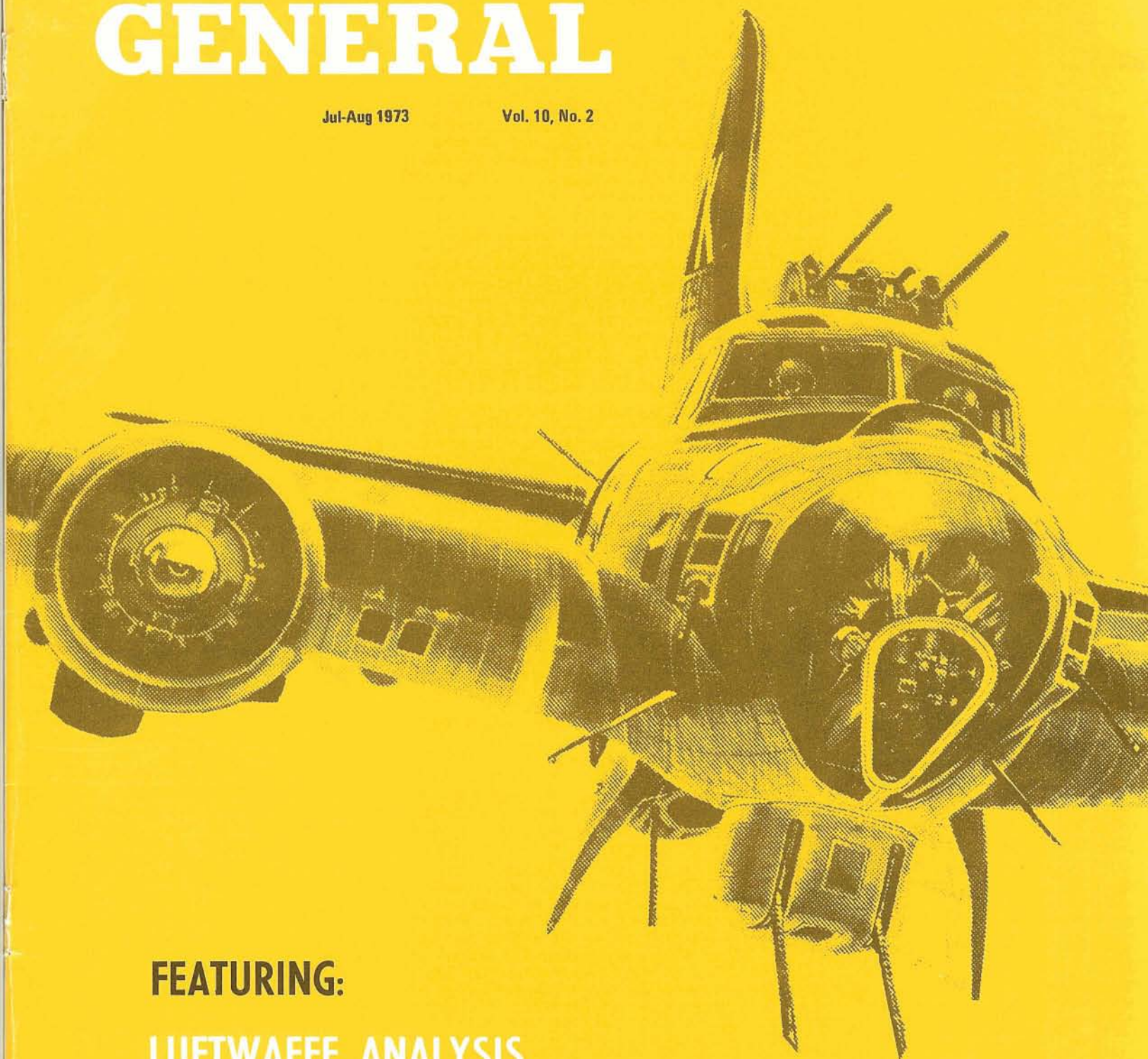




The AVALON HILL
GENERAL

Jul-Aug 1973

Vol. 10, No. 2



FEATURING:

LUFTWAFFE ANALYSIS

★ 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 Philosophy Part 39

WHERE DO WE GO FROM HERE?

It seems like just yesterday we were discussing Philosophy No. 38. Time does fly — especially when you're putting out a magazine like the new GENERAL. The improvements made in the last few months have more than quadrupled the manhours we need to put out an issue. And when something happens to throw the machinery out of whack (like the press lay-up which resulted in the lateness of the May issue) we have to run like crazy to catch up again. We realize that being late with your magazine is an annoying habit we have, but it's a vicious circle which we have fallen into. When an issue comes out late it automatically makes the next one twice as difficult to get out on time. However, we are of the opinion that you would rather wait a few extra weeks than sacrifice the quality of the mag and will continue to operate on that premise. And unlike other magazines we will continue to maintain a printing schedule rather than coming out with an issue when we can arrange it. This has caused considerable bad feeling in the past from people who receive their issue after or just prior to the contest deadline. Therefore, let's go on record as saying that the GENERAL is "pasted up" or prepared to print long before it usually goes to press. Thus, we cannot foresee delays which may crop up after it leaves our editorial offices and therefore the contest entry deadline often doesn't leave you enough time to take part in the contest. When these mailing delays occur we are aware of the problem and automatically extend the entry deadline. So take it in stride, and fill out the contests regardless of stated deadlines — if we were late we will accept your entry. Until we can get into the age-old groove of experience with the new format we must seek your indulgence in such difficulties.

The results of our first Readers' Response were quite interesting and gave us several clues as to how to proceed with future efforts. Unfortunately, many of you probably did not take the time to fill out the card properly. We received many letters which praised the new GENERAL to the heavens and then proceeded to rate everything with 9's and 10's. Remember, in our system the lower the number the more favorable the response. Nevertheless, a random sample of 200 responses was used to derive the following information which we will have to repeat at a later date for verification.

The May issue was the first copy for 24% of the responses, although the average subscriber has been with us for 2.49 years. 94% indicated that they would resubscribe on the basis of the last issue while 96% indicated that it was better than the preceding issue. Collectively, they rated the issue at 3.81 — not bad considering the number of people who clearly misunderstood the rating system. We will be repeating these questions regularly to give us an indication of how we're doing. We believe we can and will improve tremendously in the months ahead, and a careful watch of these points should tell us how we're doing. Only 41% are taking advantage of the "2 for 1" deal whereby if they get a new subscriber for the magazine, their subscription is extended

for free. It is unfortunate that there isn't more of an attempt to take advantage of this offer. It will be the last year in which it is made. We are willing to take it on the chin this year and bear the brunt of the cost of increasing the magazine's circulation. However, we cannot be expected to continue this give-away philosophy forever. You have 2 very good reasons to take advantage of this offer; 1. — it saves you money, and 2. — if we reach the level of circulation we're striving for by the end of the year, 1974 will see a further increase to 32 pages at no added cost.

The undefeated feature article premise almost was upset last time, but the 'Waterloo Campaign' beat off strong challenges by the Gygax and Gross entries to come in first. Our new rating system gives 3 points for a first place vote, 2 for second and 1 for third. Given our random sample of 200 this means that 600 is a perfect score. It will be interesting to see whether anyone can top the 400 mark — let alone 600. The results for Vol. 10, No. 1 were:

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Getting on to the more common day questions, we found that the average reader was 22.5 years of age and a sophomore in college who has been active in wargaming for 5.4 years and owns 11.3 Avalon Hill games. Only 38% of you play by mail but those who do average 7.8 games a year. Afrika Korps, Stalingrad and Bulge are the most commonly pbmed games with Panzerblitz and D-Day close behind. Waterloo and Blitzkrieg share a respectable 6th place in this respect with the other land battle titles and Luftwaffe following along with roughly 1/3 of the pbm popularity of the others.

On the average, you play 5.2 Avalon Hill games per month, 6.2 simulation games per month and devote 23.3 hours to the art every month. 54% favored the intermediate complexity level as opposed to 38% who opted for tournament-style games. The land element was by far the most popular game environment — polling 68% of the vote compared to 27% for naval games. Strategic level games outpolled tactical and grand strategic types by 56%, 34% and 10% respectively. The balloting on favorite periods was of special interest to us — showing a few changes we didn't expect.

World War II	24%
Modern	17%
Revolutionary	13%
Ancient	13%
Civil War	13%
Nuclear	8%
Napoleonic	5%
World War I	4%
Medieval	3%

The tabulation of Section III of the Response held special interest for those of us who work on the GENERAL. Your responses gave above average ratings for all 14 departments and were very gratifying. We are now proceeding on the assumption that we are heading in the right direction and will judge accordingly. Especially

Continued on page 9

LUFTWAFFE ANALYSIS

by Scott Duncan and Lou Zocchi

LUFTWAFFE, although having been around for quite some time, has never been the subject of a major analysis. With this thought in mind, we approached noted war gamer Scott Duncan for his opinions. After almost half a year of concentrated study, Scott sent us the article which follows. We think you'll agree with us that it is the most comprehensive, yet not overly assuming, piece yet done on this particular game.

For an historical touch we went straight to the game's designer. Lou Zocchi has long felt that the lack of play balance in his game is due to the fact that the German side is not handicapped as it was in real life by inept leadership. The fact that wargamers do not make the same mistakes that Goering did, makes it very hard for the Americans to repeat their real life performance. It is Lou's historical presentation which precedes Scott's study.

Although the loser of a war may have made better decisions than the victor, his conduct is always the subject of closer scrutiny on the assumption that perhaps he could have changed the outcome by making a better choice. While there is no valid reason to suppose that the Germans made more mistakes than we did, it is definitely more interesting to contemplate their choices and ask what would have happened if . . . ?

Most certainly our major blunders will never receive the degree of scrutiny we accord our adversaries. If you think we didn't make any, you've forgotten about Roosevelt's decision to make Hawaii into a Pacific bastion, Harris' decision to bomb workers' homes instead of their factories which produced the weapons of war, or our own bullheadedness which sent unescorted bombers over Germany in broad daylight in the mistaken notion that they could defend themselves, despite British warnings and ample evidence to the contrary, etc.

During my Luftwaffe research, I found that two key men made more than their share of bad decisions. Considering these bad judgements has left me wondering how the Germans managed to hold out as long as they did.

The two men to whom I refer are Herman Goering and his lesser known assistant, Ernst Udet. Neither man was qualified for the position he held and each penalized the Luftwaffe with faulty judgements. Although Udet was far more competent than the bumbling Goering, he was overmatched by the responsibilities thrust upon him. Unfortunately for him, the mistakes he made were so enormous that even Goering began to realize what was happening.

GENERAL-LUFTZEUGMEISTER Ernst Udet

Ernst Udet was selected by Goering for his Luftwaffe post because his 62 victories during WWI made him a national hero second only to Von Richthofen. He was a gay, reckless fighter pilot who thrived on challenge in the air. During the twenties he was an acrobatic barnstormer and in the early thirties performed as a flying stunt man for the movies.

Goering sent Udet to discover if the American aviation industry had anything which would interest the Luftwaffe. During his visit, Udet flew and fell in love with the Curtis Hell Diver which could dive vertically from great heights to drop heavy bombs with fantastic accuracy. Whereas the accuracy of level bombers was abysmal, the dive

bomber averaged 33% of its bombs on target, which was considered fantastic in those days.

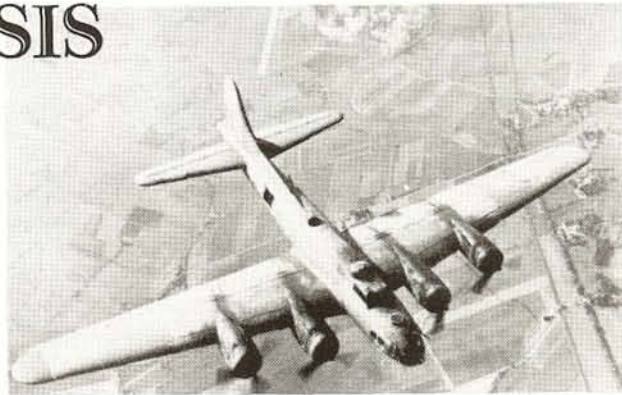
Udet persuaded Goering to buy two demonstration machines but was unable to gain support for his ideas until after he accepted a Luftwaffe position. Then he found himself competing with General Wever, the first Chief of Staff, who wanted heavy strategic bombers; Goering, who wanted fast, twin-engined medium bombers, and a third faction who demanded a strong fighter arm.

Udet accepted an appointment as a colonel and became "INSPECTOR OF FIGHTERS AND DIVE BOMBERS" in February of 1936, to assure that his dive-bombers were developed. When General Wever was killed in an air crash on June 3rd, 1936, several Luftwaffe leaders scrambled to promote their pet projects. Major Wolfram von Richthofen, cousin of the famous ace, sent out directive LC 2 No. 4017/36 on June 9th, which said, "Further development of the Ju 87 (dive bomber) shall be discontinued"! On June 10th, Udet took over the technical office and saved his brainchild while Richthofen was sent to Spain as Chief of Staff for the Condor Legion.

Udet used his new position to lower heavy bomber priorities while raising the priority of his beloved dive bombers. His passion for dive-bombing was to become the Frankenstein monster that would return to destroy its creator.

Udet's first major error was in June of 1938 when he flew the He 100A fighter to a new world speed record. The Heinkel fighter hurtled along at 394.4 mph which substantially outpaced the 290 mph Me 109B & C fighters it was designed to replace. The He 100 was further refined and improved until the standard production model was reaching speeds of 416 mph with the same engine used by the Me 109. The Heinkel fighter was cheaper to build, involved fewer man hours in its construction and could fly 550 miles while the Me 109 could not go much beyond 400. Since range became a crucial factor during the Battle of Britain, Udet's rejection of the Heinkel fighter was a major blunder.

During the months following its rejection, the fighter embarrassed and irritated Udet by establishing new speed records. Finally Udet went to Heinkel and said "For God's sake, Heinkel, the Me 109 is and will be our standard fighter. It just won't look good if another fighter proves faster"! Udet instructed Heinkel to stick to building bombers and leave fighter development to others. He 100 Fighters would have won the Battle of Britain, but Udet valued his pride above better weapons.



One of many American bombers which spread havoc over Germany and Nazi-occupied Europe.

After the fall of France, Udet told his colleagues: "The war is over! To hell with all our aircraft projects — they'll no longer be needed"! Immediately thereafter, everything he touched was cursed. He was ridiculed for his unsuccessful attempts to pioneer night fighter interception techniques. His Stukas were so badly butchered during the Battle of Britain that they had to be withdrawn. Goering began spiriting away Udet's few loyal staff members and intrigued against him until he succumbed to nervous exhaustion.

When the Mk 108 thirty millimeter cannon was demonstrated for him in 1941, he rejected it saying "We don't need any aircraft weapons of greater caliber than 20 mm. Our pilots are crack-shots and can destroy the heaviest bombers with 20mm cannon at a distance of 65 feet." His decision appears contradictory since the production of the Mk 103 which fired the same caliber shell, was authorized. The Mk 103 weighed 319 pounds while the Mk 108 weighed only 127 pounds. The Mk 103 fired 420 rounds per minute while the Mk 108 fired 650 rounds per minute. Only 4 hits from a 30mm cannon shell were needed to down a B-17.

Udet's ELK plan was designed to eliminate aircraft from production, which failed under operational circumstances while expanding the



Ju87's (Udet's prized Stukas) in flight.



Udet, the incompetent hero.

output of the few carefully selected models. The plan flopped because Udet selected planes for production which were failures. The development of the Do 217 and He 177 heavy bombers was greatly delayed because they were required to DIVE-BOMB. At that time, the technology for making 20 tons of bomber as nimble as a fighter did not exist. This requirement caused innumerable delays and both programs fell far behind schedule. He also ordered the Me 210 into production as a replacement for the aging Me 110, but the new plane was so defective that it had to be junked. In point of fact, a suitable replacement for the Me 110 was never developed and it soldiered right up to the end of the war as a night fighter.

In September 1941, Hitler berated Goering for Luftwaffe failures. Goering, in the presence of State Secretary Milch, called Udet to his headquarters and passed on all the complaints, with liberal embellishments. As Goering finished his tirade, he made it perfectly clear that every disappointment Germany had since 1936 was all Udet's fault. The He 177 bombers caught fire too easily, they were behind scheduled production, the Me 210 program was a failure, the Battle of Britain had been lost, and his Stukas could only be used against the Russians. Udet realized too late that Goering had tied his hands with red tape and was using him as a scape goat.

Heinkel 100D's, sister craft to the HE100A's which Udet cancelled.



Udet solved his dilemma by blowing out his brains with a Colt revolver on November 17th, 1941. Goebbels pounced on the event to launch a propaganda campaign which convinced Germany that the heroic Udet died while testing out a new "SECRET WEAPON." Udet was replaced by the loyal and hard working party member, Hans Jeschonnek. Unfortunately for Jeschonnek, he became Goering's next scape goat. His hard work to correct the errors he encountered was nullified by the incompetent Goering and he too committed suicide when he realized his situation.

REICHMARSHALL HERMAN GOERING

Herman Goering was an ambitious, flamboyant egocentric whose arrogance was exceeded only by his technical ignorance and propensity for bad decisions. He was such a liability that one wonders how he could become the commander of anything.

Goering emerged from WWI as the heroic leader of the Richthofen Geschwader with 22 victories to his credit. During the chaotic years of unrest which followed, he succumbed to the brilliance of Hitler's oratory and became his disciple.

Hitler needed the highly decorated hero to give tone and class to his bid for German leadership. Goering was given command of Hitler's brown shirted Sturmabteilung force. As their leader, he turned them from an undisciplined mob of ragged agitators into an effective army of ruthless assassins and mobsters.

When Hitler took over in 1933, Goering was given the Luftwaffe and ordered to make it the world's most powerful air force. Goering believed the job would take 10 years and planned accordingly. Four years before the master plan could be completed, Hitler plunged Germany into WWII.

Initial Luftwaffe successes against poorly trained or equipped and heavily outnumbered enemy forces caused Goering and his staff to conclude that they could relegate aircraft development and production to a very low priority. This, coupled with his continued interference on the pretext that he was "interpreting the wishes of the Fuhrer," did irreparable damage to aircraft programs. His technical ignorance caused him to cancel many promising projects, some of which had been started by his insistence in the first place.

To illustrate this point, you may find it interesting to know that by diligently searching all radio frequencies, the Germans learned that British fighters were remotely controlled on VHF frequencies from ground stations. They realized that the ground stations were obtaining their information from a new radio location system which was somehow connected to the mysterious antennas along the English coastline.

General Wolfgang Martini, Chief of Luftwaffe communications, has assumed that Germany was ahead of the British in this field because of their own Freya and Wurzburg systems. Freya was successfully being used to spot ships moving in the English channel and Wurzburg was directing flak batteries defending the Ruhr.

Martini discovered that the entire length of the east and south coasts were covered by radar stations which were giving the British advanced warning of every raid. On August 15th, two days after the Germans had openly committed themselves to destroying the R.A.F., Goering drove another nail into the Nazi coffin with the following directive. "It is doubtful whether there

is any point in continuing the attacks on radar sites, in view of the fact that not one of those attacked has so far been put out of action."

His shortsightedness was directly responsible for Luftwaffe losses suffered during the ensuing battle. However, Goering's standard solution for unsatisfactory situations was to blame others. When the Battle of Britain was not won in the 3 days he predicted, Goering made a personal tour of each unit involved, to tell the men what a pack of cowards they were. When General Major Osterkamp, commander of Luftflotte 2, wrote the Inspector General that his pilots were being pointlessly sacrificed by Goering's restrictions, he was busted to Major, and told that any further revelations would result in his Court Martial.



Herman Goering prior to the war.

In the spring of 1942, the German high frequency expert, Roosenstein, learned how to jam radar with "DUPPEL." This seemed to be an effective means by which German bombers could avoid detection during their nightly forays over Britain. When Goering heard about it, he suspended further experimentation because he feared the British might learn of it. General Martini was ordered to hide the files in his safe and mention of the word "DUPPEL" became a court martial offense. Goering's directive left the Germans without an effective countermeasure when the British used something similar to Duppel to jam German radar during the battle of the Ruhr.

Goering promised Hitler that the beleaguered von Paulis and his 6th Army holding Stalingrad could be completely supplied by air. They needed a minimum of 300 tons per day to survive but the Luftwaffe averaged only 100. This debacle could have been averted if, on April 29th, 1937, Goering had not cancelled all further development of four engined bombers.

With four engined bombers, the Germans might have smashed the industrial complexes which armed the Russians who trapped von Paulis in the first place. The heavies could have been pressed into service as supply transports whether the factories were destroyed or not. But the real measure of Goering's ineptitude is not gauged by his lack of equipment, but rather his ignorance of

its limitations. His failure to grasp the potential of the forces he commanded cost the Germans dearly.

When Guderian had the British army pinned against the Dunkirk beaches and was ready to finish them off, Goering prevailed upon the Fuhrer to let the Luftwaffe end the matter. "My Luftwaffe can do it alone!" he bragged, in spite of the opposition his subordinates voiced over the preposterous commitment. And so, Goering singlehandedly saved the British army.

The only creditable action Goering ever attempted was when he argued with Hitler against his decision to attack Russia. Since he was unable to change the Fuhrer's mind, his track record for failure remained unimpaired.

One is hard-pressed to find published material on LUFTWAFFE. The game does not seem to have provoked the normal early flood of strategies and game-winning plans which have characterized previous Avalon Hill offerings in the months following publication and distribution to the game-playing public. What has been written consists largely of suggested revisions and optional rulings or historical commentaries and technical debates on the game's accuracy. Articles on playing LUFTWAFFE have been few and far between and only one or two have presented more than an intelligent reader could deduce from the suggestions in the instruction manual itself. Having had the pleasure of playtesting a prototype of the game several years ago (Spring of 1970 to be exact), I find this a pleasant opportunity to initiate what I hope will be some heightened interest in playing and writing about it.

Perhaps it is the sheer expanse of the game — it is certainly *not* a game you'd pull out Sunday afternoon in order to spend a few hours with friends (save a quick single-quarter mini-game in the Basic Game format). Barring its lengthiness, LUFTWAFFE is uniquely suited to a kind of comprehensive long-range planning not truly matched in any other Avalon Hill game, including the naval games which in some ways pretend toward the same end in a small way. LUFTWAFFE does not lend itself to the normal, typical gaming analysis so familiar with land wargames given the latter's relatively defined starting positions, limiting terrain features, and relatively predictable order-of-appearance data. LUFTWAFFE hardly has anything that one would define as "starting positions" save the Recovery Lines, certainly has no dependable order-of-appearance as regards placement of units and has "terrain" of the most limited value in actually establishing defenses and planning offensive thrusts from the point-of-view of *using* the terrain. I can think of exceptions on a very small scale to all of the above such as is suggested in the instruction manual which recommends winding up your move behind a city so the American can't get to you without risking AA fire (hence "using" the terrain). However, for the most part, LUFTWAFFE analysis does not have at its disposal most of the 'obvious' points of reference, and success for either side rests quite firmly upon an ability for comprehensive long-range planning and an equal ability to respond to the unfolding of opposition planning.

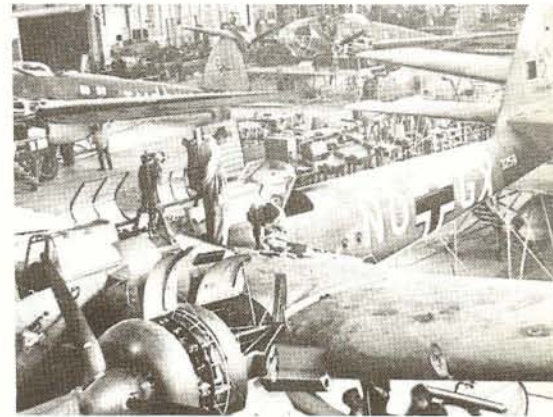
We don't have the space to recount each of Goering's mistakes in detail. So let us end the story by relating that Goering became more remote from his responsibilities as the situation deteriorated. He became addicted to drugs as the end drew near and, in retrospect, it appears that the rotund Reichsmarschall helped the Allies more than the Luftwaffe.

Sources . . .

- GERMAN COMBAT PLANES, Wagner
- WARPLANES OF THE THIRD REICH, Green
- THE FOCKE-WULF 190, Nowarra
- THE MESSERSCHMITT 109, Nowarra
- LUFTWAFFE DIARY, Bekker
- A HISTORY OF THE LUFTWAFFE, Killen
- WARPLANES OF THE SECOND WORLD WAR, AIRCRAFT IN PROFILE, Green

D-DAY comes close to this sort of planning in the beginning since the freedom of selection of defense and offense for both sides is highly flexible and occupies lengthy discussion; STALIN-GRAD then came along with a further freedom of deployment and the naval games, by their very nature, brought even more initial unpredictability. LUFTWAFFE brings this all to a new height of well-calculated strategy by not allowing either side a true knowledge of the opponent's beginning placements until after all positions are set. The committal of American forces each quarter to specific targets which may not be changed during the course of the quarter is an element of play totally unprecedented in Avalon Hill gaming — the preplanning in 1914 was not irrevocable in the way American bomber missions are in LUFTWAFFE. The timing of the release of these missions is quite free to compensate for the committal to targets and the German player has no idea of either the targets or the timing, making his job tougher than in most previous games in which the objective was and has been very clear. Though there is a *How To Win* statement for each version of LUFTWAFFE there is no set order for achieving this end be it a need to eliminate any 10 cities or every city during the course of a full 10 quarters of play.

Perhaps I overemphasize the situation and the strategic possibilities of the game — I do not think so. I am willing to admit that the nature of the game demands that it be played on a campaign level after a while since the Basic Game or a mere one quarter version of Tournament/Advanced play soon fails to keep up playing interest. And for this reason, the game becomes a lengthy battle, involving a complex records-keeping system. The game does not seem to me to be 'old' enough yet to submit it to too detailed an analysis of move-by-move positions and tactics. LUFTWAFFE's many variables within just a few well-defined rules for movement and combat leave analysis of it in much the same shape as I imagine early Chess analysis found itself: no real standards yet developed out of play with apparently every possibility a good one. Any "do this on the first move" philosophy seems to me to have to stand the test of time in play, and I am certainly unable, even after a few months of analysis, to lay down coordinates for placement of units and "sure" targets for bombing runs. I do feel that a "think about this *before* the first move" philosophy is possible and it is just this that I have attempted to compile over the past



Factory view of He115's and He111's under construction. The two-engine bombers were Germany's largest aircraft and totally unsuitable for strategic bombing. Goering thought otherwise.

few months for presentation here.

I feel that the most important consideration is whether or not to play with the freedom of individual counters rather than mass typing of similar units. Personally, the game seems to me to demand that this step be taken as soon as you have a grip on the Basic Game and the fundamental rules of movement and combat. If this method of play is delayed, the game bogs down and both Tournament and Advanced versions must suffer — if indeed they are truly playable at all as I could not play them with any enjoyment or realism without freeing all units from the demand to act as one according to type. However, the forbidding nature of the paperwork involved must surely dampen the spirits of anyone attempting such an individual accounting of units. LUFTWAFFE seems to me to be intended to last several sessions over several weeks of play once the basics are grasped — this is the true campaign spirit in operation as a key element of the game rather than a mere outcome of the need to postpone play until more time is available or the next PBM sheets arrive. But keeping track of the turns each unit must refuel or pass the Recovery Line is not conveniently or very visually handled using paper and pencil (or even grease pen and plastic sheets). Diagram A suggests a pegboard arrangement which very visually indicates when each unit must land to refuel or pass back across the Recovery Lines from a bombing mission. The initial outlay of materials and time to prepare such boards is, I believe, more than made up for by the ease with which records are then kept — and using a peg specially marked for each unit is as bad as having to hunt for counters, thus the use of rows for each unit and random selection of any peg to mark the turn for landing/recovery. Suggestions accompanying the instructions indicate that the essence of the game is to get to this stage of individual

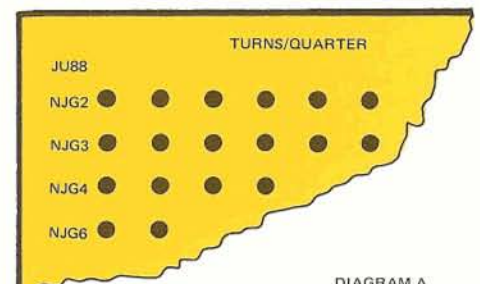


DIAGRAM A

accounting as soon as possible. I find this pegboard arrangement a most useful method for anyone seriously interested in testing out LUFTWAFFE's potential for effective campaign planning and reaction to opposing planning. Many tactical and strategic concepts are truly foolish if they must be tied to operating all planes by type, so my analysis will presuppose counters being free to operate on their own even if specific reference is not made to this rule during the rest of this article.

THE IMPORTANT STRATEGIC CONSIDERATIONS

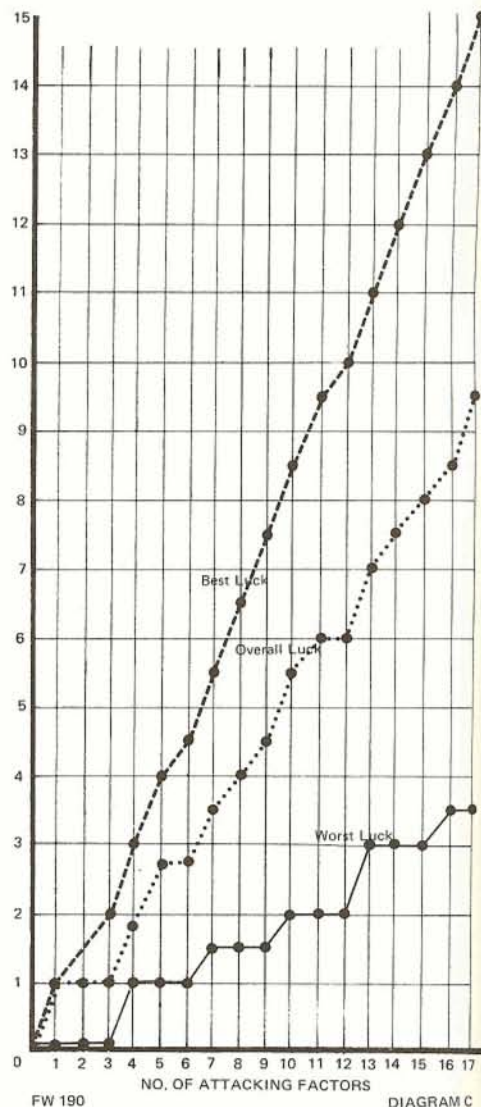
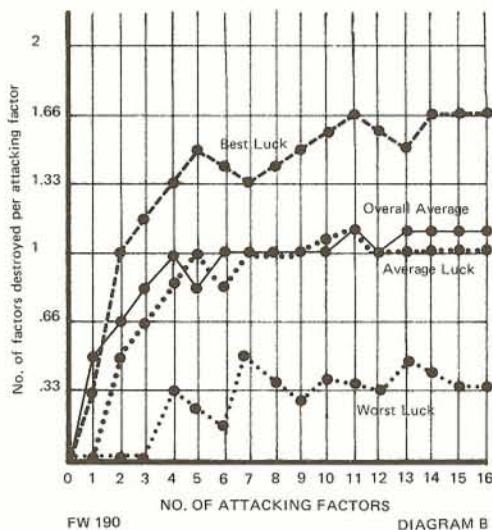
One of the subtlest of assumptions made in the design of LUFTWAFFE concerns the accuracy of American bombers: they are assumed to be 100% effective in destroying a target if they survive anti-aircraft fire (which can, at most, eliminate one factor). Thus getting through to any target with two factors insures its elimination. Indeed, it is not too grave a risk to suppose that one lone factor could eliminate a target since getting through is really all that is required. For some, this may not be very realistic in a very fundamental sense since anti-aircraft fire, even if not successful in destroying bombers, could unfavorably affect the accuracy of the mission, requiring several strikes for true elimination. However, this would probably only further the extreme complications involved in keeping records and while I have seen other games on the same topic use partial elimination of targets, they were based on single raids of one day duration in which no real need existed to keep track of turns for landing, etc. As it stands LUFTWAFFE does offer a fairly simple objective to the American due to the simple need to "get through." Returning becomes something of another issue . . .

The rules specify that there is a penalty for failure to land to refuel or pass the Recovery Line by the deadline for a given unit. There is NO direct penalty for loss through combat. Thus the implication strategically (barring the need to save on units from quarter to quarter) is that it might be better in the long run to risk elimination through combat to get to a target than to fail to attempt the target or fail to get back once you make the target. That is, don't be afraid to go into the dragon's mouth because elimination of his cities or bombers is what the game is all about! Thus it may be quite sound to send a few bombers at a target with less than complete fighter protection if the target is truly necessary — the same might be true for the German defensive posture since one obviously does NOT go after returning bombers in the Basic Game but will want to go after them in Tournament or Advanced play in order to reduce the effective quarter-to-quarter strength of the American forces.

Another important assumption made in the rules which definitely colors the composition of fighter groups is the "best vs best" requirements in all fighter combat. It is quite easy to use a superior unit (or a couple such units) to "shield" less effective fighters rather than concentrating the best units in groups, leaving weaker fighter types to fend for themselves. This fact is one of the major suggestions in the game itself but what it does mean is that the individual accounting of units will *have* to be employed if such a ruling is to have a desirability as a tactical element.

Otherwise you'd be forced to ignore such integration of weak and strong units or only have limited use of such a tactic since the use of a few strong units with weaker ones would restrict other similar strong units from flying at other times while those which had flown were refueling. This sort of mass typing provides a very handy method for use by your opponent to "time" your ability to use units (providing a sort of fluid but definite order-of-appearance timetable). The ruling resolves much possible argument over what units fight what units when unmatched types meet but it does seem to me to require accepting the burden of records-keeping in a big way.

The Aerial Combat Table has provided the source of one article specifically dealing with the analysis and play of the game (LUFTWAFFE — A BATTLE OF WITS by Dennis Milbert). I don't intend to repeat the whole basis for this Sept-Oct '71 article, but Dennis indicates that there is a maximized point of elimination of enemy factors for each type of unit above which there is no real increase in the amount of destruction a single factor can produce (though more factors will, naturally, result in more enemy losses in total). While the article is quite good and Dennis presents statistics with which I have no real quarrel, there are other considerations which might color the decisions being made by a given player: the gap between "poor," "average" and "good" luck with the die. Diagram B illustrates Dennis Milbert's article visually rather than simply through figures: there is a leveling off of the number of factors each attacking factor can be expected to eliminate which occurs approximately at 7 attacking factors. This is accurate for the average but note that with "Best Luck" the leveling off begins at a higher level (roughly 11 factors) and at "Worst Luck" there is a very hazy stability achieved. But the significant fact which this graph illustrates is that there is a significant gap between the levels of Luck: well over a full factor's difference when the leveling off begins and almost a full factor between adjacent levels. Certainly the "average" overall equates very closely to the average luck levels, but it seems to me to be instructive to note that the overall average is derived from averaging widely separated levels of chance.



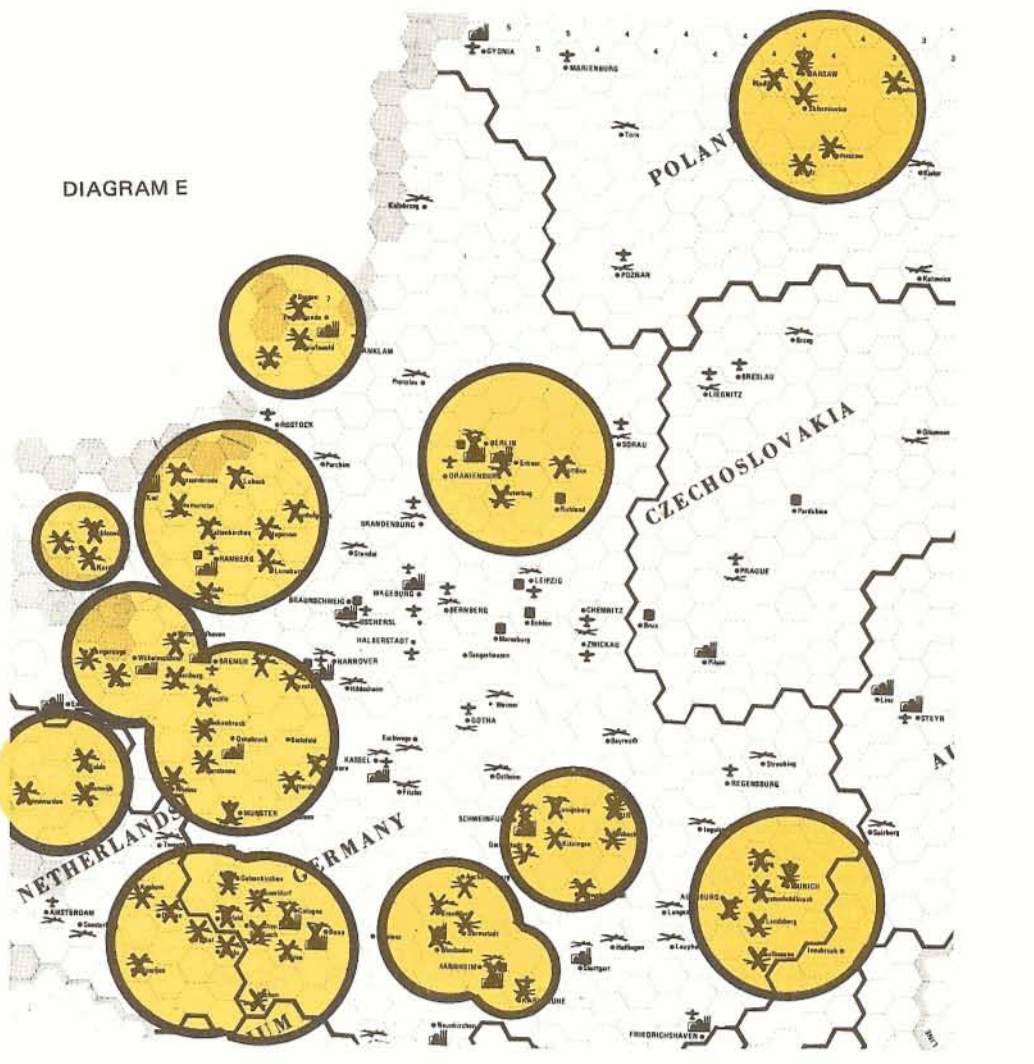
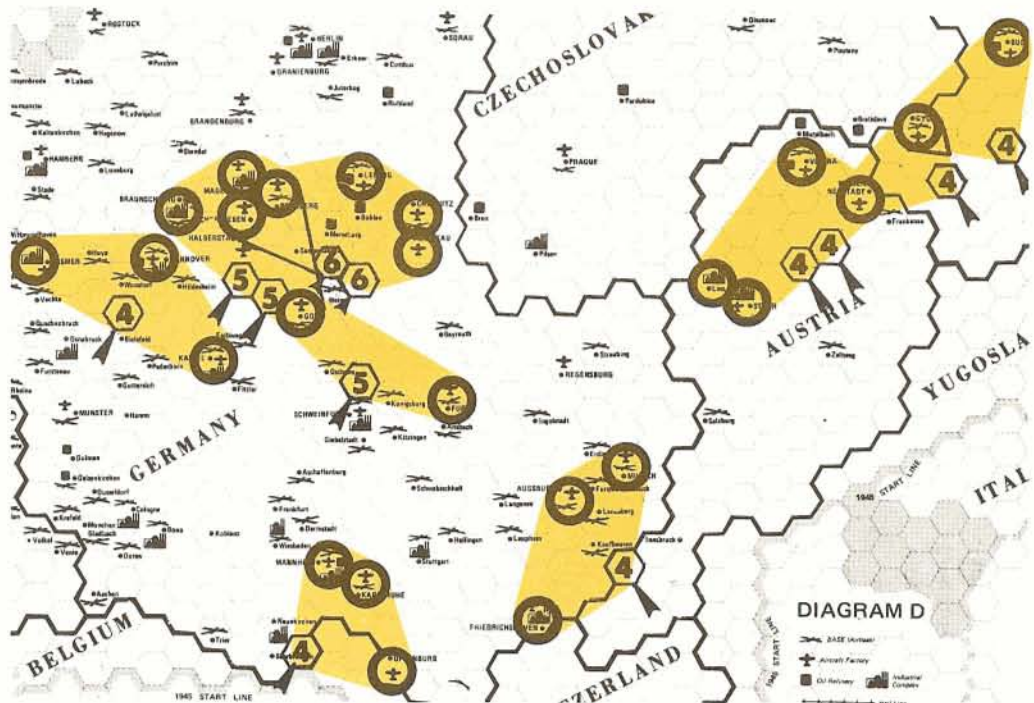
Perhaps Diagram C will illustrate the kind of gap present as you climb the scale in numbers of attacking factors since it illustrates the severely widening gap between best and worst luck in terms of the actual number of enemy factors you can expect to eliminate at each level of attacking factors — Diagram B, remember, is the number of factors *each* attacking factor can be expected to eliminate while Diagram C is the total number eliminated by summing up all enemy units eliminated by a given roll at a given total of attacking units. Again, the average luck equals the overall average but the gap between lowest and highest climbs very steadily from a couple factors to more than 20 (though the practical level is about 13-14). Again, over the course of a long game, you can count on averages to balance out, but specific encounters often can temper such averaging and statistical rationing of forces as Dennis suggests. The phrase "on the average" is the catch — we have all rolled several consecutive low or high numbers many times in play and they do average out, but a few good rolls at key points of any game can make averages irrelevant because the game may not last long enough for averages to average out!

Overall, I would agree with Dennis in his assertion that the use of the combat table analysis he gives will give you some point of

reference in an otherwise lengthy table. His concept of attrition is also useful but must be tempered by the fact that you are moving between these attrition attempts. His statement that it is "quite hard to reduce" a stack of 24 bomber factors given a decent fighter coverage seems to me to be more important than counting up turns and factors to try to reduce such a stack because it might take three or four turns to do so and, by that time, the bombers could very easily be at their targets. (Note, too, that there is nothing preventing enemy fighters from attacking bombers in the turn they are over a city since there is no provision for anti-aircraft accidentally knocking their own units out of the air.) The point is that an air-combat situation is hardly "automatic" though planning can be a lot easier for the whole game using the Optimum Combat Level and Kill Rate figures which Dennis gives for each type of unit. Dennis admits to having "statistical deviations" as a part of the luck - I think the two previous diagrams illustrate that these "deviations" can be pretty significant and create unpleasant setbacks. It becomes increasingly clear that it is important to concentrate your forces whenever and wherever possible so that you come out of combat ahead. Couple this with the "most direct route" requirements, however, and we come to an even more extensive strategic/tactical issue.

The problem of how to concentrate force yet use the most direct route, and still not give away bomber missions too soon is perhaps the essence of the American planning. The solution to this involves two decisions: whether to hit densely occupied areas or not and in either case, where to disperse from concentrated formations so as to preserve the protection of a large group for as long as possible. Fortunately, the rules do NOT require that you start from the point behind a given Recovery Line which insures the shortest route to a target. The rules do indicate that from starting square to target hex you do not spend any more turns in the process than necessary and I do not interpret this to mean that you can be forced to start at a specific spot by the final target - this often gives the American player a better choice of a spot from which he may disperse from mass formation to specific targets. Diagram D indicates particularly good central hexes toward which large groups of bombers may aim and from there break-off to specific targets - thus not giving away exact locations. The selection of these "jumping-off" points has been made only as an example of the concept and not as any attempt to provide some sort of complete list of such points. The numbered hexes are the points from which the various aircraft factories within the circles can be hit within the next turn. The numbers in the hex refer to the number of turns it takes to reach the particular dispersion point.

Obviously, the opportunities for such uncommitted positioning are greater where the concentration of targets is correspondingly greater. It is for this precise reason that while there is better protection, i.e., more bases nearby for possible fighter locations, there is a far better chance of catching enemy forces offguard. The problem of dealing with such protection is part of another strategic ploy I will mention later; however, for the moment it is sufficient to note that there are substantial numbers of targets in less densely protected areas (about 10 along the Italian Front



alone). German fighter protection will have to expend some time in these areas, spreading them thinner than the wealth of bases near Central Germany and the Netherlands Border otherwise suggests. Of course, when the objective is the entire reduction of cities under German control, the targets open up drastically. In either event, it is a good idea to stagger attacks on more than one front and attempt to get the German player to run back and forth, parrying thrusts into widely separated areas at time intervals which maximize the time it takes to get from one side of the board to another. This is the essence of the American plans since he is limited by time and by route: he has no chance to refuel and must follow a tight course once he starts out. However, this does not mean that fairly lengthy missions are out of the question since it is possible to begin on one front and travel with a very large group of bombers which drop off along the way, ending up near an opposite front. The use of this with shuttle raids begins to give the American extended flexibility in his missions since missions, in play without shuttle missions, consist of returns to the same Recovery Line from which the mission began. Otherwise, too many missions will span too lengthy a distance — this front-to-front mission technique is merely a variation to be employed to put German defenses off-balance since the apparent strength at one front becomes offset by the actual targets at another.

Sneak raids fulfill yet another American option, that being the tying down of German defenses by the use of a threat. In fact, as with all military threats, the shuttle raid is probably more valuable before it is launched than it is once begun, as it is not subject to analysis until this time. German defenses can only guess at the real strength of the raid — if indeed there is one in actuality. The situation is similar to the entry of the American forces in BULGE or the second Allied invasion in D-DAY: the effect is heightened by delaying them past the expected arrival time. In LUFTWAFFE, the arrival time is totally unknown leaving the German player with a problem which, while it is not totally a surprise due to the requirements for announcement within two turns of the raid, does not give the German player as sound a timetable as in the land games. As with other elements of each quarter of play, the sneak (and shuttle) raids become a more valuable tool when used during longer games since they may be varied in strength and timing each quarter. In fact, the key to success in the Tournament and Advanced games seems to me to lie very much in the variations upon a sound strategy which both players can develop — since it is as much the German's ability to confuse American plans by variation of the defenses which the latter must expect to face.

As mentioned earlier, the concentration of German bases on the Western Front seems formidable. Indeed, it could be if the American refuses to exercise the important option to attack these bases, thereby depriving the German of the use of these bases and cutting off possible refueling spots and staging areas. The important fact is that the German is lured into the area and then the bases are eliminated or the bases are eliminated, suggesting an attack on aircraft factories, and pulling fighter support from an intended area of real attack. The fortunate element in all this is that the "most direct route" is not followed in these attacks. Thus it is possible to bypass such targets in an apparent thrust at deeper factories

or bases and then turn back upon the bypassed bases or make right angle moves from missions headed in other directions to cut-off support from defending fighters. The possibilities are fairly extensive but the point is that such attacks are quite effective and amount to harassment of German resources in a manner perhaps even more devastating than expected.

Diagram E reveals something fairly surprising: there are very few bases actually near the central German targets of the Oschersleben area! There are large numbers of bases surrounding this area but few really in the area in comparison to the concentrations along the Western and Northern/Southern approaches — an attack coming from the Italian Front requires a long flight which will allow German fighters to shift their positions from the more concentrated areas. However, a sacrifice mission aimed in this direction with the express purpose of drawing fighters from the West may give an American player a vast opportunity to destroy MANY bases, laying open the Western Front to later attack against aircraft factories. This merely illustrates the variety of strategic possibilities the American has in a seemingly limited game of getting to a target and eliminating it. Though the Basic Game is little else but a good practice for the more advanced versions, it does provide opportunities to try out a variety of ideas in many games.

GERMAN RESPONSES

I have spent a good deal of space emphasizing American chances to the extent that some may think there is no real play going for the German save to hang in there as best he can. However, the German player does have the best of it as the victory conditions are expanded — saving ONE city does not seem to be too hard though it becomes harder when one enters the game thinking that ONE city is no difficult task simply because that becomes the goal and many sacrifices are allowed to pass thinking that there is lots of time left. In fact, the fact that the responsibility for action lies with the American is one of the greater problems for the German since he can permit himself to sit back in some instances. This attitude is, of course, damaging since the German defensive chances have many variables which will serve to confuse American efforts just as effectively as the many American ploys. For example, the simple decision to hit American Missions early or at a more delayed moment (or, in more advanced play, even after targets have been hit in an effort to deprive the American of units for later quarters) will begin to throw the American's rhythm off significantly and make it harder for him to plan just when to break from formation to go to specific targets or assault airbases.

Diagram F indicates the limits that bombers can reach after set numbers of turns no matter where they leave from. It is perhaps as enlightening as Diagram E in what it reveals since it shows how far away various targets are in terms of air time from each major front. Note that the Italian Front offers the American no real targets until he has gone at least 4 turns in the air and at that he has but 2 bases! Most Italian targets lie within the five turn band. The Western Front is hardly more promising since it offers but 2 targets within 3 turns and adds but five more on the next. Percentage-wise the bands break down as in

Diagram G — note that most airbases are just the opposite, appearing (along the Western Front) in the early turn bands rather than near the greatest number of targets. But it is the Baltic Front where many targets lie open to the American — hence a strong sneak raid can be devastating. The figures after each front's identification on Diagram G indicate how many targets there are TOTALLY within 6 turns of each front.

Note that the Baltic Front is THE most lucrative in terms of pure number of targets accessible to American attacks and it has relatively few bases near the beginning hexes. Of course the total for the Baltic Front includes many targets also in the Western Front where there are more bases for defense — but a larger number of targets are present early in the movement on this front than for any other front. Limiting the number of turns to 3 and not 6 makes this apparent since the Italian Front has NO TARGETS within this distance and the Western Front has but 2. But the Baltic Front has a full 17 targets within the first three turns of movement!! Expanding to four turns gives the Western Front up to 7 targets with 2 for the Italian Front while the Baltic Front expands to 26! Thus there is sufficient hidden threat in the Baltic Front to warrant careful consideration of defense in this area. In fact, the major target areas are inaccessible to the Western Front (and very distant from any Italian attack) before the fifth and sixth turns — yet they are within 3, or at most 4 turns of the Baltic Front. Fortunately for the German defense, only one raid per quarter may be launched (but bombers may move in any direction from their jumping-off point).

It would seem to be the best German course in the Basic Game to make EVERY effort to reach the bombers and stop them as soon as possible. In more advanced play, tearing away at fighter support will have its effect in later quarters of

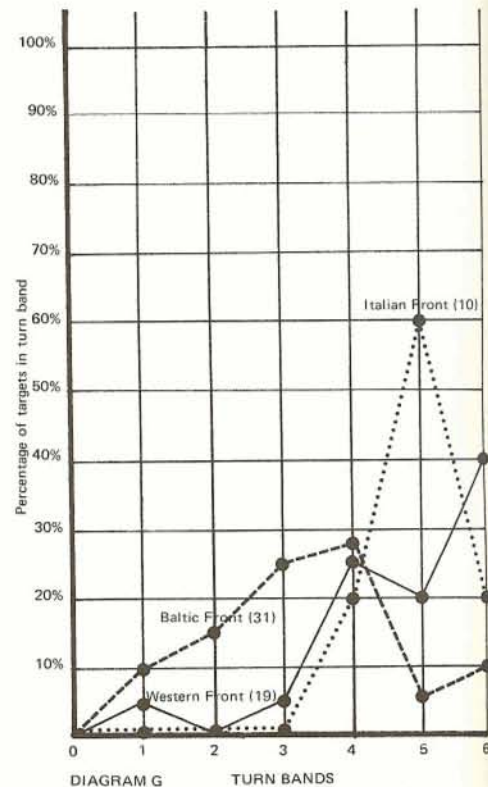
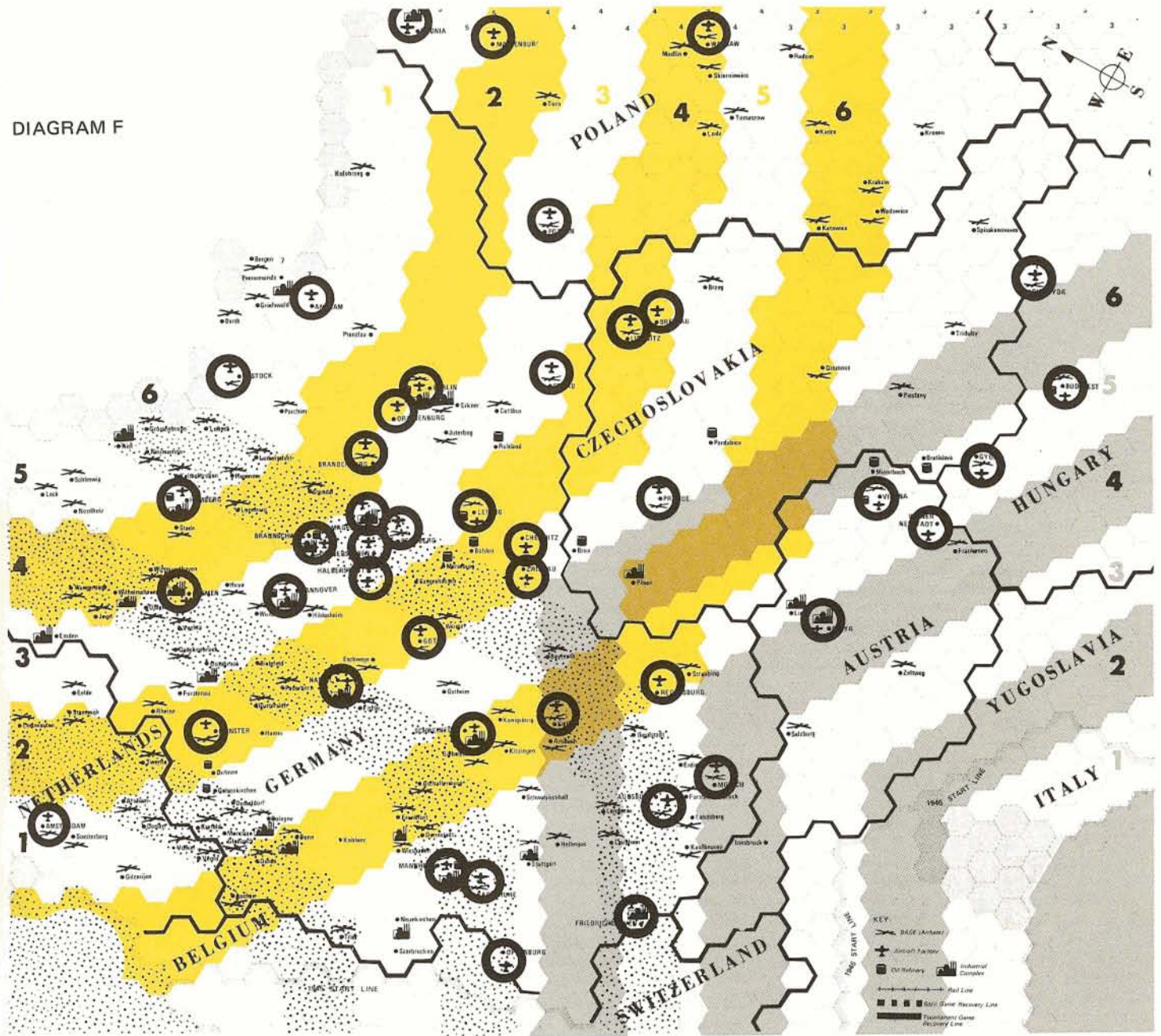


DIAGRAM F



play even if it does leave some successful American missions early in play. The ONE city rule cannot become a crutch for weak movement but is a comfort in trying to wear away American fighter forces when this may allow bombers to get through. During this time, protect the bases so that you are not alternately cut short by a clever American who seeks to stop your fighter force early.

The introduction of jets and school units does NOT alter any major elements of planning; however, alteration of the concepts implied by figuring the number of targets within a certain turn radius is very drastically changed in Advanced play since all cities are targets and these are very heavily concentrated in the Western Front. But the objectives and methods are still the same no matter what version of the game you play - I merely encourage the longer versions because of the variety they allow in using many individual plans from quarter to quarter.

Fundamentally, I would have to give the edge in a longer game to the German since intelligent play will make it hard for him to not manage one city left by the end of play. However, it is by no means as cut-and-dried an affair as many shorter articles have suggested. I do not feel that the German player cannot hope to do anything but win as one writer has suggested! Perhaps the Basic Game, again, is fairly easily predicted given average luck with die rolls and average play (at least matched play on both sides). As I have stated, no other Avalon Hill game offers the kind of play LUFTWAFFE presents - perhaps a limited number of people appreciate this offering. I am hoping that the number of people in this category increase if only because it will mean further attempts to reproduce a truly "campaign" game which is more than a loose conglomeration of ideal design plots which characterized many amateur inventions in this direction many years ago.



A.H. Philosophy

Continued from page 2

encouraging to us were the ratings for strategy articles and the Series Replay concept, an indication that you approve wholeheartedly of our decision to concentrate on bringing back the "art" of playing games well and not just playing for the sake of playing. Only the Game Design Column, Philosophy, and RBG show any sign at all of being unhealthy appendages. With a rating of 5 considered average even these must be considered healthy additions to the magazine.

STRATEGY ARTICLES	2.08
DISCOUNT COUPONS	2.53
SERIES REPLAY CONCEPT	2.59
QUESTION BOX	2.66
OPPONENTS WANTED	3.08
VARIANT ARTICLES	3.27
HISTORICAL ARTICLES	3.56
INFILTRATOR'S REPORT	3.59
CONTESTS	3.65
LETTERS	3.77
READER'S BUYERS GUIDE	4.08
DESIGN ANALYSIS	4.10
PHILOSOPHY	4.11

Campaign at WATERLOO



Harley Anton continues the CAMPAIGN AT WATERLOO series with the second part of his WATERLOO analysis. This month Harley takes a close look at the individual pieces of the game and relates the best uses for each type. Next time Harley will conclude his treatment of WATERLOO with a study of the mapboard.

PART V THE TACTICAL GAME The Pieces of Waterloo

There are 3 keys to victory through tactical superiority in Avalon Hill's Waterloo. The first and by far the most important of these is to know your pieces and their capabilities. The second is to know the mapboard. The last is a realization of the major tactical techniques of the era and successfully translating them into game turns that will insure tactical success.



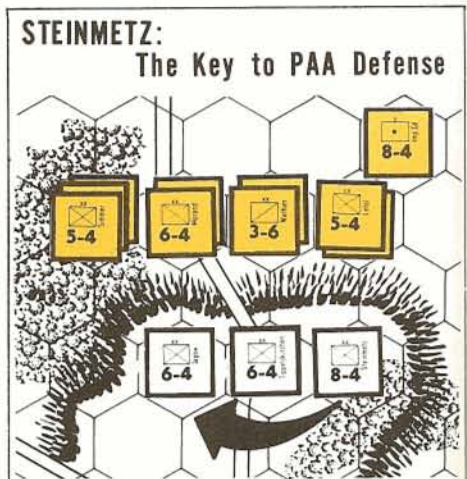
THE 8-4's

The two 8-4's are the largest pieces in WATERLOO. Steinmetz is much more valuable to the PAA than his French counterpart. The reason for his great value is his ability to hold a doubled position. When he is doubled, the maximum odds a French player can achieve are the number of squares available minus one. For this reason he can make squares like AA27, S31 or T39 impregnable from frontal assault, barring low odds attack. Holding key positions of this nature until they are flanked instead of letting them fall frontally can often buy the difference in game turns between victory and defeat. A 2-1 on a unit the size of Steinmetz is rarely attempted for several reasons. A loss of 32 factors in an A-Elim result will cost the French player the game. Whereas the loss of Steinmetz would only damage, not destroy, PAA chances. Secondly, why would the French player attack Steinmetz at 2-1 when the usual alternative of 3-1 on a doubled 6-4 usually presents itself in an extended line situation? Third, even when a 3-1 is impossible, 2-1 is much more economically attained on a doubled 6-4 and can be achieved from two squares. Finally, the French player will have difficulty avenging a 16 factor exchange without losing a valuable 6-4 or even more valuable cavalry units.

As the strongest PAA unit, Steinmetz should always be kept near the center of the PAA lines. There he can stop gaps as they arise by using the excellent PAA interior line road network and can avoid being cut off by a victorious enemy flank thrust. He should always be moved to AA27 on the 9AM/16th turn and should stay there until one of two things happens. If the French leave less than 42 factors in the DD 22-DD 30 area he can be replaced by a 7-4. Once the area is bled to

less than 36 factors a 6-4 can hold the square. Naturally, if the French player leaves 42+ factors in the above area (and a smart one will) Steinmetz must stay at AA27 until the heights are abandoned. A particularly effective switch of Steinmetz is to allow your opponent to infiltrate the woods at BB23 (a multi-turn project) in an attempt to hit the doubled 6-4 at AA25 from 3 squares, thus obtaining 3-1 odds. If your opponent achieves BB23 with a stack of units and at the same time falls below the 42 factor level in the DD22-DD30 area Steinmetz should be quickly switched to AA25. This will completely blunt your opponents infiltration drive and cost him several turns as he backs out of the forest. As soon as the heights are abandoned Steinmetz should be positioned at W31, or more commonly, at S31. W31 is the option that should be taken if you have stalled your opponent's Nivelles drive and at the same time are still strong enough to fight as you back down off the heights. Steinmetz at W31 combined with judicious delay along the Z28-32 line will anchor the PAA right. Meanwhile, a strong infantry force at R30-T32 (with at least 2 6-4's at S31) can be used to cost the French player extreme casualties as he attempts to cross the Genappe river. Later, if your retreat toward Mont. St. Jean is hurried, keep Steinmetz in the center of your force. If you have been more fortunate and can effect a vigorous retreat and your numbers are approximately equivalent to the French, let Steinmetz anchor the PAA left at K35 and form a line from K35 to Braine La Leude. For a last ditch stand Steinmetz can be very effective at A45 because of the wooded terrain on either side. One of the major mistakes of the novice PAA player is to let Steinmetz lead his counter attacks. Steinmetz should *never* counterattack unless it is unavoidable. A 7-4 or 6-4 will usually do as well or better due to the stacking rules, and anytime Steinmetz is used in an attack he becomes an automatic target for the French player on his following turn. The only exception to this rule is when you can counterattack and leave Steinmetz in a doubled position.

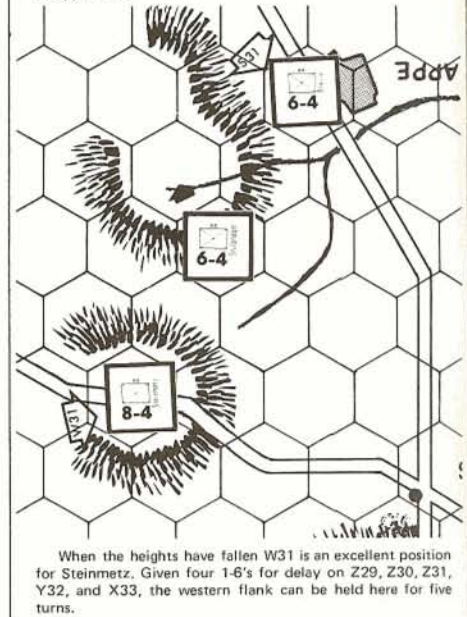
The Imperial Guard Artillery suffers greatly due to the 15 factor stacking rule, combined with the French lacking a 7-4. Despite this limitation it can be used to great offensive advantage in several ways. It can best be utilized with a 6-4 for infiltration and with a 2-6 and 5-4 for straight offensive combat. Using the Imperial Guard in its attack formation with 2 squares to work from, the French player can assemble 28 factors (4-1 on a 7-4) and a 2-6 soak off. After the attack he ideally will have four 5-4's and the Imperial Guard to repulse a counterattack. Although infiltration is a mediocre tactic at best, there is a right way to go about it if it becomes necessary (see below for cases of necessity). The primary



NOTE: Should the French occupy BB23 on their next turn, leaving less than 42 factors in a position to hit AA27, Steinmetz and Jagow should switch positions.

The Steinmetz Options

If the French are causing trouble at Nivelles S31 or R27 is the more likely position for Steinmetz, 3-1 proofing the Genappe River.



When the heights have fallen W31 is an excellent position for Steinmetz. Given four 1-6's for delay on Z29, Z30, Z31, Y32, and X33, the western flank can be held here for five turns.

maxim is to use the largest pieces possible to avoid being cut-up piecemeal. Infiltration through the woods between Nivelles and Quatre Bras should never be tried unless your opponent is already reeling and you are attempting to burst his defensive perimeter. However, infiltration by an 8-4, 6-4 stack at V22-U23, or CC22-BB23 combined with continued pressure elsewhere will cause the PAA player to retreat if handled

skillfully. The Imperial Guard can often be used in conjunction with a 15 or more factor cavalry thrust down the Tilly corridor. It can furnish good infantry support for the lighter units but its limitations must be recognized. Its object should be to break the cavalry out into the plains between the Thil and LaLasne Rivers. After this it should never head for Waterloo unless the Genappe River has already fallen to frontal assault. Due to its defensive fortitude it can be of invaluable aid in flanking and breaking the Genappe line by moving along any one square O-28, O-27, P-26. After he establishes this break he should join the main force on the road to Mont. St. Jean. The Imperial Guard can also be used excellently along the line U-Z 18 if the Tilly drive is aborted. He can mop up 1-6's and unless the PAA player was foolish enough to waste 24 factors in the corridor the Imperial Guard can stop cold any thoughts of counterattack.



THE 7-4's

The PAA player is blessed with 5 units with a combat factor of seven. Since these units are unique to the PAA side they can at least cause a problem for the French player to consider when he attacks at odds that may call for an exchange. Almost any exchange he makes will hurt him in some way. At best these units can be tenacious defenders and can furnish a sharp cutting edge to a PAA offensive. In the final stages of a game they are especially good in the latter capacity.

On defense the 7-4 is at its best in a doubled position in which the enemy can achieve only 3 squares against it *and* must soak off from 2 of those 3 squares. Once supported on its flanks in this manner (i.e., 7-4 at S31 and 6-4's at S-32 and R-31) 3-1 becomes impossible. Excepting this one rare case a 7-4 should never be tied to a defensive position but should instead act as a counterattack/defense bulwark force. When the PAA defend the Quatre-Bras, Bors DeMetz corridors, sooner or later he must stop delaying and stand to fight. This stand should always be initiated with 6-4's because early in the game only 7-4's are available. They should be thrown into counterattacks to replace a 6-4 lost or thrown back on the previous turn. Combined with three 6-4's and the inevitable 1 factor soak-off the 7-4 yields 5-1 odds on a French 5-4 with no possible exchange and an ultra strong defensive position facing the French. (i.e., Z24, Y24 counterattack a 5-4 at Z23 leaving 13 and 12 facing the French). If you are still strong at this counterattack juncture it might be wise to use four 6-4's to go after a French 6-4 at 4-1 and to conserve your 7-4's for later attacks.

One major fact to remember is that 6-4's are almost equivalent to 7-4's on defense so 7-4's should not be tied down when 6-4's are available. Two 7-4's stacked with a 1-4 or 1-6 which disappears in the soak-off will leave the French a tough problem to counter on their following turn. There are several ways not to use the 7-4's. The first of these is don't send them to Tilly. Likewise, keep them on the Braine Le Compte flank only as long as necessary and not one turn longer. The only exception to this rule is when your opponent's Nivelles drive consists of 36-41 factors. In this case three 7-4's and several 1-6's can delay him indefinitely. (7-4's at U42, T41, T39 and 1-6's down row 36.) Note that the 7-4's should never be more than 4 squares from the road to Mont. St. Jean in case a French break-

through necessitates a rapid fallback. Always try to avoid meeting the French 4-4's in open terrain where they can be effectively used in 1-2 attacks.

THE 6-4's



The 6-4's are the backbone of the PAA army. Because of their preponderance they make their 7 French counterparts doubly valuable for exchange purposes. The Allies must protect their 6-4's. A stack of two 6-4's should never be placed such that the French player can gain 3 squares on it. Perponcher and possibly one or two other 6-4's should be sent to Nivelles early in the game to counter major French thrusts in that area. By sending Prussian 6-4's to Nivelles, Picton and Company can be routed to Quatre Bras. One major reason 6's are valuable at Nivelles is due to their ability to clog the forest corridors at AA35-AA38. A 6-4 is the smallest allied unit which cannot be attacked at 3-1 from one square (or from 2 squares, when doubled). A 7 or 8 in the same position is much more vulnerable to 1-2 attacks. Further use of a 7 or 8 is a waste of factors which violates a basic principle of war best summarized by the phrase "economy of force," and best demonstrated by odds of 29-10 when the 7-4 could have been used to replace a 6-4 had adequate forethought been shown. For this reason it is wise to send 6-4's to Nivelles and shuffle 7-4's to Quatre Bras unless one wishes early counterattacks against a weak French Nivelles thrust. On the first turn of the game a 6-4 at CC21 and a 1-6 at EE19 illustrates the manner in which the PAA can turn the 15 factor stacking limit to their advantage. One of the major uses of the 6-4's is the Funnel principle. By stationing delay units at CC17 and DD20 and putting a 6-4 at BB20, 7 squares of terrain can be defended at a cost of only 2 factors. A further corollary of this principle would involve a configuration of two 6-4's at AA17 and AA19 and delay units at CC15 and CC19. By studying these examples, a competent PAA player can use them all over the board. By combining them with terrain even more advantages accrue (note in my last example a total of 9 squares are covered if no enemy units started the turn on the Ligne River.) As the PAA forces are slowly driven back, 6-4's can be used to stop-gap such positions as W36, T41, U42, W31-Y31, R29, P30 and many others. When the Prussian IV corps arrives it can hold the LaLasne River from T35 to L36 while the main bulk of the army can take a stand at L37-L40-J42. Finally, if only a few turns remain in the game the PAA on rare occasions may gain a time-limit victory by keeping the major portion of remaining PAA units to guard 39 and by detaching a couple of 6-4's to guard the road to Brussels along A and B45. The enemy would have to waste 2 or 3 turns in flanking to obtain good odds and if 3 turns were remaining in the game then this uneven split of guarding factors might provide the difference.

The French 6-4's along with the 8-4 should always be the vanguard of the French attack. The 6-4's are the units that should infiltrate when necessary. Naturally they should always be used to feed exchanges with PAA 6-4's whenever possible. Late in the game if the French player has 6-4's remaining he can hurt the PAA player by sending a couple through the E48 corridor and down to A46 in conjunction with the main French drive which should be aimed at Waterloo itself. One major flaw which seems to be ex-

tremely prevalent even among expert Waterloo players is the use of a 6-4, 5-4, 4-4 stack. While this may be an acceptable marching stack it leaves no room for soak-off on an attack and the 4-4 is easy meat for a PAA counterattack.

THE 5-4's



The 5-4's are the mainstay of the French Army. Whenever possible exchange of two 5-4's for a PAA 6-4 or 7-4 should be avoided for obvious reasons. An exchange of two 5-4's for the PAA 8-4 would be of some advantage, especially early in the game or when moving from a position of strength late in the game. Most proponents of French strategy in Waterloo argue for massive 2-1's using the 5-4's early in the game. I feel this to be a tragic misuse of factors. Early deployment of 5-4's to V22 can be profitable if weak PAA Tilly forces have been driven back and if it is combined with a drive in the Bors De Metz corridor. The I Corps 5-4's should come to TT18 and UU17 on turn 1 and proceed up to the foot of the Quatre Bras heights as a holding force which can be shuttled from the CC26 area to the Bors De Metz corridor if necessary. The standard 8-4, 5-4, 2-6 stack (described earlier) can be supplemented by a 6-4, 5-4, 2-6, 2-6 attack stack, but this is not desirable in most cases because a 2-6 would be left extremely vulnerable to resulting PAA counterattacks. A 2 square attack of five 5-4's and a 2-6 or three 5-4's, two 6-4's and a 2-6 are usually the most desirable.

The PAA player is blessed with only six 5-4's, 3 of which come on late in the game. For defensive purposes a 5-4 is useless by itself and vulnerable in a stack because the competent French player will attack it. It can achieve limited value by being placed with another 5-4 when the French player has only 1 square or 2 squares doubled to attack from. They can thus be used for short periods in the place of a 6-4 or 7-4. The best use of the 5-4's is in counterattacks for exchange purposes against French 5-4's or 2-6, 3-6 cavalry stacks.



THE 4-4's and 4-6's

Of all the pieces of Waterloo the French 4-4's seem to be the least useful. They are too small for offensive operations and too large to be used as soak-offs. Their best use is for exchanges and even then they rarely furnish an equal exchange unless a valuable 2-6 is expended as well.

Early in the game the French 4-4's should proceed to the CC24-26 area. From there, two 4-4's make a good 1-2 gamble against the 8-4 at AA27 or the three 4-4's can be shuttled to Nivelles if that drive needs a boost. Later in the game 4-4's can be used at 1-2 against undoubled 7-4's and this is their greatest appeal. An exchange of three 4-4's for 2 PAA 6-4's should never be ignored.

The French 4-6 on the other hand is a good shock weapon due to its mobility. I usually erroneously classify the French 4-6's and 3-6's as heavy cavalry and the French 2-6's as light cavalry. Although this is obviously not historically accurate it leads to a better fundamental understanding of Napoleonic cavalry tactics. The French 4-6 is always best used in conjunction with 3-6's as discussed below.

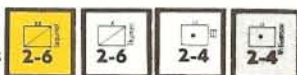
The PAA 4-6 should always be headed to V44 where it can combine with the lone English 4-4 to hold the Nivelles branch of the Somme River. These units can effectively police the PAA far right with little loss. Even if the center falls, the 4-6 can usually escape to Mont. St. Jean by way of the Plains near Hal and the 4-4 can retreat under protection of the Somme River and by its weakness and distance from the front become too costly for the French to chase. If defection occurs Cooke should be the first removed if he is thus cut off.

The three Prussian 4-4's are usually best employed holding the Tilly corridor on the PAA far left. Used in conjunction with rivers and delay units they can form a testy maze for the French to wade through. In addition, a 1-2 surrounded on 15 French factors by two 4-4's can often turn the tide of the game. If the French do not pursue a Tilly drive, the 4-4's can rejoin the remainder of the PAA army at Mont. St. Jean. Like Cooke they should be removed 1st in case of defection if by-passed by the French drive. A counterattack drive at low odds toward Tilly is a good desperation play to buy time when that becomes more important than factors.



THE 3-6's

The 3-6's are the French heavy cavalry. They should be used with the 4-6 in raids down the Tilly corridor or the Braine LeCompte-Hal road. By early placement of these units in the Charleroi area these forces can threaten X24 by 1PM/16. By using the narrow Z12 corridor, 3-6's can infiltrate the Tilly area by turn 4. I don't favor this strategy as the masses of rivers on the far French right rob the 3-6's of their major weapon; mobility. The more ordinary Tilly drive should have the objective of breaking (with its mobility, not combat factors) the Dyle River between N24 and Wavre and then making a dash over the open terrain to A39. Even when unsuccessful this maneuver draws large PAA commitments off the main front, to counter it. One word of caution: this maneuver is not dangerous if supported by 5-4's or the 8-4 as far as N24. Once there, the large units flank the Genappe river and the cavalry must be withdrawn in time to avoid being trapped by the IV Corps if it is not immediately successful. The 3-6's should be used as soak-offs only when no other alternative is available. In short, effective heavy cavalry tactics, consisting of overwhelming delay forces, going on raids to extend fronts and draw off factors, and always retreating to fight again when confronted by force can spell the difference between victory and defeat.



THE 2-6's and 2-4's

The use of the French 2-6's can be summarized in the word soak-off. They are the only soak-off unit which the French can really afford to lose. Because they appear in large numbers a few can be used to aid the heavy cavalry on raids as long as the main fronts are left with adequate soak-off units. These units have a few other uses dealing with protection of the main body of the French army. If it breaks through to Waterloo with most of the remaining PAA units in the Mont. St. Jean area the French player may delay with 2-6's

behind his main force as it crushes all remaining defenses and moves off the board to victory. The 2-6's can also be used to guard French flanks early in the game in front of the main line. They should be positioned in such a way that the PAA must expose 2 large units to kill them.

The PAA 2-6's are extremely valuable as a counterattack force against infiltration. (Combined of course with a few larger units preferably 5-4's and 4-4's) and against a Braine LeCompte drive (combined with a 7-4, Cooke, and the Cav. Batts). On the other hand, the PAA 2-4's are the least useful PAA unit. Their best use is for soak-off and delay when 1-4's and 1-6's are unavailable. Usually these units can be gathered into a stack which can absorb exchange losses near the end of the game. This type of stack should not expose itself early in the game because a turn of fortune might make the 2-4's valuable as delay units.



THE 1-4's and 1-6's

I have saved the most important PAA units 'till last. Proper use of these units for delay-screening is the key to PAA victory and will be discussed in detail below. However, there are other intrinsic advantages which can be listed here. The major secondary advantage of the 1-6's and 1-4's is that the PAA player can always lose 1 factor on soak-offs as compared to the French 2. This yields the additional advantage of leaving the PAA player with a large stack to await counterattacks. One should use the 1-6's and 1-4's in all types of delay operations with the exception of attempting to delay across large open terrain corridors such as M35-J42 and V41-O48. This type of delay would needlessly dissipate valuable units when a fall back would be preferable. Never expose large stacks of 1-6's to enemy attack as this is equivalent to cutting an artery!



Continued from page 20

phalanx army was impossible; attempting it anyway he lost the war. Armies attempting "impassable" obstacles have sometimes found them impassable indeed.

The point is that the game rules suggest that an attack in the old style, throwing armor against well-defended rivers and canals in the face of a supplied and vigorous defense might have succeeded — and even have been superior to Guderian's nearly bloodless victories. In my judgment, a game design which produces that result has some explaining to do.

For all my objections to the simulation aspects of France, 1940 I return to where I began. This essay, although critical, is none the less a "rave review." Although the designers have failed to overcome many problems of simulation, they have given us a very good game. They have also designed a building block on which future simulations may be based; and they have done it while providing important new contributions to the art of gaming. France, 1940 is well worth the money required to buy it and the time it takes to master it.



ADVANCED

by Mike Shefler

KRIEGSPIEL, despite an excellent overall sales appeal, is often criticized by the "hard corps" as one of Avalon Hill's worst games. The reason for its lack of popularity among wargame fanatics is not hard to pinpoint. The very simplicity which makes it such a good "beginners" game stands it in bad stead as far as the "hard corps" is concerned, despite the innovative matrix CRT. Mr. Shefler proposes some changes, including some amendments to the CRT, which may make some of you change your mind.

Many people have expressed their dissatisfaction with *Kriegspiel* because of its lack of complexity and realism, so here is an attempt to make the game more interesting, challenging, and realistic. First, I have tried introducing a step-reduction system in which the second step is written in on the back of the unit. New matrix-type CRTs have been thoughtfully provided by the author to take this into account. In these CRTs I have attempted to preserve the different characteristics of the various offensive and defensive strategies available to the players that are present in the AH CRTs (and which, I might add, are missing in the only other *Kriegspiel* CRT revision I have seen — No. 7.3 of the *General*). To adapt them to PBM use, I suggest using L. Mitchell Wein's excellent method as described on p. 7 of No. 7.4 of the *General*. I have also included some revisions to the rules on prisoners and nuclear weapons to make them more realistic, and I have introduced some new optional rules. The rules and CRTs I propose follow:

STEP REDUCTION: On the back of each unit write in the attack and movement factors of the unit's second step along with its corps, type, color, and identifying number. Attack factor in the second step is 1/2 of the unit's basic AF, while the movement factor is reduced by one. When called on by the CRT to lose a step, simply flip the unit over (if it is already flipped over, it is eliminated instead). If more than one unit is involved, then all such units are affected. However, they may instead elect to eliminate units (from any of those involved in the attack) with at least as many combat factors as would have been lost by step reduction. For instance, if two 4-4's attack an 8-5 and the attacking units must lose a step, they could remove one of the 4-4's, instead of turning them both over. When the CRT calls for elimination, all such units must be eliminated, regardless of which step they are in. These rules lead to or suggest several changes in other rules:

A. Retreats after combat — Units forced to retreat after combat are still eliminated if forced to retreat off the board, into sea or other non-permissible squares, into enemy zones of control, or onto or through other units. However, they may choose to retreat one square less than the specified number at the cost of losing a step instead (this does not apply to units conducting an invasion). Thus, if a surrounded unit is forced to retreat one square, it may forgo retreat and instead remain where it is and lose a step. If it



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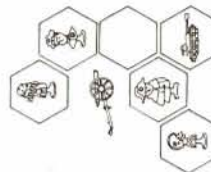
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- 4. Ease of Understanding _____
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- 6. Play Balance _____
- 7. Realism _____
- 8. Excitement Level _____
- 9. Overall Value _____
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SECTION I

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____
- 11. _____
- 12. Definitely
 Perhaps
 No
- 13. \$15 \$25 \$35
- 14. free games
 trophy
 cash

SECTION II

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____

- 7. PBM opponents club listings
- FTF opponents tournaments
- old games _____
- 8. 6 times 1,2 times
- 3-5 times never

- 15. November July
- December August
- January September
- May October
- June

SECTION III

- 1.
- 2.
- 3.
- 4.
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- 10.
- 11.
- 12.
- 13.
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			front	rear	range	AA	Mg
A							
B							
Starting Speed _____			Starting ALT. _____				

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KRIEGSPIEL THEORY

were forced to retreat two squares, or if it were already in its second step, then of course it would be eliminated anyway.

B. Fortifications — Units flipped over to make a fort are not reduced in step (they may be turned rightside up again if you decide to destroy the fort). For convenience in keeping track of which units have been reduced and which haven't, I suggest that units which have been reduced in strength not be permitted to make forts. Any unit may occupy a fort.

C. Replacements — Replacements must be brought in at full strength. Thus, an 8-6 which had been reduced to a 4-5 and then eliminated must be brought in as an 8-6 at a cost of 8 replacement factors.

PRISONERS — The POW camp may be located anywhere in your home country on a noncity square. If you capture your enemy's POW facility then your prisoners re-enter the game from that square, at their second step. Prisoners can escape from an ungarrisoned POW camp without outside help using the prisoner escape chart. However, if you roll the die for a prison break and it is unsuccessful, you must remove one of the prisoners to the dead pile. If there is an enemy unit on his POW camp, then your units cannot escape by themselves. Otherwise, use the following table. Prisoners which escape do so at the beginning of their turn and enter the game at their second step.

Prisoner Escape Chart

Number of prisoners in POW camp —	Die roll necessary to release prisoners —
1-2	1
3-4	1, 2
5-6	1, 2, 3
7-8	1, 2, 3, 4
9+	1, 2, 3, 4, 5

NUCLEAR WEAPONS — When you capture one of your opponent's launching sites, the capturing unit takes custody of the nuclear weapons stored there. You do NOT immediately transfer them to your launching site, the capturing unit must do so. It can transfer the captured rockets to another unit by moving adjacent to it. To avoid unnecessary bookkeeping, no partial transfer of nuclear weapons between units is allowed. If the unit which is holding the captured nuclear weapons is itself destroyed, the weapons

it was carrying are also destroyed. If the unit surrenders in battle, then it must also surrender the weapons to one of the attacking units, which may next turn carry these nuclear weapons back to their launching site. Captured nuclear weapons cannot be fired until the turn after they have been moved to their launching site.

Here are some optional rules which may be of interest to the wargamer who goes all-out for complexity.

Tactical Nuclear Weapons

Black 3-4's and Red 4-4's which are not special forces carry one short range tactical nuclear weapon (TNW) apiece. These TNW's have a range of three squares but may not be fired at a target which is in the zone of control of one of your units. They are fired after the movement portion of the turn. A die roll of 5 or 6 means that all units in the target square are eliminated and if it is a city square, it may not be used for supply or replacement purposes for one turn. A roll of 3 or 4 means all units in the target lose one step and no movement is allowed through that square for one turn. A roll of 1 or 2 means the attack has no effect. Fortifications are protected enough from TNW's so that a roll of 1, 2, 5, or 6 has no effect, while a roll of 3 or 4 has the same effects as above. Each unit carrying TNW's may fire only once during the entire game, and if eliminated before they can fire, they lose the ability to do so, even if brought in again later in the game. To make up for the advantage that Red has under this rule (9 TNW's to 3 for Black), try starting both Red and Black with 14 units and/or giving Black one additional ICBM and two additional rockets in his initial nuclear inventory.

ABM system

Each side accumulates, beginning with the first turn and provided his capital city is unoccupied by enemy units, four ABM's per turn. When a nuclear attack is launched by your opponent, he specifies only one target square. You may try to intercept his missiles before they reach their target(s) by using as many ABM's per nuclear attack as you wish, up to the number you have accumulated. ABM's may not be used against TNW's. Use the following chart to determine if the missile is intercepted (if not, then the attack was successful).

ABM Interception Chart

Number of ABM's intercepting —	Die roll necessary to intercept —
1-3	1
4-6	1, 2
7-9	1, 2, 3
10-12	1, 2, 3, 4
13+	1, 2, 3, 4, 5

ABM's, like Airpower factors, can never be captured and can be used even if your capital city is captured. However, they can never be used to attack enemy units or positions. They are only used to intercept incoming missiles.

You may use your accumulated airpower factors to transport units from one city to another (including captured enemy cities). This is done in the movement portion of your turn. Airpower factors used for air transport may not be used for attack and are lost after use in this manner. One airpower factor can transport up to two combat factors, thus to transport an 8-6 by air would require four airpower factors. You cannot transport units into a captured enemy city in the turn of capture, nor can you transfer units directly into enemy zones of control.

I hope the above rules and suggested changes to Kriegspiel will make it more attractive to the "hard-core" wargamer, Kriegspiel is, in my opinion, one of Avalon Hill's best games as it offers almost limitless opportunities for improvement and improvisation. It should appeal to the game designing urge most wargamers have but are unable to satisfy (it's too time-consuming to design your own game from scratch — I know, I've tried). I would like to see more games where the player can write his own optional rules instead of being bound by a set of all-inclusive, pre-packaged rules.



- A — attacker
- D — defender
- r — retreat (opponent may retreat your units up to the specified number of squares)
- a — advance (you may advance your units up to the specified number of squares, but you must stop in the first enemy controlled sq.)
- LS — lose one step (flip unit over, if already over, eliminate it)
- E — eliminated
- NC — no casualties either side
- X — exchange (player with fewer total combat factors removes all his units; other player removes at least that many combat factors — units may voluntarily reduce themselves in step to account for the appropriate number of attack factors).

1 to 4			1 to 3			1 to 2			Battle Odds		1 to 1			2 to 1			3 to 1			4 to 1							
Engage & Hold	Escalating Assault	Blitzkrieg	Engage	Engage & Hold	Escalating Assault	Blitzkrieg	Engage	Engage & Hold	Escalating Assault	Blitzkrieg	Engage	Engage & Hold	Assault	Escalating Assault	Blitzkrieg	Engage	Engage & Hold	Escalating Assault	Blitzkrieg	Engage & Hold	Escalating Assault	Blitzkrieg	Engage & Hold	Escalating Assault	Blitzkrieg		
← Attacker → COMBAT RESULTS TABLES ← Defender →										Engage <small>No Advance after combat</small>			Engage & Hold			Assault			Engage & Hold			Escalating Assault			Blitzkrieg		
A Abandon Position										Ar1	ALS	Aa2	ALS	NC	Aa1	NC	DLS	NC	Aa2	Aa1	Aa2	Aa3	Dr2	Dr2	DE		
B Fighting Withdrawal										NC	ALS	Aa1	NC	AE	NC	ALS	Aa1	X	NC	DE	X	DE	DE	Aa2	Dr3		
C Standfast										DE	Aa1	NC	Aa1	ALS	DE	ALS	X	NC	ALS	DLS	X	Aa1	Aa2	ALS	DE	DE	
D Hold-at-all-Costs										AE	DLS	AE	ALS	Aa2	DLS	Dr2	AE	ALS	DE	ALS	DE	DE	ALS	ALS	DE	DE	DE

DESIGN ANALYSIS



Dr. Pournelle is a noted historian with several published works to his credit who has recently turned to game design as a spare time endeavor. His thoughts on conflict simulation as portrayed in *FRANCE, 1940* bring to light some interesting design questions on the campaign. Dr. Pournelle presents a strong case for a revised CRT and TEC, and in so doing, takes our designer to task for some of the principles built into the game. The questions Dr. Pournelle raises on the design of *FRANCE, 1940* are well worth thinking about.

LITERARY CREDITS:

THE STRATEGY OF TECHNOLOGY
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PHALANX, ASTRONAUTICS, FRONTIER, and
numerous others. Now serving as President of the
Science Fiction Writers Association.

Avalon Hill's *France, 1940* is destined to become a classic game. It has attempted a campaign that defies simulation, to produce a very playable and enjoyable game with different orders of battle to provide a variety of fascinating problems. Moreover, the "point handicapping" in which a country may "win" while its player "loses" works well. As a game *1940* belongs in every collection, and it makes a good introduction to serious war-gaming for those just starting out.

I wholeheartedly recommend *France 1940*. The recommendation is strongly stated because this article is quite critical of many features of *1940*. The designers have made a bold attempt, but despite a number of fascinating gaming innovations, they have not produced a very good simulation of the German conquest of France. Whether or not such a simulation can ever be packaged as a popular wargame is another question. The Fall of France was unique and due to factors nearly impossible to bring to a games table. Some games simply by-pass the problem by beginning after the Sedan break-through and playing on from there — an acceptable and enjoyable alternative. *France, 1940* tries to produce a more general simulation of war of the 1940 era, and it is a good beginning.

I believe certain modifications can bring it closer to a campaign simulation.

The best new feature of *1940* is the use of airpower. By separating air units into a movable but grounded base and an invulnerable in-flight component *1940* has come very close to the real conditions of aerial combat for that era. Dog-fights are spectacular, but air supremacy was never won by them in modern war. Air cover could drive enemy air forces away, or exact heavy attrition; and of course, if one side pursued an improper air strategy as did the Germans in the Battle of Britain, air superiority might eventually be won in the sky.

Usually, though, it was necessary to destroy enemy bases in order to dominate the air. The A-H game incorporates this feature very well. It adds a realistic dimension of aerial warfare and at

the same time does not unduly complicate things. The game is playable without an air battle staff — although the post of "Air Marshall" as a subordinate player is fun, so that the game can be played by teams without artificial divisions of responsibility.

Another good feature of *1940* is the handling of armor/mechanized forces. By allowing them to move after combat the designer has given them a qualitative difference so that armor is not just fast, stronger, infantry — something lacking in many strategic games. Like all good rules the armor/mechanized rule is simple and intuitively obvious once thought of. Whether it is enough to give armor of that period the role it actually played is something else again; but the rule is a good one and rather realistic.

A lot of research must have gone into certain aspects of *1940*. The decision to use 10 km. hexes was probably difficult, but unavoidable. As Dunnigan points out in the design notes, division size pieces would have meant an unholy number of units on the board, while including the whole Franco-German border would have required a lot of wasted space in which combat would never take place. The resulting ratio of combat units to playing space is a good one.

The game scale chosen requires corps units, except for the armor which is by divisions or brigades. Given the stacking rules, armor/mechanized forces again have a qualitative difference from the other pieces. Again, so far, so good.

Come now the problems. First, the Combat Results Table has not had the same research as other parts of the game. I agree with the system in which increasing die numbers bring increasingly favorable results; among other benefits this makes it easier to incorporate terrain effects and other factors since you can add or subtract points to the number actually thrown. What combat actually accomplishes is something else again. I do not understand the logic of the involuntary counterattacks which dominate the CRT.

Worse, though, there are no possible results other than retreats or eliminations. There is no "contact" or "engaged," although given *1940*'s time scale such results were very likely. An "engaged" result with armor free to withdraw but infantry "fixed" for a move would have been very realistic.

In fact, the *Bulge* CRT modified for this game would be more appropriate. In *1940* the attacker's advantage is too great — that is, although it takes high odds to assure unit elimination, attackers are relatively safe from damage. The design notes state that in the 1940 time period the attacker had an advantage over the defender. I cannot agree with that. During the Fall of France campaign it appeared that way, but this was due to Allied misunderstanding of what Liddell Hart called "tank time"; it was not inherent in the military equipment available.

The reverse is probably true, in fact: WW II

often took local superiority of 10-1 to achieve decisive results. Even on the corps unit scale a 3-1 superiority was generally required to insure against losses, while in *1940* an air-supported unit may attack at 1-3 odds in the certain knowledge that the worst that can happen to it is a retreat.

The CRT is coupled with stacking rules that at first appear attractive, but on reflection seem inaccurate. They make sense on the technical grounds of troops, time and the 10 km. hex; but this throws open the problem of *what do we simulate?* Sometimes it is better to abstract out principles than to rigidly stick to "real" limits.

The CRT/stacking problem is a very knotty one, because "in 1940 the decisiveness of the Panzer thrusts of Guderian lay in producing paralysis after penetration, not in producing destruction of the enemy's forces in battle. It really eliminated battle." (Liddell Hart, *Deterrent or Defense* p. 183) Now, how do we simulate that, particularly since, at a later time in the war, "Allied attacks rarely succeeded unless the attacking troops had a superiority of more than 5 to 1, accompanied by domination of the air."

Thus, as simulation, the CRT is wrong, for in the actual campaign there were almost no "battles," at least not of the march up and knock down variety; and when this kind of equipment actually engaged that way, the results were grim. In my judgment, *1940* would also be a better game if the CRT supplied were scrapped and a new one substituted; but this would, as Dunnigan notes in his text, change the game entirely. It cannot be done in isolation, and careless changes in the CRT will make *1940* a worse game although they might improve its realism.

The second major defect in *1940* is the Terrain Effects Chart. France and the Low Countries were rather well roaded, and given the 10 km. hexes it is arguable that roads are not relevant. In terms of strict unit-size realism, leaving roads off the map-board makes sense. In terms of abstracting the factors vital to the campaign, it may have been a mistake.

One major qualitative difference between armor and other units, including mechanized, was that everything but armor was *road-bound*. It was the lack of tracked supply and support vehicles that slowed down the Blitzkrieg of 1940 as it was to slow down Patton years later.

Secondly, armor was nearly useless in city-fights. The Germans quickly learned that taking their tanks into house-to-house combat was a drastic error; to clear out a defended town you need infantry and artillery, both rather slow and both confined to roads.

Rivers, too, were more important, especially on a day-to-day time scale as *1940* uses, than the game allows. Crossing rivers under fire, even with air support, was a tough job; and even undefended rivers could and did slow down the tanks. *1940* would have been a better game if more thought had been given to the terrain effects; and in my judgment would have been improved if some of the major road net had been added, although the latter point is certainly open to debate.

Rules changes, even those suggested above, are not the primary requirement for making *1940* a better simulation — or are they? As the designer admits, the Germans *always* win by the rules of the game, even when the armored units are stripped away from them. The question is, would this be true of the real world?



SERIES REPLAY

MIDWAY

Ever since MIDWAY made its appearance in 1964, critics have said that the American player can not win against a competent opponent. Our R&D staff set out to put this theory to the test in the form of a Series Replay contest. The result, aided by an oft ignored ruling in the GENERAL that ships may leave the search board, appears to have disproved that theory. Don Greenwood, our intrepid editor, took on the task of defending Midway and was opposed by one of the local talents from IGB; A.H.'s official playtest panel.

PARTICIPANTS: Bill Barr and Don Greenwood
COMMENTARY: Harold Totten

0500 JUNE 3

USN MOVES: Fleet: G4E
SEARCHES: 1A, 2A, 3A, 4A
SIGHTINGS: A cruiser in A11

The object is to split the board in half, so if not located this turn it can be assured that he is in the Southern half of the board and a further search of 4-7B will insure a sighting if he advances to meet me. If this too proves fruitless, we will have pinned him into the 4-7A corner.

IJN MOVES: Nagara: A11, Carrier Force: A6C, Tone: A7C
SEARCHES: NONE POSSIBLE DUE TO EXTREME RANGE.

I have split my force thus to allow maximum search potential as outlined in "The Rest of the Alphabet" by Lloyd Berger in the May issue of the GENERAL. As is stated in the article this will give me 5 searches by the time the cruisers reach Row D — ensuring that the Americans are found before they can exit D, assuming they come on at full speed for an attack today.

0700 JUNE 3

USN MOVES: Fleet: G4D
SEARCHES: 7B, 7A, 6B, 5B
SIGHTINGS: A cruiser in B7B. A Carrier Force in B5E
OPERATIONS: Readyng all aircraft.

The cruiser to the North is obviously a diversion. I'm sure I can locate him later without too much difficulty as he will in all probability go directly to Row D to get the added ship search capability. I only moved my fleet one square because my opponent will obviously search F this turn. It is my intention to slip into one of the areas he has called next turn while he searches the remainder of Row F.

IJN MOVES: Nagara: B2B Carrier Force: B5E Tone: B7B
SEARCHES: F3, F4, F5
OPERATIONS: Readyng All Aircraft

Assuming he has moved his full capability, the American is now in Row F within my search radius. The search of the middle of the board proved fruitless thus affirming my suspicions that he advances either to the extreme North or South.

0900 JUNE 3

USN MOVES: Fleet: F4E
SEARCHES: 6C, 5C, 4C, 3C
SIGHTINGS: A cruiser in C6D

My intention was to keep his carrier under watchful eye while noting the approximate positions of his cruisers. I suspect he will withdraw his carriers while advancing the cruisers to increase his search capacity. If this is indeed his aim, I want to be in position to eliminate both cruisers prior to nightfall.

IJN MOVES: Carrier Force: A41 Tone: C6D Nagara: C2D
SEARCHES: F1, F2, F3

Changed course Westward with carrier force in hopes of evading U. S. search. He now knows positions of my entire force. I must lose him before his planes come in range.

1100 JUNE 3

USN MOVES: Fleet: E3I
SEARCHES: 6C, 2C, 4B, 4A
SIGHTINGS: Cruiser in C6F, cruiser in C2F, CV force in A4E

Again I have moved to place my fleet in an area which he must consider safe, having just extensively searched the Northern part of the board, he must think me in the South. My main goal now is to keep his cruisers under surveillance, hopeful that I will find his carriers at 1500 in Row A when I'm sure he plans to unite with the Mikuma group.

IJN MOVES: Tone: C6F Nagara: C2F Carrier Fleet: A4E
SEARCHES: E5, E6, E7

My failure to locate the Americans in the center and to the North tells me that he has infiltrated through the South and is now somewhere in E4-E7. I should find him this turn.

1300 JUNE 3

USN MOVES: Fleet to E4D
SEARCHES: 2D, 6D, 3A, 3B
SIGHTINGS: Cruiser in D2E, Cruiser in D6E

My search last turn has confirmed my suspicions that his carriers are retreating to meet his cruisers and as such are no danger to attack me today, and probably will be unable to protect his cruisers as well. Unfortunately, I now have to move into what could well be the teeth of his search. There is also still the chance that he still believes my penetration to be one square further Eastward in which case he will concentrate his search in Row D.

IJN MOVES: Tone: D6E Nagara: D2E CV Fleet: B3G
SEARCHES: D2, D6, D3, D4, D5

Brought my carriers Eastward again to give CAP support over cruisers, noting that his carriers can still not be in range. If search fails this time it will prove only that he hasn't taken maximum movement. When I didn't locate him last time I assumed him to be in E4. If this doesn't work, I

will have no idea where he is other than that he can't yet be in Row D.

1500 JUNE 3

USN MOVES: Fleet: E4B
SEARCHES: D3, D1, D6, E6
SIGHTINGS: Cruiser in D1G
OPERATIONS: 15 Torpedo factors to D1G

The fact that I didn't locate his carrier force in Row 3 indicates that the new cruisers and the carrier group should rendezvous in 3-7A. I am going to gamble on this in an effort to sink his cruisers now despite betraying my position in the belief that his carriers are out of range and that I'll be able to retreat before their advance and try again after nightfall. The location of his cruisers in E zones plus his inability to find me means that his cruisers could be just about anywhere this turn. The move into E4A is to guarantee that I will locate at least one cruiser and also to keep some distance between myself and his carriers.

BATTLE NOTES: Unfortunately, I found only one cruiser. The 15 torpedo factors quickly found and dispatched the Nagara at no cost other than the betrayal of my position. I had hoped to get both cruisers in the same turn but was unable to locate the second which apparently moved out of range in any case.

IJN MOVES: Tone: D7A Nagara: D1G CV Fleet: A3E
SEARCHES: D1, D7, D2, D6, D3

Carriers retreat Westward to combine with the Mikuma cruiser group for added AA protection. Scouting cruisers move into the board's outer limits to search extremities of Row D — not having located him in the center last time. His furthest possible advance still rests in Row D.

BATTLE NOTES: The American has betrayed his position by attacking and sinking the Nagara. The attack came from E4B. It was worth the loss of the cruiser to locate him at last. Unfortunately, I was not within range to give fighter support.

1700 JUNE 3

USN MOVES: Fleet: E4G
SEARCHES: 6E, 6D, 3B, 4B
SIGHTINGS: Cruiser in D6F
OPERATIONS: 36 DB factors and 4 fighters to D6F; 22 Fighter factors CAP over E4G.

I am still working on the assumption that his carriers are out of range and want to bag the other cruiser before nightfall.

BATTLE NOTES: Search reveals Tone in D6F where my planes find no opposition in swamping it at no loss. Had I not been successful in my search I would have sent 6 bomber factors each to D7A, B & C, and E7A, B & C.

IJN MOVES: CV Force: A2H Tone: D6F
SEARCHES: D3, D4, E4
SIGHTINGS: U. S. Fleet in E4G

1300 June 4

Figures ODD: 4-1 8 hours of Jap CAP destroyed

ATTACKER	TARGET	DEFENDING	ODDS	RESULT
D18	Soryu	Atago	1-1	1 Hit
		Mikuma		4 F Lost
T1	Soryu	Mikuma	1-2	1 Hit
				1 F Lost
D18	Hiryu	Zuiko	5-1	1 Hit
		Chikuma		2 F Lost
		Atago		
		Hiryu		
T6	Kaga	Kaga	1-1	1 Hit
				4 F Lost
T3	Hiryu	Kaga	1-8	1 F Lost
		Soburo		
T7	Zuiko	Zuiko	7-1	2 Hits
				4 F Lost
D1	Kumano	Kumano	1-1	2 Hits
				1 F Lost
T1	Kumano	Kumano	1-1	1 Hit
				1 F Lost
T1	Mikuma	Mikuma	1-1	1 Hit
				1 F Lost

Results of Attack: Zuiko, Soryu, Kumano sunk
Two hits on Mikuma, Hiryu, Kaga
15 US bomber factors lost

Kirishima, Haruna, Nagato are not shown, having not participated in the battle due to placement.

1500 June 4

ATTACKER	TARGET	DEFENDING	ODDS	RESULT
D3	Hornet	Northampton	1-1	2 Hits
				3 F Lost
T4	Hornet	Atlanta	1-8	3 F Lost
T3	Atlanta	New Orleans	1-1	2 Hits
				3 F Lost
T10	Enterprise	Hiryu	3-1	2 Hits
				3 F Lost
D8	Enterprise	Enterprise	3-1	2 Hits
		Perseus		3 F Lost
T1	Enterprise	Vincennes	2-1	1 Hit
				3 F Lost

Results of Attack: Enterprise sunk
2 hits on Atlanta and Hornet
18 US bomber factors lost

Yorktown, Portland, Mitsubishi, Astoria are not shown, having not participated in the battle due to placement.

0500 June 5

ATTACKER	TARGET	DEFENDING	ODDS	RESULT
T2	Vincennes	Vincennes	1-2	2 F Lost
D1	Vincennes	Vincennes	1-1	2 Hits
				1 F Lost
T1	Vincennes	Astoria	1-2	1 Hit
				1 F Lost
T7	Hornet	Mitsubishi	3-1	1 Hit
				3 F Lost
D14	Hornet	Perseus	3-1	2 Hits
		Hornet		4 F Lost
T1	Atlanta	Atlanta	1-6	1 F Lost
T4	Hornet	New Hampshire	1-1	1 Hit
				2 F Lost

Results of Attack: Hornet sunk
2 hits on Vincennes
14 Jap bomber factors lost

0900 June 5

ATTACKER	TARGET	DEFENDING	ODDS	RESULT
D5	Haguro	Nagato	1-2	5 F Lost
D6	Yamato	Yamato	1-2	1 Hit
				5 F Lost
D6	Mutsu	Mutsu	1-2	5 F Lost
T1	Haguro	Nagato	1-1	1 Hit
				1 F Lost
BT	Haguro	Haguro	1-1	1 Hit
				1 F Lost
T1	Haguro	Hocho	1-1	1 Hit
				1 F Lost
T1	Sandak	Koifu	1-2	1 Hit
		Sandak		1 F Lost
D3	Sandak	Sandak	1-1	1 Hit
				1 F Lost

Results of Attack: Haguro, Sandak sunk
1 hit on Yamato
20 US bomber factors lost

0900 June 5

Fighter Control: 1-1, 8 Jap, 3 US Factors Lost

ATTACKER	TARGET	DEFENDING	ODDS	RESULT
D1	Atlanta	Portland	1-2	3 F Lost
T2	Atlanta	Astoria	1-2	1 Hit
				2 F Lost
T2	Vincennes	Vincennes	1-2	1 Hit
				2 F Lost
T2	Vincennes	Vincennes	1-2	1 Hit
				2 F Lost
T2	Vincennes	Northampton	1-2	1 Hit
				2 F Lost

Results of Attack: Atlanta, Astoria, Vincennes sunk
Jap loses 12 bomber factors, 4 fighters
US loses 3 fighter factors

HOW THEY FARED:

FINAL SCORE: U.S. 51 JAP 41

Japanese search forces finally located U.S. Fleet on their own. However, the range prohibits both offensive and CAP operations over the Tone. The move into D6 is designed to escape U. S. search efforts which may be reluctant to search the same square two turns in a row.

NIGHT JUNE 3

USN MOVES: Fleet to E41
OPERATIONS: Ready Aircraft

I hope to stay out of his reach until he is found again. With my superior searchpower I hope to find him first tomorrow and launch the first strike.

IJN MOVES: CV Force: A2B

With my cruisers gone, I will proceed North where I will join with the Atago group before proceeding to Midway. U. S. last sighted in E4G.

NIGHT JUNE 4

USN MOVES: Fleet: F5E
IJN MOVES: CV Force: A11

0500 JUNE 4

USN MOVES: Fleet: E6C
SEARCHES: A5, A4, A6, A7

I am proceeding on the assumption that the Japanese will hold their carriers back until 0500 to unite with the Atago group before proceeding West. Therefore, my search should be centered on the A row - finding the Atago group if nothing else.

IJN MOVES: CV Force: A11
SEARCHES: C3, C4, C2

Atago group has joined with main fleet. I am now prepared to give battle. The trick now is to

find him, before he finds me. I am basing my search on the premise that he has advanced from last known position to attack me.

0700 JUNE 4

USN MOVES: Fleet: E6A
SEARCHES: 1B, 2B, 3B, 4B
SIGHTINGS: Combined fleet in B2E

If he is steaming at full speed my search of 1-4B should find what I hope to be his combined fleet. Otherwise, I shall have to be very wary of any approach while the position of his carriers is unknown.

IJN MOVES: Combined Fleet: B2E
SEARCHES: B4, C4, D4

Continuing to search within 7 squares of my position. If his carriers are within sinking range I desperately need to find him before he locates me.

0900 JUNE 4

USN MOVES: Fleet: E5E
SEARCHES: C3, C2, C1, B3
SIGHTINGS: Cruiser in C2G Carrier Fleet in B3C

He has again lost sight of me, making my chances of launching the first attack exceedingly good, after finding his combined fleet in B. It should be an easy matter to shadow him until I can launch a strike because if he alters course Westward I'll have gained another turn, and thereby another point for holding Midway.

IJN MOVES: Combined Fleet: B3C Yura: C2G
SEARCHES: B3, C2, D2, D4, B5

Yura breaks away from main fleet to give extra searching capacity. I don't believe him to be too close or he would have attacked last turn after locating my fleet. Therefore, I am concentrating

my air search on squares which he would have moved into from outside the 7 squares round-trip attack range.

1100 JUNE 4

USN MOVES: Fleet: D41
SEARCHES: 3C, 2C
SIGHTINGS: Combined Fleet in C3E, Cruiser in C21

I have moved into D4 because he has searched it the last two turns, and I doubt he will search it a third time. It would probably be wiser to shadow his fleet until nightfall but if I can manage a strike from a central square which provides a 33% chance of escaping his followup search and allows me the possibility of making another attack prior to nightfall I will do so.

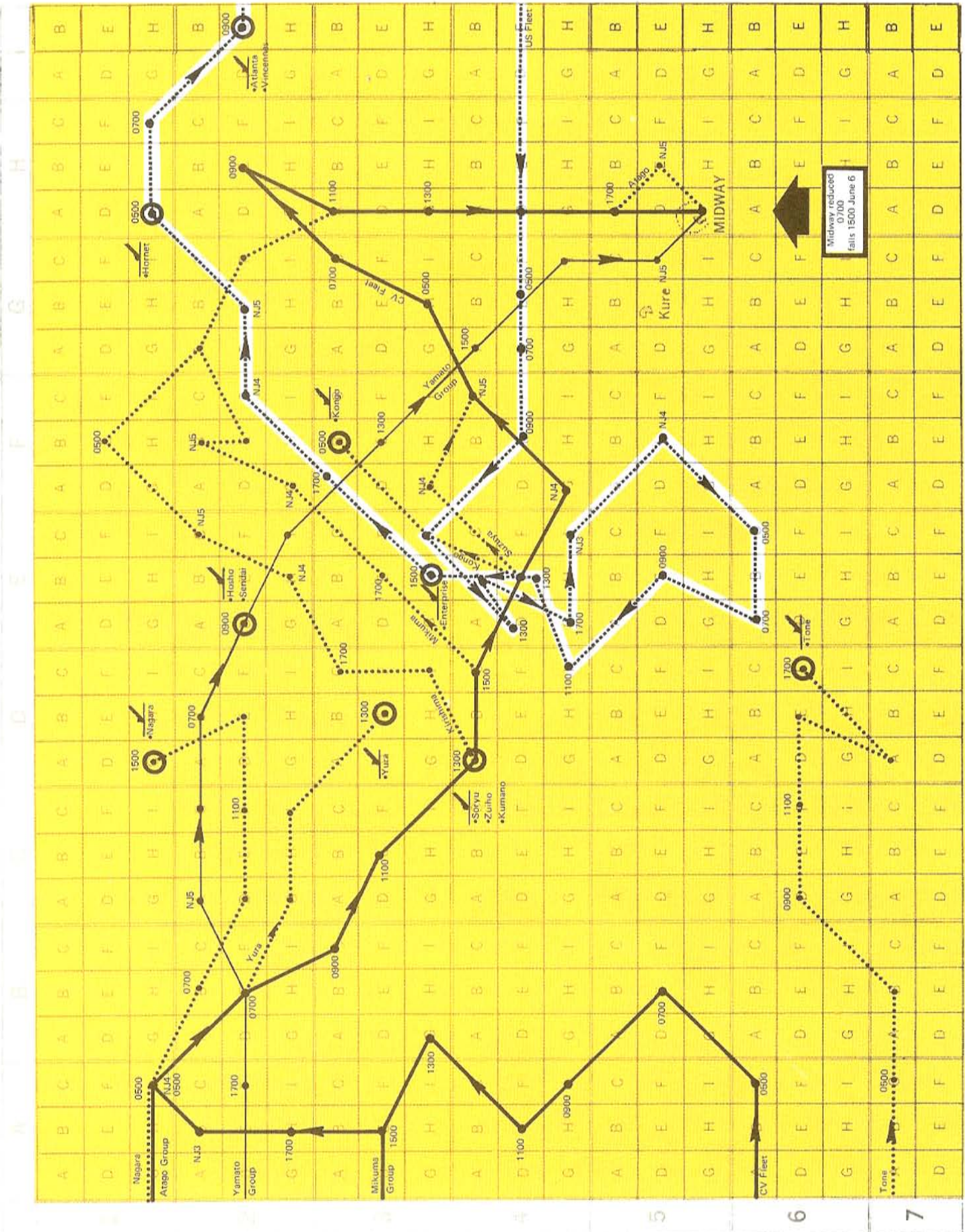
IJN MOVES: Combined Fleet: C3E Yura: C21
SEARCHES: C2, C3, C5, A4, E4

I no longer have the faintest idea as to his location. His failure to attack me the last 2 turns suggests that he is nowhere near me and is hiding in a far off corner. Am setting course for Midway, leaving Yura out as bait for my opponent who appears to have a fondness for knocking off solitary cruisers.

1300 JUNE 4

USN MOVES: Fleet: E4E
SEARCHES: 3D, 4D
SIGHTINGS: A cruiser in D3E, Carrier Force in D4A
OPERATIONS: 5 DB to D3E, all remaining aircraft including Midway forces to D4A.

My move to E4 was prompted by his search of that square last turn and the fact that D4 is susceptible to a ship search. I'll definitely attack him this turn barring an unexpected variance in his eastward course. I should have at least a 33% chance of escaping his 1500 search pattern.



BATTLE NOTES: 5 DB from the Enterprise dispatched the Yura at D31 with an automatic attack. My 32 fighter factors overwhelmed his 6 CAP at 5-1 but still suffered a 6 factor loss when the Midway fighters ran out of fuel on their return to the carriers. The T2 and D6 from Midway assumed the losses taken in the attack. The fact that his decks are still loaded with readied AC makes the prospects for this attack exceedingly good when coupled with the added punch of the Midway planes. My aim: an ambitious effort to sink 3 carriers and cripple his counterattack capabilities. The chances of sinking all 3 carriers are about 30% while the chances of getting two are extremely high. Unfortunately, 4 of the 6 fighters which he lost in the air battle were from the Zuiho, thus minimizing his loss in fighters. The attack on the Yura was necessary to lessen his search capacities next turn, increasing my chances of escape 11%.

IJN MOVES: Combined Fleet: D4A Yura: D3E
 SEARCHES: D3, D4, H4, H5, H6
 OPERATIONS: 6 Fighters CAP over D4A

I am putting up 6 fighters CAP over my fleet which is the amount of my fighter superiority at present. It would be pointless to use more as I have no idea when he will attack, as he has already passed up three opportunities to do so. Until I find him, I will reserve my remaining 26 fighters for my counterattack when it comes.

BATTLE NOTES: His attack has finally come; and from surprisingly close. I was correct in assuming he'd go after Yura. He seems to have a penchant for sinking cruisers at no cost. I feel it was worth the loss to distract five more of his DB from the Hiryu, Zuiho, Soryu, Kumano and Yura were lost to his attack – the first two with a loss of 25 factors in planes.

1500 JUNE 4

USN MOVES: Fleet: E3H
 SEARCHES: D4, D3
 SIGHTINGS: Task Force in D4C, Battleship in D31

My northward move, directly in his line of approach, hopefully will be unsuspected. I believe he will suspect a retreat to Row F which will allow me to escape and launch yet another strike before nightfall.

BATTLE NOTES: Having been found, I hate to give up plans for another strike today as I don't dare to ready aircraft with a strike coming in. The Enterprise was doomed due to my placement which tried to "cut the corners" in fear of the dreaded Jap torpedo plane. Instead, his DB's did the job. The only possibility of saving the Enterprise meant taking a chance on losing both carriers. I therefore directed my AA fire in such a way as to take the maximum losses from the Japanese attackers. The Enterprise went down with almost a full complement of aircraft.

IJN MOVES: Task Force: D4C, Kirishima: D31
 SEARCHES: D4, D3, D5, E5, E3
 SIGHTINGS: Fleet in E3H
 OPERATIONS: All bombers to E3H

The Kirishima is separated from the main fleet for search purposes. I searched the nearby areas using a "doublethink" theory. The retreat to Row F is too obvious.

BATTLE NOTES: Having found the American fleet I concentrated my attack on the Enterprise and Hornet. If he tries to save the Enterprise he may lose both.

1700 JUNE 4

USN MOVES: Fleet: F3A
 SEARCHES: D3, E3, E4, A4
 SIGHTINGS: Battleship at D3C, cruiser at E3E, Task Force at E4E

I now have sufficient victory points to withdraw from the board and win, assuming I lose only a few ships during my eastward retreat. He will probably be able to locate me easily from here on despite the approach of darkness if he guesses my intent. However, he will have to split his forces to both pursue me and to take Midway which he has already dallied too long in reducing. Hopefully, he will continue to send out solitary ships for search purposes which will enable me to pick up easy points with my now diminished airforce.

IJN MOVES: CV Force: E4E, Kirishima D3C, Yamato Group A2F, Mikuma E3E
 SEARCHES: D3, E3, E4, D4, F3, F4
 SIGHTINGS: Fleet in F3A

Mikuma separates from fleet to increase search capacity. Am guaranteed of finding him – unfortunately I have no readied planes and night will soon be here allowing him to escape again.

NIGHT JUNE 4

USN MOVES: Fleet: F2F
 OPERATIONS: Ready A/C
 IJN MOVES: CV Fleet: F4G Kirishima: E2H Yamato Group: B2E Kongo: E3I Suzuya: F3G
 SEARCHES: E2, F2, E3, F3
 SIGHTINGS: Fleet in F2F
 OPERATIONS: Ready A/C

Separated one BB and one cruiser from main fleet for night search purposes.

NIGHT JUNE 5

USN MOVES: Fleet: G2E
 SIGHTINGS: CV Fleet in G3H, BB in F3B

If he suspects my intentions he will have 2 more shots at me with aerial attacks. I must be ready to pick off something of his as he is sure to get at least my crippled ships.

IJN MOVES: Suzuya: F4C, CV Fleet: F4C, Kongo: F3B, Mikuma: F2B, Kirishima: E2C, Yamato Group: C2A
 SEARCHES: F2, F3

The sighting at F2F convinces me that he is going to try to get off the board – otherwise he would never back himself into a corner as he is now doing.

0500 JUNE 5

USN MOVES: Fleet: H1G
 SEARCHES: 1G, 2G, 3G, 3F
 SIGHTINGS: CV Fleet: G3H, Kongo: F3B
 OPERATIONS: 6DB, 6TP, all fighters to F3B; all remaining bombers to G3H

BATTLE NOTES: Bill has made a serious error in leaving the battleship in the open. The force I have sent guarantees that the Kongo will sink at minimum loss to my aircraft – an expensive price to pay for an extra search.

There is some question as to whether the attack on the Chikuma was worthwhile. 6 factors lost for 1 hit on a cruiser does seem extravagant. However, I plan to leave the board in 2 turns which means there is only one air strike left in the game. Planes, not being worth points, have little value now except for what they can sink on the 0900 turn. Perhaps I can pick off Chikuma then.

Again I made a serious error and did not adjust my defense to compensate for the Hornet's weakened condition. It cost me a carrier and I can offer no excuse for such shabby play. His attack had a probability of 3.1 hits, when only 3 were needed. It also would have sunk the Atlanta and seriously threatened the Vincennes. Therefore, realizing that the score still left me 1 point ahead and that the surplus planes could land on Midway, I opted to give up the carrier in hopes of being able to hold my own defensively at 0900 when he will only be able to hit me with 16 bomber factors.

The situation is extremely volatile and capable of going either way. Doubtless he will find me on the 0900 turn and sink at least the Atlanta. I do need to deep-six at least one more Jap ship. However, my main advantage now is that Midway has not, as yet, been reduced. He no longer has an effective airforce capable of reducing it in one raid. With the 3 battleships he currently has in his main fleet heading towards Midway it appears that it will be a long task – which should mean another 6 or 7 points and a clear margin of victory. As a result of attacks this turn the Kongo and Hornet were sunk. Additional damage was administered to the Chikuma and Vincennes.

IJN MOVES: CV Fleet: G3H, Kongo: F3B, Mikuma: F2E, Kirishima F1E, Yamato Group: C2C
 SEARCHES: F1, F2, F3, G3, H1, H2, H3
 SIGHTINGS: Fleet: H1G
 OPERATIONS: All aircraft to H1G

Hosho's aircraft are sent on a one-way mission. They assume the losses of the attack. He is obviously now trying to get off the board. I must hit him with every available plane.

0700 JUNE 5

USN MOVES: Fleet: H1I
 SEARCHES: 2G, 1G, 3G, 3F
 SIGHTINGS: BB and CA: 2GA Task Force: G3C

He seems to have totally ignored Midway. This will cost him any remaining chances he has for victory.

IJN MOVES: CV Fleet: G3C Kirishima, Mikuma G2A, Yamato Group: D2B
 SEARCHES: G1, G3, G2, H1
 SIGHTINGS: Fleet in H1I
 OPERATIONS: Ready all A/C

I will get one more strike at him in the I Row. The game appears lost if he does indeed go off the board.

0900 JUNE 5

USN MOVES: Fleet: I2E
 SEARCHES: 2H, 2E, 3H, 1H
 SIGHTINGS: Yamato Group: E2D, CV Fleet: H2E
 OPERATIONS: All bombers to E2D; all fighter CAP over fleet.

BATTLE NOTES: Discovery of Yamato group removes all doubt of Midway's status. Now that all his ships are accounted for I am positive Midway will not fall for many turns after I exit the board, insuring me plenty of insurance victory points. The game is mine.

This time I made no mistake in set-up. His success in sinking the Atlanta and Vincennes was due primarily to good fortune. I, on the other hand, sent all remaining bombers to E2A on a one-way mission. With my limited bomber strength an attack on his carrier force would be hopeless. I could only inflict a few meaningless hits on outlying cruisers. This is my last turn on

the board, I must get points now. Despite the three battleships, he has limited AA power to deal with a dispersed attack coming from many directions; a possibility thanks to my remaining 3 torpedo planes. I have a good chance of sinking both the Hoshio and Sendai which are worth 6 points. To save them, he would have to sacrifice a battleship worth far more. The loss of the planes is of no concern. They can no longer do

me any good.

IJN MOVES: CV Fleet: H2E, Yamato Group: E2D, Kirishima & Mikuma: G2F

SEARCHES: G2, H2, I1, I2, H1

SIGHTINGS: Fleet in I2E

OPERATIONS: All A/C to I2E except 3 fighters to CAP at H2E.

I do not care about loss of planes at this point. I must sink ships, preferably the Yorktown, but

if that is unfeasible at least the two crippled cruisers.

At this point the game was virtually over. The American left the board ahead 14 points. It would be the 1900 turn before any ships reached Midway. Combined bombardment and bombing did not reduce Midway until 0700 of June 6th. The island fell to the Japanese at 1500, June 6th – giving both players 15 points for Midway.

From the Judge's Corner

Harold Totten supplies us with the neutral commentary for this month's SERIES REPLAY. MIDWAY was Harold's 1st AH game and one which he has played far more than any other in the line with an approximate 90-10% win-loss ratio. A player of the game for five years now and the author of the best article yet to appear on the title (Vol. 9, No. 4), Harold appears to be unquestionably qualified for the task. His turn by turn critique on the game appears below.

0500 June 3: The USN should have readied their aircraft at this point. This is mainly because of my predilection for a "suicide" attack at long range should the carriers become sufficiently exposed to make the loss of aircraft worthwhile. The IJN uses the recent Berger strategy, which in my mind is quite lacking. It assumes a basically stupid American player in order to be successful. The American sits back and picks off the solitary scout cruisers with little or no loss in aircraft. It also has a great weakness in that it just *begs* the American suicide attack early in the game, which if successful means the end of Japanese hopes.

0700 June 3: The commentary concerning the searches during the first day is quite instructive, as the American consistently outguesses his opponent. The delayed movement tactic *should* have also been used by the Japanese player.

1100 June 3: The American searches are consistently on target, due mainly to insufficient evasive tactics. The IJN will get a chance to correct this when night falls. At this point, however, the American should have launched all his carrier based aircraft and attacked the exposed CV's. With only 2 BB's and a CA providing covering fire the American should be able to get all four (or at least three) of the carriers, especially since the CV's have readied aircraft on their decks. The American is immune to counter-attack because the Japanese cannot afford to suicide as they need plenty of aircraft to reduce Midway. All in all, I would say it's a shame such a chance at decisive victory had been passed by.

1300 June 3: The Japanese finally catch on to the American movement strategy. The difficulty here is not knowing exactly what the American will do. Some of my games reached June 5th before there was any significant contact, so his slowness in this respect is not surprising or even unusual.

Night June 3: Not only is the Japanese move at this point extremely questionable, it is downright stupid! Both players have a reasonable idea of where the other's fleet is and in what direction they are headed. The American changes his positioning, moves away, and eventually will strike at point-blank range – *exactly where the Japanese player doesn't expect it.* The Japanese player should head for Midway at this point,

taking a *southern* course in order to avoid the American search. He should also adopt some more intelligent search evasion procedures. Instead the IJN will ignore Midway as per the Berger strategy. Delay here is disastrous. Mr. Berger notwithstanding, and it will prove to be a decisive factor in the game.

1300 June 4: The Japanese defensive set-up on this turn is rather mediocre. Notice the thin-skinned *Soryu* lacks BB cover, and is subsequently sunk. Ability to withstand attacks *in a large fleet formation* is often a function of available BB cover. The American hits the weak side with only the *Kongo* covering and scores.

1500 June 4: Now it's the American's turn to make mistakes. This staggered system, used as an antidote to torpedo attacks, actually *decreases* available firepower against divebombers, while failing to give a significant rise in the firepower available against torpedo bombers. What surprised me here was that the Japanese player did not employ the "6-9-6" attack of the Berger strategy, which is about the only sound advice in the strategy. Apparently the lack of aircraft makes the "6-9-6" less effective, and that is why the tactic does not make its appearance in the game at any time.

0500 June 5: The *Atago* is moving in the wrong direction. What is worse, the Japanese player is splitting off single BB's, which can be sunk with little American losses. It would have been wiser to split up into two groups, one group going for Midway and the other after the CV's. If the Japanese player would have taken the southern course he would have been able to avoid the major problem of reducing Midway – which is not an enticing prospect with aircraft depleted. The IJN policy of using ships as search material is extremely faulty, with the exception of their use at night or for a turn or two before the American discovers them. By leaving these ships detached the Japanese search tactics have all the subtlety of shooting a cigarette out of someone's mouth with a shotgun, and the American can readily take advantage of these obvious movements.

The American shows a rather poor tactical fleet formation for the second time. All the exposed ships are those with hits already, and this allows an effective IJN attack without many aircraft. The vulnerable *Vincennes* is definitely misplaced. The American should make the undamaged *Yorktown* a somewhat better target than the *Hornet* because the *Yorktown* can absorb more hits.

One can hardly fault the Japanese set-up – it is sound. The American should have split his T3 into a T2 and a T1 to attack the *Chikuma* from both sides, yielding better chances to sink the ship. This attack for points is not unusual in the "end game". As the American, I once had a game rest on a 1-3 attack on a CL with a single hit remaining, and I needed a "six" desperately.

0900 June 5: Amazingly, the IJN continues to ignore Midway, which should have already been reduced. It will take at least 5 turns to get to Midway, who knows how long to reduce it, and then 4 turns to take it! All this wasted time means the American player will profit from many Midway points. Barring any extraordinary events on these last attacks, the game is already over and the American has won.

The final American attack is extremely clever, and continues to "deep six" IJN ships. The American T's are extremely valuable in that they allow multiple attacks on a single ship – a tactical point of great importance. Without these T's an effective divebomber attack is much more difficult – any history of the battle is sure to point that out.

The American also finally produces a sound tactical formation. Nevertheless the Japanese player has some somewhat unusual luck and destroys two ships using low odds attacks. But not even Midway can help him now, as the American left the board with a 14 point margin.

Had the Japanese player played a stronger strategy, he may well have won. The ships he lost on solitary patrol were the *Nagara*, *Tone*, *Yura*, and *Kongo*; a grand total of 13 points! Had these ships remained with the fleet, and had Midway been attacked instead of ignored, then the Japanese player would have had a viable chance of victory. It would seem that "the rest of the alphabet" doesn't spell "Japanese victory."

On the other hand, I think that the American player could have obtained a greater victory had he tried the suicide attack and then left the board. Nevertheless, I think a 14 point margin is a decisive victory without a doubt. The American had uneven abilities, in that he seemed to be very good at the strategic aspect of the game, while being deficient in regards to tactics (which he later improved, but the game was already decided). The strategic aspect of the game is the more difficult, and requires a more intuitive type of thinking.

The USN wins the game by making the dual task of the Japanese force too much to handle, not by hitting "the Japanese carriers first, then escaping untouched, and coming back to hit the Japanese carriers once more," as Mr. Berger insists in his article. If these were the game's victory conditions then the game we just discussed was a Japanese victory! I feel any strategy that does not fit into a balance of objectives and methods is patently absurd, and the Berger strategy fits the bill.

In summary, the IJN was defeated because he provided easy targets and ignored Midway. The USN won because he took advantage of the easy targets, and was able to evade detection while consistently and accurately guessing Japanese intentions. It's a combination which is hard to beat.

Dunnigan prefers the term "idiocy" for the strategic mistakes of the Allies during the campaign. Although that is perhaps too strong a term, let it stand; but what would have happened if there had been no "idiocy" factors? As Liddell Hart points out, the advance through the Ardennes could easily have been halted; and he, at least, was convinced not only in 1941 but at the end of his life that the defense could have dominated had it been properly conceived. If he was right, then 1940 is a bad simulation of warfare of the time, and a number of rules changes are needed — but if they are made, the game may be no fun at all. If that's the cost of more accurate simulation, Dunnigan and A-H made the proper decision. 1940 is too good a game to be ruined by quickie efforts at simulation.

However, if we concede that the game as published is an accurate simulation — a concession I do not make, but grant for the following discussion — then there is one glaring omission. Although 1940 has an admirable list of "what ifs" including likely possibilities and some intriguing improbables, for some inexplicable reason it leaves out the most likely of all: British development of mobile tank and mechanized anti-tank forces.

On May 28, 1937, Leslie Hore-Belisha became British Secretary of State for War, and immediately invited Capt. Basil Henry Liddell Hart, then Military Correspondent for the London Times, to become his personal advisor. The story is told in all its tragic detail in Volume II of Liddell Hart's *Memoirs*: the upshot was that very few of Liddell Hart's ideas were actually incorporated into the British military system.

Suppose, however, that they were: that his "Role of the Army" paper prepared on Hore-Belisha's appointment became, as it very nearly did, the official policy of the Imperial General Staff. Britain would have entered the war with several armored divisions instead of only one; and most of her infantry units would have been truly "mechanized" in that they would have had not only the motor equipment, (they had that anyway) but the appropriate tactical doctrines.

Suppose, in other words, that we play the game with the "historical" orders of battle, but the British have three "5-8" armored divisions instead of their 8-8 infantry corps, while the rest of the British forces can use the "mechanized" rules. Other alternatives are possible, including combinations in which Allied air doctrines are better developed, more or fewer British armored and mechanized units are introduced, etc. This seems in my judgment to be a far more likely situation than one in which the Maginot Line was not built, so that the French had many more mobile forces. Why it was not included in the "what-ifs" of 1940 is a mystery to me.

Actually, the mystery is probably of my own making. Dunnigan has always been much stronger on game design than historical research, (although his research into military *technology* and the nitty-gritty of weapons systems capabilities has few peers). There are ample clues that 1940 suffers from the customary biases of its designers. For example: on German Order of Battle Alternative No. 1 there is the following comment: "This assumes that there was no German invasion of Denmark and Norway in the Spring of 1940. It also assumes that the British did not become tempted to invade Norway themselves (a possibility which seems to have existed primarily in German minds)."

Now, even the most cursory examination of the history of 1940 reveals that the British were not merely tempted, but actually did invade Norway, not in reaction to a German move, but on their own hook. The only controversy remaining is just how far the British were prepared to go.

It is true enough that German Admirals were convicted at Nuremberg of "waging aggressive war" for planning the invasion of Norway; but the rules of the trial prohibited their calling British officers to testify about the British plans for the same thing, and documents later released make it quite plain that both sides were guilty.

For an unimpeachable source, see Lord Hankey (formerly Sir Morris Hankey, Secretary to the War Cabinet) *Politics, Trials, and Errors* Oxford, 1950 p. 78. Lord Hankey approved of Churchill's "prescience," in planning a pre-emptive invasion, and notes that the British actually mined Norwegian waters 24 hours before the Germans landed, while British troops were on their way even as the Germans came ashore.

A more popular source is Laurence Thompson, *1940* New York: Wm. Morrow, 1966. On pp. 51-52 Thompson describes the *Altmark* incident: the *Altmark*, supply ship to the *Graf Spee*, escaped to Norway and took refuge in a fiord, but was driven aground in neutral waters and there boarded by HMS destroyer *Cossack*. When the British sailors came aboard they asked the prisoners "Any English here?" and when being told there were, coined a popular cry: "Well, the Navy's here"! This early British violation of Norwegian neutrality was praised by Churchill.

Thompson shows that Churchill planned the invasion not only of Norway, but of Sweden as well, but his plans "met with resistance inside the War Cabinet, some members of which believed themselves to be fighting for the rights of small nations such as Norway . . . finally the War Cabinet reluctantly agreed to land an expeditionary force for Finland in Norway, if necessary in the face of armed Norwegian resistance . . ."

"[Field Marshall] Inrside has left us a memorable picture of these decent peace-loving men steeling themselves to bloody resolution: Halifax recoiling from the shedding of innocent Norwegian blood, Chamberlain inquiring what effects an 8 inch shell would have on a troop transport, then advancing an opinion that he was prepared to risk a 4 inch shell but not an 8 inch. The Cabinet was saved from such horrors by the Finns, who on the night of the final decision to force a landing in Norway announced that they had accepted Russian terms."

Churchill, however, was not interested so much in Finland as in the Swedish iron mines at Galivare. He continued to press for occupation of Norwegian ports and mining of Norwegian waters; and the result was that the British and German invasions took place, by coincidence, almost simultaneously, the Germans being so successful that Chamberlain was forced to resign.

The irony is that Churchill, who had precipitated the Norwegian disaster, became Prime Minister after Chamberlain's fall. It is even more ironic that he would not have got that post if Hitler's successful invasion of France hadn't happened when it did. Chamberlain and the King did not care for Churchill and preferred Halifax, who declined; and if the crisis had lasted much longer Lloyd George would probably have been recalled as Prime Minister. Guderian's slash into France created such a crisis that a Prime Minister was needed immediately, and Churchill got the office

almost by default.

The Norway incident is not very important; but I have labored the point because it is illustrative of the kind of serious defects often found in Dunnigan designed games. While he is very strong on military technology, he is weak on the broader pictures, both military and political; unfortunately, they tend to make as many unqualified statements about the one as the other, and the unwary reader, impressed with their technology scholarship, is tempted to put more faith in their other judgments than is always deserved.

The Campaign of 1940 has received a great deal of analysis, and deserves more. My own suspicion is that it defies simulation: that is, that no mere game which realistically incorporates the capabilities of the forces of the time will produce the results actually obtained in battle. The real question, though, is this: has the A-H game been successful in the simulation of 1940 equipment and forces?

The campaign analysis suggests that the Schlieffen Plan which Plan D was designed to counter may have been superior to the Mannstein Plan actually adopted by Hitler. The argument runs thus: had the German forces chewed into Belgium and pushed the Allies south, there would have been no escape at Dunkirk.

This point requires more analysis than I can give here. However, it is appropriate to quote from the memoirs of the one man most responsible for the Blitzkrieg of 1940. Both Guderian and Mannstein acknowledge their indebtedness to Liddell Hart, Guderian going so far as to describe himself as "disciple and pupil" to the British newsman-theorist.

Liddell Hart (*MEMOIRS*, Volume II) says of the campaign:

"The collapse of the West in 1940 was a world-shaking disaster which changed the course of history for the worse. Yet never was a great disaster more preventable.

"The panzer forces' thrust could have been stopped long before reaching the Channel by a concentrated counter-stroke with similar forces. But the French, though having more and better tanks than the enemy, had them strung out in small packets in the 1918 way. The one British armored division available was not despatched to France until after the German offensive was launched . . ."

"The thrust could have been stopped earlier, on the Meuse, if the French had not rushed into Belgium leaving their hinge so weak . . . Guderian's Panzer Corps, reaching the river early on May 13, stormed the crossings that same afternoon (the fourth day). A 'tank-time' pace of action bowled over an out-of-date 'slow motion'.

"But this *Blitzkrieg* pace was only possible because the Allied leaders had not grasped the new technique and so did not know how to counter it. The thrust could have been stopped before it ever reached the Meuse . . . by minefields [or] the simple expedient of felling trees along the forest roads which led to the Meuse. The loss of time would have been fatal to the German chances for the issue turned on the time factor."

Of the Mannstein plan, Liddell Hart says its adoption "changed the whole outlook of the war."

"For the old plan, with the main advance going through the canal-lined area of central Belgium, would in fact have led to a head-on collision with the best part of the Franco-British forces, and so would probably have ended in failure — shaking Hitler's prestige."

In fact, the 1940 campaign illustrates a time-honored principle: the line of least expectation, particularly one considered impassable, is often better than a frontal assault. We generally only hear of this when it works, of course: the 1940 notes call the Allies stupid and idiotic for not realizing that the Ardennes was passable by armor, but we should have just as quickly called the Germans stupid if their attack had been bogged down there. In 300 BC Pyrrhus the Red King was told that a night march in forest by a

Continued on page 12

Dear Sir:

In Contest Number 53 the objective is "move and attack in a decisive fashion that affords the best opportunity of capturing Tobrukh before the British June reinforcements arrive." However a liberal interpretation of the situation gives the German player a 100% chance of gaining Tobrukh in the required amount of time. The contest states that CARPATHIAN is on the coast road moving from HB to Tobrukh, however no position is given for the unit. I assumed that the unit had not yet reached the SIDI OMAR - SALUM area, such that 21/5 is able with the ROMMEL bonus to reach the coast road at J34, and move back westerly toward 41/7 and 41/11 into H27. This eliminates these two Allied units (three to one surrounded) and with 21/5's advance into I27 seals Tobrukh off with interlocking axis ZOC's. Because 9A/20 is also being attacked at 3-1 unsurrounded and retreated to H25 and then to I25. With 15/33 at K26, 9A/20 and 2/3 are also eliminated on the allied turn when they are forced to attack 15/8 at 1-3 odds with no legal retreat path open to them.

The way I have analyzed the situation will always result in the Axis player capturing Tobrukh. However, assuming that CARPATHIAN is blocking the coast road at SIDI OMAR and SALUM, 3-1 attacks against 41/7, 41/11 and 9A/20 with retreat away from Tobrukh and advances by 21/5 and 15/8 will always result in the attainment of Tobrukh, though with less material gain due to allied elimination.

I think that in view of the fact that Tobrukh can be gained by a number of different approaches, the objectives of the contest should have specified clearer tactical results than those given. The result of "the best opportunity of capturing Tobrukh before British June reinforcements arrive", leaves a number of solutions that the Axis player may use. However if the objectives had been more specific, solutions can be compared against each other for maximization of the objectives. Objectives such as:

- 1) minimize Axis losses
- 2) maximize Allied losses
- 3) combination of 1 and 2
- 4) minimize supply uses

would help to define the best result, that results in capturing Tobrukh. Without specific objectives, all solutions become feasible due to individual interpretations of the Axis' game strategy. Effective arguments can defend individual game strategy, such that it becomes unfair to say which solution is "the" correct one for the contest. In this particular situation, 8 of 9 factors for the Allies can be effectively eliminated around Tobrukh. I would assume that most solutions would maximize Allied losses and minimize Axis losses, and this is how I saw it. However, more specific objectives would make the contest more meaningful.

Edward Patrick, Jr.
Box 665
5 Nash Rd.
West Acton, MA 01720

Dear Avalon Hill,

I am totally impressed by the re-publication of the old Tactics II. In a time when prices are going bananas it is comforting to know that AH is giving new people a chance to get a game for the long-gone price. Some people have condemned AH for the quality of the General. They don't stop to think that AH gives them a chance to advertise free, put in their two-cents like me, and get a chance to win games in the contests. And let us not overlook the 25c coupon, which is handy to have. I figured it out and in the years I've taken the General, I have come out with a profit from the coupons and some contest victories.

And even more bargains, with every new subscription a person brings in, he or she gets a free year subscription. What other gaming mag can offer such a good deal without raising prices?

And let AH's detractors think about this. AH could easily sell the Tactics II game for the average price and not lose a cent in the process. But it seems I am overlooking the fact that if more wargamers are introduced to the hobby, AH will make more money. But I can't overlook the fact that in the process AH sure is helping a lot of wargamers to enjoy the hobby.

Robert Olimski
3804 Quill Court
El Paso, Texas 79904

► Blush! We try.

Letters to the Editor ...

Gentlemen,

It was with great interest when I read Phillip Costaggini's suggestion in the General, Vol. 9, No. 6 suggesting a method to determine the Allied order of battle using die roll outcomes for France 1940. Indeed, Mr. Costaggini has found a way to produce a die roll within the range of 1 and 11 corresponding to the various Allied orders of battle. However, I would like to point out that Mr. Costaggini's method does not produce equal probability for the occurrence of the 11 numbers. As pointed out in the appendix, out of 216 cases, only 1 instance occurs wherein the French general gets to play alternative 11, and in only 1 out of 10 cases will the French obtain a strength rating of less than 80 (i.e. orders 8, 9, 10 and 11) while one third of the time the German will have less than 80 strength points (i.e. orders 5 and 6). Thus, while Mr. Costaggini's suggestion may be welcomed by the French player, the German player may not be as enthusiastic about it. To be fair to the German player and reiterating my original belief that any of the eleven French orders of battle is equally probable, a simple method may be devised:

Throw two dice and determine the French order as follows:

	DIE 1					
	1	2	3	4	5	6
D	1	1	1	1	2	2
1	2	3	3	3	4	4
E	3	5	5	5	6	6
2	4	7	7	7	8	8
3	5	9	9	9	10	10
4	6	11	11	11	x	x

x - indicates throw both dice again.

If Mr. Costaggini disagrees with the equal-probability hypothesis (despite the use of the handicapped option), this simplified method can still be applied by varying the number of occurrences of each order.

Peter Hsu
1560 Bloor St. E. No. 35
Mississauga, Ontario

Gentlemen:

If you think that maintaining a wife and an interest in Avalon Hill wargaming is difficult, try selling AH games for a living. After nine months of owning a hobby shop I have decided that marketing an unknown (in this town) product is definitely more difficult.

Of course, Avalon Hill games are not the only things we sell. But I assumed since I have such an overpowering passion for AH, others naturally would also. And I expected to sell out of our AH inventory within hours of opening.

It did not quite happen that way. Some problems were immediately evident. First, Olatheans had gotten along very well without a hobby shop for years and were apparently determined to keep it that way. Second, most of the buying public in Olathe had never heard of Avalon Hill. But I thought that fair - Avalon Hill had never heard of Olathe.

However, I was determined to rock the collective consciousness of the consumers by promoting wargaming to every customer who walked through the door.

"Want to buy a war game?" I'd cry. Most flashed a peace sign and walked out. It went on like that for several months.

The situation has improved a bit since then, but, to date, I have not actually discovered a sure-fire way of selling war games. I do, however, have a few modest suggestions which Thomas Shaw may even want to try.

When the customer says he has never heard of Avalon Hill, attempt to shame him into making the purchase. I have found that if you shout to the back room, "Hey, here's an idiot who never heard of Avalon Hill," you can usually expect some sort of reaction from the customer.

If the customer shows a slight interest, extol the virtues and advantages in playing an Avalon Hill game over some other conventional game, as for example chess.

"Once you play this game you'll never play another game of chess."

"I don't know how to play chess," he might say.

"Hey! Here's an idiot who never played chess!"

If, after that, his interest continues, attempt to give him the impression that if he buys, he is getting a special price. Say something like: "Normally this game is \$9.98, but for you, only ten dollars."

And finally, always ignore such demands as, "I want my money back."

Russell E. Saltzman
Post Office Box 141
Olathe, Kansas 66061

► Sorry Russell, you're a little late. Tom Shaw has been using the same tactics for 7 years.

Dear A.H.:

I am writing to tell you that Origins has to be the best, yes best, game that has ever been put on the line. Want to know how great it is? My old high school civics teacher ordered two of them for her class to aid in instruction about political maneuvering in the world. It is the best. Congratulations.

I would also like to reply to W. B. Seairight's article, "Urals Before 1942." If you don't want to go to all the trouble to make new units, etc., try this suggestion. Simply double the Movement time. Each move would be a half-month. Most other A.H. games run 40-50 turns, but Stalingrad only runs 26. This is quite ridiculous. This is borne out by the fact that a unit of Manstein's corps drove to Daugavpils in a little over a week. But as the rules, you can barely get there in one month. This rule, I believe, will perfectly balance this great game.

Bill Fisher
Box 215
Missouri City, Texas 77459

Dear Sir:

CHANCELLORSVILLE may have had its shortcomings as a game, but its demise left a void in simulation gaming that to my knowledge remains unfilled. It dealt with the problem of an opposed river crossing operation, to be accomplished with assault boats and pontoon bridges. This is quite a standard and important operation, not easily understood, so a game on that subject might be worth some thought (either set in Russia or again at Chancellorsville).

The real value of STALINGRAD seems to me often overlooked in all the excitement. It simulates the problem of necessity of lightning victory when at war against a country of vastly superior resources; this is really what the game is all about, but it's a quite abstract idea when you think about it. The game makes it all very concrete.

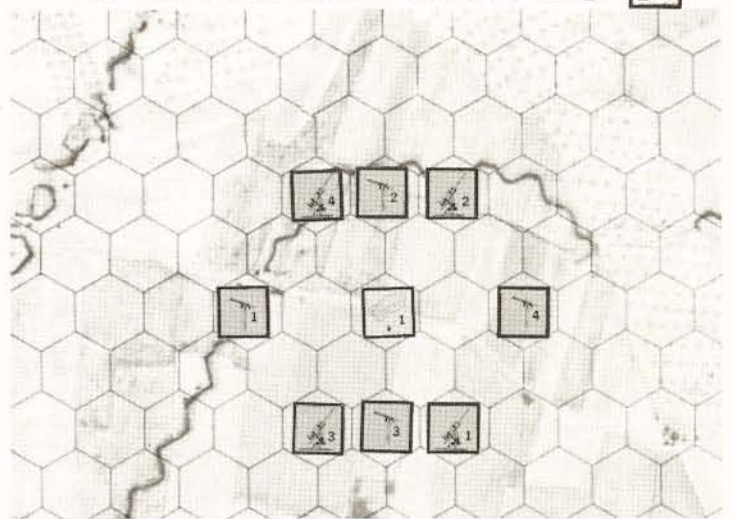
I'm rather wary about the current trend toward increasingly "mechanical" wargames, in which the situation dictates the move and little or no judgement is required. These games are definitely valuable and have their place, but they also have their limits. Thus, PANZERBLITZ was very valuable in teaching weapons interrelationships and small unit tactics. However, once you've mastered these, it becomes rather like a slide rule - it is useful in working out whether a particular military operation would be feasible. But there's no need to "think out" the individual moves - you just set up the problem and work out the answer.

Along the same lines, FRANCE, '40 was worth the purchase price for the Idiot's Game alone. Also, for the first time, the "mechanized after-move" helped me to really understand the blitzkrieg breakthrough - and why, for example, the Chinese were not able to exploit non-mechanized breakthroughs in Korea. But beyond this, as a game, it quickly becomes awfully mechanical - one tends to feel more like an office clerk than a military commander.

Again, I regard both these games as extremely valuable, but it should be recognized that their value is of a very limited and specialized sort.

Mark Saha

CONTEST NO. 56



RICHTHOFEN'S REVENGE

This issue's contest picks up in the middle of a free-form Tournament-level balloon busting scenario of RICHTHOFEN'S WAR. Shown in the diagram is a typical defense of four AA units and four MG units protecting a German observation balloon which is at an altitude of 400 meters. As the British pilot flying a Bristol/f2b, you must initiate a series of two movement-and-fire turns that MAXIMIZE the possible damage to the balloon and MINIMIZE the possible damage from the anti-aircraft defenses AND the possible destruction in the event of spontaneous ignition of the balloon (HINT: acceptable percentage = 33% overall for spontaneous ignition). Both the balloon and the aircraft have seven accumulated damage boxes filled.

Indicate the path of the BR/f2b and the hexes from which it fires on the diagram, and fill out the chart as indicated with the pertinent information. Initial starting hex, speed, and altitude are

determined at the discretion of the entrant. Initial starting hex may be off the diagram so long as distance from first hex of diagram is indicated. Judges will give consideration to initial starting hex as possible point of the (hypothetical) previous turn's fire position. Neatness counts! An illegible or ambiguous entry will be invalidated. Contest deadline is August 20, 1973.

To reply to the contest, fill out the contest entry form on the Reader Response page; DO NOT cut out this section of your magazine. It is intended as a permanent record of the contest for you to keep. Indicate movement by drawing a line on the contest map.

TURN	SPEED	ALT	machine guns fired			No. AA & MG return fire	
			front	rear	range	AA	MG
A							
B							
Starting Speed			Starting ALT.				

READER BUYER'S GUIDE

TITLE: STALINGRAD SUBJECT: Corps level invasion of Russia, 1941 \$7.00

STALINGRAD was the first of the "classics" to go under the scrutiny of the RBG. As such, we awaited the tabulation of your ballots with considerable eagerness. The results were not particularly surprising; sticking pretty close to what we had envisioned.

Records were set for fine ratings in the two categories that count for the "Classics" group: "Ease of Understanding" and "Completeness of Rules" both of which fared extremely well with 2.07 and 2.52 ratings. It is these same traits coupled with the convenient playing time which stand the game in such good stead among players who are competition oriented. These three factors are what make STALINGRAD a game first, and a simulation second. Playing time is a consideration of a game's makeup that many designers ignore. Our studies have shown that the average wargamer wants to play contests which are longer than conventional games of chance, yet tend to shy away from marathon undertakings which can't be brought to a conclusion in one setting.

Everything didn't come up roses however. Your feedback shows that if anything, the bookcase format has spoiled you in regards to what you expect to receive in a game. The old style mapboard graphics which did the job so well no longer appear to suit your fancy if one is to believe the poor ratings which set three negative records for the RBG in the Physical Quality, Mapboard, and Components categories. The absence of such niceties as slick battle manuals in the old games may be part of the reason why. However, it should be pointed out that the ratings in the 3's are still excellent testimonials to the physical quality of Avalon Hill games. The

game's components suffer only in comparison to the mapboard of a France '40 (1.75).

'Grad also set negative records for ratings in the play balance and realism categories. Here, the degree of the rating is such that there would be room for concern were it not for the misconception that runs rampant on this title. Ever since the game came out people complained that a competent Russian could not lose. However, everyone was playing the game wrong!

The rules quite plainly call for exchange at attack factors, something which almost everybody ignored for years. Given exchange at attack factors and the suggested 4-5-6 replacement option the game is evenly matched! In fact, many experts swear by the Germans chances under such conditions.

The overall value rating of 3.04 and the cumulative score of 3.44 are both very creditable characteristics of this granddaddy of the Avalon Hill line. Without the misconceptions on play-balance STALINGRAD would have fared very well indeed.

1. Physical Quality	3.43
2. Mapboard	3.74
3. Components	3.40
4. Ease of Understanding	2.07
5. Completeness of Rules	2.52
6. Play Balance	4.37
7. Realism	5.15
8. Excitement Level	3.28
9. Overall Value	3.04
10. Game Length	3 hr., 20 min.

THE QUESTION BOX

OOPS!

Q. In Vol. 7, No. 2 of the GENERAL you state that allied reinforcements may land on a coastal square in the zone of control of a German unit. Is this correct?

A. No. The Allies must hold the coast square free of German zones of control.

Q. In the last issue you gave contradictory rulings in Bulge on the question of advance after combat. Which is correct?

A. The ambiguity in the rules regarding retreats and advances in automatic situations should be reconciled by using the tournament CRT advance rules. The contrary ruling in the appendix of the Battle Manual should be ignored.

MIDWAY

Q. May ships leave the search board?

A. "Yes, but once they do, they may not return." This ruling has appeared before in the GENERAL. We now amend it as follows - The American may not withdraw any vessel until his fleet has been attacked and he has sailed West of Midway.

D-DAY

Q. In PBM when a 1/2 A ELIM is called for what happens to the remaining half?

A. The surviving attackers stand fast and the defender in his turn must either counterattack or withdraw, assuming that the combat did not take place across a river line.

Q. If the Allies are wiped out in their first turn invasion, do the Germans get to make moves in the interim between the next invasion?

A. Yes

A.K.

Q. Units may move from a plain square to a road/escarpment square and use the road bonus in the same move. However, may the same unit then move off the road/escarpment square in the same turn?

A. No. Units may either enter or leave a road/escarpment square without penalty but they may not do both in the same turn.

KRIEGSPIEL

Q. May I use my advance after combat to surround the unit I just attacked?

A. In some cases, but remember that advances and retreats are simultaneous - you can't move an attacking unit to block the retreat route of a unit you have just attacked before it gets a chance to retreat.

LUFTWAFFE

Q. Who actually chooses the cities to be destroyed or rebuilt in the case of a penalty for planes running out of fuel?

A. The opposing player always has the option of selection.

Q. What happens when 20 factors of P47's attack 2 ME262's, 2 ME109's, and 10 JU88's when the die rolls are 5, 4, 3 and 6?

A. First of all, only one die roll is required - the first one. Thus, a die roll of 5 would equal 2 (subtracting 3 because of the superior E rating of the 262). A "2" for 20 P47's results in a loss of 6 planes - both the ME262's, both ME109's, and two of the JU88's. A group of fighters of the same type may fire only once - against the best opposing fighters - any overkill is taken from the defender.

Q. What happens when 10 ME262's and 20 ME109's without tanks attack 10 tankless P-51's, 6 P-47's with tanks, and 20 B17's with die rolls of 5, 6 and 3?

A. The 10 ME 262's meeting the best vs. best requirement would attack the 10 P-51's with a die roll of "5," getting 8 of the P-51's. As the best American fighters (P-51's) are still not eliminated the ME 109's must attack them. The second die roll of 6 is adjusted downwards 2 due to the difference in E ratings. Thus, a "4" for the 20 attacking ME 109's eliminates 10 more American fighters; the two remaining P-51's, all 6 P-47's, and 2 B-17's. Since bomber losses occurred, the Americans do get the benefit of defensive fire - 20 B-17's with a die roll of "3" thus shoot down 4 ME109's.

Q. Which is considered the better plane for meeting "Best vs. Best" requirements - a P-47 or a Spitfire?

A. P-47's.

READERS RESPONSE

The questions posed below are meant to be a permanent part of your magazine. There is no need to remove this section from the rest of the issue. Elsewhere within the magazine you'll find the Reader's Response page. Among other things, it has a section specially constructed for your answers. We suggest you tear out the Reader Response page so that you can hold it parallel to the questions below while writing out your answers. Detailed instructions on how to fill it out can be found on your answer card.

SECTION I

Name and rate the best three articles in this issue, giving your top choice a 1, second best a 2, etc.

1. _____
2. _____
3. _____

4. On a scale of 1-10 how would you rate this issue?

5. Was this your first issue? _____
6. How many years have you subscribed to the GENERAL? _____
7. Would you resubscribe on the basis of this issue? _____
8. Was this issue better than the last one? _____
9. Are you taking advantage of the two for one subscription deal to recommend the magazine to your friends? _____

SECTION II

1. Your age in years. _____

2. Your education in years - a 10 would signify 10th grade education, a 16 a four year college degree. _____

3. How many years have you been active in wargaming? _____

4. How many Avalon Hill games do you personally own? _____

5. Do you read the Opponents Wanted Page?

6. Have you ever gotten an opponent through the Opponents Wanted Page? _____

7. What do you hope to find on the Opponents Wanted Page?

- PBM opponents
- club listings
- FTF opponents
- tournaments
- old discontinued games
- other (specify) _____

8. How many times a year do you place an ad in the Opponents Wanted Page?

- 6 times
- 1,2 times
- 3-5 times
- never

9. On the average, how many replies do you receive from your Opponents Wanted Ad? _____

10. Have you ever located someone in your area through the Opponents Wanted Page? _____

11. On the average, how many of your pbm games are played to a satisfactory conclusion? _____

12. If Avalon Hill were to sponsor a national convention in Baltimore with several hundred dollars in tournament prizes, tours of the AH facilities, and two years of advanced publicity would you make an effort to come?

- Definitely
- Perhaps
- No

13. If so, how much money would you be willing to spend for entrance fees and sleeping accommodations?

- \$15
- \$25
- \$35

14. If interested in such a convention, what type of prizes would you want to compete for?

- cash
- trophy
- free games

15. In what month would it be most convenient for you to attend such a convention.

- November
- December
- January
- May
- June
- July
- August
- September
- October

SECTION III

Place an X next to all game subjects which you definitely would not purchase were it to come out as the next Avalon Hill game.

- 1. Ancient Period
- 2. Basketball Strategy
- 3. Civil War Period
- 4. Medieval Period
- 5. Modern Period
- 6. Napoleonic Period
- 7. Naval Games
- 8. Non-Historic
- 9. Nuclear
- 10. Political
- 11. Revolutionary War
- 12. Science Fiction
- 13. World War One
- 14. World War Two

When submitting questions to us for answers, please note the following:

- 1.) Include a stamped, self-addressed envelope. The letters that include one are answered first. Those that do not are answered last; as a result, these letters get back to you at least a week later.
- 2.) If your question refers to a specific situation, please include a diagram of the situation. It takes a good deal of time to answer the letter otherwise, which will delay your reply.
- 3.) We wish we could answer technical ques-

tions and do research for you, but the large amount of mail we receive prohibits this. We will be glad to answer questions on the play of the game, but we cannot, unfortunately, answer those on technical or historical points nor can we research data for those of you designing your own games.

4.) Keep orders and other mail separate from questions. Separating the items of your letters into different departments takes time and delays your reply.



(FOR THOSE NOT IN COLLEGE, SUBSTITUTE: WIFE, GIRLFRIEND, PARENTS, FRIENDS, ETC.)

There's still time to make your reservations for the United States's oldest wargaming convention. The 6th Annual Lake Geneva affair is scheduled for August 18th and 19th. Featuring the Napoleonic period, the big event this year will be the WATERLOO tournament.

Running conventions is a year-round business. Witness: Kevin Slimak, president of MITSGS is already making plans for WINTER CON II to be held on the MIT campus in Cambridge, MA. on January 12th. WINTER CON I proved very successful and we expect even bigger things from the MIT lads this time.

Congratulations are due for the newest addition to our editorial staff: Bruno Sinigaglio, for placing first in the Avalon Hill tournament at East Con III. Bruno was the recipient of a handsome trophy and \$100 for his efforts which included five wins in AFRIKA KORPS, D-DAY, WATERLOO and BULGE. While we're at it we might as well congratulate Damian Housman and the rest of the Spartan organization for conducting a very professional convention. The Hotel McAlpin affair was the best we've yet attended!

Owners of our award winning FOOTBALL STRATEGY game may be interested to hear that we have replaced the "scoreboard time dials" with a pad which not only makes time keeping a much easier task but records the use of time outs as well. In addition, instructions are given for the finer points of time keeping.

Along similar lines but of even more use to the game buff is the pad we've designed for use in the revised BASEBALL STRATEGY game. Having done away with the scoreboard printed on the gameboard itself in favor of the additional charts for this much more realistic edition, we included an extensive "scoreboard" pad in the game. More than just a place to record line scores, this pad provides you with a permanent record of your games played and makes the replay of an entire league season that much easier. In addition, each pad provides the charts necessary for the vital information pertaining to pitcher use, without which the play of our tournament game would be very difficult. As if that wasn't enough, on the back of each page is a statistician's sheet to aid you in keeping track of your player's averages — so important in our advanced game. Each pad contains enough pages for 150 games. So, if you've been neglecting your purchase of our new sports releases because you have an earlier edition of the game, we urge you to reconsider. Extensive revisions have made these two titles an entirely new "ball game." Those wishing to just purchase the pads may do so from our Parts Dept. for \$1.00 each, plus the usual 50 cents postage and handling charge.

M.O.W. informs us that the initials now stand for MIDWEST ORGANIZED WARGAMERS due to their decision to expand their Michigan base to include Ohio, Illinois, Indiana and southern Ontario. The M.O.W. is one of the better organizations to come along in recent months and if you live in their area and are desirous of further face-to-face contact we suggest you write them c/o Lew Pulsipher, 423 N. Main St., Bellevue, MI 49021.

Infiltrator's Report

WWII buffs should be made aware of the existence of two fine organizations which can supplement their interests. Photo File has a collection of military photographs for sale to interested parties at very reasonable rates. This fine organization is the source for many of the photographs which appear in the GENERAL, and can be reached at their Box 262, Avalon, California address. Of similar interest are the services offered by the WORLD WAR II HISTORICAL ASSOCIATION. The Association offers through its newsletter all sorts of military memorabilia including actual WWII equipment, photographs, and news of interest to all students of WWII. Direct your inquiries to Ray Merriam at his 218 Beech St., Bennington, VT 05201 abode.

WE HAVE BEEN INFORMED of the formation of The Simulation Games Committee. SGC is an unusual new concept in wargaming organizations. Not a club, the key concept of SGC is a nine member central coordinating committee which will act as a resource center for the projects of any group or individual gamer. SGC will place major emphasis on increasing cooperation and understanding between existing competing and divergent groups. SGC's vision of wargaming is that it has the promise of becoming a hobby of the highest intellectual caliber, and SGC intends to do everything it can to promote this promise. A major project now underway at SGC is a thorough re-writing of the Classic AH game rules for potential use in national tournaments. SGC hopes to encourage and assist the local independent convention organizing groups without dominating or diluting their efforts. For more information contact David Roberts, R.F.D. No. 1, Houlton, Maine.

The newest casualty in the Avalon Hill line is 1914. We must announce the demise of this title, a veritable abortion of a game designed by the same people who did PANZERBLITZ. Because of the great title we tried every which way to salvage it, even to the point of setting up a special answering service to handle the flood of questions it generated. It proved too costly in man-hours and money to continue with this title. Our fall entry will fill its place in the line. Collectors should order now because once our limited supply has been exhausted it will take its place in the land of unavailability. Production was stopped on this title six months ago and stocks are running low.

We are pleased to announce that our own Thomas N. Shaw has been selected as one of the judges for the prestigious IRVING SALOMON prize in gaming and simulations sponsored by the Institute for Diplomatic Studies. Our Vice President is enjoying some impressive company as he joins the ranks of judges which include among others: Dr. Richard Gripp, Chairman, Dept. of Political Science, California State University; Dr. Sidney Warren, Chairman, Dept. of Political Science, U.S. International University; Dr. Lincoln P. Bloomfield of M.I.T.; and Dr. Robert Noel, Director of the POLIS Laboratory at the University of California.

SPARTAN INTERNATIONAL is currently the only licensed source for official Campaign Game player aides for RICHTHOFEN'S WAR. Each pad sells for \$1.00, postage paid. Mail orders to SPARTAN INTERNATIONAL, Box 1017, Bellflower, CA 90706.

Contest No. 55 was an exercise in understanding a game's victory conditions. The victory criteria for the American player is to destroy 14 oil targets and maintain his losses at less than double that of the German's. Realizing that the American losses at this point in the game are already double that of the German's and that even a perfect attack on the B-24's would still leave 2 bomber factors remaining in easy range of the refineries at Vienna and Bratislava, the only reasonable choice for the German is to bounce the P-47's. Barring very bad luck this should insure a favorable rate of attrition which will cause the game to end in a tie. Any other course of action would almost definitely end in a German defeat.

Less than 10% of those who responded had the right solution. However, even this number necessitated a drawing to pick the 10 winners. Those surviving the luck of the draw and submitting perfect entries were: Jay Leone, San Francisco, CA; Don Kammer, Bakersfield, CA; Wesley Letzin, Rochester, NY; Steve Parker, Indianapolis, IN; Dan Gardner, New England, ND; James O'Neil, Williamsburg, VA; Ray Clark, E. Hartford, CT; R. Mastrangelo, N. Plainfield, NJ; Paul DeVolpi, Lisle, IL; Robert Korpanty, Charleston, SC. Incidentally, due to the lateness of the GENERAL we extended the contest deadline until July 20th.

LOYAL SUBSCRIBER'S DEAL: To reward our full time subscribers for their loyalty we continue to offer various parts and materials at half price. This month we offer the rules to many of our discontinued games. Although you can no longer obtain the games, you can order the rules to see what they were like. We list the items offered below at full price. You may total your order, deduct half the cost and add 50c for postage and handling. Mark the items you want by circling the items in the list below and mail it to our parts dept. along with the accompanying discount star. This offer expires September 30th, 1973.



ANZIO Game I rules	.....	.50
O/A Cards — each	.....	.50
Step Red. Card	.....	.50
BISMARCK rules	.....	.50
Reference Folder	.....	.50
GUADALCANAL rules	.....	.50
O/A Cards	.....	.50
CRT	.....	.50
JUTLAND rules	.....	.50
LEMANS rules	.....	.50
U-BOAT rules	.....	.50
C&O/B&O Train Manual	.....	\$1.00
DISPATCHER rules	.....	\$1.00
Set of timetables	.....	\$1.50
CHANCELLORSVILLE rules	.....	\$1.00
Reference Folder	.....	\$1.00
CIVIL WAR rules	.....	\$1.00
GETTYSBURG rules	.....	\$1.00
GUADALCANAL Battle Manual	.....	\$1.00
JUTLAND Battle Manual	.....	\$1.00
MANAGEMENT rules	.....	\$1.00
VERDICT II rules folder	.....	\$1.00

OPPONENTS WANTED

Average player desiring PBM opponent in Multi-Commander... Turney Blitz, AK, PBM, AK, D-Day, F-40 and FTF any AH game...

OPPONENTS WANTED

Average or above average player for fit B&B and AK... At my place. Any title. Also will sell micro-armour...

OPPONENTS WANTED

RD, Box 393, Baton Rouge, La. 70805-2612/2913... Graduate student, age 29, desires competent adult p/bm opponents...

OPPONENTS WANTED

Desperately want Anzio, G-canal, Biomark, Lutland, Uboat, Air Empire, and original Tactics... Will play any reasonable prices for games in excellent condition...

OPPONENTS WANTED

Ferguson, 20 Fairview Rd., West, Massachusetts, NY 11758, 841-0167... GENERALIS-containing Segnal articles wanted. Paul Webster, 99-60 63rd Road, Rego Park, N.Y. 11374, 775-8813...

OPPONENTS WANTED

Expert player of college age desiring p/bm for Blitz. All options except nuclear. You choose the sides, Undefined at Blitz, John A. Durkin, 5949 Alder St., Pittsburgh, Pa. 15232...

Have just moved to Arizona. Will be contact wargamers in the Tucson area. I am of adult age. Alan Ketchum, 3332 E. 25th St., Tucson, Arizona 85713...

I have never lost in BULG, L-Wafite, W-40m, R-War, P-Blitz, I like Allies in Bulge. I am competition in R-war and P-Blitz or PBM. Jeff Wescovich, 4381 Belmont Rd., Balto., MD 21227, 344-1851...

Will sell C&O/B&O management, G-canal, TacII and Biomark. Interested in playing fit, Lutland, 1914, F-40, Diplomacy, William Rakowski, 7210 Birchwood Rd., Balto., MD 21227, 344-1851...

Seeking experienced, adult wargamers in Hudson-Bergen counties area for informal weekday gaming sessions. All AH except K-piel, Anzio, PBM, FTF, only. Contact Jim Murphy, 149 Edgar St., Hawthoken, N.J. 07087, 201-863-7518...

FTF opponents wanted for all AH games. Prefer college age or adult opp's. Nati freaks need to call Keith Nelson, 35 Barrett Rd., Apt. 811, Berea, Ohio 44023, 876-3438...

Wanted: opponents willing to be shot on land or sea at sea by victorious armament forces in most AH games (fit, please). Larry Wessels, 10423 Londonderry, Houston, Texas, 77043, 466-3843...

Looking for a few good opponents for p/bm Blitz, Bulge, Segnal. Also fit most yrs. experience. Harston Stevens, Jr., 548 Michigan Ave., Evanston, IL 60202...

Good adult age player wants fit opponents for Gettysburg, Waterloo, also p/bm. Will trade Anzio, P-Blitz, Spang, Stock Market, Origins, want Outdoor Survival, Kriepspiel, Baseball & Football Strategy...

Want to buy the out of stock issue of the new issue of P-Blitz. Contact: John A. Lang, 11, 5137 Homecoming Ln., Columbia, Md 21046, 270-660-9000...

Wants to find anyone in a place to simulate. Also might fight club. Buy any used games for reasonable price. Send prices and your address. Ted Glascock, 1512 S. Ave. B, Portales, NM, 88130, 368-2231, 291-7408...

Wish to play PBM. Send list of situations and questions. Dan Stafford, 2207 High, Postestown, Ohio 45667...

Interested in playing p/bm multi-player games of WW and after. Steve Knopp, CMR-8, Box 8419, Lackland AFB, TX, 78236...

Good adult age player wants fit opponents for Gettysburg, Waterloo, also p/bm. Will trade Anzio, P-Blitz, Spang, Stock Market, Origins, want Outdoor Survival, Kriepspiel, Baseball & Football Strategy...

Need fit opponent for any AH wargame. Also p/bm Blitz players. Norman L. Owens, 290 N. Kirk E. Rd., Indpls., Ind. 46224, 244-0274...

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