

## **DESIGN NOTES FOR THE “PROKHOROVKA: THE EXPANDED BATTLE” SCENARIO**

**By  
Alan R. Arvold**

Almost four years ago I created the Prokhorovka: The Real Battle scenario for East Front II. And now just recently it has gone over two thousand downloads on the Games Depot website. Quite an accomplishment for such a well received scenario. Although I was satisfied that I had captured the flavor of the battles in this more accurate playable version of the battle of Prokhorovka, I still was not satisfied with all of the compromises I made to do so. For one thing, the Russians are still heavily favored to win (although I have achieved some German victories in solitaire). Another thing was that the casualties both sides suffered in the game were far out of proportion to the actual historical casualties suffered, given the same historical sequence of events happening. Still yet I went back and studied Jay Karamale's Design Notes and found that, after more research, some of his conclusions had some merit after all (though not all as he is still off based on quite a few points). Anyway I decided that it was time to update and expand the scenario, bringing in the rest of the forces involved in the battle and expanding the map to contain them in their historical starting positions.

These design notes should be considered to be supplemental to the ones from my original scenario. Points that I covered in them that do not need revision I shall not repeat here. Points that have been revised will be covered again here. The Order of Battle has been revised after much research and now includes all of the combat support units for both sides (which when placed on the map makes for a very crowded board). Besides the revised points, new questions have come up and they will be answered here.

### **14. What did you do to the map?**

Well I expanded the map by adding ten more rows of hexes to the west side of the map and six more rows of hexes to the south side. Using topographic maps of the area, some from the time of battle and some more modern, I was able to fill in all of the terrain in these added hexes. I also made some minor changes to individual hexes on the original map to correct mistakes that I had made four years ago (No they will not change the flow of the game so do not worry.) Now the map is big enough to contain just about all of the forces involved in the battle. Still there was a nagging uncertainty about the distances between various points on the map versus reality made a series of measurements on the map and made the same ones on the various topographic maps I had and made a rather frightening discovery. The scale of the map was not 250 meters per hex like all of us thought that it was.

### **15. So what is the scale of the map?**

The scale of the map is 500 meters per hex. Because of this the amount of time that one turn represents is now twelve minutes, not six, so five turns equals an hour of real time. Not only that, even though a hex now contains four times the area of ground, it still may only contain a total of 24 stacking points and maximum of six units, due to the mechanics of the game. Thus each hex can only contain a quarter of the units that it would normally contain in real life. If that is not bad enough, the weapons ranges of each unit is effectively doubled as are the supply ranges of the headquarter units. While the actual number of hexes in these respective ranges has not changed, the distance covered has, so we have odd occurrences where infantry can engage targets out to 2,000 meters and the machine guns can reach out to 3,000. Most medium and larger artillery units can now range across the board and the anti-armor weapons are more effective at close range than they should be. However, all is not as it seems.

Though the time scale of a turn is now twelve minutes, the amount of action points it takes to perform any task has not changed. Thus in a given turn a unit fires the same amount of times in a twelve minute turn as it does in a regular six minute turn, reducing its effectiveness. This balances out the increased effectiveness caused by the doubling of the range mentioned above, so the overall effectiveness of a unit is about the same in a twelve minute turn as it is in a regular six minute turn.

Obviously, this was what Jay Karamales had in mind when he decided to create his Prokhorovka map using the 500 meters per hex scale.

## **16. So what were the visibility conditions at the battle?**

On the 12<sup>th</sup> of July it started out cloudy with heavy ground fog, especially in the low lying areas. By about 8:00 AM the clouds started to break up and the sun came out, burning off the ground fog by about 8:30 AM. It stayed partly cloudy for the rest of the morning until about 12:00 PM when the clouds rolled back in. It then rained the rest of the day, mostly a light rain with occasional heavy thundershowers rolling through the area. So how does this translate to the Prokhorovka scenario?

Well first I had convert the visibility table in the rule book to fit the new map scale. I did this by dividing the range in hexes for each weather condition in half (rounding fractions down). What I came out with is as follows:

Clear: 10 hexes  
Overcast: 9 hexes  
Slight Haze: 8 hexes  
Light Rain: 5-7 hexes  
Squalls: 4 hexes  
Light Fog: 3 hexes  
Heavy Rain/Snow/Fog: 2 hexes  
Thick Fog/Very Thick Fog/Night: 1 hex

As one can see from the description in the first paragraph, the visibility was quite variable during the day, ranging from 1 hex (for the ground fog) to 9 hexes (for the partly cloudy skies) to 5 hexes (for the light rain). In East Front II scenarios there can only be one visibility range for the whole game, so I took an average for the day, which came to about five hexes (2,500 meters) and used that for the visibility range for the scenario. It should be noted that Jay Karamales was a little more liberal with the visibility ranges in his version. In his original version in East Front, he had a visibility range of 6 hexes (3,000 meters) and in his revised version in East Front II he had a visibility range of 10 hexes (5,000 meters). It should be noted that in my previous Prokhorovka scenario, I too had a visibility range of 10 hexes, but then I was only following Jay's lead in this, thinking that it was really 2,500 meters, not knowing the real map scale at the time.

### **17. What were the ground conditions at the battle?**

The ground was generally firm but wet for most of the day. By the end of the day, some of the ground had gone soft in parts of the battle, mostly due to the rain. In fact some parts even became muddy, but only because of the tracked vehicles moving back and forth over the same ground, churning it up into a muddy mess. However the game can only have one ground condition though out the whole scenario and for that I go with normal as this was the condition for most of the day.

### **18. Are the units placed in their historical positions?**

On the front lines, the answer is yes for the most part. There were a few exceptions though. The Russian 97<sup>th</sup> Guards Rifle Division is spread over a wider area, even some of it is off the board, than its historical set up area because the stacking limitations of the hexes prevent all of its units from setting up there. The Russians are not set up in Storoshovoye, thus conceding it to the Germans, for play balance reasons. Players may wonder why units of the Russian 2<sup>nd</sup> Guards Tank Corps, 2<sup>nd</sup> Tank Corps, and 9<sup>th</sup> Guards Airborne Division are set up much closer to the Germans than in the previous rendition of this scenario. Well this was where they were historically set up prior to the attack, in other words they were in their attack positions which they moved into the night before.

The further you go away from the front lines, in either direction, the more out of place the units become. This is because of the map scale and stacking limitations of the hexes. In fact, the Russian 32<sup>nd</sup> Motorized Rifle Brigade is off the map and arrives as reinforcements, when it should historically be placed on the board near the north edge in the 18<sup>th</sup> Tank Corps's third echelon, because of this situation. The main body, or what's left of it, of the Russian 52<sup>nd</sup> Guards Rifle Division is exactly where it is supposed to be though. While the artillery on both sides is placed back further than what it would normally be, the double range they have due to the map scale allows them to reach just about anywhere on the board and the limited visibility keeps this ability in check as they

can not shoot at what the forward spotting units can not see.

### **19. Why are some units fixed in place at the beginning of the game?**

Well there are several reasons. In some cases units such as the Russian 95<sup>th</sup> and 97<sup>th</sup> Guards Rifle Divisions had defensive missions in the battle. To allow them to be used in an offensive manner would be ahistorical. In other cases, certain units were delayed in starting their attacks (like the Russian 183<sup>rd</sup> Rifle Division), thus they are only fixed for a limited amount of turns before being released. In still other cases some units, like the Russian 1529<sup>th</sup> Heavy SU Regiment and Group Trufanov, were not used at all but were present in the battle, so they are permanently fixed in place for the whole game. Of course if an enemy unit were to fire on them, then they would be released and it is up to the owning player whether to use them as they were in history or to use them differently.

Units are also fixed so the computer AI can not use them either. Many a player have fooled the AI into moving units from a sector where there is no action occurring only to attack that sector later and finding no defending units at all. While a real life commander may move selected units from an in-active sector to reinforce a threatened area, they would not move the entire defending force like the AI is prone to do.

### **20. Why are front line units placed in Improved Positions?**

Because that's the way both sides had their front units set up. Both sides had a tactical doctrine of digging in as soon as you stopped for the night, in fact just about every army in World War II had this doctrine. Improved positions represent infantry foxholes, rifle pits, and other simple fighting positions that can be made relatively fast. Nor is the infantry the only ones who benefit from them. For vehicles they represent simple hull defilade positions, most of which vehicles can obtain by simply parking behind some wall or rise in the ground or even dug tank pits that can be driven into, something that the Russians excelled at. On the map those front line units in improved positions have been in that location since the day before and have dug in. Those front line units that are not in improved positions are units which moved up their attack positions during the night and are prepared to attack as soon as the order is given (usually on Turn 1). The trench lines on the map are pre-existing trench lines that have been there for days and both sides are using those which are in their possession at the beginning of the game.

This brings up an interesting question. If this doctrine was so prevalent during the war, why are not we seeing more scenarios where all of the defending units are in improved positions? Well it was a doctrine that was honored more in breach than in practice. Armies on the offensive tended to ignore this doctrine even when on the temporary defensive. Also units on both sides of a meeting engagement scenario would be on the offensive and thus not in defensive positions. (Yes the Prokhorovka scenario is listed as a meeting engagement but the actual meeting engagements occurred in the no-man's land in-between the front lines, the rest of the engagements were attacks made

against the defensive positions of one side or the other.) And it should be remembered that in any scenario, any infantry or engineer units can create improved positions during the course of the scenario no matter which side they are on.

## **21. Why is there even more artillery in the scenario for both sides than before?**

All of the artillery units in the scenario are the actual artillery units that participated in the battle. These include those which are at corps and army level. As noted in the design notes of my previous version of this scenario, most of the Russian artillery was already in place when the 5<sup>th</sup> Guards and 5<sup>th</sup> Guards Tank Armies arrived in the area and was regulated to their operational control during the battle. Most of the artillery that the 5<sup>th</sup> Guards Tank Army brought with them (which was not much) was placed in Group Trufanov so it was never set up as it would be moving south anyway. All of this artillery can turn the scenario into one big artillery duel.

However, to prevent this I have lowered the base ammo level of both sides to levels that are more historically consistent in the battle (40 for the Axis, 35 for the Allies). I took a look at Jay's Karamales's statements about the supply situation for both sides and found that they had a certain element of truth to them. It seems that both sides did have supply problems. The problems were not in the amount of supplies that were available. Both sides had large amounts of the supplies stockpiled for the campaign. The problems were in getting the supplies to the troops. On the German side the main problem was in the irregular delivery of supplies from the supply depots. The supply lines were under constant air attacks and the attrition of supply vehicles meant that the supplies were delivered at irregular intervals. Indeed a lot of vehicles went into battle with less than a full compliment of ammunition, some with a little as four or five rounds for the main gun and a couple belts of ammunition for the machine guns. For the Russians their main problem was that their supply system was less advanced than the Germans and they only re-supplied at night. The units that went into battle had a full day's supply of ammunition but most of it was consumed in the morning combat, by afternoon a lot of Russian units were low on ammunition and had to be more conservative in their shooting. However, Jay Karamales's statement that the Russian mortars were never fired is in error. It's wasn't that they were not fired, indeed every mortar and artillery piece joined in the massive fifteen minute artillery barrage that they opened the battle with. It's just that the barrage consumed about 80% of the mortar and artillery ammunition and so after the barrage, Russian artillery support was rather sporadic for the rest of the day.

Due to the increase of units in the scenario, I have slightly increased the amount of smoke available to both sides.

## **22. Why are there two different versions of the scenario?**

I created two different versions in order to give each side their turn as the aggressor (first player) in the scenario. As both sides were on the offensive that day, it seems only

fair. Each version has its own set of victory levels to reflect each side's objectives for the day. (The German objective is to capture Prokhorovka and the Russian objectives are to destroy the II SS Panzer Corps and to exit off the board Group Trufanov.) One will notice that I substantially increased the victory point totals for the Russian version. Each version can be played with two players or be played solitaire providing the player plays the side for which the version is named. These versions are probably better played between two players. Solitaire games tend to be nothing more than practice, providing ones knows how the AI operates, and victory is almost pretty much assured.

### **23. What is Group Trufanov doing in the scenario if it historically was not involved?**

Group Trufanov was originally the operational reserve of the 5<sup>th</sup> Guards Tank Army. It was based around the 5<sup>th</sup> Guards Mechanized Corps, plus most of the army level support units that came with them. On the 12<sup>th</sup> of July it was ordered to go south to stop the German III Panzer Corps. After detaching some units to support the 2<sup>nd</sup> Tank Corps and leaving behind two brigades of the 5<sup>th</sup> Guards Mechanized Corps, Group Trufanov started moving out in the late morning of the 12<sup>th</sup>, with its last units leaving by late afternoon of the same day. In the Russian version of the scenario, Group Trufanov starts the game fixed in place until Turn 30, after which is it released and exited off of the southern edge of the board using the three exit hexes placed in its area. Indeed, the victory point totals in the Russian version have been increased to reflect this need. Of course the Russian player is free to use Group Trufanov any way he wishes once it is released, thus if the Russians are getting beat rather badly at that point, he can use them as reinforcements. What this means though is that he will probably stop the Germans from winning, but will not have enough points to win himself. Historically this would mean that without Group Trufanov to stop it, the German III Panzer Corps will break though in its sector and eventually capture Prokhorovka from the southeast.

In the German version of the scenario, Group Trufanov is fixed in placed for the entire game as it does not serve the German victory conditions in any form. In a way it acts as a deterrent to the Germans from advancing too far east, should they be that successful. There are no exit hexes in the German version to prevent the AI from moving units away from the front lines to exit the board, thus weakening the defense. Should the Germans engage the group, they will probably find that they have bitten off more than they can chew.

### **24. Is this my final rendition of the Prokhorovka battle?**

No it is not. After this version has been on Games Depot for few years I plan to do another version based on this one, only that the map will be bigger with scale of 250 meters per hex. The same area will displayed, only in better detail. Every unit will now be placed in its proper historical starting place. The present 500 meter per hex scale does

present some problem in that it creates an overcrowding situation in places where there are many units. Also this present version may not be able to be properly handled by older model computers, it can have a problem of freezing them up due to the wealth of data they have to compute from the scenario. I hope that in the future new models will be able to handle the load.

## **25. How is it determined that Prokhorovka was the greatest tank battle in history?**

Depends on how large you want to make the battle. Many modern revisionist like to restrict the actual battle to the one engagement on the 12<sup>th</sup> of July where three Russian tank brigades performed that cavalry style armored attack against the German LAH SS Panzergrenadier Division. If one were to consider this one engagement to be the whole battle then no, Prokhorovka is not the greatest tank battle in history. But that one engagement no more defines the whole battle of Prokhorovka than Pickett's Charge defines the whole battle of Gettysburg. Most historians define the battle in terms of the largest operational command directly involved in the battle, in this case the German II SS Panzer Corps for the Germans and the 5<sup>th</sup> Guards Tank Army, plus the supporting elements from at least four other armies, for the Russians. When one adds up the tanks and other AFVs in both forces than one can easily reach 1200+ AFVs, certainly the largest armored engagement in history.

## **26. So who really won the battle?**

The answer depends on the several factors and victory levels. On the tactical level it was a clear German victory, given the number of losses each side took that day. On the operational level it was a draw, neither force achieved their respective objectives that day (the German one which was to capture Prokhorovka and the Russian one which was to destroy the German II SS Panzer Corp). On the strategic level it was a Russian one, but the battle of Prokhorovka by itself can not be used to make this judgment. Instead it must be considered as one of a number of battles fought that day against the southern prong of the German Kursk offensive in order to put it into the strategic category. And even then, the effects of the battles were only one factor in determining that it was a strategic victory.

## **27. Did Stalin really know the extent of the casualties of the battle?**

He most certainly did, considering the fact that shortly after the battle he called General Rotmistrov and admonished him for his handling of the 5<sup>th</sup> Guards Tank Army in the battle. ("What did you do to that fine tank army that I gave you?") General Konev of the Steppe Front (Rotmistrov's former boss) also voiced his objections. Stalin almost relieved Rotmistrov of his command and it took the intervention of both Marshal Zhukov and General Vatutin to stop Stalin from doing that, after they explained the necessity of

Rotmistrov's actions in the battle to him.

## **Conclusion**

This concludes my design notes for Prokhorovka: The Expanded Battle". As this scenario is 50 turns long, be sure to allocate a lot of time for it. It is probably best played against a human opponent. I wish all players good luck with this scenario.

## **Errata**

Every so often I find small errors in older scenarios that I have submitted to the Games Depot. This is a current list of them.

Prokhorovka: The Real Battle

Change the visibility from 10 hexes to 5 hexes. This corresponds to the newly understood scale of Jay Karamales's original Prokhorovka map which I based the scenario map on.

Ode to Panzerblitz: Scenario #4

Change the strength points of the two German Nashorn units from 4 to 3.