

★ The AVALON HILL
GENERAL

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FEATURING:

The Invasion of Russia

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**★ The AVALON HILL
GENERAL
The Game Players Magazine**

The Avalon Hill GENERAL is dedicated to the presentation of authoritative articles on the strategy, tactics, and variation of Avalon Hill games of strategy. Historical articles are included only inasmuch as they provide useful background information on current Avalon Hill titles. THE GENERAL is published by the Avalon Hill Company solely for the cultural edification of the serious game aficionado, in the hopes of improving the game owner's proficiency of play and providing services not otherwise available to the Avalon Hill game buff.

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AVALON HILL

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Avalon Hill Philosophy Part 45

Response to the first 34 page edition of the GENERAL was mixed as could be expected. Generally speaking, you either loved it or hated it, depending on what games you owned. Few people rated it between a 3 or 7. Because of the unusual format necessitated by last issue's double feature article premise, we actually covered only two games in any detail—PANZERBLITZ and D-DAY. If you didn't own those games, you were probably quite naturally disappointed in the start of the Volume 11 series. This was due primarily to our decision to go with the Normandy Anniversary motif, compounded by the Playing Aids secondary feature, and an unusually long Series Replay. It was something we had been planning for a long time and, in our opinion, quite a worthwhile venture—even though the issue itself polled only a combined 3.16 from the readership, which although still quite good was not the outstanding success we had hoped for. We are getting a lot of requests for more diversity in the magazine and now that we have the Playing Aids extravaganza out of our system, this shouldn't be too hard to achieve. In the future we shouldn't have any difficulty giving in-depth coverage to a minimum of 6 games per issue plus the usual features, without getting into a rut of offering the same old thing every time (which is the main reason we experimented with the Playing Aids article). By the way, the individual article ratings on our 600 point maximum scoring scale for the last issue looked like this:

D-DAY—VARIATION & PLAY	411
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PANZERBLITZ SERIES REPLAY	204
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The PANZERBLITZ Series Replay was a disappointment. It ranked far lower than we had hoped; especially considering the lack of many other articles for competition. This makes two PANZERBLITZ Series Replays which have not come up to snuff. PANZERBLITZ is a tough game to portray in the Series Replay format. It is one of those games which requires that every move be shown, rather than every turn. Such a presentation is, of course, out of the question due to space limitations. But there are other solutions. Graphically, we learned a lesson from the last replay which should enable us to improve our visual presentation in future matches. We'll probably give PANZERBLITZ another shot next year. We already have a finished game in the files which is much more exciting than the conservatively played draw used in the last issue.

A sharp increase in circulation has flooded the Opponents Wanted page with more requests than it can possibly handle. We've had to do a lot of judicious editing so as to fit

in as many as we could. In the future, priority will be given to people looking for opponents and discontinued games. Other ads will be printed on a space available basis. For more on this subject, refer to the Letters page and let us know what you think on the Survey card.

Speaking of floods, we were totally unprepared for the virtual flood of letters which came in response to last issue's Loyal Subscriber Deal. Literally hundreds of you wrote in requesting that we include your name in the drawings for those few dozen collector's items. One guy even stated that he'd buy every game in the list—including all 14 copies of BASEBALL STRATEGY! We hated to disappoint so many people though so we tried to restrict the winners of the drawings to one game per person. We even looked around for people who wanted to trade their own copies for new games so that we wouldn't have to disappoint so many of you but unfortunately we still had to return many of your letters with our condolences. Only the sports games were left and even they went to people placing multiple orders. Apparently nostalgia is running high among the readership.

We have word of a miniatures convention to be held from 1 to 9 pm Saturday, Sept. 7th and from noon to 5 pm the following day in Buffalo, NY. Although there will be no organized competition in board games, an area will be set aside for their play. Diplomacy and miniatures will be the main attraction. For further details, we suggest you write: Richard Kohlbacher, 410 Linden Ave., Buffalo, NY 14224.

The brief mention in the last philosophy of updating rules has brought in many inquiries and this is a good place to answer them. Rather than taking the easy (and cheaper) way out of issuing errata sheets we plan to issue completely new sets of rules for all of the old flat-box games. These won't change the games; they'll just try to eliminate any ambiguities or contradictions which might have existed before. The first game to undergo the face lift will be STALINGRAD. The rules remain basically the same except for suggesting a 4-5-6 replacement rate for the Russians and outlawing an Hungarian-Italian entry in Finland. There are other small points but those are the main changes. The new rules will be available for the nominal fee of 25¢ plus 25¢ shipping costs. (Note: the shipping coupon in the GENERAL is good for games only). Next on the list will be WATERLOO. Here the clarifications should have a bit of an effect on play-balance. Partial hexes will no longer be playable, bringing on reinforcements by column will be specifically outlawed, and those annoying river rules will be clarified and made less restrictive. The net effect should be to in-

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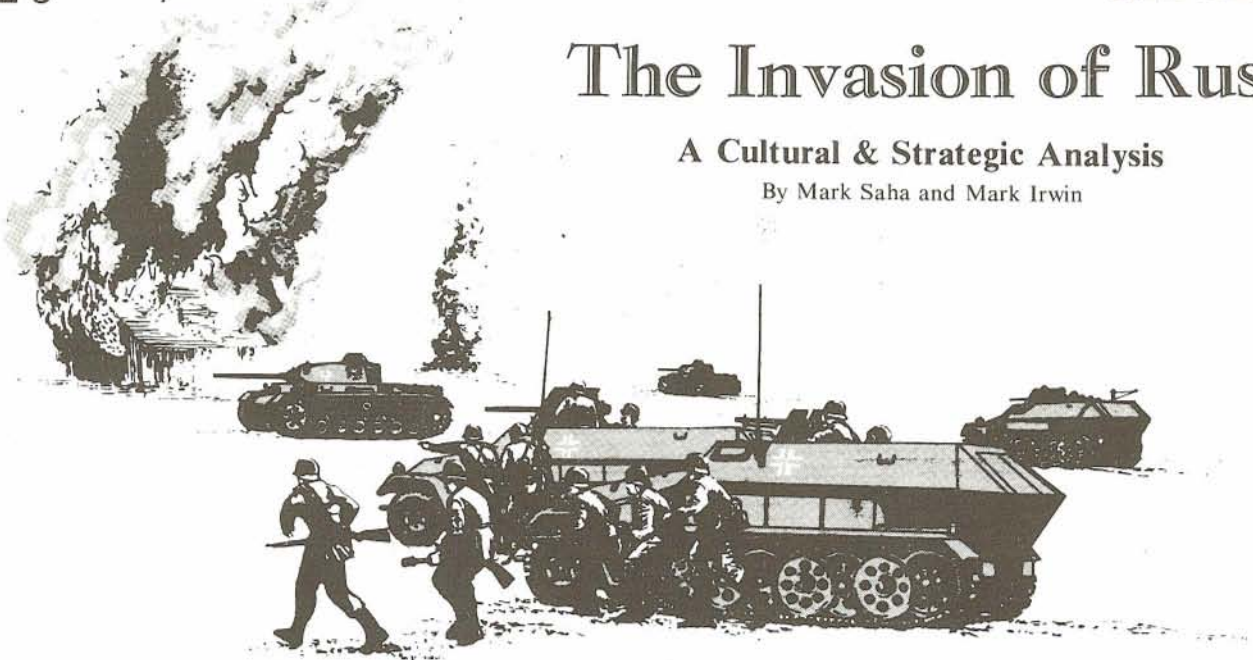
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Column 3

The Invasion of Russia

A Cultural & Strategic Analysis

By Mark Saha and Mark Irwin



When the German General Staff received instructions to begin preparations for the invasion of Russia in the coming spring of 1941, it was no real surprise. It was probably quite a shock, to realize that at last the time had come. The very size of the operation was sobering enough to stagger the imagination and shake the confidence of even the most fearless of these recent conquerors of France. So it must have been quite a shock, yes . . . but hardly a surprise.

The fact is that Hitler had made it quite clear to his generals since the time of his coming to power in 1933 (and, to many, even before that) that he was turning his eyes to the east—and Hitler was Germany. He followed his words with actions; he suspended the warm relations that had existed with Russia in the 1920's and initiated a secret ten year rearmament program calculated to climax in a Russo-German war sometime in 1943 or 1944—at latest, 1950. Meanwhile, efforts were made to promote peaceful relations with France and England, and the unfortunate "bumper states" between Russia and Germany were slowly and methodically swallowed up into the "new" Germany in preparation for the great clash. It always frustrated and enraged Hitler, right to the very end, that England and France never grasped his intentions; and that, as a result, the war came at the wrong time and under circumstances much different than had been anticipated.

The Problem of Germany

But Hitler's coming to power in 1933 was in itself only the culmination of yet another trend—the rise of Prussian, and finally, German militarism. This must also be understood, because in a sense there is an almost Hegelian historical necessity in the rise of this new military power. First, Germany was a relative newcomer in the family of European nations, having united its various independent provinces slowly and painfully over the centuries. Secondly, from an overall strategic standpoint, Germany was (and still is) militarily indefensible; it is her bad luck to be geographically located in a militarily hopeless situation. Consider, if you will: France, protected by mountains and sea; Italy, the same; England, an island fortress;

Russia, limitless space for retreat. Germany, alone, of the major European powers, was surrounded on all sides by potential enemies; and these enemies had time and again nibbled at her borders on various sides over many long centuries.

So it becomes quite reasonable and understandable, really, once you see this, that Germany should require a larger standing army than the rest of the nations of Europe. She had more borders to defend . . . and it was really as simple as that. The rest becomes a bit more complex, in that it includes a cultural and economic acceptance of this condition, but it nonetheless also followed quite naturally: the dashing young cavalry officer, in the romantic literature of the period, who brags of his exploits and makes the ladies swoon; the rise of industrialism with an emphasis on weaponry and armaments; the reserve system, which made possible the calling to arms of large numbers of trained men on short notice. . . .

Finally . . . two other things followed quite naturally, although they were not so obvious at the time. (1) If Germany had a standing army large enough to defend all her borders at once, that same army could with little difficulty crush any *one* neighbor by massing an overwhelming force against it. (2) This point is a little more subtle but unfortunately also true: it is a fact of human nature that if you place an instrument in a man's hands, he's going to be strongly tempted to use it—if only to "see if it works." The Franco-Prussian war of 1870 demonstrated for all the world to see that Germany had perhaps the finest and most sophisticated military machine of the time. Can you not imagine the frustration of the men in command of so magnificent a machine when told they must simply *sit* on it? The career men especially, who realized all too well that power and influence and promotion come quickly in war, but slowly if at all in peacetime! The restlessness of that dashing young cavalry officer, flirting with the ladies, anxiously looking forward to the day when he will lead his first charge?

The glamor of the Napoleonic legend was far from forgotten, and as it was in Germany so it was in most of Europe. It was the romantic thing then to be a soldier, especially an officer, just as

in later times it would become the fashion to be a novelist, or a movie star, or a rock singer. The nineteenth century was the time of the dashing young cavalry officer; even looking back today, the era has not quite lost its romantic luster.

Unfortunately, none of this was to diminish in any degree the point already made—that despite her dash, daring, spirit, and military excellence, the situation of Germany always was and remains strategically hopeless. This was demonstrated with dramatic force in the war of 1914-18; cut off from the rest of the world by the British naval blockade and the Russian front, Germany was already starving as early as 1916. Black *erstaz* butter made from coal tar was in common household use; coffee and chocolate simply disappeared from the market; and soldiers had no rubber for waterproofing of boots or tents. The plain fact was that Germany was not a self-supporting country, and had to import such basic commodities as butter, eggs, and grain to feed her population . . . and if war closed her borders for any length of time, she would collapse. Germany at war is in the position of a wind-up clock. The clock could only run for a certain length of time, winding down and growing weaker by the hour, until it stopped. Germany at war must always win a bold and swift decision . . . or lose slowly and surely and with great pain and suffering. The failure of the Schlieffen plan in 1914 dictated that the war would be a long one . . . and in 1918 the clock ran out.

Why Russia?

This, then, was the problem of Germany, and it was the problem Hitler set upon himself to solve when he came to power in 1933. Hitler knew, as did most people, that if Germany was ever to rise again as a world power, she *must* have enough land and resources to make herself self-supporting as a nation indefinitely. That accomplished, she would be immune to a British blockade, and could pursue a war with an enemy for as many years as complete victory might require. The question, then, was *where* was this additional land to come from? France might seem a likely candidate, but Hitler rejected that for good reason: the French had

existed as a nation for centuries, and no occupation force could ever get her to accept dissolution even if conquered. England was not worth attacking, Hitler declared, because in twenty years she would lose her colonies and become a third rate power anyway (and history has proven him exactly correct).

But in the East, things were very different: the dictator Stalin was not popular, and that vast land offered a prize of almost unlimited resources in food and raw materials. More importantly, Hitler predicted (again correctly) that within twenty years Russia would have industrialized and converted these resources into a military power that would make her among the strongest on earth. Europe was on the decline as a world power, while the Russian giant was just now awakening. Hitler knew that if Russia was to be defeated and her empire dismembered, it must be done quickly; and so he set up the ten year rearmament plan and hoped to strike as early as 1943 or 1944. He probably actually believed it—he was quite sincere—when he referred to himself as the last hope and savior of Western civilization.

Thus, despite the many political intrigues and pretexts, and the many immediate tactical objectives, the grand strategic pattern of the expansion of Hitler's Germany from 1935-39 is clear—always he is moving east, absorbing the bumper states and moving into position for the great war . . . while Germany's unemployed masses are put to work in illegal manufacture of armaments for the day of invasion.

Unfortunately for Hitler, the West was not all that anxious to witness Germany's swift (and illegal) reemergence as a world power—not after the bloody 1914-18 struggle they had undergone to dismember that same power. There was strong Western disapproval of the cruel Bolshevik dictatorship in Russia, to be sure; but Germany was after all in the heart of Europe, and so, the more immediate threat. After numerous attempts to contain Germany by negotiation; England and France took a stand on the issue of Poland. Hitler invaded Poland on September 1, 1939—and, to his utter astonishment, three days later England and then France declared war on him.

Stalin had actually been quite as alarmed as the West at Germany's swift rise and expansion, and was much relieved to see Hitler now at war in the west, opposite the direction he had intended to move. But Stalin's relief was short-lived; for, in the Spring of 1940, before the eyes of an astonished world, France collapsed under a swift and brilliantly executed German blitzkrieg.

Curiously, it was here that the German General Staff was discovered to have made its first big mistake—and a strange one for them. The last sort of thing you'd expect to catch the Germans on; for, if they're known for anything, it is the thoroughness of their staff work. They plan for every contingency and it's difficult to present them with a surprise once they go into action. But they missed something when they hit France. The plain truth is that they were just as astonished—if not more—as the rest of the world when France simply collapsed. They had no contingency plan for this event . . . and, as a result, had absolutely no idea what to do about it! They might have invaded England, but they had no special forces or amphibious vessels ready and waiting for this purpose. Franco offered them free passage through Spain to take

Gibraltar, but Hitler declined on the ground that the war was over anyway. When England failed to surrender, Hitler reconsidered . . . but by then Franco reneged, saying they could have passage on commencement of the invasion of England (after which Gibraltar would no longer matter anyway).

Thus, what should have been a great victory turned out to be a victory in the wrong direction, and a large part of the German army was absorbed in the occupation of Denmark, Norway, Belgium and France. Further, Hitler now found that he was having the most trouble with, of all people, his own allies! Franco would not give him passage through Spain to Gibraltar, and Mussolini insisted on the honor of kicking the British out of Africa himself (with Germany supplying planes and tanks for Italian soldiers, of course). Both Franco and Mussolini wanted French territory on the continent or Algeria, which Hitler was reluctant to grant since it would drive the Vichy government right into the arms of Churchill. Astonishingly, Hitler was prevented by his own allies from bringing operations in the West to a swift and decisive conclusion—and with friends like these. . . .



Motorcycle units played a very important role in the eastern campaign. Their great mobility usually meant that they had to bear the brunt of Soviet breakthroughs. Usually crack troops, the Germans had to rely more and more heavily on these recon units to stuff gaps torn in German lines by Russian offensives.

Unable to deal with his friends, Hitler returned attention to the last and greatest of his enemies. . . Russia. True, conditions were not what he had anticipated: (1) it was still two to five years before Germany was ready for the planned Russo-German war of 1943-50, (2) vast portions of his armies were absorbed in Western occupation duties, and (3) he was still at war with England. But Germany's situation was rather unpleasant, and could get desperate—because as long as hostilities continued in the West, Hitler was almost wholly dependent on Russia for crucial supplies of food and essential raw materials. Stalin had his hand on the water faucet; he could shut off the water any time he pleased . . . especially if tempted to do so by Churchill. And this only reveals an additional hazard to a German assault on Russia: Hitler would be in effect *attacking his only remaining source of supply!* Clearly, he could not afford the planned Russo-German war; what he *must* have is another blitzkrieg like the one that brought France to ruin. Anything less than that, any degeneration of a blitzkrieg attack into a prolonged war, would simply set the wind-up clock of 1914 to ticking again.

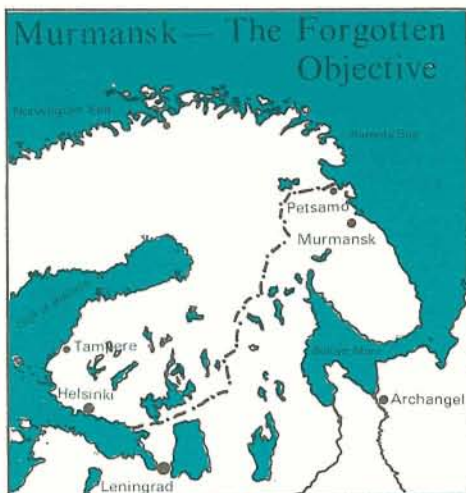
Fall Barbarossa

So take out your *STALINGRAD* gameboard, and let's have a look at the problems confronting the OKH staff in planning the overthrow of Russia, and the reasons for the particular solutions they arrived at. Surprisingly, I find the *STALINGRAD* board more useful for this purpose than most geography maps, if only because it oversimplifies and sets in high profile most of the features of military interest. Start with Moscow; being the capital, its capture would be of great political and propaganda value. However, notice it's also the rail center of the country; so long as Moscow is in Russian possession, they have the effect of interior lines. If Moscow falls, it is the Germans who have this advantage. True, the Russian railroads were of wider gauge than standard European track, but even this could be to German advantage; for, as they advanced, it was only necessary for German sappers to move one rail in a little closer to the other and cut off the extra length of cross-tie. If the Germans should ever have to retreat, Russian sappers in turn would have to replace every single cross-tie to again widen the track. So the railroads were important, especially in a country of such abominable roads. Moscow was of greater military value now than in Napoleonic times.

Leningrad was also of propaganda value, since it was named after the founder of the Bolshevism that Hitler so bitterly detested. If for no other reason, Hitler was determined that the city should be utterly razed. But there were also any number of reasons for making it a legitimate military objective: the Russian Baltic fleet was based there; it was a center of armaments manufacture; it was the main rail link to the ice free port of Murmansk. Finally, Leningrad was an ideal spot for the Russians to anchor the northern flank of their line; as a glance at the gameboard reveals, the Moscow-Leningrad line consists mostly of rivers, swamps, lakes, and the rough terrain of the Valdai hills . . . ideal defensive terrain. The fall of Leningrad would nearly outflank this line to the north, and there is no really good place for the Russians to ever again anchor a flank. At the same time, Leningrad would give the Germans an excellent anchor for their own flank, as well as a port to shorten their supply lines. Leningrad, then, was definitely another major military objective.

Stalingrad, in the south, was of no real importance in itself, but because a decisive battle occurred there it may be taken to symbolize the many things of military and economic value in the area. First, the entire region of the Donets basin, including the city of Stalingrad, was a major center of industrial and military manufacturing. Second, the Volga river was a main artery of riverboat traffic through which supplies from England and America could be shipped all the way to Moscow; although this fact was not fully appreciated at the time of planning, it became obvious later in the campaign. Third, Rostov—gateway to the Caucasus, and Russia's only overland rail link (via Persian Gulf) with Great Britain. Finally, what was perhaps *most* obvious at the time of planning, the valuable oil fields at Batum and Grozny in the Caucasus, which would fall to the Germans by default if they advanced to the Volga.

There were other objectives of value not so obvious on the gameboard which should also be pointed out. First, the Ukraine—roughly the area just south of the Pripyat marshes, between the Prut and Dnepr rivers—the so-called “bread basket” of Russia that would assure Germany a plentiful supply of grain for the duration of any war. Sevastopol and the Crimea were not so important as was thought at the time, but Hitler was anxious that they should be seized as quickly as possible. Sevastopol was a major fortress and port for the Russian fleet in the Black Sea; the Crimea itself Hitler described as an “unsinkable aircraft carrier” from which bombers could be launched against his precious oilfields at Ploesti (about 20 miles from Bucharest). Finally, Hitler believed the fall of the Crimea would be a strong political inducement for Turkey to enter the war on the side of Germany.



There was one other objective of major military importance that Hitler almost overlooked and which, indeed, isn't even shown on the STALINGRAD board—the port of Murmansk. It lies in the far north, where the rail line from Leningrad crosses the Svir and disappears off the board. The importance of Murmansk derives from a rather strange fluke of nature; it is the farthest north of all Russian ports . . . yet, paradoxically, it is the only year around ice free port in all of northern Russia, and can continue to receive ships when ports much farther south such as Archangel have frozen solid. The explanation for this oddity can be more easily seen on the accompanying map than explained; the warm waters of the Gulf Stream make a long and graceful journey around the North Cape of Norway to Murmansk, and keep the area free of ice . . . but by the time they have descended south to Archangel they've cooled again to the freezing point. Murmansk, therefore, is unique and has a distinct military importance.

Of course, a short war was being contemplated so the port would ordinarily have been overlooked. Hitler's attention was drawn to it for the wrong reason: Murmansk lies a bare sixty miles from the precious nickel mines of Petsamo (in Finland) . . . these mines were of vital importance to the German steel industry, and Stalin had long had his eye on them. Hitler was well aware of this and, deciding that the best defense is a good offense, instructed OKH that an expedition from Petsamo to capture Murmansk should be a definite part of Operation Barbarossa.

Planning & Operations, 1941

So much for the objectives. Now comes the problem of planning and execution of a military operation best designed to seize these objectives in a quick and decisive fashion. Of course, inherent in any such operation is one further objective: destruction of the enemy armed forces. How to best bring this about?

Again, a glance at the gameboard reveals something that came to the immediate attention of the OKH planners: what was soon to be the “front” would be its shortest length right at the Russian border, where it was a bare 930 miles from the Baltic to the Black Sea. Moreover, this

distance was rendered even shorter by the presence of the Pripyat marshes in the very center of operations. Fortunately, much of the Russian army happened to be deployed right on or very near this border. It was here, then, the best chance for a quick and decisive victory was to be found. The Germans were looking for just that sort of lightning armored breakthrough and envelopment that had worked so brilliantly in France. If they should fail to reach such a decision on or near the Soviet frontier, they saw as clearly as you that there would be problems: as you advance deeper into Russia, the front quickly widens and you even lose the shortening effect of the Pripyat. It could quickly and easily open up to 2,500 miles or more, and OKH was fully aware they had not nearly the troops to maintain a continuous front across such a distance. Hopefully, then, a military or political decision could be forced before such a situation arose.

But *where*, then, to strike? Where on the 930 miles of frontier to concentrate the main effort? Needless to say, plan after plan was discussed and considered and reconsidered, and last minute changes continued to be made right up to and (unfortunately) after the day of invasion. However, much detail and trivia can be filtered out, and the evolution of the final plan of invasion traced through three basic proposals:

If you're an avid *STALINGRAD* player, you're probably already familiar with the earliest since it's likely the one you use yourself. This plan was submitted by the OKH staff, and consisted mainly of a major effort in the Ukraine, south of the Pripyat. There were many reasons for this recommendation, but one was outstanding: the flat, open terrain of the south was ideal for panzer operations and hence offered the best chances for success of the contemplated armored thrust and envelopment. Moreover, the greater part of Stalin's army was deployed along this border, and so offered the opportunity for the greatest “catch.” (Ironically, Stalin had deployed here because he also recognized the Ukraine as “panzer country” and wished the strongest possible defense.) Finally, an attack here would yield an immediate gain of the Ukrainian “bread basket.”

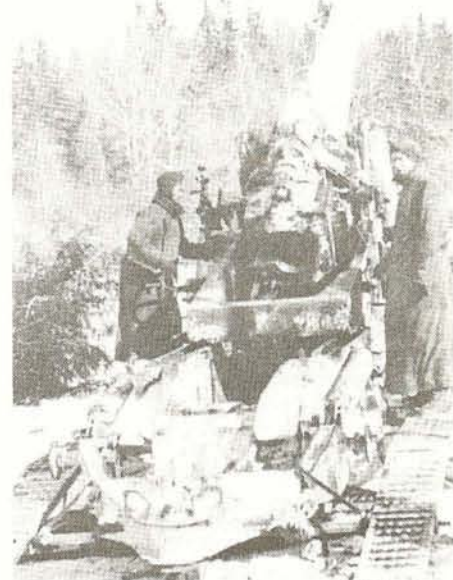
Hitler rejected this plan for what he considered good reasons. First, as you can see, the attitude of Hungry was still uncertain at this time, so the attack would have to be broken into two parts—one from Rumania, the other from Poland. Furthermore, the attack from Rumania would run into a series of rivers across its front, and a possible reverse and counterattack here would again threaten Hitler's precious oilfields at Ploesti (Bucharest). Finally, it would be far more difficult to supply a major effort in the south rather than center or north (a point Hitler was to forget the following year). Thus, Manstein was later to lament “. . . how run-down our Panzer Corp had become in country which was most unsuitable for armored troops . . .” while the Ukraine down south “. . . was ideal tank country, but unfortunately (we) had no tanks.”

The next plan, offered by Halder, consisted mainly of a direct thrust to center. The thrust to be composed of two coordinated armored “prongs”, and they were to penetrate and envelope all major Russian forces in the area in a series of “pockets.” All resistance was to have been crushed by the time they reached Smolensk. Then it would be a straight drive

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along the so-called Orsha-Smolensk land bridge (the dry watershed area between Divina/Volga and Dnepr; especially hexes S-24 to S-27) to Moscow. But again Hitler was not satisfied. He was afraid the Russians would fight stubbornly to hold the Baltics—digging in behind the Divina—and launch a counterattack on his flank and extended supply lines. He did not relish the thought of a Napoleonic defeat at Moscow, and anyway (although this is not generally known) Hitler was never throughout the war particularly excited about capturing Moscow. He placed a much higher priority on many of the other objectives mentioned; and, indeed, Russia was a land so huge and rich with tempting military objectives that one scarcely knew where to begin.

The final plan, as it was eventually hammered out and adopted, was really quite good in my opinion, and if it had been strictly adhered to probably offered the best chance of success. It was actually in many ways a sophistication and embellishment of the second plan, in that again the main armored thrust was to be made in the center at Smolensk—although it was not definitely decided the drive would continue from there to Moscow.



German heavy artillery such as this 15cm gun were often all that the Germans could use on penetrating Russian forces from their bypassed strongpoints.

The crucial key to this plan, the one thing that made it indeed intelligent and workable as a methodical approach to the dismemberment of the Soviet Union, was that it recognized the limitations of what the quantity and quality of German forces at hand could realistically be expected to achieve. All the military objectives outlined above simply could not be seized at once, simultaneously. Therefore, they would have to be taken *individually*, one after another, in a carefully worked out *sequence*, according to a crucial *timetable* of events that would result in the conquest of Russia before the onset of winter. Moreover, it was the *gradual frittering away* and *ultimate loss of sequence*, I shall try to show, that was really more fatal (since it was an error of the highest strategic level) than any one specific decision made in this campaign (such as whether or not to drive on Moscow, and when).

The plan called for three main thrusts to be made into Russia, by Army Groups North, Center, and South. Starting at the top, Army

Group North was under the command of Field Marshal von Leeb. Serving under him was General von Manstein, the brilliant tank strategist and tactician who planned the successful invasion of France and was to gain even greater distinctions in Russia. They were assigned to advance up the Baltic coast, breaking the river position of the Divina at Riga and, if possible, take the valuable bridge at Daugavpils intact. Then, a lightning strike at Leningrad would be possible. Finland agreed to enter the war after the first week or so of invasion, and would isolate Leningrad from the north. The final assault on the citadel would probably be made with armored reinforcements from Center, which should by then be available. Thus, the clearing of the Baltic and fall of Leningrad would (a) eliminate from the very start any possible threat of a Russian counterattack from the north on German flanks (b) give the German flank a solid anchor at Leningrad (c) Finnish troops released by the fall of Leningrad could now cut the Murmansk railroad, while a German expedition from Petsamo marched on the port itself.



Guderian, often found in the front lines in his armored scout car, was the principle backer of the German winter drive on Moscow. His forward units managed to reach the city's suburbs, only 6 miles from the Kremlin.

But the main German effort was to be made by Army Group Center under the command of Field Marshal von Bock. He had the largest concentration of armor and the services of the distinguished panzer leader, Heinz Guderian, conqueror of France. Their initial assignment remained pretty much the same as in the second plan; the main body of the Russian army was to be trapped and destroyed in a series of mobile battles between the frontier and Smolensk. Then, they were to await developments and send aid if necessary for the capture of Leningrad. That accomplished, they would return with Manstein's additional armor and, depending on the situation, make a final decision about Moscow. Notice, however, that at the moment of this decision the German position would be quite secure: Leningrad taken, and its use as a port for German supplies at least potentially available (although Hitler had no such specific intention), resulting in a considerably shortened supply line and secure flank.

Finally, there was Army Group South, the weakest of the three, under the distinguished von Rundstedt. He was to attack just south of the Pripyat marshes, along that strip of clear terrain I refer to on the gameboard as the "Ukrainian slot" to Kiev; from there, he was to plunge downward to the sea, encircling all Russian forces in the Ukraine. The Rumanians were also to attack from their own country, lightly reinforced by the Germans, and advance along the coast to Odessa. If they took Odessa, Hitler promised that Rumania could have it. But this was little more than a pinning operation, insignificant in the overall scheme of things.

These, then, were the objectives of the initial thrust, after which it was thought Stalin's government would surely fall. If it did not, there seemed little doubt the Germans could easily fan out to what came to be called the "AA" (Astrakhan-Archangel) line. This would leave them in occupation of the greater portion of European Russia; the country beyond that was so primitive it was hard to believe that a hostile army of any size could continue to exist there, much less carry out military operations. "Even if I have to use sixty divisions (along the 'AA' line)," Hitler remarked in conversation, "that will be less than I now require along the Polish frontier." And . . . it would place the resources of European Russia at his disposal.

This was the overall historical plan for Operation Barbarossa as it was finally decided upon. The main objection has already been noted—that panzers were being concentrated in the Center and North, where terrain was most unfavorable for their use. However, it must be remembered that just because the terrain was unfavorable made them all the more unexpected there—as they had been unexpected in the Ardennes in France. Once again, they would gain surprise by attacking in the "wrong" place. Moreover, an attack here had the advantage of shorter supply lines—and the recent conquest of Greece further reassured Hitler that his panzers could handle the roughest of terrain. Most important, this plan assured that they would be everywhere in sound position with flanks secure. The Germans would never let their armies become lost in the vast expanses of Russia and subject to Napoleonic defeats . . . provided only that they adhered strictly to sequence and timetable, and did not let early success go to their heads . . .

Invasion

The invasion of Russia began at H-hour 0315, June 22nd, 1941; with the first light of dawn on the longest day of the year, German artillery opened up from concealed positions behind the frontier . . . and the opening barrage rolled southward along the 930 miles of frontier with the dawn. The Russians were caught almost everywhere by surprise. Many of the bridges along the border were seized by shock troops before the Soviet guards could react . . . and where there were no bridges, crossings were forced by assault boats and rubber dingies, and engineers quickly threw together emergency bridges. German armor was in action on Soviet soil in a matter of hours, often brushing past pickets and unmanned defenses to drive into Russian troop assembly areas.

The German surprise remains controversial to this very day. It's hard to imagine that they could have assembled three million troops along

the frontier without detection; one gets the impression that the only people in the world unaware of the impending assault were the Soviet frontier guard. Stalin had been warned repeatedly by the British and Americans, and although he did not trust them, his own considerable intelligence service verified these reports again and again. Apparently, he was so terrified of the impending attack—"like a rabbit of a snake," as Krushchev recalls—that he dared not alert his frontier for fear of provoking the Germans. Even when the German barrage opened, he refused permission to return the fire in a last desperate hope that it was all a mistake.

There was no mistake. Stalin was so paralyzed with fear that he was unable to do anything, and went into hiding and was not heard from by the Russian population for several weeks. The initial confusion at the border was taken advantage of by Soviet radio and press to announce to the people that "the Fascist bandits have been knocked on the head" and there was talk of retaking Brest and driving into Poland. But such optimism was short lived: German spearheads quickly overran the frontier almost everywhere, and fanned out into Russia in a series of the most brilliant and fantastic military operations of all time.

Success!

Since this is a strategic and not tactical study, we will be concerned with tactical battles only insofar as they influenced strategy—especially the strategic timetable and sequence of the Barbarossa plan we've already referred to. At first, this timetable went like the finest clockwork—except in the south. The most spectacular gains were made in Center, where the twin "prongs" of Guderian's and Hoth's panzer armies encircled four Soviet armies in the Minsk pocket and drove ahead to capture Smolensk by 16th July. Just as in France, Guderian was the driver, the pusher, pressing forward so hard and fast that German infantry was soon left far behind. It was a daring maneuver, for he was operating far behind enemy lines and if forced to stop for fuel or any other reason he could immediately be surrounded and annihilated by advancing Russian reserves.

But there was method to his madness: he was able to drive again and again into assembly areas for new Soviet defense lines and penetrate them before they had been completed. "Your operations always hang by a silver thread," the unhappy Kluge moaned . . . but invariably Guderian had his way.

A desperate Soviet counterattack to retake Smolensk was smashed, and by 26th July Army Group Center had achieved its initial objective in record time: all Soviet resistance in the area had been crushed between the frontier and Smolensk; there was now nothing of significance between them and Moscow, a little more than 200 miles away. Should they now drive on the capitol, or should reinforcements be sent to Leningrad first, as planned?

Meanwhile, things had gone so well with Army Group North that the promised reinforcements were not even needed. Substantial Soviet forces had been trapped before Riga (where the bridges had been blown prematurely) and destroyed. And, what was even more important, the impossible had been achieved: the bridges at Daugavpils, 155 miles from the frontier, had been captured intact by a clever ruse and held until additional forces could

advance to secure it. The road to Leningrad was now open.

But the opportunity that this presented, on a silver platter as it were, was promptly frittered away in a series of tactical blunders, high command bickering, and delays. Basically, what it came down to was that OKH had a preordained plan for the taking of Leningrad by first flanking it to the southeast, but this approach bogged down against heavy Russian resistance in the swampy lower Luga. Nonetheless, the swift German advance had so surprised the Russians that Leningrad itself was virtually undefended, and an opportunity presented itself to drive straight into the city.



Few people realize the importance cavalry held as late as the 1940's. Horse-drawn transport remained essential to the Wehrmacht throughout the war, especially in winter when lorries were often useless. Above, SS cavalry advances in the Ukraine.

The German high command insisted on adhering to their original plan, and it was many weeks before permission could be obtained for this adjustment. Then, just before the assault was to be made, the Russians counterattacked south of lake Ilmen and achieved a decisive breakthrough. The assault on Leningrad was postponed, and Manstein sent to the lake where he delivered a shattering attack on these Russian forces and annihilated them. He then reassembled for the final assault on Leningrad—which the Russians had by this time managed to fortify and reinforce. There seems little doubt the attack would have succeeded anyway, but at the last minute—on September 17th—Hitler called it off, and ordered Manstein south for “operations elsewhere.”

Sequence Lost

The decision not to take Leningrad just at the moment when it was ready to fall into his hands—after weeks of frustrating maneuver—was probably the most single fatal decision that Hitler made in the first year of the war. The damage it caused to the overall operations in Russia was even greater than the prior strategic studies had indicated: (a) for the remainder of the war, the German northern flank was left “dangling” in an area difficult for them to supply, but easy for the Russians to supply for frequent and costly counterattacks; (b) The use of Leningrad as a port to shorten the desperately overlength and inadequate German supply lines was denied; (c) Finnish forces were pinned in the siege of the city to the north, which compromised their efforts to cut the Murmansk railroad (This was more serious than anticipated, for the expedition against Murmansk from Petsamo [Operation Platinum Fox] was a fiasco: when it got underway, it was discovered that the dotted lines on Russian maps of the primitive terrain were not secondary roads but telegraph lines—there *were* no roads!); (d)

finally, heavy German forces were pinned down here in siege, which dragged out until broken by the Russians in 1944. These troops were desperately needed elsewhere. In fact, a second attempt by Manstein to take Leningrad had to be called off in 1942 when Paulus was trapped at Stalingrad.

Thus, something very subtle but of highest strategic importance had happened . . . *sequence* and *timetable* of Barbarossa had been violated; the northern flank was not secured, and Army Group North was not released to join Center for concluding operations of the campaign.

Decision: Moscow?

Meanwhile, remember, Army Group Center had seized Smolensk almost two months earlier, on July 26th. Since North was doing quite well at the time, reinforcements were not sent there. About two weeks were spent in emergency repairs and overhauling of engines, and the question was raised: what next? There was no doubt in the minds of Guderian and Bock—Moscow! They could not believe it when they learned Hitler had other plans, and precious weeks of good campaign weather were lost in bitter and fruitless argument. And, although there was almost nothing left between them and the capital to oppose them, they ultimately followed orders and pursued a different objective—Kiev.



Von Runstedt was given the weakest force (Army Group South) with which to face the Russian's strongest troop concentrations. At Hitler's orders, emphasis was switched to the south to reinforce him, granting the defenders of Leningrad an 11th hour reprieve.

The problem sprang from the desultory performance and misfortunes of Army Group South. The highly capable but unlucky von Runstedt had the dubious honor of commanding the weakest of the three army groups—against the strongest concentration of Soviet force, including most of their armor. He was so badly outnumbered that his assigned “breakthrough” was impossible, and in the first ten days of invasion had pushed the Soviets back a bare sixty miles. Progress after that was described as “slow but sure,” but losses were heavy and he was under constant counterattack, especially by Soviets that withdrew into the Pripjat until he passed and then struck at his flank and rear. Worse yet, this desultory

Good News and Bad Omens

How could Hitler have made such a monstrous blunder as to pass on the capture of Leningrad at the last moment? The answer is at least partly to be found in his character, and in a pattern that gradually developed in his thinking as the campaign progressed. Hitler had proven himself to be a highly unorthodox, original, and innovative military thinker . . . but as time passed he developed an increasing tendency to repeat himself—to repeat by rote the lessons of past successes and failures, in new situations where the lessons did not apply. Thus, when he gave in to Rommel and called off the invasion of Malta, one factor was that after Crete he had no stomach for such operations. And now, in Russia, it is likely that the brave Russian defenders at Brest-Litovsk had much to do with saving Leningrad; they had held the Brest citadel almost to the last man, for almost two weeks after the invasion, and inflicted frightful losses on the Germans.

There were other reasons, of course: Hitler had heard that Leningrad was being heavily mined and booby-trapped, so that any army trying to take the city would be blown to bits. And the Finns refused to cooperate with a coordinated assault from the north. Thus, the combination of all these considerations led Hitler to gamble that the city would fall quickly under siege . . . but it was far too important an objective to gamble.

Finally, in all fairness, there were some more general and overall considerations, in addition to the specifics given above. The war news at this time was good almost everywhere, but there were also some dire omens . . . indications that if operations were not brought to a swift conclusion, there would be trouble:

(1) First, the realities: the German mechanized army had been in constant use since September of 1939, and after two years of war much of its equipment was beginning to wear out. The hot, dusty roads of primitive Russia did much to accelerate the process; the dust and grime did brutal damage to tank and truck engines alike, which overheated and froze up; oil filters were clogged with dirt, and oil consumption became so heavy supplies could not keep up with demand. As early as July, Hoth was writing to command that “the losses of armored fighting vehicles have now reached 60 to 70 percent of our nominal strength” and this was due mostly to breakdowns, not enemy action.

(2) Meanwhile, Russian resistance had been unexpectedly fierce and fanatical; the incident at Brest was only one example, for surrounded Russian units often fought to the death rather than surrender, to delay the advance as long as possible. Moreover, the Soviets had even blown the recently completed Dnieperstroni dam on the Dnepr—largest in the world and pride of Russia. These were not good omens of the political collapse Hitler had predicted.

(3) And Stalin was unwrapping almost daily an arsenal of secret weapons nobody had dared to dream existed. When the rocket mortars of “Stalin's organs” were used on the central front for the first time, the deafening whine and awesome destruction caused the troops of both sides to panic and run. But an even nastier surprise was the Russian T-34 tank; here's what happened during a first appearance on the central front, during a tank battle at Senno:

At 1700 hours German tanks received a signal over their radios: “Ammunition must be used sparingly.” At the same moment Radio Operator Westphal in his tank heard his commander's excited voice: “Heavy enemy tank! Turret 10 o'clock. Armor piercing shell. Fire!” “Direct hit!” Sergeant Serge called out. But the Russian did not even seem to feel the shell. He simply drove on. He took no notice of it whatsoever. Two, three, and then four tanks of 9th Company were weaving around the Russian at 800-1000 yards' distance, firing. Nothing happened. Then he stopped. His turret swung round. With a bright flash his gun fired. A fountain of dirt shot up 40 yards in front of Sergeant Hornbogen's tank of 7th Company. Hornbogen swung out of the line of fire. The Russian continued to advance along a farm track. A German 3.7-cm anti-tank gun was in position there.

“Fire!” But the giant just seemed to shrug the shells off. Its broad tracks were full of tufts of grass and crushed haulms of grain. Its engine note rose. The driver was engaging his top gear. That was not such an easy operation with their sturdily built vehicles. Nearly every driver therefore had a hammer lying by his feet; if the gear would not engage, striking the gear-lever with the hammer usually did the trick. A case of Soviet improvisation. Nevertheless, these things moved all right. This one was making straight for the anti-tank gun. The gunners fired furiously. Only twenty yards to go. Then ten, and then five.

Now it was on top of them. The men leaped out of its way, scattering. Like some huge monster the tank went straight over the gun. It then bore slightly to the right and drove on, through the German lines, towards the heavy artillery positions in the rear. Its journey did not end until nine miles behind the main fighting line, where it got stuck in marsh ground a short way in front of the German gun positions. A 10-cm. long-barrel gun of the divisional artillery finished it off.

(Carell, *Hitler Moves East*)

The lesson of such chilling incidents was clear. The T-34 was primitive, but it worked—the Germans had nothing that could match it in firepower, mobility, and armor. Moreover, any effort to catch up with the design now would require considerable industrial retooling and loss of production . . . at a time when German industry was already unable to keep up with losses! Fortunately, the Russians still adhered to the obsolete French doctrine of committing the tanks piecemeal, as infantry support. But if given time to pick up the German *modus operandi* and train their personnel . . .

There was nothing for it. German infantry losses were also mounting due to the ferocity of Russian resistance and the high command realized a decision must now be forced quickly, if at all. So, with Leningrad neutralized, Manstein's armor was ordered south on September 17th.

progress delayed the expedition from Rumania, which was not supposed to start until Runstedt was well under way. Needless to say, he was also the first to encounter the dreaded T-34s.

Hitler's decision to turn away from Moscow to clean up the situation in the south has often been described as the worst mistake of the war. It may very well have been a mistake; this decision, and the subsequent abandonment of Leningrad threw the entire operational planning and logic of Barbarossa to the winds. But, at the same time, there were some very sound military grounds for the decision:

(1) Guderian's lightning advance in center had outrun the flank protection of both North and South, as well as his own infantry. If he were allowed to further extend this exposed position with a drive on Moscow, the sizable armies in the Kiev area would be sitting right on his flank for a counterattack to smash his supply lines and put him out of business. It would be especially dangerous in the coming winter, to have such an army in your rear—and Runstedt did not seem capable of dealing with it.

(2) Guderian and Hoth argued that the Russians would rally to save Moscow and so bring on the "showdown" battle of the campaign. They may have been right. But Hitler was also going after a sizable army; and, if this is the criterion, you can't argue with the result. The battle of Kiev was probably the greatest military victory in the history of warfare. If that failed to win the war, it's difficult to imagine what would have been required at Moscow.

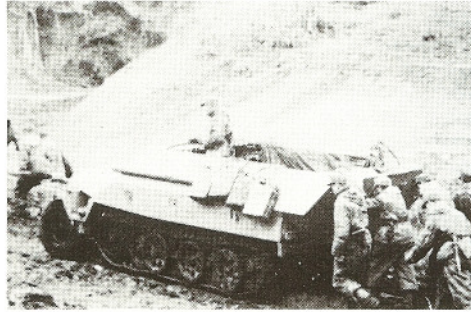
If Hitler's decision can be criticized, I think it is more for grand strategic reasons; the really *fatal* clincher, to me, was the subsequent September 17th abandonment of Leningrad. Sequence and timetable were forgotten, and suddenly Hitler had his armies splitting up and scrambling for objectives everywhere. Especially, he seems suddenly to have changed his mind about things and shifted emphasis of the entire invasion from north to south. Suddenly he was telling Guderian that capture of Sevastopol, the Crimea, and Rostov (gateway to the Caucasus) was more important than Moscow . . . and that for political and economic reasons these must be taken before the onset of winter. Overall, he seems to have overreacted to Runstedt's foot-dragging in the Ukraine.

Finally, one last point has occurred to me in the playing of *FRANCE, 1940*—I'd like to offer it as a hypothesis worth thinking about. If you happen to have the game, open up the board and take a look. Imagine the Ardennes to be the Pripyat, Seden to be Smolensk, and Paris as Moscow. And Guderian, of course, sitting at Seden/Smolensk with his panzer army. Well, what do you do? Do you drive straight ahead for the capitol—or swing down and right to encircle the main enemy force from their rear? Now, I'm not saying Kiev was a deliberate and conscious reinactment, on Hitler's part, of the campaign in France. Nonetheless, the resemblance is striking . . . and it certainly seems to fit with his growing tendency to repeat the lessons of past experiences.

Moscow

Stalin not only refused to let Soviet armies in the Kiev area withdraw—he actually reinforced them! The result was that, when the trap closed, over a million men and thousands of pieces of equipment were taken. It was, beyond a doubt, one of the great military victories of all time.

This accomplished, many of the German generals wanted to call it quits for the season; it was high time, they felt, to start digging in for the winter and bring up supplies of blankets, heavy clothing, anti-freeze. . . . And Hitler was not opposed to the idea. It was Bock, Hoth, and Guderian who continued to press most forcefully for a final drive on Moscow. They felt there was still time, and this one last effort would be the blow to bring about the collapse of Russia. There was no question the country was reeling; the Soviets were no longer capable of maintaining a continuous front anywhere, and the idea of ending it now was tempting. Finally, Hitler gave in; the assault on Leningrad was called off and Manstein reassigned to Army Group South (which was to attempt, unsuccessfully, its original objectives of Rostov and Sevastopol before winter). The considerable forces deployed for the Leningrad assault were now recalled to Smolensk for the last big push—on Moscow.



The Germans got their first taste of the Russian weather when mud made unpassable morass out of the few secondary roads which primitive Russia had to offer.

The result of the last great German drive of the Barbarossa campaign is history. Certainly, the Germans were still strong enough to do the job, especially since there were only remnants of Soviet forces to oppose them. Distance was the enemy; distance, especially, for battered and worn-out equipment on miserable roads from Leningrad and Kiev to assembly in the Smolensk area—where they kicked off for Moscow. Even this they accomplished. But then came mud . . . and then snow. The effect of these was to limit the German drive to very narrow frontages on the few passable roads (basically a Smolensk-to-Moscow assault, with encircling thrusts at Kalinin and Tula). Meanwhile, Stalin had learned from his informer in Japan that the Japanese planned to attack America, and not the Russian rear. He gambled desperately that this information was true, and stripped his Pacific frontiers of Siberian troops and poured them in at Moscow. These last minute arrivals, and the weather, and the narrow frontages of the German assault, just barely proved to be enough.

Winter Disaster

And it was the Germans who now had to pay, for another gamble that failed. The collapse of the weather brought with it collapse of overextended supply lines that the German had already outrun anyway. Worse, they had absolutely no provisions of any significance for the sudden sub-zero temperatures. Infantry lost fingers and toes by the thousands to frostbite; guns would not fire because lubricants froze; planes and trucks had to have their engines heated by blowtorch, in an often vain attempt to make them start.

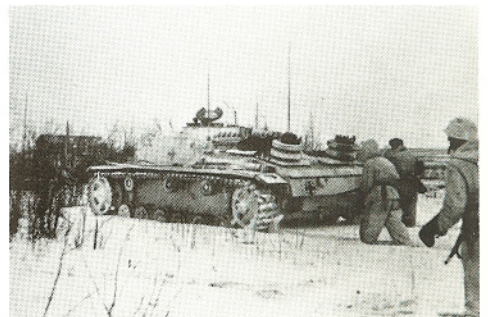


The 3.7 cm PAK was greatly undergunned in comparison to the Soviet heavy tanks they were expected to deal with. The small AT weapons often needed several hits at point blank range to stop an advancing T34. Only the inexperience of Soviet tank crews prevented complete disaster in the early years of the war.

Stalin saw in this catastrophe a chance for the sudden and total victory that Hitler had sought. He deployed his experienced Siberian troops for a badly coordinated but nightmarish counterattack intending nothing less than destruction of the entire German Army Group Center. There was no longer a question of a German "front;" they were restricted to the few roads that were passable, and outposts sometimes watched in horror as Russian ski troops in the distance swept gracefully and silently past their positions toward the supply depots in the rearward areas.

The harshness of this brutal winter for both sides is brought home in a fantastic episode that occurred to a German unit snowed in on a narrow road; they looked up, and saw Russian cavalry on the rise, ready to charge. They were lost, for they knew there was nothing they could do to defend themselves . . . but the cavalry waited for more than an hour, and did not attack. Finally, they could bear it no longer, and some of the men climbed to the top of the rise. They discovered, to their astonishment, that the entire cavalry detachment—men and horses alike—had frozen solid like statues, while preparing for the charge. An attempt was made to photograph this bizarre spectacle, but not even the camera shutter would work in the intense cold.

It is said that Hitler's hair turned white during these trying months. Nonetheless, he remained ever afterwards convinced that his "standfast" order had prevented a disastrous Napoleonic defeat and saved the German army. There is good reason to suppose he was right, for if a retreat had been attempted under such circumstances a fatal panic was extremely likely.



By the time the Russian winter offensives struck, German panzer units were practically without operational tanks. Only assault guns like the above Stuk 40 L/48 shown above were available to deal with Russian armor. The knee deep snow shown above was actually light in comparison to other areas of the front where temperatures dipped below -50 degrees centigrade.

However, once again, the lessons of this costly "defensive victory" were to be even more expensive in the coming years, when Hitler would try to apply them to other, inappropriate, circumstances. For example, the successful airlifting of supplies to 100,000 troops in the Demyansk pocket (about two hexes northwest of Kalinin) would lead him to believe he could supply 300,000 troops in the Stalingrad pocket the following year. And, more disastrously, he was to insist on the same "hedgehog" defense of Army Group Center once again in 1944—this time in summer.

But those horrors lay yet in the future; and the winter of 1941/42 was caviar, in comparison, to what was yet to come.

The Spring thaw of 1942 brought an end to the Russian counteroffensive, but it also revealed that the vaunted German Wehrmacht had virtually ceased to exist. The two and a half years of constant warfare, the thousands of hard miles over brutal terrain, the weather, and fierce Russian resistance had finally ground them down to a mere travesty of their former might and glory. Nonetheless, in the process, they had managed to do much the same to most of their enemies, and there was no real army on the continent to oppose them. Still, Operation Barbarossa had failed. Germany and Russia were now at war, and Russia had in addition to her own considerable resources the industrial might of America and Great Britain—her new allies. Now, more than ever, it was necessary for Germany to somehow rally support and resources for one final effort to topple the Russian giant while it was still dizzy . . . for the clock of 1914 was ticking again.

—Mark Saha

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Defense in Stalingrad

Mark Irwin's article is a throwback to the days when the GENERAL reprinted the best articles of other magazines from time to time. Although we are not resorting to that policy again, we felt Irwin's article merited a little better graphic presentation than it got in its first printing. DEFENSE IN STALINGRAD first appeared in the INTERNATIONAL WARGAMER. We gratefully acknowledge their kind permission to reprint the article here.



The German invasion of Russia fared well until the Russian winter hit. German troops were to suffer great hardships from lack of proper winter equipment. Without winter lubricants machineguns jammed; without felt boots thousands lost toes and feet to frostbite, without fur helmet liners men simply froze to death. Looting of Russian dead for items of winter apparel was accepted practise. Many didn't even have camouflage smocks as worn by the troops shown above.

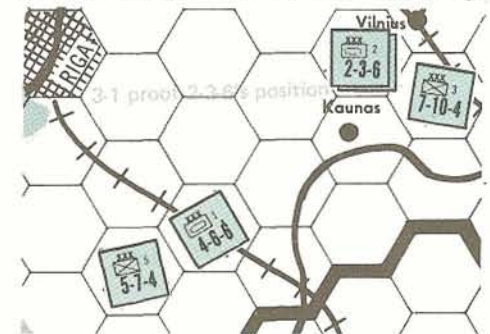
"Why another Stalingrad article?," many of you ask as you read this title. The main reason is that I do not see enough articles concerning defense for any of the popular AH games. Some may feel that Stalingrad is too simple a game to do a major defensive study on. I will admit that 4-6-8 Stalingrad is so imbalanced that a good defense is not needed. I also concede that 4-5-6 Stalingrad is still weighted in favor of the Russians. But consider an opponent who would like to have a German Replacement rate of 8 per turn. Actually, a good Russian player can make a good fight of this and possibly win. However, there can be no mistakes. As an aside, I have noticed that in 4-5-6 Stalingrad the Russian can afford to make about two bad mistakes which the German takes advantage of. To test your own perfection, here is a short quiz question: "Is there any difference between two doubled 7-10-4 units protecting three squares and a doubled 6-9-6 with a doubled 7-10-4 doing the same?" Well, there is a vast difference. The two 7-10-4 units are not vulnerable to 3-1 attack while a 3-1 attack could be made against the 6-9-6 while the 7-10-4 is soaked off against. It is this type of difference which can lose a game. And it is the type of difference that a beginner will not realize for many painful defeats.

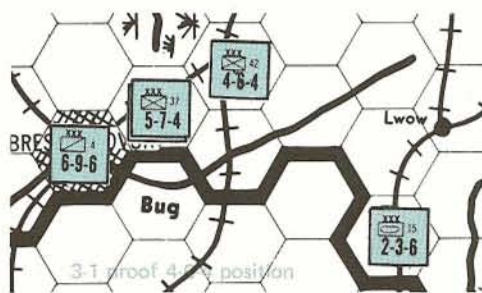
The primary goal of a defensive line is to make a line of zones of control of units which may not be attacked at 3-1 odds. Any line which does not meet this requirement cannot be considered a real defensive line, but only a group of doubled units. Rather than fall back to such a situation it is better to use only the portion of the line which can be made 3-1 proof and protect the remainder of the line on open terrain. This applies only if you are subsequently going to be able to make the remainder of the line 3-1 proof.

Different units, of course have different capabilities in respect to making a position 3-1 proof and I intend to explain these differences. The 2-3-6 can almost be disregarded for this purpose but they can be used if the situation calls for it. A 2-3-6 if stacked with another unit can protect one square from 3-1 attack. The German needs

18 attack factors to make a 3-1 attack & this requires at least 3 units. If it is stacked with another unit and protecting only one square then the other unit must be soaked-off against leaving only two units to attack the 2-3-6. However, this tactic is to be shunned due to the fact that the force needed to make an attack at slightly lesser odds is so small that the German can easily risk the loss.

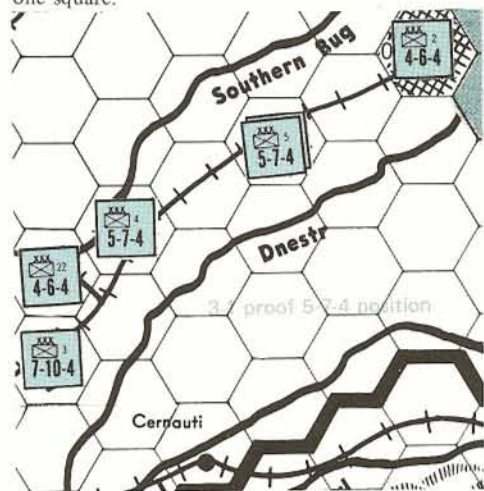
Although the 4-6-4 is twice as large as the 2-3-6, its general usefulness in this role is only slightly larger. The German only needs 36 attack factors for 3-1 and should the 4-6-4 be protecting three squares this force can be pure Infantry. With a front of two squares the German must use a little of his Panzers but very little. Examples of such forces are: 4 5-5-4's & 2 8-8-6's; 3 4-4-4's & 3 8-8-6's; 4 8-8-6's & a 4-4-4; 3 8-8-6's & 2 6-6-6's. As the last two examples show, this force can be mounted using just five units. This means that another unit could make a soak-off attack from one of the attack squares and this means it can still be attacked at 3-1. The 4-6-4's main usefulness is in protecting one square which it can do quite well since even a 1-1 attack risks 12 factors. Of course, situations will arise when the 4-6-4 can protect two or even three squares. However, extreme care must be taken when using this tactic. You will be able to use the 4-6-4 in this capacity only because the German is unable to bring enough units to bear, but always





remember that a month or two later he may be able to bring up enough force. Therefore, you must be able to correct the situation by using a more suitable unit or lose the line. This applies to all units that are used in positions which they cannot protect under all conditions. To improve your care in this area always assume that the German has purposely allowed the situation and plans to take advantage of you placing an unsuitable unit in an important position.

The 5-7-4 does not seem much larger than the 4-6-4, but it is immeasurably more useful for defensive lines. A 3-1 attack against this unit needs 42 attack factors. This means that even when a 5-7-4 is protecting three squares a lot of 5-5-4's and some panzers are needed. But the main use of the 5-7-4 is in protecting two squares. There are only five different forces which can make a 3-1 attack against a 5-7-4 and the German can only raise one of these forces at a time. They are: 4 8-8-6's & 2 5-5-4's; 3 8-8-6 units & 2 7-7-6's & a 4-4-4; 3 8-8-6's & 3 6-6-6 units; 3 8-8-6's & a 7-7-6 & a 6-6-6 & a 5-5-4; 2 8-8-6's & 2 7-7-6's & 2 7-7-6's & 2 6-6-6's. The only other combinations are larger and are formed by using units larger than necessary such as a 6-6-6 instead of a 5-5-4. Note the large amount of Panzer units needed. This is a deterrent in itself because of the high cost of an exchange. The possible forces available shows a very important point, which is that six units are needed and this leaves none for a soak-off. This means that two 5-7-4's protecting two squares are not vulnerable to 3-1 attack. In addition, any unit which forces a soak-off attack from one of the squares used to attack the 5-7-4, without being susceptible to 3-1 attack itself, will 3-1 proof the 5-7-4. Thus we can see that the 5-7-4 is the mainstay of the defense. I urge that this be kept in mind especially when taking replacements. Myself, I prefer to wait a month for a 5-7-4, than have a 4-6-4 immediately. Of course, the 5-7-4 is superior to the 4-6-6 for protecting one square.



The 6-9-6 is a relatively powerful unit since it can protect one or two squares by itself. However, when it is used to protect three squares, it can often be susceptible to a 3-1 attack. Such an attack will use a lot of Panzer units, but one must always keep in mind that the force can be raised and in fact it can be done with eight units leaving one for a soak-off (e.g., 4 8-8-6's & 2 7-7-6's & 2 5-5-4's). This is important when trying to use the 6-9-6 alone or with a 7-10-4. As is always the case, the 6-9-6 may often be able to protect three squares from local German forces. The fear of losing 18 factors in an exchange will also deter an attack and under the most favorable conditions you may be able to force two soak-offs and thus make the 6-9-6 3-1 proof.

Although, as stated, the 5-7-4 is the mainstay of a defensive line, the 7-10-4's are essential to most lines. Their use is, of course, in protecting three squares. In most circumstances their very presence will either mean that the German does not have enough Panzer units in the area to make a 3-1 attack or he will be too afraid to risk the devastating effect of an exchange. The 7-10-4 is superior to the 6-9-6 for defensive purposes due to the fact that although an attack force can be raised it must use nine units leaving none for a soak-off. A great many river positions which protect three squares have a common characteristic which is a square adjacent to the 7-10-4, which forces a soak-off from a square used to attack the 7-10-4, and a unit on this square can only be attacked from the square for attacking the 7-10-4. This means the 7-10-4 can often be made 3-1 proof and since most river positions have at least one spot which must protect three squares, this is essential.

UNIT VULNERABILITY TO 3-1 ATTACK

UNIT	A.F.	M.U.	A.S.	3-1 1	3-1 2	3-1 3
7-10-4	60	9	6.67	N.P.	N.P.	N.P.*
6-9-6	54	8	6.75	N.P.	N.P.	Diff.
5-7-4	42	6	7.00	N.P.	N.P.*	Vul.
4-6-4	36	5	7.20	N.P.	Vul.	Easy
2-3-6	18	3	6.00	N.P.**	Easy	Very

Now that I have gone over the various units I have included a short chart to review them. The codes are as follows: A.F. is the number of attack factors needed for a 3-1 attack; M.U. is the minimum number of units needed for a 3-1 attack; A.S. is the average strength of the units needed (M.U.); 3-1 1 is the vulnerability to 3-1 attack from one square; 3-1 2 is from two squares; 3-1 3 is from three squares; N.P. means not possible; N.P.* is conditional requiring another unit to force a soak-off; Diff. is that the unit is usually vulnerable to 3-1 attack unless two soak-offs can be forced but in any case it will be difficult to raise the force; Vul. is that the unit is usually vulnerable to 3-1 attack; Easy is that the unit is almost always vulnerable; N.P.** not possible if in combination with another unit but is still ill-advised; Very is very easy and needs negligible force to attack.

Forward Defense Lines

In Part I of this three part study on defense in STALINGRAD, I examined the defensive capabilities of the various Russian units. In this, Part II, I will examine, in detail, all the forward defense lines. My deployment of forces for each line shall be only what is needed. That is, other deployments will do just as good a job, but will usually use more force. The Russian just does not

have enough force to waste it on over-protection. My deployments will attempt to make each line 3-1 proof, if possible. I will, however, make suggestions on what to do if the line cannot be made 3-1 proof or if you do not have the units needed. At most stages in the game, you cannot make all lines 3-1 proof, primarily because of a shortage of 7-10-4's. This makes it important that lines be defended to their optimum even if they are not 3-1 proof.

Nemunas River

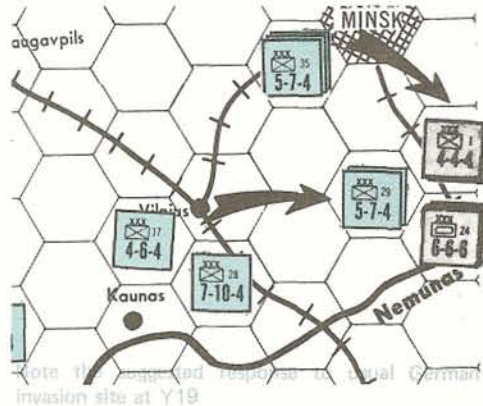
Initially, the Nemunas River must be a main concern to the Russian Commander. This is an easily defended line, although to protect the whole line, the two 7-10-4's are needed. It is such an important line that it should only be broken by being outflanked to the south or by low odds attacks. It should never fall victim to a 3-1 attack and if it does, have someone rap your knuckles. In most set-ups, the entire line is seldom used. It can be narrowed down to two squares if there are delaying units on X-16 and U-18. The two squares are protected by a 5-7-4 on S-18 and a 4-6-4 on R-18 will 3-1 proof the 5-7-4. This is seldom used because it means you must sacrifice a unit which need not be sacrificed. A more typical line uses a 7-10-4 on S-18 with a 4-6-4 on R-18 to 3-1 proof the 7-10-4 to protect the three Northern squares. A 4-6-4 on S-20 protects and 3-1 proofs the next southernly square. The type of unit used on V-19 is dependent upon what type of delaying action is used between the Nemunas and the Bug. There are two major types of delaying action used in this area. One is to place a sacrifice unit on Y-15 and strong units on Y-17. With this type there are three squares from which the German can attack and therefore you must use a 7-10-4 with a soak-off 4-6-4 on U-20 or you can use the 6-9-6 on V-19 and 4-6-4 on each of U-20 and W-19 to force two soak-offs. The other method of delay is to place a sacrifice unit on X-16. This means V-19 has only two squares to protect and a 5-7-4, 3-1 proofed by a 4-6-4 will do the job. With this defense, turn two defense will be the same as turn one (initial) defense for the first method.

Both these defenses have the advantage of not having to use a 7-10-4 on V-19 immediately. The advantage in this is that it staves off a low odds series of attacks. Often when the German is faced with a 3-1 line at this stage in the game (this stage is critical as he has no other route to take in the north), he will make two 1-2 attacks against V-19 and S-18. If you have 7-10-4's in these squares then the attack can be very effective. This is because the 7-10-4 is totally necessary for each square (at least after a few turns) and therefore we must give a victory to the German if he gets an exchange as well as when he gets D back 2. This gives him a chance of victory of 55.6% FTF and 64% PBM. If however he cannot attack both of them then the chances are lowered to 44.4% FTF and 48% PBM.

When X-18 becomes the most southernly exposed square, you must have a 7-10-4 for V-19 with the 4-6-4 3-1 proofing from U-20. A 4-6-4 on X-19 seals the line. When the German can enter Y-18 but not Z-18, the 4-6-4 must move over to Y-19 and be replaced by a 5-7-4. When he can enter the swamp square (Z-18), the 4-6-4 must be pulled out of the line and another 5-7-4 must go to X-19 to make the line complete and 3-1 proof. Do not get sloppy or give up just because the German will soon break your line. If

you allow a 3-1 attack the German will gain a month. In addition, the German may be repulsed if he is sloppy in his out-flanking maneuver.

As an aside, I will explain how you might be able to repulse the German. The German units on the swamp square will move to Y-19 to attack X-19 in conjunction with forces on the river. These units will usually be only infantry because with the slow progress he has made he will have sent the Panzers south. If he does not put more units in the swamp, you have a possible opportunity. His attacks against X-19 will usually take the form of a high odds attack against one 5-7-4 and a soak-off against the other forces (it is often wise to add another 5-7-4 to the stack the turn before he makes his crossing). To give himself better odds on the soak-off, he will usually use one of the units on Y-19. This will leave only two units east of the river and, as stated, they will usually be weak. If you soak off against the forces on the river and make a strong attack on the two units east of the river, the German will be faced with a 3-1 proof line again and will have lost two months. This situation may not arise often but when it does, make use of it. Be sure to add a devilish grin as his mouth falls open.

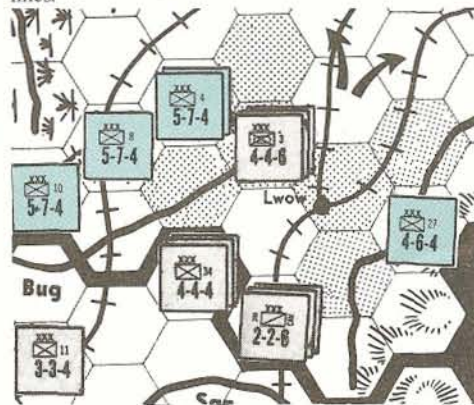


BUG RIVER

The Bug River defense depends on Brest-Litovsk and the defense of Brest-Litovsk depends on the delaying action between the Nemunas and the Bug as described in discussion on defense of V-19 on the Nemunas. If the first method is used, that is, delaying units on Y-15 and Y-17 then Brest-Litovsk only protects two squares and is easily defended by 2 5-7-4's. This leaves the 7-10-4 for V-19. If the second method is used (a delaying unit on X-16), then V-19 does not need the 7-10-4 and it can be used on Brest-Litovsk where it protects three squares and is 3-1 proofed by a 4-6-4 on Z-16. With Brest-Litovsk secure, a stack of 2 5-7-4's are placed on CC-15 to protect the next two squares. The Bug defense does not always extend to the end for the initial set-up, but if it does then place 2 4-6-4's on EE-15. It should be two rather than one 4-6-4 here because any penetration by the German can be disastrous



and well worth his risk of a low odds attack. We face this same danger in placing a 7-10-4 in Brest-Litovsk, but whether it is a serious threat or not depends on relative troops north and south of the Pripyat swamps and whether or not you use reserves. If you fear a split then it is best to ensure no penetration rather than 3-1 proof the position. Units on BB-15 would also be doubled if you can withdraw from Brest-Litovsk into that square. How far the Bug defense should extend is dependent on whether or not you delay between the Bug and the Hungarian mountains. If there is no delay then it must be extended to the end in the manner I suggested. If there is a delaying unit used at all, it is usually on EE-12. In this case you need only the stack on CC-15. When defending to the end of the Bug it is imperative that there be those two 4-6-4s on EE-15, even if you have 2 5-7-4's on DD-15. The reason for this is the German's possible use of an advancing retreat, which I do not believe has been outlawed in STALINGRAD yet. For if you have units on DD-15 and not on EE-15, he can stage a I-3 attack against DD-15 and fill all squares to the west to capacity. Then if you have to retreat him you have no option but to place him behind your lines.



Example of a 1-3 advancing retreat. The German has no where to go but forward.

Hungarian Mountains

The defense of the Hungarian Mountains is very simple in the first turn or two. To the north there are two options. If the delay mentioned in discussing the Bug is used, then 2 5-7-4's should be placed on GG-11. If it is not used, then they should be on GG-12. GG-12 closes the gap with the Bug defense. For the delay option GG-11 is used because it keeps German troops from advancing into GG-10, which is the jump-off point for troops to attack GG-12 the following turn. In most cases the 2 5-7-4's on GG-11 will have to withdraw to GG-12 on turn one because of a threat of troops arriving from Hungary. However if there is no threat and another delay is desired and possible, then they can remain on GG-11. The second delaying unit is placed on FF-12 or EE-13 and in any case the 2 5-7-4's only protect two squares. The possibility of a delay depends on how strong your first was and how bright the German is. If you use a 2-3-6 and he senses you will delay again, his best move is to attack it from EE-11 and DD-12. This makes the 2-3-6 doubled and he gets an advance which means no further delays. Therefore, if you have two delays in mind you should use a 4-6-4 which he dares not try the same tactic with. When there is a serious threat from Hungary, GG-12 should only have one unit on it because the other will be

caught when the German surrounds the position and makes a 3-1 with a soak-off. Therefore if you use an initial delay, as described, do not use a 2-3-6, as a German advance means you have no choice but to have two units on GG-12. At this stage you should have a good size stack on HH-12 to force a large soak-off from troops coming from Hungary. In the south, you should have 2 4-6-4's on JJ-12. They need not be 5-7-4's, because any German who places a large number of Panzers in the south is a fool and the defeat of these units is not very important. When these units are threatened with being surrounded, they should be withdrawn behind the Prut (north). This is not always possible, however, if you are threatened at GG-12 and wish to place troops on HH-12. HH-12 can easily be surrounded by Germans advancing into GG-12 and by an attack from the south. In this case, leave a sacrifice unit on JJ-12 (not II-12).

Prut-Siretul River Complex

Defense of this area takes two main forms. The first is the simplest and it is to just defend behind the Prut River. This cannot be made 3-1 proof as NN14 can always be broken. The best you can do is to make the soak-offs expensive. The rest of the river should be defended by 2 4-6-4's on KK-15 and 2 4-6-4's on II-15. 4-6-4's are used as you do not fear his panzers in this area and II-15 is used to protect the one square and to stop an advancing retreat as described for the Bug. No advance can be allowed into II-15.

The alternative to this defensive is to place a delaying unit on NN-13. Again you make soak-offs as expensive as possible, especially for German units on OO-13. He must place units on OO-13, if he is to break the Prut line first turn. The rest of the line is defended by 2 4-6-4's on KK-14 behind the Siretul River. This type of defense has the advantage of using less units and it also reduces German strength in northern Rumania to six units as they can only start on MM-12 and LL-12.

As Tyrone Bomba demonstrated in his article "The Set-Up of the Thing," this area could be made almost impregnable. This, however, requires a great deal of units, which usually cannot be afforded. In any case, if and when the Prut is broken in the area of NN-14, there may be two possible reactions. You can delay again east of the Prut or drop back to the Dnestr-Prut line. A delay will be very difficult if you have allowed an advance into NN-14. Speaking of delays, I think that you will find it very expensive if you use them very much during the opening stages. Often they are more expensive than realized. As an example, some people feel that NN-14 could be best defended by a 2-3-6 on OO-13 and another on NN-13. But in reality, they must either sacrifice more or they have wasted the delay units. Both of these squares can be considered doubled if attack comes from certain squares (e.g., PP-12 against OO-13). A German force of 3 6-6-6's can easily win the battle and advance. Then the delay units have died for nought. If you make the sacrifice greater then you lose two 4-6-4's to delay, for one month, an attack on the Prut. This I don't feel is worth it and I urge you to examine very closely all delaying tactics.

Dnestr-Prut Defense Line

This is one of the finest and simplest lines in Russia, Squares LL-17, JJ-17, HH-16 and HH-14

all protect only two squares each and are doubled positions. The main factor which makes this line so great is that you know the exact German strength which can be deployed against you. You must calculate the strength he can put in five units and in six units. With this knowledge and the lessons you learned in Part I of this study, you can decide what size and how many units will be needed to defend two squares. This line is hinged on the Hungarian mountains and it is on them that it depends for its usefulness. This area must be held as long as possible, in order that German forces do not have lateral movement north and south. Once his forces can move north and south in this area, there are two consequences. First of all, you have to fall back from the Prut and defend on the Dnestr. This line is not as easy to 3-1 proof, because HH-16 must now protect three squares. If possible, a 6-9-6 or 7-10-4 should be available for this position. Either can be made 3-1 proof with appropriate forced soak-offs and the German will usually not attack one of these, in any case, for fear of an exchange. He is slowly advancing up the Pripyat Dnestr plain, anyway, and this means the risk is not worth it. For this position and for all positions of three squares, whenever you cannot use a 6-9-6 or 7-10-4, all you can do is make it expensive to attack. Try not to let 4-6-4's be attacked, use 5-7-4's instead. The second consequence is that you must re-assess the German strength. You must correct for his greater strength, if possible. This may entail replacing a 4-6-4 with 2 5-7-4's, but you must make every effort to have a 3-1 proof line.

Rear Defensive Lines

In Part I of this study, I discussed the use of the Russian units. Part II dealt with the defense of the forward defense lines, that the German should be defeated. However, he will not be stopped. He will push on towards your replacement cities. If you have done a good job early in the game, he will be weak and in fact defeated. On the other hand, you may have done a poor initial job or may be playing some variation. In this case, he may be strong and this means he will drive all the harder against your cities. Therefore in this, Part III, I discuss the defense of the rear defensive lines. These lines vary in their usefulness. Some are strong like the Luga River and others are terribly weak like the "City" line. At any rate, I go over almost all of them. I have left out such things as the defense of the Kama River. Generally you will find a description of the defense of all lines which normally can come into play. The proper defense of the Forward Defensive Lines should defeat the German and the proper defense of the Rear Defensive Lines should stop him.

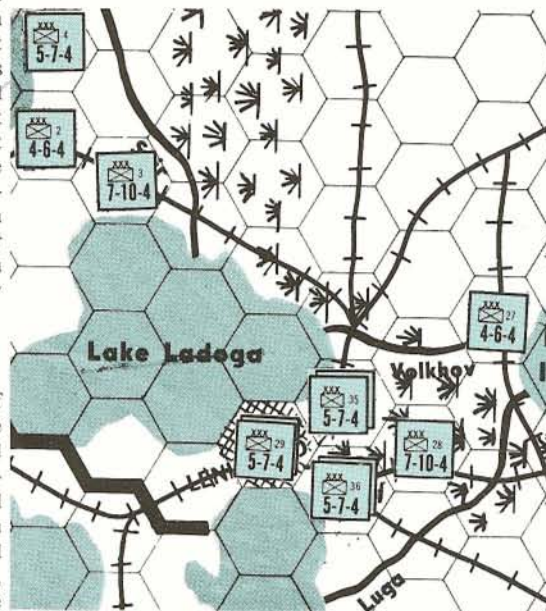
Luga River

The Luga River is an extremely good defense line. Of course, it is only useful part of the year, but when it is useful you can make it very strong. In fact, you can hold the Luga 3-1 proof with the same forces that hold the Divina weakly. All you need is 2 5-7-4's on L-30, a 7-10-4 on M-30, and a 4-6-4 on N-31. You must form up this force, as soon as possible, and if you do not have the correct force, you must have the 2 5-7-4's on L-30. Penetration here, as good as takes Leningrad and Leningrad does have the ability to defend itself. Always keep in mind the

force you need especially if you are retreating toward the Luga during the winter. Make absolutely sure that you can raise the force either from the retreating units or from replacements and do not risk the units in open terrain if you cannot replace them.

Leningrad

As I said, Leningrad can protect itself, to some extent. Unfortunately, this can only be done well during summer. During summer, 2 5-7-4's on Leningrad will protect it. During snow months, the best thing to do is place the largest units possible in Leningrad and try to delay the outflanking, as long as possible. In addition, if you ever want to counter-attack during the game, this is the place. It is especially effective if you can retreat him onto lakes which will thaw on the next turn. Remember that after a thaw Leningrad becomes very powerful and therefore if you have to risk drowned troops to save it, it will be worth it.



Volkhov River

There are several situations which can bring about the defense of the Volkhov River. If you are defending the east bank and hold Leningrad, then you need only a 5-7-4 on M-32 and a 4-6-4 on O-31. If on the other hand, you do not hold Leningrad, you must use either a 7-10-4 defense or a 6-9-6 defense. Defense on the west bank, when you are defending the Luga, is never secure as M-30 can be surrounded and attacked from four squares the best you can do is place a 6-9-6 or 7-10-4 on M-30 and stacks of 2 5-7-4's on L-30 and L-31. This means he must use considerable force and if he wishes to surround M-30 he must make two soak-offs of five factors at 1-6. If you are defending the west bank but are not threatened at the Luga, you should have a 5-7-4 on N-30, 3-1 proofed by a 4-6-4 on M-30. 2 5-7-4's should be on L-31. This is a little over-protected but you cannot risk any penetration.

Ilmen Mountains

This area, too, is quite variable. As already noted, when defending the Divina and wishing to join it to the upper Volga, a 5-7-4 is placed on Q-30 and 3-1 proofed by a 4-6-4 on Q-29. Upon

the breaking of the Divina, Q-30 should be reinforced with another 5-7-4. You should hold Q-30 until there is a threat of the German entering P-30. He cannot do this without entering P-29, except in winter. Q-30 should be held to reduce the front of the upper Volga. It means that no unit on the upper Volga must defend three squares, and while Q-30 is itself attackable from three squares, it will not be penetrated as we have two units there and we can drop back without giving up the Volga line. When we give up Q-30, either because of a threat or an attack, a 5-7-4 should be on P-31. A 4-6-4 can 3-1 proof this from O-31 if it is needed. It may not be needed if it is summer when the German must advertise an attack. Most other situations which call for the defense of this area, will have to be planned on their own merits. The main thing to be concerned about in their defense is not to allow penetration as you cannot hope to counter-attack effectively in this area.

Svir River

The defense of this river can take three variations. When defending the north bank, you need 7-10-4 on I-35 and a 5-7-4 on H-37. These are both 3-1 proofed by a 4-6-4 on H-36. Usually, you will not immediately need all these troops as the German must advertise his attacks as he moves into the swamps. Defending the south bank, you need a 7-10-4 on J-36 and a 5-7-4 on K-34. Both of these are 3-1 proofed by a 4-6-4 on K-35. When defending the south bank but only wishing to delay, it is best just to place a 4-6-4 on each of K-33 and I-38. These squares are easily reached and retreated from. The Svir River is seldom very important but it should be defended in order that the German be slowed up. It is more important if you are defending the north bank and should be 3-1 proof if at all possible.

"City" Defense Line

I have already mentioned this line and the fact that it is very weak. Its weakness lies in the fact that every city of this line can be surrounded. This includes Dnepro-Petrovsk, Kharkov, and Kursk. It is therefore impossible to make the line 3-1 proof. However, it should delay the German or even stop him if he is low enough on units in this area. The gap between Dnepro-Petrovsk and Kharkov is closed by the zoc's of the respective cities, and the defense of Dnepro-Petrovsk has already been discussed. There is nothing you can do to delay the vulnerability of Dnepro-Petrovsk to being surrounded. The gap between Kharkov and Kursk is not closed by these cities alone, and this is a blessing in disguise. The size of the gap allows for delaying action which keeps the cities safe for a while. A delaying unit on DD-27 will mean they can only be attacked from two squares and 2 5-7-4's should be in Kharkov while a 7-10-4 occupies Kursk. The 7-10-4 should be used, if at all possible. It can be lacking this turn but should be available for the next. On the next turn you can delay with a unit on DD-29 which means the two cities can be attacked from three squares. You cannot delay on DD-28. If you keep the 2 5-7-4's on Kharkov and 3-1 proof the 7-10-4 on Kursk with a 4-6-4 on AA-30 you will have the best defense for that turn. The difference in the defense of these two cities is dictated by the terrain behind them. There is nothing behind Kursk except the distant Don

River and therefore it must be held as long as possible. At Kharkov our main concern is in not allowing a penetration so that we can fall back one square to a position behind the Donets River. This part of the Donets River is considered part of the "City" defense and on the next turn your delaying actions cease as a 4-6-4 takes its position on DD-30 behind the Donets. At this time, both cities can be surrounded and the only adjustment is to drop one 5-7-4 back from Kharkov to FF-28.

I also consider Stalino as part of this line and its defense comes about with the breaking of Dnepro-Petrovsk or Kharkov. It protects three squares and should be given whatever strength you can afford. A strong force should be put on KK-27 to prevent out-flanking. If Dnepro-Petrovsk was broken, then troops on Kharkov should withdraw to FF-28. Do not drop behind the Oskol River until you need to. This is to stop German lateral movement which is very difficult and needed at this time. This method of defense will give you the best out of this poor line. Keep an eye on German strength and keep the needed troops coming. Since the Kerch Straits are at this level and since they are usually threatened right after the fall of Dnepro-Petrovsk, I would like to mention them now. On the fall of Dnepro-Petrovsk, you should put all units defending the Dnepr back towards Stalino. Do not try to fight in the Crimea as it is a waste of units. Remember that AH has ruled that there is no supply across the straits and have it timed out so that you place a unit on OO-25 just before he is able to move from PP-23. In this way, he may waste more force than you.

Upper Oka River

This is the continuation of the city defense line and runs from Kursk over to the forks with the Ugra River. This line is as important as Kursk and must be held as long as Kursk. Actually I have already used it when I 3-1 proofed the 7-10-4 in Kursk. That same 4-6-4 on AA-30 should 3-1 proof a 7-10-4 on Z-30 (I am assuming the German is campaigning in this area and does not have enough force to seriously threaten you elsewhere). The rest of this line should be held by a 5-7-4 on each of Y-31 and W-32. And these are both 3-1 proofed by a 4-6-4 on X-32. Parts of this line can be held after Kursk falls and should be in order that the Don River is not out-flanked.

Ugra River

In this discussion, I use Ugra River to describe the river line from the tip of the Dnepr to the forks of the Moskva and Oka rivers. This line usually will not hold long due to the Rzhev gap between it and the upper Volga. But if you hold him off in the open terrain this line is very sound. It cannot be easily made 3-1 proof but it can be very strong. Place a 5-7-4 on T-31 and a 7-10-4 on each of U-31 and U-33, and you will have a strong line. If you still hold the upper Oka or are not yet attackable east of the upper Oka, place the largest unit possible on U-31 and force a good size soak-off with troops on U-32. If you are being attacked along the whole line and are daring, this is an excellent spot for a trap. You may want to use this trap if you have been able to conserve your strength but can't seem to stop or damage the German. Simply place a 5-7-4 or a 4-6-4 on U-32 between the two 7-10-4's. He will attack this at three to one with two soak-offs and

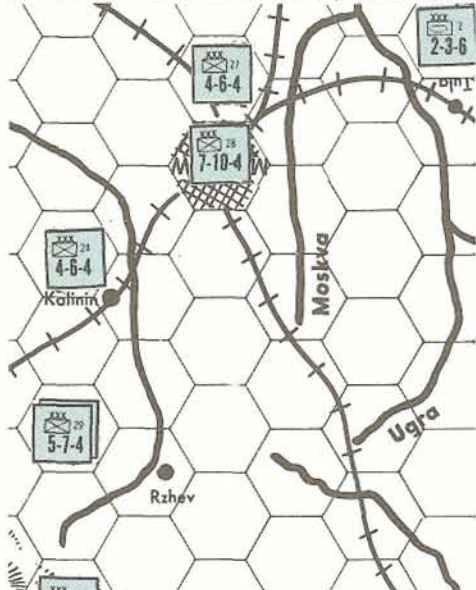
will advance. This isn't his favorite way of breaking lines but he will take it at times. It is now time to clobber him. Bring in every unit you can spare for this surrounded attack. Only put your soak-off units next to the Ugra, and put the rest on the Moskva River. You kill one unit with your attack and the two remaining must use some force on the units on the Moskva. Leaving little to attack one of the 7-10-4's to undouble it. If you have enough force you can destroy two units on the attack and he is helpless to save the other. Make sure you have a lot of force if you try this. You should try to pull in at least 24 factors in addition to the 14 from the 7-10-4 units and soak-offs.

Upper Volga

I only discuss the defense of this river down to Moscow because the rest is self-evident and is not very useful, in any case. If Q-30 is held, then 2 5-7-4's on Q-32 and a 4-6-4 on Q-34 will do the job. If you don't hold it, then the 2 5-7-4's must be replaced by a 7-10-4 backed by a 4-6-4 on P-32. This line should be held a little over-strength if possible as its fall will bring about a collapse of the Moscow defense and the Leningrad defense in time.

Moskva River - Moscow-Oka River Defense

On this line depends the fate of Moscow and rest assured that even when you're back to there, you can still save Moscow. Be very careful when



defending or delaying along the Moskva west of Moscow. Any units here should be large, stacked, and not susceptible to attack from T-33. Moscow should never come under 3-1 attack until the upper Volga or the Moskva-Oka has been broken. By proper delaying actions, it should be vulnerable to attack from only S-33 and T-33. 2 5-7-4's can then protect it. The following turn it will be attackable from S-33, T-33, and T-34. However, a unit on S-35 should not be attackable from T-35, only T-34. This enables you to use a 7-10-4 in Moscow 3-1 proofed by a 5-7-4 on S-35. On the following turn Moscow should have 2 7-10-4's and the Oka should be defended by a 4-6-4 on S-36 and a 5-7-4 on each of T-36 and U-36. U-36 and the rest of the Oka should be defended with what you have in an attempt to force the German far to the east.

AH Philosophy

crease the play-balance. AFRIKA KORPS will also get the rewrite job eventually, although changes here will be made solely to outlaw some of the ridiculous supply rulings made in bygone years by the A.H. "answer man." Both the revised AFRIKA KORPS and WATERLOO rules will be made available for the same 25¢ charge plus shipping costs.

One game where we will be making a lot of changes will be BLITZKRIEG. Dave Roberts is handling what amounts to an entirely new design of this game which at one and the same time will clarify the games many ambiguities and install some real blitzkrieg effects into the game system. The changes in the naval and air rules are especially innovative. We are quite excited about what these rules do for this old favorite. Make no mistake about it . . . these rules will remake BLITZKRIEG into an entirely new and 100% better game. Again, all you'll need to update your version will be the rules—all other components remaining the same. The combined rules and battle manual will sell for \$1.00 plus 25¢ shipping charges. We honestly recommend that all owners of BLITZKRIEG update their version when these rules become available. Don't place orders for any of these rules yet. We'll let you know when they are finished.

Response to the proposed mail order line has been very encouraging. Interest is running extremely high in both THIRD REICH and PANZER LEADER. THIRD REICH has generated a lot of excitement simply because of its scale. No other game has ever offered a corps level simulation of this scope in such a highly playable format, utilizing both air and naval forces as well. One of the things which stands out about THIRD REICH is the high skill level required in playing it. Some very wild things can happen if the players deploy their forces incorrectly, but a smart player has a countermove for every eventuality. We've had playtesters proclaim that such and such a country just doesn't stand a chance. Then we sit in, replay the same situation with a different deployment, and presto—that side wins easily. THIRD REICH has a very high skill factor and it's a game where the players make the decisions—and are not dictated to by a preordained historical series of events with the same outcome every time. But then, we've observed the same kind of reaction to 1776. Several supposedly expert reviewers have come out and said the Americans don't stand a chance while our playtesters found it very difficult to win with the British. This comes from people making supposedly authoritative statements about a game after 1 or 2 playings. In plain truth, they are just plain playing badly. If faced by a good opponent with experience in the game, they'd be surprised how easily they'd lose as the British. We expect the same type of initial response to THIRD REICH but good players will soon find they can win with either side. It is a game we are extremely pleased with. Hopefully, next issue we'll be able to announce its availability to you.

WINNING WITH THE FRENCH

A Comprehensive Look at France 1940 by Harold Totten

Being a realistic game, the historical version of FRANCE 1940 leaves little prospect for an Allied victory. This lack of play balance was no accident, being inherent in the design concept. To gain anything approaching play balance the optional scenarios must be selected.

Yet, we are always running across people who get their kicks by doing things the hard way. Trying to win as the French with the historical Order of Battle would be tantamount to such a philosophy. Although his discourse which follows is more than a "how to win as the French" blurb, Harold Totten definitely seems to fit the "we try harder" mold.

FRANCE '40 is a radically different Avalon Hill game, and because it is unlike any other AH game it can be difficult to grasp at times. The main intention of this thesis is to give the gamer a rather broad knowledge of the game, its aspects and its quirks. This is not easy for a game such as FRANCE '40 and has taken quite a bit of development.

In a way, FRANCE '40 is readily comparable with 1914. The play can end up in a stalemated position. That will be a good deal of what I intend to concentrate on — how *not* to stalemate the game. FRANCE '40 differs from 1914 in the sense that there is a great deal more mobility; plus superior German attrition abilities and airpower make for an active game. One factor that almost guarantees an extremely mobile battle is the lack of the Maginot Line, giving the French player a larger area to defend and the German a larger area to attack.

Before actually discussing the play of the game I will first go into the mapboard and its terrain. The board, by its very nature, divides into four basic lines of attack. The first three of these are in Belgium: the northern forest/Antwerp area, the central plain (Aachen, Brussels, Namur triangle), and the infamous Ardennes forest. The fourth is the Maginot line area of southern France.

Belgium is rather good defensive terrain, whereas the southern area without the Maginot is not. There is also the "Dyle Line" across the central plain along what is really the Demer River skirting Antwerp and Namur. Terrain in FRANCE '40 is not really all that crucial (with the exception of the Maginot Line) because the defensive quality can be offset by airpower.

With armor it's a different story — and the aspect is not defensive or offensive ability, but the crucial problem of mobility. In order to move into or out of a unit's ZOC it requires the expenditure of movement points, and the presence of forests further hinder armor's mobility. This will be an important factor in dealing with understanding massive armor battles in the Ardennes.

FRENCH STRATEGY

The French player is basically defense oriented, at least strategically. Tactically the French player can go on the offensive, but he must be careful that he doesn't leave any units exposed to deadly German counter-attacks. The French game problem boils down into the following points: 1) he must defend Belgium for some length of time;

2) he must keep the Maginot line intact, or lacking the Maginot, he must prevent a German flanking movement; 3) he must have minimum losses; 4) he must inflict maximum losses on the Germans; 5) he must protect Paris. Around these basic points the French player must build his defense.

The first problem which occurs in every game is the defense of Belgium. But in order to understand the strategy for Belgium, we must first expound upon the broad strategy the French player will be using. As I mentioned before, movement through ZOC's cost movement points, three movement points for entering and two movement points for leaving. Thus, to move directly from one enemy controlled hex to another you expend one to enter the terrain (or two if the unit is armored and it is entering forest or swamps), two to leave the ZOC and three to enter the ZOC, at a total cost of six (seven for armor). This makes for interesting movement characteristics within the game. This means that units may move rapidly over open terrain as long as they are unopposed. However, they cannot close with the enemy after a long march due to a lack of the movement points needed to enter a ZOC. Also, units can be pulled off the front line much more easily than it can approach the front. The total result of this is a unit may voluntarily retreat its full movement factor away from the front line, and due to the ZOC movement costs, the attacker (usually the German) *cannot re-engage the retreating player.*

Thus, if the French player retreats his units away from the German, usually the German infantry cannot engage the French front lines on the next turn. Armor usually can, however, due to its greater movement capability and its second movement phase every turn.

Theoretically, then, the French player could set up the Belgians more than three hexes from their border and the German infantry could not touch them on the first turn. Nevertheless, this is not a practical defensive proposition, as it yields altogether too much Belgian territory for comfort. This would allow German units to take the Antwerp area without a fight and overrun most of the defensively valuable Ardennes forest. However, in the central plain the concept comes off well with little problem.

So the Belgian units must physically defend both the northern forest entrance to Belgium and the Ardennes Forest. However, the Belgian Army isn't adequate for this big defensive task. Eventually there would be some point in the line without back-up units. This would allow the German armor to strike and then move through the hole it created with its second movement phase. This is tantamount to allowing the Germans to advance unopposed.

The answer to this problem is the use of the Dutch and French Armies on the flanks of Belgium in order to reduce the defensive task of the small army. The two Dutch units are used in the northern wood near Antwerp, and are placed on the border. This prevents the German from gaining a major flanking move on Belgium (which he probably would if the Dutch units were defending the Netherlands-Germany border) and pouring down through a thinly held flank. Although the Germans can outflank and destroy

these units, that requires precious time — as much as two or three turns. And in the Ardennes the French units are placed immediately on the border in order not only to secure the flank, but also to rush into Belgium as soon as the German invades.

French Historical OoB

Table 1:

This set-up illustrates the concepts involved in the defense of Belgium and later French planning as to where his forces will be committed. Each hex on the FRANCE '40 board is numbered instead of using the traditional PBM co-ordinates, and the numbers indicate what hex a unit is in. If a hex is immediately preceded by a (3) or (2) that means three or two units respectively of that type are in the same hex.

DUTCH:

4-6: 525,622

BELGIAN:

2-7: 309,432

4-6: Antwerp (657), 506, 530, Namur (533), 403, 403, 342, 345, 312

FRENCH:

6-6: 3,4, (3) 538, (3) 569, (3) 789, (3) 846

4-6: (3) 697

3-4: (3) 665

2-6: (3) 475, (3) 570, 729

1-6: (3) 819, (2) 729

2-2: 282, 217, 185, 154

A/C: 939

BRITISH

8-8: 874

6-8: 874

4-8: 874

2-8: 875

A/C: 940

The diagram and accompanying table show a possible set-up for the French using their extremely weak historical Order of Battle. The plan is rather obvious. Demonstrated is the Belgium set-up for delaying purposes. The French armor is aimed at the Namur area, the BEF and French infantry are headed for Antwerp, and most of the remaining French infantry is aimed for the Ardennes and is stationed in the Givet area. A little note on the Givet area is appropriate here. Units placed on hex 569 cannot move until the Germans invade Belgium, mainly because the French player is not allowed to violate a country's neutrality by moving *directly* from one border hex to another. However, units in the same area *can* move out by moving in the following sequence: hex 537 to 570 to 538 to 571 to 572, which brings the unit(s) into France. Granted it's a convoluted process, but it is better than having your units trapped in place should the Germans use a southern strategy.

Let us assume that the German decides to attack through Belgium. He has two basic options: attack through the Netherlands or attack through the Ardennes. I will deal with each option separately.

The attack through the Netherlands comes in two flavors, the quick two turn attack or the more thorough three turn attack. Regardless of which the German chooses, the first turn will involve the invasion of the Netherlands and Luxembourg and little fighting. On the second turn the German can attack the Dutch units, allowing him to attack with his armor on the 4-6 in hex 560.

This allows the German to conserve time and also allows him to commit some of his armor to the Ardennes if he so desires. If the German wishes to form a broader base for his attack he can concentrate on destroying the Dutch forces entirely on turns two and three, and allowing a

broad front attack on the 4-6 at hex 560 and the 4-6 at Antwerp, usually guaranteeing some sort of breakthrough. This usually leaves the French player with a few defensive headaches, as he is usually forced to defend more or less in the open. In this case the French player will counter-attack the exposed and divided armor which will be somewhat vulnerable until the infantry catches up, and stand in the open for a turn or two. Then he can afford to make a strategic withdrawal to the Scarpe River line (along the axis Dunkirk/Lille) and stand for another couple turns before making his final strategic withdrawal toward Paris.

The case of the German attack through the Ardennes presents a different defensive picture, though not necessarily an easier one. The German will usually push his infantry through as fast as possible, attacking and then following with armor. If the German commits the bulk of his armor to this area the French player will be in trouble. This is because French armor cannot effectively operate in the Ardennes. The armored divisions cannot close the attack, and if any French mechanized divisions become surrounded they become immobilized until the German decides to let them go (he usually doesn't). Thus, the French player must oppose the armor with his inferior infantry. The German also maintains a constant threat in the direction of the Maginot Line. Also, when the German comes out of the Ardennes he will have almost absolute freedom of movement and can strike out in almost any direction he chooses. The French player must slowly retreat, hex by hex, only when he has units in danger of being surrounded and cut off. This is necessitated by the key role the Ardennes plays in French strategy. The French player will usually begin some sort of strategic withdrawal towards Paris, taking advantage of the fact the Germans can't pursue too well due to the movement mechanics of the game. The success of this strategy usually depends upon the ability of the French player to keep his hold on the Ardennes until about turn six (regardless of German strategy in Belgium) so that the French player will have some sort of axis to pivot on. By swinging his left flank back he draws a parallel with Paris. He also has an advantage in holding the Ardennes in that the German cannot bypass the Maginot line until the French player decides to relinquish the Ardennes, and when he does relinquish it he has his armor and other mobile units in position to keep the German from outflanking the French right.

Other French problems come in when dealing with the Maginot Line, whether or not the line is present. Usually I have found the Line to be an invaluable part of my French defensive plans because of the German reluctance to attack the line frontally. As you can see from the sample French set-up shown, it is usually good to put the fortress divisions (2-2's) in the fort hexes that can be attacked from three hexes. This is not adequate to stop a German assault of the line, but usually nothing but bad luck can stop a patient German from breaching the Maginot Line. This will be subject to discussion under German strategy.

The presence of the Maginot line acts as an extension of the Ardennes pivot on the French right. Should the Germans breach it with armor (see diagrams of German attacks on the Maginot) the French player will be hard pressed, especially in the historical situation. He must move infantry

and motorized units into the south primarily to protect his flank and secondly to protect the then vulnerable Paris. The French player will usually not be able to stop the German armor from getting through, but he can always use his remaining 2-2's to slow the progress of German infantry through the breach. This can be crucial if the French player wishes to destroy the German armor, hopefully by surrounding it and cutting off supplies, then attacking the isolated units. In the historical situation it's usually a losing battle, but in scenarios using French 5-6's there usually is quite a mobile battle.

French strategy takes on a complete transformation in the face of the lack of the Maginot Line — and this usually happens in the stronger French Order of Battles. Without the Maginot Line the French should commit the bulk of their armor (5-6's and 4-6's) in the south, stopping a German offensive in the south before it gets beyond major proportions. If the Germans decide to attack in the south, the French player is ready for them. If the German attacks through Belgium, the Belgian Army and French infantry can gain time for the French armor to come up from the south.

The French player will usually try to hold the Germans at first, then drop back to the Moselle River, and later to the Meuse and finally to the rather good defensive line in the Argonne forest area. Since armor will be in the south, there is little problem of a German threat in the north. However, the French will still use their late game strategic withdrawal strategy in order to escape attrition.

In summary, the French strategic withdrawal is the key to a French victory. The French will also back up their main line of resistance with small motorized divisions (2-6's and 1-6's) in order to prevent a German breakthrough. Usually the French player is better off having an OoB which includes the heavy armor (5-6's), a strong airforce, and the Maginot Line. Thus the strongest French OoB is probably No. 4, which includes all of these attributes. OoB No. 9 is probably the weakest, mainly because it lacks the Maginot Line and gains relatively few units to make up for that lack. It also lacks airpower, a crucial aspect of the game.

GERMAN STRATEGY

German strategy usually is aimed at making the game mobile in which the French suffer heavily the effects of attrition. It is to the French player's advantage to create a stalemated game, so the German must avoid getting bogged down. The major difference from 1914 is the presence of armor and airpower — two decisive elements for the German player.

German objectives in the game are as follows: 1) destroy a maximum number of French units; 2) prevent the French from destroying German units; 3) take Paris if possible; and 4) foul up the French withdrawal strategy. Up to this point we have only discussed the French reactions to possible German plans, now we will discuss why the German chooses a given plan and how he will carry it out.

With the Maginot Line the average German will usually attack through Belgium, even though he can also attack the Maginot as a direct effort. If the French player uses any other set-up than the one shown, it will usually have some weakness you can exploit. If he leaves the Belgian northern flank open it is usually best to move through the Netherlands on the first turn and move into Belgium on the second. However, most French players are not that stupid — or they'll correct their mistake after being burned once or twice. In this case you'll be best off in moving armor into position to attack the Dutch units on the first turn, attack on the second, and attack into Belgium on the third. The armor would roll into Belgium to attack Antwerp, while infantry moving up behind hexes 428 and 460 would attack hex 560. This would mean killing few units on the first three turns, losing valuable time, and would put the French in a bad strategic posture. The German trades off an advantage of time and material for one of space, and against a strong French OoB the German may not be able to capitalize on his position.

The German can also try an assault up the middle, but if the French player is using the defense shown, he won't get far. Assault up the middle can be a viable option if the French player uses a poor defensive strategy, but he will usually try to prevent any German use of open terrain for armor.

ASSAULT ON THE MAGINOT

The first illustration shows a German assault on a Maginot hex with a French 2-2. Using air support with a 5-1 attack, there is a 50% chance of success. If successful, the German armor will exploit the breakthrough.

In this case the German player has decided to simply attrition the units in the fortress hex, in this case a 2-2. At 3-1 with air support there is a 66% chance the unit will be eliminated.

This shows a German assault while the French player has strongly re-inforced the Maginot with 6-6 units. At 4-1 odds with air support there is a 33% chance of success.

In this case the French again has strongly re-inforced the Maginot Line with 6-6 units, and the German decides to use his extra units to attrition the French. At 2-1 with air support there is a 28% chance the unit will be eliminated.

Note: All attacks assume maximum air and artillery support.

The other option in Belgium is in the Ardennes, an area that usually is well defended. The German can attack immediately on the first turn, or he can further increase his strategic position by invading the Netherlands and Luxembourg on the first turn, getting infantry moved up toward the front. On the second turn the German will then invade Belgium with the bulk of his infantry. Infantry in the north will attack hex 560 and the Dutch Army, and the units on the Belgian-Luxembourg border will be surrounded by German infantry. On the following turns the German armor should try to push the French back as quickly as possible in order to upset their timetable for withdrawal by denying them their crucial Ardennes pivot.

When the German player is attacking through Belgium he should not ignore the Maginot Line, because it yields dividends in terms of additional threats the French must cope with. When the Maginot is garrisoned, as it probably will be, the German can use three infantry units and the two artillery units to attack units in the line. When these units are forced to counter-attack it will be at poor odds, which is one way to attrition the French. Also, only a "DX" (defender eliminated) result will destroy the Maginot hex. Thus, when attacking at 4-1 with air support there is a 33% chance of destroying the hex, at 5-1 there is a 50% chance. The German can destroy hexes of the line and then send units through to threaten the French southern flank and to further complicate his defensive problems.

The German can also pursue a strategy of attacking the Maginot with his armor and sending infantry into Belgium. This can be done at 5-1 with a 2-2 unit in the hex to be assaulted, a 4-1 with a 6-6 unit in the hex, or 6-1 if the hex is empty. Usually if the French player has committed a number of 6-6 infantry units to the Maginot the German will do best to attrition these units with infantry and artillery while sending his armor into the Ardennes. Once these units are destroyed the German can pull a surprise move by assaulting the Maginot with armor and artillery. If the area is garrisoned with 2-2 fortress divisions, then the German can attack the line immediately. If the German does so he will usually use the same arrangement for an Ardennes thrust (minus the armor) so that he can attack Belgium on the second turn. Should he fail to destroy the Maginot hex the German will probably have eliminated the 2-2 unit. He should then disengage his armor and send it into Luxembourg. He should also have a unit next to the empty Maginot hex so the French player won't be able to move another 2-2 into the threatened area. Then the German will have the option of either attacking through the Ardennes or across the Maginot again.

Which one of these strategies are best? Really one must see the French set-up to decide, as the German must try to exploit French weaknesses. I feel that the Maginot strategy is strategically the strongest of all. It uses armor on the first turn to attempt the breach while units are moving into the Netherlands and Luxembourg. If the attempt fails the German can still move through the Ardennes on the second turn, a move which is generally superior to a move across the open area because French armor cannot operate well in the forested area.

German strategy, like the French counter-part, changes when the Maginot Line is not being used. Essentially, it gives the German player a broader

front to work with while spreading the French forces thinner. The French will probably place most of their armor in the south for reasons already discussed, so the German will do best to use infantry in an aggressive role in the south and send the armor elsewhere. The German player should at this point try to spread the French out as much as possible to achieve tactical dispersion so that some sort of decisive blow may be struck.

For the most part, after the German commits himself to a given opening strategy the remainder of the game will be a tactical struggle of attrition, with some rare maneuvering for Paris should the German break through.

TACTICS

My tactical discussion of unit to unit battles will be couched in terms of the attacking player (usually the German) and the defending player (usually the French). Tactics involve several factors, including a unit's combat strength and its mobility.

The tactics of attrition involve mobility in surrounding units and the principle of mass in some rather unique manners. Units surrounded by enemy ZOC are usually eliminated when forced to retreat, but in FRANCE '40 they may retreat to a hex which is occupied by friendly units. This allows units to be surrounded as long as they are backed up and given some place to retreat. Another advantage to surrounding units is that you may cut off their supplies, halving the combat strength of the defending unit.

The French player should plan his attacks carefully, so that should he have to retreat he will not leave any infantry units exposed to encirclement. He should also be careful not to leave gaps in his line. There should be some sort of defensive screen of weaker 2-6 and 1-6 units to keep the Germans from exploiting any hole they might create in the line.

Other French defensive tactics involve placing Belgian 4-6's next to each other on the line, preventing a German attack on both units because of limited frontal space. The French should also be careful to make their defensive line as straight as possible to avoid "corners" which expose greater area and upon which the German can get better odds.

The German can try to repeat the classic breakthrough that occurred in the original battle, but this is not likely against a good French player. The German can try, however, by attacking across open terrain with most of his armor in one group. Once the German opens up an area he will send his armor through as far as possible, usually up to the secondary defense line. Then by using aerial interdiction he prevents re-inforcements from coming into the area to seal the breach. On the next turn he can then attack the weak secondary and exploit his hole on the second movement phase. This situation, however, will not always happen because the French may have re-inforcements nearby or they may have enough airpower to stop the German interdiction.

Usually the only time the German player will get into a situation in which there are mobile armor battles would be if he breached the Maginot and rushed into the open plain of southern France successfully. This will always stretch the French forces out and allow the Germans to exploit to the utmost the inherent superiority of their armor.

One should note here that the "Designer's Notes" included with the game state: "To make

the main effort against the Maginot Line (which can be broken with a combination of armored units and heavy artillery) would be futile, a breakthrough there can be too easily contained." This, I feel, is wrong. The French player can contain the breakthrough if he sends sufficient force, but this will make the going of the infantry in the north easy.

It is interesting to note combat differences caused by the CRT system in the game. For instance, let us examine 2-1 and 3-1 attacks that could possibly occur in the game. The German player clearly has superiority in infantry attacks. For example, a 2-1 attack with two 7-6's attacking a single 6-6 has a 33% chance of retreating the attacker, 44% chance of both retreating, and in order to get a 2-1 the French player will attack with either three 6-6's or three 4-6's and a 6-6. This will limit his chances of getting even a 2-1 attack, as the German must expose his unit to attack from three hexes. And since the French player only has three 4-6 armored divisions he can only make one 2-1 attack on units with only two hexes exposed. When the French player attacks he will be counter-attacked at 1-1, as opposed to 1-2 when the French counter-attack the Germans. Thus, the French have a 33% chance of attacker retreat, 44% chance of both retreat, 5% chance of defender eliminated, and 11% chance of defender retreat. Note that these figures do not add up to 100% of the possibilities. This is because there are chances of rolling a CA result followed by another CA result, which means the attack simply starts over again. For this reason I have omitted these figures. See the table for comparative purposes.

Probably the biggest tactical problem of the game is pursuit tactics. The German must seek some solution to the problem of keeping the French from disengaging and retreating back to Paris with impunity. There are several possible solutions which I will discuss here, but I must point out that often a detailed tactical problem like this cannot be covered easily without finding new concepts constantly, usually in the course of play. Therefore, I will simply offer my thoughts on the problem as I have handled it in actual games.

The use of airpower figures strongly in stopping the French withdrawal, and although I will cover the aspects of airpower later I will not discuss the disruptive power of interdiction. Interdiction is the creation of a temporary zone of control by the air units. This single hex ZOC is treated with the same movement restrictions as a normal ZOC. If the German has a strong airforce, then he will probably be able to stop the French strategic withdrawal. By using all eight air units for interdiction, the German places them in eight contiguous hexes immediately behind the French main line of resistance (MLR). The German armor then attacks this area, or at least moves adjacent to the French units in the area, so that the movement capabilities of the French units are so cut down that they cannot effectively make the strategic withdrawal without leaving a gaping hole in the line which the armor can easily walk through, simultaneously disrupting the French rear areas. Thus, the French player is forced to hold his position and suffer attack on the next turn by the infantry. The infantry, being very close behind, will move in and take the place of the armor. The armor will side-step in order to strike another area. The interdiction will con-

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TITLE: 1776 PRICE: \$10
Grand Strategic Game of the American Revolution

INSTRUCTIONS: Rate all categories by placing a number ranging from 1 through 9 in the appropriate spaces to the right (1 equating excellent; 5-average; and 9-terrible). EXCEPTION: Rate item No. 10 in terms of minutes necessary to play game as recorded in 10-minute increments. EXAMPLE: If you've found that it takes two and a half hours to play FRANCE 1940, you would give it a GAME LENGTH rating of "15."

Participate in these reviews only if you are familiar with the game in question.

- 1. Physical Quality _____
- 2. Mapboard _____
- 3. Components _____
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Avalon Hill
 Jul-Aug 1974 Vol. 11, No. 2

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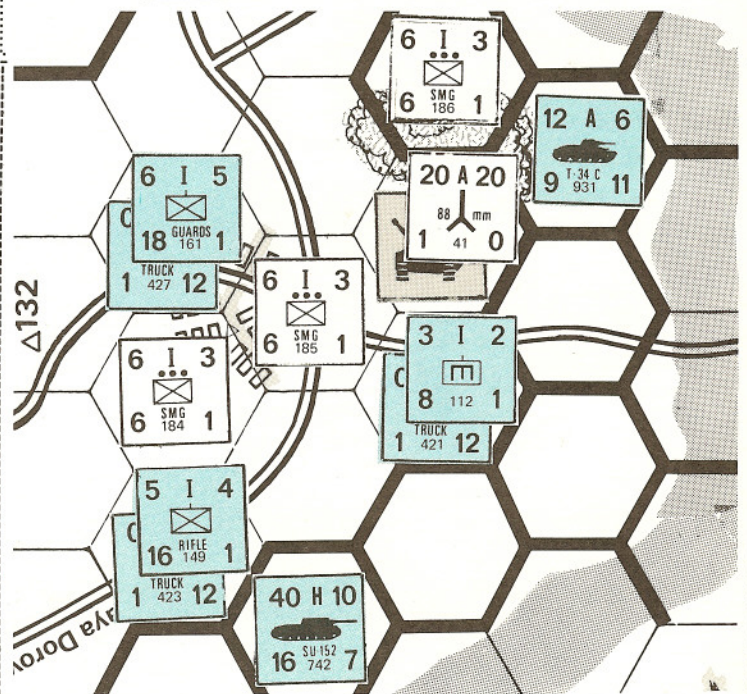
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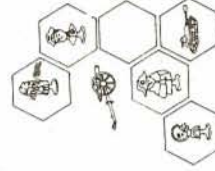
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tinue, further hindering the French. The infantry catches up with the armor and attacks, and the French withdrawal plans have been thwarted.

However, if the French player has a strong air force, then this will not work. The French player need only send his air units on interdiction missions in order to rid himself of the interdiction.

If this is the case, the German must cast around for another solution. If he is using the optional airborne units, then he may be able to disrupt the retreat. First, he drops his units behind the French MLR in order to cut off retreat routes. He then attacks in the same manner as with the interdiction tactic. Hopefully, if the German player picks the area to be attacked carefully, there will be a small but useful break through. This means the German must attack in an area away from the French reserves. He then sends his armor through the hole and around behind the French line, creating a dilemma quite like that presented by interdiction. This type of attack, however, is not as efficient, as it cannot be repeated. Thus, the German must position his armor in such a way that he'll be able to take advantage of the attack for several turns. This is because once an area is prevented from retreating far enough, the immediately adjacent areas are also hindered, unless the French player can somehow get his reserves into the area. The only areas that can retreat are those further away. The German follows up this initial advantage by sending his armor to the rear areas of the French, and sends infantry to the front. Thus the French units are caught in a tactical vise which is difficult (but not impossible) to escape from.

When not using the optional airborne units rule and when the French have a strong airforce the German player will have a great deal of difficulty in creating a breakthrough or stopping the withdrawal. In this case, about all he can do is to continue attacking with his armor and to send his infantry off the board to the south in order to weaken the French MLR.

AIRPOWER

Airpower in FRANCE '40 is one of the more innovative areas of the game, and proper use of air units is important. We have already discussed close support missions which negate terrain advantage, and interdiction missions which obstruct

supply, hold a breakthrough area, and frustrate the French strategic withdrawal. These two areas are the easiest to understand and are essential to the conduct of ground operations.

The other three functions of airpower are combat air patrol, air superiority, and interception. These three involve air-to-air combat, and therefore their implications are not always so obvious.

Air superiority involves flying units over enemy ground support units and trying to eliminate them. In scenarios in which the German has overwhelming air superiority and the French are weak in airpower, the French player will place his air units back out of range so that the German cannot destroy them without moving first, hoping to prevent the German from picking up an easy ten or twenty points.

Should the French and German players both have strong air forces, then the considerations are changed radically. This is because the German player will lose the use of four air units on the turn he invades the Netherlands, giving the French player an 8-4 advantage and placing two German air units in danger of destruction on the first turn. At this rate of attrition the German will quickly lose the war in the air, and with it the game.

The German can usually solve this problem by placing his units out of range. It should be remembered that the Allied player cannot fly over Belgium as long as it is neutral, so if the French player places his units within range and the German does not attack Belgium on the first turn, the German will be able to protect his units while vulnerable and will be able to attack the French air units with impunity. This gives the German the edge in attrition and will usually result in a German victory. Because these units are so valuable in points they often are decisive in determining victory.

What will usually happen should both players have equal air forces will be the placing of the bulk or the entirety of the air units outside of each other's range. This will prevent any disasterous losses for both sides, although either player may elect to take the risk involved, it being somewhat less for the German due to his superior range.

Combat Air Patrol is defensive air flights to prevent close support, interdiction, or air superiority attacks. As long as there is a CAP in a hex these attacks may not be carried out. This type of mission is used more often by the French player in order to protect key areas.

Interception is used to turn back enemy CAP or interdiction attacks. In this role it can be very important. It turns back enemy CAP so units remaining may close support, interdict, or make air superiority attacks. This is usually the role the German player will use it in. The French player should use it to turn back interdiction missions.

OVERVIEW: FRANCE '40

The game poses some unusual strategic and tactical problems which make for an interesting game. However, I must point out that the game itself is not realistic in its attempts to recreate the situation as it was in 1940. For one thing, had the French been as mobile as the designer Jim Dunnigan makes them, there never would have been a Dunkirk or its likes. I do not believe the French could make the strategic withdrawal that is such a necessity in the game.

Another thing that irks me about the game was the standardization of the French and German infantry. For instance, take the French Army. At the time they had ten active divisions, seventeen 'A' reserve divisions, five Alpine divisions, 'B' reserve divisions, ten North African active divisions, and seven Colonial divisions. These units varied in quality from very good to very poor, but the game itself gives you the impression that all the French corps are of equal ability. It was precisely because they were *not* that the Germans had a breakthrough at Sedan and could not get one elsewhere. They simply exploited the weakest area, attacking the weakest corps.

★★★★★



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| * GUADALCANAL | * WATERLOO |

Table 2: Comparative Infantry Attacks

GERMAN 2-1 (2 7-6's vs. 6-6)			
AR: 33%	BR: 44%	DX: 11%	DR: 11%
FRENCH 2-1 (3 6-6's or 3 4-6's & 6-6 vs. 7-6)			
AR: 33%	BR: 44%	DX: 5%	DR: 11%
GERMAN 3-1 (3 7-6's vs. 6-6)			
AR: 0%	BR: 50%	DX: 28%	DR: 22%
FRENCH 3-1 (3 4-6's & 3 3-4's vs. 7-6)			
AR: 0%	BR: 55%	DX: 0%	DR: 28%

Explanation: Not all the results add up to 100% because both players can roll CA results, which simply means the attack is repeated again until some result is rolled. The DR result (not on the CRT) means an "AR" result rolled on a counterattack. Ironically, the 2-1 attack is *better* (in terms of elimination) than the 3-1 if the German can get a 2-1 counterattack.

What I am trying to illustrate here is that players must consider not only the best odds they can get, but also at what odds the opponent will be able to counterattack. This is why armor vs. armor battles are usually stalemates in the game. Another key consideration is the opponent's ability to retreat, as in the BR result the defending unit retreats first. If a unit cannot retreat it usually does not matter whether the odds are all that great, as long as you avoid the possibility of AR results.

DESIGN ANALYSIS



Larry Pinsky continues to take time off from his duties at NASA to lend a hand in the Avalon Hill design picture. With the passing of years, many of Larry's original designs have become somewhat outmoded by present standards of the art of wargame design.

Larry is personally handling the rewrite of the Bulge rules and is taking a hand in the playtesting of the revised Blitzkrieg rules so he is far from out of the design picture. Those of you who have a pet peeve about the Bulge rules regarding an ambiguity might want to drop him a note on the subject.

In the meantime, Larry's explanation of what goes into the basic framework of a mapboard makes required reading for any potential young designer.

The Mapboard in Game Design

by Larry Pinsky

DESIGN CREDITS: Battle of the Bulge, Guadalcanal, Blitzkrieg, D-Day '65

One facet of land battle game design that doesn't receive much public discussion is the design of the gameboard. This is probably because most people consider the gameboard to be simply a map with a hexagonal grid superimposed. Actually the board is the *most* fundamental element of the design, and it must be the *first* consideration! Its design affects every aspect of the game, from the general scope, to the movement and combat factors of the units, as well as every important clause of the rules. Let us then examine some of the details of board design, which is a decidedly distinct endeavor from the simple act of superpositioning a hexagon grid on some map.

When one has completed the preliminary research into the subject, the first step in the evolution of the game's design is the task of limiting the scope of the campaign to be included in the game. In most cases, this act reduces to deciding where the boundaries of the board will fall on a map of the region where the actual campaign took place.

As an example let us consider the design of "Bulge." The Ardennes Offensive in December 1944 was the last major German offensive of the war, and it could have been directed at any point on any front. Hitler collected his reserves and resources at the expense of the front line troops for months prior to the offensive. It has been called his last desperate gamble. Whether or not it could have succeeded in averting a final German defeat, it did materially effect the course of the final months of the war, and the post-war situation. It is very unlikely that anything short of German nuclear weapons (which incidentally they were *not* then, nor for that matter had they ever been attempting to develop) would have prevented the inevitable defeat. This inevitable defeat was clear to most of the German generals, and had they been in a position to determine policy, they would most

probably have tried to use the Ardennes Offensive to obtain a position from which to ask for terms short of unconditional surrender. Given the Allied frame of mind at the time, I doubt that, as with Japan, anything short of unconditional surrender would have been accepted. Well then, if it was an ultimately fatal situation, why bother trying to design a game based on the campaign? The answer is that although the grand strategic situation may have been hopeless, the tactical situation was far from hopeless, and the range of effects of the possible outcomes from this offensive included dramatic differences in the post-war situation as well as the course of the final stage of the war.

Through the Ardennes the Germans hoped to strike for Antwerp, which would cut off and they hoped subsequently cause the elimination of over 30 allied divisions. South of the Ardennes, a coordinated offensive (code named Norwind) was mounted to help distract the allied troops along that part of the front and was intended to prevent the allied units there from coming to the aid of the troops in the Ardennes. It was further hoped that this blow would divide the Allied command (British and Americans) making the Western Front less dangerous, and allowing a concentration of troops against the Russians. In real life the offensive succeeded in eliminating two American divisions, and badly damaged another nine. The effect on the war was to postpone the final Allied assault on Germany from the west for about 5 weeks, and to strip Germany of its last reserves. The effect on the post-war situation was to move the border between the Russian zone, and the British, French, and American zones about 100 miles to the west. At Churchill's request, the Soviets launched their great Winter Offensive of 1944 eleven days early in order to take pressure off the Bulge. This favor was cashed in at the time the dispositions of the troops for the final assaults on Germany was determined, allowing the Russians to take Berlin alone.

With this overview let us consider the various game possibilities and their associated boards. The game could have been grand strategic with the board containing all of Central Europe. The units would have been armies and included the troops in Italy, Scandinavia and on both major fronts. This would allow the German player to face the same general situation as Hitler did, and the game could have been played against history (i.e., the German player wins if he survives longer than in real life or does better according to some point scheme). Such a game could not rightly be called the Battle of the Bulge, and was clearly not what we wanted to publish at the time. Moving on, the game could have been strategic, and confined to the Western Front. The mapboard would have contained the front from Switzerland to the North Sea, and the German player would have been free to mount the offensive(s) at any point, given the historical Allied setup. This game was actually con-

sidered, but since D-Day did in some sense allow this kind of simulation already (i.e., with a proper scenario) it was felt that it wasn't worth trying to publish. That narrowed the field to the Ardennes itself. However, we are not quite finished with the scope choice yet. The whole campaign as planned was targeted for Antwerp. Thus one of the seriously considered game designs was based on a board which included the region from Eternach on the South, to Antwerp on the North. This game would have included both phases of the offensive, and included those troops likely to have been engaged in the fighting across the Meuse. This design was discarded because of the playing congestion in the Ardennes (i.e., where most of the game was played) which would have had a considerably smaller board area. Thus we arrived at the final choice: from the Our to the Meuse, and from Eternach (XX-31 if it were on the board) to Monschau. Smaller scale games were considered but discarded as less interesting. The game was to encompass the first phase of the offensive, with the goal being for the Germans to cross the Meuse in strength!

With that out of the way one can proceed to design the board, which as mentioned earlier, entails more than just getting a good map of the area and deciding how to project it on a blank hex sheet. It involves a return to the basic research on the original campaign and to the basic rules structure to be employed. The board is the playing surface of the game, not a topographic map. Its features affect the play of the game, and they are intended to accurately represent the effect of the terrain, and not the terrain itself. If some feature like a river, a hill, a road, a forest, or whatever, was of no military significance (i.e., either to movement or combat) then its inclusion on the board is superfluous, even if that feature is very apparent on a topographical map of the area.

Okay, now do we grab a hex sheet and get started? Not quite! First you have to decide what size the board will be, what shape it will be, the hex size (all of which determines the eventual map scale of the board—e.g., 6 km per hex, etc.), and the grain direction! Grain direction? Well, for those of you that haven't noticed, the hex pattern doesn't look the same if you rotate the board 90 degrees either way. Consider the Bulge board, a part of which is shown in Figure 1. To move in the North-South direction there are continuous rows of hexagons side-to-side, making it possible to go in a straight line; but to move in the East-West direction one has to zig-zag because the other two grain axes run approximately Northwest-Southwest. Using the popular convention, the "grain direction" is the one that is parallel to the edge of the board. On the Bulge board this is North-South, or across the shorter side of the board, giving it a "short side grain." This labeling convention fails if you decide to rotate the hexes on your final board so that none of the grains are parallel to the board edge, but since this doesn't happen very often, let's not make things more complex.

What difference does the grain direction make to a game anyway? One of the most important effects can be seen if you attempt to construct a line of continuous zones of control along the grain from North to South on the Bulge board. This requires a minimum of eleven units. However, to construct a similar line the same linear distance in the East-West direction requires a minimum of thirteen units! Thus, it

requires fewer units to maintain a continuous line across the short side of the Bulge board than it would have had the Bulge board been designed with a long side grain. The grain effects also impact combat as shown in Figure 2. Figure 2a shows a maximum extended defensive line "along the grain" and Figure 2b shows the "across the grain" case. Each defending unit in Figure 2a can be attacked from 4 different squares (and as such can be surrounded) whereas the defending units in Figure 2b can each be attacked from only three squares (and as such cannot be surrounded). Figure 2c depicts an "every other square" defensive line along the grain, and Figure 2d shows the analogous line across the grain. In this case the along the grain situation has the advantage that *each* defending unit can only be attacked from two squares, where in the across the grain case, at best *every other unit* can be attacked from three squares! Summing up, in a game situation like Bulge where one side will be faced with defending along a given axis (i.e., basically North-South) a decision had to be made about which grain axis to give the Americans to defend with. It was felt that the ability to use fewer units over a long front and the ability to deny the Germans a three square attack on a flat front was an advantage the Americans needed. So, depending on the tactical situations likely to evolve, the board can be biased at its inception to favor one side or the other.

The next step in the design of the board is to decide, based on the research into the actual campaign, just what *types* of terrain features should be included. At first this may seem trivial, but beware. I suggest you start with man-made features like towns, roads, railroads, bridges, fords, trails, etc. Not all of the features are always included. For example, in Bulge, there are no railroads on the map, even though there were numerous rail lines traversing the area. The reason is obvious. The trains were just not used for troop or supply movements during the battle in the area depicted on the board. Sometimes terrain features are combined, like roads, and trails, or as in *Tactics II*, roads and railroads. All of these decisions must be made before the first feature is drawn on the board.

Usually, the first of the natural features to be worked on are the rivers, and sometimes these are done in conjunction with the man-made features, especially where bridges or fords are important. There is one very basic decision to be made concerning rivers. Should they be placed "in" the squares, or should they follow the square outlines along the edges? In the first case, units are allowed to be "on" river squares and in the second case, they are always on one side or the other as shown in Figure 3. The edge system has the advantage of being easier to write rules for and being slightly more playable, since there are very few interpretation conflicts either about combat or movement. However, at the map scale employed in *Bulge*, it is sometimes more accurate to depict the rivers as being in squares. Most rivers lie in relative valleys that rise for some distance on either side. This fact, as much as the "water barrier" makes many smaller rivers formidable defensive positions. To execute an attack across a river, the attacking unit must first move "down" to the water and then cross, possibly under fire, and then with no way to easily withdraw to regroup because of the water at their backs, they must attack uphill against prepared positions. Finally, if the attack

doesn't succeed, the attacking units are left strung out and vulnerable in the bottom-land regions along the river. So to provide river squares does, in some cases, provide a better representation of the situation. On the other hand, at larger scales, where units are divisions or higher, it sometimes is more realistic to use the edge methods. The final decision on rivers should be made after careful examination of the terrain around the rivers on topographic maps, as well as research into the effects the rivers of the area had on combat and movement during the original campaign.

When the man-made and the river decisions, as well as hex scale, board size, and grain effects choices have been made, one can proceed to begin putting features on blank hex sheets. One

tool that can aid in the procedure is a slide projector. Slides of appropriate maps can be made and projected onto hex sheets to get an idea of relative locations of towns, the paths of rivers and roads, etc. Be careful to watch for projection distortion. A long focal length lens (on both the camera and the projector) helps as well as projecting at as close to normal incidence as possible. A clear slide that contains a regular rectangular grid can be used to check for distortion. The first sketching should be done without regard to hex outlines, and then, afterwards, the "sliding" of features one way or the other to align with the hexes can be accomplished.

Design Analysis

Continued on Page 30

Column 3

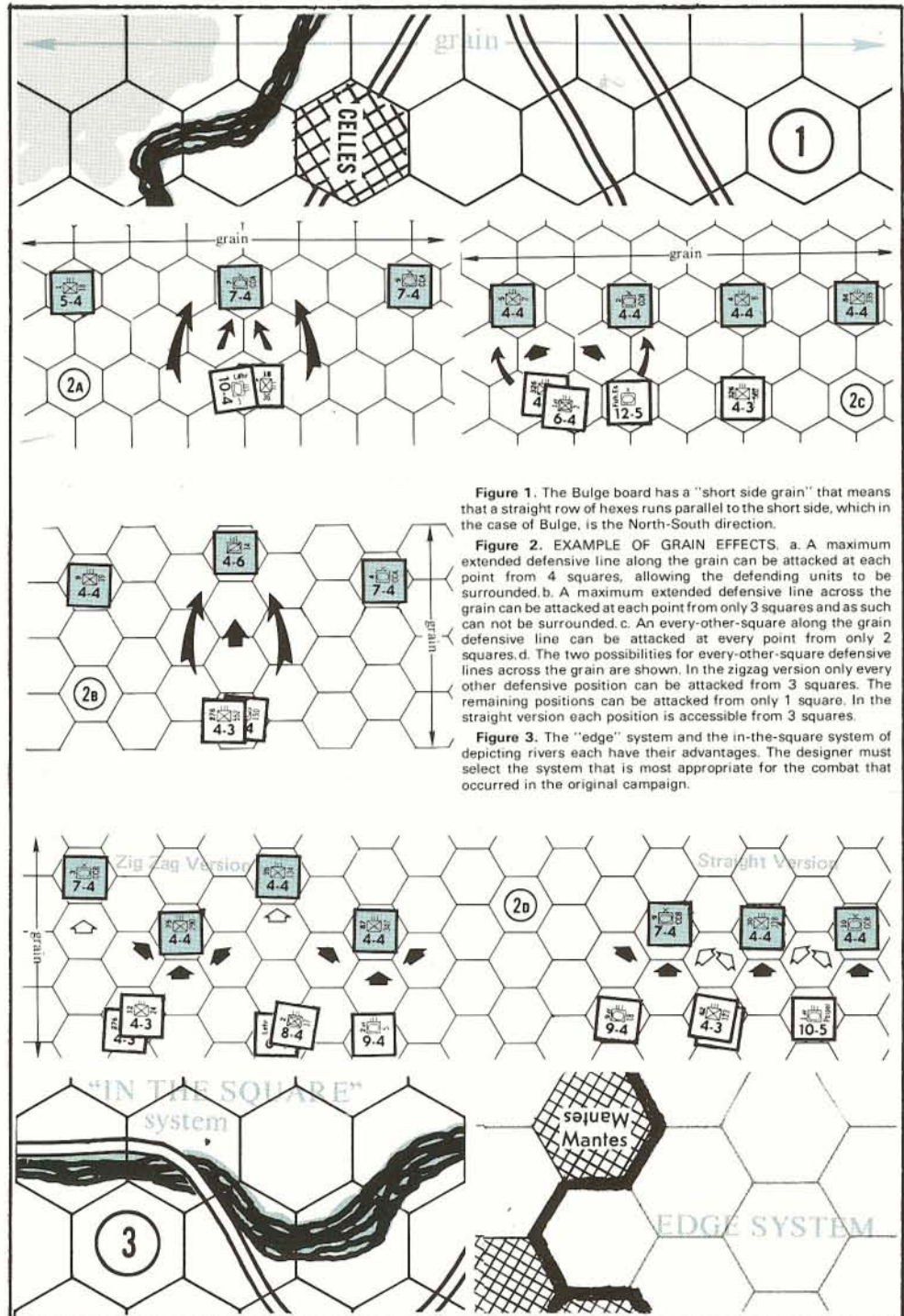


Figure 1. The Bulge board has a "short side grain" that means that a straight row of hexes runs parallel to the short side, which in the case of Bulge, is the North-South direction.

Figure 2. EXAMPLE OF GRAIN EFFECTS. a. A maximum extended defensive line along the grain can be attacked at each point from 4 squares, allowing the defending units to be surrounded. b. A maximum extended defensive line across the grain can be attacked at each point from only 3 squares and as such can not be surrounded. c. An every-other-square along the grain defensive line can be attacked at every point from only 2 squares. d. The two possibilities for every-other-square defensive lines across the grain are shown. In the zigzag version only every other defensive position can be attacked from 3 squares. The remaining positions can be attacked from only 1 square. In the straight version each position is accessible from 3 squares.

Figure 3. The "edge" system and the in-the-square system of depicting rivers each have their advantages. The designer must select the system that is most appropriate for the combat that occurred in the original campaign.



SERIES REPLAY

Waterloo

PARTICIPANTS: Bruno Sinigaglio—French
 Robert Beyma—PAA
 Harley Anton—Neutral Commentator



The following Series Replay WATERLOO game is at once an example of both a well and sloppily played game. Generally speaking, the strategy both players followed was correct given their position and views of the situation. Yet, the PAA player repeatedly makes illegal moves which the French player allows to pass because he doesn't want to hassle over the rules.

Played in this manner, the French don't have much of a chance and the French player can hardly be blamed for losing the 2-1 attack on Quatre Bras. Without a bit of luck here, the odds are slanted heavily against the French against a competent Prussian. When the PAA player is allowed to take liberties with the rules as happened here, the French have virtually no chance.

Yet, if nothing else, this game has shown the inadequacies of the current set of rules. A revised edition will soon be printed which will get rid of the present ambiguities and also change the river rules to favor the French a bit more.

In the meantime though, this game is an excellent example of how a good Prussian player defends his advantage and how an equally good French player goes about dealing with a stacked deck And lest there be any doubt . . . the Prussian method of bringing on reinforcements used below is illegal.

WATERLOO COMMENTARY

FRENCH SET UP:

The majority of French strength is started within reach of the primary roads. A strong left wing is planned to draw the PAA away from Quatre Bras.

PAA SET UP:

The French are apparently concentrating in the center. This may indicate an attack against Quatre Bras or Nivelles. The possibility that the French may deploy a sizable force East of the Gosselles-Quatre Bras road on turns 2 or 3 should not be overlooked. The Prussian Army is being deployed on the Ligny-Quatre Bras road in such a manner as to allow a first turn reaction to any French threat between the Quatre Bras slopes and the east edge of the board. Strategically, the PAA forces will defend the Quatre Bras and Nivelles positions. The Ligny-Quatre Bras-Nivelles road will be used to shift PAA forces back and forth to meet French drives. Counterattacks will be made when and where necessary or profitable.

NEUTRAL COMMENTARY SET UP:

The French set-up is good. One minor flaw is the lack of cavalry soak-offs in the JJ13 area. If the PAA closes for combat the French may have to do some hurried shuffling of forces. I prefer to put the 3-6's on 0016 and the 2-6's on JJ13.

The PAA set-up has two illegal positions in that the FF row should not be used on turn one. This is minor as EE23 and EE10 would have served the same strategic purposes. Otherwise it is excellent.

7 A.M.—FRENCH

Pire and II Horse Artillery are stationed to prevent strong PAA assault. I am massing for a 2-1 (Surr) versus Steinmetz on AA27. I feel this gamble is necessary against a competent PAA player as the French are definite underdogs and need success here to win.

7 A.M.—PAA

The French forces advanced rather cautiously on the first turn. There appears to be significant French movement towards the Nivelles front. A possible strong effort in the center should not be overlooked. The overall French strategy appears to be an all fronts advance, possibly with simultaneous attacks near the end of the first day.

The PAA strategy is to delay in the East and then gradually withdraw into a strongly defended Quatre Bras position. Forces will be shifted towards Nivelles as French strength on that front increases. The PAA forces will "bloody the nose" of any French forces that advance too boldly but will be content to delay and wait for the French to commit themselves.

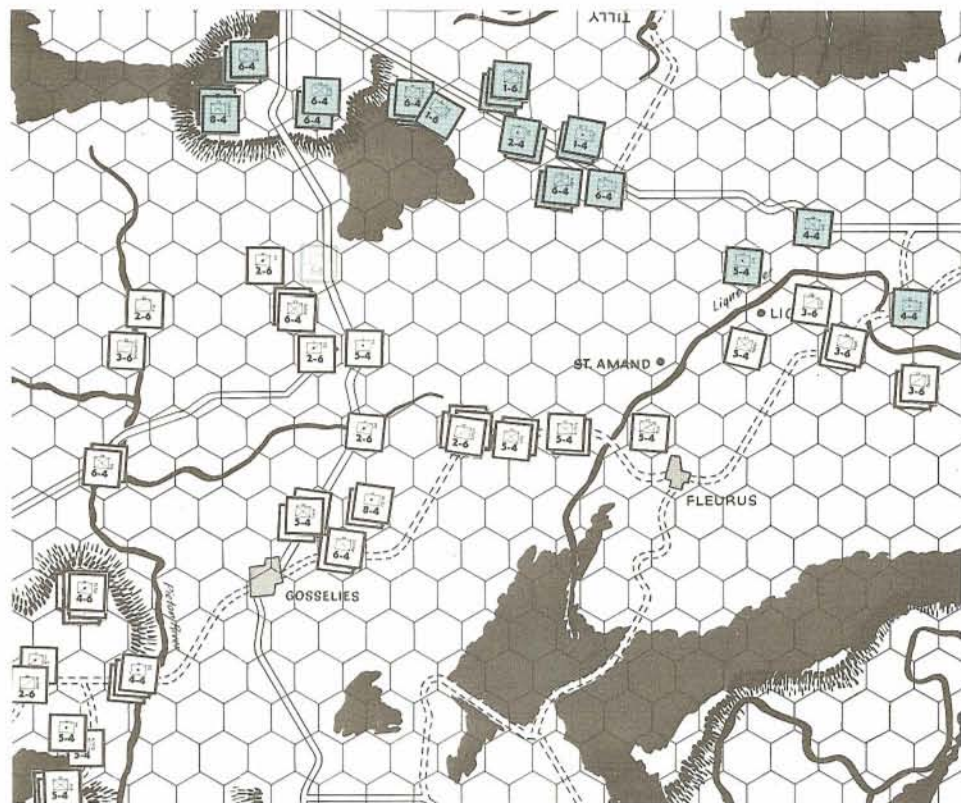
The Quatre Bras slopes were strongly defended and no attacks are expected there. The Prussian units on the Ligne River are delaying the French cavalry for another turn. These units are not considered to be in jeopardy because of the lack of French pressure against the Quatre Bras-Ligny road. Delay and/or soak-off units have been moved into position East of Quatre Bras. Other units are in reserve with multiple deployment capabilities.

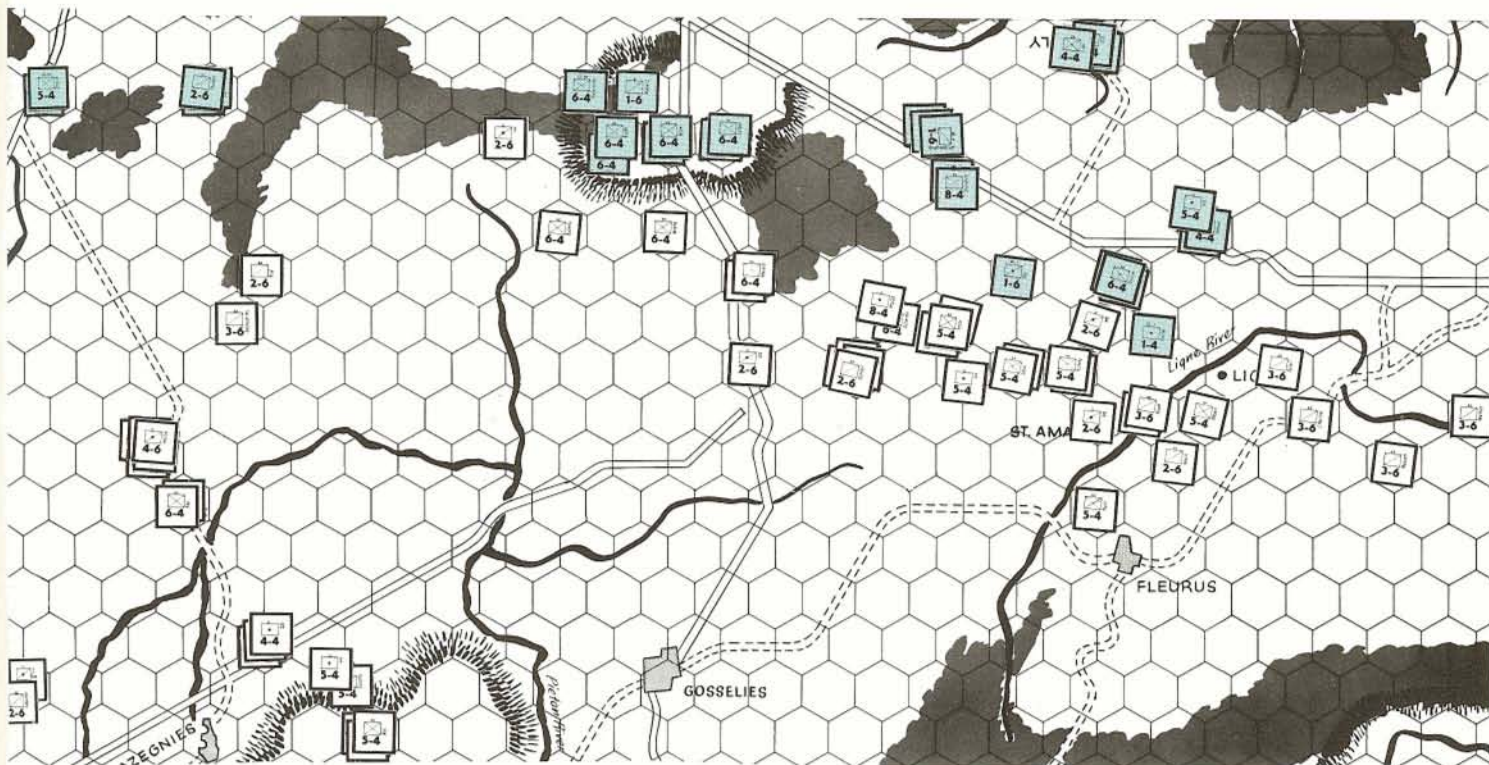
7 A.M.—NEUTRAL COMMENTARY

The French move has yielded a set-up weakness I failed to catch before. The units at 0016 and PP15 should have been switched. This would have allowed the 6-4's to reach the main road on turn one. The key to crossing the Ligne River is to leave large units on the river. This would have forced the river with the possibility of going either way. As it stands the factors East of St. Amand (GG15) are useless. II Cavalry to dd25 would have eliminated the necessity of exposing Pire.

The PAA move takes advantage of French caution near Ligne. The Quatre Bras heights seem a bit strong and I don't think the reaction to the Nivelles drive stiff enough. However, it takes the French 1st Corps a long time to get to Nivelles (I often send them up the center and the 2nd Corps toward Nivelles), so the reaction may be OK.

7AM — June 16th: As the players maneuver for position the French show a strong commitment to their left flank and a posture which looks almost defensive in nature along their right. The PAA player reacts strongly, sending Thumen, Schufenburg, Sohr, Perponcher and the I & III Horse Art'y towards Nivelles at W31.





9AM — June 16th: The French move in strength, but ever so slowly, on Nivelles where the PAA's interior lines enable them to swiftly switch delaying forces to meet the threat. Out of sight in above diagram are Schulenburg and I horse Art'y at W32; Trip and Krahrmer at W38, and Merlen at V33. The French reluctance to advance boldly on the right has enabled the PAA to pick off the French VI Horse

Art'y at no cost other than the two delaying units he would have sacrificed there next turn anyway. The PAA reinforcements are brought on illegally in column with Picton leading at M39 and Moll bringing up the rear at H40.

9 A.M.—FRENCH:

Making a strong thrust towards Nivelles and feint towards Tilly to entice shifting of PAA forces to flanks. Anticipating placement of Steinmetz at AA27.

9 A.M.—PAA:

The French player has apparently committed the majority of his forces to an attack East of Quatre Bras. The French have a sizable secondary force on the Nivelles front but it won't become a significant threat for several turns. The French may have had ideas of trapping my 4-4 on FF10 but did not. Whether by plan or chance the French player left 36 factors plus a soakoff unit within range of AA27.

I accomplished three things by attacking the French 2-6 and defending well forward:

1. Maximum delay of the Ligne Front.
2. Elimination of a French unit at no cost.
3. Complete extrication of the 4-4 from FF10.

The particular stacking arrangement on DD16 serves to optimize FR/PAA losses if the French attack the square on their 11 A.M. turn. Perponcher was placed on Z28 to prevent a French 3-1 against AA27, unless the French player is willing to sacrifice 7 factors.

I plan to delay as long as possible near Ligne and then slowly withdraw into the strong Quatre Bras position. It is felt that the French player will not have time to maneuver via the Tilly route. In any event light forces will be dispatched to cover that possibility. The PAA player will have the capability to heavily reinforce the Nivelles front prior to a major attack there. I am willing to accept low odds French attacks at this stage of the game.

9 A.M.—NEUTRAL:

The French 9 A.M. move is a strong one. I think Habert would have been better on I4 and

the stack of cavalry on HH20 could have been closer to the front but otherwise it looks good.

The PAA move is also strong but he trades two 1-6 units for a 2-6. This may be okay but it may hurt him later. Pirch II and Jagow could have stayed at AA27 as two 6-4's could have done the job at BB20 just as well. I would be tempted to throw a 1-2 on the 8 and on the 7, but probably would not since there are no 4-4's or 3-6's around. The best attack is a 4 vs. 8 and 4 vs. 7. Second best attack 9 (6-4 and 3-6) vs. 15. The PAA player has made common rules misinterpretation in that he has columned his reinforcements. This is not legal, but from my experience I would say at least 40% of the Waterloo players in the United States interpret this rule this way. It tends to give the PAA a slight advantage (3-5%). The PAA retreat at Nivelles was too far in my opinion. A 1-6 sacrifice would have been preferable to giving up 5 squares of territory.

11 A.M.—FRENCH:

Defense of Quatre Bras heights forces change in plans. Chance to attack Steinmetz at 2-1 Surr still anticipated. A bolder thrust towards Tilly may lure units away from Quatre Bras Heights. I noticed he used the illegal column method of bringing on reinforcements but don't feel like arguing the point with him. If he wants to play that way, so be it.

11 A.M.—PAA:

I was glad to see the French player get burned with his low odds attacks. The French appear to be making a major effort on both flanks. I will be interested in seeing how many French troops head into the Tilly gap.

I no longer consider the open area East of Quatre Bras to be defensible. I am slowly withdrawing back into the forest Southeast of Quatre Bras. The forces on U-19 and U-25 will slow up a French flanking maneuver, especially

an unsupported cavalry sweep. Another turn of delay on the Nivelles front was necessary to allow my reinforcements to get into position. Strong reserves are being kept in the center.

11 A.M.—NEUTRAL:

The French player tried to force an extra 1-6 out of the DD area battle, but only succeeded in losing 5 factors on a bit of poor luck. Hindsight is easier than foresight, but I think a 1-6 with IV Cavalry would have been better if the attack was to be made at all.

The PAA 11 A.M. move is very strong. He is definitely taking control of the game. I feel the French could still surprise him with a heavy Tilly corridor drive or even more important; a thrust at the Braine Le Comte road.

1 P.M.—FRENCH:

I was badly mauled in the 11 A.M. attacks. The PAA pullback leaves few units exposed. Quatre Bras Heights are still held strongly. Will shift more strength to right flank and force my way through the Quatre Bras Gap.

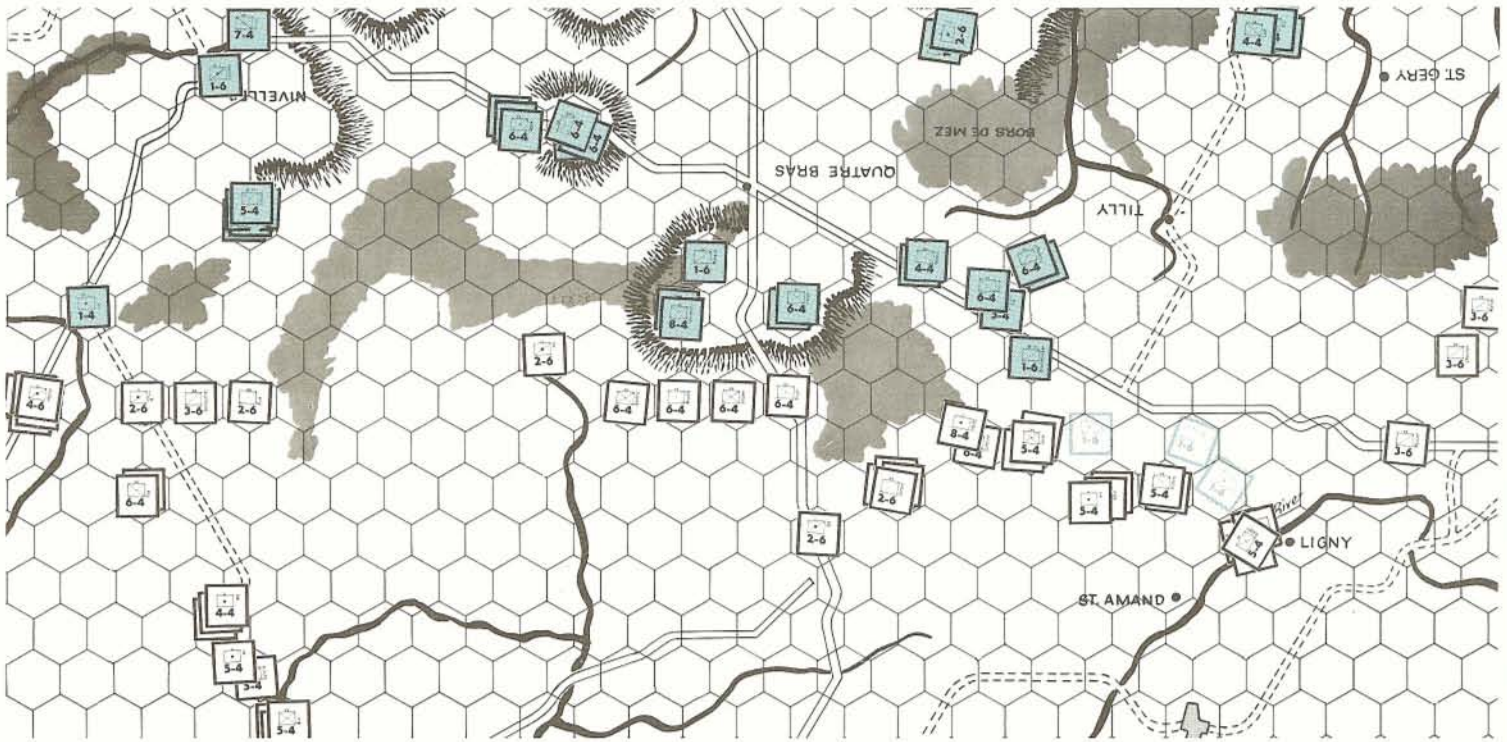
1 P.M.—PAA:

My French opponent continues his cautious advance. His overall plan appears to be to stretch my line and maneuver my forces out of the Quatre Bras-Nivelles line. I am inviting a French advance towards Nivelles. I should be able to counter-attack any French advance directly towards Nivelles. I'm holding the flanks with light forces as I believe the major battle will be fought in the center.

1 P.M.—NEUTRAL:

The French 1 P.M. move has a glaring weakness. The stack on AA36 is in danger of being surrounded. Otherwise a standard turn.

Once again the PAA player should have wasted 1 factor instead of giving up large amounts of defensible terrain in Tilly. A French sweep aimed at N24 with about 60 factors could



11 AM — June 16th: The French advance on both flanks eliminating the PAA delay forces: Gey, Opstal, and Treskow. They run into a bit of bad luck however, losing Guyot and IV Horse Art'y from the Vichery stack in 1-2 and 1-3 attacks on Brause & Stulpnagel who immediately retire to new

positions. The PAA responds to the French flanking attempts at Ligny by dropping back 7 factors in the Tilly corridor and 3 more behind the Mors de Mez. Note the tremendous edge given the PAA by their illegal method of bringing on reinforcements. Picton is already at Nivelles —

be devastating. On the other front, the PAA move was cautious, but correct.

3 P.M.—FRENCH:

I am preparing for attacks in forest corridors South of Nivelles and East of Quatre Bras. The Cavalry will exploit the route to Wavre.

3 P.M.—PAA:

The French commander seems overly cautious. I think his plan of gradual envelopment is taking too long to develop, so I'm attacking. My objectives are to inflict casualties, disrupt his timing, and to show an offensive spirit. The odds are in my favor of coming out ahead.

Elsewhere on the front, my troops are containing the French and are preparing to counterattack. The situation at Braine Le Comte is interesting.

3 P.M.—NEUTRAL:

The French player should have sent more factors toward Wavre instead of messing around in the woods around CC23. Other than that, a nice turn.

The PAA player, sensing the cautious nature of his opponent, has attacked. The attack is well planned, but I question its usefulness. He clearly has the game won if he plays cautiously. By attacking he can hasten his opponent's demise, but he also gives him a chance to make a comeback.

5 P.M.—FRENCH:

Heavy losses sustained due to my poor handling of French center. Must make up for heavy losses to boost morale. Attacks pressed in Nivelles sector to try to relieve pressure in center.

5 P.M.—PAA:

I'm counterattacking hard this turn. The French should be unable to counter-attack in the center effectively.

I'm holding on the flanks. The stack on P25 can deploy as needed. I can counterattack any French Cavalry advance in the West.

On the whole I think my forces have done well the first day. I'm still holding my primary defense line. Most likely, the French casualties will be heavier than mine. My overall strength permits attrition as long as it isn't too rapid.

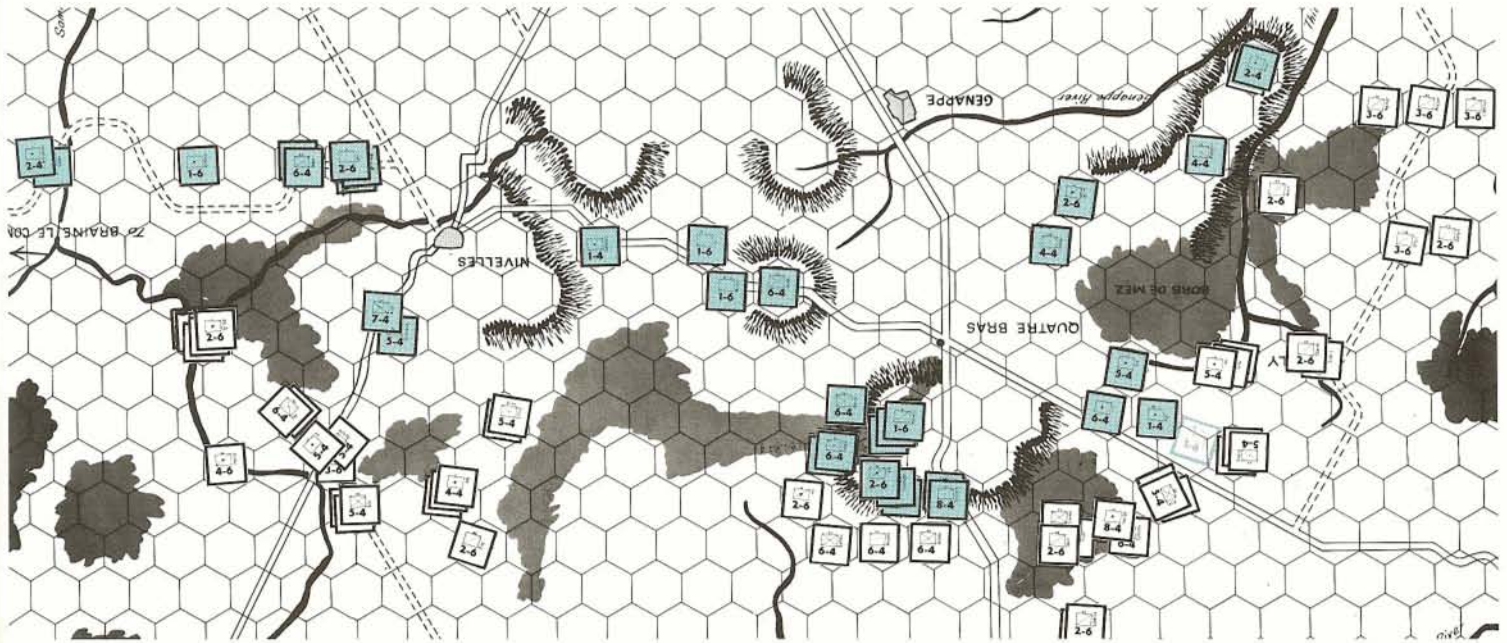
5 P.M.—NEUTRAL:

The French movement of Morand was illegal because of the rule which forbids entering and leaving the same units zone of control in one turn. This turn was a mixture of caution and



1 PM — June 16th: The French eliminate the PAA delay units Lux and Brunswick Cav as the PAA continues their orderly retreat with no problems due to their illegally arriving reinforcements. The absence of 3 French factors near the hills of Quatre Bras enable the PAA to pull out Steinmetz & Pirch

II to back up Heineman, thus denying the extra soak-off territory to the French unless our Napoleon risks low odds attacks for the sake of the extra hex. The 7 factor Prussian delaying force in the Tilly corridor has retreated to Q24, out of range of all but the leading weak French pursuit.



3 PM — June 16th: The French waste time switching units back and forth — this time eliminating only Heineman at AA21. Their cavalry on the right flank is unable to outflank the PAA who have defended well along the Thiel River. An additional 13 PAA forces are posted out of sight in this diagram below the Genappe. Note the maximum PAA delaying tactics stalling the French drive at all

3 essential points (Z23, Z35, X38) at a cost of only 1 delay factor. To force this position the French will have to gamble. To make matters worse, the PAA takes advantage of the French switch to his right to attack down the QB heights — eliminating Jerome and II Horse Art'y while its own III Horse Art'y survives the 1-3 soak-off.

desperation. The results were especially good for the French, making up for a bit of poor luck earlier.

Pirch II ignored the same rule Morand ignored in the first half of this turn. Obviously, both players are unaware of it. The PAA counterattacks this turn are strong. Things continue to look up for the PAA player despite his being hurt at Nivelles last turn. He should dominate the center and the game from now on.

7 A.M.—FRENCH:

Heavy losses taken by both sides last turn. My losses slightly higher unfortunately. Must reverse the tide soon or pack it in. I cannot afford even attention. Nivelles sector has been favorable. Pullback in center will leave many targets for PAA counterattack; however, French units on Y22, Z22 and AA22 are ready to shift South and counterattack.

7 A.M.—PAA:

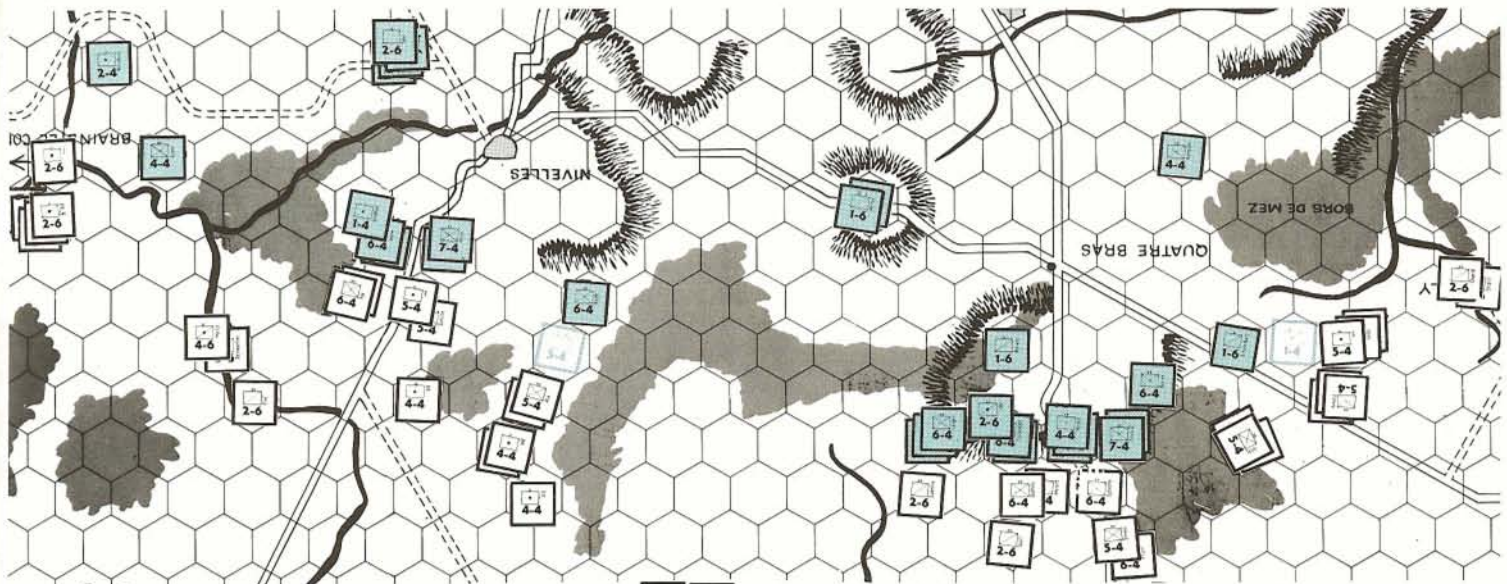
The French player is beginning to lose the strategic initiative. The French Cavalry on the flanks are being checked and the French are on the defensive in the center. Only on the Nivelles front are the French making a significant advance. (This is in large part due to two D-Elim's on 2-1 attacks).

My strategy at this point is to take maximum advantage of the promising situation on the Quatre Bras front. If the French forces here can be badly mauled and effectively neutralized then the bulk of the Prussian Army can be quickly transferred back to the Nivelles front to stop the French advance there. I think the French player should have sacrificed a 2-6 Cavalry unit in order to prevent my attacks in the center. I'm bringing up a couple of 1-6's from the Dyle and possibly (3) Infantry divisions from the Nivelles

front to reinforce my counter offensive in the center. Note the placement of my delay unit Merlen. In order to attack this unit the French must expose forces to a counterattack from the troops on V-33. Note that the French are running short of soak-off units on the Quatre Bras front and are hard put to reinforce. There is a certain amount of risk in putting units on DD-22 but I believe this is justified at this point.

For the moment I must go on the defensive on the Nivelles front until I can bring up more forces to counterattack from a more favorable position. Of course, the attack on the French Cavalry is a profitable one.

On the Dyle front the III Artillery is being offered as bait. The French Cavalry could waste 2-4 turns going after it. Also, allowing a 4-1 against Kruse is a sort of bait too. I would prefer the French Cavalry to be committed there



5 PM — June 16th: The French, stung by the PAA attacks, try some desperate assaults. The Imp. Gd is lost in a 3-1 exchange with Steinmetz while the III Horse Art'y is eliminated in the covering soak-off in front of QB. Elsewhere, the French have better luck, eliminating Chasse and Brunswick at 2-1 while the III and VI Art'y survive 1-2 soak-offs and are retreated out of action.

The PAA respond with an equally damaging move. The III Horse Art'y and Sandham are lost in soak-offs which allow the elimination of Bachelu & Duhesne at 3-1 (the latter taking the Prussian I Art'y in exchange) and the French I Art'y on the left at 5-1 odds. A French cavalry force of 16 factors on the right is not shown — having penetrated as far as O22. However, they pose little threat



7 AM — June 17th — The French eliminate the delaying Schulenberg and Perponcher in a 4-1 attack, losing Pire in a 1-10 soak-off but they are on the ropes. The PAA switch their forces to the QB front and go on the offensive. Simmer is eliminated at 5-1 surrounded, Morand is pushed back at 3-1, and Soult is eliminated in a 4-1 exchange with the PAA III Horse Arty. On the far left, Jaquinot is eliminated at 5-1 surrounded while Trip & Krahmer die in the compulsory soak-offs. The forces in the Tilly corridor still neutralize each other as the PAA assumes command of the game. In all fairness to

the French player, we should note the extreme pressure he is placed under by the illegally fast arriving PAA reinforcements — the Cav. Batts in this move being a prime example.

This is the beginning of the end for the French. Reduced to desperate measures, they grasp at the chance of evening the game in one big gamble and attack the Stulpnagel stack at 2-1 surrounded with 30 factors. The resulting A Elim ends the game save for the customary last-gasp volley of 1-1 attacks made by a player facing certain defeat.

rather than on the Northern flank. I'm giving 2-1's against the rest of the line. I think that an exchange would hurt the French considerably.

7 A.M.—NEUTRAL:

The French player did well to block the Braine Le Comte road. Things are really looking grim for him now. Nivelles is his last offensive spark. The PAA turn was a powerhouse. The French player is stymied on all fronts. Barring a miracle the game is over. The PAA wisely delayed entry of his reinforcements until he could break the Braine Le Comte road free.

9 A.M.—FRENCH:

At this point I'm down 11 factors. My losses last turn were disastrous. Must pass up 3-1 Surr versus Brause and Wissel, because PAA will still have powerful counterattack force. I must try to eliminate the entire stack on DD22 via D-Elim result in order to regain parity.

9 A.M.—PAA:

The French player had his back up against a wall and took a big gamble. He lost his gamble and for all practical purposes the game. Although hindsight is perfect, I would have chosen a 3-1 surrounded against 9 factors under these circumstances. I believe the course of the game forced the French player into a gamble of this type.

Some of the French dispositions were a little weak this turn. III Cavalry and Berthezene were exposed. The French Cavalry on the Dyle front is wasting precious time.

My strategy now is to eliminate French units remaining in the center. Then I can turn my attention to mopping up the Nivelles front. I will attempt to minimize the possibilities of French 1-1 "suicide" attacks. The game is "in the bag" now. I expect my French opponent to surrender on his turn.

9 A.M.—NEUTRAL:

The French gambled and lost. With this loss the game is over. All that remains is the mop-up.

11 A.M.—NEUTRAL:

We have the end. The French suicide attacks go moderately well but the PAA are left in a commanding position. Napoleon surrenders. This was an excellent game. Luck played little or

no part in the final outcome. From the very first turn the French player was too cautious. In Waterloo (especially when the PAA can column reinforcements) as was done illegally here, the French must be bold. The French player concentrated too much on the center. Stronger flank drives would have been preferable. Still, an excellent game between two fine players.

THE ATTACKS ...

TURN	ATTACKERS	DEFENDERS	ODDS	RESULT
11AM	Habert, Hulot, Morin, Delort	Opstal	7-1	DE
	Guyot	Brause	1-2	AE
1PM	IV Horse Arty	Stulpnagel	1-3	AE
	Pesheux, Vichery	Treskow	7-1	DE
	Simmer, Jeannin, Teste, etc	Gey	7-1	DE
	Jacquinot, Imp Gd, etc.	Lux	7-1	DE
	Many	Brunswick Cav	7-1	DE
3PM	Many	Heineman	7-1	DE
	Tippelskirchen, Langen	II Horse Arty	6-1	DE
	III Horse Arty	Morand	1-3	AB2
5PM	Steinmetz, Pirch II, Brause, Stulpnagel	Jerome	4-1	DE
	Lefol, Berthezene, II Arty, Hulot, Vichery, Pescheux	Moll	7-1	DE
	Imp Gd, Duhesne, Morand, Bachelu	Steinmetz	3-1	EX
	III Horse Arty	Stulpnagel, Brause, Pirch II	1-7	AE
	Alix, Donzelot	Chasse	2-1	DE
	III Arty	Picton	1-2	AB2
	I Arty, Durette	Brunswick	2-1	DE
	VI	Alten	1-2	AB2
	III Horse Arty	Morand	1-3	AE
	Sandham	Foy, Girard, etc.	1-7	AE
7AM/17th	Tippelskirchen, Langen, Wissel	Subervie	7-1	DE
	Stulpnagel, I Horse Arty, Brause, Henckel	Bachelu	3-1	DE
	Pirch II, II Arty, I Arty	Duhesne	3-1	EX
	Alten, Picton, Jagow, Perponcher	I Arty	5-1	DE
	Many	Schulenburg	7-1	DE
	Pire	Alten, Picton, Jagow	1-7	AE
	Girard, Foy, Donzelot, III & IV Arty	Perponcher	4-1	DE
	Brause, Stulpnagel, Pirch II, Borcke	Simmer	5-1S	DE
	II Arty, Henkel, Langen, Wissel	Morand	3-1	DB2
	Marwitz			
	Tippelskirchen, III Horse Arty	Soult	4-1	EX
	Cooke, Thumen, Sohr, Williamson	Jaquinot	5-1S	DE
Trip	Friant	1-6	AE	
Krahmer	I Horse Arty, III Cav	1-7	AE	



A Fast American Win in Luftwaffe

By Tom Hazlett

The game of *Luftwaffe* has been somewhat neglected in the pages of the *General* ever since its release three years ago. Many of the articles that have dealt with the game have concentrated on design and historical background. Those few articles which have discussed actual play of the game have dwelt mainly on the campaign versions, giving vague strategic suggestions. While the campaign versions are fine games, worthy of the attention they have received, it is unfortunate that they have overshadowed the basic game, which is a fine exercise in its own right, and one which places emphasis on the tactical consideration often neglected in the longer versions.

It is likely that many people who hear only about the campaign versions do not have the time to play them and thus never attempt the game at all. If you are one of these people, I suggest you dust off your game and try the basic version a few times. It is one of the few wargames available that can be played in an hour or less, enabling a series to be played in an afternoon. The tension level runs high, as the outcome of the game often depends on survival of one bomber factor on the last attack. It is a rare game that is decided by more than one or two cities. The game also has much of that quality which has been responsible for the survival of *Midway*, the need to figure out your opponent's intentions and then to outmaneuver him in order to win.

I would guess that there are two basic objections in the minds of many people to playing the basic game. The first is the myth of German invincibility. The second is the horrendous c. r. t. I will mention play balance later, though I hope to show in this article that the Germans are far from invincible. The c. r. t. definitely needs some attention. I do not presume to question the historical accuracy of the table, which Mr. Zocchi defended in a recent issue. I do contend, however, that it ruins the game. A basic game of *Luftwaffe* with the present c. r. t. has roughly the same "feel" as far as luck is concerned as an *Afrika Korps* game with a 1-1 attack on Tobruk in June, 1941. One roll of the die can overcome superior tactics. Nevertheless *Afrika Korps* continues to be one of the more popular games. The difference in the two is, of course, that we don't have to make the 1-1 on Tobruk, but we are stuck with the luck factor in *Luftwaffe*, unless we change the c. r. t. to reduce the role of luck to a more acceptable level. I will suggest three different methods, giving the percentage results produced by each. I suggest you pick whichever one suits you best.

Alternative 1- When rolling the die a 1=3 and a 6=4, yielding the following percentages.

1=0%	3=33%	5=16%
2=16%	4=33%	6=0%

For those who dislike eliminating the 1 and 6 columns entirely one of the following methods should be used.

Alternative 2- When a 1 or 6 is rolled, roll again. The results of the second throw count, whatever the result. The percentages for this method are:

1=5.5%	3=22.2%	5=22.2%
2=22.2%	4=22.2%	6=5.5%

Alternative 3- This method involves the use of two dice (or one die thrown twice):

first die	second die	result	percentage
1, 2, 3	1	1	8.3%
1, 2, 3	2, 3	2	16.7%
1, 2, 3	4, 5, 6	3	25.0%
4, 5, 6	1, 2, 3	4	25.0%
4, 5, 6	4, 5	5	16.7%
4, 5, 6	6	6	8.3%

After adjusting the c. r. t. we can now concentrate on exploding the myth of German invincibility. This reputation has derived from two sources; first it is a spillover from the campaign game, where they do have an edge. More importantly, it comes as a result of opening up the game for the first time, trying to muscle bomber formations through the heart of the defense, and watching them get blown out of the sky. After a few such experiences the game is declared unbalanced, and either thrown in the back of the closet or revised, "bombers on fortified clouds suffer 1/2 casualties." It is true that planning an attack requires more skill than shooting down bombers; thus games between two beginners often result in a German victory. However, an American player who constructs an attack plan based on a careful analysis of the defense will find himself managing at least a draw nearly every time, with more than a few wins.

Before I go any farther I would like to make clear that the campaign versions are more challenging than the basic game for those who have the time. I am concentrating on the basic game both because I feel it deserves some attention and because the non-varying order of battle makes analysis easier. The same type of analysis may be, and should be, conducted for any quarter of a campaign game. This article is meant to provide an illustration.

Examining the German units, we see that our opponent has three main forces as his defense, 5 FW-190s, 6 ME-110s, and 8 ME-109s. The three forces will undoubtedly be assigned to separate areas. The key to victory, obviously, is outmaneuvering the defense. Rather than dividing into three groups and trying to push through the defenders, an attack should divide into several small groups and attempt to slip past the defense. Hopefully the Germans will become confused, try to stop everybody and end up not applying sufficient force anywhere. At worst, a well-timed series of attacks prevents each German force from eliminating more than one attack group. Say, for example, we launch a five-pronged attack. Three prongs are destroyed, the two weakest ones are untouched. They each bomb three cities, adding Amsterdam this gives a total of 7. Obviously, in order to achieve a victory, some bombers must be able to survive a German attack. In order to determine the best chance for doing this we must first look at the specific defense.

A typical set-up might have the 110s opposite Italy because of their longer flight times, the 109s guarding the approaches from England, the 410s and 88 watching for a sneak, and the

190s playing "middle linebacker" in southern Germany. This type of defense seems to be standard for most German players. Like any defense, it has a weakness. As we pointed out earlier, one of the 3 defensive groups must be overcome to get a win. In this defense the 110s, semi-isolated on the Italian front, are the weak link. We use an attack like the following: (diagram #1).

group 1- 5×B17 v. Steyr, Vienna, Wiener-Neustadt, Gyor, Budapest close escort- 3×P51

group 2- 3×B24 v. Munich, Augsburg, Friedrichshaven; c.e.-P51, P38

group 3- 3×B17 v. Mannheim, Karlsruhe, Offenburg; c.e.-P51, P38

group 4- 4×B24 v. Munster, Kassel, Bremen (2) (or Hannover) c.e.-P51, P38

group 5- 5×B24 v. Rostock Anklam, Oranienburg, Berlin, Sorau Hunter group- 3×P47 on Italian front.

The 9th B17 hits Amsterdam.

The Italian front is the key. Group 1 must fight through the 110s to get at least three out of five targets in order to achieve a win. We will discuss specific tactics in this section shortly.

The 190s are caught in a squeeze. They should destroy either group 2 or group 3 with no trouble, but the other group will get through to destroy three cities. Before group 4 falls under the guns of the 109s it should reach Munster, at least. The sneak raid should yield at least three cities. This gives a total of eleven cities; the twelfth city is likely to come from either the Italian front or the sneak raid. A draw is virtually assured, assuming average luck.

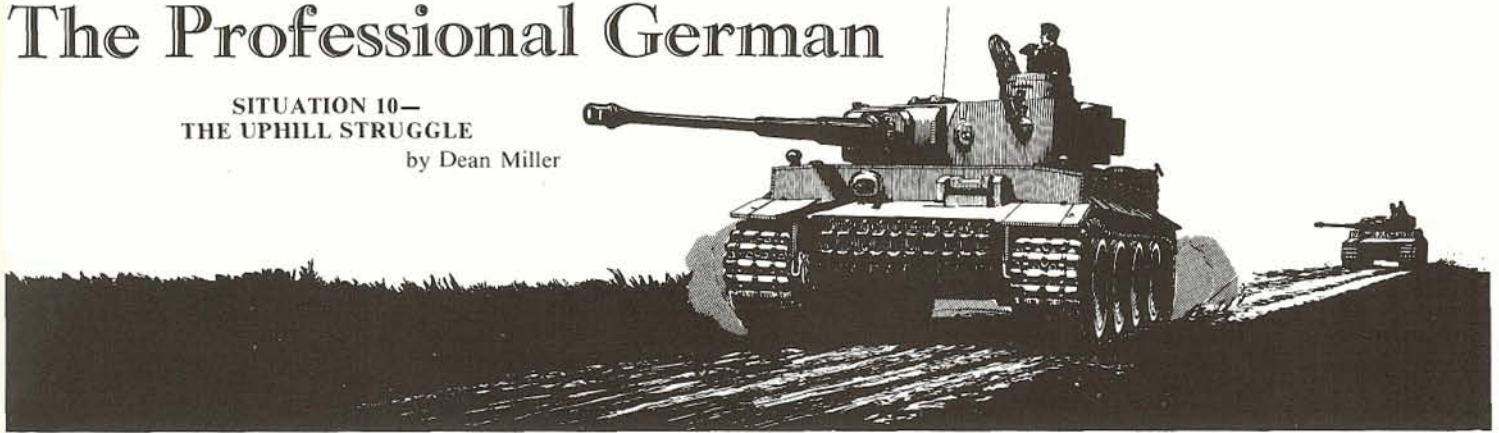
Saying what will happen without explaining how is not very helpful, so we will look at each front individually.

All aircraft on the Italian front are placed "in flight" behind the R line during initial placement. As diagram #1 shows, the main portion of group 1 spends 4 turns in the air before reaching targets, the same amount of air time the 110s have without tanks. The close escort of 6 P51 factors should take three turns to wipe out in the following manner (we are using average rolls for purposes of illustration): turn 1- The 110s roll a 4, which is adjusted to a 2 because of the E ratings, killing 3 P51s. A P47 attack kills 2 110s with a roll of 3. Turn 2- The 10 110s kill two more P51s with another 4. The P47s roll 3 again, wiping out 2 more 110s. Turn 3- The 8 110s continue with another 4, killing the last P51 and a bomber. Return fire from the bombers kills a single 110. The P47s are forced to go home. Turn 4- A final 4 kills three more bombers, which saves only 1 of the 3 cities in the center, barring AA fire. The 110s are forced to land next turn, thus the counter bombing Budapest is unmolested, while Steyr also fell without opposition. If the Germans go after either of the flank bombers they guarantee the success of the central column, and make it likely that the other flank attack gets through as well. It is to make it difficult to kill both flank units that the Budapest unit splits off so early. If the Germans refuse to attack first turn, so as to have enough fuel to hit the Budapest bomber on turn 5, then a P51 can split off to Steyr, giving that bomber a 2/3 chance of getting through. No matter how the 110s defense this area the Americans will get at least 3, and probably 4 cities.

The Professional German

SITUATION 10— THE UPHILL STRUGGLE

by Dean Miller



Situation 10 is an attempt to recreate the Battle of Prochorovka, often called the largest tank battle in history. As such, it is one of the most appealing Situations, giving promise of a large scale tank v. tank engagement in the open fields. That it doesn't work out that way is due to two factors: (1) The imperfections of the game, which have been the subject of numerous **General** articles; and (2) the playing techniques of most Russian players, which I will take up in a moment. As a game, this Situation is known as a hopeless cause for the German player. He must fight his way the length of Board 1, opposed in part by some of the most anomalous but effective of delaying units—trucks. He must get across this Board rapidly to begin the herculean task which awaits on Board 3—the destruction of 29 units (assuming he has destroyed or blocked off the 12 on Board 1) in what remains of 10 turns.

The gross imbalance has been recognized officially, first by the game's designer, and now by Avalon Hill, by extending the Situation to 12 turns—hardly an overgenerous concession. Any Russian who permits his opponent to win a decisive victory obviously is in need of help. Thus, if this were the typical **Panzerblitz** article, this paragraph would be an introduction for a number of variants to provide better balance. But this is not that kind of an article.

The odds against a German decisive victory are a fair reflection of the real battle. When the 4th Panzer Army, already decimated, entered that inhospitable field between the railway embankment and the river, to be greeted by the fresh hordes of the 5th Guards Tank Army, the only way the "death ride" could have been avoided would have been for one side to turn tail—an unlikely event, either at that turn of the war, or in a wargame.

But the foregone is not to say that Situation 10 is unworthy of your time. To the contrary, it can be one of the most challenging tests of the tactical abilities, and the guts, of wargamers. A German tactical victory—which would result in a draw—is not beyond the realm of possibility. All that is required is the destruction or elimination otherwise from Board 3 of 17 units. It is a worthy goal for a "professional German" to see—difficult, but not impossible, when he is playing a "professional Russian."

The two player types are cut of quite dissimilar cloth. The player I refer to as the professional German is basically an attacker. He is most in his element facing a situation where he must move aggressively against his opponent at poor odds. Rather than relying on the laws of chance he seeks to circumvent them

through innovative tactics and extreme aggressiveness, knowing that it is just as effective to demoralize an opponent into capitulation as it is to do so through reduction of his playing pieces. For such a player, the worst possible position to be in is not the hopeless one, but one where he cannot attack.

The professional Russian, on the other hand, is a counter of games won. Unlike his antithesis, the German, he seeks and relies upon odds heavily in his favor. He attacks only when facing a sure thing. He won't fail to assert any advantage, however unrealistic, which the oft-imperfect rules of wargaming may give him. He avoids—is deathly afraid of—the unconventional. In Situation 10 you will recognize him the moment his vast forces enter Board 3, for he will promptly hide them in the woods, in Opostoschenia, and in Graybosh. No free-for-all in the open—and hence no duplication of the real Prochorovka—for him!

So how does the German cope with the unfriendly Situation, compounded by the cowardly Russian? This is a 2 stage operation—Board 1, and Board 3—actually two very different games. In the first he outnumbers the Russian, and has no armored vehicles or overruns to anticipate. The Russian will make full use of the wooded portions of the road and the easy terrain, simply blocking a fast advance by being there with his trucks, with anti-tank units covering the necessary approaches. It is not impossible to dislodge these forces with minimal risk, if you wish to take the time (and employ Russian tactics) but time is precisely what you don't have. Your primary concern during this phase must be *speed*. This means that risks must be taken with your panzers, and if you are psychologically unwilling to do so, you are playing the wrong side, Russian!

How does this translate into specific tactics? First, you must plan for this phase. The "10-speed" units figure most importantly—the 5 superb Panthers, and the 11 halftracks. Many of these advance units are going to have to go across most of Board 1 off the road—plan on it! Send at least two Panthers and four halftracks up the right side of the Board from the start, and be prepared to divert more of them in that direction if events so dictate. Put the infantry and the guns on the halftracks, and use the spare one, and the trucks for contingencies and reserve carriers.

Secondly, and frankly, you are going to have to expose your units to the anti-tank guns. These latter units will be in the woods and

towns, on hexes like 1M5, 1P7 and 1AA9, and you're going to have to move next to them to spot. Of course, the best units for this purpose are the infantry, and occasionally you may be able to use them so in the first couple of moves. But to do so, you must also use a transport unit and either drop off the infantry, and move out of harm's way, or risk that unit also in the square next to the guns—almost certain elimination for it. This risk could be accepted for the trucks on the first move if there is an opportunity to move an infantry unit up a road next to a blocking position. The infantry can then be picked up by a halftrack. But by and large, too much time is consumed by the dropoff and pickup process, and you need your infantry dearly when on Board 3.

Thus, you are going to have to risk armored units, both in spotting and attacking, and simply by exposing them to fire while proceeding across the Board, in order not to allow your advance to be fatally slowed. The best units for this brand of spotting are the StuG III's. With their protective factor of 12, they are as strong defensively as any unit you have. And with their more limited range and speed they are the most expendable of your "12 defense" units. Next in the order of priority for this purpose are the Tigers, and lastly, the Panthers. Yet you must even risk these last-named matchless instruments occasionally, because with their movement factor of 10, they may be the only units able to reach a critical spotting position—and you must never decide to wait a turn to bring up a less valuable unit!

This risk, after all, isn't all that great. If you move alongside an anti-tank unit while in clear terrain, the odds are only 2-1. If, as is often possible, your spotting unit is in woods or a town hex, there is no possibility of destruction of your unit. Indeed, in pbm, there is a 30% chance of escaping dispersion, even if you are on clear terrain. While a dispersion is a setback, particularly if it happens to a Panther, you can usually catch up by using the road when mobile again. You must, of course, use two units for this function, preferably on separate squares, so that the other can spot and shoot back, if necessary.

For the first few moves of Situation 10 the artillery should be on the commanding hilltops, providing the firepower to eliminate the blocking forces as they become spotted. At least one should be on hill 126, and on hill 104. The remainder of the German units—the PZ IV's and Marders—should follow up, generally following the left road which traverses the Board, with minor ventures off into the boon-

docks to circumvent obstacles and move into positions to fire at the Russian units, should their assistance become necessary.

The second phase begins as soon as you can get onto Board 3. It is not to your advantage, on balance, to stop your advance short of the middle board and wait until you have sizeable units in position to enter. As soon as you have units which can go in, do so, even if it means letting some of the Russian Board 1 units escape onto Board 3, although you should extend yourself to avoid that. There may be an overlap between the phases, as certain of your units may have to stay on Board 1 to keep the remaining Russian units there. Remember, you don't have to destroy them, just keep them there. Thus if the trucks are eliminated, you can ignore the remaining anti-tank guns, if they do not threaten your artillery.

As noted above, the Russian is going to move in to Opustoschenia, and the woods hexes in force, with a reserve around Graybosh. If you enter the Board with a small force, your first objectives should be to block his way to Zabvenia, and occupy the heights at 3W8, and the gully before Opustoschenia. At the same time you enter Board 3 you should move your artillery onto hill 123, and you should time their departure from the hill squares at the other end of the Board with this in mind. The artillery will control most of the ridge and gully hexes (against the unlikely event that the Russian becomes adventurous) and provide a base of fire for the carnage which is about to begin.

The primary battle of this phase—and of this Situation—is for the village of Opustoschenia. You are going to have to go out into the open to dislodge the Russians. This will require putting infantry and "12 defense" units next to the village, backed up by "overrun protectors" on the hexes behind. Thus, you will have to put the spotters on hexes 3R5, and 3S5, 6, and 7. The backups—PZ IV's, Marders, and pairs of half-tracks if absolutely necessary—go on hexes 3R4, 3S3 and 4, 3T4, 5, 6, 7, and 8, 3U6 and 7. Then brace yourself—you are going to see many of your units promptly converted into wrecks! Assuming some spotters survive (you have to have some fair breaks from the gods), you must then utilize your assembled firepower to best advantage—blow the place off the Board! But do not fire all your units—you must save some to enter the town hexes where all defenders have been destroyed. Your greater stacking capability serves you well here.

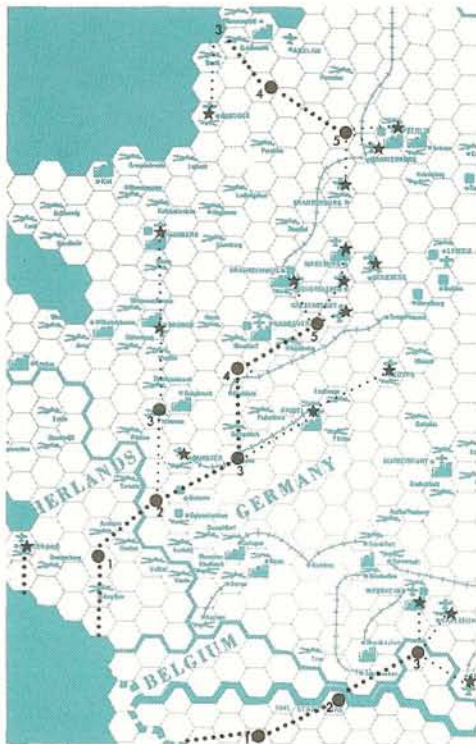
Hopefully, at the same time, or if not, on the next move, you can mount a similar attack on the wooded hexes at 3M9, 3L9 and 10. By this time you're going to be getting low on units and turns, and the next assault—on the wooded hexes at 3J2 and 3 and 3H3—may be difficult, yet the work must be done as long as the odds on the spotting units are less than 4-1, even. Count the Russian Board 3 units eliminated. Until you have reached the magic figure of 17, never mind your losses. For a moment remember that you're not Von Manstein and unlike him, will have no use for your tanks after your half of turn 12. They don't count toward victory conditions. Go after just enough of the craven Russians, wherever they may be hiding, to push you over the tactical victory level. If you reach this goal, you will have a draw, in terms of the Situation. But you will really have won! Ask any professional German. Ask me!



A Fast American Win In Luftwaffe

Continued from Page 26

Wiener-Neustadt, with a close escort of 2 P51 and 3 P47. Group 2 has a c. e. of 2 P51 and 1 P38. A bomber is added to group 4. This adjustment should yield at least 11 cities, 5 in the sneak, 3 in the center, Steyr, Munster, and Amsterdam.



An alternative that should be considered if the 410s reinforce Italy, and one that should definitely be used if even stronger forces are sent there, is to attempt to overwhelm the defense opposite England. (see diagram 2) Italy is ignored entirely. All 12 B24s are placed in flight behind the R line with a c. e. of 1 P51 and 3 P38s. Also on the first turn, 3 B17s with a P51 move toward Mannheim, Karlsruhe, and Offenburg. The remaining 4 P51s and the 3 P47s are formed into hunter groups. The c. e. of the B24s is designed merely to soften the first attack of the Germans. We want the bombers to be able to fire defensively before any of the formation has to split away. One turn of defensive fire, coupled with attacks from American fighters, should kill 11 German factors. After the second turn of battle the 109s and 190s should be reduced to a total of 8 factors or less with a loss of 10 bomber factors. One more attack will eliminate the Germans as an effective fighting force. The sneak raiders meet with little opposition, while the Karlsruhe force has not been touched. The B24s should get anywhere from 4 to 8 cities themselves. The only hope the Germans have is the quick arrival of the Italy defense force, an unlikely possibility.

An alternative to guard against this is to reduce the main force to 11 bombers and use the 12th to hit Amsterdam, freeing a B17. Three B17s go on the Karlsruhe raid, the sneak raid is reduced to 3 bombers, picking off Gydna, Marienburg, and Warsaw, and the final three B17s hug the southern edge of the board in an attempt to hold the Italian defense. If ignored, they hit Vienna, Gyor, and Wiener-Neustadt.

If less than the 190s and 109s guard England, and this can happen after the Germans have been burned a few times on the Italian front, then the B24s should push through easily, with no attempt at finesse necessary.

I want to re-emphasize what has been the point of this entire article: any defense can be beaten if you stop, add up the probable losses per turn, figure out the best routes of attack, and coordinate those attacks properly. The above attack plans work well against the defenses presented, but as individual defenses vary the attacks must adjust to take advantage of the inevitable weaknesses. Think!

Most of the principles illustrated above apply to the campaign versions as well as the basic game. Just a word on the campaign version is necessary, however. The American player must consider that early bombing of the cities in the Vienna area has the effect of reducing greatly the area the German has to defend, and makes the defense in the center much tougher.

In closing, I'd like to mention a few ideas that may not be obvious from the above.

- 1-Amsterdam is a free city. Don't forget to send one counter to destroy it.
- 2-Fighters are generally used best as close escort.
- 3-The P38s should always be used as close escort because of their ineffectiveness in combat.
- 4-Because of their high E rating P51s are very good for close escort. One should generally be placed on the top of each bomber stack. A special effort should be made to use P51s as close escort in areas defended only by 410s and 110s because of the great difference in E ratings.
- 5-P47s are the best hunter group.
- 6-Close escorts should always drop tanks. They won't be around long enough to worry about fuel. When P51s drop, they force the Germans to do likewise, which really hurts the 109s and, to some extent, the 190s.
- 7-Unescorted bombers, when in a stack of less than 10 factors, are usually better off separating. It requires more German factors to ensure killing them all in several small attacks. Many times the Germans can't cover them all.
- 8-Bombers can generally fight off about 1/2 their number of fighters over a series of turns.
- 9-Hunter groups can be effective in reducing the Germans in an area where the hunters are not greatly outnumbered, particularly because the Germans can rarely afford to take time to attack the fighters.
- 10-If 109s or 190s try to defend two areas, or defend in an area with few bases, proper timing should put them on the ground at the crucial moment.

I would also like to repeat that luck plays a significant role in *Luftwaffe* because of the small number of rolls, but the same holds true for many popular games.

For those of you who still find *Luftwaffe* unbalanced, I would like to remind you that it is the easiest of all games to balance. Merely adjust the number of cities required for a win. Another method is to play two games, switching sides. The winner is the person who destroyed the greater number of cities with the American side. The short playing time of *Luftwaffe* permits it.

For those people who become tired of the same situation, but don't have time for the campaign versions, there is the Operation Custer variant. Additionally, "Luftwaffe-Situation 13" in the March '73 *General* provides an interesting means of choosing alternate line-ups, although the victory conditions mentioned there are rather lopsided.



Dear Sir:

Your D-Day anniversary issue is my very first issue. Big deal? Well, irony, such as it is, strikes again. That I receive my first GENERAL on the eve of this monumental event (anniversary, that is) is one thing, but that your main article (excellent) deals with that game that started me off at age 13, (10 years ago) was great.

I agree wholeheartedly with the comments that the D-Day original was in itself a classic. Although it can be made more realistic with the rule patch of '65, no German commander is of Field Marshal calibre in my book, unless he has proven to be capable in the original '61 game.

Eliminating Southern France seems to be an admission of inferior generalship on the part of the Wehrmacht commander.

Mr. Roberts and Mr. Sinigaglio seem to boast good beach defenses, but a true test of their ability would be to include Southern France. True, this second invasion can crush the German but the real test is to be able to fight a moving withdrawal across France to a second and even third line of defense. I have seen it done, and often enough to vindicate the value of "one, '61."

The true test of D-Day, is not to create 50-50 chances of winning but for the German to work at this art. It is a gratifying and worthwhile effort, a thing of beauty to behold. It would be a shame to see it disappear. Don't get me wrong, the innovations of '65 have their place, but in all fairness to the original version these innovations do not make D-Day a better game, but only create a different game entirely.

Tim Latanishen
Dundalk, Maryland

Dear Sir:

Re: 1776: If the American plays like a turkey (i.e. an incompetent) in the basic game, he will get stomped on by the British. This requires massing his forces and attempting to offer a fixed battle. But this is perfectly realistic. If the 1776-1777 continental army had massed and fought the British, they would have been wiped out. This is exactly what the British wanted but never quite got. (They almost did on the Battle of Long Island, but George Washington's personal cavalry troop saved him.) If the American plays competently, at least in the basic game, the British player cannot catch him.

I think the idea of an idioicy factor rule is nonsense; the editorials in Conflict magazine have said the same thing. It is the duty of the players to supply the idioicy, something which they may be counted on to do. We may consider that there are a number of Waterloo games that I am aware of in which the PAA charged forwards from Quatre Bras, surrounded the French forces (which had concentrated at Gosselies) and destroyed the whole French Army by pinning it against rivers. This calls for a great deal of skill on the part of the PAA, and monumental stupidity on the part of the French. Since Boucher was less than competent, while Napoleon was a genius, this could never really have happened. Do we need a special rule to prevent it? NO. The player is Napoleon, not the rulebook. It is his privilege to make the decisions.

Now, this can be taken too far. For example, in a Panzerblitz-type game representing Napoleonic period naval combat, the players might well be restricted by the standing orders for engagements, which were sometimes stupid. A great commander like Nelson might ignore them, but there was a strong reason not to—commanders who did so, in general tended to be hanged. Since we cannot have players suffer this penalty, we must constrain them to do what was possible to their real equivalents.

This has nothing to do with 1776. The British generals were idiots. Howe abandoned Boston in 1776 for no reason other than that his mistress was in Halifax, and refused to come to Boston. There is no real reason to insert an idioicy factor.

George Phillis
Cambridge, MA

Dear Sir:

Vol. 10, No. 6 of THE GENERAL arrived recently. I am most impressed with what you have done with this volume. THE GENERAL has become timely again and the best value in the field.

Letters to the Editor ...

I especially like the Series Replay column. They have varied in the quality of play but all have been interesting and thought provoking. I admire the players who are willing to expose themselves to the printing of their moves and the sort of criticism they are subject to in the article.

I was rather surprised with 1776. Pleasantly surprised with the interesting innovations and ideas presented. I've only had time for a few games to date but they have all been interesting and enjoyable. The gameboard is pleasant to look at and the general quality of the game is excellent. I especially liked the return to the booklet for the rules. PANZERBLITZ style folders are cheaper to manufacture but they are a constant irritation if the game is complex and requires reference to the rules during the game. Please stay with the booklets.

I think that the idea to republish ANZIO is excellent. I may be in a minority but I have always liked it and with a little polish it could be a very good game.

The change in Avalon Hill's publications and products over the last year has been most dramatic. I must attribute that to you and Randy Reed. You have certainly revitalized the firm and I look forward to many more developments.

Gary Gehrke
Madison, WI

Ed. Note—Thanks. We'll try not to disappoint you and the many others who have written similar letters.

To the Editor:

My sincere congratulations on the latest GENERAL (Vol. 11, No. 1). It is another excellent issue.

There is one point I would like to make in reference to the article "A Compendium of Playing Aids." It mentions the ICRK system, and I think it would be appropriate if it were credited to its creator. The ICRK (Individual Combat Resolution Key) was invented by Henry Bodenstedt when he and several others founded AHIKS in 1966.

AHIKS has no desire to keep this very useful system exclusively for its members, but I think a mention of its origin is appropriate.

Omar L. DeWitt
AHIKS President

(Editor's note: AHIKS is composed of members at least 21 who play wargames primarily by mail. For more information, write DeWitt at 78 Wickham Drive, Williamsville, N.Y. 14221.)

Dear Sir:

In retort to certain "sneak previews" of 1776 making the rounds in other, less objective, magazines I offer the following. Whatever the historical correctness of a "command control" rule, it does more to destroy the enjoyment of a game than any other factor. To add a luck element of this nature would serve no useful purpose. With reference to 1776 in particular, there are enough new concepts to deal with without this unnecessary complication.

I haven't had a chance to play a Campaign Game yet but the Saratoga, Canada, and Basic games look pretty good. The Canadian scenario is not as lop-sided as I thought as first, but it can almost be played solitaire as the British have little to do. Even most of the combat takes place against forts so they can't even play the tactical defense cards. I suspect much of the attraction of the game will be the novel combat system. The matrix is so far above the KRIEGSPIEL CRT that they can't be compared. The sustained combat system is nothing short of excellent.

Returning to the command control rule, the idea of a game as far as I can see, is to see if you can do better than the original commanders with the same situation that confronted them. Other companies with their "command control" rules frustrate the gamer and make it difficult to do other than recreate the original campaign.

Tom Hazlett
Gambier, OH

Dear Sir:

Having seen a review of 1776 in another magazine, I would like to offer my opinion on the judgements made in that review.

1) I have yet to see a "command control" rule that doesn't introduce more unreality than the situation it pretends to remedy. When local commanders don't do exactly what the supreme commander has in mind, there is almost always a good reason given the perceptions of the local commander. This is not adequately simulated by utterly random actions on the part of the local forces.

2) It is quite obvious that, in 1776, each player is actually taking the part of the supreme commander and higher-level local commanders (General Washington, unless actually present, would not issue orders for a "Enfilade Right" to be used on a particular day). This is not uncommon among games—most division-level games have each player acting as Theater Commander, Army Commanders, and Corps Commanders. "Command Control" rules place highly arbitrary limits on what the local commanders are allowed to do.

3) Many silly-looking moves result simply from limited intelligence—"fog of war." The Inverted-counter rule introduces this factor quite nicely.

4) Another "command-control" rule has been to provide "leader" counters which affect die rolls in combat. Here, the player does that by his/her ability to choose tactical cards.

5) "Command control" rules are not much fun to play with. All too often, a die roll may decide the game through bad command control at a crucial time. A classic example is the AMERICAN REVOLUTION game. If they get bad command control rolls on the first two turns for the British in Boston, they have probably lost the game—through sheer bad luck!

6) Most command control problems could have been avoided by sufficient care on the part of the supreme commander—carefully wording orders and dispatching two messengers instead of one. Though the mechanism isn't quite the same, carelessness on the part of the player still leads to an occasional "silly" move—overlooking things, etc.

7) I don't like another "command control" factor—which some people choose to call "Idioicy" factors. Their contention that it's unjustifiable to put a 20th century mentality into an 18th century context... two hundred years ago, generals were stuck with ideas that our "logical" minds would abandon as impractical. Fine—I like to play the game where I command the troops. I do not share the preconceptions of the earlier commanders and get enjoyment out of seeing how MY mentality would accomplish things... not my mentality plus a bunch of arbitrary psychological limitations impressed on me from above!

Joel Davis
Boulder, CO

Dear Sir:

First reactions to war games are treacherous things, and I never make mine public — not until now, anyway. Some games are so filled with intriguing concepts, though, that they're absolute musts for hard-core wargamers. 1776 looks to be that sort of game. I've not played it yet, in fact I've barely read through the rulebook and looked at the board; but already I can see that this is likely to be a classic.

Simulations of continental-sized campaigns in the great era of grand strategy are about the toughest job a war-game designer will ever face. Although modern wars covered more geographic area, the 17th and 18th centuries covered more space-time than any other period of history. The designer is faced with a horrible dilemma: if he simulates strategy he loses tactical control, and if he sticks to tactics the uncertainty that dominated commanders of the period is lost.

1776 seems to have not only made a good compromise, but to have used ingenuity to eliminate some aspects of the dilemma. My heartiest congratulations to Avalon Hill on producing what I'm sure will be an all-time classic.

Sincerely,
J. E. Pournelle, Ph.D.
Studio City, CA

Dear General,

As a new subscriber I don't know whether this idea has been suggested before, but I find it very useful in speeding the initial setting-up of Avalon Hill and other wargames, particularly those with many unit counters and variable orders of appearance. I store my unit counters in the original cardboard frame they are printed in.

On first obtaining a new game, I restrain my eager impulse to break out the unit counters long enough to get a xerox copy of the whole counter set. It need only be legible, and the slight size distortion involved isn't important. At home I poke out a couple of the counters and place the counter sheet over the xerox so that through the holes can be seen the xerox pictures of the missing units. Then I lift these two sheets carefully, so as to keep the alignment straight, and I place them on a third sheet of light cardboard. With a desk stapler I staple this triple "sandwich" together in a dozen or more places around the margin of the unit counter sheet. This creates a neat, portable unit holder. The remaining units can then be cut out with the edge of a razor blade, and each can be returned to its exact place by referring to the xerox copy underneath.

Using these holders, the players are presented with a clear, complete, array of units according to type or order of appearance, and set-up time is greatly reduced. The units can be replaced at leisure after the game, while winner and loser are gloating and snivelling respectively. These holders prevent loss of units, and counters which have been cut out have smoother edges and are much easier to handle in play. Marks can be made on the frame to locate certain units, and a notch can be cut above a snugly fitting counter to ease its removal.

To fit properly, counters must usually be returned to their exact places in the frame, so forts, wrecks, and other non-numbered counters should be numbered by hand. It is easier to do this before the xerox is made.

The convenience of these holders in setting up, games like Anzio and Panzerblitz is immense—so much so that I am led to make a plea: it may not be feasible for the Avalon Hill company to provide holders like these ready-made in games... but in future games I hope you will print the unit counters on the sheet in the most logical and convenient sequence for play. The France 1940 sheet presents a particularly befuddling sequence of jumbled unit numbers. But thanks for the excellent arrangement in most other Avalon Hill games.

Leonard Carpenter
Oakland, CA

Dear Sir:

While I was sending in my "Reader's Response" I thought I might take the time to offer some helpful (?) criticism about the General. I wish to direct my remarks towards the "Opponents Wanted" section. Either this section in the magazine is mistitled, or you really do want to act as a free advertising agency for all the people who are trying to sell their games instead of playing them. I, for one, have several AH games that I am less than fond of, (since I have every title you've ever put out) but it is my belief that "opponents wanted" should be just that—So... why don't you screen these ads and eliminate all those who are just selling/buying games. For one, it would leave more room for the people who are trying to find opponents, and it would help the readers who currently have to wade through these "ads." Just for the record, I went over the last few Generals and obtained the following figures:

"pure" ads (i.e. no mention whatsoever about playing, club meetings, ftf, pbm, etc.)	21%
"Some" ads (i.e. at least made some reference to playing the games, pbm, ftf, etc.)	24%
others	55%

Well gentlemen, think about it!

Theodore F. Kuhn
Indianapolis, IN

READER BUYER'S GUIDE

TITLE: Gettysburg

SUBJECT:

Divisional Level Civil War Battle

GETTYSBURG is the 11th game to undergo analysis in the RBG and, not unexpectedly, received the worst cumulative rating (3.88) thus far polled. Although this still rates as above average, the game was not comparatively well received by our raters. This was to be expected as GETTYSBURG is not a "hard core" game. It is a simple game aimed at the beginner to wargames, and is listed as such on our Complexity Scale. The fact that the "hard core" readership of the GENERAL was not overly impressed with it is as it should be. It fared well in the Completeness of Rules, Ease of Understanding, and Game Length categories which explains in part its success as an introductory game.

GETTYSBURG has gone through three editions since it first came out in 1959. The first one which utilized movement by inches rather than hexes now commands upwards of \$50 on the collector's market. Many don't even know of its existence. The second version, or hex GETTYSBURG as it is more commonly referred to, is also a highly sought after collector's item. It was probably the best version of the three and shouldn't have been discontinued. The current edition must be considered a "beginner's game" at best. It suffers drastically from 2 flaws—a mapboard which does not specifically define hilltop and ridge squares, and a perfectly horrendous set of victory conditions. If Lee had had to fight the Civil War under the conditions laid down for the Confederates in GETTYSBURG, the war would have ended at First Manassas. This is reflected by the all-

time worst play balance rating (5.08) ever polled in a RBG.

GETTYSBURG should probably be revised into something more suitable for the "hard core" but after 3 previous editions one begins to doubt the worth of it all. It serves its purpose as an introductory game quite well and will probably be restricted to that role in the future.

WHAT THE NUMBERS MEAN: Put simply, the results can be considered like this: Anything under 2.00 is pretty darn fantastic. Scores ranging from 2-3 are excellent while 3's must be considered good. 4 through 4.5 would be considered fair, with the upper half of the 4.5 combination considered poor. Anything rated higher than a 6 indicates a dire deficiency and should merit either immediate attempts at redesign or dropping from the line. As you can see, what happens to the game after initial release is in large part up to you. If there are dire deficiencies we are relying on the RBG to spot them.

1. Physical Quality	3.59
2. Mapboard	3.84
3. Components	3.54
4. Ease of Understanding	2.68
5. Completeness of Rules	3.39
6. Play Balance	5.08
7. Realism	4.51
8. Excitement Level	4.34
9. Overall Value	3.98
10. Game Length	2 hours, 5 minutes

DESIGN ANALYSIS Continued from page 19

During this initial "sliding" the guidelines should be *distance preservation*. That is, the number of hexes between the most important features should be preserved, even if it means pushing features into adjacent squares to get everything "in" a square. For roads as well as rivers the number of squares along the path should be representative of the actual distance along the feature. Make roads zig-zag if they were in poor shape, or very wandering, and make them as direct as possible if they were straight and in good condition.

Now the board is ready for the remaining natural terrain. As with the man-made features, one must decide just how many different types of terrain are required. Note that if two different types of terrain are to have exactly the same effect, consider combining them into one map symbol for playability, and adopt a neutral designation like "rough terrain" instead of dense woods or hills, etc. This is not terribly important but it does affect ease of learning the game. To decide for a first cut, just which square should have what terrain, use topographic maps again, and the actual terrain effects from the campaign. During the research, look for cases where terrain effects are important. Then you can identify the area on the topographic map and treat similar features in other places in the same way. One comment about clear terrain. Rolling country is easier to defend, even if it is very gently rolling, than dead flat terrain. Remember, it only takes a slight ridge to give a tank a "hull-down" firing position. During the Bulge, there were several instances where one or two tanks held off whole columns, simply because of a crest that allowed hull-down positioning.

Once you've arrived at this point you are almost ready to proceed to the units, the CRT and all the rest. I said *almost*. The final step is the "designer's license," the polishing up so to speak. At this point you interject terrain modifications that provide the realistic terrain interactions that create the channels and pivotal vertices that the actual campaign revolved around. Be careful not to obliterate features that are potentially important but never bloomed because of the course of the actual campaign. One example of designer's license on the Bulge board is the Loshheim Gap (square TT-10 and the two squares to the west). On topographic maps, this channel is not as clear as it is on the board. However, if one examines the military history of this area, it is clear that this is a traditional avenue of attack that is easily negotiated if undefended, and a veritable "hole-in-the-dam" when the defenses are breached.

Well, at this stage the design can blossom out into other areas, and it shall refer to the board as a base for movement rules, stacking rules, terrain combat effects, etc. Most of these things will have already been thought out or determined during the board design, and one always has the option of recognizing a mistake in the board design and changing the board, just as you might any of the rules during the play testing. To aid in board changes one might consider mounting clear plastic over the blank hex sheets and using washable ink on the plastic overlay until the board is "finalized."

As a conclusion to this discussion of board design, I would like to present an idea for terrain designation and movement that was evolved during the design of Bulge, and subsequently shelved because of the playability problem.

The system revolves around two properties of movement during military operations. Firstly, units that have to move sizeable distances to attack, usually make the move in two phases. The initial phase consists of the overland movement from the starting point to a specific assembly area near the line of departure for the attack. At this time, the final coordination for the attack and the small scale assembly takes place. Then at the appointed time the attack begins. Of course things don't always go as planned, and in fluid situations the forward assembly areas are often selected by (or as) the point units are contacting the enemy. Nevertheless, regimental (and larger) size units do not in general move head long over distances and plunge into battle without first regrouping. Thus, one should consider some movement rule that allows for this consideration. The most immediate rule that comes to mind is simply the one where you charge extra movement factors to enter an enemy zone of control. As you will see, the system I shall describe here goes beyond that stage.

The second feature inherent in troop movement during military operations is uncertainty. I can see your thoughts already—He's going to roll the dice for movement, just like *Monopoly*. Well, you are getting warm. How about a "Terrain Effects Movement Results Table (TEMRT)." This beast is not quite as bad as it sounds. The idea here is that you can have a large number of terrain designations (table columns) and one could even use numbers. For example, in addition to the gross terrain feature (Woods, Rough Terrain, etc.) there would be a Terrain Effects Designation number in the hex, to tell you which column on the TEMRT to use for that square. (Well I told you it was thrown out because of the playability problem.) Anyway, one could simplify the system to include only one column for each type of terrain (and type of unit), but the roll on each square feature clearly limits this system to games with smaller numbers of units. The units would be given large movement factors like say 100. Then clear terrain columns on the table might have a mean cost of 10 MF and a distribution of plus or minus two or three around that mean. Thus, in clear terrain the unit would move on the average 10 squares per turn, with the minimum and maximum possible results being around 7 and 13 respectively. One would of course have higher costs in the rough terrain, river, woods, etc., type columns, and if the movement problems in the actual campaign warranted, the distribution of values in a given column could have a wider range. The assembly requirement discussed above would be handled by (you guessed it) an "Assembly Movement Effects Table" (AMET). This would be incurred in the square prior to entry into an enemy zone of control, and the MF penalty would be absorbed prior to attempting to move into the attack square. The system can become even more sophisticated by requiring the attacker to designate, *before moving any units*, which of his units will attempt to attack each of the particular defending units that will be attacked during his turn. Then, he begins the square by square rolling, and he has the option of keeping the attacking units in the "Assembly Squares," rather than attacking at the end of his movement phase (which he may wish to exercise if some of his units just didn't make it, i.e., "in time")!

Finally, one can think of adding rows to the TEMRT to allow adding and subtracting to the die roll for such effects as weather, air power, movement through enemy zones of control, traffic congestion and probably a million other things.

This system, as proposed would be horrendous to contemplate seriously, but even so it does have its attributes. It provides some of the uncertainty (in a fairly realistic and calculable way) that is present in movement during military operations, and gives the player the same problems with coordinating the movements of several attacking units over long distances that a real commander would face. More than one battle has been lost because troops who should have been there took a wrong turn or whatever. Perhaps some features of this system can be translated into a more workable framework. This would be a worthwhile endeavor.

I hope these comments will help to heighten your enthusiasm for AH games and possibly kindle your interest in game design, if it is not already there. I have found game design to be as immense a pleasure as is the playing of the games themselves, if not more so.

★★★★★



GUESS WHO'S TIRED OF ROLLING A-ELIM?

THE QUESTION BOX

LUFTWAFFE

Q. May close escort fighters break off at will to strafe or attack or must they be attacked first?
A. They must be attacked first.

Q. Can the German commit some types of school squadrons to combat and keep other types off the board?
A. Yes

Q. Can the German hold all his school squadrons off the board one quarter and commit them all the next quarter?
A. Yes

Q. Are lost school units irreplaceable?
A. Lost school units can never be replaced.

Q. What happens when school units and regular units of the same type attack the same enemy unit?
A. Since the regular units have a better E rating they fire first. Any surviving enemy factors are then fought in a separate pass by the school units, just as though two different types of planes were involved.

Q. Can two different kinds of bombers be in the same square in the same turn if they are both escorted by different fighters?
A. Occasionally movement dictates that to stay within the "Direct Course to Target & Back" limitations, bombers and their escorts will find themselves sharing the same hex as another group. If attacked, each group fights as though it were the only units in the hex, and prior to attacking the German would have to indicate how many factors he is applying to each group. Two separate battles may be fought in this hex and overkill from one battle will not affect the other. The German may also elect to fight only one of the groups.

Q. In what versions can sneak raiders shuttle to Russia?
A. The only game version which does not allow shuttling to Russia is the Basic Game.

FRANCE 1940:
Q. Assume that a mechanized unit, isolated at the beginning of Phase I has its supply line restored during Phase 2: can it attack at full strength and can it employ its full movement allowance during Phase 3?
A. Yes to both, providing the attack is executed after supply lines are reopened.

Q. Exactly what hexesides constitute the rear of a Maginot line hex?
A. All but those pointed to by "gun" symbols.

Q. Does the ZOC caused by interdiction apply to all 6 surrounding hexes as well as the hex on which the air unit is placed?
A. No.

1776

Q. When defending in a fort, and a 'DL2' result is rolled; how many strength points are removed — one or two?
A. Two. Doubling affects combat odds — not casualties.

Q. In the CSG may American replacements be placed ON uncontrolled Strategic Towns?
A. Yes, in general, any reference to "within x number of hexes" of a certain location means all hexes within that radius.

Q. In the CSG may British reinforcements be brought on within a fort on a Port hex if that fort has American units on top of it?
A. YES. See CSG rules IIIA2b and IIId2c.

Q. May bateaux pass by a fort containing a supplied artillery unit if no units are outside the fort?
A. YES. Only British transports on class 2 rivers are required to stop for supplied artillery units in forts.

Q. In the CSG may troops embark/disembark in a fortified port hex, if that port hex is besieged without having to stop outside the fort?
A. YES. Note, however, they must pay the extra 5 MP cost for embarking/disembarking in an enemy occupied hex.

TACTICS II:
Q. On cross-river attacks where there is more than 1 defender may the attacker make a selective attack or must all adjacent units be attacked if one is?
A. Selective attacks may be made.

Q. On replacements; the rules say "place units at the start of every 3rd turn." The TRC says the end of the turn. Which is it?
A. The end of the turn.

Probably the most esteemed wargame to take place during the last 20 years occurred recently in London where the *Daily Telegraph* and the Dept. of War Studies at the Royal Military Academy in Sandhurst organized a grand scale wargame on Operation Sealion—the planned German invasion of England in 1940.



Wing Commander Stamford Tuck (left), renowned Spitfire pilot, meets General Adolf Galland, one of the Luftwaffe's topscoring ME109 pilots.

A panel of German umpires, all of general's rank, flew in from Germany. Among the air umpires were General Adolf Galland, the Luftwaffe ace who in the autumn of 1940 was commanding a wing of ME 109 fighters on the French coast and Air Chief Marshal Sir Christopher Foxley-Norris. The German army umpire was General Heinz Trettner, postwar Inspector General of the Bundeswehr and in 1940 on the staff of General Student, the German airborne commander. The German navy command was held by Admiral Frederick Ruge, who in 1940 was Commodore of the Kriegsmarine's minesweeping flotilla in the Channel and involved in the day to day Sealion preparations.



The battle is discussed as the invasion forces land. From Left: Rear Admiral Gueritz, Adm. Ruge (seated); General Trettner, Adm. Schuenemann; Air Vice Marshall Sir Christopher Foxley-Norris and General Galland.

The players of each side, firmly kept apart in different rooms, had to decide on their moves and relay their orders to a team of umpires. In practise, this meant that the Germans had to decide on just the right moment to launch Operation Sealion. On September 22, the Germans strike and achieve partial surprise. 8,000 paratroopers are dropped in Kent and despite determined attacks by British patrol boats which sink 20 barges, the 1st German wave of 90,000 men is successfully landed. A small British naval force consisting of the cruiser Manchester and 4 destroyers is overwhelmed by the Kriegsmarine. The initial landings go well and the Germans fight their way inland.

The Luftwaffe, however, is unable to establish air superiority. The RAF downs 281

Infiltrator's Report

aircraft while losing only 133. In addition, the weather takes a turn for the worse and supply of the landed forces proves difficult. As the British Home Fleet moves to the invasion site, the German position becomes tenuous. 9 German destroyers are sunk and heavier elements of the British fleet are on their way. Despite considerable successes ashore, the Germans have already lost a third of their landing force, and are running short of supplies and heavy artillery. SEALION is a failure—the Germans must withdraw but due to the presence of the British home fleet they are unable to pull a Dunkirk in reverse. Only 9400 men are safely evacuated with the remnants of the invasion fleet. A further 6600 are taken off by E-Boats and minesweepers during the next two nights. By September 28th, all resistance ceases. The British take 32,000 prisoners and the battle is over.

Not to be put down so easily, the good humoured Admiral Ruge left the British with an interesting thought. "Perhaps now we should do one on your D-Day landings to see if they succeeded."

Readers may take interest in the fact that a full length fictional narrative of the battle, based on this wargame, will soon be published in the United States. Called *Sealion*, this novel by Richard Cox follows the battle through the eyes of the pilots, sailors, and soldiers involved. Although the narrative is fictional, the orders and plans which determine the fate of the characters are real.

NORTHEASTER III (formerly EAST COAST II) will be held August 16-18, 9AM to Midnight, at the Gilbert School in Winsted, Conn., under the auspices of the American Wargaming Association. Events scheduled thus far include an Avalon Hill tournament, a Diplomacy tournament, and naval and armor miniatures. For further information we suggest you contact Lee Atwood at his 40 Coe St., Winsted, CT 06098 address.

History repeated itself in Contest No. 60 wherein contestants were required to initiate an attack against the weakest of two beaches. Normandy proved to be the weakest beach due to the fact that the holes in the Le Havre para-screen were practically unexploitable. Indeed, it is the porousness of the Normandy para-screen that permits a good shot at a game busting first invasion.

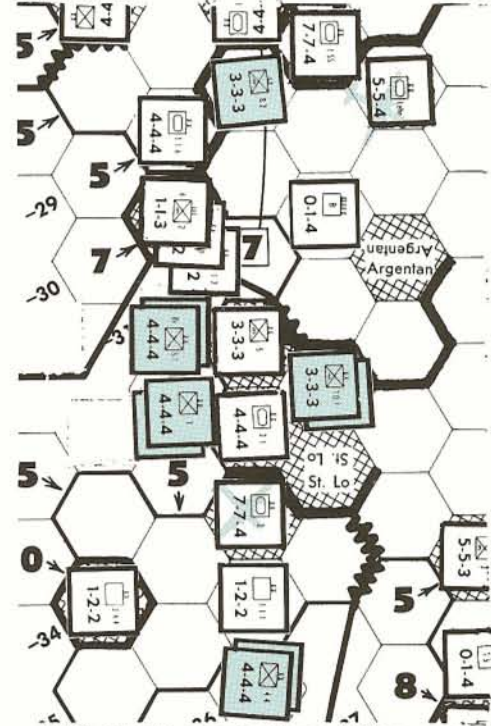
Three ground attacks and two SAC's are required for success, but the failure of the 2-1 attack against the 5th Para will doom this invasion unless the other attacks are completely successful. Indeed, para units and air power are very crucial to the success of this invasion:

Attack #1 — two infantry division vs. 711 Static at 4-1; this is a gift attack that, combined with the SAC attack against the 2 Panzer almost certainly assures that powerful unit's elimination. Only the possibility of an exchange weakens its chances.

Attack #2 — two infantry units vs 21st Panzer at 1-1 surrounded. Why not? At the

price of two infantry divisions, a 50% chance of elimination here is well worth it.

Attack #3 — two infantry divisions and two paratroop divisions vs 5th Para at 2-1. This is the big one! If the Allied player loses this one, he might as well start planning his second invasion. Unfortunately, the defender is not surrounded.



SAC attacks are made on 2 Panzer and Lehr with a 70% probability of elimination. Note the isolated position of the third Allied Para unit; no one entering the contest opted for this placement. Even the winners did only the next best thing and moved a para unit into Argentan for a 3-1 against HQ-B. Both methods have one purpose — delay the powerful divisions behind Le Havre. Yet even though Argentan is a stronger delay position, there is a 30% chance of exchange in that attack which will mean no delay to the 4 Panzer divisions. By not attacking and dropping the lone para unit, we are assured of allowing only one division down from the north (1st SS) which makes an attack on the other two paratroop units much more difficult. Even if the result of the 2-1 attack is an exchange, the situation is not lost if the best counterattack the German can muster against the paratroops is a 2-1. This is even more the case if the German player must choose between moving the 3 Para Division west and aiding the 2nd Panzer or north to help the counterattack against the Paratroop units. In any event, the Allied player will need the expected outcomes on all attacks to make this thing work to perfection.

The ten readers whose solutions to Contest No. 60 came closest were: Richard Klug, Cockeysville, MD; Brett Hunt, Silver Springs, MD; Curtis Wong, Palo Alto, CA; Ed Niemira, NY, NY; Gary Behnen, Bloomington, MN; Martin Grimm, Glen Burnie, MD; Leroy Day, Cambridge, MA; Phillip Caddell, Paris, AR; Ron Seamens, Linden, NJ; and David Shaefer of Baltimore. Gift certificates for Avalon Hill merchandise went to all of the above gentlemen.

OPponents WANTED

Novice player of Junior High age needs phm; app for L-waffle. Jim Turner, 1316 Birch...

WIShIONS WANTED

Wanted: D.C. 20007, 965-2692. Will you opponent for any AH game or phm...

OPponents WANTED

Avp. player wishes IT victims for Stag, Anzio (Kursk). Also phm Bulge. Prefer N/ozis but...

OPponents WANTED

Will trade U-B, B194. Would prefer J-Land, G-ganual. Would also like info on miniatures...

OPponents WANTED

Anybody? Bryan Mündel, 59 Sapsucker. Wanted: opponents for all AH games, especially...

OPponents WANTED

phm. For application send self-addressed stamped envelope to Jim Bron, 9223 Anderson...