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You've already noticed that S&T is now bi-monthly at 32 pages, now you would like to know how and why. Let me try it graphically and briefly.

Why? (1) Serialization. There is simply too much of it due to the small number of pages. Since the articles are among the best, the only answer is to increase the number of pages. (2) You actually get more for your money in printed matter in one 32 page magazine than in two 16 page magazines. This is obvious. (3) It saves on postage and envelope costs. (4) It provides a magazine that sells better over-the-counter.

The primary reason, however, is a financial one. The games have not brought in an amount of money sufficient to expand the magazine on the ten times yearly schedule. Subscriptions have been coming in with less speed than we had hoped, and our campaign to get S&T on the counters of hobby shops has met with only limited success. With expansion in size almost mandatory for the above listed reasons, going bi-monthly was the only answer in view of our tight financial situation. We think it is actually an improvement, and with the coming of Valhalla, we'll still be in touch with you very regularly. On sum: rather than expand to 20 pages on the old schedule and go out of business in a few months, we've decided to do it this way and continue to bring you good quality, both physically and editorially, indefinitely.

How? Well, by (1) re-figuring subscriptions now standing on a straight one for two basis. This means your subscription still ends at the same point in time, but you get one 32 page issue for each 16 page issues to which you were previously subscribed. (2) Raising our subscription rates (again) to take into account the postal rate increase on 1 January (which has been coming out of our hide) and the fact that it costs over a dollar to print and mail one copy of the "new" S&T. This affects NO present subscriber until it is time to renew; by then, you should have a coupon or two from the games you've purchased to ease the impact of the increase.

If anyone presently subscribed seriously objects to this new form and procedure, please write us immediately and we will return what remains of your subscription money by return mail. I sincerely hope that isn't too many of you. As I said, this change was less a matter of expansion than of survival, but a quick comparison - even at the increased subscription rates - with other existing wargames publication still shows that you get more for your money with S&T. We intend to keep it that way.

- Chris Wagner

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THE BATTLE OF BRITAIN

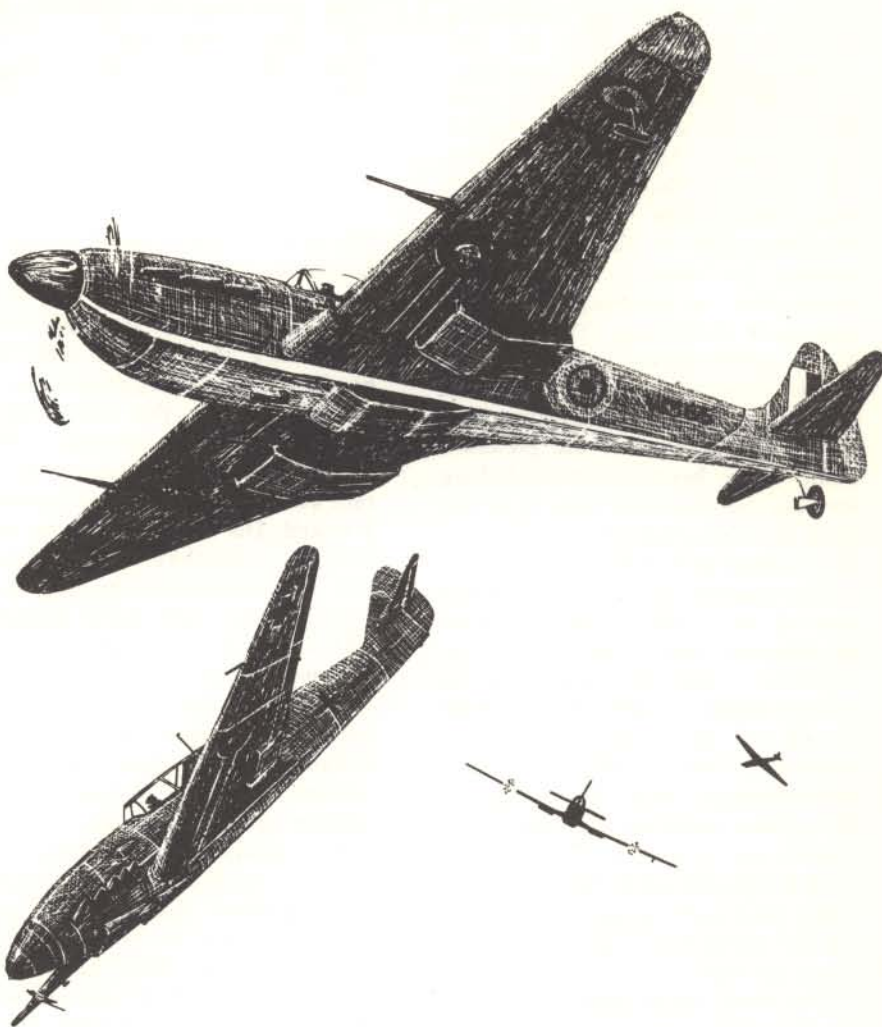
THE BATTLE OF BRITAIN GAME DEVELOPMENT

by Louis Zocchi

BATTLE OF BRITAIN is the newest game offered by the Game-science Corporation. This game took over three years to design and test and is the cumulative effort of myself as designer, James F. Dunnigan as researcher, and Scott Berschig as head of the Testing program. I have been told that many people have been waiting for this game and that is a partial explanation as to why the game is available now. The inside story of the game's development might prove useful to those of you who are planing to design your own game, or to those of you who wonder just how a thing like this gets its start.

Like many of you, I kept looking for the Battle of Britain to be placed on the market everytime I looked for new games. After several years of disappointment, I began to play with the idea of developing the game myself. Although I wasn't serious about the idea, I began to accumulate information concerning the battle. Every time I found figures which pertained to the battle, I wrote them down. I read a book which told how important photo intelligence was. This inspired me to take 3 correspondence courses in Target intelligence. Those courses gave me an insight to the processes used to determine which targets should be hit, how often, and with how much force. At the time, I never dreamed that the information would be used to determine the targets which the Germans should have eliminated during the Battle of Britain.

As many of you know, I am in the Air Force and do not design games for a living. I made many mistakes in my earlier versions, but received excellent suggestions from Carl Knabbe, Fred Viemeyer, Scott Berschig, Dick Sandin, John Videtto, David Rowley, Russel Smith, Chris Wagner, and two of the finest Veteran game designers I know, Jim Dunnigan and Phil Orbanes. The combined efforts of



these dedicated wargamers enabled me to bring Battle of Britain from desire to reality.

When you buy the game, you will find that you have purchased 3 games in one. The Simple Version is very easy to play and lasts about 90 minutes. It is not designed to be a precisely accurate portrayal of the battle, but it closely approximates the actual balance of forces and performance limitations or advantages of both sides. It is challenging and requires great use of logic to win. The rules are very simple and can be learned in about 5 minutes.

The other two versions of the game are the Basic version and the Tournament level version. The Basic version lasts from 3 to 6 hours and the Tournament version usually runs from 4 to 8 hours. In order to acquaint you with the problems we faced and how they

were solved, I will describe how the rules were in the first version, the changes which took place, and how you see them in the finished product.

The Conditions of Victory in the original basic game required the German player to completely knock out all British aircraft production. I felt that this condition was very realistic because the German Navy flatly refused to ferry troops across the English channel until the RAF had been driven from the sky. Operation Sea Lion could not be executed as long as the German navy refused to cooperate. I get the impression that the German navy would have been willing to take their chances against the Royal Navy if they could be assured of total Luftwaffe superiority.

On August 13th, the Luftwaffe began ADLERANGRIFF, designed to sweep the RAF from the skies. The only thing wrong with ADLER-

ANGRIFF was that the three separate air fleets which were to destroy the RAF did not cooperate. Each Air Fleet commander had his own ideas about how the RAF could be destroyed. Instead of working together, each commander tried his hand at what he considered the vital target, and they all failed. Each man had a good idea, but it would have required the combined strength of all three Air Fleets to accomplish the objectives of any one of the commanders. One of the commanders wanted to starve England into submission of bombing the ports and dock facilities. This project would enhance the U-Boat efforts which were directed towards the same objective. The Starvation plan would have worked if the pressure could have been maintained long enough, but I doubt that it would have caused England to surrender before September 17th.

The second air fleet commander wanted to destroy the factories of England and thereby halt production. I feel that this was the correct approach because the RAF would not be permitted to stand idle while the facilities to make replacements were destroyed. If all of the factories had been destroyed, the British would have had only a few hundred fighters which could have been easily overwhelmed by the combined fighter forces of the Luftwaffe.

The third commander thought he could destroy the RAF by attacking the airbases. This idea could have worked but didn't. Someone in HQ had made a master list of all of the airbases in England. Each time a mission was sent out to attack a base on the list, the name of the base was crossed off the list. As far as the high command was concerned, a base which was crossed off of the list was considered completely destroyed. No consideration was given to the fact that the planes which were supposed to attack a base turned back before they reached their target. Most of the bases which were listed as total wrecks had suffered only a few hits, and some of them were completely untouched! Headquarters didn't suspect a thing until they had crossed every base off of their list. By this time, the issue had been decided and they had lost.

I was satisfied with my conditions of victory until I made the third version of the game. Through extensive research, I discovered that during the entire battle, the British had only 2 factories which were producing the Merlin engine. This engine was used in all Spitfires, Hurricanes, and Defiants. If the Germans had eliminated these two factories, they would have brought new fighter production to a halt.

The conditions of victory for the 3rd version basic game called for complete destruction of the Airframe factories or the two engine factories. If the Germans wiped out either they would win. This condition was changed for the last version. When the third edition was sent out for testing, I didn't know what the weekly production rate was for the two motor factories. I asked Jim Dunnigan if he could find out what they were producing, and the information he dug up revealed that they were producing 144 motors per week. I had learned from my Target intelligence courses that when a factory is completely wiped out, the next link in the chain doesn't feel the pinch until it exhausts its supply of material. This usually takes two weeks.

By calculating the output of aircraft against the number of engines, I determined that if both motor factories were completely destroyed in the first week of the game, the British player would not have enough motors to last him until the end of the game. If either of the factories escaped total destruction, during the critical first week, the British would have an ample supply until after September 17th.

Before proceeding with the next rule, I'd like to mention that James Dunnigan provided almost all of the information which was used for the final market version. This was a tremendous task which was further complicated by two obstacles. The first obstacle Jim had to overcome was that it is the policy of the British War office, no to reveal any facts or figures concerning campaigns until 50 years after the battle. As you all know, Jim writes those brilliant KAMPF booklets. I believe Jim has a secret friend somewhere in the British War office who bootlegs information. It is positively un-

canny the way he can dig up facts which are supposed to be unavailable. I believe the most bizarre exhibition of his determination to send me to facts was the day he sent me the complete performance characteristics of the JU 87B. The information was the most comprehensive I have ever seen, and it was all written in Japanese. At first I thought he was kidding me and wanted to see if I had learned anything during my 4 year stay at Misawa. When I looked more closely at the information, I discovered that everything I wanted to know was there. When I asked him why he did that to me, he replied that he thought that particular book was the one which would provide the exact information I needed. He was right!

The second obstacle he had to overcome was that most of the Luftwaffe records were kept in a city which was completely destroyed by firebombs during WWII. In some cases, there just wasn't any information available, and we did the best we could with what we had. I'll go into greater detail on these points when we come to that part of the rules.

To simplify which set of rules I'm talking about, I'll use the British system from here on. Mark I will be the original, Mark II will be the second version, Mark III the third and Mark IV the final market version.

The playing pieces changed very little during the various stages of development. The final Market version features a small picture of the aircraft each piece is supposed to represent. We feel that this will aid the players in identification and enhance the appearance of the playing board. The first pieces showed the aircraft type, speed, mission and Luftflotten. This information stayed the same until the Mark 4 version was developed. In the earlier versions of the game, you had to know which Luftflotten dispatched a particular mission, before you could determine the strength of the unit. Because there were 3 Luftflotten involved, it required lots of concentration and bookkeeping to keep your facts and pieces straight. Every one who tested the game suggested that something be done to simplify the bookkeeping. The only solution to the problem was to combine all

the German forces. The net effect against the British is still the same, but it is much easier to keep track of who is where.

Radar information must be given to the British commander concerning the strength of incoming German forces. In Mark I, the Germans had to give a strength figure which was accurate within 10% anytime he came within 15 squares of England. The British had built a chain of Radar stations along their coast line. These sets were designed to detect aircraft out to 150 miles. Because each square represents 10 miles, the German player had to give the information when he came within range. The German players pieces remain upside down and he does not disclose the type of aircraft which are approaching because the British couldn't deduce aircraft types.

An excellent book on the Battle of Britain was published by McGraw Hill. The book is called "The Narrow Margin" and was written by Wood and Dempster. This book provided one of the most detailed accounts I encountered during my search for information. I found this book just before I made Mark II. From page 147 I learned that the British had 120 Chain home stations with a range of 120 miles and 30 Chain Home Low stations with a range of 50 miles. Reading further, I discovered that although the stations were designed to operate at 120 miles, the seldom detected anything beyond 90 miles. On page 280, an account is given of such an interception. I felt that I should revise the radar detection line downward to what was probably their most reliable distance and that is how the radar rule has remained.

British fighters are not permitted to engage in air combat over foreign territory or foreign coastal squares because the pilots could not be rescued. In the area battle things got so desperate that eventually British pilots were ordered to avoid combat unless they were over land! This rule never changed from Mark I to Mark IV because it represents Basic British policy.

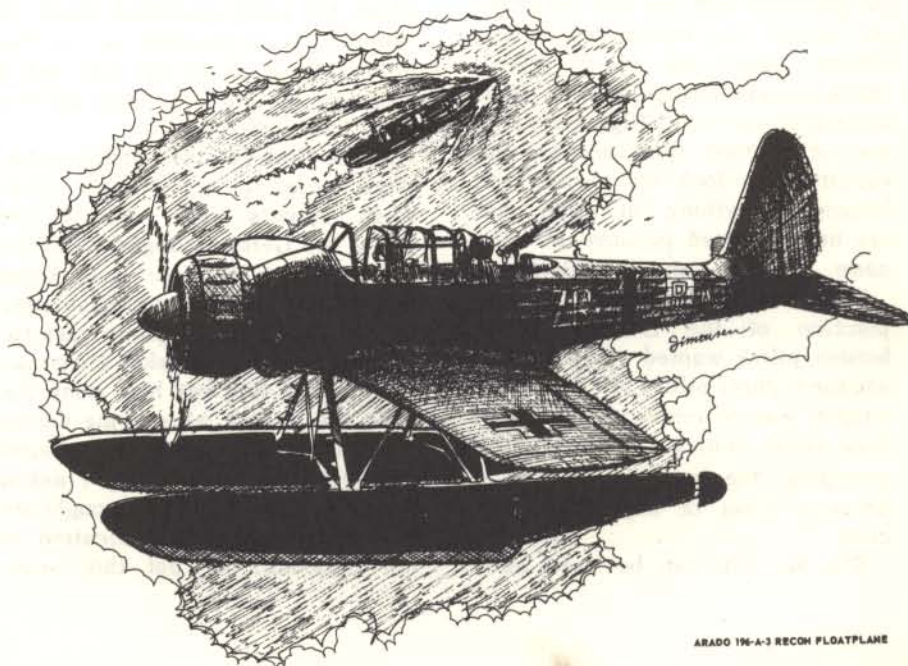
Being an Air War game, some consideration must be given to the 3-dimensional complications which exist. With Mark I, the problem was

easily handled by saying that aircraft which had spent one or more turns in the air could not be attacked by aircraft which were just taking off on their first turn. If a German plane takes off and comes within striking range of a British plane which is still on the ground, the British aircraft may take off and attack the German plane provided neither aircraft has spent more than one turn in the air. By making this rule, the Germans are compelled to climb to altitude over France before they move towards England. If they don't, they can be attacked. This rule remained until the Mark IV was produced at which time this amendment was tacked on. Aircraft which are Divebombing can be attacked by aircraft which are just taking off. The Divebomber must come so low to release its bomb, that it is within easy reach of fighters which are just taking off. If the British are attacked on the next turn by German Fighters, the German fighters must first undergo any ground fire before the attack against the British can be executed. In the Tournament level rules, further altitude situations can be exploited which I will describe later.

The British player began Mark I by filling out a production sheet. This sheet indicated which factories produced Hurricanes and which produced Spitfires and also indicated the rate at which these aircraft were being manufactured. When I first began designing this game, it was for my own amuse-

ment and I didn't really get fired up with a burning drive for absolute accuracy until I became involved with Dunnigan. In the Mark I basic and tournament level game, the British had only Spitfires and Hurricanes with which to fight. This is because I didn't know any better. By the time I made Mark II, I discovered that the British were also using Blenheims, Defiants and Gladiators. A few Fulmars and Mesquitos were in operation but not in sufficient strength to be employed in combat. As a result, the Fulmars and Mesquitos or other planes which were too few in number are not in the game. I decided to keep the Basic game relatively simple so in all Basic game versions, the British have only Spitfires and Hurricanes. The British are required to designate 2 of their cities as Motor Factories in the Mark IV basic game. This feature was formerly found only in the Tournament level rules of Mark II and III. It was included in the basic version of Mark IV because its significance can not be ignored.

At the beginning of the game, the British are also required to distribute their anti-aircraft guns so as to give maximum protection to the most vital installations. When this has been accomplished, he decides how many aircraft each playing piece will represent. Each piece can represent a different strength so as to confuse the Germans more easily. This information is recorded and the pieces are placed on Airport squares.



ARADO 196-A-3 RECON FLOATPLANE

The German commander must decide how many of each type of aircraft he will use for each operation he is planning. A record is kept of how many aircraft are assigned to each playing piece, and which playing pieces are supposed to attack what cities. German bombers may start anywhere in Europe, but the Fighters must start from fighter Bases. Most of the bombers have such an extreme range, that it is not necessary to keep track of how far they have moved. However the Fighters are so short ranged, that this is a crucial factor and must be closely watched. Fighters may land anywhere, but they must operate out of a base if they are to be used more than one time during the week.

During the 2nd and subsequent weeks, both players will be forced to keep 1/3rd of their surviving forces out of play because of maintenance. In the first 3 versions of the game, the Germans had a maintenance problem, but the British did not. Dunnigan was responsible for digging out the facts on the British maintenance problem, and it was at his suggestion that this feature was introduced into the game.

The German player is restricted in his choice of actions because he must write out his intentions before each week begins. Most of his force is committed to executing a pre-planned operation and no deviation is permitted. The only force which is capable of improvising are the Fighters. If they have been assigned to fly close bomber support missions, they must move with the bomber force as long as possible and are not permitted to attack or initiate aggressive action. Their job is to protect the bombers by staying with them as long as they can. Fighters which are on a Free Hunt mission are permitted to look for trouble and bounce everything in sight, but are not permitted to move into the same squares as the Bombers.

This rule reflects the actual practice of the Luftwaffe. The bomber pilots wanted close support and the Fighter pilots felt that such support was too restrictive and that they could achieve much more by sweeping the proposed route of advance clear of any enemy aircraft.

The Me 110 can be used as a

Fighter-bomber or as a fighter. If it is used as a Fighter-Bomber, it will lose one turn in the air because of the extra load it is carrying. If the 110 wants to dog-fight, it must first jettison its bomb, if it still has one.

Playing pieces are kept upside down until they have engaged in combat. This prevents each player from prematurely discerning the true composition of the others' forces.

A week begins when there is movement on the playing board, and ends when the last German bomber lands. Because the game is 5 weeks long, this gives the German player only 5 opportunities to win the game. All of the bombers need not be assigned to attack the cities. The German player may hold back a few which are supposed to attack the British airports. Naturally, a notation concerning his intentions should be made on his master sheet. When properly executed, this feature can make life for the British player pure terror.

The bombers which try to destroy the airbases always drop their bombs from low level because more precision is required. Coming in at low level means that the bombers are subjected to any light anti-aircraft fire which might be on the base. The bombers which survive the A.A. fire, roll the dice to determine the number of grounded enemy planes they have destroyed. In my first version, all of the planes were destroyed but the S&T staff thought this was too unrealistic. Chris Wagner suggested the method which is now used. A die roll of 1 or 2 destroys one grounded plane for each attacking plane. A roll of 3 or 4 destroys two on the ground for each in the air, and a 5 or 6 on the die kills them off in a three to one ratio.

In the first versions of the game, there were no Anti-aircraft guns. When Airports were added to the game, the Germans began to attack the refueling fighters more often than in the past. The British were unable to reserve fighters just for Air Base defense. I asked Dunnigan if he could find out how many AA guns the British were using during this period and again, he amazed me by getting everything I asked for, and more. He even brought me the exact number and location of the balloons. We put this infor-

mation into the game after some careful calculations to make sure that the guns would do what they were historically capable of doing.

After 10 test games, I noticed that the German player never attempted to shoot down the barrage balloons even though the rules told how it could be accomplished. In the data Dunnigan had spent, the anti-aircraft guns had been divided into three categories. The heavy guns could shoot at anything. The light guns could only shoot high enough to protect the Barrage balloons and the Light Machine guns could fire only to the height at which Divebombers or straffing fighters might fly. If the Germans were not going to attack the balloons, I could see no point in making a distinction between the light anti-aircraft guns and the light machine guns. The effectiveness of the Balloons, light anti-aircraft guns and light machine guns was combined into one figure. This made bookkeeping easier and now the British keep track of only two types of Anti-aircraft equipment whereas before they had to keep track of four separate types.

In the first three versions, we permitted the attacker to determine which aircraft he had destroyed when there was a dog-fight. This led to a situation that caused the British player to have devastating losses in his best aircraft, while his worst never suffered a lick. This situation was finally corrected by permitting the British player to determine what will be lost in any conflict.

Refueling takes 20 minutes but usually causes an aircraft to miss 40 minutes of combat. A fighter may not engage in combat on the same turn in which he lands. He usually spends 10 minutes climbing to altitude before he can get into another scrap. Bombers fly only one mission per week, so you don't have to worry about their refueling problems. If a group of fighters need more fuel, they must land on an Airbase square. If they do not, they are out of play for the remainder of that week. In earlier versions of the game, any aircraft which did not land on an airbase square was lost from the game. This rule was changed when Carl Knabbe pointed out that only the Fighter bases were shown on the map board. The fighters could

have landed at a bomber base which is not shown on the gameboard. These fighters would not be able to receive the same speedy service and refueling which they could normally expect to find on a fighter base. The Germans would have the same problems.

Occasionally, the German player makes a mistake and misroutes some of his aircraft. When this occurs, a navigational error has been committed. If the bombers have not bombed their respective targets, the bombers must fly to their correct destinations. If the fact is discovered after one of the groups has already bombed a city which was supposed to be bombed by another, the group which was originally scheduled to bomb the city, must go there to drop its load and will not be permitted to "Trade Targets". When the Germans make the mistake of keeping their fighters up too long, and it becomes obvious that they can not get home safely, they must immediately head for home even though they will never make it. If the British player is aware that the German player has erred, he should remain silent until the following turn.

This feature forces the Germans to keep their eyes on the clock. The British commander should not be required to keep time for the Germans, but by watching carefully, he occasionally finds an opportune moment to attack. That moment is the turn in which the German fighters must turn back. During the excitement, the German could forget himself and frequently gets carried away by his desire for revenge. If he attacks when he should be running for home, he will lose every fighter in the group. The Germans are not permitted BANZI options which would allow them to penetrate deeper or prolong combat once they are made aware of the facts.

As in most war games, when it is your turn to move, all of the pieces you own can be moved during your turn. In the first versions of the game, the faster bombers were permitted to loiter while enroute to the target so that they could fly with the slower bombers. This made most raids massive power plays. The loitering about was eliminated from the game when I discovered that if such a thing had been tried in the real campaign,

the faster bombers would have had to sacrifice most of their bomb load in order to carry the extra fuel they would use up while horseing around and attempting to keep station on the slow bombers.

In the Mark 4 version, bombers are required to move their maximum speed each turn and no loitering is permitted. Fighters are the only planes which may move at less than maximum speed. On several occasions, German players have moved fighters at bomber speeds and deceived the British player into attacking.

The last rule in the basic game is called "ALTITUDE EXCEPTION" because it indicates a few rare instances when a fighter may take off and attack without spending one turn climbing to altitude. When a German aircraft comes low enough to divebomb, or straff, it can be attacked by any fighters which are on the ground and within range. If these British fighters are attacked on the next turn by German fighters, any AA guns in that square will be permitted to fire on the Germans before he shoots. As long as the fight continues at low altitude in that square, the AA will assist the British. This covers the basic

This covers the basic rules for Battle of Britain. They might sound complex when all you do is read, but if you had the pieces and board to follow along with, you would find the game quite simple.



Commanders' Briefing:

"The Battle of Britain"

by Scott C. Berschig, VAD Editor

Gamescience Corporation's "Battle of Britain", being the first pure air warfare game of any note available on the open market, offers a fascinating challenge to the contemporary wargamer, oriented towards conventional land warfare encounters. The strategy and tactics of an aerial bombardment game such as "Battle of Britain" differ radically from those employed in, for instance, a tactical ground-game, such as Avalon Hill's "Waterloo" or "Battle of the Bulge". Therefore, the Strategy & Tactics Playtest Committee, which played a large role in the critical playtesting of "Battle of Britain", has compiled this "Commanders Briefing", in order to assist the contemporary adult wargaming audience in adjusting to the radical new concept in wargaming represented by "Battle of Britain".

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SITUATION: British Commander

For air defense planning purposes, England may be divided into three Primary Air Defense Zones: Southern England ADD, including the major cities of Yeovil, Southampton, Rochester, London, and Croydon City; Central England ADD, including Bristol, Swindon, Wolverhampton, Bromwich, Coventry, and Derby; and Northern England ADD, composed of the major cities of Blackpool, Preston, Manchester, Stockport, Crewe, and Chester.

British aircraft are of several kinds; Bristol Blenheims, actually medium bombers pressed into service as night fighters; Boulton-Paul Defiants, two-place heavy fighters deficient in maneuverability and forward-firing armament; a small number of Fleet Air Arm Gloucester Gladiators, single-place biplanes of little use against the modern aircraft of the Luftwaffe; and two excellent day-fighters, the sleek Supermarine Spitfire and the work-horse Hawker Hurricane.

British aircraft are based at twenty-seven major bases, throughout all England; some, like "Mansions in the Dust", are less than ten minutes flying-time from the

great aerodromes of Pas de Calais, and they are not suitable for use as advance bases for the RAF in its confrontation with the German Luftwaffe. However, they can be protected, to some extent, by the 3772 light AAA and 1279 heavy AAA guns available to the British player, for secret disposition to the British air bases and industrial complexes; and 5 light anti-aircraft guns, using a single Gladiator on the ground as a lure, can entice German aircraft attempting to strafe the field to their destruction. (To give you some idea of the effectiveness of the AAA, I can tell you that 5 AAA guns equal 15 Hurricanes in approximate ability to inflict casualties on a German formation). The British player cannot afford to overlook such simple ruses, for his resources are stretched to the limit, and any plan which causes the Germans more casualties is worth attempting; besides, over the course of a week, if the Germans continue to probe RAF bases, trying to detect the areas of major RAF fighter concentration, the total losses from British AAA dispersed among the airbases can run to well over a hundred aircraft.

The British industrial targets consist of: six Hurricane factories, each making eight aircraft per week, three Hurricane factories, each making nine aircraft per week; five Spitfire factories, each making eight aircraft per week; one Spitfire factory making nine aircraft per week; one Defiant factory, making twelve aircraft per week; one Blenheim factory, making ten aircraft per week; and two factories making engines. (The S&T Playtest Committee suggests the above division of targets, instead of the one outlined in the "Battle of Britain" Production Center Chart. This revision actually allows the British player more defensive flexibility, although two factories will have to be "doubled-up" in two different cities.)

British fighter inferiority to the Luftwaffe, which renders it extremely unwise to directly oppose the swarms of Messerschmidt BF109 and BF110 day-fighters possessed by the Germans, virtually renders the Southern England ADD indefensible. If the RAF allows itself to be drawn into a fighter contest over Southern England,

the Germans will eventually achieve air supremacy over all of England, since they can accept losses of 1.5:1 with their fighters without being seriously weakened, while the fighter arm of the RAF will be bled white.

STRATEGY: British Commander

A defense-in-depth, keyed not to attempting to defend all possible targets—which is patently impossible—but to protecting as many targets as well as possible with the available defensive forces, so that attacking the targets, while not impossible, incurs unacceptably heavy losses upon the attacking German forces, is the only strategically justifiable solution to the British Commander. Disposition of the vital aircraft and engine factories must not be compromised by a too-obvious displacement of AAA or defending fighter forces. Key pivot bases, such as Tangmere, Middle Wallop, Duxford, Dedben, Whittering, Digby—any large airbase lying along the geographically predictable route of the bomber stream—should be heavily defended with light AAA (500-1000 guns), so that British fighter forces of 20-20 aircraft may land and refuel during battle without fear of being attacked and strafed on the ground.

It is imperative that the RAF take advantage of every opportunity to inflict casualties on the force of Messerschmidt BF110 twin-engine long-range dayfighters, as these aircraft are the most strategically flexible and dangerous possessed by the Germans. The Luftwaffe's force of long-range fighters must be, for all practical purposes, destroyed by the end of the second week of the battle. In addition, the fast medium bombers of the Luftwaffe, the Junkers JU-88, should be dealt with whenever they are encountered, in preference to other types of German bombers.

The British Commander, and the RAF, is faced with the long and arduous challenge of a five-week defensive campaign against superior numbers; there will be ample cause for despair in the course of the battle, and again and again the German player will strike telling blows against the Royal Air Force's physical resources and fighting spirit: on "Battle of Britain", superior skill, planning, and leadership will triumph, for, in its

tournament version, it is extremely realistic and also extremely evenly matched.

SITUATION: German Commander

At the airfields in northern France, in Normandy and the Pas de Calais, in Holland and Denmark and Norway, waits the German Luftwaffe, France lies prostrate, subdued by the blitzkrieg of the Wehrmacht in a shocking, six-week campaign; only England, protected from invasion by her natural moat, the English Channel, and its guardian, the Royal Navy, remains fighting. And now the Luftwaffe, molded and trained according to the theories of the Italian military theoretician, Douhet, primary proponent of the doctrine of the primacy of air power and strategic bombing, will pit itself against the home defense forces of the Royal Air Force.

The Luftwaffe, as the aerial instrument of a great Land Power, has several serious defects: its fast medium bombers, lightly armed defensively, are unsuitable for use against a highly integrated, radar-directed air defense system; its chief day-fighter, the Messerschmidt BF109, though a superb machine, does not have the fuel capacity to act in the role of long-range escort for the bombers. Its only strategic, long-range fighter, the twin-engine Messerschmidt BF110, is not maneuverable enough to engage the British Spitfires and Hurricanes on equal terms, without the support of BF109's. The infamous Junker JU-87 "Stukas", with their small bomb load and miniscule defensive armament, will be called upon to face superior air defenses and modern fighter opposition for the first time. The German commander is faced with a battle for which he is not very well equipped; but he has tremendous tactical initiative and considerable numerical superiority, and German pilots can be depended upon to give as good an account of themselves as their British counterparts.

The initiative lies in the hands of the German Commander; it is up to him to induce the British player to fight on German terms, where the RAF can be broken and the crucial British aircraft industry crippled or destroyed.

STRATEGY: German Commander

The key to a successful air offensive against England lies in

systematic, well-coordinated bombing raids and constant, aggressively conducted fighter sweeps against the defending fighter force of the Royal Air Force. Only by planning his attacks carefully, and enticing the British commander into committing his aircraft in disadvantageous aerial engagements with his more numerous Messerschmidt BF 109 and BF110 day-fighters, can the German commander hope for victory. Despite his quantitative superiority, the German commander's forces are inferior to the RAF in the vital aspects of: A. ENDURANCE, B. GEOGRAPHY, and C. ECONOMY OF FORCE. The German commander will find his BF109's are woefully lacking in ENDURANCE, because of their limited range and airborne time; GEOGRAPHY works against him in that he must fight over the enemy's homeland, far from his concentration areas, and the distance he must fly his attacking forces to their assigned targets, all the while subject to continuous attack by defending fighters; and, lastly, he will find that he must violate the principle of ECONOMY OF FORCE, because he must assign over-sized bomber forces to reduce each target, since he cannot predict how many aircraft will actually reach the target, and how many will be lost to enemy fighters. In fact, of the six elements of sound tactics (Cf: Strategy & Tactics, Volume II, No. 2), only in the area of FLEXIBILITY does the Luftwaffe have any definite or noteworthy advantage. But a skilled German commander can utilize this slight advantage decisively, especially if the British commander is given to overconfidence or carelessness, and so achieve the victory he seeks.

The RAF, by its very nature, is tied to its concentration bases and important industrial targets it is deployed to protect. The Luftwaffe, on the other hand, has an impressive array of tactical missions available to it; and many of its aircraft (especially the Messerschmidt BF110 twin-engine, two-place fighter-bomber) can be utilized to fulfill any one of several functions; strategic bombing, tactical bombing (i.e., attacks against British airfields), bomber escort, "sweep" fighter, diversionary sorties, etc. This fact alone

gives the Luftwaffe a significant strategical advantage (as distinguished from tactical advantage, which each force must achieve for itself).

The reduction of all of the targets located in the Northern England ADD and the northern part of the Central England ADD by the end of the second week of play is crucial to German hopes for victory. Since the Luftwaffe cannot supply bomber escorts or very efficient fighter sweeps into these areas, they must be attacked by unescorted bombers. In the first week, especially, the RAF, though appalling strong defensively, cannot entirely stop the attacking bomber forces from reaching their targets in sufficient strength to do considerable damage. In the second week, if the RAF commander has wisely refused battle over Southern England, he will have enough defending fighters available to inflict stunning losses on the Luftwaffe bombers attacking Northern England; however, if the main strength of the German bomber force is applied into Northern and north-Central England, the targets will be effectively attacked and bombed, despite heavy losses. But if the Luftwaffe has not reduced these targets by the end of the second week (or very early in the third week), the growing power of the RAF will enable the British commander to concentrate against any inbound, unescorted bombers and totally destroy them before they can reach their targets.

On the other hand, if the foregoing conditions are fulfilled quickly, and the northern industrial areas neutralized, the emphasis of the battle will gradually shift towards the south--closer to the German aerodromes in France (and closer to the German areas of CONCENTRATION), into the effective range of the deadly swarms of BF109's, which may well number over 1,000 by the third week. And, after targets in the Central England ADD are dealt with, the RAF will be forced to stand and fight over Southern England; and the elements of ENDURANCE, GEOGRAPHY, and CONCENTRATION will accrue to the Luftwaffe, instead of the RAF (as had been the case when the major engagements were taking place over Northern and Central England). In this situation, the

numerical superiority of the German fighters will be decisive, and the RAF will be destroyed while trying vainly to defend exposed London, Croydon City, Southampton, Rochester, and Yeovil.

EDITOR'S COMMENTS:

As you adjust to the new problems presented by "Battle of Britain", you will begin to discover some of the tactical finesse inherent in the two air forces, the RAF and the Luftwaffe. Tactical finesse (or "mechanical" finesse) derives simply from a familiarity with the capabilities and limitations of the various types of aircraft available to you, as well as the effects of geography on tactical initiative. The German commander, for example, will discover--to both his and the British commander's surprise--that by staging out of the advanced airfield at Wissant, or Calais, or even Marquise, he can indeed, extend the coverage of his BF109's into Northern England, although for only a very brief span (10 minutes at the most), by flying directly and at full speed in that direction, and returning to base by exactly the same route. While this tactical device is not as effective as a regular escort force or a full-force fighter sweep, such a "dash-sweep" does serve to prevent the British fighters from "dogging" the homeward bound bomber forces, and inevitably cuts German losses considerably. Also, the German commander should remain aware of one very important fact: in the overall tactical situation of any given week, time is on his side. The German commander can land 600 fighters at small airfields, like Caen and LeHarve, although he may be able to refuel only 20 or 30 per twenty minutes; but he not only has all day to do so, but all week. The bomber forces can attack just as effectively on Friday as they can on Monday--perhaps more effectively, since the RAF will be disorganized and weakened by a week of heavy fighting against the free-ranging German fighters before they even engage the bombers. The German commander, above all else, must be patient and systematic--take his losses without flinching, give as good an account of himself as he can, and wait for the fruits of his careful planning; he must constantly probe

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the anti-aircraft defenses of the cities and British airfields with small raids of one or two "expendable" aircraft. And when he uncovers an industrial target with little or no AAA protection, he can always send his versatile, ubiquitous Messerschmidt BF110's in against it on a bombing sortie; after all, 200 bomb-laden BF110's can deal very effectively with a target...

It is my opinion that the position of German commander offers the greatest challenge to the wargamer, because of the tremendous task facing the Luftwaffe, and the many disadvantages it must overcome in order to achieve a victory. But, on the other hand, when faced by a cunning and resourceful German opponent, the role of the British commander is anything but easy.

Your comments on this article will be appreciated. Time permitting, letters of significant content will be answered personally by Mr. Berschig.

S&T's WARGAMER'S RATING BATTLE OF BRITAIN

Realism: Good. Though much fun will fly over the choice of conditions of victory, limitations of weapons, etc, the game plays extremely well. In that context, Battle of Britain quite successfully mimics the actual historical situation.

Complexity: Good to Excellent. There are several "levels" of play to appeal to all. The game is not nearly as complex as Jutland, Confrontation or even Blitzkrieg, but it is clearly more challenging than Afrika Korps, Vietnam, etc.

Rules: Fair to good. The rules leave some questions unanswered but are generally good. Slightly below AH standard (with the exception of Jutland).

Chance Involved: Generally the minimum consistent with accuracy.

Physical Quality: Given the improved counters in the second edition (free from Gamescience to first edition purchasers) the game's quality is slightly better than the usual AH level overall.

Number of Players: Two or more.

Playing Time: 2 to 10 hours depending on the game level. An excellent game can be played in 3-5 hours.

Price: \$7.00

Publisher: Gamescience Corporation.

Comments: Unique in subject matter, this game is highly recommended for wargamers. Gamescience has vastly improved the physical quality compared to their earlier efforts, and it plays very, very well. Realism buffs will find it open to their own personal modifications. Don't miss this one.

ROSTER PBM SHEETS for Avalon Hill Waterloo, D-Day, Bulge, and Stalingrad (more soon). Use one sheet for many turns! AHKS approved. 8¢ per sheet (postage paid on orders over 50¢). SUMMER & SUMMERS, 605 Idlewild Circle, Apt. 202, Birmingham Alabama, 35205.

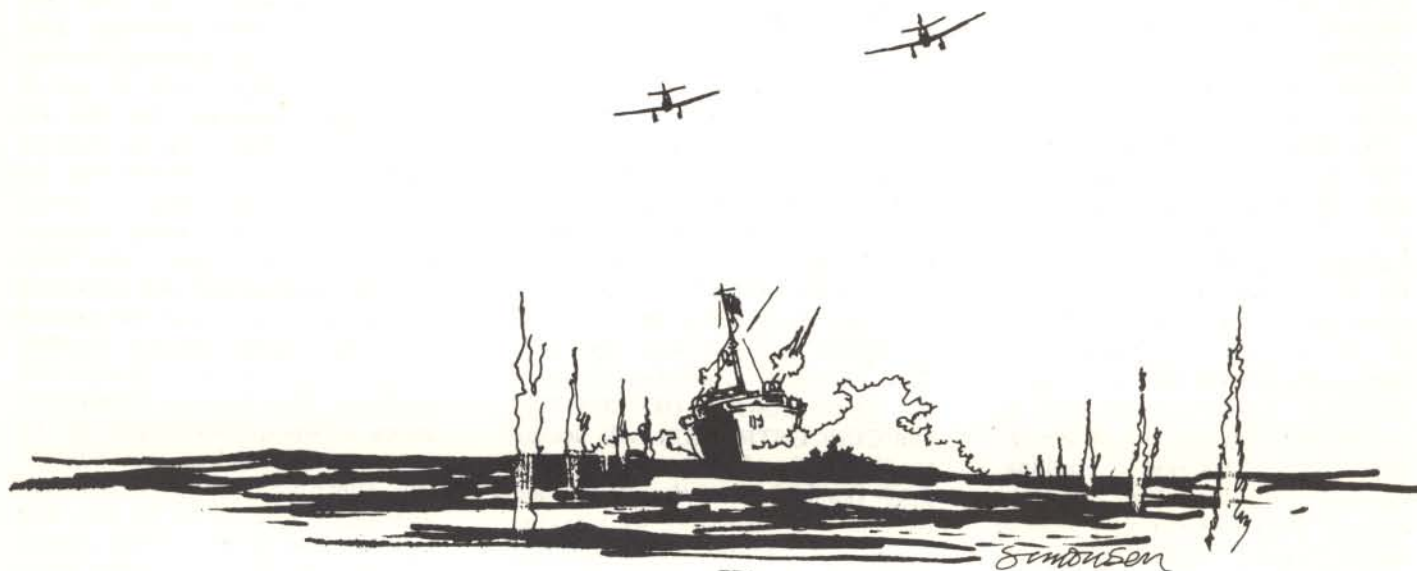
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SAVE MONEY! For sale: Full-size 22x28 inch hex sheets. Same as Avalon Hill's. 75¢ each or 3 for \$2.00. Sent very promptly; by return mail. Robert Libby, 16 William St., Portland, Me. 04103.

BLANK COUNTERS! Excellent quality, any color desired. AH size: 5¢ per 25 postpaid (first class mail). Richard Gutenkunst, Box 204 Mott, North Dakota 58646.

HELP! Can anyone make the "Super-Stalingrad" board depicted in S&T Vol II #1 on PP 13? I am willing to pay reasonable amount for this service. Lewis Ritter, 120 Berwick St., Elizabeth, N.J. 07202.

LOS ANGELES AREA NAVAL GAMERS: Please contact Kenneth B. McKelvy, 3431-A Olinda Lane, Anaheim, Calif. 92804.





WARGAMER'S NOTEBOOK

By Ray Johnson

Thus far in our discussion on rules for a table-top wargame, we have covered how to move the units about the board and how to resolve infantry and artillery fire. In general, one side achieves success by attacking an enemy force on the defensive in order to destroy it or to wrest away its position. This is done with a Charge, where the attacking units break out into a dash upon the enemy line and, if successful, use their impetus to bayonet, saber and club the hapless defense, thus re-ven-geing the casualties that they suffered as they moved up. Cavalry especially use the charge to cause casualties; except in the Melee (discussed later), these rules do not give them any other way as small arms fire from the saddle was negligible.

Only a unit formed into Battalion Line or Battalion Column may charge, and it may charge only within 45 degrees of the direction faced before the bound.

If the charge takes place in a straight line, not uphill, and across no obstacles, the charging unit may use the maximum movement range for the charge (see section on movement). Otherwise, the unit may charge using normal movement range, providing the conditions in the preceding paragraph are met.

The charging unit may not fire in the charge (this is included in the impetus), and it becomes unformed. If for any reason the orders for the charge cannot be carried out (the range was miscalculated or the defending unit moved out of range), the unit must move forward a normal move and become unformed. A unit may not charge again for two successive bounds after a charge.

Upon successfully charging home, the attacking units receive an impetus bonus. This is based upon the number of troops actually making contact after casualties, if any, from defensive fire are removed. It

cannot be more than the number of defensive troops within charge range. The impetus is figured using the Table below:

Remove as casualties:

- 2 infantry for every 5 infantry charging home
- 1 infantry for every 2 light cavalry charging home
- 1 infantry for every 1 heavy cavalry charging home
- 1 light cavalry for every 3 light cavalry
- 1 light cavalry for every 2 heavy cavalry
- 1 heavy cavalry for every 3 heavy cavalry
- 1 heavy cavalry for every 5 light cavalry

Lancers are counted as heavy cavalry for purposes of impetus. If two units are mutually charging, each side takes impetus (morale rules permitting). Artillerists are counted as infantry in taking impetus when a battery is charged. If the unit charged is in open or extended order, multiply impetus casualties by 1½.

The front of the charging unit is considered to remain intact throughout the charge, any casualties received are considered to be filled from the rear ranks. The width of the front of the charging unit may increased or decreased in the charge up to the 45 degrees restriction. The line of defending troops are pushed back 1 inch for every rank of troops charging home.

After taking the impetus, the charging unit may elect to "chop" or to force a melee with the remainder of the defending troops. If a melee is elected, all men within 6 inches of the line of impact after the charge may be considered to be in the melee if wished by their commanders. If the charge was made within half the maximum distance for the bound, the melee is decided within the same bound; otherwise it is decided in the next,

and the troops in the melee are fixed. The charging unit may "chop" if the impetus is enough to make a gap in the defense wide enough for the front of the charging unit. The charging unit may then elect not to engage in melee but to pass through. If there is another enemy unit beyond the first and within the initial maximum charge range, it may be charged and impetus taken against it as the first.

Defensive fire upon a charge and the range at which it is taken will be covered in an article on Morale, as there is the question whether the defending troops will stand or run.

In general, contingency moves are not allowed in wargame rules; that is, orders written for a unit must be definite and not allow alternative moves if the enemy does not move as expected. One exception is for cavalry: a formed, stationary cavalry unit may write as an order, "Charge if charged". Then, if charged by an enemy cavalry unit from its front, it may counter-charge as a defensive measure, providing it could do so under the restrictions above. If it is not charged, the cavalry must remain stationary.

THE MELEE

The melee is a representation of the hand-to-hand combat when opposing units close and become intermingled. It is resolved as a whole since it is assumed to be too confused to handle individually. The casualties inflicted by one side on another are determined using the formula below; although it appears complicated, it is quick to figure in the wargame. Each side rolls one die:

$$Cp = \frac{D \times F \times N}{10}$$

- Cp = Casualty points inflicted
- D = Number resulting from roll of die
- F = number of men inflicting casualties
- N = factor given to F from below

Table for N:

- N = 1 for infantry, light infantry and artillerists 1.5 for elite units, light cavalry and lancers.
- 2 for Guard infantry and heavy cavalry.
- 2.5 for cuirassiers

Each side computed the casualty points (Cp) inflicted on the other, and, from that the casualties are removed in the same manner as for

N (e.g. 2 casualty points equal 1 Guard infantry, 1 heavy cavalry or 2 infantry). Each commander determines the casualty points inflicted by his troops on the enemy, and each removes enough of his own men to account for the casualty points he has received. All casualty points must be accounted for up to the strength of the side in the melee even if the removal of another figure results in more casualty points removed than received. If more than one type of troops are present in one side in the melee, the cumulative total of the products of $F \times N$ is used.

The number on the die (D) is modified as follows:

(a) Charging units add 1 to the die in the turn following the charge.

(b) Defending units add 1 if on superior terrain and 2 if in a building.

No unit may fire into a melee for any reason or charge into one. Nearby units may join a melee as reinforcements but are not counted in the turn in which they enter; they are considered as part of the new melee to be resolved in the following bound. The melee is considered to be taking place within an area 6 inches from the line of contact of the troops involved.

A unit may force a melee without a charge by simply moving to contact an enemy unit. It may do so in a Move and Fire move if within range.

Once formed, the commanders have no further control over the troops in the melee until either one is eliminated or flees under Morale decision (covered next issue). * * *

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THOUGHTS ON STALINGRAD

by J.K. NORRIS

Mr. Norris has been associated with S&T from the beginning. For those of you who have been with us for awhile, you will recall that we've imposed upon him to play devil's advocate on a number of occasions with the result of a better magazine. As for qualifications, well, in the Editor's estimation Mr. Norris is one of the three most proficient board gamers in the world; certainly, he is one of the most experienced.

Here Ken expounds on his favorite subject, AH STALINGRAD, a game in which he has been beaten twice in over 200 postal contests with enthusiasts around the world. Especially noteworthy is the contest he won against Avalon Hill while representing AHKS in a game designed to test the advisability of including the automatic victory rule in STALINGRAD.

There are three basically different approaches to the Avalon Hill game of Stalingrad, each having certain characteristics which can usually be recognised. First of course is the beginner. In his game we usually find the Panzer Corps making deep thrusts and wide sweeps into the heart of Russia on the one hand, and the Russians massing for huge counter-attacks on the other. It is a fast moving game with the casualties mounting swiftly. The very novelty of the game is one of its great attractions. Towards the end of this period, but before the novelty has worn off, it is quite usual to find the player concerned writing to 'The General' or 'S&T', setting out in great detail, either a perfect Russian Defense of an equally perfect German Offensive Plan.

With the passing of this first phase we find developing the rather more cynical attitude of the experienced player who has seen it all before. No longer are there any 'perfect plans' to interest him, instead, this is more a period of experimentation. The questions that concern him now are such things as, 'Is it better to soak-off at 1 to 5 or 1 to 27'. 'Are 16

factors to 12 better than a straight 1 to 1?' After a time he is convinced that there is no future in the game as the Russians are obviously too strong to be beaten; and yet, there is something about Stalingrad that won't let go, so once again our gallant player sits down to write to the magazines. This time he has finally discovered the secret; it is that the Avalon Hill Company have messed it all up, and by just a few small changes in the rules our hero is able to put life back into the game. More often than not it is the same file changes that are proposed too, away with Historic accuracy: — (i) Reduce the Russian replacement rate. (ii) Bring in the Automatic elimination rule. (iii) Introduce the Luftwaffe.

Just before we move on to the third phase, let us have a look at some of these rule changes in greater detail, because some of them do have much to commend them. However, the reduction of the Russian replacement rate is not one of them, it has nothing at all in its favour. Historically it is completely inaccurate, and in any case its effect on the game is practically nil at the time when it would be of most use, that is, during the first 8 or 10 moves. If you really must play about with replacement rules, you will find it far better just to double the German replacement rate.

The automatic elimination rule, as introduced in Afrika Korps (not as in Blitzkrieg). This rule does make a great change to the game when played at a medium level, but, although at some stages of the game you may get a glimpse of the rolling Steppes stretching out before the Panzers, you will soon find that all you have done is to increase the importance of river line to such an extent that the game is closed right up again. Playing at a more advanced level, it cannot be altogether without significance that when the Avalon Hill Company (as Germans) played an experimental game with the automatic elimination rule against A.H.I.K.S. (as Russians) the Ger-

mans were only able to make use of the rules once during the entire game. Mr. Shaw of Avalon Hill attributed this – very generously – to 'astute' play by A.H.I.K.S.

The introduction of Air Power. This of course requires a considerable amount of work before it can be brought into the game of Stalingrad. It can be very good fun when done correctly, but it really isn't the same game any more, because the scale of the Avalon Hill game is just not suitable for the introduction of Air Factors.

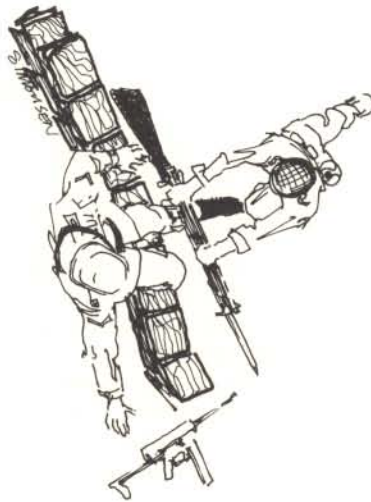
None of these rule changes really help the game because they are really designed, not to improve the game, but to improve the Germans' chances. Any proposed rule change to improve the game must be a two-edged sword. That is, it must be one that both sides can make use of. So if you really think there is something wrong with Stalingrad, I suggest you read a few books about the campaign, and then copy what really happened, and in the 'Snow' months. Freeze ALL the rivers. Try it, and see.

Finally we come to the third type of approach to the game. This is the player who has either had the good fortune to be able to clear away all the cobwebs and see Stalingrad as about the very best example of pure war-gaming, or, for want of a better word, the pure fanatic. Of course, if you reach this stage in Stalingrad, you will probably be a first class, all-round player of most games of this type anyway. But there is a lot more to Stalingrad than at first appears provided, and I stress this point, provided you want to play a good hard game all the way through. It is no good looking for a quick Victory; it just isn't there. Go back to the real Barbarossa for a moment, and you will be surprised how very much alike the real war in Russia and the Stalingrad game turn out to be. I don't know the names of the people who designed the Stalingrad game, but I think they did a far better job in this game than has been done in anything else that Avalon Hill has produced.

Hitler started the Russian Campaign with the idea of getting a quick result. By December of 1941 it was obvious that the idea was a failure. Even so, it wasn't until the 'Zitadelle' battle of July

1943, that the Germans were finally beaten – Stalingrad debacle or not. Now if your opponent is a player of your own calibre, and you try for a quick Victory, you will very soon find that you are not as good as Hitler. Barring freak dice, you cannot get quick results. You must plan your game so that you are going to win it in or around the 24th move. Once you have grasped this most essential point, you will find yourself thinking of the Stalingrad game as a study in Strategy as well as Tactics, and once you have reached that stage of gamesmanship you will probably find yourself enjoying war-gaming very much more.

There are two main causes of complaint against the game of



Stalingrad; first, that it is too easy for the Russians; and second, it is too close a game, too much of a slogging match rather than a game in which hard thinking will pay off. Let us examine these two points carefully.

Too easy for the Russians'. Is it? The Russians start the game with 220 Defence Factors and the Germans with 247 Attack Factors. Now even if the Russians never lost a single unit but saved up all their replacement factors right through to the end of the game (and if they didn't lose a replacement city, that would mean 438 replacement factors) they could not at any time have more than 220 Defence Factors on the board. Right away we can see that what we really mean is that it is too hard for the Germans. But the Germans outnumber the Russians, so we must go a step further and then we can

formulate the first golden rule of the Stalingrad game. "The Germans cannot afford to lose units". This does not mean that the Germans must never risk losses of course, but what it does mean is that every effort must be made to attack at 5 to 1 or better, and to soak off with the least possible factors. Make no mistake about this, one battle at 5 to 1 is better than 2 battles at 3 to 1. In the 5 to 1 battle the Germans must gain ground without loss, in the two 3 to 1 battles they must gain ground all right, but they cannot afford the losses under normal circumstances.

As for the 'slogging match vs the hard thinking'; the Russians have 158 attack factors against the Germans' 265 Defense factors, so there is not going to be too much slogging from the Russians. As for the hard thinking, picture the start of a game, the Russians are in position, the Germans now have to decide not only their distribution of concentrations, but which units on which squares to attack, and just as important, which squares to attack from. One of the important points which is often ignored, is the fact that the Germans are always on the move in front of the Russians as far as the Weather is concerned, and the correct positioning of the Germans can not only allow a quick switch of the main point of attack from, for example the South to the North side of the Marshes, but can also attract Russian units to where the Germans want them for the following move.

What are the Strategic questions that the Germans must decide? Well, they are fairly straight-forward. First, Finland. The initial German dispositions here must depend on the Russian line-up. If there appears to be the slightest chance of infiltration, then this is the place for a couple of Panzer Corps because if they can get loose behind the Russian lines their very existence will be a source of worry to the Russians and a drain on their resources. More often than not of course there is no chance of evading the Russians, so it becomes a question of keeping as many Russian Corps as possible tied up for as long as possible. If you think you can spare them, you could do worse than let the 6R Panzer Corps sit the war out in Helsinki.

In the central area between Königsberg and Hungary is the obvious place to concentrate the Germans, and after the first few months when Brest has fallen or been outflanked, the Panzers must be concentrated in the area with a clear target set for them. Move them around within the area by all means, North of the Marshes this turn and South of the Marshes next turn, but make sure that they cannot be caught on the wrong foot by bad weather. Keep the Russians guessing as to the main point of attack, but once you have fixed your target in your mind, don't be side-tracked.

Which should be the chief target for the Germans? Moscow, Leningrad or Stalingrad? Well, let's forget about Stalingrad right away because (1) its too far away, and (2) it is much easier to attack it from the North and North-West than from the West. Of course the Russian might invite you to go that way; he might mass his troops behind the Nemunas and leave the weaker units to, not defend, but delay an advance in the South. Does it matter? Any successful advance on Stalingrad must either capture Kiev, or leave a lot of German units tied up in defence, and even a quick capture of Kiev doesn't really mean all that much, because it is still further from Kiev to Moscow or Stalingrad than from Kaunas to Leningrad. No, Moscow or Leningrad should be the first German target, and Leningrad looks the best bet every time, although we can always keep Moscow in mind as a target of opportunity. Why Leningrad? Well, there are three good reasons. 1. It keeps the German line short - and we are back to the economy of German units. 2. Once captured, Leningrad gives the opportunity of outflanking Moscow from the whole of the Northern area, or will at least tie down a lot of Russian units if they try to form a defence line. 3. An advance on Moscow rather than Leningrad makes a dangerous salient.

What about Rumania? Here the Germans are on interior lines, so it is worth putting half-a-dozen or so Corps down here in order to force the Russians to do the same.

No doubt all the experts will have given up by now, but just in case there are still some beginners

reading this, here are some Tactical suggestions that might be found interesting. Did I say Tactical, well, perhaps they are Strategical too, and this magazine covers both.

For the Russians.

1. Never place a weak unit in the next, or next-but-one square to a square you want to hold, at least not if the Germans can reach a square that is adjacent to both. For example (using the Official Avalon Hill Grid) if you want to hold Minsk, it is no good putting a weak unit at V22, because the Germans could kill the weak unit from W21 and soak off against Minsk from X20, leaving their forces adjacent to the city at the end of their turn, making you move out or counter-attack.
2. Never double up a very strong unit with a very weak one. For example, if attacking a 7-10-4 at S18 from the three squares S17, T17, T18, the Germans would have to attack with 60 factors to be sure of winning the battle, and would risk the loss of 20 of those factors. But if you put a 2-3-6 with the 7-10-4, although you have in theory increased the defence factors from 20 to 26, the Germans could then be sure of winning by attacking the stronger unit at 1 to 5, with 4 factors, while automatically the weaker unit at 7-1. This would leave them astride the river at the end of their turn forcing the Russians to retreat or counter-attack, and all for a maximum risk of 4 factors.
3. From September to March, always assume that the weather for the following month is going to be bad, and make sure you have replacements on their way to the required position just in case it is too far to reach in one move.
4. Don't attack unless it is really necessary. There is nothing that exasperates the Germans more than to see the Russians continually pulling back the absolute minimum without ever attacking.
5. When taking replacements, make first call on your Light Armoured Corps. In a straight line with 2 squares between each they can form a complete block over a length of 9 squares.
6. You only have 2 7-10-4's. Keep them fairly close together. The best positions for them are S18 & V19; R24 & S25, and possibly L30 & M30. As for 6-9-6. Leave it in (i) Minsk; (ii) Smolensk; or even (iii) Kiev, as long as possible,

even if it is eliminated through being isolated.

7. Try to build up some replacement credit. Once you have, don't take the replacements unless you really have to. Once the German knows that there are 5 or 6 5-7-4's just sitting back waiting, he will be very reluctant to leave just Rumanian units to hold his defense lines. It is the threat that will bother him, not the actual units.
8. Eliminate all the Germans & Finns in Finland as soon as possible, and other things being equal, do it by making a bee-line for Helsinki. If you are involved in any 'exchanges' up there, eliminate some of your Armoured Corps as you will want some fast-moving replacements in the South during the Winter.
9. Many of the river lines which run through cities can best be defended from behind the city rather than in it. For example, the mouth of the Divina is best held from P23 rather than Riga as P23 can be attacked from only two squares but Riga can be hit from three, and if captured, Riga will be occupied which would put the Germans across the river next turn.
10. Try to make the Germans extend their lines, and try to keep them extended. If they get across a river with a spearhead, don't draw back all along the line but let the salient go deeper but not wider. Not only will this tie up Germans on the flanks of the salient but it will often stop them making a rapid transfer from one point of attack to another.
11. Don't try to kill Germans. Let them kill themselves attacking you.
12. If you ever find yourself attacking at odds of 2 to 1, hand in your commission, run, do not walk, to the nearest bridge, get up on the parapet, and - JUMP.

For the Germans.

1. Remember, every unit you lose is a nail in your coffin.
2. If you are going to attack, try to make it at least at 5 to 1, and if you are going to soak-off, why risk 3 factors if 2 will do?
3. The Russians cannot form a continuous doubled defense line in the West, you can outflank the Bug through the Lwow gap, and you can outflank the Nemunas through the marshes.
4. If you are attacking and risking an exchange, say against Brest,

S18 or V19. Make sure that the units you are prepared to lose in the exchange do not all come from the same square of attack.

5. If you are able to advance after combat, and you have been attacking from 2 or more squares, don't advance all the units from one square, but leave each of the attacking squares occupied unless it is the middle one of three. And if you can advance after combat, make sure you are not moving into an exposed position which is liable, or likely, to be counter-attacked.

6. As soon as opportunity allows, start pushing 2 or 3 Infantry Corps due East through the middle of the Pripyat Marshes. You may find that you are outflanking Minsk and the Russians to the South, and you will be surprised how effective this can be. You might also find it informative to note how many Russian units pass through Z22 by train during a game's early stages, especially if you are keeping him guessing by switching your forces North & South of the marshes.

7. Pick your main target and don't be side-tracked. Keep your Panzers concentrated as you don't have enough for two all-out attacks.

8. In an attack in which you are risking an exchange, don't be afraid to give up a Panzer Corps if you can get it back quickly as a replacement. In an exchange against a Russian 5-7-4 it is better to lose a 7-7-6 than two 4-4-4's.

9. Keep the Rumanians spread out behind the front along the whole length of the line so that they will be available for soak-offs, but

don't put them in the front line, because the Russians can attack them at 5 to 1 without much trouble, probably soaking off against any other Germans on the square. Although it will not mean a big victory for the Russians it will mean that the German advance will be held back for the following month.

10. You will often find that the Light Russian Armoured Corps keep getting under your feet when you are out in the open. They are easy to kill off, all you need is 21 factors. But don't just kill them because they are there, try attacking at 5 to 1 now and again. You are bound to win without loss, and if you drive them back instead of eliminating them it will mean that they will not be available as replacements for the Russians next turn, perhaps in a totally different sector of the front. It will also mean that the Russians will have to use up their replacement capacity at a quicker rate just to recover the same number of units to block a given length of front.

11. Always remember that the Russians will never be any stronger than they are at the start of the game, so, kill them if you can of course, but always keep in mind the fact that it is more important to gain ground than fight.

12. The game is scheduled for 24 moves, so don't try to finish it in 12 or less. As long as your German losses have been kept fairly low, you can expect to be within striking distance of the major Russian cities by mid 1942, and still be able to win.

13. See '12' for the Russians.

GUERRILLA WARFARE ANALYSIS COUNTERINSURGENCY in Theory

by Mark Rudolph

Many of the guerrilla's axioms are shared and practiced by the counterinsurgents in order to contain and defeat them. Both are unwilling to fight under conditions adverse to their type of strength, organization and training. While guerrillas shun large-scale, fixed-piece battles the counterinsurgents avoid small isolated battles in jungles or mountains. Both are unwilling to hold meaningless territory for the sake of a gain in controlled square miles at the expense of manpower. The purpose of all actions in guerrilla war is to undermine the opponent's will to win by causing a strain for him in time, material and men. By so doing he can force his opponent to reappraise his position in terms of cost and possibility for victory, in order to force negotiation or "phase out" of battle.

It is unfortunate that guerrilla war is viewed by many as merely another type of military conflict. A revolutionary war is based on winning the hearts of the people involved and discouraging the opposition (priority given to the former). The military aspect plays only a secondary role in the winning of a guerrilla war. Just as important are the factors of political balance and psychological effects. A typical example of the limited view of guerrilla war was the announcement of victory by the allies in the February Tet offensive in Vietnam. It is easy to label the allies as victors based on casualty figures and kill ratios, yet incalculable damage was done to confidence, morale and security of the South Vietnamese people. It remains to be seen who actually was victorious.

To be effective the government forces must destroy the lingering rationale of conventional war. Although they may enjoy superiority in numbers and advance weaponry, they must realize that in not every situation is this edge going to allow them to prevail. Due to terrain and surprise the guerrillas are able to produce tactical advantages such as the ambush. The counter-insurgents must undergo an important



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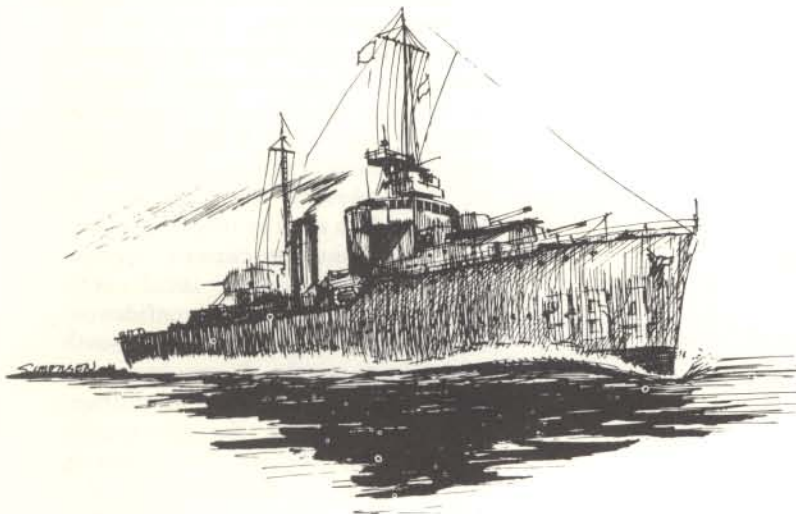
change in philosophy; they will not win every battle as indicated on paper and by statistics, and must shun certain movements. They should not attempt to keep the guerrillas from utilizing remote, scarcely populated terrain because of the necessity for constant patrol and policing of the area while always in danger of a sneak attack or ambush. What is achieved by securing this terrain? Certainly nothing worth risking large commitments of troops and time. A more effective strategy would be one of holding territory to (1) protect the population in order to gain political support, (2) isolate the guerrillas from precious regions containing food, supplies and possible recruits, (3) maintain a strong defensive position guarding lines of communication, infiltration routes, and bases. An example would be Khe Sanh in Vietnam, a base which shoulders a strong defensive line blocking movement from the DMZ, guards the vital artery (Highway 9) and protects population centers in Quang Tri Province.

The government forces must cope with another key "opposite" of

guerrilla wars. In conventional wars each side fights with utmost effort to end the war, but in revolutionary wars the insurgents will usually fight to extend the war. This delay action may actually help to hasten victory since the opposing forces often lose the will to continue. For this reason the government forces must prepare economically, militarily, and most important psychologically for a long, costly war. Malaya, a win for the counterinsurgents, took eleven years, yet even today guerrillas exist in that area. The war in Vietnam has been raging for nine years and even optimistic observers see at least two or three more years of fighting. Contrast these typical examples with World War II which took six years, or Korea lasting three years.

The first step in winning peoples' minds and hearts for the counterinsurgents is to instill confidence in the government. The best way to discourage dissent is to present a better program for living than that of the guerrillas. Often this means exploiting the fear of ideological differences between the opposing

side. Comprehensive land reform (critical problem in Vietnam today) and fair tax legislation need to be initiated in order to satisfy the peasants. The people must have an interest in government and be allowed to elect representatives and vote in elections. At all times the government forces should establish friendly relations with the civilians. They must be made to realize that the national government cares about their protection and welfare. The counterinsurgents contrast acts of terror by the guerrillas with generous aid programs, hospital, schools and free elections from the government. If the government can not provide security against guerrilla reprisals for cooperation, there will be only partial response by the people. The peasants will choose to cease giving food, medicine and recruits to the guerrillas if they are assured that retaliatory measures will be checked by counterinsurgents. For this reason security camps are used to cut off the rebels from the populace. These camps are called "strategic hamlets" in Vietnam, "new villages" in Malaya, and "regroupments" in Algeria. Each hamlet



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develops, in phases, an independent ability to repel guerrillas from the village area. First, security is provided by government army troops or police. Next, local confidence and strength is improved to allow the formation of village defense bands, armed by the counterinsurgents and operating jointly with the police. Soon the local bands are strong enough to allow the soldiers and police to pull out, freeing these men for combat or establishment of another security village. Each hamlet is transformed from a helpless target into a strong anti-guerrilla bastion providing security for its citizens. Gradually, the vast civilian lake of indifference and apathy dries up, leaving the guerrillas in dire need of food, medicine and recruits.

Outside support is an asset to counterinsurgents. If engaged in an ideological struggle the guerrillas will probably be receiving aid from a block of nations. For example, by the end of 1954 the Vietminh received two thousand tons of supplies *per month* and twenty thousand "advisors" from China in addition to the use of Chinese military schools for training and Chinese territory for sanctuary. Today, Russian aid to North Vietnam is placed at between six and eight billion dollars per year. This type of assistance could easily be decisive without aid to the counterinsurgents. The country hosting a revolutionary war will be ravaged

and choked with refugees. In order to cope with the monumental problems resulting from guerrilla war, aid in the form of money, food, weapons and possibly combat troops should be encouraged by the government. However, often the presence of foreign troops is a propaganda victory for the guerrillas, especially if the troops are of another race and from a major power (implying imperialism and colonialism).

In summary, it is interesting to note the similarities in principles between guerrillas and counter-revolutionaries. It is vital to the success of the counterinsurgents to break from the concept of conventional war when combating guerrillas.

Look for Part V in the next issue.



Israeli Infantryman

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UNIVERSE

by Jared Johnson

With this issue, Jared Johnson starts a series of brief columns devoted to abstract games, vaguely related to wargames, so that we don't become too narrow-minded. Mr. Johnson is, of course, an expert in this field as well as a wargamer of long experience.

Universe, one of Parker Brothers' newest games, is a take-off on a game called Pan-Kai put out by the Phillips company some years back. The game, for two to four players, is played on a board composed of 200 small squares, a ten square by ten square section in the middle and 25-square sections of a different shade of green adjacent to each of the four sides, for convenience in eliminating portions of the board with fewer than four players.

Each player has a set of twelve pentominoes. A pentomino is one of twelve possible shapes, all different, which results when five equal squares are joined together. In order to form a pentomino at least one side of each of the five squares must join a side of at least one other square.

The object of the game is to place these pieces on the board, employing a strategy that will enable you to place the last piece. The basic strategy is to wall off sections of the board of such a shape that only one of your pieces will fit into it, thus assuring you of an extra play at the end of the game.

This is a most fascinating game of abstract strategy "which embodies all of the fascinating of space and shape inherent in the twelve possible pentomino shapes provided for each player." It is a definite challenge to your intellectual and perceptual abilities. It reminds one of some of the items on various aptitude tests, where you have to fit shapes into various fields of space.

Playing time runs about 10-20 minutes a game, thus you can play any number of rounds using a point-scoring system. A player gets one point for being the last to place a piece, two points if he places the last two pieces, etc. A "triple win" is about maximum.

The game sells for \$5.00. If unavailable at your local retail outlet, write to Parker Brothers, Inc., Box 900, Salem, Massachusetts, 01971.



MOVEMENT

We are now ready to play. The dock is placed anywhere along the table end and a ship against it. The drift current cards are divided into two piles, one containing the direction cards the second the remainder. These are shuffled and the top card on each pile turned over. This is done after every ten turns. If a ship is at sea with engines off by damage or design, that ship will turn broadside to the current and move in the direction and at the speed shown.

Now concerning speed, each ship has, in a sense, 6 speeds. They are: full ahead, $\frac{3}{4}$ speed, $\frac{1}{2}$ speed, engines off, $\frac{1}{4}$ and reverse. A ship is considered to be without steam at the outset of the game. A ship may change speed by $\frac{1}{4}$ per turn, this including stopping to reverse, but the drift rule does not apply if reverse is followed on the next move. Now how do we calculate how far we travel at a given speed? This is shown on your data card for each ship, but you will want to know how to make this up. Well, let's take the example on the sample card given (last issue). The ship travels 32 knots, that is, 32 sea miles per hour; 2,000 yards are 2 inches on our scale. Further, each turn is for 6 minutes $\frac{1}{10}$ of an hour therefore we get $\frac{1}{10}$ of 64 inches or 6.4", full speed. Half speed is 3.2" and so forth. A player may remain in harbour building and up steam $\frac{1}{4}$ speed per turn if he wishes. This is marked in the log as $\frac{1}{4}$ A, $\frac{1}{2}$ A, $\frac{3}{4}$ A, etc. (A meaning anchored.)

When in reverse fill log as $\frac{1}{4}$ R.

TURNING

A ship has a choice of 16 directions or points of the compass corresponding to the 16 directions given on the drift direction cards. This is why the direction indicator is marked off in angles of $22\frac{1}{2}$ degrees. The turning procedure is a bit difficult to describe. First the window of the narrow end is

GEORGE A. LORD'S

RULES FOR

NAVAL WARGAMES

lined up on a radial line and then the blunt end marker is placed against the bow of the ship. (See dotted position in figure I). Secondly, without moving the indicator itself, swing the point over number of compass points it is desired to turn the ship (full line position figure I). Thirdly, hold the indicator and pointer firmly and slide the indicator until the blunt end marker is again against the ship's bow as shown in figure II. Finally, without moving the bow, swing the stern of the ship around until it points along the direction of the pointer. For each $22\frac{1}{2}$ degree swing deduct $\frac{1}{10}$ th of an inch from the ship's speed. A ship is permitted to turn twice in a single move and distribute the distance travelled anyway desired as long as deductions are made for every point turned.

BASIC COMBAT

First, an explanation of some points listed in the turn sequence. The position to be listed in the log under point 3, refers to the 1 foot square the ship lands in, such as C4, F6, etc.

Next R.F. means range finder. Now before the day of computer and radar controlled guns, the range was reported from certain range finders to gunnery control which passed on the laying of the guns to the turrets. We assume each turret has its own range finder,

one of those contradictions we spoke of. Now if a gun loses its range finder through battle damage as shown on the damage wheel, then on all succeeding turns, in step five, a player planning to fire that turret must write down his guess at the range, and he must write down his guess for each turret concerned, which means he may make a different guess for each turret if he wishes. REMEMBER, these guesses are made only for turrets without R.F.'s. After the range is measured (step 6) those turrets with the correct range may be fired along with the other turrets.

Step 7 — In the fire orders, the player must list which guns and torpedoes he intends to fire and must fire them; no change in orders are considered possible before the 6 minutes are up. The only exception to this rule is in the event that the ship has been sunk by, say, the 2nd torpedo and 4 were ordered fired, then an automatic stay order applies on the last two.

Step 10. — Since the ships are firing simultaneously, the damage done will not be counted against each player until the end of the turn, so that a ship may be sunk, but is still permitted to carry out her fire orders for that turn.

Now we come to the rules of actual combat. The range is measured from the bow tip of one ship to the bow of the other. If the

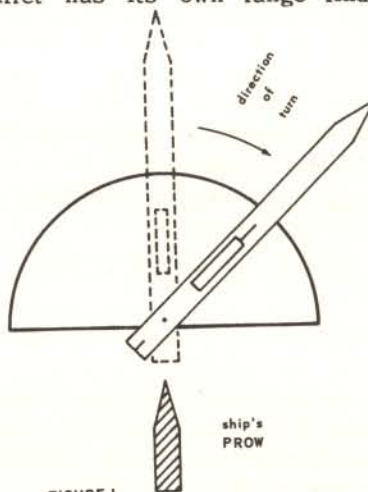


FIGURE I

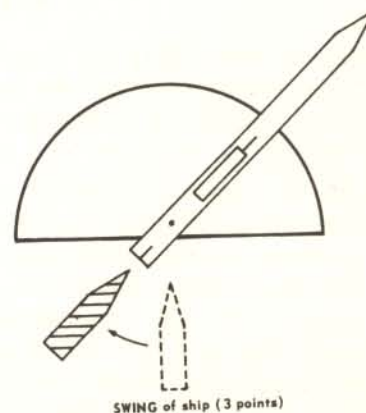


FIGURE II

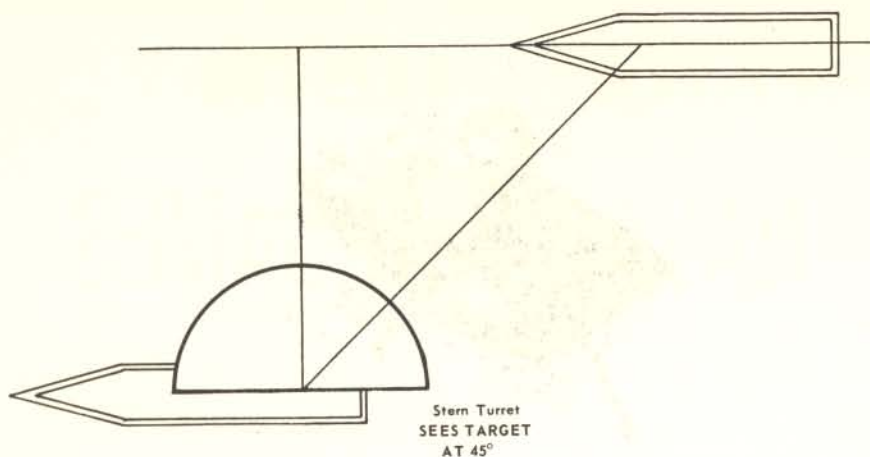


FIGURE III

fraction of an inch over is less than $\frac{1}{4}$ " ignore the fraction, but if $\frac{1}{4}$ " or over raise to the next inch. For example $12 \frac{3}{16}$ " is treated as 12,000 yards, but $12 \frac{1}{4}$ " is treated as 13,000 yards. Guns facing bow or stern are main armament and are considered to swing 135 degrees either side of center. Guns or torpedoes firing from the side are considered to swing through $67\frac{1}{2}$ degrees each side of center. Hold the direction indicator with the pin above the turret in question and swing the pointer around to decide if the gun can reach the target on any doubtful shots. Next comes the angle of the target presented to the gunners. Place the yardstick or lathe out in front or behind the ship (target) in the direction she is steaming, hold the indicator above the turret of the firing ship as described above, and swing the pointer around until it forms a right angle with the stick. The right angle would of course be a broadside, now swing the pointer around until it reaches the target at the most favorable position. Read off the nearest number of points from broadside. Now check range and angle from the range table. Incidentally, the angle the target is illustrated (in Fig. III). From the range table we obtain a code number of 4 digits. The table is designed for destroyers, so we make a correction for the size of the target. From every complete inch that the ship model is longer than a destroyer, add 1 to the second digit. In the case of submarines, we deduct 1 for every inch under. If the target happens to fall within head-on position, we add 1 for every $\frac{1}{4}$ " more than the beam of a destroyer, or deduct in the case of submarines. Every time the second digit reaches

6 raise the first digit by 1. For example the table says 1522, and the ship, a cruiser, is longer by 2 inches the code becomes 2122. Now there will be some who think I love dice rolling when they see how the system works, but how else do we make so many fine distinctions? The key number for a hit in all combat is a 6. The first digit gives the number of tries with two dice, the third with 3 dice, and the last with four dice. This is per gun, but once a hit is scored the rest of the roll for that gun is obviously dropped. Now some may say there is practically no hope of a hit if you need three sizes, but it comes up reasonably frequently for the number of rolls made in combat. I have suffered some severe damage from such hits.

Each time a hit is scored the damage wheel is checked. It is given one free spin at the outset of the game like shuffling cards. Then, after each hit, the player making the hit rolls two dice, adds the total and moves the shell damage window that many times, and the damage, if any, is recorded in the log of the target ship, being assessed at the end of the game. Sometimes the damage means nothing. Turrets are numbered from the bow end, and if a ship does not possess such a weapon it is ignored. We will give an interpretation of the damage that counts in Stage One shortly. Meantime, however, I should like to explain the effect of the weight of the shell given in the caliber table. When a hit is scored, the target is damaged regardless of the special damage shown on the damage wheel. The weight of the shell casing has not been deducted from the contained explosive as it is all relative to the shell size. Hence, for each

1 pound of shell we assume 1 ton of damage, and this is deducted from the displacement figure given on the ship's data card and listed in the damage column of the ship's log. The ammo and fuel column are not used until Stage Six.

Torpedoes follow the same rules as guns except when a hit is scored a double dice throw is made and the window turned, then the weight deducted from the displacement as given. There is no other special damage. Torpedoes may vary in their damage depending on many factors; this is reflected in the wheel.

It now remains to explain the terms in the damage wheel.

R.F.'s means the range finder for that turret is out of action, and the result of this has already been explained.

The turrets themselves naturally mean the turret has been silenced.

Torpedoes - means that bank has been silenced, incidentally, surface ships can fire only once from each tube.

Radio Control (Gunnery Control) hit reduces all turrets on that ship to fire one gun per turret per turn.

Magazine - ship is blown up.

Boilers or Engines - each hit here, reduces the ship's top speed by one quarter.

Steering or Rudder - Under steering control, a hit here permits the vessel to move only forward, backward or lie in the water, where the current of the drift cards takes over. If Rudder Jammed Right or Left comes up, then the ship makes a 45 degree turn, moves half a move, another 45 degree turn and then the other half moves. If a second steering hit comes up it replaces the direction of the first. If a ship becomes involved with such a ship in a collision - not likely if you watch out for them - then they become locked together and drift as a unit.

STAGE II - RADAR & MULTI-SHIP ACTION

Ranges - Radar Range - 40' (night or day).

Day Time visible range - 30' (for ships without radar).

Night time visible range - 2'

Moving beyond radar range.

This is one of the problems we found most difficult to solve and keep the system simple: How to keep track of ships assumed moving

Page 20

on the board that your opponent is not supposed to see because they lie beyond the range of his radar. The simplest solution, of course, is to simply move them on the board and let him see them, but then you have no justification for radar and, what is of greater importance, the element of surprise in Stage Six. We thought of curtains to divide the board, but the mere thought of the headaches it would involve was enough. Next, a system was worked out which used a form of slide rule to keep track of the movement of hidden ships, but it required more tables of values, and, as we already have plenty of these, we scrapped the idea. It finally boiled down to the most direct approach, in which the ships do not appear on the board until detected by radar, and their movement is kept track of by merely filling in speed and direction of each in the log for each turn. It is recommended that you mark down the actual distance travelled each turn and merely record the cumulative total each time until ship changes course. (We will give an example of this system shortly.) A player should be able to form a rough idea of where his ships are; if he becomes uncertain, he merely asks his opponent to turn around while he plots out on the board the path or track taken by his ship. Another plan is to make up a ditto 8' x 6' and divide it into 1 inch squares. With such a sheet he can plot the movement (scaling it down of course) so that he can see where every ship would actually be on the board. If any reader can evolve a simpler system, I would be indebted to him if he would pass it along.

Now for our example of plotting and leaving out a ship's course. We will assume the ship in this case is a cruiser of speed 32 knots. She is lying at harbor which juts out to the upper left corner of square D8 and is facing west. The following are the log entries:

Turn	Speed	Direction
1	$\frac{1}{4}$	W
2	$\frac{1}{2}$	W
3	$\frac{3}{4}$	W
4	full	W
5	full	N
6	full	N
7	full	N
8	$\frac{3}{4}$	NNE
9	$\frac{3}{4}$	NNE

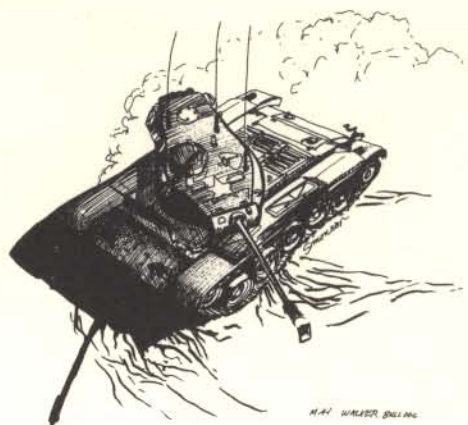
In the above example it is now very easy to check the exact position of the ship. Merely measure out 18 inches due west and place a die or other marker, then measure off from this 21.2 inches north. Move the marker to this position, layout the course NNE using the Direction Indicator and mark off another 8.9 inches.

DETECTING BY RADAR

Any ship at any time, providing its radar has not been knocked out by shell damage (see wheel), may make a radar sweep. The sweep is carried out as follows: place the 40" lathe over the ship's bow (hidden or not) and swinging out a circle. (A 40" string may work better.) Now the 1 foot squares on your table top are mentally subdivided into quarters, and the player making the sweep may call out any squares he wishes which fall under the range of his 40 inch string/stick. We said that he may call out any squares he wishes, but there is a qualifying rule on this, which will be explained shortly. If the opponent has any ship or ships in the squares called, he must place them in position on the table. The player making the sweep must now add in any of his ships which lie in radar range of these enemy ships. The opponent now adds in any more of his affected by these last additions, and so on until all affect-

Total distance on the table
(in inches)

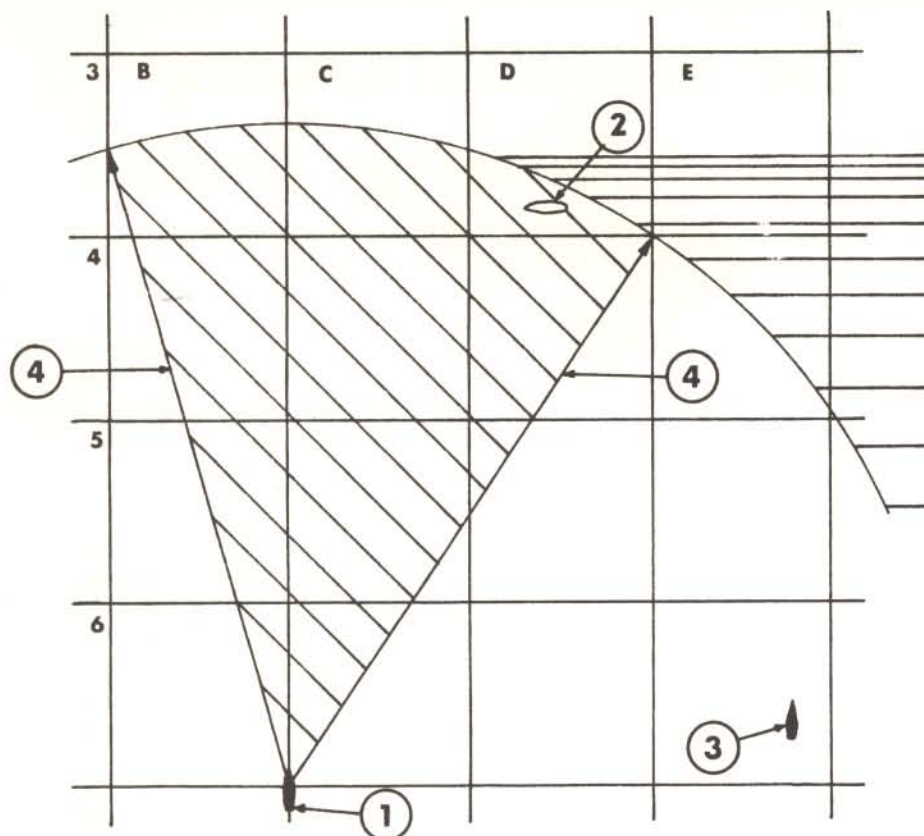
1.8
5.4
10.8
18.0
6.8 (4 off for the turn)
14.0
21.2
5.3
8.9



ed are on. This rarely is as prolonged as it sounds, since most players keep their ships together in squadrons. The player does not have to call out all the squares that his radar commands, but (here comes the qualifying rule) if he calls at any given distance away without netting something, he is compelled to keep calling off those squares in closer until he has picked up something or until he has exhausted all the squares right up to the one he occupies. The purpose of the subdivision of squares is to give the 40" range a little more accuracy in connection with sweeps. The following example (Figure IV) will show how it works.

The player making the sweep from B6 calls "B3 front", "C3 front", "D3 front" since he cannot reach the back, and if the opponent had a ship in the back half of C3 he merely remains silent about it. The sweeper also may call "E3 right front" since he can reach that corner of E3. A player on the other hand may not want to call out the last mentioned as it would tend to indicate his own position to his opponent, and he would be perfectly right in doing so. But if he has made the first 3 calls given in the example without encountering his enemy, he must call B4, C4, D4, B5, C5, B6, at least (they are shown shaded in the drawing since they lie closer and are crossed by the "arrows of the sweep"). Of course, if he had another ship as shown in E6, he could call E3 front without giving away his position. Naturally if your radar covers the whole square you can call the whole square at once.

If a ship moves all enemy radar, it is removed from the board and again moves as a hidden ship. If a ship has lost its radio as listed in



- 1 - Ship conducting sweep
- 2 - Enemy ship caught by sweep
- 3 - Friendly ship able to extend sweep to confuse enemy as to exact whereabouts of ships in case sweep comes up empty.
- 4 - ARROWS of sweep.

the damage wheel, and is beyond radar range or has also lost his radar and is beyond visible range, he may not enter an action which is going on, since it is assumed he has no way of knowing about it (sound of battle is ignored). This rule may seem unfair, especially if it is a major or critical action, so if you wish you may use some chance system to determine if he steams toward the action. You may, instead, rule that such ships may enter the area a given number of moves later. We hope that takes care of those who wish to use radar rules, and they definitely - to my mind - should be used in Stage VI.

MULTIPLE SHIP ACTIONS

First of all under this heading, before we forget, in writing up "Fire Orders" you will now not only state what weapons will be fired but also the targets against which each is registered, before any firing is

carried out. Remember, "Sailing Orders" and "Firing Orders" may NOT be changed once they are written down.

FIRING OVER INTERVENING SHIPS

Intervening ships must be at least 2,000 yards from the ship firing, and the target at least 5,000 yards beyond that.

FIRING AT TARGETS PARTIALLY BLOCKED

This naturally must be viewed from each turret, have your opponent slide a ruler along the target while you view the total number of visible inches, then use the adjustment mentioned in stage one. For example, our destroyers are counted as 3", and so if 2" of a cruiser are exposed and the normal code number for the range and angle is 1511 then you see 1" less and the code becomes 1411.

FIRING AMIDST FRIEND & FOE

Friendly ships must be 5,000 yards from target ship, otherwise they are assessed with every second hit instead of the enemy.

STAGE III

Night Fighting

We use an old clock (not running) and turn it by 6 minutes intervals at the end of each turn. It is useful for knowing when the ten turns are up and the current drift cards should be changed. It is also useful for keeping track of length of flights or missions as will be obvious when we come to stage five.

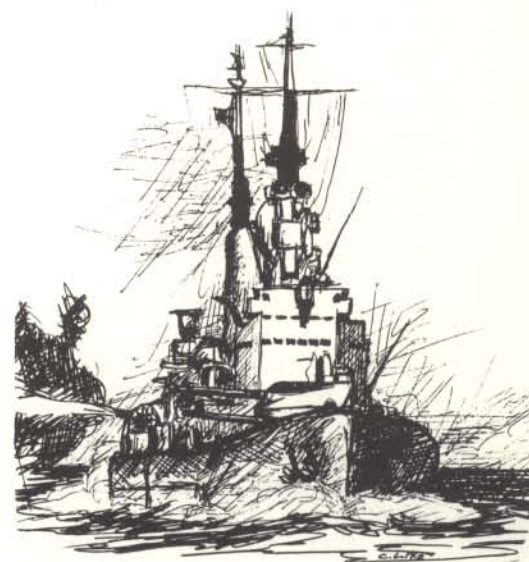
First a single die is rolled

1,2,3,4, - is daylight

5,6, - is darkness

Next two dice are rolled and the total is the starting hour of the game, daylight being assumed from 7 AM to 7 PM.

Night visibility for ships without radar and aircraft making night strikes is 2,000 yards. Any operating searchlight from any vessel not more than 4,000 yards from the target raises the range on that target to 4,000 yards. Any two such searchlights raises the range to 6,000 yards. The range, however, cannot be raised beyond a 6,000 yard limit by any additional searchlights. Ships with radar, of course, have their regular maximum range for all guns. Incidentally, all ships are assumed to carry two searchlights, but can lose them as shown by the Damage Wheel.



James F. Dunnigan **THE INFORMATION GAP** some problems in table-top Realism

As designer of AH JUTLAND and 1914, and as researcher-design assistant for BATTLE OF BRITAIN, Jim Dunnigan is uniquely qualified to speak on the creative aspects of game design. Here he branches out a bit and discusses the problems of games with miniatures set in the Modern Period.

Of all the various methods of wargaming it is the tabletopper who must have the most complete and extensive body of historical data for the development of his games. Unfortunately, tabletop games are least adaptable to mass sales and distribution. Thus most tabletop gamers are, out of necessity, "loners". Working in isolation and without the additional facilities that cohesion would bring, the average tabletopper must face constant frustration as he seeks the precise, yet unobtainable data his craft demands. While most of my work is concerned with board games of the Avalon Hill variety my research has often brought me down to the small unit level of the tabletopper. While not being familiar with tabletop games themselves I have investigated their level of historical data sufficiently to feel that I can shed some light on their current problems, and some possible solutions.

First of all we must define the period in which we will work, if only to be consistent in our use of historical examples and information. The period which seems to produce the greatest number of problems is the most recent one, namely the 20th century. This is understandable as there is as much difference between Greco-Roman and Napoleonic warfare as there is between Napoleonic and 20th century warfare. This is primarily because of changes in weaponry but also, in a far more subtle fashion, because of changes in doctrine and tactics. The key ingredient here is firepower, and man's ability (or lack of ability) to adapt to these changes in firepower.

An even more basic problem

is the difficulty the tabletopper has in recreating a World War (I or II, they have much in common) situation. The problem here concerns not so much a lack of data on situations and WHAT happened during them but rather HOW these situations evolved. Here we face a situation peculiar to 20th century warfare—the fragmentation of the battle into thousands of small, isolated combats. These combats demand that the private and junior NCO make decisions which previously were made only by officers. The key problem here is, essentially, one of communication. The high command rarely learns about HOW things happened. It only knows what happened, but can make up reasons why. This is what, until recently, has occurred in most armies. If the generals themselves do not have a complete body of data on how things happen during small unit actions, how can we expect the tabletopper to recreate these situations in game form?

When I first encountered this problem I soon discovered that most of the readily available "official" military sources contained little of value on the subject. I then turned to the two most likely related fields (sociology and military medicine) and found that the problems outlined above

had been dealt with. World War II had been the starting point, Korea had proven the needed vindication for the new theories and techniques. The sociological work (mainly THE AMERICAN SOLDIER: COMBAT AND ITS AFTERMATH, S A Stouffer et al, plus many other works) was given a combat vindication during World War II and was brought to the public's attention in a too-little-read book by SLA Marshall—MEN AGAINST FIRE. The medical studies consist primarily of the Army Medical Corps' WOUND BALLISTICS which deals mainly with the effect of modern weapons. Working with these sources I have been able to develop new board gaming procedures. As these new board game procedures are worked out to the lowest possible level it is a rather simple matter to present the appropriate data for the use of tabletop wargamers.

My research on the small unit level first concerned itself with the conditions of 20th century combat. This research showed that during the relatively brief time a man is in "combat" he is exposed to two major wound-producing agents—high explosive shell fragments and bullets. Both of these wounding agents depend more on quantity of projectiles than quality of accuracy for their effectiveness.

FIG. 1 – EFFECT OF TERRAIN ON CASUALTY PRODUCING WEAPONS

Casualty Producing Agent	OPEN (Plain, Steppe, Desert)	MIXED (Plain & Forest, Populated Area)	CLOSED (Jungle, City, Forest)
Shell (Mostly Arty)	75%	63%	50%
Bullet (70-90% MG)	20%	25%	33%
Grenade	1%	2%	12%
Mine	2%	1%	2%
Bomb	1%	5%	0%
Other (Flame, Trap, &c)	1%	4%	3%

Their presence also has differing psychological effects on their targets. The terrain also has its effect, as Figure I shows.

The shell was the most damaging weapon for two reasons. First, it simply delivered the larger amount of wound producing projectiles—a 105mm shell landing in an enemy position would release some 1500 wound producing fragments, 8% of which could produce casualties at 300 meters, 55% at 30 meters. Bullets could be avoided, shells couldn't and the infantryman knew it—perhaps too well. Figure 2, shows how U S Infantrymen in North Africa reacted, in terms of fear and casualty causation, to German weapons.

With regard to weapons themselves, particularly the basic infantryman's weapon, we come upon an interesting problem—the continuing debate of the “pop-gun” (burp gun) versus the “aimed rifle” (semiautomatic or bolt action) schools. The pop gun school felt that the infantry weapon would have to be automatic. The aimed rifle school, while recognizing the irrefutable evidence of machinegun superiority from World War I, still felt that well trained marksmen armed with slow firing weapons would be the more effective. They also felt that the ammunition expenditures of burp-gun armed infantry would be too high. (The same argument was used against the breech loader when it was proposed

as a replacement for the muzzle loader.)

Because, as it turned out, there was not enough time to train expert riflemen and because the infantryman had little faith in his slow firing weapon during combat the burp gun eventually became recognized as the most effective type of infantry weapon. Although the burp gun won the battle it lost the war in that it was not generally adopted. The reason—artillery and the available machineguns were so efficient that it was really not worthwhile to replace the relatively ineffective rifles. This is not to say that front line troops do not need all of the firepower they can get. Quite the contrary—the point is that artillery can supply this firepower in greater quantity and more effectively. Troops on the firing line and directly behind it are constantly harassed by enemy artillery. Supply is made quite difficult when you realize that a 500 round box of belted machinegun ammunition weighs some 30 pounds. An 81mm mortar round weighs 8 pounds. Artillery is thus able to take up position in a relatively safe area where supply is uninterrupted.

Indeed, the bulk of modern artillery ammunition expenditures goes for harassment (keeping the other fellow jumping), interdiction (cutting travel routes) and neutralization (making areas impassable) fires. The expenditure

of over a billion rounds of artillery ammunition in World War I proved how difficult it was to destroy dug in infantry with fire alone. Artillery thus became a “screen of steel” which, if used properly, could thwart the enemy at the proper moments and allow your own infantry to destroy the enemy's with the minimum of loss.

It is interesting to note the physical, psychological and organizational effects of modern shells and bullets. One of the most interesting physical effects is the short ranges at which most casualties are inflicted. This in spite of the long range of modern small arms. Here is a case of tactics finally adapting to weapons. Figure 3 gives the general percentages of casualties inflicted by the principal wounding agents plus, in parenthesis) the proportion wounded within the indicated ranges.

Machinegun weapons were more often fatal because, at close ranges, their wounds were usually multiple. Also, bullets from automatic weapons generally had more “wobble” thus producing greater tumbling and thus more “explosive” effect upon entering a body. Mine wounds were more often serious because the victim was directly over the explosion.

The psychological effects of modern firepower are chiefly seen in tendency for men to “freeze” or lapse into inactivity when faced with sustained (for even short periods) shell or bullet fire. In a defensive situation the usual reaction was for most men not manning crew-served weapons (machineguns, mortars) to either not fire their weapons or to fire them uselessly into the air. It was found during World War II that only one third of all combat troops used their weapons in a defensive firefight. Again, those who did tend to use their weapons were those serving machineguns, mortars, flamethrowers and other weapons which, as it turned out, gave the users a feeling that their weapons could have a decisive effect on the attacking enemy. The rifle, apparently, did not engender such confidence. This phenomena was in the American army. The Germans recognized the decisive power of the machinegun, they called it “the essence of infantry”, and built their entire defense around

FIG. 2 – QUESTIONS ASKED OF US COMBAT TROOPS IN NORTH AFRICA – 1943

	Which weapons, caused most casualties?	Which weapons did you most fear?
Artillery	62%	48%
Mortar	17%	13%
Machine Gun	6%	7%
Heavy Bomber	5%	12%
Dive Bomber	4%	20%
Strafing	4%	5%
Mines	2%	2%
Rifle	0%	0%
Other (tank, &c)	2%	4%

Note: as a man spent more time in combat he tended to fear most the same weapons he thought caused the most casualties.

it. Veteran American units learned, usually the hard way, to do the same.

In an offensive situation the superiority of German training was again evident. American units tended, at the first sign of enemy fire, to "hit the dirt". The usual result was that the unit lost all cohesion for several hours as leaders first got control of themselves and then sought to do the same for their men. The Germans and Japanese, on the other hand, stressed the need for continual voice and visual contact during an advance. Americans mistakenly thought the shouting and whistling among attacking German and Japanese troops was a sign of nervousness. On the contrary, it enabled attacking force to maintain its cohesion even if it had to go to ground ("hit the dirt") during its advance. These organizational defects were not unknown in the German army, especially with entire units of partially trained teenage troops (the paratroopers in late 1944). One veteran German paratroop NCO summed up the effect of fire on these "elite" troops with the comment, "when the first shell exploded the iron in their hearts turned into lead in their pants".

These organizational defects also go far to explain some of the poor performances of the Italian troops during the war. Most of the Italian infantry came from Galabria and Sicily, areas where lack of education and poor government produced little respect for delegated authority, which is just about all

you really have in modern armies. Individually brave, the Italian soldier was at an enormous disadvantage in operations requiring unit discipline and cohesion (such as attacks and mobile defense). American troops were able to overcome many of their organizational and training deficiencies through the use of their superior firepower. Many an American unit, unable to generate sufficient firepower with its infantry weapons to stop an attack, was saved by the massive and efficient use of artillery.

A somewhat more indirect effect of modern firepower is the limited ability of men to maintain their effectiveness during periods of sustained combat. The mobility of modern armies makes it imperative that enormous frontages be manned at all times. Thus we find soldiers in most armies spending endless months in "combat" of varying degrees of intensity. No matter what the intensity there is a limit to what a man can take under these conditions. It was found during World War II that a private's combat efficiency reached a peak after 4-5 months of combat, it then rapidly declined. NCO's were good for twice as long. The only thing which prevented the armies from simply falling apart after the above periods had elapsed lay in the fact that during periods of sustained combat (such as in France between June '44 and March '45) divisions would suffer casualties equal to two to four times their total infantry strength. This was mitigated somewhat by the

fact that 40% of infantry casualties would eventually return to their units. But then, many of these men would become NCO's or be transferred to noncombat positions. Still, after a unit had "gone through" its infantry a number of times it would still find some one third who were in the line from the very beginning. Those who had passed their peak would be sure to have an effect on their units.

With the above data in mind, how can the tabletop wargamer handle the problems we have thus uncovered? The most effective method I have yet come across is to create a "functioning model" situation in which every possible expedient is used to recreate the essential elements of the situations our research has covered. What are the "essential elements" in our case? Fog of War for one. Added to this is the difficulty of small unit control although this varies with the situation and nationality. The effect of weapons also varies with the above conditions. About the only constant where weapons are concerned occurs in the case of body area exposed when troops are in various positions-as shown in Figure 4.

When testing the prototype model be sure that you change nothing unless you can justify it in terms of your validated (if there is such a thing) research data. As you progress your game will "evolve" before you, becoming simpler and more relevant as you go along. This system has worked admirably well for board games, I see no reason why it should not work for tabletop games as well.

FIG. 3 - RANGE AND EFFECT OF WEAPONS

	Dead	Seriously wounded	Lightly wounded	Figure in paren. is % hit within below range.
Machinegun	55% (91%)	30% (100%)	15% (61%)	within 75 yds of gun
Mine	38% (100%)	32% (100%)	30% (100%)	within 5 yds of burst
Rifle	32% (90%)	43% (100%)	25% (63%)	within 75 yds of gun
Artillery	22% (95%)	34% (73%)	44% (72%)	within 20 yds of burst
Mortar	12% (88%)	41% (89%)	47% (80%)	within 20 yds of burst
Grenade	6% (100%)	34% (70%)	60% (74%)	within 5 yds of burst

Note: all figures are for mixed terrain.

FIG. 4 - BODY AREA EXPOSED

Position	A Total Body Area Exposed (in sq. ft.)	B Vulnerable Area (incapacitating wounds)		C Decline in vulnerable area (from B)	D Vital Area (fatal or serious wounds)		E Decline in vital area (from D)
		Sq. Ft.	% of A		Sq. Ft.	% of A	
Standing	4.2	2	43	100%	.7	16	100%
Kneeling	2.1	1.2	57	60%	.5	23	71%
Prone (head on)	1	.75	75	37%	.3	30	43%

Note: This is area of body taken head on. Use of cross-fire or artillery increases area accordingly.

INTRODUCTION TO NAPOLEONICS

By Fred Vietmeyer



So you have ordered your initial Napoleonic troops and are waiting for them to arrive. Now I'd better tell you; it takes awhile, perhaps up to eight weeks. The trick is to keep something coming all the time while you're painting what you have received. No, do not start painting them with airplane paints. Model airplane paints are designed for the specific purpose of fuzing with plastic. Besides, they're too "short". Paint and liquids such as oil may be represented as a tumbled mass of threads of varying length. A "short" paint would have short threads. After drying, the short threads come apart easily if they are bent, and a lead-tin casting WILL bend. If you use a short paint, the paint will readily chip off.

Turn to your Soldier Shop catalog (you did do your homework and order one didn't you?). In the back you will find the Imrie Military Colors. I personally have considerable experience with these and they do a very nice job, but there are two items of difficulty here. First, their silver is not as bright as it could be, so here I use model airplane silver. Secondly, their white has poor hiding power. If you double coat it, it is satisfactory, but do not put on too much as it cakes up the detail on a casting. One trick is to white wash a casting before painting it white - or red, for that matter. This white wash is made by over-thinning a portion of the Imrie white.

Jack Scruby (look in your Scruby catalog) sells FLATT colors. I have not used these myself, but other players in our group report them as satisfactory. FLATT does have one color not available in the Imrie Colors - gun metal. Another person in our group, a master painter, uses only Rose colors from Gammage in England. The Rose white is supposed to be superior. So, you might as well order a Rose Catalog since it also has color guides and an excellent page on British and French flags. Write: Military Miniatures. Rose Model

Soldiers, Russel Gammage, M.S.I.A.
45 Sundore Road, Charlton, London
S.E. 7 England.

How do we prepare a casting for paint? First you cut and file off the flashing. The expensive castings will have little flashing. Then you must, please, please, prime the castings or your troops will catch the creeping crude, a dread disease that wipes out battalions. No, don't use just any old primer. I have found that Imrie's Metal Primer does the job properly (I understand KOTE is also the same type).

Why prime? The paint causes a chemical reaction with the lead of the casting yielding a powdery white deposit similar to the deposits on a car battery. This is murder to paint; it just chips and peels off. Furthermore, there is the oxidation of the casting metal and a reported new form of corrosion, which is possibly caused by fungus in the presence of humidity. This corrosion digs tunnels under the paint. Oddly enough, when two tunnels meet head on, they will not merge. Strange. This new discovery is really getting some attention in the automatic paint business - my field.

Whatever the cause, priming with Imrie primer will completely seal the casting, and you can paint over it with peace of mind. The primer will also fill in minor imperfections in the casting. For faster priming, try dipping using a bent paper clip for a hook. Dip the casting in head first, then let the primer run down on the base and brush it out. You will have to thin the primer for dipping. Stand the drying casting on wax paper and let dry overnight.

Please do not use ordinary white primer. Although it gives good initial adhesion to the lead, it actually accelerates the creeping crude. I have seen battalions of unprimed troops catch the disease and die in a year's time. It seems that the purer the lead casting (type metal or pure lead) the easier it

catches the creeping crude. Soft, lead-tin castings are somewhat more resistant.

Now you need brushes. For priming, ordinary model airplane or water color brushes are acceptable, but for details you need a Winsor & Newton Red Sable 0 or 000 brush or equivalent. This size is mandatory; try any artist supply store.

After the castings are painted, wait seven days or better, then spray coat the entire casting with KRYLON MATTE FINISH #1311 (spray bomb) from Krylon, Inc., Norristown, Pa. Please do follow instruction on the can. Krylon sprayed castings can be handled without the paint coming off, and later the castings can be washed free of dust, although you should store painted castings in a covered area such as glass front cabinets. Gloss paint can be used over the Krylon for items such as boots or British Waterloo Shako fronts.

Concerning the storage of troops, I put them in shoe boxes on the top shelf of a closet. Fit the troop stand bases carefully in the boxes so they do not slide around, using chocks and curbs glued to the bottom of the box. Then mark the inside bottom of the box with the stand outline and unit name. During the game, you can put casualties into the boxes in their proper places. Troops can be transported thusly for hundreds of miles in the trunk of a car.

Incidentally, do not use a permanent glue or glue the troops to the masonite bases; use Elmer's or Elephants glue (you may want to change them). It is sometimes better to have a casting come loose from the stand than to have it bend off at the ankles.

Well, now that we have these necessary painting mechanics out of the way, we can return to troops themselves. As I said before, in the more expensive Stadden and Suren range of Figures there are ample French and British to fill the bill, but for the other countries, there are only a few exotic infantry

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units available in these types. You can, however make conversions with solder or Klenk's epoxy glue (order from the Soldier Shop). I'll give you a few examples: For Prussian foot guards, you should use Stadden castings such as PN3 with PN2 drummer and PN1 officer because they are wearing boots, but what are you going to use for a flag? You could take another casting and cut the musket from its hand, then notch or drill holes to put in your flag. This homemade flag is made from stiff wire and tooth paste tube. Check the Rose catalog for flag sizes. The tooth paste tube has the paint cleaned off with solvent (lacquer thinner works), glue the entire thing together with Klenk's Epoxy Glue. For Prussian line infantry use Suren E5b since these are wearing gaiters and are a little smaller than Staddens.

Second example: What should you use for Prussian Hussar with a rain cover shako? You start with French FC4 Hussar, cut off the head, then take a Prussian casting such as PN3 and make a plug-in head from it. Insert this head into a hole drilled into the FC4 neck, and glue with Klenk's Epoxy Glue. Or drill a hole in both the head and body where they fit together, insert a wire, and glue together.

Incidentally, Klenk's Epoxy Glue is also good for filling blow holes in the more economical castings.

Homework assignment: For French color guides, order one copy of the following from the Soldier Shop:

Booklet #1 - "The French Imperial Army - The Campaigns of 1813 - 1814 and Waterloo" by R.K. Riehn.

Booklet #2 - "The French Infantry and Artillery 1795 - 1812" by R.K. Riehn.

So 'till next issue FUR KONIG UND VATERLAND !!!



A NEW METHOD FOR PBM COMBAT RESULTS

by Henry Knox

Henry Knox has access to a computer in his daytime job (something to keep him well supplied in games). What better than to slip in a little wargaming-related data?

Computers need to relax too.

In order to determine the results of combat, Avalon Hill has a system using information from newspapers (stock trades) and a special play by mail combat results table. AHKS has preprinted forms giving the die roll numbers and combat can be decided instantly on the combat results table included as part of the game. Stock quotations are not available in all areas and neither are AHKS forms to non-members.

This new system provides a wide variety of pre-recorded die rolls with the selection of die rolls determined by a random number chosen from a newspaper. On an electronic computer the die has been rolled randomly for 1000 rolls. These have been divided into ten tables: A, B, C, etc. Each table has 100 rolls divided into 10 columns and 10 rows.

Prior to the game, each contestant selects a daily or weekly published economic indicator where the last two numbers of the indicator will be random, i.e., numbers of stocks issued traded in a day, bank debits, treasury balances. Each contestant states which indicator he can obtain from his local paper. In addition, they agree on:

- 1) Numbers to be assigned to each table.
- 2) Whether they will use rows or columns to select their series of 10 die rolls for attacks.

For example, Table A may be assigned 1, B = 2 C = 3, etc., and columns are selected to obtain the 10 die rolls for attacks.

The last number in the published economic indicator is the column (or row), the second to last number is the table number. A O is read as a 10 for a column heading or J as a table.

In our example, a player in Syracuse receives his opponents attack and note that September 27th is the date to be used for his economic indicator. The Syracuse player uses "the number of issues traded", which the Post Standard reports as 1487. The 7 is the column number, the 8 is the table number which translates to table H.

Looking up Table H and looking down Column 8 he finds the first attack rolled a 6, second a 6, third a 6, fourth a 1, fifth a 2, sixth a 3, seventh a 1, eighth a 1, ninth a 6, 10 a 1. The normal combat results table that comes with the set is used to give the combat results of each throw.

He writes the results on the attacker's sheet, makes his moves, and encloses a clipping from his paper which include the date and the economic series from which the number is taken. His opponent can check that the correct table and die rolls have been posted.

Now if the contestants had chosen rows as their battle series, the die rolls would have been: first attack - 2, second - 5, third - 5, fourth - 2, fifth - 3, sixth - 3, seventh - 1, eighth - 1, ninth - 4, tenth - 3. Thus, from these 1000 rolls we have over 200 different combinations of rolls possible from either rows or columns. Further combinations are possible if rolls are calculated on the diagonal, for example: 1st roll read column 8, row 1; second roll column 9, row 2; third roll, column 10, row 3; fourth roll, 1st column, row 4, etc.

If there are fewer than 10 attacks, the balance of the rolls are ignored. If there are more than 10 attacks, the 11th attack roll is the same as the first attack roll, etc.

If you and your opponent have copies of this table, you can fight your battles with a minimum of paper flowing through the mail and using the combat tables that are normally used in playing face to face.

TABLE A

Col:	1	2	3	4	5	6	7	8	9	10
Row										
1	5	2	1	2	2	4	2	6	3	2
2	2	5	3	6	4	6	6	6	3	3
3	4	4	4	4	4	6	6	1	1	5
4	6	5	6	3	3	5	3	2	4	3
5	2	2	1	3	1	1	3	3	6	2
6	4	5	3	6	4	5	4	3	1	6
7	5	1	4	3	4	4	1	6	5	2
8	5	1	3	6	1	3	4	3	5	5
9	2	1	4	3	5	2	4	4	4	1
10	5	5	5	1	2	2	1	5	1	4

TABLE D

Col:	1	2	3	4	5	6	7	8	9	10
Row										
1	1	2	2	1	3	2	3	6	5	1
2	1	5	1	1	3	2	6	5	1	2
3	4	4	3	4	1	5	1	2	3	3
4	5	2	4	2	1	5	5	6	1	5
5	1	2	5	6	2	4	4	3	6	3
6	3	3	1	4	6	5	3	6	3	1
7	6	5	3	6	6	4	3	2	1	6
8	8	6	1	2	4	3	1	2	3	3
9	2	6	4	5	2	4	6	4	5	3
10	4	1	6	4	2	1	1	6	1	3

TABLE B

Col:	1	2	3	4	5	6	7	8	9	10
Row										
1	6	4	4	5	6	2	2	5	5	5
2	3	6	4	2	3	1	4	3	6	5
3	3	6	6	4	1	4	5	2	1	6
4	3	1	2	2	1	3	5	3	3	4
5	5	2	4	5	1	1	6	6	1	3
6	3	4	2	1	5	2	3	5	2	5
7	5	1	2	1	4	2	3	1	1	2
8	4	5	4	5	2	3	4	3	3	1
9	6	2	2	6	5	3	1	5	2	4
10	5	3	1	2	1	6	5	4	2	5

TABLE E

Col:	1	2	3	4	5	6	7	8	9	10
Row										
1	5	4	5	1	4	1	5	4	6	2
2	6	3	5	6	4	4	6	4	1	6
3	1	2	3	2	3	3	6	5	6	2
4	3	3	3	5	5	3	4	5	6	2
5	4	3	6	2	4	3	5	4	3	3
6	5	1	3	4	6	2	1	5	6	4
7	3	5	1	2	2	2	4	1	1	2
8	3	4	2	5	3	1	5	5	5	6
9	3	3	4	5	6	1	1	3	2	6
10	5	1	5	3	1	6	2	2	2	5

TABLE C

Col:	1	2	3	4	5	6	7	8	9	10
Row										
1	5	5	6	3	1	3	2	6	3	1
2	5	2	3	6	1	6	2	6	1	2
3	2	6	2	3	6	2	4	3	1	3
4	6	4	6	1	2	4	2	2	5	2
5	2	2	5	4	2	3	2	2	5	5
6	4	4	4	6	4	5	4	3	1	3
7	3	4	2	3	2	2	5	6	2	2
8	5	2	2	1	5	2	5	6	4	2
9	6	5	5	6	1	3	6	2	5	3
10	1	2	5	6	2	2	1	6	2	6

TABLE F

Col:	1	2	3	4	5	6	7	8	9	10
Row										
1	1	4	2	2	5	3	3	6	1	4
2	4	4	1	2	6	2	2	1	1	4
3	5	5	5	6	6	2	5	2	3	5
4	5	5	4	6	1	4	1	2	2	4
5	5	6	4	3	3	2	3	3	4	3
6	4	5	5	3	6	1	5	1	5	3
7	4	6	1	5	4	6	1	3	2	3
8	3	1	4	6	3	5	2	1	2	1
9	1	1	6	1	1	5	1	5	3	1
10	1	3	6	2	2	6	2	6	3	6

TABLE G

Col:	1	2	3	4	5	6	7	8	9	10
Row										
1	3	5	2	4	5	4	2	2	6	6
2	3	4	3	1	6	3	5	5	3	6
3	6	1	1	2	3	2	2	3	2	5
4	6	5	3	2	5	6	1	5	6	6
5	1	5	1	5	6	3	5	5	6	4
6	4	3	6	2	3	5	1	5	1	6
7	5	3	4	2	3	1	4	2	5	5
8	5	1	6	4	6	3	3	1	1	1
9	2	1	1	2	6	4	2	1	6	5
10	5	4	6	6	3	2	1	1	2	4

TABLE I

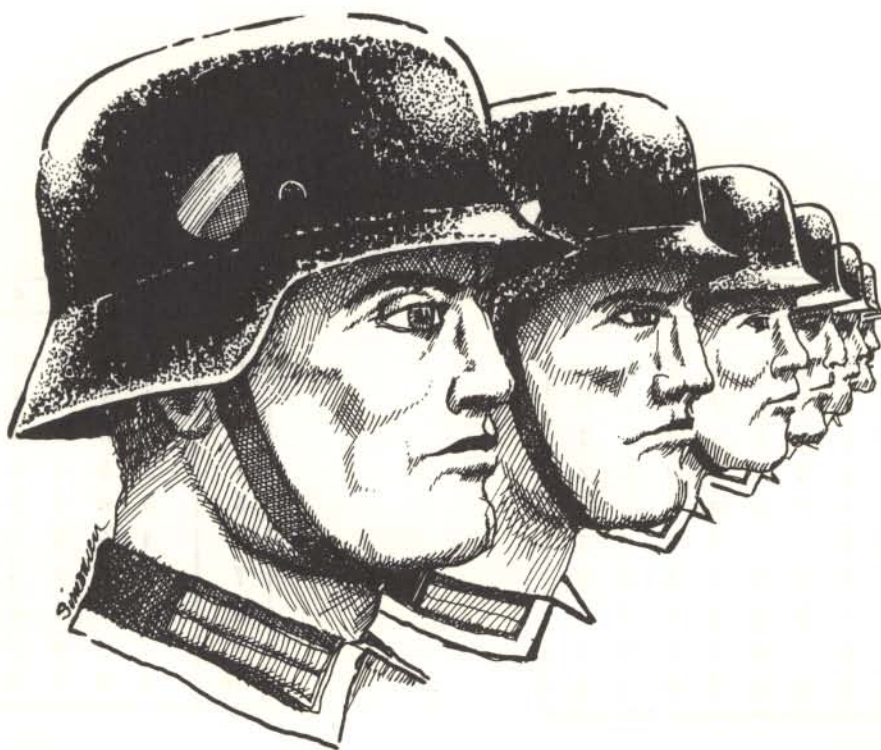
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TABLE H

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TABLE J

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Diplomacy

By Capt. R. C. Walker, USAF



A GUIDE TO POSTAL DIPLOMACY

There are presently approximately two dozen publications which report the progress of the many postal Diplomacy games in the United States and Canada. While it is true that Diplomacy is also played postally by tactical wargamers and that some strategic wargames unrelated to Diplomacy are also played by mail, it is my intention here to discuss the field of postal Diplomacy as it is generally understood.

The first proposal for postal Diplomacy known to me was made by Conrad Von Metzke of San Diego in May of 1962. This proposal did not bear fruit at the time (although Conrad later edited *COSTAGUANA*), and the first postal magazine, *GRAUSTARK*, appeared in 1963, edited by John Boardman of Brooklyn. Science fiction fandom was the first medium for expansion of the postal game (again excluding play by enthusiasts of Avalon Hill and like games). Since then there has been a rapid growth in the field. This has been characterized by long-range stable publications, and magazines which disappear almost as fast as they appear (sometimes even faster, as in the case of *EURALIA*, whose fate is as mysterious as that of the *Marie Celeste*).

What I propose to do below is list and describe the current publications in the field of postal Diplomacy. There is wide variety among them, and many effect changes in their vital statistics without much notice. The reader should bear in mind that this column was written sometime before publication (in February 1968), and that some information may no longer be current. Each entry below will take the following form: NAME (# of latest issue); Editor, address; \$ game fee ("yes" or "no" for

current openings); \$subscription per # of issues; reproduction method; types of games. The last will indicate regular or variant, variants being games based on the generalized rules of Diplomacy, but with modifications and/or different playing boards. The listing will be followed by some comments. In all cases, those wishing to join games or subscribe should contact the editor for current status.

GRAUSTARK (152); John Boardman, 592 16th St., Brooklyn, N.Y. 11218; \$3.50 (no); \$1.00 for 10; mimeo; regular. The oldest 'zine, and one of two which conforms to a strict 2-week schedule. The level of Gamesmastering is very high. At one time, *GRAUSTARK* was a focal point of Diplomacy affairs, but this was pushed out by reams of political cat-calling occasioned by Dr. Boardman's outspoken views on the Southeast Asia problem. This material will soon be shifted to another publication, but the 'zine will continue to carry its clever pacifist satire, *The Adventures of O-OHate*, plus related material. Definitely recommended.

BROBDINGNAG (80); John McCallum, "A" Quarters, S.E.S., Ralston, Alberta, Canada; \$? (no); \$0.10 for 1; mimeo; regular. This is the central Diplomacy forum, publishing a regular player rating list, reviews of completed games, and many articles and letters on the game. Currently carries no games at all, and may not resume publication until the Fall (except for some issues in the summer for editors who have commitments which take them away from their 'zines temporarily). Absolutely top-notch.

EREHWON (Vol. 11, #7); Rod Walker, 1611 Lowry Dr., Rantoul, Ill. 61866; \$4.00 (yes); \$1.00 for 5; mimeo; regular & variant. This one is my fault. Publication is about monthly. Contains 22 games, a couple of cute extras, and many GM errors. There. I've plugged it, and I'm glad.

STAB (43); John Koning, 2008 Sherman Ave., Apt. 1, Evanston, Ill. 60201; \$? (no); \$1.00 for 10; mimeo; regular. The name is usually written sTab. Incorporates sub-'zines *Trantor*, *Massif*, and *Orthanc*. The Gamesmastering is first-rate the editing generally good, and the humor sparkling. Appears tri-weekly (sort of). Very definitely worth getting.

BIG BROTHER (54); Charles Reinsel, 120 8th Ave; Clarion, Pa. 16214; \$6.00 (yes); no subs; ditto; regular. Observes rigid bi-weekly schedule and has good Gamesmastering. The reproduction is definitely inferior (based on the few copies I have seen). Mr. Reinsel does not observe the general custom of open trading respected by most Editors, nor does he take subscriptions. Has a player rating system, but no other extras that I know of.

LONELY MOUNTAIN (40); Charles Wells, 3678 Lindholm Rd., Cleveland, Ohio 44120; ?\$2.00 (no); \$0.10 for 1; ditto; regular. This 'zine is known for its excellent Gamesmastering and reproduction, and regularly carries material of general interest. LM was the first to experiment with graphic depiction of moves, with good results. The 'zine tends to be a bit clannish, catering to local players mostly. It is one of the best.

WILD 'N WOOLY (114); Charles G. Brannan, 2324 N.W. Johnson St., Portland, Ore. 97210; \$6.00 (no); \$1.00 for 10 (I think); ditto (it varies); regular. The Editor has been moving frequently lately in connection with his job, and this 'zine has suffered lacune in its publishing schedule. No games are planned in the near future. Mrs. Brannan publishes *KALMAR* (fee \$4.00), but I am not altogether sure of its status.

DIPLOMANIA (18); Don Miller, 12315 Judson Rd., Wheaton, Md., 20906; \$ various (yes); various; ditto; regular and variant. This 'zine carries no games itself; these are carried in related publications: *DIPLOPHOBIA* (regular); *DIPSOMANIA* (variants on the original board); *FANTASIA* (variants on other boards); *SUPERCALIFRAGILISTIC - EXPIALADOCIOUS* (utterly fantastic variants). All are well printed and excellently Gamesmastered. All are affiliated with the National Fantasy Fan

Federation. Fees start at \$3.00 and go down.

A DROITE, A GAUCHE (ADAG) (25); Harold Naus, 681 "1" St., Sp. B-11, Chula Vista, Calif. 92010; \$2.00-\$2.50 (no); \$2.00 per year (approx. 12); ditto; regular and variant. This 'zine is as poorly edited as any, but has good Gamesmastering and presents a large number of games with a minimum of frills. Tends to be hard to read.

ARMAGEDDONIA (30); Charles Turner, 24 Boyd Ct., Pleasant Hill, Calif. 94523; \$? (no); no subs; ditto; regular. This 'zine offers excellent Gamesmastering and scintillating press releases, but a somewhat arbitrary publication policy. One of the best 'zines, but impossible (usually) to get without being in a game and (unfortunately) games are not always available.

EFGIART (3); Douglas Beyerlein, 3934 S.W. Southern, Seattle, Wash. 988116; \$2.00 (?); \$1.00 per year; mimeo; regular and variant. A very good new 'zine, well edited and reproduced. Published by experienced players.

THE LOST ONES (IV); Stephen Hueston, P.O. Box 25, Zenith, Wash. 98075; \$3.00 (yes); \$1.00 for 10; mimeo; regular and variant. The variant is Kriegspiel Diplomacy, in which all pieces are invisible. Editing and reproduction excellent. A very new 'zine.

AEOLUS (2); Monte Zelazny, P.O. Box 1062, Melbourne, Fla. 32901; \$3.00 (no); \$0.15 for 1; mimeo; regular. This 'zine is very carefully edited and Gamesmastered, with a 3-week publication schedule. Contains numerous extra features.

MISKATONIC UNIVERSITY (?); Anders Swenson, 145 Ponderosa Ln., Walnut Creek, Calif. 94529; \$? (no); ?; ditto; regular and variant. The variant is the Napoleonic 5-man game (minus players for Germany and Italy). This 'zine is currently under the caretakership of ARMAGEDDONIA and its future as an independent entity seems to be uncertain.

GLOCKORLA (15); David Lebling, Box 2234, Burton House, 420 Memorial Dr., Cambridge, Mass. 02139; \$3.00 (yes); \$?; mimeo; variant and regular. A regular game is taking players. This 'zine has two unusual variants, plus additional features, including a player rating system.

JUTLAND JOLLIES (9); Robert

Lake, 35 Esterbrooke Ave., Apt. 904. Willowdale, Ontario, Canada. I have not seen this 'zine since issue #2, and do not have current information.

XANADU (0); Norman McLeod, 906 Kimberwicke Rd., McLean, Va., 22101; \$3.00 and down (yes); \$1.50 for 10; mimeo; regular. This 'zine is advertising for games via flier. Apparently, reproduction will be good.

XEOGOGIC (10.5); Lawrence Peery, 4567 Virginia, San Ave., Diego, Calif. 92115; \$2.00-\$3.00 (yes); \$2.00 for 10; ditto; regular and variant. This 'zine caters at least as much to the literary bent of its Editor as it does to Diplomacy. Has many inventive variants and regular games show skillful Gamesmastering (usually). Well worth receiving for its content. Some of the material tends to be meaningless unless you know the people Larry knows.

Other 'zines, notably MARSOVIA (Sacramento), CEREBRAL NEBULA (Seattle), and INTERNATIONAL ENQUIRER (Minneapolis), are more or less in limbo owing to publication difficulties or what have you. I am sure that there are some publications in the field which I have never seen and which are therefore not mentioned here.

Persons interested in postal Diplomacy should contact Mr. McCallum of BROBDINGNAG first; he is the unofficial Welcome Wagon of postal Dippy. Most Editors will be more than happy to send sample copies upon request, and to set you straight on any mistakes which I have made above. For general information in the field, the following are recommended: BROBDINGNAG, LONELY MOUNTAIN, STAB, DIPLOMANIA, AEOLUS, and GRAUSTARK. New game openings are where you find them.



AIRCRAFT CARRIER, USS ESSEX

JUTLAND

by J.K. Norris

WESTFALEN Class. NASSAU, POSEN, RHEINLAND, WESTFALEN. Completed in 1909 & 1910 with a displacement of about 18,900 tons; these vessels had an armament of 12 - 11 inch, 12 - 5.9 inch, 16 - 24 pounders and 6 torpedo tubes. Their 11 inch guns could be elevated to 16 degrees only, giving them a maximum range of 19,500 yards. At 28,000 horsepower they exceeded 21 knots on trials but were down to about 20 knots at full load in service. Main armour was 11½ inches thick. All four ships were at Jutland where they formed half of the First Squadron. One of them received major damage, and their gunnery was reported to be 'poor'. When the German Fleet began the run for home the WESTFALEN was the leading ship, and showed a tendency to turn a parallel course to the British Fleet, which necessitated no less than three direct orders from Admiral Sheer to resume course for the Horn's Reef. Although they did not show to any advantage during the day all four ships played havoc with the British light forces during the night. They frequently used searchlights to illuminate before firing, accounting for the BLACK PRINCE and DEFENSE, though NASSAU was lucky when a torpedo from the Light Cruiser CAROLINE passed right underneath her. Later a British Destroyer, the SPITFIRE which was out of torpedos, got in under the guns of NASSAU and WESTFALEN, ramming the NASSAU, and getting home with 20 feet of the NASSAU's armour plate in the mess deck. The WESTFALEN, due no doubt to her position at the head of the line, was in action more than most German ships against the British Destroyer Flotillas, sinking the FORTUNE and TURBULENT, and damaging the BROKE, SPARROWHAWK and PETARD. In one short period of four minutes the WESTFALEN fired nearly 150 rounds of 5.9 inch and smaller calibre.

Some time later on, the WESTFALEN was torpedoed by the British submarine E 23. She was badly damaged, but made port. All four ships were disarmed and scrapped after the war.



Address comments, suggestions, etc., to
Strategy and Tactics, Box 11 187, Loudon-
ville, N. Y.

Charles E. Johnson

The article on how to play Vietnam by mail was good, but I didn't like what were, in effect, rule changes. The first was the "back-up" technique. In the regular, in-person game the VC couldn't have any backed-up areas, the GF could have every area backed-up. This feature could be duplicated very easily in a PBM game by not allowing the VC player to list any backed-up areas, and allowing the GF to list an unlimited number of backed-up areas. The GF player could letter both the areas he was intending to convert and the backed-up areas with the same lettering system in priority order. E.g., GF could write: VC areas/4 pawns: (3b, 4c, 6e, 27i) ...GF areas/3 pawns: (2a, 28d, 12f, 11g, 7h). Obviously, if the GF player places 4 pawns in the GF space or no pawns in the VC space, there is no need for him to list backed-up areas at all.

The other complaint I have is in the Battle Phase, about the allotment of GF TAC and VC Infl. The way it is handled now adds an undesirable element of uncertainty. Unfortunately, this technique must remain unchanged in the interests of speed.

There is one rule change that I liked, and I think should even be incorporated into the in-person game. That is, the fact that one must choose all of the cards for all of the battles at the same time. Doing the battles one at a time, in order, creates an unrealistic situation when the players actually try to lose areas to manipulate the situation indices to land on a bonus star. The fact that the VC player was able to do this, and therefore get more units when he was about out, was the reason I lost the only VN game I did lose. Even I have done this on occasion. (*Ab, come on now!*)

Charles Litka's strategy for VN is fair, but the so-called tournament game for VN was completely useless and a waste of space.

I realize naval articles may be interesting to others, but I have

little interest in naval affairs, and the amount of space in recent issues devoted to them has been dismaying. Some of them have been interesting reading, but even so, the space could have been used for better things.

The Sinai Wargame was hilarious. The crack about DeGaulle on the Diplomacy Table was even more hilarious. This is the best satirical article I have ever seen in a wargaming magazine and I hope to see more of this kind of thing in the future.

Some parts of the AK variant were useful; i.e., the rules for stacking and those for boxes (with the associated rule changes for escarpments, Benghazi and Tobruk). The rules for logistics and replacements were poor, however. However, as Henry Bodensedt said, "if you are able to use just one idea..., neither your time nor mine will have been wasted".

Hans Brennecke, as always, wrote an interesting article. His articles have opened up a whole new way of thinking in AH games for me, and I hope to see more of him in future issues.

As my last comment, I would like to say that I think your magazine is the best wargaming related magazine around, and I feel that S&T will do more for wargaming than anything since the founding of AH and the resurgence of table-top wargaming. Good luck.

Peter A. McDonald

The following is an extract from a letter by Mr. McDonald concerning a recent wargaming convention held at Nassau Community College (Long Island, NY)

I must take this opportunity to commend Tony Morale and his assistants for an outstanding convention. At one time, he had four Stalingrad, one Bulge, one Waterloo, one Blitz, and one Viet-Nam game going in addition to a naval engagement (models) and a 30mm Napoleonic battle involving more than 600 figures. More than 80% of the people who came found themselves actively participating. A convention in the future should be styled after his precedent. (*Agreed!*)

Mark Goldberg

(Another extract. This time from Mr. Goldberg on the subject of the War Games Inventors Guild.)

The Guild is NOT extinct! The

WGIG, led by Grant Noble, 234 Fir St., Park Forest, Ill. 60466, and closely affiliated with the International Federation of Wargaming (headed by Scott Duncan) has some 23 members and is devoted COMPLETELY to the designing, modifying & limited production of new and old games. Current ones include: ARBELA, THE LITTLE BIG HORN, and CAMPAIGN. The latter, conceived by Gary Gygax, Terry Stafford and Scott Duncan, is - to quote Scott - "...the most complex military game in existence (even surpassing the complexity of Gamescience's CONFRONTATION...)" Designed for L-O-N-G range play (literally years) and for groups of people handling each of the four major and 6 minor (not to mention 23 neutral) countries on the 6x6 foot map. Imagine a tactical CONFRONTATION, with DIPLOMACY & BLITZKRIEG added on a world scale, and you've some idea of the military, economic and political factors involved. The rough drafts of the rules occupy over three score pages! The first game, scheduled to begin in March, will probably be played by individuals, although there are several minor and possibly major countries yet uncommanded. Each simultaneous -movement turn occupies one month of actual time. Anyone interested should write: Scott Duncan, 2249 N. Broad St., Philadelphia, Pa. 19132 or Gary Gygax, 330 Center St., Lake Geneva, Wisc. 53147.

Brent Ellerbroek

S&T is great! Unfortunately, some people who write letters to S&T don't think so. I'm not thinking of a person who writes letters of criticism about one article for one specific reason, but about the person who writes a letter of criticism about an article or sometimes an entire department just because he doesn't like that field of wargaming. These people don't realize that S&T is trying to cater to ALL branches of wargaming - realistic, playable, table-top, AH and Gamescience games - not just one specific type of wargaming.

FLEET OF GREATER MILWAUKEE meets irregularly for naval clashes using Fletcher Pratt's rules and 1:1200 ships. All interested Milwaukee area wargamers please contact: C. Litka, 6114 Briarcliff Ct. Greendale, Wisc.

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Valhalla is a frequent (every third week), low-price (\$2.00 yearly), mimeographed (good quality however) publication designed as a vehicle for reader-service features and a clearing-house for Postal Diplomacy, under the editorial supervision of John Koning.

How to be listed: There are, initially, two types of listings: Permanent listings designed to develop local groups, bringing together wargamers in each area; and Postal Locator, designed to provide those seeking postal-play opponents to find them without sorting through a mass of irrelevancy. YOU DO NOT HAVE TO SUBSCRIBE TO EITHER S&T OR VALHALLA TO BE LISTED.

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Postal Locator: Send your name, address (don't forget the ZIP code) and age plus a list of those games you desire to play-by-mail now. Your data will be run in the next two issues only. If you still desire postal games, you may again enter your "ad".

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