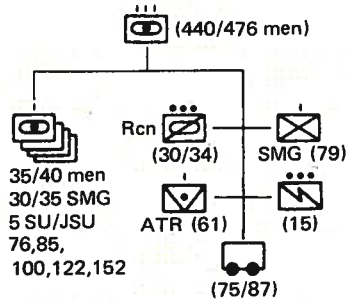
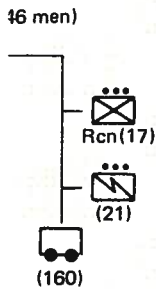
1942-45 SOVIET CAVALRY REGIMENT



22

1942-45 SOVIET SELF-PROPELLED ARTILLERY REGIMENT

MOTORIZED
BATTALION



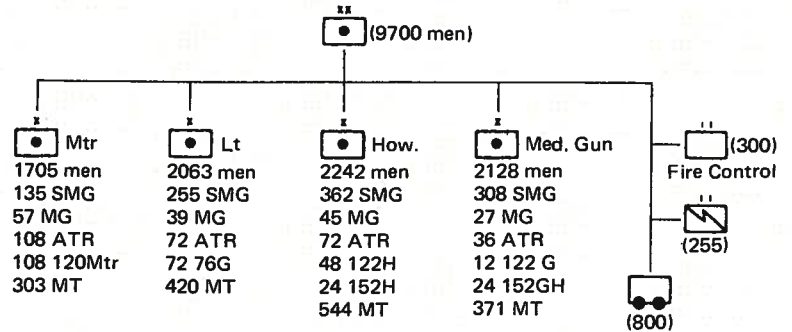
NOTE: There were two basic types of regiments, light and heavy. Their respective strengths are given separated like so-light/heavy. Light units were SU 76 & 85, heavy ones were SU 100 and up.

1942-45 SOVIET SELF-PROPELLED ARTILLERY REGIMENT—This was another unit that was only found in larger motorized units, although by mid '44 there were two brigades of self-propelled artillery. By far the most numerous type was the SU-85. It had replaced the SU-76 (an open top weapon built on a light tank chassis) in 1943. This was followed during the next year by the SU-122, JSU and SU 152 and SU-100. Their main function was to place heavier (armor protected) guns on the battlefield than were provided by then current tanks. There was also the economic factor which the Germans also took advantage of, this type of weapon could be built for 80% of the cost of a comparable tank. As with their tank units, the SP gun units had protective SMG infantry attached.

T ANTI-TANK s the unit that an "panzerblitz" in their experience the that 12 rounds of mm gun fire were one medium tank. lation each 76mm o put 2-3 medium re being destroyed. s (Panther & Tiger) 's effectiveness by he Russians were nm guns than the s. In 1944 the 3,800 76mm anti- more than '43) as n guns (then being m gun). The Rus- ir 76mm guns in . all concentrating get at a time. The st always employed

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1942-45 SOVIET ARTILLERY DIVISION



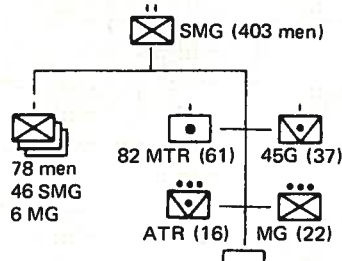
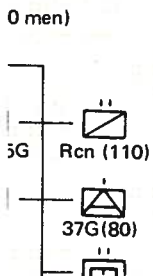
1942-45 SOVIET MOTORIZED ARTILLERY DIVISION—During 1941-42 only 20% of all Soviet artillery was "non-divisional" (outside of the rifle and motorized divisions). By early '44 some 65% of the artillery was concentrated in non-divisional units. A year later nearly 75% of the artillery was organized into artillery divisions and brigades. Only four artillery divisions were organized when the war started. By late '42 there were 26. A year later there were 80 (plus 73 separate brigades) and after another year (late '44) there were 94 artillery divisions and 149 separate brigades. The earlier divisions had only 168 guns. By the end of the war many had an extra brigade attached to give the division 356 guns. Most had 288. Up until 1943 over half of the Soviet "artillery" consisted of 120mm mortars. There were 27 brigades of these, a year later there were 82. During 1944 a heavier 160mm mortar began to appear, as well as separate brigades of heavier (mainly 203mm) artillery. During late '42 the first four rocket (132mm) divisions were organized. These, along with mortars, continued to form the bulk of the Soviet artillery up until the end of the war. Almost all of these large artillery units were held in "reserve,"

being allocated by the Soviet GHQ ("Stavka") to the Fronts in accordance with the overall strategy in force at the time. The Fronts would then allocate the artillery to their armies. Each army would normally have one artillery division (or a few brigades) attached. The Artillery Corps (first formed in early '43) would control the masses of artillery used for "breakthrough" operations. Each corps would control as many as 20-25 artillery brigades in the form of divisions and separate brigades. The brigades shown in the artillery division also appeared as separate brigades, particularly the 120mm mortar brigade. The fire control battalion was primarily a target acquisition unit and, in conjunction with the signal battalion, actually "controlled" the fire of the division. The use of the division was rather rigid, as can be seen from the very organization of the division (the Germans formed one artillery division, the 7th, but used it in a much more fluid manner). The organization of Soviet artillery units was very standardized. Light gun (76mm) and rocket (132mm) regiments had 24 pieces each while all other types had 36 pieces. A brigade then consisted of 2 or 3 regiments plus support units.

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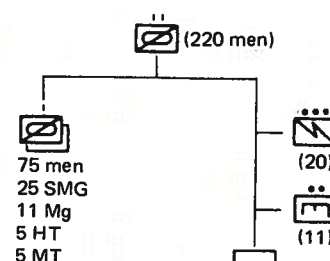
1942-45 SOVIET MOTORIZED SUBMACHINEGUN BATTALION

ARTILLERY DIVISION



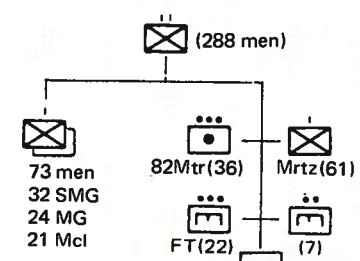
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1942-45 SOVIET RECONNAISSANCE BATTALION



29

1942-45 SOVIET MOTORCYCLE BATTALION



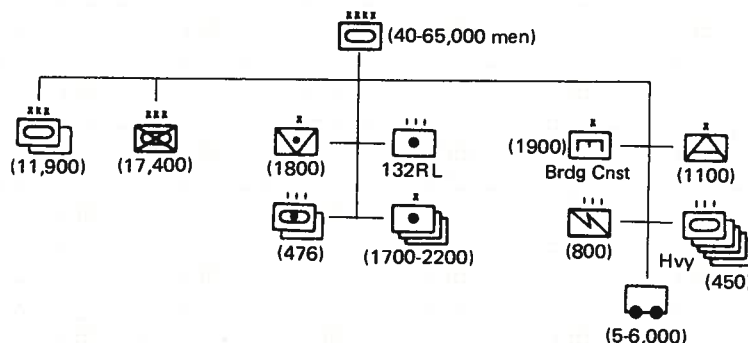
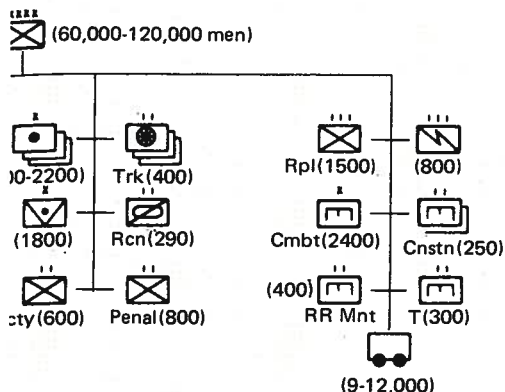
2-45 SOVIET MOTORIZED SUBMACHINEGUN BATTALION—The Russians quickly realized the vulnerability of tanks alone against enemy infantry. Their solution was probably the most efficient one enacted by anyone during the war. They attached a "half" battalion of submachinegun armed infantry to each tank brigade (65 tanks). The SMG was primarily a "close-combat" weapon and was thus well suited for protecting the tanks from adjacent infantry. This unit was only found in the tank brigade.

1942-45 SOVIET RECONNAISSANCE BATTALION—Unlike the Germans, the Russians never organized special recon units of the size and combat power of the German "Panzeraufklarungsabteilung". Reconnaissance as the Germans carried it out was a highly specialized undertaking and, naturally enough, the Russians simply could not spare the capable manpower for it. Thus the Russian recon unit was little more than a reinforced "scout" unit. When the Russians chose to "fight" for information as the Germans often did, they would attach a tank brigade to the reconnaissance battalion.

1942-45 SOVIET MOTORCYCLE BATTALION—This unit was little more than a motorized infantry unit with a large number of motorcycles. The Russians went in for machineguns mounted on sidecars and the like. This unit was only found in the tank and mechanized corps. It was used primarily for reconnaissance.

32

1942-45 SOVIET TANK ARMY

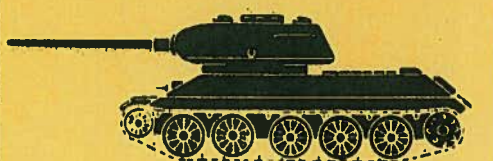
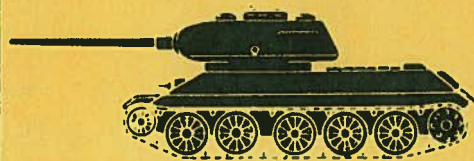
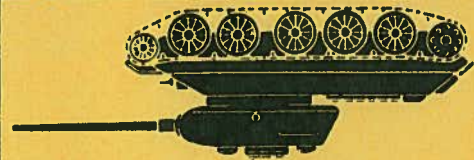
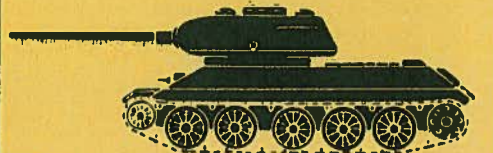
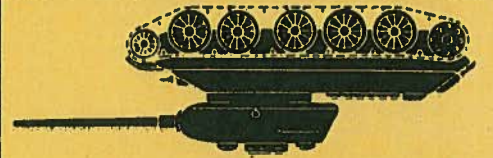
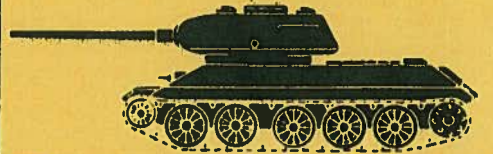
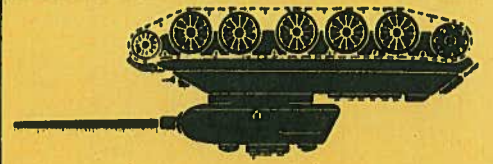
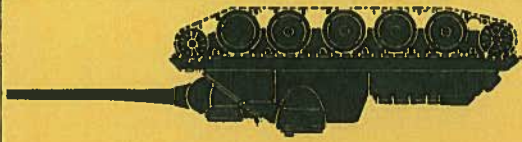


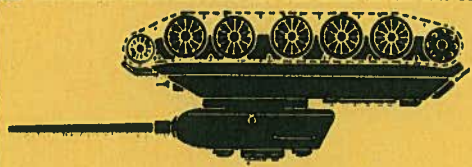
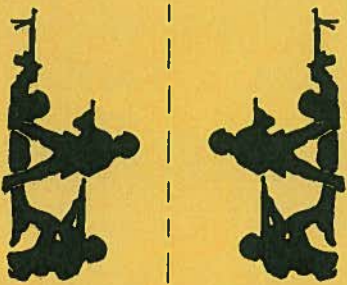
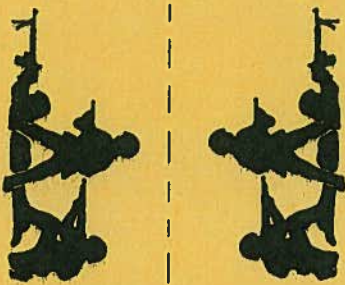
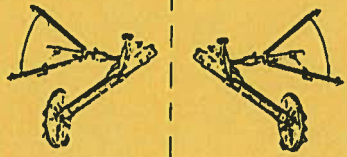
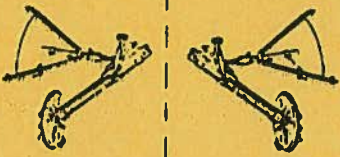
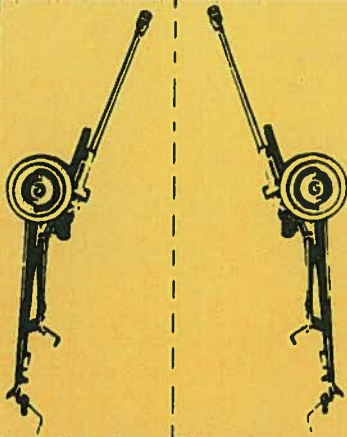
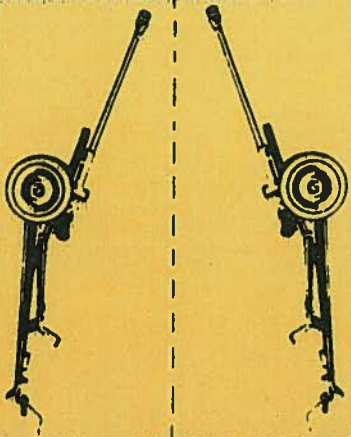
The army would not be the "most strength" which would be cut in half. On the other hand, an army of the effort of a major effort of 10 or more rifle divisions (strength) plus an artillery and engineering concentrations of artillery corps, each of which would only be used at the moment of the attack. It would remain in place and just clog the way with its attached brigades moved engineer strength in the construction of permanent, stronger battalions. Assigned to the

army by the front commander in a proportion of one battalion per rifle division. This, of course, proportion of one battalion per rifle division. This, of course, motor transport became available more truck battalions were added. Four truck battalions (1200 trucks) would fully motorize a rifle division, only 900 would be needed if the division's horses division, only 900 would be needed if the division's horses (100 trucks) could fully motorize a rifle battalion. During late '43 the rifle corps was gradually re-introduced, along with a share of the army's support units (as shown in the chart above). By the end of the war the Soviet Infantry Army was no longer merely the equal of a western corps. It was about equal to two western corps. But the, by late front.

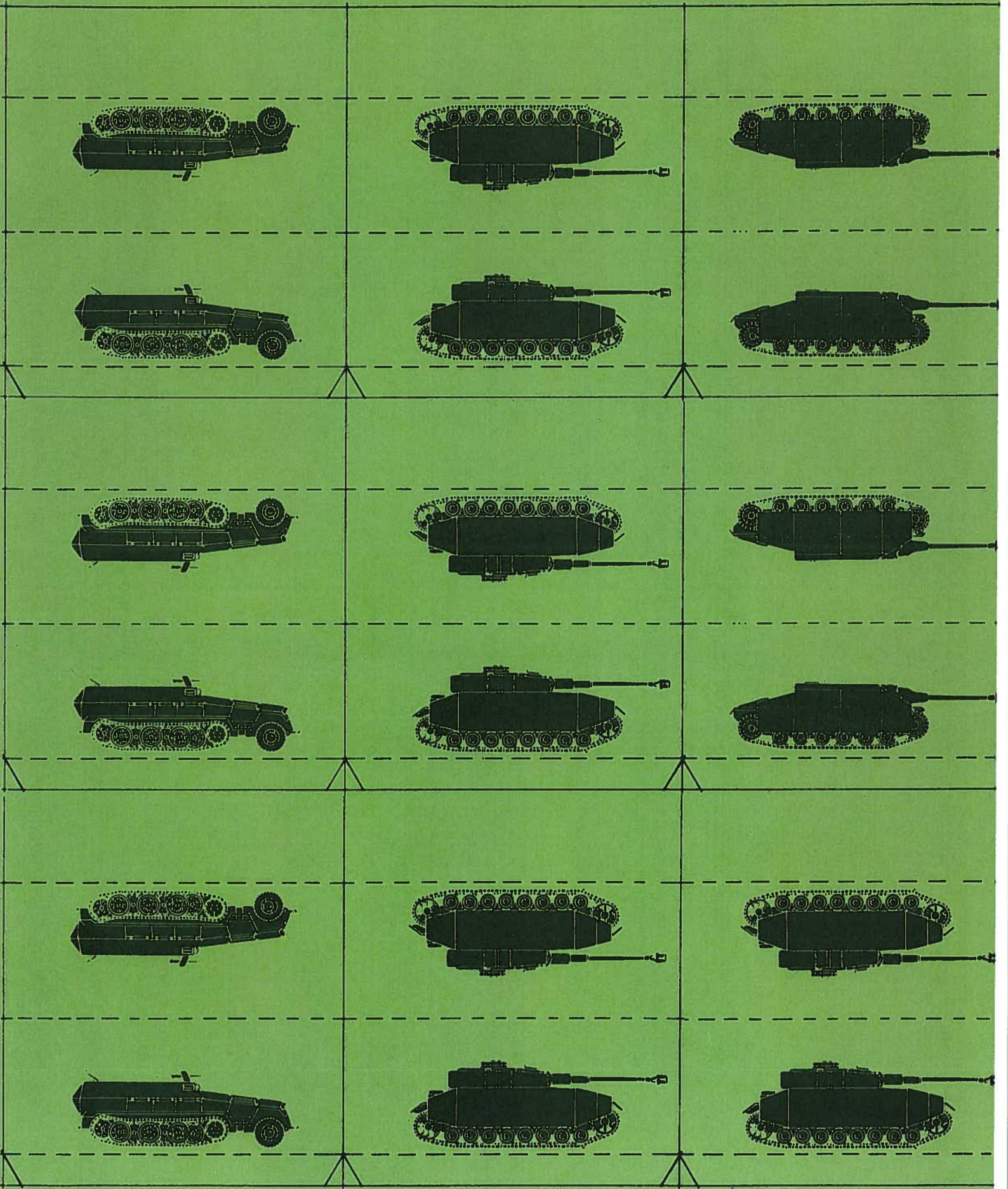
1943-45 SOVIET TANK ARMY—The first units of this type (as shown above) were formed in 1943 (Spring/Summer). During late '42 there were also some "tank armies" but these were mainly collections of tank brigades and rifle divisions. The tank army was about equal in strength to a German "Panzerkorps" (full strength). By 1944 there were 6 tank armies. Each usually had two tank corps and one mechanized corps, plus attached units as shown above. During this period there were 26 tank corps and 11 mechanized corps.

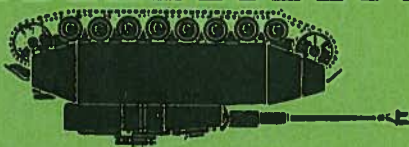
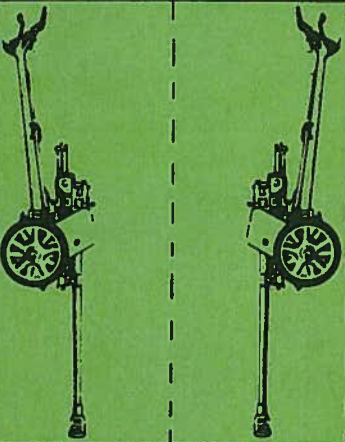
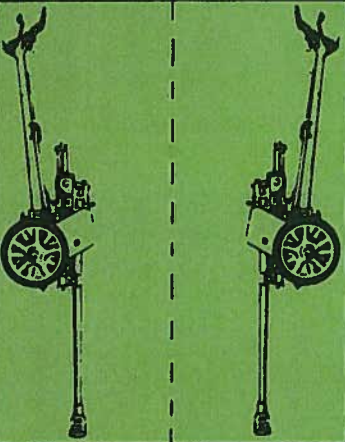
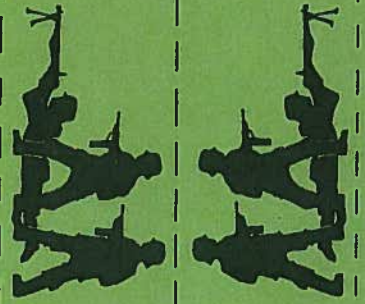
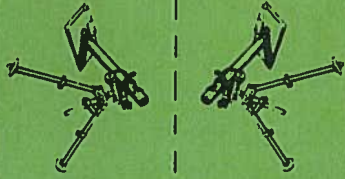
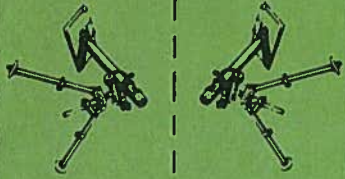
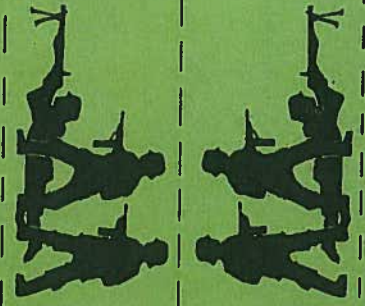
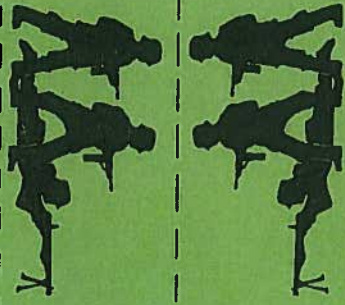
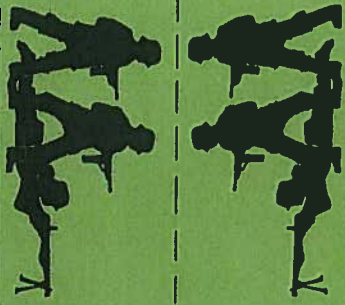
Occasionally there would be two mechanized corps in a tank army, or a different combination of support units. Mechanized corps were often held in GHQ reserve as special exploitation forces or else paired with cavalry corps into cavalry-mechanized groups. The Russians never had more than eight or nine units (tank armies or "cav/mech groups") comparable to the German panzerkorps (of which, even in 1944, the Germans had 10 to 18). But the ones they did possess out-"blitzed" the Germans during 1943-45.





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