QUEEN OF THE SKIES

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Avalon Hill Philosophy Part 102

Once again *ORIGINS*, The National Adventure Gaming Convention, looms on our horizon. This *ORIGINS*, the tenth of the line, will be held at the Dallas Market Hall-North from 21 June to 24 June. This marks *ORIGINS'* first visit to the South. Without exception, every major wargame publisher world-wide will be present or represented at the show. Science fiction and fantasy authors Robert Asprin, C.J. Cherryh, Fred Saberhagen, Richard Pini and others will be available for seminars (and autographs). Oh yes—and "noted boardgame, role-playing and computer software designers/ developers will share their secrets and philosophy of products."

Needless to say, among this veritable deluge of talent, Avalon Hill will be well represented by Don Greenwood and Tom Shaw. Both will be much in evidence throughout the convention. Avalon Hill hosts some ten tournaments for the competitively inclined.

STORM OVER ARNHEM (Don Greenwood hosts, single elimination)
FOOTBALL STRATEGY (Tom Shaw, single elimination)
VICTORY IN THE PACIFIC (Wes Coates, single elimination)
SPEED CIRCUIT (Jim Burnett, two rounds)
WAR AT SEA (Don Greenwood, single elimination)
CIRCUS MAXIMUS (Don Greenwood, two rounds)
ACQUIRE (Wes Coates, single elimination)
B-17, QUEEN OF THE SKIES (Dale Wetzelberger, single round)

TACTICS

TACTICS is the very first modern board wargame . . . designed and perfected by Charles S. Roberts II, founder of Avalon Hill and pioneer in the design of tactical all-skill games of logic.

In 1952 while an infantry officer, Charles S. Roberts designed **TACTICS** for his own tactical and strategic instruction, primarily to test application of the nine Principles of War in preparation for a military career. Two mapboards were prepared to provide a variety of terrain situations. The first **never-before-published** version is in this 25th Anniversary edition. The second mapboard, with rules similar to those contained in this game, was copyrighted in an edition of only 2,000 copies in 1954 by The Avalon Game Company. **TACTICS** became **TACTICS II**, a game as popular today as when it was published under the new Avalon Hill Game Company back in 1958.

TACTICS II is the top selling wargame in history. And it is the progenitor of the **"Charles S. Roberts Award"** presented annually by the hobby industry to outstanding contributors to the wargaming avocation.

∎

In **TACTICS** your strategy alone determines the outcome of every game. There are no chance cards, spinners, or random luck elements. No military experience is necessary—but you'll certainly learn what it's all about after playing just one or two games. All you really need, now, is a little common sense and—who knows—you may find you have what it takes to run a war.

TACTICS could be called **"Military Chess."** The chesspieces in this game represent military units such as infantry, armored, parachute and amphibious divisions.

TACTICS is basically a battle between two complete armies; each person begins with equal forces occupying one-half of the realistic-looking mapboard.

Players maneuver their divisions across a 22" x 28" mapboard portraying a fictional continent with a great variety of terrain including railroads, woods, mountains, rivers, beaches and cities. Obviously terrain affects both movement and combat in a variety of ways. It is in the shrewd deployment of divisions, combined with a bit of foresight and logic, that makes this game FUN TO PLAY time and time again. A whole generation of wargame hobbyists cut their teeth on this game system.

For the person who has never experienced the thrill of wargaming, **TACTICS** is a great starter game. For those already familiar with the hobby, with **TACTICS** you get a **never-before-published** mapboard in a brand new game that's over 25 years old.

TACTICS, complete with company history, is now available for $12.00 from the Avalon Hill Game Company, 4517 Harford Road, Baltimore, MD 21214. Please add 10% for shipping and handling (20% for Canadian orders, 30% for overseas). Maryland residents please add 5% state sales tax.

BEACH

REPLACEMENT CENTER

RED CAPITAL

MATCH POINT! Two exhausted but still defiant pro tennis stars eye each other warily across the net. One more point and the grueling match will be over! The ball is tossed and the service is smashed—a great back-hand return by the opponent! A spectacular volley ensues: drops, smashes, lobs and sensational clutch play—a thrilling climax to a sensational match. Finally, the server sneaks a passing shot into his opponent's corner. It's over: GAME, SET, AND MATCH!

PRO TENNIS

Game comes complete with 100 cards, representing 50 male and 50 female top stars of professional tennis, each rated in five critical areas of play.

Now, it's your serve, because Avalon Hill's unique and exciting new sports game can be yours to re-live all of the fascinating elements of the highly-popular sport of professional tennis. Who's the best tennis player in the world today? Play PRO TENNIS and find out! Fifty men and fifty women tennis stars of the 80's have been scientifically evaluated in five critical areas of tennis play. Each is presented on an attractive player card, allowing the gamers to create their own tournaments or "dream" matches of their own choosing—including doubles and even men versus women, if you so desire! Each player will perform in the game in a similar manner to his or her real-life strengths and weaknesses. Be careful of the wildly-aggressive servers, who treat each serve as a life-or-death struggle. They'll go for broke against anybody! On the other hand, the conservative volley players, who try to keep the ball in play while waiting for the right moment to win the point by strength or finesse, can make any match into a grueling test of endurance.

Probably the most attractive element of PRO TENNIS is its simplicity. Although it is a highly realistic game, it can be learned and played by anyone within ten minutes of opening the box. The game can also be played solitaire with no problems, for those tennis fans who want to simply re-play an entire tournament rather than play competitively against friends. Although the game recreates the real world of professional tennis, it also enables the gamers themselves to employ strategy during the course of the match. Should I have my tennis player rush the net? Or maybe I should wait for the opportunity and smash! If my opponent's too deep I'll try a drop shot! PRO TENNIS has all this and more—including penalties, injuries and even the weather! And, when you're through with a complete tournament, you'll truly be able to tell who is the best tennis player in the world today!

PRO TENNIS is available now for $16.00 from the Avalon Hill Game Company, 4517 Harford Road, Baltimore, MD 21214. Please add 10% for shipping and handling (20% for Canadian orders, 30% for overseas). Maryland residents please add 5% state sales tax.

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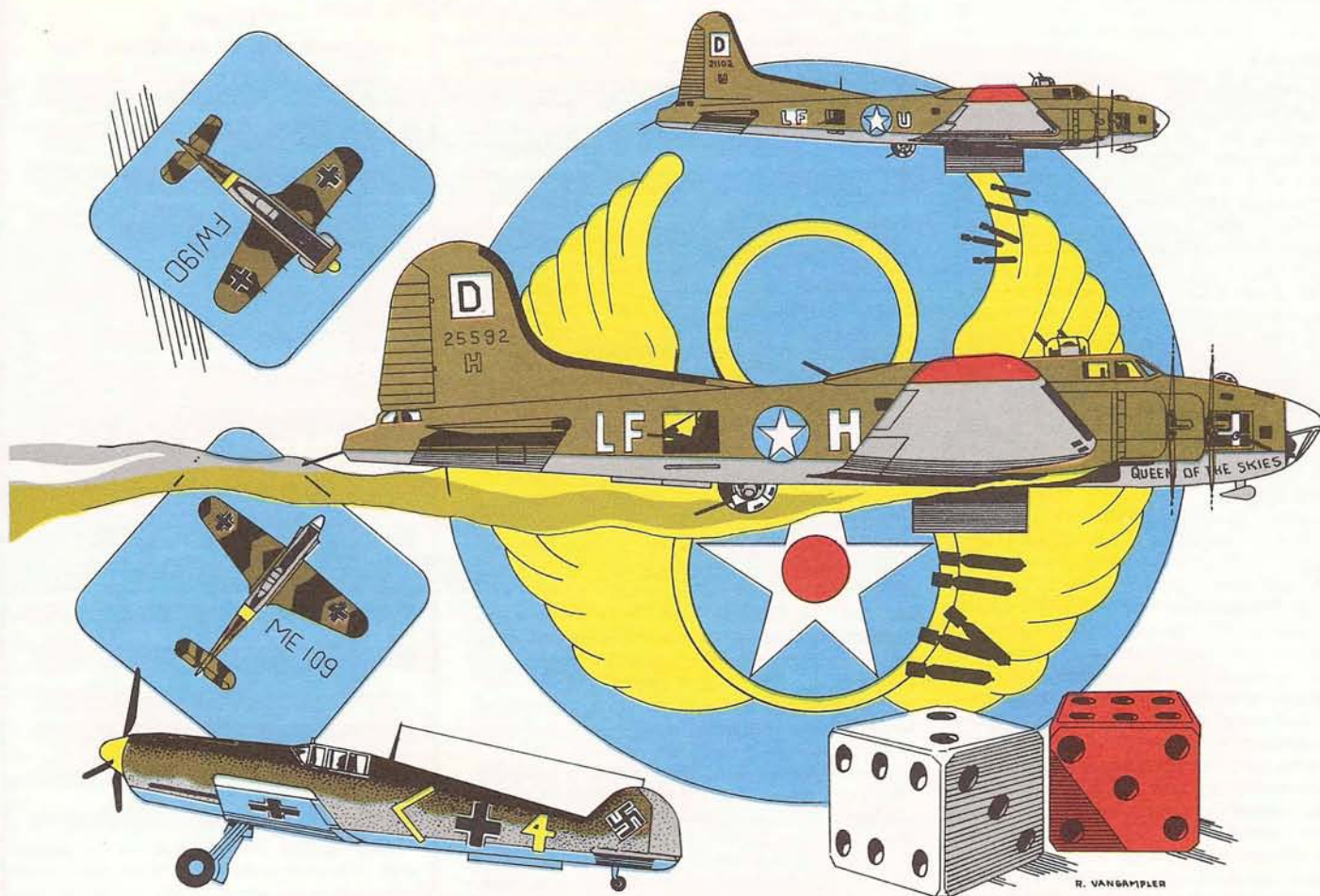
THE LONELY NUMBERS
Playing the Odds in B-17
By Rex A. Martin

Every wargamer is familiar with playing the odds; chance is an oblivious element of most titles on the market. Each of us has calculated the percentages of a ploy, only to have "luck" take a hand and obliterate any scent of victory. Few of these exercises, however, are as "number heavy" as *B-17: QUEEN OF THE SKIES*. In essence one plays against an unfeeling, unthinking number system, carefully crafted to force the player to make a number of critical decisions. An awareness of the potential for resultant events is a decided advantage to our solitaire fliers. This introductory article seeks to set forth the odds they face in the hopes of bringing a few more Yanks home safe from the troubled skies over Nazi Europe.

Upon opening a mission of *B-17*, the gamer is faced with a plethora of charts, two dice and an elegantly simple sequence of play. To hope to make sense of the mass of numbers, and make a few guarded suggestions to pilot-commanders, we'll rely on this sequence of play to structure the presentation. By proceeding through an exemplary flight, we can identify the "decision points" and also provide some insight into what different decisions may bring.

The Pre-Mission Briefing

First comes the pleasure of assigning names to the craft and its crew. This is, perhaps, the only element of this design the player has total control over. The opportunity for vicarious revenge or gallows

humor runs rampant. However, even here there are some decisions for certain positions are safer than others. [For those readers who absolutely insist on adding one "Rex A. Martin" to their roster, please consider assigning him the position of *Ball Turret Gunner*, the safest aboard. By my calculations, with the lowest odds for "Wound" and "Oxygen Supply" results, he serves with distinction here. Alternatively, he is quite happy as the *Engineer*; although this post has slightly under twice the chance of a "Wound" and a high risk of "Oxygen Supply" out, there is absolutely no possibility of suffering loss of "Heat" and frostbite.] Having done this, we move on.

Next comes determination of the target city for our effort. On the first ten missions, there is a straightforward 16.7% chance of drawing any one of the six you're faced with. However, for those who survive their tenth mission, the odds of drawing any single potential target lessen. Yet the player is more apt to fly to some than to others. You've a 2.8% chance of flying to one of the previous targets, an 8.4% chance of going over St. Nazaire, and a 5.6% chance of facing any of the rest. The choice of St. Nazaire as being the most probable target rests in the historical fact that it was the most heavily bombed target of the period, earning iself the nickname of "Flak City" from the aircrews of the 8th Air Force.

[*It should be stated plainly that, for simplicity's sake, I've rounded all odds to the nearest tenth of a*

percent. Readers should not become unduly excited if the total percentages for an event do not equal "100%" exactly. Those more exacting than I can pull out their own calculators if they wish.]

Turning to this question of distance, one immediately realizes that the farther away a target is, the greater the odds of not returning. This is complicated somewhat by modifications to the German flak and fighter waves for each, but is a fair guide as to when to flinch upon rolling on Table G-3. So it is that we find the following odds of drawing a target in each zone: Zone 2—2.8%, Zone 3—14.0% Zone 4—8.4%, Zone 5—16.8%, Zone 6—19.6%, Zone 7—28.0%, and Zone 8—11.2%. Precisely three-quarters of these missions will take the bomber away from its "little friends" (Allied fighter cover). Worse, over one-quarter of the time the target will be in Zone 7—no "milk run".

With the target announced, the player looks to his formation position. First he must weather a 2.8% chance of being the lead bomber and a 2.8% chance of being the tail bomber. Neither are conducive to survival on lengthy missions. However there is a 94.4% shot of being just one of the middling mob. Next the squadron of which the B-17 is part is determined—high, low or middle. With equal odds of being in any (with attendant greater or lesser protection from enemy "bandits"), there is really little to say. In both of these cases the pilot-player must simply accept his fate.

With all this now set, the brave pilot is ready to

hurl his engine of destruction into the air.

Up in the Air

Once away from the haven of England, the bomber will face the possibility of hostiles in each zone broached, both en route and returning. A strict sequence covers happenings upon entering a zone, deviated from only when in the target zone.

Upon entering a new zone (2-4 only), the player will first roll for fighter cover (Table G-5). Unless one is on one of the initial missions, there is an equal chance (33.3%) of obtaining either poor, fair or good cover. These will, in turn, affect the roll for a specified enemy attack. Should enemy craft appear, the player rolls for the "Fighter Cover Defense" (Table M-4); in effect, the table will indicate the number of enemy fighters driven off before attacking the B-17 in each wave. Needless-to-say, the better the fighter cover, the better the odds of eliminating at least one of these annoying gnats (roughly, 33.3% for poor cover, 66.7% for fair cover, and 100% for good cover). When delving deeper, upon entering one of the early zones one may calculate that there is a 33.3% chance of having a result of "0(0)" (meaning that none are driven off in the first wave, nor any in the subsequent waves), a 33.3% chance of "1(0)", a 22.2% chance of "2(1)" and only 11.1% odds of the best possible result. Moral: don't depend on your fighter cover for help.

Inevitably it comes that one must face the enemy. Following determination of "Fighter Cover" but prior to "Fighter Cover Defense", the number of German fighter waves are found. Except for when over the target, you've a 50% chance of facing one wave of fighters and a 16.7% chance of facing two. Note however, that these percentages fluctuate dramatically due to modifications to Table B-1 from the *Flight Log Gazetteer* (Table G-11). For instance, while in Zone 2 one will commonly escape any tangle with the Reich air defenses (66.6%) regardless of destination.

German fighters attack in waves. Once it is known how many waves must be breasted to carry us through the zone, it remains to determine the number of "bandits" and their location in relation to the bomber. Usually one will face but one wave (occasionally two) of from one to three aircraft. Now the tension mounts as the loner rolls two dice on Table B-3 ("Attacking Fighter Waves"). Fourteen percent of the time the chart will list "NO ATTACKERS" (the enemy having been driven off by the other B-17s of the formation). Unfortunately, if "out of formation" one must face some scavangers and a re-roll is called for; this one aspect is the prime advantage for staying in formation if at all possible—a decision many must face as damage mounts. Dismissing the *Random Events* on a result of "66" (which I'll touch on later), the plane will face: one attacker 16.8% of the time; two attackers some 22.4% of the time; three attackers, 19.6% of the time; four 16.8% and five, 8.4% of the time.

Chart 1 indicates that the spread of enemy attacks is less than one might imagine. Of 82 possible attackers, the majority will strike from ahead of the B-17. Indeed, twice as many attacks come from the 12:00 o'clock altitudes than any other—a sure indication of the positions to be kept manned and when one should be truly concerned with a gun inoperable or out of ammo. A little thought by the reader makes it just as obvious which gunners may be transferred away from their posts should critical need arise elsewhere. And, as an addendum to Chart 1, it should be noted that of the 82 attacking fighters, 36 are *Me109s*, 34 are *Fw190s* and only twelve are *Me110s*. (Those who dream of knocking down Me110s by the score to inflate gunners into Aces had best realize that eight of the dozen Me110 attacks come from low altitude and two more are vertical climbs; only at 9:00 Low, 6:00 Level and 6:00 Low does one have more than a one-sixth chance to hit a Me110 during the initial attack of such a wave.)

With the enemy planes lancing in, the B-17 commander looks for his "little friends". But as pointed out above, the odds of them having great impact on the threat are less than average. In the instance of being attacked by only one fighter, which can be driven off (i.e., rolls of "11", "31", "41" and "51" on Table B-3), 66.7% of the time you need not expend a shot on the pest. One-third of the time you face two "bandits", they will be driven off by the escort. But the vast majority of the time, notably once outside fighter range, you are forced to rely on your own guns.

The allocation of defensive fire is one decision the player *must* face with great regularity. Ever-changing data must be analyzed by the pilot—information such as fighters driven off by cover, and damage and/or casualties on the B-17 itself. We cannot hope to review all the possible configurations within the confines of these few pages. But some points may be made.

I would be greatly remiss if it was not mentioned that, for the very positions from which the greatest number of bandits will attack (12:00, 1:30, 10:30), you've the lowest chance to hit—16.7%—with any single shot. Neither the use of Tail Guns (9.2) nor of Area Spray Fire (9.5) brings relief. Only an *Ace* at the guns, rarely seen in these posts despite great opportunity (at least so I've found), has any impact. The true horror is that in 70% of the initial waves the B-17 will be attacked from the front. Of course, if the bomber is unlucky enough to be in the lead, this percentage increases to 100%.

An intriguing exercise here is to calculate number of guns that can be brought to bear in relation to number of aircraft attacking. Chart 2 presents the raw figures. Note that these numbers assume that all guns that may fire are functioning and manned by healthy, non-Ace personnel and that attacking fighters are neither lessened by fighter cover nor augmented by target position (lead or tail role).

It should be obvious even to the novice that the most dangerous situations in *B-17* will occur when the ratio of guns firing to attacking fighters is *1:1* or less. Cross-referencing this observation with Chart 1 and Table M-1 leads me to suspect that the most dangerous dice rolls on Table 3—the ones which will result the most often in unscathed German fighters firing on the lumbering bomber—are "33", "54" and "55". I tend to concentrate my fire on one or two targets in this game, as I assume most players do. However, the numbers indicate that it is actually most efficient to spread your fire, maximizing the percentages. In *B-17*, given no other considerations (such as a desire to protect a badly damaged section), concentration of fire is a primrose path for the unwary. Spreading fire across the

CHART 2:
Spread of B-17 Defensive Fire

Die Roll	B-17 Guns Firing	Attacking Fighters
11	3	1
12	5	2
13	4	3
14	5	4
15	7	4 (5) *
21	2	1 **
22	3	2
23	4	3
24	5	4
25	7	5
31	1	1
32	5	2
33	3	3
34	4	2
35	4	2
41	2	1
42	4	2
43	5	3
44	5	4
45	4	3
51	3	1
52	3	2
53	4	3
54	4	4
55	4	4
61	2	1 **
62	3	2
63	5	3
64	6	4
65	6	4 (5) *

* The fifth fighter is in a Vertical Dive and immune to Defensive Fire; available guns may concentrate on the other four attackers.

** The attacker is in a Vertical Dive and both Top Turret and Radio Room positions may fire; but both must roll a "6" to obtain a single hit (about 2.8%).

sky is a definite recommendation of this survivor of 25 missions.

In the same vein, I strongly recommend that all *B-17* pilots invoke the Area Spray Fire (Table M-5) option. Spray fire will remove the attacking fighter *before* it resolves its fire some 50% of the time. I use spray fire to "up" the odds when faced with a target normally difficult to hit. This, of course, depends on projected ammunition supplies and distance yet to fly. For example, when attacked from 6:00 O'clock High, the Top Turret and Tail Gun's posts fire normally while the Radio Room gunner "spray fires". My usage of spray fire increases dramatically near the end of a long mission as the battered bomber is nursed home to the shelter of England. Too, on all short missions (i.e., within fighter cover), all gunners in my *Amber Renee* (now on its second 25-mission tour) use spray fire unmercifully to bring the odds to 50%—especially since, as Chart 2 shows, I've usually a gun post or two to spare to compensate for the inevitable jams.

[*This leads me to observe that, short of abominable luck or gross negligence, no player should lose his craft in the first ten missions. I would be most interested in hearing from those who do. Address your tales of woe to me c/o The GENERAL.*]

Those German fighters which have survived the cover and the defensive fire now punish the B-17 for invading Reich airspace. The "German Offensive Fire" is higher, on the average, then the B-17's chances to hit them. There is a two-thirds chance of hitting the bomber from the rear, one-half chance from the sides, and one-third from the front. Players of the game will also have learned to dread the scream of a Vertical Dive (33.3% odds to hit) or Vertical Climb (50.0% odds to hit) with their

CHART 1:
Spread of Enemy Fighter Attacks

	Low	Level	High	Total
12:00	5	9	13	27
1:30	2	4	7	13
3:00	2	3	5	10
6:00	2	1	4	7
9:00	1	3	4	8
10:00	2	4	5	11
Total	14	24	28	

Vertical Dive: 4

Vertical Climb: 2

CHART 3: Spread of Shell Hits

Number of Shell Hits

	1	2	3	4	5	6	7
12/1:30/10:30	44.8	50.4	2.8	2.8	—	—	
3/9	16.8	28.9	50.4	2.8	2.8	—	—
6	—	44.8	22.4	16.8	11.2	2.8	2.8
Vertical Dive	67.2	28.0	2.8	2.8	—	—	
Vertical Climb	16.8	50.4	16.8	14.0	2.8	—	

CHART 4: Spread of Damage

	12H 1:30H 10:30H	12Le 1:30Le 10:30Le	12L 1:30L 10:30L	3H 9H	3Le 9Le	3L 9L	6H	6Le	6L
Superficial	16.8	39.2	16.8	5.6	30.8	11.2	8.4	11.2	14.0
Nose	14.0	16.8	14.0	5.6	8.4	5.6	2.8	—	2.8
Pilot Comp.	16.8	11.2	5.6	8.4	5.6	5.6	8.4	—	2.8
Bomb Bay	5.6	—	16.8	11.2	2.8	8.4	11.2	—	11.2
Radio Room	11.2	—	11.2	11.2	8.4	11.2	8.4	—	8.4
Waist	11.2	—	11.2	8.4	11.2	8.4	11.2	5.6	11.2
Tail	8.4	—	8.4	16.8	11.2	14.0	16.8	56.0	16.8
Stb. Wing	7.0	16.8	7.0	14.0	9.8	14.0	14.0	14.0	14.0
Port Wing	7.0	14.0	7.0	14.0	9.8	16.8	14.0	14.0	14.0

relatively high chance for "Walking Hits/ Fuselage". One thought to console oneself with is that those fighters which miss in their first pass will break off in search of other prey. Those which do hit, however, will return in "sucessive attacks" (perhaps twice more). The interesting point to note on Table B-6, which assigns locations for these secondary attacks, is that 67% of the time the fighter is placed in front of the bomber and that there are *no* low attacks at all! Another reason to keep key gun posts manned and well-stocked with ammunition (see 9.4).

For each "hit" obtained, the player must now find the number of shells which actually tore through the B-17. He does so by, of course, rolling two dice and cross-indexing with the clock position the fighter occupies. Chart 3 displays a breakdown of the percentages for shell hits.

The odds shown here do not make allowance for the addition to the number of shell hits due to fighter type. It is certainly possible to suffer *ten* shell hits when attacked from the rear by a Fw190! In any decision to allocate defensive fire, these figures should be borne in mind. For instance, when attacked from the 6:00, 3:00 or 9:00 o'clock positions, there is a 43.9% chance that an unopposed fighter will get two shell hits. It is always wise to evaluate placement of fire counters in terms of potential damage.

For each shell hit, the "Area Damage Tables" (Table B-5) are referred to for the specific location on the B-17 the shell struck. Chart 4 shows the spread of damage locations.

This may all be reduced to a few handy numbers. Regardless of the position of the attacking fighter, the following shell hits can be expected: Superficial Damage—19.2%, Nose—9.9%, Pilot Compartment—8.4%, Bomb Bay—7.5%, Radio Room—8.1%, Tail—12.4%, Starboard Wing—11.9%, Port Wing—11.5%. The remainder of the time you will be subjected to the deadly "Walking Hits". Note that the majority the hits a B-17 will suffer on a mission should be to the tail and wings. (Unfortunately, the highest odds of a B-17 being lost to a single shell hit are found on Table B1-1, Damage to Wings.)

By this point, I presume that any of the players can figure the percentages for specific damage in each location. The Damage Tables (P-1 through P-6, B1-1 and B1-2) bring the struggling B-17 commander such esoteric worries as an inoperable Norden Sight, failing intercom system and punc-

tured rubber rafts—along with the most serious damage. It should first be noted that from 28.0% to 50.4% of the hits on your plane will result in *Superficial Damage*. On the other hand, as seen in the ORIGINS '83 tournament (detailed elsewhere in this issue), the dice roll can bring absolute devastation and a quick end to B-17, crew and all. There are several manners in which a single hit can immediately send down the hardy B-17: "Bombs Detonated" (Table P-3), "Runaway Engine" (Table B1-1), "Fuel Tank Fire" (Table B1-1), and "Electrical System" (Table B1-2). The odds on each of these, in keeping with the plane's reputation, are low; but even the most experienced pilot cannot be complacent until his 25-mission stint is behind him.

On Target

Having weathered the fighters to reach the target zone, the B-17 must now weather the weather (sorry, I couldn't resist). After all the effort expended to reach the city, the pilot-player may find his bomb run "off target", translating into a slim chance of doing even minimal damage on the drop. Weather may be either "Bad" (5.6%) or "Poor" (11.2%) or "Good" (83.6%), the first two affecting the bombing. Once the weather has been found, the bombers must make their way through another fighter wave (at least one; consult Table B-2).

And you're not there yet. Now the vaunted German *fliegerabwehrkanonen* open up. The player must roll for "Flak Over Target" (Table O-2). Note that the U-boat targets all have an increased chance of heavy flak opposition. Depending on the level of flak concentration (heavy, medium or light), each of the three die rolls for flak bring a 50.4%, 28.0% or 5.6% (respectively) chance to be hit. Each flak hit is now translated into terms of "shell hits". The potential ranges from 19.6% for four shell hits to 28.0% for one; and there is a 2.8% possibility of the devastating *BIP* (Burst Inside Plane) which will wipe out an entire section of the B-17 and bring on its rapid demise. It is then necessary to locate the section of the plane hit by each "shell", and damage is resolved normally on the Damage Tables.

At last in the final approach, the pilot-player must find if his run is off or on target. A number of circumstances affect the die roll. Weather has already been mentioned. If the B-17 has been hit by flak, or if the automatic pilot is out of commission,

the run will be adversely affected. While the experience of the *Bombadier* can offset these, even the best cannot keep the plane on target if KIA or his Norden Sight is out.

Since victory is determined by bombing results (and survival of course), the "Bombing Accuracy" Table (O-7) is crucial. If off target, you've only a 5.6% chance of 10% of the bomb load hitting within 1000 feet of the aiming point, and 11.2% of 5% striking therein. Basically, any time the B-17 drops its load off target, the game is lost. If on target, the percentages of load falling within 1000 feet range from 20% to 100%. Obviously the entire exercise is aimed at doing damage to the target, and surviving to fly again.

Turning for the homeward leg, the bomber must endure all the hardships encountered on the way in. Again in the target zone, and every zone thereafter back, enemy fighters will swarm. It is usually at this point that the planes out of formation and the crippled (those forced to spend two turns in each zone) go down. And cumulative damage will make itself felt. Nursing your battered "Fortress" toward England, driving through the vengeful Luftwaffe, it is time to cast your thoughts towards the end of the excitement.

Coming Down

There are various manners of returning to earth in *B-17*, not all of them enjoyable.

If worse comes to worst and the crew is forced to bail out, it may take the form of either a "Controlled Bailout" (Table G-6) or Uncontrolled Bailout (Table G-7). Unfortunately, seriously wounded crew members may not bail out. However, each crewman leaving the striken craft has an 83.3% chance of surviving when leaving a plane under control—16.7% if the B-17 is out of control. Those who bail out over the continent will be captured (although there is a one-sixth chance of escape from Nazi-occupied France or Belgium).

Bailout over the water (Table G-8) is a much grimmer prospect. Even if the crewman comes down safely, he has a 66.7% chance of dying from drowning, exposure, etc. And if the radio is out, all the crewmen bailing out over water have "bought the farm".

Assuming that your B-17 holds together, it must eventually land. With no modifiers in effect, a safe landing is certain. However, rarely have I seen a case after the first ten missions where the "Landing on Land" (Table G-9) or "Landing on Water" (Table G-10) isn't modified. To cite but one such adverse modifier, a landing with anyone but the *Pilot* or *Co-Pilot* flying the plane is a −11 DRM! All modifiers are cumulative, so opting to bail out of a badly damaged craft over the airfield is the better part of valor (assuming no seriously wounded are left behind, in which case it's called cowardice).

Post-Mission Debriefing

Once safe on the ground, it is time to recover from wounds and contemplate one's luck. Whenever a crew member is wounded, there is a 50% chance of it being a temporary disability, affecting performance only for the current mission and immediately and surely healed upon landing. But one-third of the time, the wound is serious. After landing, one die is rolled. The chance of the wounded man ever flying again is only 16.7% Frostbite victims recover 50.0% of the time.

Finally, as promised earlier, I could not pass up the opportunity to philosophically contemplate fate in the form of "Random Events" (seeing as how everyone claims my "luck" is so good). Whenever a "66" results on Table B-3, the player can roll on Table B-7 for happenstance—both good and bad. The majority of the events (72.4%) are crafted to aid the pilot-player in his mission. Only 27.6% of the time need the player curse his fate. (However,

the incidence of jammed guns and formation casualties have always seemed high for me.) Unlike most games, the players should always opt to institute these rules for "Random Events" (18.0).

Looking back on all this, most players will hopefully find something of interest. But, perhaps, the best approach to *B-17, QUEEN OF THE SKIES* is simply to enjoy it—not analyze it. The game is unique—a challenging, ever-changing solitaire activity that is made truly enjoyable by a mimimum of bookkeeping and artificiality. The fact that it also recreates the reality is the cream in a near perfect blend of simulation and game. ☆

THE SAGA OF THE MEMPHIS BELLE
Simulating a Survivor
By Bruce C. Shelley

In the afternoon of 21 May 1943, 14 B-17s of the 91st Bombardment Group, 1st Bombardment Wing, 8th Air Force landed safely at Bassingbourn Airfield outside of London. These planes were returning from the 8th Air Force's 60th bombing mission of the war, a strike on the U-boat yards at Wilhelmshaven. They each had dropped ten 500 lb. bombs on the target. Luftwaffe resistance had been fierce. Of the 98 American bombers dispatched by the 1st Bombardment Wing, seven were missing —including four from the 91st Group. The gunners of the wing claimed 47 German fighters downed, five "probables" and 17 damaged. Of these, the 91st claimed seventeen "kills". Besides the forty men in the lost B-17s, the group had six other crewmen seriously wounded.

For one of the veteran crews returning, there was a special reason to celebrate. The *Memphis Belle* of the 324th Squadron, piloted by Lt. Robert K. Morgan, had survived its twenty-fifth mission. The *Belle* and her crew had departed Bangor, Maine on 25 September 1942 bound for England. There they became part of the newly forming 91st Bombing Group, and took a role in that group's first mission on 7 November, an attack on the U-boat pens at Brest. In the following months, the *Belle* and her crew saw action after action over Occupied Europe, steadily and steadfastly doing her job, and always returning safely. When the plane's crew climbed from their craft on 21st of May, there were smiles and congratulations all around. These men, and this plane, were the first to complete 25 bombing missions over Europe. They had finished their tour and "earned their ticket home."

The *Memphis Belle* was named in honor of Lt. Morgan's sweetheart, Miss Margaret Polk of Mem-phis, Tennessee. Following the return of the *Belle* to the States, Miss Polk joined the plane's crew for a war bond tour in the venerable B-17F. After the bond tour, the crew was given the choice of new assignments and the plane was sent to McDill AFB in Florida (where she was used for training). The *Belle* was the star (of course) of William Wyler's wartime documentary "The Memphis Belle". Wyler flew five missions on her to obtain actual combat footage. This full-color, 45 minute documentary was the best of those on B-17s, and is still available.

For players of Avalon Hill's *B-17, QUEEN OF THE SKIES*, the 25 missions of the *Memphis Belle* make an ideal campaign game. The *Belle* was a B-17F, as modeled in the game, and her missions are encompassed by the time span of the simulation. All of the *Belle's* targets are included (as detailed in the accompanying chart). For historic interest, the crew of the plane claimed eight enemy fighter "kills". Of these, five were credited to S/Sgt. John Quinlan of Stormville, New York—the tail gunner. He was also the only crewman to receive the Purple Heart. To recreate the saga of the *Memphis Belle*, simply fly the 25 missions of the campaign game, using the targets bombed historically in the proper order. See if you can duplicate history—or just how far you can go.

The Memphis Belle still exists. The Memphis Belle Memorial Association is now working to provide a permanent hanger and museum for the warbird. Any reader interested in learning more about this project can contact the Convention and Visitors Bureau of Memphis (12 South Main Street, Suite 107, Memphis, TN 38103; 901-526-1919).

The Belle's Twenty-Five Missions
91st Bombardment Group:

Mission	Location	Date	B-17 Losses	Enemy Kills
#1	Brest	7 Nov 1942	0 of 14	1
#2	St. Nazaire	9 Nov 1942	0 of 14	0
#3	St. Nazaire	17 Nov 1942	0 of 20	5
#4	Lille	6 Dec 1942	0 of 22	2
#5	Rommily Sur-Seine	20 Dec 1942	2 of 17	24
#6	St. Nazaire	3 Jan 1943	1 of 16	6
#7	Lille	13 Jan 1943	0 of 13	0
#8	Lorient	23 Jan 1943	0 of 13	0
#9	Emden	4 Feb 1943	2 of 17	5
#10	Hamm	14 Feb 1943	0 of 20	0
#11	St. Nazaire	16 Feb 1943	0 of 18	5
#12	Wilhelmshaven	26 Feb 1943	2 of 20	2
#13	Brest	27 Feb 1943	0 of 18	0
#14	Lorient	6 Mar 1943	0 of 14	1
#15	Abbeville	12 Mar 1943	0 of 18	0
#16	Abbeville	13 Mar 1943	0 of 21	0
#17	Wilhelmshaven	22 Mar 1943	1 of 21	5
#18	Amiens	28 Mar 1943	1 of 22	2
#19	Antwerp	5 Apr 1943	0 of 20	6
#20	Lorient	16 Apr 1943	0 of 21	0
#21	Bremen	17 Apr 1943	6 of 32	24
#22	St. Nazaire	1 May 1943	1 of 20	3
#23	Antwerp	4 May 1943	0 of 25	2
#24	Lorient	17 May 1943	0 of 24	6
#25	Wilhelmshaven	21 May 1943	4 of 21	17

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RAID ON DETROIT
The 1983 ORIGINS B-17 Tournament
By Bruce Shelley

At ORIGINS in Detroit last year, Avalon Hill revealed its solitaire game of World War II bombing, *B-17, QUEEN OF THE SKIES.* In support of the release, we ran a *B-17* tournament to introduce anyone interested to the play. Guidelines for the tournament were kept simple (see accompanying sample). Everyone wishing to take part was seated at one of three long tables in the hall, and were each given a card from a standard playing deck. All participants at one table were given Spades, the next Clubs, and so forth. The person given the Ace was made the lead bomber and he holding the highest card in the suit was designated the tail bomber in each squadron. A random die roll determined which table was the Low, Middle and High squadron. When this organization was completed, we were ready to begin. The signal for take-off for Hamm in Germany was given to Dennis Rapke of *Miss Informed,* the lead bomber of the low squadron and group leader for the entire mission. For those fliers unfamiliar with the game, the moderators and additional Avalon Hill hands Rex Martin and Dale Sheaffer provided assistance.

Enemy fighters began appearing over the Channel, although friendly air cover helped keep them at bay. The first serious damage was taken by Group Leader Rapke's plane *Miss Informed.* She lost an engine, and Rapke elected to jettison his bombs to stay in formation and lead it on to the target. Enemy fighter activity increased as friendly air cover diminished. (Air Cover in Zones 2, 3 and 4 was Good, Fair, Poor out and Poor, Fair, Good back.)

The first B-17 was lost in Zone 5 after the friendly fighters had been left behind. The victim was *Ms Magic,* captained by Patrick Vostal of Birmingham, Michigan. She was under attack by an Fw190 and shells were seen exploding along her starboard

wing, marching toward the fuselage. Suddenly, true to her name, *Ms Magic* disappeared in a thunderous fireball. It is speculated that this was caused by the detonation of the bomb load. There were no chutes. The shaken members of the Low squadron closed up and pressed on.

In Zone 6, two more B-17s were striken, one each from the Low and Middle squadrons. The first to go was the *Flying Witch,* commanded by Steven Cabral of Fall River, Massachusetts. An attacking Me109 was walking hits up her starboard wing when the inboard fuel tank blew into flames. Luckily the wing held momentarily and her crew had some time to get out. Eight chutes were counted by passing bombers. Next was the tail bomber of the Middle squadron, *Leper Colony* commanded by Greg Dryanski of Pontiac, Michigan. The #2 engine was hit and became a run-away. The crew bailed out before the vibrating engine could tear off the wing. Relieved gunners in other planes counted ten chutes. With the loss of *Leper Colony, Miss Me* (commanded by Pat Nicely of Toledo, Ohio) became the tail bomber. But not for long.

Entering Zone 7, approaching the Hamm railyards, *Miss Me* was seen to lose an engine that was quickly feathered. A second pass by the same fighter scored hits in the pilot compartment. Lt. Nicely signaled that his electrical system had been knocked out, and the entire crew safely abandoned ship. Zone 7 also cost the High squadron its first casualties. First to go was the lead bomber *Betty Sue,* piloted by Kevin Knape of Grand Rapids, Michigan. In a swirling attack by several fighters, the *Betty Sue* and her crew suddenly disappeared in yet another tremendous blast of detonating bombs. The crew of the *Mad Bomber,* Tom Bessing of Dearborn, Michigan commanding, were much luckier. They were hit by flak in the starboard wing,

starting a fuel tank fire. But they had time to get out, and nine chutes were counted.

The bomb drop was about average. Over half of the B-17s managed to drop their bombs on target. Considering the losses and ferocity of the enemy fighter command, this was most satisfactory.

Turning away from Hamm for the return to England, the Low squadron lost its tail bomber. This was the *Damn Buster,* under command of Duane Warnecke of Downer's Grove, Illinois. In the midst of the fighters' attack as the formation wheeled out of Hamm's flak zone, *Damn Buster* radioed that the electrical system was out. The crew immediately began bailing out. Eight men were seen to leave the plane safely, but to the horror of the watching crews in neighboring planes, the pilot was seen to slam into the rear tailplane. His body was still pinned there when the crippled B-17 was last in view falling away.

Zone 6 witnessed no end of the fury of the Luftwaffe. However, only one bomber, the *Billy B* under Steve Lentz of Dearborn, Michigan, was lost—from the High squadron. The *Billy B* had dropped out of formation over target with two engines out, and now the enemy fighters closed in for the kill. Within sight of the departing formation, her port wing fuel tanks caught fire. Seven chutes were spotted.

Zone 5 saw *Zeus' Bolt* fall from the sky out of the High formation, just short of hoped for fighter cover. The ship's captain, Chris Lentz of Dearborn, Michigan, had decided to ignore a fuel tank leak that had started in Zone 5 outward bound. He couldn't coax anything more out of the plane however, and it was now seen to crash land.

In Zone 4, friendly fighters were first spotted. But there were not enough to deter the enraged Germans, however, and two more B-17s were lost. In

B-17, QUEEN OF THE SKIES

Tournament Presented by The Avalon Hill Game Company

ORIGINS '83

Welcome to the first tournament of *B-17, QUEEN OF THE SKIES*, Avalon Hill's new game of simulated WWII bombing missions. This tournament will have one round only, consisting of a single mission. Each player will control a single bomber. Players will be placed in groups of two or four players, with one game for each group. Each player must complete one zone, and then allow the other players in his group to complete that zone. All non-active players will verify the dice rolls of the active player of the group.

Every effort will be made to have comparable conditions for all players. So please note the following:

a. The target for the mission is the railyard at *Hamm*.

b. Fighter cover will be announced by the moderators as each zone is entered.

c. No optional rules will be used (no random events allowed).

Victory Conditions

Selection of the winner will be based on points, with the highest total winning the tournament. Points are awarded for the following:

a. Each crewman returning to England not seriously wounded or KIA = 1 point.

b. Your B-17 returns to England in repairable condition = 5 points.

c. Percentage of bombs on target divided by ten (round fractions down) = 1 to 10 points.

d. Each Me110 destroyed = 1 point.

e. Each Fw190 or Me109 destroyed = 2 points.

You are not eligible to win unless you fly your bomber over the target and return to England. In the case of tie scores, the prize winners will be chosen at random.

There is a good chance that an account of this mission will appear in The *GENERAL*, so please fill out your Mission Charts legibly. If you want your successes or disasters in print, keep your writing clear and no obscene bomber names. Good luck and good hunting!

Moderators: Bruce C. Shelley and Dr. Vince ("Vinny the Ninny") Frattali.

The High Squadron

B-17	Commander	Fate	Claims
Mad Bomber	Tom Blessing Dearborn, MI	Fuel Tank Fire Flak over target	—
Zeus' Bolt	Chris Lentz Dearborn, MI	Out of Gas Zone 5 back	—
Betty Sue	Kevin Knape Grand Rapids, MI	Bombs detonated Zone 7 out	—
Billy B	Steve Lentz Dearborn, MI	Fuel Tank Fire Zone 6 back	—
Heart o'Gold	Henry Vytengsu Vancouver, BC	Crashed on Landing	(2) 190 (2) 109 (1) 110
Memphis Belle	Doug Schnee Toledo, OH	Returned	(1) 109
The Lady Ann	John Jacoby Charlottesville, VA	Returned	(1) 109
True Blue	Tom West Toronto, ONT	Returned	(5) 109 (1) 110
H.S.S. I	Derek Croxton Charlottesville, VA	Returned	(3) 190 (1) 109 (1) 110
Gypsy X	Neil Hall Kansas City, MO	Returned	—

Of ten in squadron, four shot down and one crash landed. Of the six crews returning to England, eleven were KIA and three seriously wounded. The squadron claimed five Fw190s, ten Me109s and three Me110s.

the Low squadron, the *Franklin II*, commanded by J. Janoska of Highland, Michigan, suffered a fuel tank explosion that blew off its starboard wing. Only two chutes were counted emerging. In the Middle squadron, the *Flying Circus*, commanded by Mike Nicely of Toledo, Ohio, was lost. The *Flying Circus* had become the tail bomber due to earlier losses in the squadron. The craft suffered a fuel tank fire on its starboard wing, causing the crew to bail out. Ten chutes were happily reported.

Entering Zone 3, the worst was over. There were still a few stragglers out of formation, and most ships had some casualties and damage. And fighter cover was at last improving, but for two B-17 crews, even this was too late.

Group Commander Rapke was still limping along in *Miss Informed* at the head of the Low squadron. However, in Zone 6 homeward bound, *Miss Informed* had taken a hit in the starboard outboard fuel tank. Luckily there was no fire, but a leak developed. Agonizingly close to the visible coast of England, *Miss Informed* was forced to ditch into the Channel. Fortunately, Sea Rescue patrols were quickly on the spot and the eight non-seriously wounded men of the crew were saved.

With the Channel and the enemy fighters now behind, the remaining bombers prepared to land. There was but one last drama to play out. This concerned the *Heart o'Gold* commanded by Henry Vytengsu of Vancouver, British Columbia (having enlisted to fly with the Yanks). On the outward leg the co-pilot was wounded several times and died. Over the target, the pilot was killed by flak. The engineer took over the controls. Then in rapid succession, the radio operator and starboard waist gunner were seriously wounded and the engineer was killed. In desperation, the navigator took over the controls. Arriving over England hours late, the navigator elected to attempt the landing to save the two seriously wounded men. The other surviving crew members bailed out over the airfield. The navigator's luck finally failed however, and he and the wounded died in the crash landing. The crash finished the mission.

Once the post mission debriefings were concluded, a number of participants in the raid on Hamm were commended for decoration. Included in these were pilot Chris Villeneuve and his co-pilot of the *Linda B Good* (Middle squadron) who brought their plane through though badly frostbitten (Silver Stars). Also, the Group Leader Dennis Rapke of the *Miss Informed* for his courage and leadership (DSC). And finally, the navigator of Henry Vytengsu's *Heart o'Gold* for his desperate act of courage in the landing attempt (CMO).

The mission was a costly success, another step to victory over the enemy. Of 31 bombers dispatched, eleven were shot down; in addition one crash landed and one ditched. Returning crew casualties amounted to 23 dead and eleven seriously wounded. Of the 310 men involved, an additional 110 are listed as missing. However, the three squadrons claim kills on 20 Fw190s, 33 Me109s, and 15 Me110s. Obviously the Luftwaffe command made an all-out effort to decimate the operation against Hamm. It is only due to the skill of the commanders that losses among the squadrons were not higher. Great courage and ability were displayed by all, despite some utterances of concern.

The winner of the tournament was Ken Legg of Hampton, Virginia, captain of the *Crap Out*, who scored 28 points. This plane was forced out of formation early, but continued on to drop 30% of its bombs on target while the enemy concentrated on the bomber stream. Thereafter, damage forced it to spend two turns per zone on the homeward trip. *Crap Out* attracted much attention from fighters now, but wouldn't go down. She arrived in England with both waist gunners KIA and her navigator seriously wounded. But her gunners had

The Middle Squadron

B-17	Commander	Fate	Claims
Flying Circus	Mike Nicely Toledo, OH	Fuel Tank Fire Zone 4 back	—
Leper Colony	Greg Dryanski Pontiac, MI	Runaway Engine Zone 6 out	—
Miss Me	Pat Nicely Toledo, OH	Electric system Over target	—
Phantom Phanatic	Ronald Jongeling Youngstown, OH	Returned	(1) 190
Ducky Web	Patti Webber Toronto, ONT	Returned	(1) 190 (3) 109
Perfect Circle	Ted Bielak Chicago, IL	Returned	(3) 190
Lady of the Lake	David Dzladziola unknown	Returned	(1) 190 (1) 110
Linda B Good	Chris Villeneuve Ypsilante, MI	Returned	(1) 190 (3) 109 (1) 110
Aces & Eights	William Patrick Detroit, MI	Returned	(3) 109
Bomb's Away	Andrew Webber Toronto, ONT	Returned	(1) 190 (3) 109
Banshee's Chariot	Patrick Frye Laurel, MO	Returned	(1) 110

Of eleven in squadron, three shot down. Of the eight crews returning to England, five were KIA and five seriously wounded. The squadron claimed eight Fw190s, twelve Me109s and three Me110s.

The Low Squadron

B-17	Commander	Fate	Claims
Ms Magic	Patrick Vostal Birmingham, MI	Bombs detonated Zone 5 out	—
Flying Witch	Steven Cabral Fall River, MA	Fuel Tank Fire Zone 6 out	—
Damn Busters	Duane Warnecke Downer's Grove, IL	Electric system Zone 7 back	—
Franklin II	J. Janoska Highland, MI	Fuel Tank Fire Zone 4 back	—
Miss Informed	Dennis Rapke Madison Hts., MI	Ditched in Channel	(3) 190
Ilene	Peter McNabb Clive, IA	Returned	(1) 190
Lady Luck	Jason Jousma Alto, MI	Returned	(1) 190 (2) 109 (1) 110
Allah Be Praised	Phil Joerin Milford, MI	Returned	(3) 109 (3) 110
Crap Out	Ken Legg Hampton, VA	Returned	(2) 190 (3) 109 (1) 110
Holy Grail	Alan Morgan Westlake, OH	Returned	(3) 109 (2) 110

Of ten in squadron, four shot down and one ditched. Of the six crews returning to England, seven were KIA and three seriously wounded. The squadron claimed seven Fw190s, eleven Me109s and nine Me110s.

claimed three 109s, two 190s and three 110s. She returned with plenty of non-vital damage (indeed, looking quite battered) and little ammunition. Second place went to Alan Morgan of Westlake, Ohio, flying in the *Holy Grail*—also from the Low squadron. For a complete analysis of the mission, readers are referred to the accompanying charts.

Experienced B-17 pilot-players are advised that the next target for the Avalon Hill bomber fleet is Dallas. At ORIGINS '84, Dale Wetzelberger will host the second official B-17 mission. With heroic disregard for the truly awful weather conditions over target, a new crop of greenhorns and veterans will take to the skies in a raid on Dallas.

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RETAIL OUTLETS

Daily the offices of Avalon Hill receive requests from gamers for the location of the nearest retail outlet in their locale. Unfortunately, the Avalon Hill Game Company deals through wholesale distributors exclusively; no comprehensive listing of retail stores which offer our fine line is maintained. Until now we have met such requests with the suggestion that the gamer check the yellow pages for the better hobby and bookstores of his region, many of which carry Avalon Hill titles. However, the editors have managed to compile a *partial* listing of retail outlets offering the best of adult games. Look for Avalon Hill games at the following fine stores:

Illinois—*Arlington Heights:* Gamers Paradise; *Aurora:* Ace Hardware, Gager's Arts, Crafts & Hobbies; *Bensonville:* Village Toy Shop; *Bloomingdale:* Gager's Arts, Crafts & Hobbies; *Buffalo Grove:* Bob's Hobby; *Champaign:* Slot & Wing Hobbies South; *Chicago:* Gamesters, Gamers Paradise, Hobby Cellar, Toy Castle, Toys Et Cetra, Toys Galore, Trost Hobby Shop; *Crystal Lake:* Frank's (Barber, Toy & Hobbies); *Decatur:* Haines & Essick Co.; *Evanston:* Just For Fun; *Glen Ellyn:* Glen Ellyn Toy & Card Shop; *Glenview:* Klipper's Toys, Hobbies & Crafts; *Lombard:* Gager's Arts, Crafts & Hobbies; *Moline:* Gager's Arts, Crafts & Hobbies; *Norridge:* Gamers Paradise; *Northbrook:* Gager's Arts, Carfts & Hobbies; *Oakbrook Terrace:* Dispensa's Castle of Toys' *Palatine:* Compleat Gamer; *Peoria:* Prospect Variety Inc.; *Rantoul:* Slot & Wing Hobbies; *Rockford:* Don's Hobbies & Toys, Royal Hobby Shop; *Round Lake:* Ace Hardware; *Schaumburg:* The Hobbyist; *Skokie:* Hobby Chest; *Vernon Hills:* The Hobbyist; *Villa Park:* Don's Toys & Hobbies; *Westmont:* Lyle's Hobby & Craft Center; *Winfield:* Prosek's Military Model Shop; *Zion:* Shiloh Toy Center.

Indiana—*Clarksville:* Something to Do; *Evansville:* Woolsey's Toys & Sports, ABC Hobbycraft; *Indianapolis:* Board Room, Ed Schook's Toy & Hobby Shops, Tom Metzler Hobby Center, Toys by Rizzi; *Merrillville:* Toys by Rizzi.

Iowa—*Cedar Falls:* Arts N' Crafts; *Davenport:* Gager's Arts, Crafts & Hobbies, Thinkers' Enterprises; *Des Moines:* Anuvin Fantasy Books & Games, Toys N' More; *Fort Dodge:* Hobby Craft Shop; *Iowa City:* Iowa Book & Supply Co.; *Waterloo:* Arts N' Crafts.

Kansas—*Kansas City:* J's Hobby Haven; *Lawrence:* George's Hobby House; *Leavenworth:* Playworld Store; *Olanthe:* Funtastic Toys; *Oakland Park:* King's Crown; *Prairie Village:* Village Toy & Hobby; *Wichita:* Game Shop, McLeod's, Toys By Roy.

Manitoba—*Winnipeg:* Celebration, Den For Men, Eaton's, Games Unlimited, Keystone Hobbies, Shopette Ltd.

Michigan—*Ann Arbor:* Campus Bike & Toy Shop, Rider's Hobby Shop; *Berkley:* Alcove Hobby Shop; *Birmingham:* Gags & Games; *Detroit:* Comic Kingdom Bookstore & Hobby Shop, J. Kay Stores; *East Lansing:* Rider's Hobby Shop; *Grand Rapids:* Meijer Thrifty Acres, Meyers Hobby House; *Holland:* Cobbleware Crafts & Hobbies; *Lansing:* Athlete's Village, The Hobby Hunt; *Lincoln Park:* Brown's Hobby Shop; *Livonia:* Gags & Games; *Monroe:* Brown's Hobby Shop; *Petoskey:* Games Imported; *Rochester:* Trackside Hobbies; *Sterling Heights:* Hobbyville; *Warren:* Brown's Hobby Shop, J. Kay Sales.

Minnesota—*Bemidji:* The Hobby Hutch; *Brainerd:* Tom's Pet & Hobby; *Brooklyn Center:* Gager's Arts, Crafts & Hobbies; *Burnsville:* Gager's Arts, Crafts & Hobbies, Hobbytown, Toys Plus; *Duluth:* Atlantic Books, Carr's Hobbies; *Eden Prairie:* Gager's Arts, Crafts & Hobbies, Toys Plus; *Edina:* Games By James; *Maplewood:* Gager's Arts, Crafts & Hobbies; *Mankato:* Don's Hobby, Toys Plus; *Minneapolis:* Books Galore, Clancy Drug, Gager's Arts, Crafts & Hobbies, Games By James, Grand Games, Jolly's, Little Tin Soldier, The Game Room, World of Toys 6 Hobbies; *Minnetonka:* Gager's Arts, Crafts & Hobbies, Games By James; *Owatonna:* Thon Co.; *Plymouth:* D&M Hobbies; *Richfield:* Hub Hobby; *Rosedale:* Gager's Arts, Crafts & Hobbies; *Roseville:* Gager's Arts, Crafts & Hobbies; *St. Cloud:* Baker's Craft & Hobby; *St. Louis Park:* Gager's Arts, Crafts & Hobbies; *St. Paul:* Grand Games, Storkville Inc., Woodcraft Hobby; *Virginia:* Sakrison's Hobby; *Woodbury:* Team Track Models.

Missouri—*Des Peres:* Des Peres Hobbies; *Hattiesburg:* Hobby Center; *Independence:* Funtastic Toys; *Joplin:* Playworld Stores; *Kansas City:* Brookside Toy & Hobby, Dreams & Things, Playworld Stores, Yankee Doodle Game & Hobby; *Springfield:* Toy-O; *St. Louis:* Hobby Haven, Spicer's 5 & 10.

Nebraska—*Bellevue:* Youngtown; *Grand Island:* World of Toys & Hobbies; *Lincoln:* Great Race & Hobby Place, Hobby Town, Youngtown; *Omaha:* Hobby Center, JC Penney's, Youngtown.

North Dakota—*Bismark:* Meridith's Craft & Hobby; *Fargo:* Gager's Arts, Crafts & Hobbies, Hatches.

THE REST OF THE ROYAL FAMILY
Variant Models for B-17
By James E. Meldrum

The pivot point of Avalon Hill's new *B-17* solitaire game is the Boeing B-17F "Flying Fortress", the model commonly used during the time period in which the 8th Air Force was developing the daylight strategic bombing doctrine. The B-17F was not, however, the first model of the Flying Fortress to enter service or see combat, nor was it the last. There were several production models of the B-17 in action over Europe. Nor was use of the B-17 limited to the USAAF; B-17s were also used by the Royal Air Force prior to 1943. The use of these different models of the "Queen" may be simulated quite easily in the game, and serve to illustrate how a military craft progresses through designs, production models and field modifications.

The various models of the B-17 Fortress are simulated by simply altering the layout of the craft and by changing some of the charts and tables to reflect differing capabilities. In the case of one of these, fewer crewmen will be carried. Dedicated players seeking to compare models may wish to enter the data on notecards for ease of reference.

B-17C

The first alternative model to be covered is the B-17C, used by the USAAF in small numbers against the Japanese and by the RAF against the Reich from July through September 1941. In both cases, heavy combat losses soon dictated a major redesign incorporating heavier defensive armament, a new tail section, more reliable self-sealing fuel tanks, and an improved electrical system.

All B-17C gun positions are considered to be blisters mounting single guns with the exception of the ventral blister, which mounted twin guns. Neither the Top nor Ball Turrets exist on this model; the Ball Turret position is actually the ventral blister containing manually aimed and fired weapons. The following gun positions only are used on the B-17C model: Nose, Radio Room (blister), Waist (one blister on each side of the craft) and ventral blister. This model of B-17 carries 15 ammunition points for all guns except the belly gun (18 ammunition points).

As mentioned earlier, there is no Ball Turret in this B-17 version; instead there is the ventral blister housing twin guns. This position is affected by any enemy hit that would normally affect the Ball Turret. The belly gunner may vacate this station at any time. Defensive fire from the ventral post is effective only against opposing fighters attacking from 6:00 Level and Low, and from a Vertical Climb.

One reason so many B-17Cs were lost in combat was because of the lack of reliable self-sealing fuel

tanks. In order to simulate this, the damage table for the wings (Bl-1) must be modified. On any fuel tank hit, a fire starts on a roll of 1-3; on a roll of 4-5 there is leakage; on a roll fo 6 the tank seals properly. Fire extinguishers quench a fuel fire on a roll of 1-2, and additional attempts up to three may be made on a die roll of 3-6.

Historically the B-17C carried only eight crewmen. When using this aircraft in the game, eliminate the navigator and tail gunner (whose stations are left vacant and may not be manned). The pilots are responsible for navigation. Ignore all damage results affecting these positions; consider all such superficial damage.

During the period in which the British used the B-17C, early models of the German Fw190 were just beginning to enter service with the Luftwaffe. Therefore, no Fw190s may be used against the B-17C. In situations on Table B-3 calling for the appearance Fw190s, consider them to not to show; do not substitute other craft. As an option, Fw190s may appear in Zones 7 and 8 of the Strategic Movement Map only. However, these craft may not be used against B-17Cs attacking the U-boat base at La Rochelle.

The British occasionally used the B-17C on night raids. To simulate the use of B-17Cs (or any other craft) on a night bombing mission, allow the Germans Me110s only to appear when specified. If any other fighters are called for by Table B-3, consider it to be "No Attacker". When using Table O-6 during a night raid, subtract one from the dice roll. No fighter escort is used on a night raid; ignore Table M-4. Damaged B-17s landing at night must subtract an additional one from their dice roll on Table G-9.

B-17E

Following the B-17C, the B-17E offered improvements and a strengthened crew—from eight to ten men. The "new" Ball Turret was added. This was the model first used by the 8th Air Force over Europe. At this time, the Americans were experimenting with unescorted long-range bombing missions. High losses resulted as soon as German fighter pilots discovered that the B-17E was vulnerable to a frontal attack.

The B-17E is identical to the aircraft normally used in *B-17* except that is lacks cheek guns and the nose gun may only score hits on opposing aircraft on a die roll of "6".

The US Army Air Corps started its bombing offensive by sending unescorted formations of B-17Es to attack Europe. To simulate this early

doctrine (which was replaced only after heavy losses), do not use Table M-4 unless ordered to do so by the Random Events Table. When doing so, do not use a die roll modifier of +1.

The first major daylight bombing raid conducted by the USSAF's B-17s was on Rouen on 17 August 1942. Players may simulate this raid by making a similar attack with 40 bombers without fighter cover.

B-17G

Following the retirement of the B-17F (the model found in the game), the definitive production model rolled off the assembly lines. This was the vaunted B-17G, which was slightly heavier and slower than its predecessors but which featured a heavier armament. The major feature about the B-17G model to note was a chin turret under the nose of the aircraft. This model was used in great quantity by both the USSAF and the RAF in the closing years of the war.

For game purposes, the B-17G is identical in every respect to the B-17F used in the regular game except that the nose gun is replaced by the "chin turret". The chin turret is equipped with twin guns and may attack fighters approaching from both 10:30 Level and Low, all levels of 12:00, and both 1:30 Level and Low. Enemy fighters are hit on a die roll of "5" or "6". Chin turrets are affected by all hits that would otherwise affect the nose gun/bombardier. Enemy fighters attacking from 12:00 High may not knock out the chin turret. Ammunition supply is the same as for the nose gun post.

Taking into account the time frame in which B-17G operated and the American bases in France from which most flew, together with the development of long-range fighters (P-38 and P-51), players may try simulating the effects of a B-17G raid in the late war. This may be done by allowing the B-17G player to claim fighter cover in all map zones on the strategic board.

Players may wish to try flying several individual missions using the different models of B-17 available. To preserve historical continuity, each model of B-17 should be used in alphabetical order. Players are reminded that the B-17C flew unescorted, the B-17E frequently flew with escorts, as did the B-17F, while the B-17G was usually very well escorted by Allied fighters at all times. Players may now compare their survival rates and performance. I think they will find it instructive.

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BEFORE THE QUEEN
British Bombers for AIR FORCE
By Michael Anchors

Before great aerial fleets of B-17 and B-24 bombers thundered over the Rhine, aerial fleets of Whitleys, Hampdens, Wellingtons, Stirlings and Halifaxes blundered across to extract revenge for Coventry and London. Their bombing was often wildly inaccurate and their economic impact on the Reich was slight, but their contribution in promoting British morale and diverting Luftwaffe resources was considerable. In the process, novel techniques of navigation and sighting were developed that were prerequisites for the destruction of the Reich from the air which followed in 1943-1945. Stirlings, Halifaxes and Lancasters delivered 60,510 tons, 227,610 tons, and 608,612 tons of bombs respectively during the war; yet there are no Data Cards in AIR FORCE for the Stirling or Halifax. Craig Taylor, the designer of AIR FORCE, could not possibly include the whole panoply of the British, American and German airforces of the European Theater in thirty Data Cards. Some compromise had to be made. So the

British Lancaster was included, and the others left out. But the Lancaster was not available until 1942. AIR FORCE owners wishing to simulate the pioneer RAF raids on Berlin, Luebeck, Hamburg and Cologne in 1940 and 1941 have been out of luck.

There is a similar situation in the category of two-engine bombers. The only two-engine British bomber in AIR FORCE is the famous multi-purpose Mosquito, which did not appear until 1942. The British did borrow Mitchels and Bostons (DAUNTLESS Cards 9A and 11B respectively) from the United States, but, again, that was later in the war. Actually, the British began the war with a menagerie of two-engine bombers of their own, and these they hurled at Germany in raids as deep as Berlin with amazing persistence long after it was clear they were outmatched by the Luftwaffe fighters. Raids were more rationally and effectively aimed at the Kriegsmarine in its drydocks and fjords and at targets in occupied France. Where are

these valiant warriors in the game?

Data Cards for four of the missing bombers are printed on the insert in this issue, and a fifth bomber appears below. The Cards are reduced to fit the 8½ × 11″ pages of The GENERAL. No counters are provided but the following substitutions may be made: Lancaster counters for the Stirling and Halifax; Wellington counters for the Whitley; and Mosquito counters for Hampdens and Blenheims. A brief historical to each follows:

BLENHEIM. The Blenheim was the military version of a plane built privately for Lord Rothmere, a newspaper magnate, in 1934. The craft was fast for its time, but age had caught up with it in 1939. It was used variously as a bomber, heavy fighter and night fighter without particular success in any role. Nevertheless, the British and Canadians proceeded to build 5,500 of them. Most of them wound up in the Mediterranean facing endemically underarmed Italian fighters.

HAMPDEN

Handley Page Hampden Mk I Light Bomber
PV: 18 Engine Type: R Producer: Great Britain
Operational in 1938. 1430 built for RAF.
Loaded: Carried 4000 lbs. of bombs; has sights for level bombing.
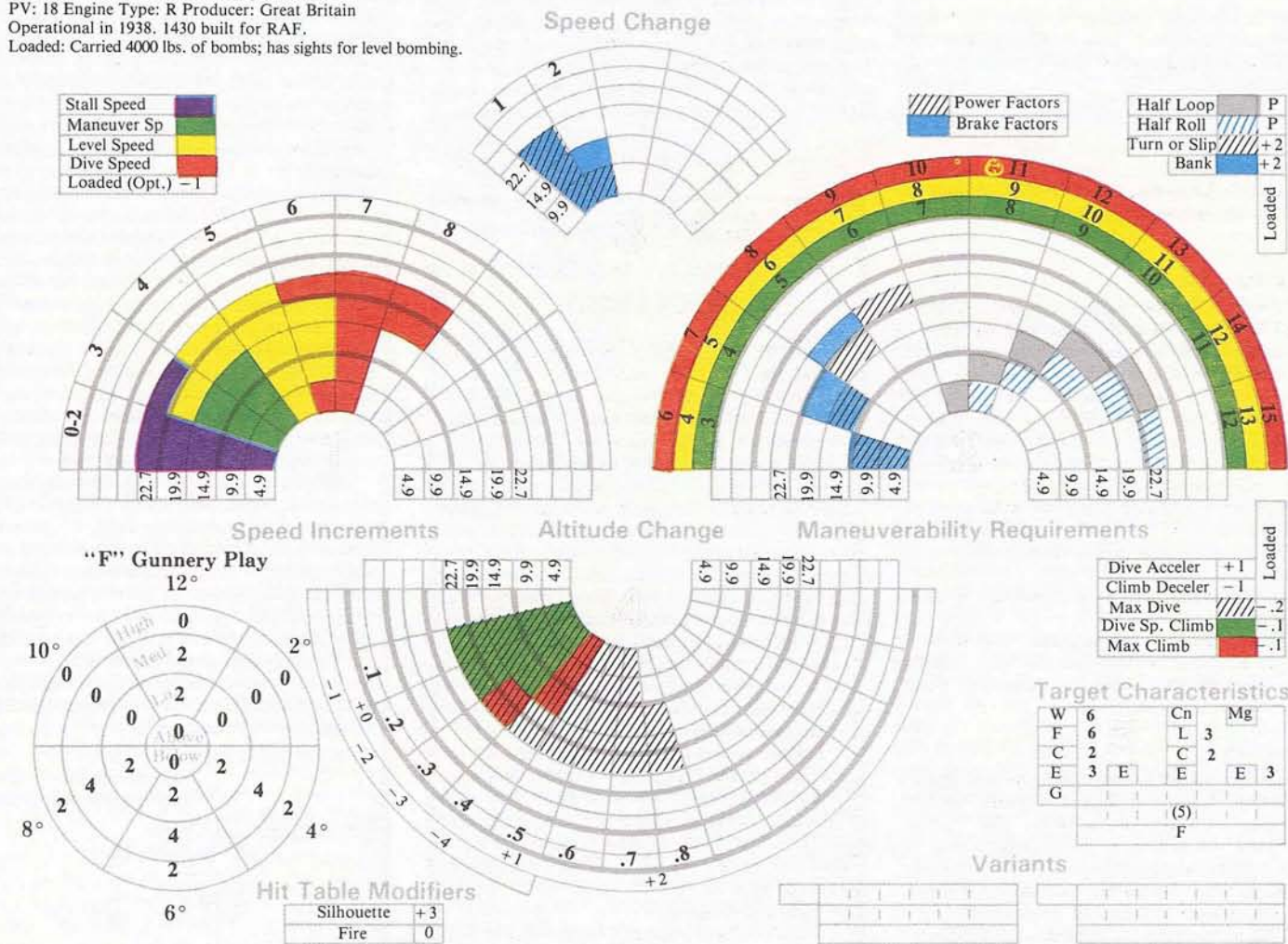
HAMPDEN. The Hampden was as unpopular with aircrews as the Blenheim was popular, sacrificing comfort for payload. The plane was better armed than the Blenheim, but it had critical blind spots. It was vulnerable to attacks from above and ahead because the bombadier-observer could not elevate his gun adequately, and from the sides because the rear-facing turrets don't swivel.

WHITLEY. Whitleys welcomed Italy to the war, bombing Genoa and Turin in June 1940, and joined Hampdens in the first bombing of Berlin in August. These planes were slow and underarmed, as usual, but rugged and plentiful. They continued in production until 1943.

STIRLING. Britain's first four-engine heavy bomber was handicapped with a short wingspan to accommodate existing hangars. Its turn radius, climb rate and ceiling were adversely affected by this. Nevertheless, it carried twice the payload of the Whitleys and was better armed. It took fewer of them to get the job done, and more of them returned safely. A successful design.

HALIFAX. The 100-foot wingspan of the Halifax was a vast improvement over the Stirling. Halifaxes were used concomitantly with Lancasters throughout the war. The 1944 version had radial engines in place of the in-line engines of the Mark III.

Scenario 10—Raid on Rouen

British: 2 Blenheim (loaded) at 5,000 feet enter from board edge 4 on Turn 1 2-6 Spitfire V (see Special Rules) at 6,000 feet from board edge 4 on Turn 2

Germans: 1-8 Me-109E enter from board edge 1 (see Special Rules)

Victory Conditions

Each side gets points for aircraft shot down. In addition, the British get points for bombing their target.

Special Rules

The German player decides how many fighters he will commit, but loses 2 v.p. for each Me 109 and 3 v.p. for each Me 110 he uses. Once chosen, the starting altitudes of each pair of German fighters is determined by rolling one die and multiplying the result by 1000 feet. The highest pair (or group of three if there is an odd number of fighters) enters on Turn 1. The turn of entry of the remaining pairs is determined by rolling one die for each pair.

The number of Spitfires is determined by a roll on Turn 2. A roll of "4" yields 4 Spitfires. At least two Spitfires are committed to battle, and no more than six.

Only Blenheims may bomb, and only via level bombing

The scenario lasts twenty turns. The board is arranged as shown on Page 3 of the rules, and the target area consists of Hex V-H12 and all hexes within two of of this hexline.

Commentary

With Barbarossa getting underway and no second front in Europe, the British had difficulty enticing the Luftwaffe into combat. The "Circus Operations" consisted of small raids aimed at targets in occupied territory using Britain's obsolete twin-engine bombers as bait to bring the Messerschmidts to battle with the new generation of Spitfires. The tactic often failed because the Germans cared less about attacks on occupied territory than preservation of their own aircraft.

Scenario 11—La Pallice

British: 12 Halifax (loaded) enter from board edge 4 on Turn 1

Germans: 2-6 Me109F enter from board edge 5-6
 3 Heavy Flak
 5 Light Flak
 1 BB-1 (U.S. 1941-43) the *Scharnhorst* hex IV-K4

Victory Conditions

British: 17 hit points on the *Scharnhorst* and less than 7 bombers down *or* 33 points on the ship

German: avoid British Victory Conditions

Special Rules

The British player may choose the starting altitude of his bombers, all of which must enter by Turn 2.

The German player places the Flak guns as he pleases in the initial set-up, but they cannot be on boards I or II (the ocean) or on the ship.

The ship can use its AA armament, but cannot move.

German fighters enter in pairs at any altitude of the German player's choosing whenever a roll of 1-2 is made with one die at the beginning of the turn. German fighters may not fly off board edge 4.

Play continues until all Halifaxes have exited board edge 4 or 33 hit points are scored on the ship.

Commentary

The British attacked at low level, scoring five hits on the *Scharnhorst* for a loss of five bombers—a modest success. The next month the ship sailed to join the *Gneisenau* in dry dock at Brest. Damage to the two ships from air attacks prevented their sortie with the *Bismarck*, and spared the Royal Navy a sticky wicket, indeed!

☆

HIT 'EM HIGH
Allied Strategy in LUFTWAFFE
By Ralph Marshall

Avalon Hill's version fo the Allied air offensive in Europe is a truly fascinating strategic game that has been widely overlooked by most gamers. This article will detail a few suggestions for the Allied strategic effort. (I here assume that the Advanced Game rules and OB are in effect, and no other special rules or units are being employed.)

There are two areas of strategic concern in *LUFTWAFFE*. The Allied player must destroy *all* of the cities on the board to duplicate the actual results of the American bombing, and so win the game. This means that some long-range planning is imperative before even the first quarter is begun. If the German player is able to successfully defend just one city, no matter what the rest of his position at the end of the game, he has won and the Allied effort has been misdirected. (While this may seem a little artificial, and provisions might be made for marginal, tactical, and decisive victories such as found in a variety of other AH games, it is not the purpose of this article to propose "variant" rules.) The next major area of concern is that of replacement factors. Since these are not calculated in the same manner for both sides some work might reveal a way for the Allies to gain the upper hand in this area. The above two topics, along with some hints on planning missions, will be the main areas of discussion herein.

Since the Allied player must bomb all of the cities to win, it makes a great deal of sense to have at least a rough plan for how the action will be conducted before play begins. It can be immensely frustrating to have bombed all but ten of the targets, only to realize that due to a lack of replacement factors there are only five heavy bomber counters left for the last turn of the game. Since it is possible to lose the entire air force in one bad quarter, some advance planning can help to minimize the problem.

There are 43 aircraft factories and 36 factories of other types that must be hit by the end of the game. To do this successfully requires having a planned number of cities hit each quarter. Having such a number not only assures that the Allied player won't lose sight of the final goal, but also provides him with some indication of how things are going at any given time during the game. Since the Allied airforce comes in piecemeal, rather than all at the beginning, it is obvious that more cities must be bombed in the latter stages of the game than at the beginning. The Allied player can expect to be able to fly a maximum of about 185 shorties over the course of the game, assuming that he does not run out of replacement factors. Thus the Allied player must have a *minimum* success rate of about 43 percent, assuming that all planes fly every mission possible. These assumptions are for a best-case situation and are a little unrealistic. The Allied player is going to eventually run out of replacement factors, cutting down the total number of missions that can be flown, and there will be some quarters where a lucky German roll will wipe out an entire stack of bombers before they can complete the mission. (I've seen it happen too many times to be discounted). All of these factors, plus the fact that occasionally flying less than the maximum number of missions can force the German to guard against planes that never materialize, mean that the *planned* success rate must be closer to 70 percent.

Armed with the above information, the Allied player can begin to make plans for conducting each quarter. While it is not realistic or necessary to plot out the entire game before starting play, it is helpful to decide how many missions need to be conducted in each quarter. The table below has been compiled with that goal in mind.

Quarter	Planes Available	Successful Missions
1	3	*
2	3	*
3	7	4-5
4	10	6-8
5	17	10-14
6	24	15-19
7	29	18-23
8-10	??	About 5/quarter

*Depends on whether the quarter is played. See text.

If the game progresses as predicted by the above table, the Allied player will have won by the end of the seventh quarter. Since it's rarely that easy, we must examine what is more likely to happen.

The Allied player has 124 bomber replacement points available to him, which will allow him to rebuild his entire bomber force for the first seven quarters (hence the "?" for turns 8-10). Since all losses after that point are permanent, it is critical that the German Luftwaffe have been reduced as much as possible when the replacement points run out. If only one city is left and the German has nothing but Ju 88's, the chances of victory look very good; but if no bombers remain, the allies have still lost.

It is necessary for the Allied player to hit as many cities as possible in the early stages, when the air force can recover from expensive missions, and have some plan for hitting the few stray cities that remain in the last three quarters. If he can bomb roughly the number of cities outlined on the chart for the first seven quarters, and attempt to conserve as much fighter strength as possible, the last three quarters should be enough to hit the remaining cities with ease and with little opposition.

Now for some suggestions on how to accomplish the above success rate. The single most important part of each quarter—from the Allied point of view—is initial set-up. Since it is so critical, it is essential that it be done in the most efficient manner possible. The best way to lay out the missions for each quarter is to get the German player to leave the room, and place the bomber counters on the cities you plan to hit. This not only is easier than trying to figure out which squadron numbers go to which cities by looking at the list on the target sheet, but it also allows you to count hexes without trying to hide it from your opponent. In this manner, you can be sure that all of the cities are close enough together that the stack will be able to stay together for as long as possible, and you can ensure that no cities are overlooked. (Be aware, the target sheet has dots on a lot of airfields that don't need to be bombed, thus making it useless for determining what cities have yet to be hit.)

One of the most important advantages to the above methods is that it allows you to count hexes and plan the timing of the missions. If you send stacks in individually, the German is able to concentrate his entire force on each stack, rather than being forced to split up his units. As an example, if one plans to have sneak raiders appear at the same time that another stack from England is in the area, they will stand a much greater chance of surviving,

especially if there are some fighters with the main stack. It also has shock advantages, as the German is faced with having to defend against a whole slew of attacks, and usually doesn't quite have enough units, often leading to quick decisions, and thus mistakes.

Another tactic that can increase the number of units that not only complete missions but return to base is that of shuttle flights between England and Italy. While this is not possible until 1943, it does have some very real advantages. Since individual counters do not have to turn back as soon as they have reached their target, the stack can retain its defensive firepower, and units can't be jumped individually as they struggle back home. Since each factor that is saved is one that is available later in the game, when they will be needed, this is an important strategic consideration.

As an example of the above tactic, consider the following mission from Italy: starting three or four hexes above the bottom edge, and traveling Innsbruck-Munich-Stuttgart-Karlsruhe-Mannheim-Wiesbaden-Bonn-Duren-England. Nine cities are hit, exactly the right size for a stack of B-17s on turn 7 or later, or for B-24s on turn 6. If you want to try it earlier, simply skip some of the targets. While it may seem that the route followed is not the shortest route for some of the bombers, careful counting will reveal that it is. The shortest route from Italy to Innsbruck and then England is 33 hexes, or 11 turns. The route described above is 35 hexes long, and thus still takes 11 turns, as required by the rules. There are several other variations to this tactic, such as sneak raiders (which could also link up with a stack of planes on the way back for protection) and shuttles to Russia. If the German player is waiting for you to break up so that he can inflict casualties, he will be unpleasantly surprised.

The next important tactic to ensure both completion of missions and recovering as many units as possible is that of sending fighters along with the bombers. Starting a stack of B-24s, some B-26s and B-25s and all of the available P-47s in Italy is a very successful tactic. The fighters fly one turn behind the bombers, with tanks, and as soon as the enemy fighters come up, they drop the tanks and attack. Ten factors of P-47 have an incredible firepower and, if no jets are available for protection, the entire enemy force committed to the Italian front can be eliminated in one or two turns. This forces the Germans to either allow the bombers to complete their missions untouched, or reduce the forces on the other fronts. Since the P-47s only have three turns after dropping tanks, they will probably be forced to fly back to Italy after combat—but they will have served their purpose.

Since the German's replacement factors are limited by the number of aircraft factories available, it is obviously essential that these be the first targets. If enough casualties can be inflicted early in the game to deplete the German's reserve of replacements, he will be hard pressed to field a viable defense force in the latter stages of the game. The other area that is vulnerable is the rail system. If a concentrated effort is made to attack the rail cities (especially the concentrated centers at the bottom of the board), the Gemran will be denied a large number of rail fighters that arrive in the later stages of the game.

Once both players have run out of replacment factors, the game becomes much more closely run. It is essential to the German that he eliminate as

many bombers as possible, and for the Allied to kill as many German units as possible. An interesting way for the Allies to come ahead in this exchange is to play one quarter without sending any bombers out. He usually has some fighter points remaining, and can afford to trade planes with the Germans. If the Germans wait for the bombers, strafing can be employed, and if they come up, the allies can afford to trade losses, while the German can't. In addition, the first time that you pull this ploy, your opponent probably won't be expecting it, which should lead to confusion, when he wonders where the bombers are. If this tactic doesn't have unexpectedly disastrous results for the Allies, the next quarter should arrive with the Germans having no appreciable fighter forces, with the exception of the new arrivals. And if it fails completely, remember that—luckily for you—it's only a game . . .

Now for two areas that are more of an art than a science. Shuttles to Russia are a double-edge sword. If you succeed, the German suddenly has one more area to worry about defending, splitting his forces even more. However, if it fails, the German knows that he is safe for the rest of the year, and needn't station any units there. Thus, these shuttles should only be attempted if you feel that there is a reasonable chance for success. The rules are rather ambiguous, and do not state whether bombers must reach Russia for the mission to be successful, or just an encounter. If you decide that anything counts, it makes sense to send something like a P-38 up on a solo mission on a turn when you have bombers slated to shuttle. If it makes it you'll not only have left your options open for the next quarter, but you'll have a fighter that can operate out of Russia, to aid sneak raiders. You are likely to make it, since the German can't spare the fighters if you have another large stack of bombers going to Russia; if he does, your bombers stand more chance of getting through.

The other area is the decision to play the first two quarters. Arguments can be made for both choices, and success is mostly a matter of luck. If the German hasn't unduly defended Gydnia, the sneak raider shuttle to Russia makes for a good opening move, but it is likely to ruin Allied shuttle opportunities for the rest of the year if he shoots it down. If the German player anticipates this move, and defends against it, the Allied player stands a good chance of making a successful raid against Amsterdam or Aachen. The other solution is simply to skip the first two turns, and wait until you have an appreciable air force built up to attack. Most of the decision depends on the personality of your opponent, and how lucky you feel.

All in all, LUFTWAFFE makes an excellent game full of crucial decisions; too, it can be played in quarters and thus doesn't require that you devote an entire weekend to one game, but still is long enough to make strategic planning critical to victory. Hopefully the above suggestions will enable LUFTWAFFE fans to review their plans for Allied success, and employ some new strategies to "hit 'em high".

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CONTEST NO. 118

It is Turn 13 of *Scenario Three: The Kammhuber Line* in *AIR FORCE*. The Me-11OG-4/R3 (Data Card 14B—in hex VI-A16, direction 1) has already shot down two Lancaster B1s, and damaged the other two (Data Card 2B—No. 3 in hex VI-I8, Direction 4 and No. 4 in hex VI-L3, direction 5), although the Me-110 is also damaged and has expended most of its ammunition (see Damage Records, below). The Initial Speeds, Altitudes, and Banks are also shown. All planes completed their last Game Turn with a maneuver. The scenario victory conditions require the Me-110 to destroy or force bomb jettisoning by at least one more Lancaster before they can exit the mapboard, and this calls for the *best* possible shot or shots. Optional Rules XI, XIII, XIV, and XV are all in use. With an overdose of confidence, the Lancaster player has pre-plotted all the remaining moves, as shown below, and dares *you* to do something about it!

Plot moves for Game Turns 13-17 for the Me-110. When firing is possible, list the number of the target aircraft and the Hit Table Number used (applying all modifiers) for the shot. Winners will be determined by the *highest* number found by totalling all Hit Table Numbers used for all shooting by the Me-110.
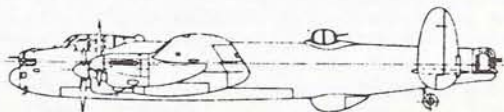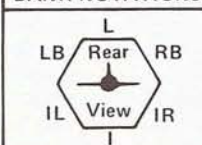
LOG SHEET

Type: ME-110	No: 1			Type: LANCASTER	No: 3			Type: LANCASTER	No: 4		
W	Cn	Mg		W	Cn —	Mg —		W	Cn —	Mg —	
F	L			F	L ooø			F	L ooø		
C	C			C	C oo			C	C oo		
E	E	E		E oo	E oo	E oo		E oo	E oo	E oo	
G 4-8-3	F 3-8-1			G F				G			

TURN #	In. Speed	In. Altitude	In. Bank	Moves	Altitude Change	In. Speed	In. Altitude	In. Bank	Moves	Altitude Change	In. Speed	In. Altitude	In. Bank	Moves	Altitude Change
13	6	13.0	L			5	14.0	L	5 KK	D.8	5	14.0	L	5 KK	D.8
14						5	13.2	L	EXITS		5	13.2	L	5 KK	D.8
15											5	12.4	L	5 KK	D.8
16											5	11.6	L	5 KK	D.8
17											5	10.8	L	5 KK	D.8
18											5	10.0	L	EXITS	
19															
20															

LOG NOTATIONS:

P = Power	S = Right Slip	Spin = Spin
K = Brake	T = Left Slip	Bmb = Drop Bombs
C = Climb	B = Right Bank	Rct = Fire Rockets
D = Dive	N = Left Bank	V = Half-Loop
R = 60° Right Turn	H = Right Half-Roll	
L = 60° Left Turn	E = Left Half-Roll	

BANK NOTATIONS

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        L
 LB  /Rear\  RB
    <        >
 IL  \View/  IR
        I
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The answer to this contest must be entered on the official entry form (or a facsimile) found on the insert of this issue. Ten winning entries will receive AH merchandise credits. To be valid, an entry form must be received prior to the mailing of the next issue of The *GENERAL* and include a numerical rating for this issue as a whole, as well as listing the three best articles. The solution to Contest #118 will appear in Vol. 21, No. 1 and a listing of winners in Vol. 21, No. 2 of The *GENERAL*.
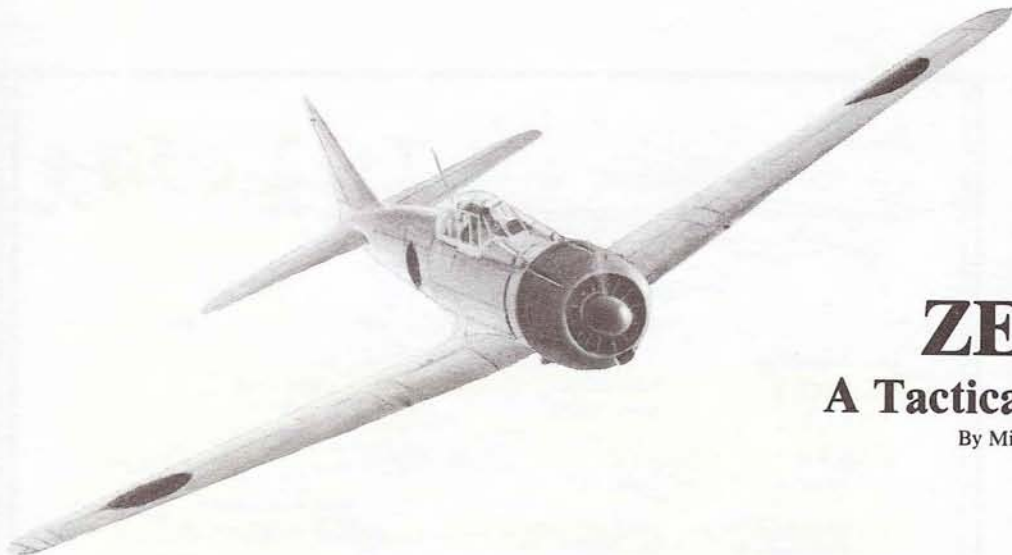
ZERO!
A Tactical Handbook
By Michael Anchors

霧
戦
闘
機

On December 7, 1941, the Mitsubishi Zero was the best carrier day-fighter in the world, and the most numerous. Nevertheless, by January 1944 the plane had been swept from the sky by an avalanche of superior American fighters. Along the way the Zero earned a reputation in the U.S. not matched by any other. One can say, the plucky, green fighter with orange "meatballs" on the wings had charisma. In the *DAUNTLESS* system, the Zero gets a lot of interest mainly because it is so different. Anyone can bore himself to sleep comparing American fighters; they all dive like gangbusters and survive more hits than Popeye. But the Zero is a fragile craft. It requires patience and finesse, courage and a knowledge of the aircraft and one's opponent to realize the Zero's unique advantage in maneuverability, stealing victory from the jaws of technological mediocrity. Zero aces are as rare as hen's teeth, but they are gamesmen of the highest order.

In this article I will analyze the fighter types most often faced by the Zero and the best methods for dealing with each; but before getting to the nitty-gritty, there are several matters to be discussed first. I have presented the maneuvers described in the text in the form of tables, rather than diagrams, to better show the written movement orders. I recommend following the action with pieces on an *AIR FORCE* board. Underlined movement orders refer to aircraft with declared advantage, written after the movement of the target aircraft.

Now about that Advantage Rule . . . can Avalon Hill be serious? How can an advantaged aircraft in F7, direction 3 follow a disadvantaged aircraft in H8, direction 5 "as closely as possible through the same path of hexes"? Indeed, following through the same path of hexes is only possible when the pursuing plane is directly aft of the target—the great minority of cases. Furthermore, it seems unrealistic to allow the pursuing pilot to view the entire move of the target aircraft before writing any of his own orders. I found it impossible to write an interesting article on the game with the Advantage Rule as it is, so I have substituted the following rule for the paragraph under "How Order of Movement is Determined" on page 9 of the *AIR FORCE* rules:

A full set of movement orders is written for each aircraft in the Movement Plotting Phase regardless of advantage. In addition, owners of aircraft in a position of advantage over an enemy aircraft may claim the advantage bonus by recording the ID number of the specific disadvantaged aircraft. After all orders have been secretly recorded, pilots who claimed advantage name their targets. Aircraft claiming advantage which are themselves disadvantaged by another aircraft (even the target aircraft) lose the advan-

tage. Owners of aircraft with the declared, un-canceled advantage erase all orders written for the turn, except the first movement point. Aircraft that are neither disadvantaged nor advantaged move their full set of written orders. Advantaged and disadvantaged aircraft move only the first movement point. Advantaged pilots then write orders for the next movement point. The next movement point is executed, and so on, until one aircraft has run out of movement points. The other aircraft then writes and executes the remainder of its movement. Finally, disadvantaged pilots record power/brake factors and altitude changes. After seeing these, the advantaged pilots record theirs. An advantaged pilot must maneuver so as to remain in a position of advantage over the same disadvantaged enemy aircraft, even though he may elect not to claim the bonus next turn. Moreover, the advantaged aircraft may not fire at any target other than the disadvantaged aircraft, even though other aircraft may offer more favorable targets. Aircraft may claim advantage, even if they are out of ammo or have no functional guns.

With this new rule in place, "Step 2" and the two paragraphs that follow it in the Sequence of Play on page 7 should be deleted. The new rule is longer on paper, in part because it is more rigorously stated, but it takes no longer to play. It permits the miserable wretch in front to outfox his pursuer and escape, the kind of play action the designer must have wanted.

The Dive rules had to be modified because aircraft could use a technique called the "Power-Elevator Game" to achieve and maintain an average airspeed just short of maximum dive speed while flying in essentially level flight! For instance, the lowly Buffalo with Maximum Level Speed of 5 could maintain an average speed of 7.0, outrunning the fleet Zero, by simply repeating the following sequence:

Speed	Altitude	Move	AltCh
8	0.1	8	+0.6
5	0.7	5P	−0.4
8	0.3	8K	−0.2
8	0.1	. . . .

The Corsair, Hellcat and Lightning can clock 8.6 hexes/turn this way, 430 mph in level flight! Therefore, add the following section to the "Dive Speed" rules on Page 9 of the rulebook between " . . . while in the Dive Speed Increment" and "Aircraft at Dive Speed . . . ":

In addition, one brake factor must be applied to reflect increased aerodynamic drag. Additional brake factors or power factors may be written,

but the total of brake factors applied may not exceed the limit for the altitude increment.

The third rule change involves the "Altitude Loss at Non-Level Bank" rule on page 11. The rule is unnecessarily complicated and, as a result, unrealistic, The lift of a wing is a function of airspeed, angle of bank and angle of attack *only*. It does not depend on whether a "banking or non-banking maneuver" is being performed. Consequently, I will assume the rule reads:

The Maximum Climb Rate is reduced by one during any Turn in which a plan is in any non-level Bank during any part of the Turn.

A pilot can counteract the 100' loss by writing a 100' climb as he could with the old rule, in effect using a little up elevator to offset the loss of lift in a turn as real pilots do. The point is that a pilot should not be able to climb faster by turning than by not turning, while climbing in non-level bank.

Those are the major rule changes, but I have a few minor ones to throw in, as a matter of taste.

1. Pilots may bail out before their plane is shot down—the rules don't explicitly state this—but a pilot may not bail out of an un-damaged aircraft and may never bail out at an altitude less than 1000 feet. A skydiving enthusiast might tell you that bailing out at 500 feet is safe, but it took time to unbuckle the seat belt and open the canopy.

2. Pilots bailing out of a P38 Lightning suffer a +1 modifier on the Bail Out Table due to the unique double-body structure of the aircraft.

3. Pilots can "crash land" on the mapboard in locations other than airstrips and carrier decks by following the usual procedures for landing. The pilot has to consult the Bail Out Table, using it as a Crash Landing Table, to determine whether he survives.

4. Pilots bailing out or crash landing successfully in enemy territory are captured—don't bother consulting tables. Pilots bailing out or crash landing in enemy territory in the Pacific Theater or over any ocean must make a Rescue roll of 1-4 (Jap 1-3) with one die in order to return to duty. There is a DRM of +1 for each cockpit hit.

5. Aircraft without drop tanks cannot make it back to base after any scenario in which they are still able to fly, but sustained two or more "L" hits. They crash landed in *friendly* territory, even if combat occurred in enemy territory.

That completes my list of rule changes. All that remains is to list some printing errors which appear

on the Aircraft Data Cards for some of the fighters we will be dealing with here:

Card 1A (P-38L) The Altitude Increments on Screens 1 and 2 should read 4.9, 9.9, 14.9, 19.9, 24.9, 29.9, 34.9, 39.9. In Screen 3, the hatched and shaded areas are reversed. In the 9.9 Increment, the P-38L has two power factors and four brake factors, not *vice versa*.

Card 7A (Corsair) Screen 4: Acceleration for dives of 0.9 to 1.1 should read +5; for dives of 1.2, +6. There should be no deceleration listed for climbs of 1.0 or greater, since the maximum climb rate is 0.9.

Card 10A (Zero) The higest Altitude Increment on Screens 1 and 2 is unlabeled. To be consistent with other cards, the top altitude should be 34.9. The 33.8 increment on Screen 3 and 4 should be changed to 34.9. Research indicated that the ceiling for the Model 21 Zero was 32.8. Take your pick. Screen 3: the arc covered by a climbing deceleration of −1 should be extended to include 0.7. Climbs of 0.8 have a deceleration of −2.

The first fighters in *DAUNTLESS* met by the Zero were P39 and P40 fighters (Data Cards 13B and 14B respectively) lent to the beleaguered Chinese in 1941. The first Zero shot down by an American fell to a P40 at Pearl Harbor, and afterward the P39 and P40 were staples of the various Allied army air forces resisting the Japanese in the South Pacific. Many Japanese aces earned acedom shooting down these planes although, as Table 1 shows, the margin of the Zero's technological advantage is slim. In particular, the P39 and P40 possess the usual American advantage in diving and surviving hits. The P39 with that nasty nose cannon has more firepower than any other fighter in the Pacific!

We must conclude that the initial poor performance of the P39 and P40 against the Zero was due to faulty tactical doctrine. Allied pilots were too willing to engage the Zero in dogfights in which the Zero, with its superior climb and turn radius, excelled. Too, the Japanese started the war with combat pilots who were, on the whole, much better trained and far more experienced than their American enemies. The early Pacific air battles were similar in nature to AF games played between experienced players and novices with but a basic grasp of the rules.

The unique foible of the P39 and P40 is their poor vision into sectors to the rear or at higher altitude. Zero pilots should take full advantage of this defect and maneuver in the early turns to get a crucial, unreturned first shot and a position of advantage. Zero pilots should approach the unalerted enemy from 1) above or behind; 2) the side opposite the enemy's bank, if any; 3) through a cloud; or 4) out of the sun. The Zero should approach at Maximum Level Speed or dive at Maximum Dive Speed to close the range as rapidly as possible before the enemy can spot the Zero and accelerate or evade. Remember that there is +1 modifier to the American's spotting roll when the Zero gets within 10 hexes, so try to wind up no closer than 11 hexes on the turn before closing to firing range.
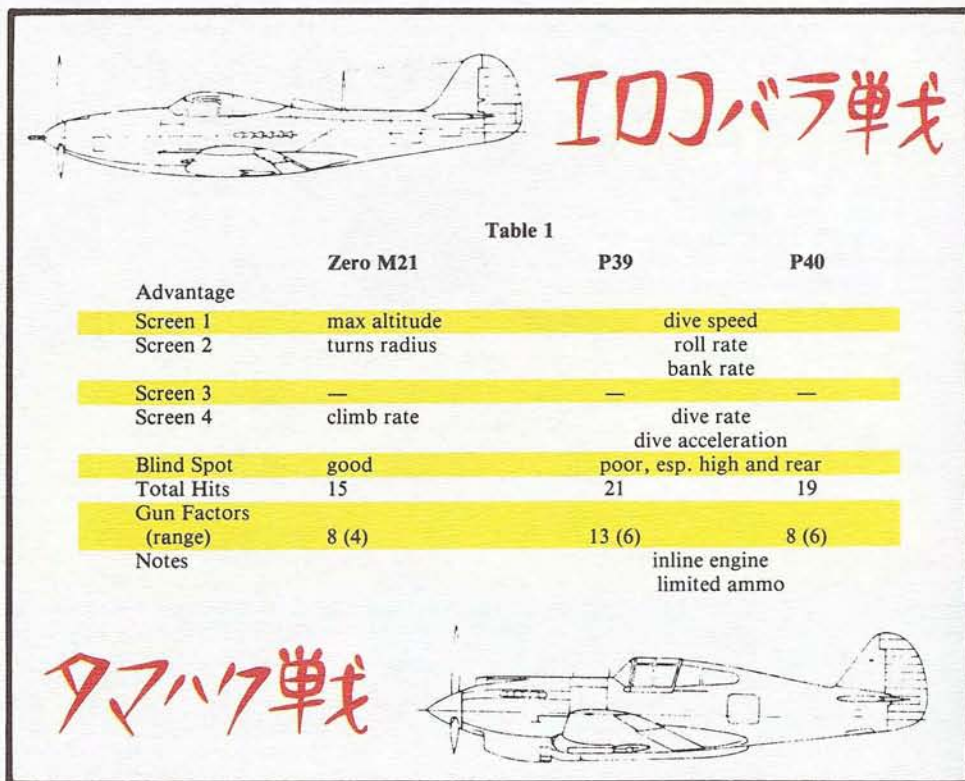
Once in firing range, the Zero should drop into the Maneuver Increment to be able to follow the enemy however he may try to evade. On the average, it takes two or three shots at medium or medium-short range to shoot down an American fighter. It is essential, therefore, that the Zero follow the first evasion maneuver and get a second shot. If the Zero is going too fast or gets too close for the initial shot, the Japanese won't be able to follow the American fighter, if it is flown by even a modestly competent player.

In writing movement six turns in advance before initial sighting, Zero pilots should climb to an altitude 1000'-2000' above the expected altitude of the enemy, up to the maximum altitude in an Altitude Increment in which the Zero still has good maneuverability. The Zero should bank toward the area of the board in which the enemy is expected to be, taking advantage of the +1 modifier by flying next to a cloud or with the sun behind. When Zeroes fly in formation, it is basic drill to bank some right and others left for best spotting on both sides.

At Pearl Harbor and again at Midway, the Zero tangled with two chunky Navy fighters, the F2A Buffalo and F4F Wildcat (Data Cards 7B and 5A respectively). In spite of great similarity between them, the Buffalos were butchered and forced into early retirement while the Wildcats proved able, if slightly unequal, opponents for the Zero. These were the main actors in the critical carrier battles of 1942. Table 2 shows the comparisons.

Cockpit visibility in these two American fighters is substantially better than the previous two. The Zero will not be able to surprise them as often. Usually the American and Japanese pilots spot each other at some distance and approach in a head-to-head pass. The Zero cannot afford to trade shots at close range because it is so much more fragile, but it can afford an exchange at medium or long range. The −4 deflection modifier will limit damage.

Once the contestants have made a head-on pass and rushed by, they will begin to maneuver fiercely to gain the advantage. Since the first step is usually to reverse direction, four maneuvers are generally useful: 1) a simple turn, which may be diving, climbing or level; 2) a slip-double turn combo; 3) a half-roll followed by diving half-loop; or 4) a climbing half-loop.

Method 1 was the historical favorite of Zero pilots and works best in the game. Methods 2 and 4 lose too much speed, and method 3 too much altitude. Since American planes cannot turn as quickly as the Zero, they resort to methods 2-4 more often. In any particular setting, the Zero pilot must take several things into account rapidly before committing to a turn. What is the position of other aircraft in the area? Would a diving half-loop put the Zero in a more favorable altitude increment for maneuver? Would deceleration into the Maneuver Increment by slipping or climbing be advantageous? And so forth.

Aside from these meager remarks, I can offer no general advice for the Zero pilot in this critical phase of maneuvers. Since each pilot is writing orders in complete ignorance of his opponent, there is a considerable amount of lunging about in odd directions until one pilot or the other achieves a position of advantage. This game of "blindman's bluff" often produces a comical effect, but is really not unrealistic. Pilots had to distribute their attention during the fleeting seconds of combat between the complex controls in their cockpit and rubbernecking to spot the enemy.

Once an aircraft gets into a position of advantage, the game devolves less on instinct and luck, and more on skill and experience. Moreover, "advantage" situations can be logically analyzed in an article, so let us open our investigation with the situation in Table 3A, in which a Zero is hotly pursued by a Wildcat four hexes behind. Will the pilot see his ancestors in the next few seconds? *Mada Ya!* The Zero slopes into a tight turn. The Wildcat cannot follow because of its greater turn radius. The other way of looking at the old adage "Never turn with a Zero" is "Always turn with an American".

Almost always. If the Wildcat had been two hexes farther back, it would have had time to complete its maneuver requirement, turn and shoot, as Table 3B shows. In fact, if the Wildcat hangs back, any turn by the Zero is dangerous. Of course, with the Wildcat shooting at this long range escape is not quite so urgent. The Zero can accelerate to maximum level speed and simply outrun or outclimb the Wildcat. The Zero pilot should be aware that, even
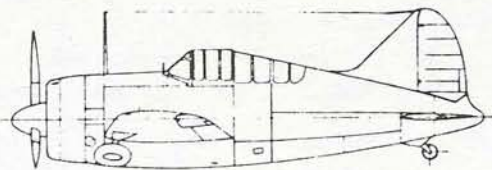
イロコバラ単戈

タマハク単戈

Table 1

	Zero M21	P39	P40
Advantage			
Screen 1	max altitude	dive speed	
Screen 2	turns radius	roll rate	
		bank rate	
Screen 3	—	—	—
Screen 4	climb rate	dive rate	
		dive acceleration	
Blind Spot	good	poor, esp. high and rear	
Total Hits	15	21	19
Gun Factors			
(range)	8 (4)	13 (6)	8 (6)
Notes		inline engine	
		limited ammo	

ブハロ戦ギ

Table 2

Advantage	Zero M21	Buffalo	Wildcat
Screen 1	max level speed max dive speed	—	max altitude
Screen 2	turns radius		bank rate
Screen 3	—	brake factors	
Screen 4	climb rate		dive acceleration
Blind Spot	good	good	poor in rear
Total Hits	15	19	20
Gun Factors	8 (4)	8 (6)	10 (5)
Notes		limited ammo	

ワイドカツ戦ギ
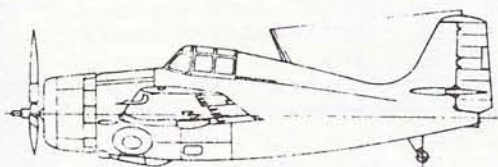
after his airspeed attains so-called "max level speed", he can coax extra speed out of his machine, if his Limit Speed permits, by applying power factors or diving. Note also that the Zero can climb 300' free (i.e., with a deceleration of zero). When the Zero dives the same 300' next turn, the altitude bump translates effectively into an extra power factor! The P39, P40, Wildcat and Buffalo can't copy the trick because their acceleration and decelerations are matched.

The disadvantage of simply outrunning the American is that the move is purely defensive. It doesn't enable the Zero to turn the tables on his pursuer, and it takes the Zero away from his wingmates engaging other American fighters. The Zero pilot can give his pursuer the slip and turn around by playing the Banking Game. The Zero banks one way, hoping the American will match the bank, then banks the other way. If the Zero is in a Speed or Altitude Increment affording a lower maneuver requirement for banking, the American will lose ground each time he tries to match the Zero's bank. The lost ground may not be evident in hexes of distance, but accumulates as an advantage in maneuver requirements completed, so that eventually the Zero can execute a tight turn safely. The American can't follow because he has so many more hexes of maneuver requirements and more banking maneuvers to complete before turning. Table 3C shows an example.

In another variation, the Zero pilot makes a half-roll after the initial banking maneuver. A half-roll is faster than two consecutive banking maneuvers and accomplishes the same purpose —getting the Zero onto the opposite bank for a turn. If the American has to roll himself to keep up, all the better! The −3 Hit Table Modifier for inverted fire will limit any damage to the Zero.

The maneuvers in Table 4 examine the reverse situation, a Wildcat pursued by a Zero. Most of these are applicable to the Buffalo and to other American fighters as well. Table 4A demonstrates that the tight turns that were so useful to the Zero are no help at all to the Wildcat. The maneuverable Zero can stick to the Wildcat's tail like a shadow through any level maneuver. Even the Banking Game is a losing proposition, for if the American

foxes the Zero onto the wrong bank, the Zero can turn late and still catch up because of its short turn radius.

The slip-double-turn combo simply gives the Zero a shot at point blank range with no chance to reply, but half-loops deserve some consideration as a way of forcing the Zero into a head-to-head exchange of fire. On close examination, there are problems. A climbing half-loop, in addition to slowing the Wildcat to a snail's pace, leaves the fighter in inverted attitude, handicapped by a −3 Hit Table Modifier; the Zero can get back on the Cat's tail by following the half-loop. Diving half-loops are no better. The Wildcat must half-roll or

bank twice to get into inverted attitude before looping, giving the Zero extra shots. When the head-to-head exchange does occur, the Wildcat is 1000' lower as a result of the dive. The range is two hexes greater and damage to the Zero is consequently less. After the movement phase, once again the Zero gets back on the Wildcat's tail. The half-loop variations are not shown in Table 4, but a battlewise *AF* pilot can work them out for himself.

By the process of elimination, then, we arrive at the only escape tactic that offers hope for the Wildcat: a power dive. Diving can save an American fighter in two distinct ways. First, the fighter may take advantage of its superior dive speed, dive rate and acceleration to get more than six hexes ahead of the Zero during the dive. At that point the Zero loses advantage and can no longer write its move after the American has moved. Consequently, the American can now evade by turning, climbing, looping or diving, and the Zero pilot has to guess which way to jump. The Wildcat can escape in this manner provided the chase starts at sufficient altitude and the Zero is not too close.

The Zero pilot can often catch a diving fighter managed by an inexperienced player in situations in which a more experienced pilot would escape. There are several tricks to achieving and maintaining maximum dive speed and rate. Table 4B shows some. The diving fighters use same-bank slips to soak off excess acceleration and remain in non-level bank to drop an extra 100' each turn. The pilots are careful to wind up at an altitude just above, rather than just below, the next lower Altitude Increment, when possible, to get the best speed on the following turn.

If the disadvantaged fighter does not succeed in getting more than six hexes ahead before the chase levels out near the ground, the fighter can only avail itself of the second method of escape: outrunning the Zero in level flight. There are tricks to be called upon here, too. For instance, fighters at the bottom of a dive can use their momentum to fly at Dive Speed for a turn or two or chandelle upwards, transforming their momentum into altitude. We saw an example of this in the previous example using a Buffalo. The pursuing Zero pilot must anticipate these extending maneuvers and match them.
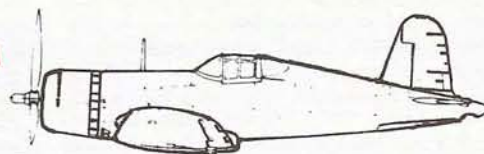
ヘルカツ戦ギ
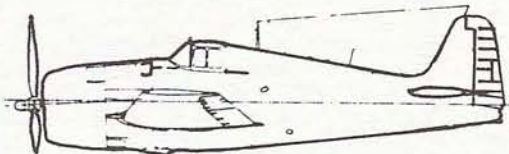
Table 6

Advantage	Zero M52	Hellcat	Corsair
Screen 1	—	max level speed max altitude max dive speed	
Screen 2	turn radius	bank rate	roll rate
Screen 3	—	—	power factors
Screen 4		dive rate dive acceleration	
Blind Spot	good	poor in rear & right-side	bad in rear and ahead low
Total Hits	18	23	23
Gun Factors (range)	10 (4)	12 (5)	12 (5)

コルセル戦ギ

Eventually, the pursuit over the wavetops settles down to Maximum Level Speed. The Wildcat and Zero have the same Maximum Level Speed (6) in the 4.9 Altitude Increment. The Speed for the Buffalo is one less (5), and this is surely its Achilles' Heel. If the Wildcat gets six hexes or more ahead of the Zero at the bottom of the dive, the Zero will never be able to catch it. Under the same circumstancces, a Buffalo will be caught as the Zero narrows the range by a hex each turn.

There is more than one way to skin a cat and more than one way to dive a Wildcat. Table 4C shows another, and illustrates more fancy maneuvering by both pilots. The Zero has caught the Wildcat at its low Maneuver Speed of 4. The Wildcat could, perhaps, make a conventional dive and get away, but the pilot is unwilling to be driven off the battlefield completely—his buddies are desperately engaged with Zeroes nearby—so he resorts to the "Falling Leaf" tactic to turn around and face his pursuer with a minimum loss of altitude. The Wildcat puts on full brakes and decelerates to Stall Speed.

Meanwhile, the Zero uses one half-roll to get in line behind the Wildcat and another to compensate for the Wildcat's slip, but, when it comes to writing power/brake factors and altitude change, the Zero pilot is faced with a dilemma. If he stalls himself, the Zero will be spinning in H7 next turn while the Wildcat spins in F9. Since the facings will be determined by die rolls, there is only a 33% chance the Zero will be in a position to fire, and there is even a 23% chance the Wildcat will take over the advantage. Moreover, when the Wildcat comes out of the stall, it will be at high speed because of its diving acceleration of +5.

In some positions the Falling Leaf works, but in Table 4C the Zero pilot has a calm response. Making a conventional diving turn, he assures himself of a shot and has a 66% chance to keep the advantage. Furthermore, he can accelerate to Maximum Dive Speed in one turn should the Wildcat break out of the spin. Note that the Zero pilot would have none of this wonderful versatility, if he let his speed climb out of the Maneuver Increment. Stay in that green, if you can!

We spent a lot of time discussing maneuvers for the Wildcat, but, as we said, the American fighters are so similar that the same tactics apply to all. Of course, the tactics work better against fighters of the 1941-42 period than against the metal monsters that followed. A Wildcat dives better than a Zero; a Hellcat *much* better. A P-40 is as fast as a Zero in level flight; the Corsair is *faster*.

The P38 Lightning (Data Card 1A and 1B) is a different sort of fish—a single seat fighter with two engines. It has marked advantages over the Zero in every category except maneuverability (see Table 5). For play balance and historical accuracy, you should use a Model 52 Zero (Data Card 15A) against the Lightning, Corsair and Hellcat. Even though the Model 52 was not introduced until Fall '43, according to the Data Card, inproved versions of the Model 21 were available at Midway. There must have been some model numbers between 21 and 52!

The Zero pilot will not often score enough 'E' hits to destroy a Lightning, but a lucky radiator hit would wreck one of the inline engines. It is important to notice that the Lightning has to fly as if loaded when one engine is knocked out. Consequently, Zero pilots should concentrate their attacks on a side with a damaged engine. If more than one Zero attacks a Lightning simultaneously, they should attack from the same side.

The F6F Hellcat (Data Card 9B) was the Navy's replacement for the Wildcat. It was designed specifically to counter the Zero, using test data obtained from flights with a captured Zero. Nevertheless, as the Data Card shows the Hellcat is really just a souped-up Wildcat with none of the Zero's

snappy maneuverability.

The F4U Corsair (Data Card 7A) is simply the most powerful fighter in the whole *AIR FORCE-DAUNTLESS* system. It was not successful in carrier service because of its size, but it was the preferred weapon of Marine aces. The Japanese called it "Whistling Death". The high Maximum Level Speed of the Corsair and its tremendous acceleration allow it to escape from tailing Zeroes without diving. Moreover, its low maneuver requirement for banking allows it to humiliate the Zero in a Banking Game (Table 3C). Low half-roll requirements allow it to make two successive rolls in one turn to line up shots on turning Zeroes that

other American fighters would miss (for example, Turn 1 Zero in Table 4C). Table 6 compares the Corsair and Hellcat with the Zero.

Any pilot can profit from the advice of AVG General Chennault ("If you fight with the best characteristics of your plane, never allowing the enemy to use the best characteristics of his, you can lick him."). But pilots of Corsairs, Lightning and Hellcats can profit most—starting at higher altitude or avoiding combat until they climb higher, diving at high speed, attacking head-on with impunity and escaping with superior dive or level speed to climb again in some remote quarter of the atmosphere. What can Zero pilots do to defeat such

Table 3

Zero Pursued by a Wildcat:

A. Successful Escape-Turn, initial range = 3

Turn	Plane	Hex	Dir	Speed	Alt	Att	Move	AltCh
1	Zero	H6	4	5	11.0	L	B1R1R1P	−0.3
	Wildcat	G4	4	6	11.5	L	1B3TRP	−0.4
2	Zero	F7	6	5	10.6	RB		
	Wildcat	H8	5	6	11.0	RB		

B. Unsuccessful Escape-Turn, initial range = 5

Turn	Plane	Hex	Dir	Speed	Alt	Att	Move	AltCh
1	Zero	H6	4	5	11.0	L	B1R1R1P	−0.3
	Wildcat	G2	4	6	11.5	L	1B3TRP	−0.4
2	Zero	F7	6	5	10.6	RB		
	Wildcat	H6	5	6	11.0	RB	FIRE!	

C. The Banking Game

Turn	Plane	Hex	Dir	Speed	Alt	Att	Move	AltCh
1	Zero	H6	4	5	11.0	L	B3N2	0.0
	Wildcat	G2	4	6	11.5	L	1B4N1	0.0
2	Zero	H11	4	5	11.0	L	1N1L1LP	−0.3
	Wildcat	G8	4	6	11.5	L	3N3	0.0
3	Zero	I14	2	5	10.6	LB		
	Wildcat	G14	4	6	11.5	L		

Table 4

Wildcat Pursued by a Zero

A. Unsuccessful Esacape-Turn, initial range = 3

Turn	Plane	Hex	Dir	Speed	Alt	Att	Move	AltCh
1	Wildcat	H6	4	6	11.0	L	B3R2P	+0.1
	Zero	H2	4	7	11.1	L	1B5RP	+0.3
2	Wildcat	F10	5	6	11.0	RB	3R2P	+0.1
	Zero	H8	5	7	11.3	RB	6R	+0.1 FIRE!
3	Wildcat	A11	6	6	11.0	RB		
	Zero	B11	6	6	11.3	RB	FIRE!	

B. Successful Escape-Dive, initial range = 5

Turn	Plane	Hex	Dir	Speed	Alt	Att	Move	AltCh
1	Wildcat	H6	4	6	11.0	L	6KKK	−1.0
	Zero	H1	4	7	11.1	L	7KK	−1.0
2	Wildcat	H12	4	8	10.0	L	B4T3KKK	−1.0
	Zero	H8	4	8	10.1	L	1B4T2KK	−1.0
3	Wildcat	I4	4	8	8.9	RB	1T6KKK	−1.0
	Zero	I16	4	7	9.0	RB	2T4K	−0.9
4	Wildcat	J11	4	8	7.8	RB	T7KKK	−1.0
	Zero	J6	4	7	8.0	RB	1T5K	−0.9
5	Wildcat	K3	4	8	6.7	RB		
	Zero	K13	4	7	7.0	RB		

C. The Falling Leaf

Turn	Plane	Hex	Dir	Speed	Alt	Att	Move	AltCh
1	Wildcat	G6	4	4	11.0	L	B4TR	−0.3
	Zero	F1	4	5	11.3	L	E3EP	−0.5
2	Wildcat	H8	5	2	10.6	RB	Spin	
	Zero	H5	4	5	10.8	L	3B1RKK	−0.1
3	Wildcat	F9	?	8	9.5	RB		
	Zero	H9	5	5	9.7	RB	FIRE!	

a strategy?

Winning strategy for the Zero pilot must begin in the pregame negotiations. Point out to your American opponents the overwhelming superiority of their aircraft. Demand some sort of handicap. Here is a shopping list arranged in order of desirability for the Zero pilot:

1. numerical advantage (i.e. 3:2, 2:1, etc.)
2. ace status for yourself or a wingmate
3. better pilot characteristics
4. altitude or position advantage
5. American planes to be flown by less experienced players
6. American planes low in ammo or already damaged
7. American planes low in fuel to break off combat early
8. combat at low altitude (to hinder American planes from escaping; Zero can't escape anyway)
9. combat over friendly territory
10. American fighters to escort vulnerable bombers
11. a point system: 1 point for a dead Zero, 2 for a Hellcat, 3 for a Corsair, etc.

If your opponents insist on historical conditions, you probably cannot get one of the first three simply because the Japanese had lost so many planes and pilots by 1943-44 when the Corsairs and Hellcats were flying, and the last isn't much help if you are interested in surviving to be an ace. If the opponents won't concede enough equalizers, consider trading your Zero for a ''George''.

Once the game begins, Zeroes should fly in a tight ''V'' formation until bounced. Defensively, the two trailing planes in the formation cover the tail of the leading plane. Offensively, the three
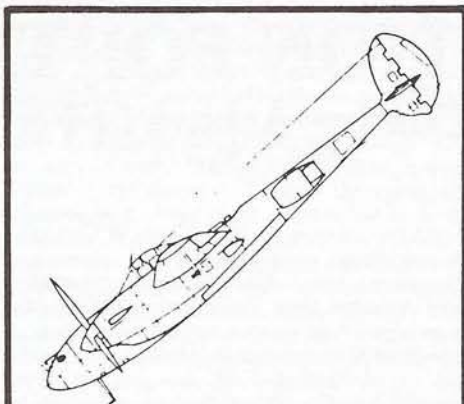
Table 5

	Zero M52	P-38
Advantage		
Screen 1	—	max altitude max level speed max dive speed
Screen 2	turn radius bank rate roll rate	—
Screen 3	—	power factors
Screen 4	climb rate	dive rate dive acceleration
Blind Spot	good	good
Total Hits	18	Model G: 25 Model L: 26
Gun Factors (range)	10 (4)	12 (6)
Notes		twin inline Silhouette +3

fighters firing at the same target simultaneously can probably destroy it. Using four Zeroes on a target is inefficient, and using two is uncertain. The greater firepower of the American fighters and fragility of the Zero suggest that the Americans should operate in pairs. The key lesson is that Japanese players should prefer destroying one or two enemy aircraft to damaging three or four. Damaging a Corsair won't keep it from shooting back later; blowing it up will. A corollary is that one should concentrate on already damaged American aircraft or the weakest aircraft type if two or more are present.

Cultivate good wingmates. Teach them your tricks between games. Work out a battle plan before going into a game together. Survivors, among Zero pilots, are team players. If you are an ace or looking for your fifth kill, don't let the enemy know which aircraft in the formation you are flying. Let one player in your group move the aircraft of all, and avoid using an ace bonus if you don't need it. Once your identity is discovered, seek to exit the battlefield before the odds get unwieldy, but never leave prematurely if you can help a pal by disadvantaging an American on his tail. (Pals remember things like that.) Finally, consider bailing out *before* catching two cockpit hits from enemy fighters converging on your plane, or crash land if pursuing Corsairs are overtaking you near the ground.

With all this in mind, good hunting when next you take to the sunny Pacific skies.

零戦闘太幾

AH Philosophy . . . *Cont'd from Page 2*

UP FRONT (Don Greenwood, single elimination)
BANZAI (Japanese-British UP FRONT expansion; Don Greenwood, single elimination)

With such an intrepid crew to guide one along, how could any gamer pass up the chance to pilot a bomber or launch a *banzai* charge? Numerous other events featuring Avalon Hill games are planned by the convention organizers themselves, but have yet to be announced.

Our sister firm, Victory Games, has announced that they will be hosting a number of functions. These include a *James Bond* demonstration, a *James Bond* tournament for experienced players, an *Ambush* demonstration, a seminar by Jerry Klug on game design, a seminar on Eric Smith focusing on *Civil War* and a VG ''staff'' seminar.

While hurrying from one mind-twisting challenge to the next, stop by the Avalon Hill booth to look over the newest releases—sure to be the subject of next year's tournaments. Finalized for release at this time are FIRE POWER, HITLER'S WAR, DEVIL'S DEN, BANZAI, GAME OF TRIVIA and DECATHLON.

DECATHLON, latest in the Avalon Hill Sports Illustrated line, celebrates the year of the Olympics by looking at the greatest athletes of the past. This is your chance to ''coach'' one or more of seven decathletes—Milt Campbell (USA), Jim Thorpe (USA), C. Yang (Taiwan), Vasily Kuznetsov (USSR), Rafer Johnson (USA), Bill Toomey (USA), and/or Bob Mathias (USA). All of their performances have been analyzed and integrated into easy-to-use charts. Many factors must be considered aside from pure statistics, including stamina, risks of foul, injury, fatigue. As the lead changes from event to event, it will take a shrewd tactician to get the most out of your

athlete's abilities while capitalizing on your opponents' limitations. Best of all, *Sports Illustrated* has pledged to contribute $1.00 to the Olympic Track Team for every copy of DECATHLON purchased.

The object of The Avalon Hill GAME OF TRIVIA is to be the first player to answer enough questions to earn a ''Bachelor's Degree of Trivia''. Each correctly answered trivia question moves the player closer to his goal and winning the game. Bruce Shelley has devised an innovative system for the Avalon Hill effort. And all the players are continually involved; should one fail to answer the question correctly, each of his opponents in turn get the chance to succeed where he failed. And, if good enough, the ''Bachelor of Trivia'' can send away for a *spiffy* full-sized Diploma from Trivia Tech, the College of Inane Studies (better known as Avalon Hill).

HITLER'S WAR—Mick Uhl's update of the popular, fast-paced grand strategy game of World War II—should be an instant hit. An elegant system allows the three players to simulate the many facets of modern war without the effort and time THIRD REICH demands. Mick Uhl has added many new aspects to the game; indeed, it now has depth in many areas that even *3R* ignores. Research, and finances, play a large part in the guidance of the player's war efforts. A clean combat system brings into play every branch of the armed services—from armor to air, from submarines to missles. a beautiful new mapboard completes the redesign. For the many who are new to our hobby, or the many who cannot devote themseles to *3R*, this is the perfect WW2 grand strategy game.

The latest addition to our gamette line is *BANZAI*, intended for use as an expansion kit for the unique UP FRONT system. It brings in the Japanese, British and American Marine con-

tingents to this popular tactical card game. Rules for jungle, Japanese and British operations, Marines, and more realistic reinforcement. Further rules found in *BANZAI* are intended for solitaire usage. As well as adding the forces available for existing scenarios, a number of new scenarios to challenge UP FRONT experts are included to simulate the operations that a squad would undertake. Among these—Evacuation, Paratroop Drop, Ambush, Jungle Patrol, and others. The convention tournament, hosted by Don Greenwood, will top off its release.

Craig Taylor's first original design for Avalon Hill, FIREPOWER, concentrates on man-to-man combat in the modern era. The many scenarios range from Vietnam to Goose Green, from Lebanon to El Salvador, from Angola to Bolivia; these are as topical as yesterday's headlines. Four geomorphic maps represent terrain commonly found contested by rebel forces. Extensive tactical TO&Es for modern insurgents, Third World powers, and anti-guerrilla forces allow the flexible DYO experimentation. The best of its class, ''lots of heads roll'' in FIREPOWER. Joe Bob says check it out.

The SQUAD LEADER fraternity is not overlooked. Don Greenwood will be hosting a seminar on the progress of the Advanced SL Rulebook, a preview that any interested in the upcoming playtest should attend. For, with an eye on recruiting some player expertise, Don will pass along a current draft of the new rules to a volunteer. And, also considered something of a preview will be Avalon Hill's release of eight new boards, which will be included in the ''expansion modules'' for the *ASLRB*. It must be stressed that these boards will be available only in limited numbers, but that all will appear next year as components in the modules.

OPERATION FORTITUDE
Coming Ashore in FE
By Dennis Devine, Jr.

When you really study it, there is more than one way to skin a cat. Admittedly, cat-skinning is not the intellectual, mind-engrossing type of hobby that wargaming is; but it fits well with the point I am trying to make. Translated into terms of *FORTRESS EUROPA*, it means that there is more than one district in which to land in order to beat Germany. It seems these days that many Allied commanders forget this elementary rule of thumb when they sit down to a game.

Now granted there are many opportunities for both players to exercise their creative talents in the game, especially the Allied player; but the Allied first turn invasion hasn't seemed to be one of them. Allied strategy seems to be firmly in a rut for this particular phase of the game. That rut is the German 7th Army District.

Certainly there are sound reasons for invading in the 7th Army District, but the strategy has been overused. German players now expect such an invasion and take steps to counteract it with their nasty hidden units. An invasion here can not only be dangerous if playing against a master, but it can lead to stereotyped games and stilted play where nothing new is introduced.

What is the bottom line, you might ask. I have devised a plan that will avoid having the SS welcoming committee crash the Allied homecoming party. All the plan requires is a little daring. So you can change the Allied good luck number from "7" to "15", because the Allied invasion is cleared for landing in the German 15th Army District now. In this article, I will try to show you that an invasion of the 15th Army District *is* a feasible alternative to a 7th Army District invasion. Then I will highlight the practical invasion sites in the district and outline the methods and objectives of such a campaign. If nothing else, I hope this article will provide some insight to a fascinating game.

The Principles of Invasion

In this section, I am going to delve into the reasons why anyone would select the 15th Army District as an invasion site, hopefully presenting it in such a way that it shows such an invasion to be practical—indeed, more than practical, even desired.

There are four invasion principles which I believe support an invasion in the 15th Army District in *FORTRESS EUROPA*. They are: (1) Seek the greatest gain. (2) Capture ports. (3) Destroy the opponent's forces. (4) Take the enemy by surprise.

When seeking the greatest gain, Principle #1, nothing tops an invasion in the 15th District. In *FORTRESS EUROPA*, as in most games, one wins by achieving the victory conditions. This, in a sense, can be called seeking the greatest gain. The closer your invasion is to achieving the objectives of the victory conditions, the more gain it is seeking.

To be sure, the loss of the big ports in the 7th District is a blow to the Germans and a boon to the Allies; but it is unlikely that the Germans will sue for peace because of this. Let's face it, the average German at home was not reduced to hysterics when told that Gascony was irreparably lost. (They're a brave lot, those Germans!) The same might not have been true of the Lowlands, as Cornelius Ryan shows in the early chapters of his book *A Bridge Too Far*. This is the welcome mat to Germany's front door. The 15th District is the closest district to Paris and Bruxelles; and it is the closest district to

Germany, excluding the Netherlands. A landing in the 19th District or the 1st or the 7th is a fine thing; it may even be relatively easy. But when considering game objectives, these all are landings in the middle of nowhere. You do not see the occupation of hedgerows or vineyards listed in the victory conditions of *FORTRESS EUROPA*. You see Paris, Bruxelles, and the spires of German cities; and the quickest way to accomplish these is invading the 15th.

If you are following closely, we are now to Principle #2. This states that you should capture ports. This is what usually draws Allied eyes to the 7th Army District. The sight of all those big ports weakly defended is usually enough to entice the unwary to invade here. But actually, the 7th has no greater a net value in ports than does the 15th. And once the Allies, in all their arrogance, activate the entire German Army, they are no longer merely confined to a single district, so the neighboring ports in the Netherlands and the Contentin Peninsula are in reach also.

When considering destruction of the enemy, as Principle #3 states, there is only one way to do it. Go for the throat! It is important to destroy the German Army before it can trade space for time instead of fighting. But in the 15th, they can't. Since this area is so decisive, we can expect to see the enemy's best come clanking out to meet us. They can't afford to sit back. If this force can be destroyed here (and an invasion here will certainly draw a crowd), it won't have to be done later under even worse conditions.

The last principle, #4, seeks to surprise the enemy. Easier said than done, right? Not exactly. Taking the enemy by surprise is the underlying theme of this play. It plays on the Allied overuse of the 7th Army District and the German awareness of this. In short, this play traps the trappers!

The German opponent is likely to expect an invasion in the 7th, or at least near it. But even if he has no idea where the invasion will come, he rarely reinforces the 15th to any great extent. Why? Well, at first glance, the last district one would think of as needing reinforcements would be the 15th. This stems from the psychological intimidation of the whole area. After all, it scared the Allies in real life, and rightly so. It was the only brick in Hitler's plaster Atlantic Wall. So why should it be any different now? The German player now, as in actuality, feels secure with the presence of the many fortresses in the area as well as some of the strongest units of the German Army. Well, comrade, if this plan aims for nothing else, it aims to achieve surprise.

If the Allied player isn't intimidated by the numerous fortresses and the crack troops in the area, surely he has read the rules and knows he will be activating the whole German Army by landing there. Surely that will stop him! Often it does, and that is probably the biggest reason that most Allied players don't invade in the 15th. When taken at face value, it's a terrifying proposition. Imagine, the whole German Army cascading down on a small Allied bridgehead. Shocking, right? Shocking that no one has taken a good look and has seen that it's a myth!

Why a myth? Quite simply, the German Army is not capable of sashaying over to Northern France-Belgium to wipe out an Allied invasion. Few units can be spared to rally 'round the beachhead and even fewer can make the trip. Crucial decisions must be made on which units from which districts can be spared to rush to the invasion site. Consideration must be given to protecting against Allied raids and paratroop drops, and ultimately, the second invasion. Each district does not have enough strength as it is, and a third of the German units are immobile coastal divisions. All in all, the position is not as envious as it seems.

Then there is the problem of getting those "chosen" units to the scene of the fighting. With the pitiful allotment of German TAC, German mobility is at the mercy of the Allies. German units speeding to the battle on rails must sidestep partisans, halt at blown bridges, and dodge Allied air attacks while they await their turn for the stricken rail to get them aboard. Other units must wait longer or walk. Also, with complete German freedom of movement now, the whole board must be reshuffled, calling for a complicated timetable and ample room for error or delay.

So don't worry about the whole German Army lifting off the ground and setting down right outside the Allied perimeter. It's not possible; and even if it were, it's not practical. I can hear many mutterings now, "There is more to the German position than meets the eye." But is there really? The wily German player concludes that any sane Allied commander would look for easier pickings. Why go look for trouble? This is what the Allies want the

Map 1: The Partisan Set-Up
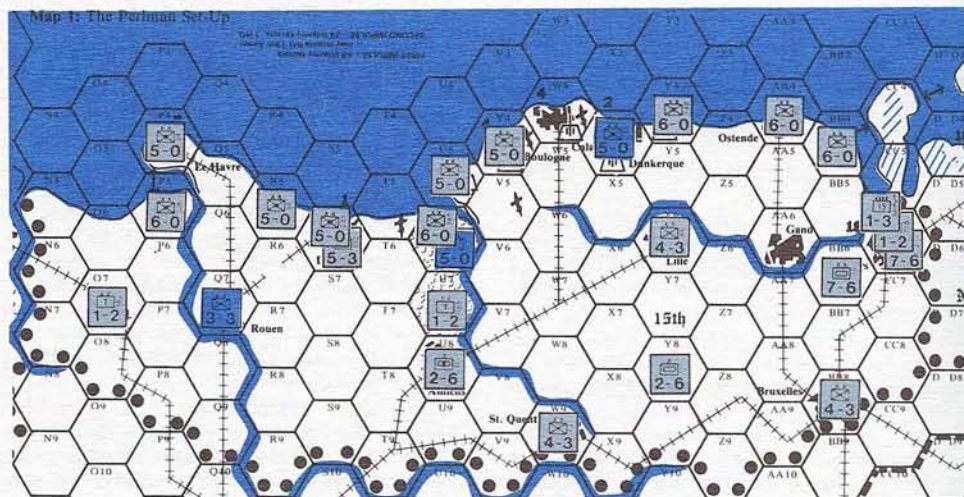
German player to think. If he does, Principle #4 has been accomplished.

Where Ashore

Our eagle eyes now turn to the 15th Army District and a quick glance reveals two lengths of beach suitable for invasion. These are: P4 (Le Havre)-Q5-R5-S6 (Dieppe)-T5-U6 *and* Z4-AA4 (Ostende)-BB4.

There are advantages to each. The Le Havre-Dieppe beaches are closer to Paris and the ports of the 7th District and allow for a peaceful build-up behind rivers. They also give flexibility to the Allied position, allowing for a movement west to gain supply capacity or east into Germany and the Netherlands. These beaches also have the largest invasion capacity.

On the other hand, the Ostende beaches are closer to the vital ports of Antwerp, Amsterdam and Rotterdam—and closer to the German border itself. These beaches are likely to be left fairly open by the German player, because of the impracticality of seriously defending them. By blowing the Schlede bridge, the Allies can cut off any German units in the coastal plain from the rest of Belgium. This easy isolation, if desired, also makes for a build-up in relative peace. Finally, the short distance between the coast and the open plains of Belgium allows for a quick and comparatively painless breakout. If the breakout can be forced in the first turn, the German is in trouble.

There is one other stretch of beachfront, however, that deserves mention. It is an area shunned by Allied players, yet one often left underdefended by the German. This section is U5-V4 (Boulogne)-X4 (Calais)-W4 (Dunkerque)-Y4, comprising five fortress hexes, and at times, the five most weakly guarded fortress hexes on the board. Some of you may be saying to yourselves, "Hey, five fortresses are five fortresses." And I admit you are right. But there is no advantage to the defender if the invasion hits a vacant fortress. (There's nothing that irks me more than a wimpy fortress.) If you look next time you play or observe a game of *FORTRESS EUROPA*, you may be surprised just how open the German often leaves the crucial Calais sector.

Let us now go into a little of the background of this proposal invasion and analyze the German opening set-ups, which will have tremendous influence on where the invasion will land. This analysis may also reveal a little bit about the German hopes and plans for their defenses and provide us with some insight on how to attack each. For much of the commentary, I will use a reproduction of two German opening set-ups that have been expounded by experts of the game, David Perlman and Alan R. Moon. These are found in The *GENERAL*, Volume 17, No. 4, accompanying

a very fine piece on German strategy by David Perlman, "The Von Stauffenberg Plan." I will use these set-ups not only because they represent knowledgeable analyses of the German position but also because they highlight many of the possiblities open to the Allies with an invasion of this area.

Maps 1 and 2 illustrate current German setup trends. These show two shades of the strategy advocated by German Field Marshal Rommel. His philosophy for the defense of France was, as we all must know by now (having been informed so for years in the wargame press), to keep troops near the beaches and cast the Allies back into the sea as soon as they set foot on the continent. In contrast to that theory is the one advocated by the head of German OB West, Gerd von Runstedt. His theory was to keep the troops back from the beaches, let the Allies land, and then fight a slow, deliberate delaying action across France.

You rarely will see a Runstedt-type defense for the simple reason that players tend to be more aggressive than their real-life counterpart commanders. If faced by an inland defense, consider yourself lucky, for it is generally an easier defense for the Allies to operate against. Regarding the effect on a 15th District invasion, an inland defense makes it almost ideal. The hardest part of this plan will be getting ashore, and the thin defense alleviates the problem. As for the panzers, which this plan assumes will be idling in western France, there is no cause for alarm. It does not matter where they are, as long as they are not behind the invasion ports.

Maps 1 and 2 will give an idea of how a solid German defense might look. In the Le Havre/Dieppe area, we have the common German conception (or mis-conception?) of invasion in the 15th Army District. Perhaps because of the actual Allied invasion on the plains of Dieppe, or because Dieppe is closer to the 7th Army District and thus more conceivable as a sector with invasion potential to the historically minded, this is the stretch of the 15th District most often well-defended.

Overall, the Perlman placement is the better of the two. This defense is weaker up front with regard to defense of the ports (even so much as to make Le Havre a giveaway), but it has much more flexibility and depth. In the Moon setup, he puts everything up front in reach of Allied airpower; it is dangerous, but does somewhat compensates for this with the superiority in numbers in the ports, making an attack on *both* Le Havre and Dieppe impractical. In the Perlman, both Le Havre and Dieppe can be fairly easily taken. It will be simpler to get ashore against the Perlman-type defense but harder to expand. One will certainly make it ashore against either, so the next consideration is where it is easier to expand. Go for Dieppe alone when fac-

ing the Moon setup but choose the Le Havre and Dieppe option when facing a Perlman defense.

The strategy here seems to be to either stack it all up in the ports or lay back behind the ports to force second impulse Allied attacks without benefit of air support. Although other options are possible, usually it is best to drop paratroopers right on the coast to help with the invasion or not at all. Most German players of *FORTRESS EUROPA* know the danger of paratroopers and take measures to defend it.

The Ostende beaches are in almost complete contrast to the Le Havre/Dieppe beaches. Quiet and serene, there is usually little expectation of invasion this far north into Belgium, as the diagrams show. An Allied invasion here would achieve surprise. Both defenses are similar, emphasizing token, "showpiece" units on the beaches that have no hope of stopping an invasion. The most important difference, though, is the Perlman defense of the River Schlede. This defense puts up a fairly strong line of defense along the river that will prevent any first-turn Allied breakout into the heart of Belgium.

The Schlede is the last barrier to Germany up here; and it if is broken first turn, it could be the game. The Moon setup, conversely, makes it practical for an Allied first-turn breakout over the Schlede. With no reserves behind the Schlede and a measly 3-3 in Gand holding up the Allied advance, this area invites trouble. If the Schlede is well-manned, as in a Perlman defense, count on at least a month's fighting before breaching the Schlede completely. An invasion here is still more than worth the effort, even if the Schlede cannot be forced first turn. An early end to the war is in sight.

The Calais Consideration

The invasion of Calais is an interesting proposition, yet one that involves some weighty decisions, some daring, and a long list of "ifs" and "provisos." Not only that, but the final determinant of this plan is not the whim of the Allied player but lies in the German opening setup. Unlike other areas in the Allied TAC radius, this sector can be made truly impregnable.

From the beginning, players have had the unfounded notion that invasion at Calais was "suicide." The Calais fortresses would be death if an invasion hit them fully manned; but for reasons of practicality, influenced by a little psychology, we find the Calais fortresses often feebly defended and taken for granted by German players. The practical reason for the weak defense of these fortresses is easy. There just are not enough units to adequately guard all the ports in the 15th Army District. Some place must be left exposed, and what better place than where no one will ever think to come ashore—Calais.

The myths about Calais go back to the actual war itself. We all know that the Allies invaded the Cherbourg Peninsula because they wanted to avoid the slaughter of an invasion among the fortresses of Calais. The area has been taken for granted for so long, in so many games, that no second thoughts occur at the futher weakening of its defenses in order to cover the gaps near Dieppe. Then, the talk got going and pretty soon the Allies weren't even giving Calais a second look before setting the invasion down out in the boonies of Western France. And the German removes another unit from the stacks in Boulogne, Calais, and Dunkerque to send it elsewhere.

What the German is trying to do, unconscious though it may be, is to cover himself with a "blanket" of protection that just won't fit. Although the German often leaves himself exposed in Calais, it may be the only thing to do. Who is at fault—the German who doesn't defend Calais or the Allied player who doesn't attack it?

Map 2: The Moon Set-Up
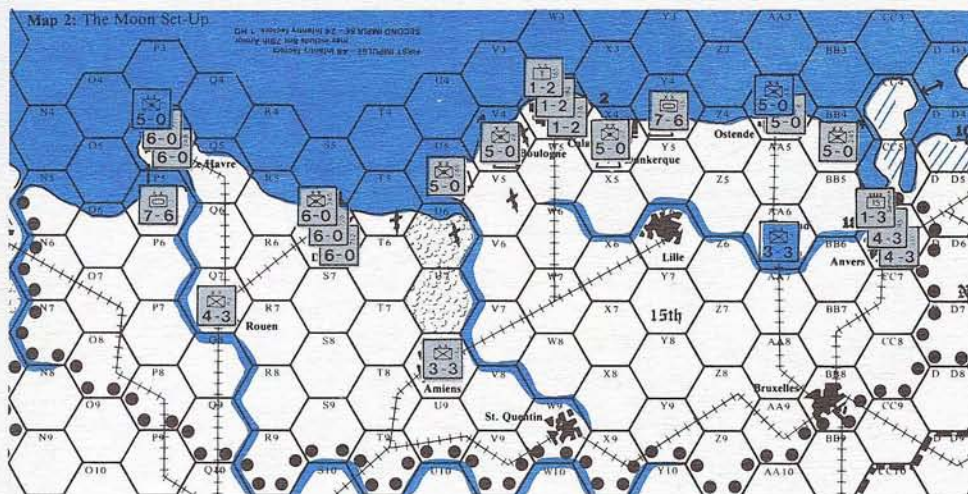
A look at the maps back up my theory. Both players have left the Calais area exposed to attack. The intention seems to be to lightly screen the Calais ports with a coastal division each and leave one of the hexes open or very lightly guarded. The Perlman setup almost seems to invite attack. Against either Mr. Perlman or Mr. Moon, an attack at Calais should work. Such an attack offers advantages. It will yield, if totally successful, the largest supply capacity of the three sectors and provide a route for the breakout that does not cross a river. Yet another point is that surprise is generally achieved.

As a final note, let it be said that this plan invades only Calais under certain conditions. Calais will not be open all the time, but should be most of the time. In the coming section, I will deal with an Allied invasion of Calais only when it is practical.

The Landing

In this section, I will discuss the mechanics of the actual invasion. For each sector, I will also mention any important notes on the first turn air mission chart.

In dealing with this analysis, I must assume several things. First, I will assume that there are not units with a combat factor above a "6" in the targeted invasion ports. Anything higher than this would have to be a strong panzer division, which is highly unlikely and would cast some doubt on any invasion in the first place. If the German has committed a panzer division to Calais, look for the opening in his coastal defense for there surely will be one. Next, all odds figured in the coming analysis will assume as a base, 1-1 odds. If any ground support is added, add that onto the 1-1 basic odds.

The first section to be analyzed is the Le Havre/Dieppe sector. With the two options for the invasion, Dieppe alone or Dieppe along with Le Havre, we now look at the role of our airpower.

The plan for the air centers around ground support. Since there is a likelihood of stiff initial resistance, all seven TAC should fly ground support. Hopefully, the German will concede that you are going to get ashore and will leave your TAC alone. He may then work your SAC over or conserve his planes for the counterattack. Anyway, don't count on it, but keep it in mind. All you can count on are your three assured ground support.

The SAC must hit the bridges first, then the rail net. This is the only turn on which it is recommended one leave the replacement attacks alone. On the other hand, you could try to bluff the German and send three SAC at his replacements. This is bound to worry him because it hurts him where he can feel it—in the pocketbook. A excitable German may give in and lay off your TAC. Next, one of the two ground options should be chosen. The Dieppe option is assured of taking Dieppe, since it is not a fortress; but the Le Havre option clears up the Allied rear and chips in a crucial "5" for supply purposes. Le Havre cannot realistically be attacked without attacking Dieppe also, due to their proximity.

The goal of the Dieppe option is Dieppe. As long as Dieppe is taken and the position around Dieppe is relatively good, the invasion should be considered a success. Since this option can take place with three ground support, we will assume that that is all the German allowed us, cancelling his maximum of four. The plan for the ground forces is to storm Dieppe. Although Dieppe is hardly a major port, it does have a supply capacity of one, and it is directly in the middle of where the Allied host is descending. There are 42 factors available for the attack on Dieppe, 16 of them ground factors: two British 6-4 infantry divisions, the British 4-6 79th Armored, two 5-4 parachute divisions, the 2-4 Polish parachute brigade; six factors are assured, leaving a question mark on the 12 factors

of parachute troops. Assuming that not more than 18 factors of Germans are in the port (36 factors when doubled), up to six factors of parachute troops, or one-half, need to make it through. There is a 50-50 chance that the Poles will make it through, and an 83% chance of two factors from each of the parachute divisions making it through, to make six total. If the Poles are lost, one of the parachute divisions must make it through unscathed (50%) and the other must come through with two factors or more (83%). If we assume that we get our 36 factors to meet the doubled 18 factors of Germans head-on at 1-1 odds, then all that is needed is ground support and the Germans are evicted from Dieppe (100% odds at 2-1 with +2 for the 79th Armored).

If by some chance, six factors of parachute troops do not make it through to make 1-1 initial odds, you must either tack on another ground support mission to bring the odds up to 2-1, or take on Dieppe at 1-1 odds (including the one ground support) which yields an 83% success rate. The rest of the force, three American 8-4 infantry divisions and one 6-4 infantry from any country, combine with the remaining ground support to hit the terrain around Dieppe.

If the defense of Dieppe is 18 factors in the first place, and the Calais and Ostende sectors are adequately guarded, there will be little strength left to be placed around Dieppe. Since this option assumes you will be invading here only when it looks feasible, we will surmise that the remaining Allied forces are adequate to deal with the Germans left around Dieppe. You should have enough force left to take on two hexes around Dieppe, if they are occupied, or three or four hexes if one or two are unoccupied.

If all four hexes are occupied and Dieppe is heavily guarded, go somewhere else!

If you're a daring soul, you could even try to kill two ports with one invasion. I am of course speaking of Dieppe and Le Havre. The air mission chart looks much the same for Le Havre/Dieppe as it did for the previous site. Every little bit of ground support will be needed. An attempt to use the bluff described earlier works well in most cases as a lure away from the ground support. On the other hand, if the German does cancel all that TAC and the bridges around Dieppe don't get blown, you can probably write off the invasion here. Best to try it and see. The questions arising on the use of this option stem from practicality, not particularly technique. If this invasion is deemed practical, the technique used is the same as the former option, with minor modifications.

A look at Chart 1 reveals a few things about this invasion. For one, it shows that an invasion here is possible with up to 29 factors of Germans in any combination in the two invasion ports, if one figures to get 1-1 odds before ground support. Since by our plan, no invasion will take place with more than 18 factors of defending units, let us assume the worse and accept that there are 18 factors of Germans in Dieppe (which although a smaller port is still the constant in this sector). That leaves 11 factors for Le Havre, represented most likely by a 5-0 and a 6-0 coastal division. The reason we consider 29 factors of Germans optimum is because there are 58 of Allied forces available for the invasion of the two ports. Any more strength here and an invasion should look to calmer waters.

Another factor to be noted is that the Allies only have a 100% chance of achieving 1-1 odds before

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CHART 1: Plan for Invasion, Dieppe/Le Havre

Dieppe		Le Havre	
German Factors	Invasion Force	German Factors	Invasion Force
0-8	2 US 8-4 Inf	0-8	1 4-6 Arm
			2 6-4 BR Inf
9-10	+2 Naval	9-10	+2 Naval
11-12	+2 Special Forces	11	+2 Special Forces
13	+ 5-4 Airborne (83%)	12	+ 5-4 Airborne (83%)
14	− (50%)	13	− (50%)
15	+ 2-4 Airborne (50%)	14	+ 2-4 Airborne (50%)

Odds achieved are shown in parentheses; where unnoted, assume 100%. Note too, that only one of the forces may use the 2-4 airborne, but it is available to either.

CHART 2: Plan for Invasion, Calais (Moon Defense)

	Boulogne	Calais	Dunkerque
Invasion Force (1-1 Odds)	1 8-4 US Inf 1 6-4 US Inf	1 4-6 Arm 2 6-4 BR Inf	2 8-4 US Inf
Misc. Factors (2-1 Odds)	6 Naval Factor	6 Sp. Forces 2 Naval Factor	2 5-4 Airborne 1 2-4 Airborne
Ground Support	2 Mission	2 Mission	2 Mission
Final Odds	83%	100%	83%

The "Misc. Factors" represent the needed strength to attain 2-1 odds on the targets. However, the attack on Calais can be raised to 2-1 by using both the 4-6 Armored and the two 6-4 Infantry; and to 4-1 by adding the Special Forces and the naval fire. For the Dunkerque assault, at least four factors from the three Airborne must make it through to have 2-1 odds.

CHART 3: Plan for Invasion, Calais (Perlman Defense)

	Boulogue	Dunkerque
Invasion Force (1-1 Odds)	1 4-6 Arm 2 6-4 BR Inf	2 8-4 US Inf
Misc. Factors (2-1 Odds)	2 5-4 Airborne 1 2-4 Airborne	8 Naval Factor 6 Sp. Forces
Ground Support	3 Mission	1 Mission
Final Odds	100%	83%

To bring the assault on Boulogue to 2-1, any four factors of airborne must make it through. Finally, Calais itself should be occupied with two 6-4 Infantry Divisions of either nationality.

ground support when there are 23 factors of Germans in the two ports. When the Germans are up to our limit of 29, the Allies are counting on parachute troops, which have variable odds of achieving the desired 1-1 odds. Always consider your opponent as intelligent as you and look for 29 factors in the ports.

OK, so how are we going to tackle these ports at 1-1 odds? Ground support, of course. Two questions arise on this subject. How much is needed? And what are the priorities? First, how much one needs is dependent on how much the German has in his ports. In Dieppe, to be assured of taking it without the benefit of the +2 that the British will received, 4-1 odds are required. This can be accomplished by allocating the three ground support missions that are assured. At Le Havre, things are a little more complex. Reduced to its simplest, if there is one step in Le Havre, you will need a final odds tally of 5-1 to be assured of pushing them out. After this startling revelation, things get better. Even with only one step in Le Havre, there is an 83% chance of taking the place at 2-1 odds! The reason for this is a persistent little combat results, DR, and units in fortresses do not retreat on a DR result. This DR result meanders through the CRT, staying a possibility until 5-1/6-1 column, when the +2 for the British 79th Armored at last puts it "below" the first possibility.

Following the plan for the assault (Chart 1) then, the general plan is to tack on as much ground support as possible. So how much is actually needed? Well, if the conservative view must remain dominant, then at least two are needed for Dieppe (83%) and one for Le Havre (83%), if there is one step present in each. If there is only one step present, chances are the ground forces can make 2-1 odds on both anyway, further reducing the burden on the TAC (24 factors would be needed at most). This would enable another ground support to be allocated to Dieppe for 100% odds, as setting it on Le Havre would not increase odds, just make it a little more likely that the defenders would be eliminated. If there are two steps in Le Havre, it is imperative to have at least three ground support missions. With the +2 to the die roll, there is a 66% chance of taking Le Havre. If there is little defense in Dieppe, 2-1 initial odds might be acquired, giving an 83% success rate. The rest of the invasion forces hit the two hexes between Le Havre and Dieppe, and perhaps the hex on the far side of Dieppe.

So, to summarize, we see that Dieppe alone is a promising option. With enough ground support assured (and only one is needed), the goal of the invasion is secured and there are two missions in reserve. The Le Havre/Dieppe option is a bit more risky and much more involved. Dieppe, in this case, needs two, but three missions would be better. This gives, respectively, 83% and 100% chances. Le Havre needs at least one mission if there is one step of German defenders to achieve 83% chances. More can be added if desired. If there are two or more steps in Le Havre, the highest initial odds that are possible should be gained (probably 1-1) and three ground support missions are needed, giving a 66% chance of taking Le Havre.

The next sector beckoning is the Ostende sector. Along with the Dieppe sector, this sector makes up the two orthodox invasion areas in the 15th District. An invasion here would come in one and only one place—right on top of Ostende. Like Dieppe, Ostende is not a fortress. This definitely makes things easier for the Allies. Althought there are now only 32 ground factors available for invasion, this is just enough. The air mission chart is altered. Because of the lessened need for ground support, the Allied first turn flexibility in the air is greatly enhanced. In some cases, no ground support at all will be needed. This would give the Allies amazing opportunities. For the first time, all the bridges could be blown, the German rail net blasted, and

maybe even a little strafing attempted. For it is a long way from Brittany to Belgium, and even small amounts of strafing could catch a panzer or two trying to push it. The area is ideal for this kind of thing. Out of the way and relatively isolated, with good planning, the Allies could have a lonely week or two on the Continent. First and foremost though, get enough ground support to ensure the boys get ashore. Sometimes all seven TAC must be allocated, because at least three are needed. However, you shouldn't often need more than three; if you do, that means the German is leaving somewhere else uncovered.

The plan for the ground forces is simple. The British take their 16 factors again and head for the port of Ostende. They are joined enroute by as many miscellanous factors as are necessary to make 1-1 odds. This gives 30 assured factors. If the German has more than 15 factors (doubled) in Ostende, then it's back to the guessing game, "Gee, what are the odds of getting enough factors of parachute troops thought to make 1-1 odds"? The only thing one can do is try and see. If the requisite factors don't make it through, there is enough ground support to cover up and bring the initial odds up to 2-1, the odds needed to give 100% odds on the capture of Ostende.

The remaining force left is composed of 16 factors also. This most likely will be two 8-4 American overstrength divisions. These two divisions hit the hexes on either side of Ostende, which will probably be weakly held. If both are unoccupied, get two; but if one is occupied, gang up on it and settle for one. All in all, this area probably holds the most promise. With a quiet place to build up and many "portage" points nearby in the form of the Calais ports and Antwerp, it proves an ideal place for a build-up and a handy place for the breakout. It is also an invasion assured of its goal, the capture of Ostende.

The last sector of fateful beach that crops up is that of Calais. Of all the areas of invasion, this one, I believe, offers the most in post-invasion potential. A landing at Calais captures more points of supply and affords an non-river opening for the breakout, unlike Dieppe or Ostende. It also has a long river line on which to base the defensive flank during the breakout.

When analyzing an invasion near Calais, we must assume the situation is exactly to our liking. If it is not, then it is not worth invading. That's how fine a line is drawn at Calais. When trying to figure out whether situation is to our liking, we must always opt for the conservative. So instead of trying to mathematically figure out the exact number of factors the German can have in the Calais sector before an invasion is practical, which is exceedingly difficult with the many possible defensive configurations open to the German, let me just simplify things into one sentence. For the invasion of Calais to remain practical, the German defense should be equivalent to, or weaker than, that of the German setup in the two maps.

Many are probably wondering about that last statement. Well, instead of trying to deal with all the built-in complexities of the situation, I think it is better to just look, in a down-to-earth manner, at a feasible situation that is as conservative as possible while remaining practical. These give us two fine examples.

So what is the grand plan? In the air, there is a little difference in reaction to either defense. While the Somme, and possibly the Schlede, bridges still need to be blown in both, the ground support situation is totally different. Against the Moon setup, six or seven ground support missions will probably be needed, for there are three occupied hexes and one contains more than two steps. Against the Perlman, missions must only be divided against two hexes, neither with more than one step. With the added advantage of the ground forces being able to garner

3-1 initial odds on one of the hexes (the one the Americans will attack) and 2-1 odds on the other (using parachute troops), one can get by invading here with as little as four ground support missions! The exact mechanics will be explained in the coming section. The SAC should hit the Somme bridges, two German rail capacities (cancelling four out of the six possible moves by rail for the German) and perhaps one German replacement, meaning the armored.

The invasion then proceeds. Against the Moon type setup, six missions is the prerequisite. Seven would be nice. From there, the invasion force breaks into three groups, each heading for a different port. One group is composed of an 8-4 U.S. overstrength infantry division and a 6-4 U.S. regular infantry division. This group heads for Boulogne. Another group, composed of the British 4-6 armored and two regular British 6-4 infantry divisions, heads for Calais. The last group, made up of two American overstrength infantry divisions, heads for Dunkerque (See Chart 2). The positioning of the stronger British force (with their +2 to the die roll for the armored unit) is important in that, to capture Calais, a "DE" must be rolled (because of their being more than one step present in the hex) and the +2 to the die roll will help a great deal. The American positioning is reversible, but I like to put the stronger American force at Dunkerque since that is the side any German counterattack is likely to come from.

After the initial subgroups are divided as much as possible must be done with the remaining force of naval factors, parachute troops and commando-type units to bring the initial odds up to 2-1. I prefer to use six factors of Special Service troops and two naval factors because the American forces will be attacking (after ground support) at only 83% odds and we want to save as many inanimate factors (i.e., naval factors) for their invasion as possible; if the boys don't get ashore, there is less of a loss of life.

The American task force sailing for Dunkerque needs four factors to bring initial odds up to 2-1 (20-10). This is accomplished by adding two 5-4 American airborne divisions to the fray. With a 50-50 chance that each will come out with five factors and an 83% chance that each will come through with at least two, odds are pretty good. If you're a worrier, you could also throw in another 2-4 U.S. airborne regiment, which gives you another 50-50 chance of getting two factors. This brings initial odds up to 2-1 also.

From there, as Chart 3 shows, the Boulogne force gets 2 ground support missions, the Calais force gets two, and the Dunkerque gets two. This gives odds of taking the respective ports of 83%, 100%, and 83%, for a total success rate of 67%.

As Alan R. Moon correctly surmised in his comments on his defense, the Allies need at least six ground support missions to make much headway. The only time you as the Allies will probably see six is when the German has decided to conserve his TAC, either for his victorious counterattacks or to mess up the Allied air plan in the coming weeks by keeping out a variable in Allied calculations, thus keeping the Allied player from being able to fully commit himself.

Against the other example, the Perlman setup, an invasion at Calais works much better. The big difference is the three factors Moon puts in Calais. Not only is there a step in Calais, there are two. As you will see, this extra step in a port is one small step to the German but is one large factor in the game. The plan for invasion is slightly different. Instead of the attacking force splitting into three groups, it splits into two groups (See Chart 3). Enough ground support is then given to the British to enable them to gain 5-1 odds on Boulogne and assure their taking it. The Americans get enought to ensure 4-1 odds and 83% chances. Any more ground support is usless, as the "DR" result persists to the last

column on the CRT, 7-1 odds. Two divisions are sent to Calais as usual under the assumption that no hidden units will show up there.

In conclusion, I hope I have shown a little about the possibilities of Calais. I never meant to propose invasion at Calais as a predetermined, automatic invasion. It does, however, have great potential if the circumstances are right. If they are not right, then the invasion should not be attempted. The possibility will either be there or it won't.

To summarize, I would like to clarify a few points. First, I would like to clear up the situation regarding the two diagrams used in my commentary. In defense of Mr. Moon and Mr. Perlman, it must be said that they organized their defenses with the 7th District in mind. And it is also doubtful whether any other setup could adequately cover an invasion in the 15th anyway. There are just too few troops and too many areas to worry about. It is also true that each person's setup is influenced by his personality, for better or for worse. And finally, by no means does a successful invasion in the 15th assure Allied victory; there is a lot of action left before the German must accept defeat.

If there is one thing that I hope I have proved to the readers in this article, it is the fact that the 15th District does indeed have first turn invasion possibilities. Admittedly, under many circumstances, the 7th District is the better place to invade. It is only when the German begins to count on Allied invasion in the 7th District that a first-turn invasion in the 15th reaches its full potential.

Assuredly there will be some chances taken in a 15th District invasion, but are there not chances taken in every invasion? With the liberation of Europe at hand, this is not the time for pessimism! Tally ho and on to Berlin! ☆

SO THAT'S WHAT YOU'VE BEEN PLAYING

			Rank Last Time	Times On List	Freq. Ratio
Rank: Title		**Pub**			
1.	Squad Leader	AH	4	19	4.2
2.	G.I.	AH	12	9	2.7
3.	B-17	AH	10	2	2.5
4.	Third Reich	AH	7	19	2.4
5.	Russian Campaign	AH	1	19	2.3
6.	Cross of Iron	AH	8	19	2.2
7.	War & Peace	AH	—	1	2.0
8.	Diplomacy	AH	—	1	1.8
9.	Bulge '81	AH	2	2	1.6
10.	Starship Troopers	AH	—	1	1.6
11.	Panzer Leader	AH	—	1	1.5
12.	Frederick	AH	11	2	1.4
13.	Panzerblitz	AH	13	2	1.3
14.	Titan	AH	5	3	1.3
15.	Guns of August	AH	16	2	1.2
16.	Up Front	AH	—	1	1.2
17.	VITP	AH	14	5	1.1
18.	Afrika Korps	AH	—	1	1.0
19.	FITG	AH	—	1	1.0
20.	WS&IM	AH	20	4	1.0

Titles Listed 107   Total Responses: 518

Again a dramatic reshuffling among the top twenty games played by the readership occurs. *B-17, QUEEN OF THE SKIES*, subject of this issue's concentration, continues to make a strong showing. And *STARSHIP TROOPERS* and *FREEDOM IN THE GALAXY* make their first appearance here—due, no doubt, to their handling in the recent Vol. 20, No. 4 issue of The *GENERAL*. For those who follow the survey from one issue to the next, it should be noted that several titles seem perennially grouped at or near the bottom of the listing—appearing in the column one issue, gone the next, often due to a single vote. Among these are *FLAT TOP, CIVILIZATION, THE LONGEST DAY, AIR FORCE*, and *D&D*; all of these fell from the list this issue. *UP FRONT*, due to be the topic of the next issue, surges onto the list; the fine articles on it to be found therein should establish the game there.

The Compleat Diplomat

c.kibler
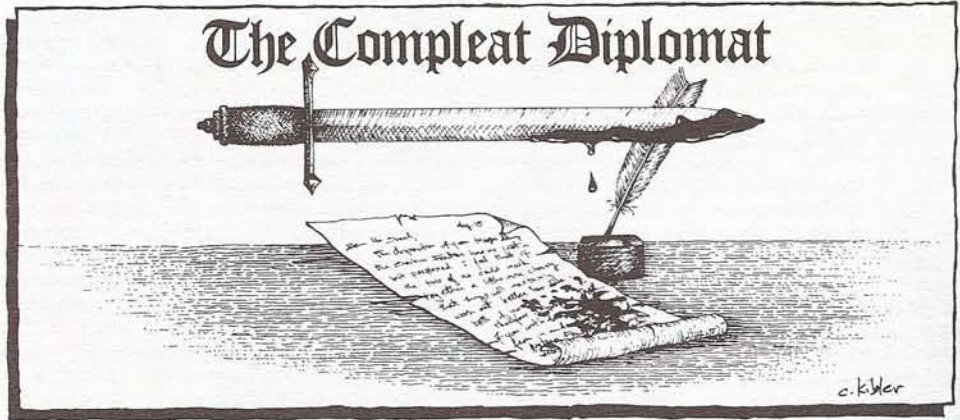
FORKING YOUR ENEMY

By Rod Walker

When I first learned to play chess, I was taught about the neat little things a knight could do to a king and a queen under certain circumstances. But chess is a game you don't play all that much unless you are a fanatic. (People who play any game a lot are fanatics; people who play the GAME, *DIPLO-MACY*, a lot are dedicated fanatics). I missed many opportunities to create knight "forks", and I got forked a lot myself when I played. A neat, but rare, move like that is easy to overlook and hard to guard against, unless you're on your toes all the time. There are moves much like the knight "fork" in *DIPLOMACY*, too. As one might imagine, this sort of "sneaky-Pete stuff" is even rarer in opportunity and just as hard to remember . . . and, unlike chess, usually requires the aid of one of the other players. That just makes the "fork" that much more difficult. But, let me give the readers at least a couple of examples for their *DIPLOMACY* log.

The Forced Grab

There are times when you may face a situation—especially in a stab that you are planning—in which you have one unit with a choice of two supply centers it could grab, and your opponent/victim likewise has one unit with which to defend them. You could equally win or lose that guessing game. But, there is a way, if the position is quite unique, to make virtually certain you can guess right. It involves not attacking one of the centers, but getting your unit dislodged into one of them instead.

Here is a situation which can arise (rarely, I admit) when Austria and Russia have a non-aggression pact and Russia has been at war with Turkey.

AUSTRIA: A Boh, A Trl, A Tri, F Gre

RUSSIA: A Rum, F Sev, A War (and others)

TURKEY: F Bul (ec), F Bla, A Arm, A Con

The question is, if Russia and Turkey patch things up, and if Austria suspects a stab now, how does the Russian player guarantee weakening Austria by getting a center? Budapest and Serbia are vacant, and the Army in Rumania could get either one. But Austria also has a unit which could cover either one: the Army in Trieste. The solution, if Russia really trusts the Turk, is to give up Rumania temporarily on a Fall move as follows:

RUSSIA: A Rum H, F Sev H, A War-Gal

TURKEY: A Arm-Rum, F Bla C A Arm-Rum, F Bul (ec) S A Arm-Rum

Now Army Rumania must retreat. Russia simply orders the retreat to whichever center Austria did not recover. *Voile!* Austria is down one center. (Later on, in exchange, Turkey can return Rumania to Russia and pick up Serbia and Greece from the tottering Austrian empire.)

Admittedly, a circumstance of this sort will arise only rarely. That is all the more reason to be constantly alert for opportunities to get yourself dislodged into an enemy supply center rather than play the guessing game as to which of two to attack. Guessing is much too fallible.

Instant Retreat Home

This ploy is a bit more on the garden-variety side, but a handy defensive trick to master and use when necessary and possible. Situations will arise in which you suddenly have a need for a new unit in the homeland but have no build coming nomally. Such a circumstance often arises when your front line is quite a distance and a close neighbor suddenly stabs you.

Consider, for instance, a situation in which Italy is attacking Turkey in the east. Suddenly, French units move in his direction. The Italian player needs a unit at home right away—how does he do it? As an example, in Winter France builds F Mar and then in Spring orders: F Mar-Lyo, A Bur-Mar, F Mid-Wes. At the end of the Spring turn, surprised by the perfidious French move, the Italian has A Apu, F Ion, A Gre, F Eas, F Aeg. The attack on Turkey has stalled due to Russian non-participation and so no immediate gain is in sight that Fall. Italy needs a build at in a home center to firm up his defense and buy time to respond to the French moves. Turkey, let's say, has F Con, F Smy and A Arm at this point in the game. The solution is to make peace with the Turk, and have him dislodge F Aeg. Italy then orders A Apu-Ven, F Ion-Tun, F Eas-Ion, A Gre H, F Aeg H. When F Aeg is dislodged, refuse to retreat it (Rule XI.2). Again *voila!* Italy can now build one and France runs up against a stone wall.

I would be interested in hearing of other sneaky maneuvers pulled on the playing board in desperate circumstances. I've a few more for later columns, and perhaps clever reader contributions could yield a few beyond those. The "fork" in *DIPLOMACY*, like that in chess, is a beautiful or awful thing to behold—depending on your view of it. And, like the ploy in chess, it deserves many more words than I expended here.

Rod Walker is the editor of DIPLOMACY WORLD and author of Avalon Hill's THE GAMER'S GUIDE TO DIPLOMACY. DIPLO-MACY WORLD is a quarterly publication featuring articles on the game, hobby news, ratings, a demonstration game and numberous other tidbits. It has been the central DIPLOMACY hobby publication since its founding in 1974. Subscriptions are $8.00 per year; a sample issue, $2.50. Order by contacting Mr. Walker, 1273 Crest Drive, Encinitas, CA 92024. ☆

DEBACLE AT MIDWAY
Japanese "Jaws"
By William B. Searight

June 4, 0500: the American fleet is sailing towards the Japanese with all aircraft readied for a second day strike. Previously, spotter aircraft had sighted a Japanese carrier, battleship and cruiser force nine zones away. Unfortunately, the American position has also been found. The Americans are planing to launch their attack two hours from now when within range.

Suddenly, enemy aircraft appear through the clouds; twenty-eight squadrons of dive bombers scream downwards towards the carriers. Zig-zagging from side to side, thirty-five torpedo squadrons approach at wave top height. American anti-aircraft fire opens up on the attackers with streams of machine gun fire, 1.1 inch AA guns and five-inchers join in, but the attackers press on in to their targets.

One carrier disappears immediately beneath the waves; the second carrier, under repeated attacks, slowly sinks by the bow and rolls over. The third staggers out of formation, heavily damaged. It is the Americans who reel under the first attack with their airpower shattered. How could this event have been brought about from a distance seemingly out of range?

FLEET TACTICS

Up to now Japanese players have been mesmerized by the "Tengo Kantai" (Combined Fleet) concept of massing together their initial 1500 June 3 and 0500 June 4 forces—totaling 21 ships. Through this seemingly brute force the Japanese player utilizes what is known as "bulldozer tactics", where he zig-zags around the ocean, moving closer to Midway, searching for the Americans to deliver a massive five-carrier punch.

On the other hand, the American player can bide his time and maneuver into an advantageous position due to his four area search (as opposed to the Japanese three). That extra search is a very great tactical advantage. By launching an undetected air strike, the Americans can hit and run, slowly nipping and slashing away at the three weakest thin-skin red Japanese carriers. A quite feasible attack concentrated on the readied *Hiryu* and *Zuiho* would sink them along with their aircraft. This would give the Americans 14 points. The Japanese would be short 29 aircraft squadrons and also lose the fighter superiority—quite a crucial factor as time progresses.

The time consumed in joining up with the Atago group loses to the Japanese any advantage to be gained through night movement. The Americans, knowing this, can place forces most anywhere with two night and the 0500 turn movements (six zones). The element of surprise swings even more heavily in favor of the Americans as the June 4 daylight approaches. From a previously known 1700 A-area position, the Japanese would have to be within a maximum five areas, of which the Americans can search four: an 80% chance of locating the Combined Fleet. The Japanese with their backs to the wall have only three directions to go, while the Americans can maneuver with much more room in any direction. The situation at this point is now akin to a 350 pound sumo wrestler, who is blind in one eye and cannot see very well out of the other, facing a 150 pound man carrying a seven-foot club.

Strategies for both sides up to now have been to remain undetected, maneuver to within seven zones, launch an air attack and then take evasive action to escape retaliation. Easier said than done, especially by the Japanese, but there is a chance—a very good chance for the Japanese—through surprise, to get in that first punch without being spotted and attacked. To attain this surprise, the Japanese must utilize his ingenuity by splitting up his carrier force into two groups during the June 3/4 night turns. The following demonstrates the strategy to be used, although the exact time, areas and zones are used only for clarification; these are not the definitive blueprints for movement.

During the previous daylight turns the Japanese moved out to the "B" areas and ended back at A4E by 1700 June 3. The American fleet is situated in the D2 or D3 areas.

June 3/4 night turns to 0500 positions: During the first night the *Akagi*, *Soryu*, and *Suzuya* separate from the main fleet and stream towards A3F to rendezvous with the Atago group, while the *Kaga*, *Hiryu*, both battleships and the remaining six cruisers silently cruise westwards—reaching C4E by 0500, 4 June.

June 4, 0500—Americans search A2, A4, A5 and locate the Japanese in A3; whereupon the response is "A3F contains carriers, battleships and cruisers". The Japanese search D3, D5 and locate them in D4—zone C.

JAWS ATTACK

The American, nine zones away from the located Japanese fleet, already has his aircraft readied but does not fly any CAP due to the Japanese being nine zones away. Much is his surprise then, when he is suddenly smothered by squadrons of Val dive bombers and Kate torpedo planes from all five carriers boring in on his fleet. This is possible by the shuttling of aircraft from one CV group to the other. Aircraft from the *Akagi*, *Soryu* and *Zuiho* can fly nine zones to attack the American fleet and then fly four zones to land on the *Kaga* and *Hiryu*, and vice versa for the *Kaga*'s and *Hiryu*'s aircraft. Losses in combat should be more than sufficient to cover the single left over squadron (32 T&D squadrons from three carriers to a 31 T&D squadron two-carrier capacity).

American battle board ship formations will vary, but the following guide lines should be followed to insure the maximum effect.

T—torpedo squadrons

D—dive bomber squadrons

	T	—	D	—	T
one CV	3		6		3
two CV's	6		6		6
Atlanta	0		4		0
one CA	0		0		5
one CA	0		5		0

Since the Americans AA firepower is in multiples of three, two carriers are attacked three ways with six squadrons each, while the third carrier is attacked with only six squadrons from above and three squadrons on each beam. Even with optimum cruiser AA firepower, at least one carrier will be sunk. Because of readied aircraft on deck, there is a 44% chance of a sinking a second carrier. The third carrier will receive only light damage.

Along with the attack on the carriers, three cruisers are attacked with sufficient strength to insure being sunk if their AA power is directed towards carrier defense. Again it will depend on the American fleet formation. The American could choose to save the two cruisers by firing upon their own attackers. The remaining escorts could concentrate their AA in support of the weakest attacked carrier and one other. The third carrier would be automatically sunk, followed shortly by the *Atlanta*. On the remaining carriers the odds would be three 1:1 attacks. Keeping in mind that the carriers are loaded with readied aircraft, four hits will sink each one. With six one-to-one attacks, there exists a 33% chance (with every roll), to score two hits. One such roll in six will sink an additional carrier. In fact it is pretty hard not to roll a five or six in six rolls! This type of "Jaws Attack" could very well scratch two of the three flat tops as well as the *Atlanta*.

In the event that his aircraft are not being readied or have flown off, the attacking aircraft must alter their tactics since five hits will now be required to sink each carrier. Go in against the carriers with the same torpedo attacks as before. All dive bombers will concentrate on the carriers (12 squadrons each on two), with three squadrons on the third. The *Atlanta* should be attacked with five torpedo squadrons on one beam.

How much damage is inflicted on the American will determine the next step. For if he lost only one carrier, then you should move away from him with both of your carrier groups and fly CAP over the Kaga group; the Akagi group would still be out of the American's range, with at least 20 Zero squadrons. The other 12 squadrons could be used as a backup in case the enemy tries to fake all of your CAP up, leaving you with nothing on the following turn. Another way to lessen damage is to de-ready the aircraft on the *Kagi* and *Hiryu* and fly CAP over them with the *Akagi*'s, *Soryu*'s, and *Kuiho*'s Zeroes (18 squadrons), which are within seven zones of the *Kaga* and *Hiryu*. Continuously using the same tactics could eventually lead from wild success to a crushing defeat. Therefore, be sure that once the American has been stung by this move strategy, he will be much more wary of it the next time. He may even stay further west as 0500 June 4 dawns, to be just in range of your advanced Kaga group where he would have three carriers to your two. For this reason you must vary your strategy from time to time such as :

1) The advanced Kaga-Hiryu group moves west, but stays in the B area instead of full movement into the C areas.

2) Vary the direction of the advanced group (north, center, south).

3) Do not split them up at first and have the jittery Americans looking for a "ghost" CV fleet until his split searches have lost your actual fleet. Then divide it into a more balanced AA cruiser disposition.

4) Keep both CV fleets in separate A areas on 0500 (oncoming Atago fleet arrives on two separate areas to meet with two separate CV groups) so that each has approximately the same ship type and total AA firepower.

As you can see, there are at least four basic methods which could cover 21 possible ocean areas. Whereas before, the Americans had a 80% chance in locating the combined Atago-CV group within an A area on 0500 June 4, now he will be pulling out his hair trying to locate and keep track of two CV groups and later on, the Yamato group. Gone is the time when a Japanese CV force spotted eight or more zones away leaves the American feeling safe from attack. Now, any CV contact within 13 zones

Figure 1: Attack on the Split CV Task Force.
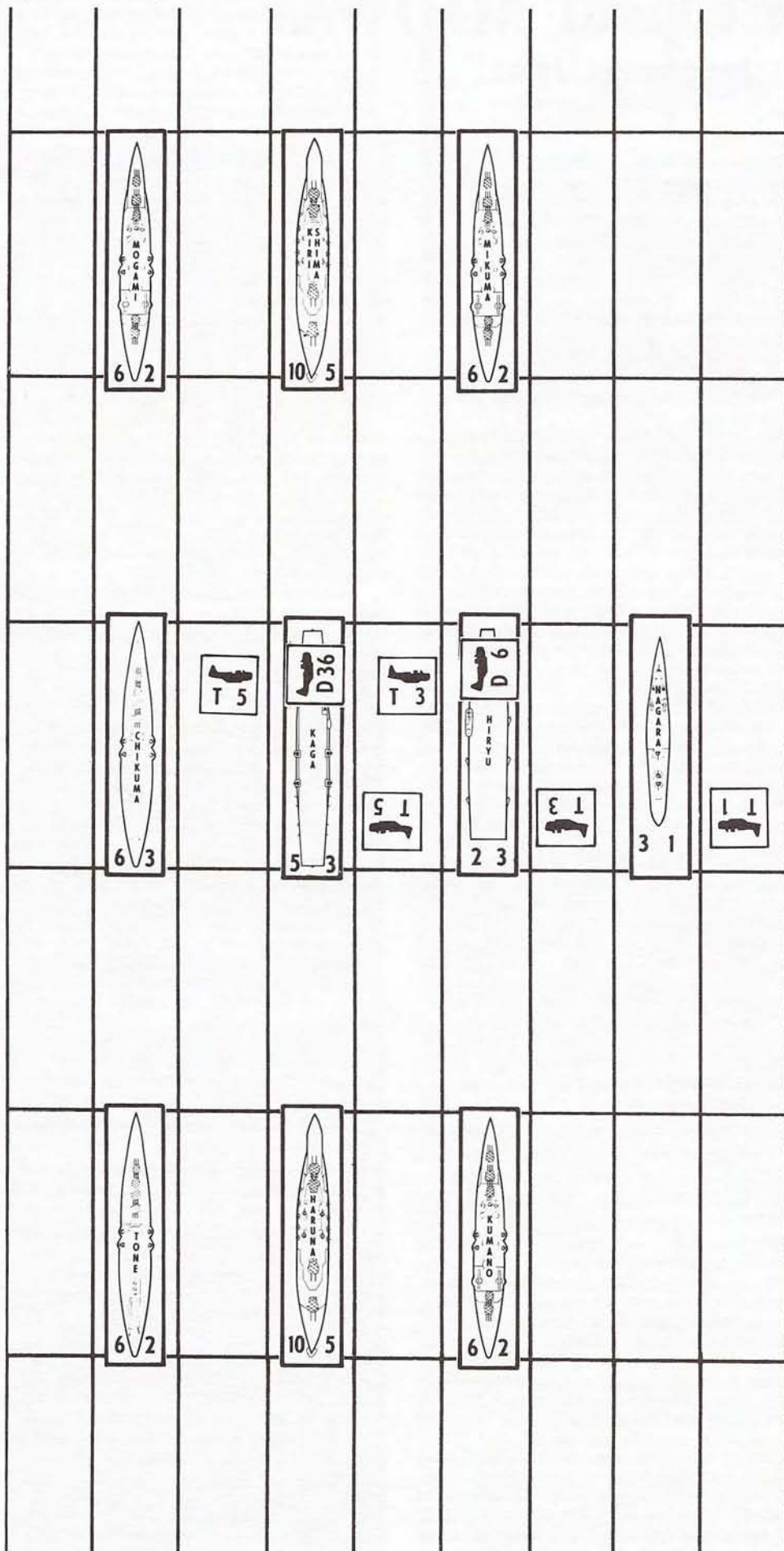
can give the Americans a nervous breakdown as he tries to decide when to throw up CAP cover, or fly off all aircraft.

SEARCHES

All too often the Japanese are so intent to avoiding detection during the June 3 daylight hours that he loses any chance of sighting the Americans on his 0700 own turn by not advancing into the B areas to search the F areas. Thus the Americans could disappear. Weak in anti-aircraft fire, the Japanese CV fleet usually zigzags out into the B and possibly the C areas before returning to meet up with the four cruisers. Feeling more secure, but not enough to take on an air attack, he moves along the A areas continuing his searches. With the night turns, the American could move almost anywhere to launch his first daylight strike. Obviously the Japanese must cast off the concept of the Samuri and adapt the new tactics. The first being a sound initial search phase.

Since it is possible for the Americans to launch a first day strike by 1700 June 3 by maximum movement, it is extremely important for the Japanese to locate the enemy fleet and keep him under observation. By being continually spotted, the American might very well become nervous and take evasive action by stopping for one turn or by moving north or south to lose the tail. Any one of the above movements will place him out of strike range on the first day, a development to the Japanese advantage. The Japanese fleet will then have a sanctuary along the extreme west A area zones—A, D, G.

SEARCH BOARD

By examining the search board, it can be seen that by full movement the Americans will take turns 2 and 3 within the F areas and turn 4 in the E area. If he only moves one zone on his second turn; then only turn 3 will be taken within the F area and turns 4 and 5 in the E area. Either way the following search pattern diagram will definitely locate him. Whether his strategy is to launch a first day sneak attack or to try to confuse you by only moving one zone on his second turn and full movement thereafter, he still will not escape detection.

0700 F1, F2, F3
0900 F3, F4, F5
1100 E5, E6, E7
1300 D3, D4, D5
1500 D2, D6, D7

As the Japanese search pattern moves west, move the fleet in the same direction to prevent being surprised within range and attacked. If you have not located him by the 1500 turn, your safe 1700 sanctuary will be any of the first two vertical rows of zones within A4-A7 and all of A1, A2, and A3 (except zone I).

It should be noted that during the first day, June 4/5 1700 turns or any night turn—movement can be terminated on any one of the nine zones of an area. If you can avoid it, you should never stop on any corner zone, for once you are spotted, you would not be able to escape detection on the following turn as the Americans will be able to locate you through a box search (four area square) pattern. He could then lure up Japanese CAP and strike the carriers on the following turn. Remember—during the first daylight hours it is more important to locate and track the Americans then to remain out of sight. By accomplishing this through the above mentioned search pattern, it will be impossible for him to launch a surprise attack without being counterattacked simultaneously.

The latest innovation in early Japanese tactics is to dispatch the *Nagara* and *Tone* on the first day to cruise the forward perimeter, augmenting the three air searches. Then as the Americans approach the Japanese carriers, pull back out of CAP range over the cruisers making it easy for them to be sunk

without any loss to the Americans. And thus he will reveal himself to the waiting Japanese strike. True—he will have given away his position, but if his intentions are not to attack your main fleet on the first day, your loss of two cruisers worth five points is tactically unsound (especially as he can disappear during the two night turns). The American player will always receive at least four points for Midway, which added to the five points for the cruisers, effectively gives him a nine-point lead. The use of CL's and one CA is a good idea, but their search value would be of much better tactical use during the second day when the American fleet could be most anywhere and the need to locate him then would be worth the loss of a cruiser as opposed to one of your carriers in order to locate his main fleet first.

If the American strategy is to bore in each time to launch a 1700 June 3 attack, the best policy is to then launch all of attack aircraft towards his fleet while keeping fighters as CAP. If he has previously exchanged eight fighter squadrons for a T2 and D6 from Midway, he will only have 18 squadrons for escort duty. This should allow the Japanese to peel off 10 fighter squadrons for ship defense; equal to the AA firepower of five additional cruisers.

SPLIT CV FORCE— "COMBINED IMPERIAL FLEET"

Under the old concept of a "Combined Imperial Fleet" of 21 ships (excluding the Yamato group), by 0500 June 4, they would *have* to be within a maximum of five A areas, from his previously known 1700 June 3 position. The Americans can search four of them—not very good odds for the Japanese. Also the Japanese attack range is limited to only seven zones. Under a split CV force, the element of surprise is injected as desirable for the Americans to locate the Japanese within an A area. In this way he will assume they are all located as a "Combined Fleet". Their last 1700 June 3 position will determine the maximum eastwards penetration of the Kaga group. Even so the Akagi group, by 0500 at A3F would have an increased attack range—out of at least nine zones.

When attacked, the "Combined Fleet" generally tries to protect all five carriers with four battleships and 12 cruisers, or an average of .75 battleships and 2.4 cruisers per carrier defense. With so many ships spread out, the Americans can pick any two carriers to attack and so leave up to nine AA firepower out of range. Conversely, a split CV force has two battleships and six cruisers to protect two carriers, or an average of one battleship and three cruisers per carrier. With a split CV group, even if both spotted, the Americans do not have the strength to successfully attack both at the same time and either group he does attack will normally lose only one carrier, instead of the two in a "Combined Fleet" formation.

With a "Combined Fleet", aircraft range is always limited to seven zones out and back, but with two CV groups (in a north-south line, seven zones apart), their aircraft ranges are bounded only by the north and south edges of the board. A crippled American fleet, once spotted in range, could never escape from being air attacked.

The fleet carriers are the back bone of the fleet, but what of the smaller carriers. Up to now, not much has been said about them except that they ride in wake of their larger sisters.

BABY FLAT TOPS (CVLs)

The Zuiho and Hosho comprise one-third of the Japanese total carrier force, although in aircraft capacity they carry only three-quarters that of a fleet carrier. Weak in firepower and the ability to sustain damage, they are much like glorified light cruisers—except for their point value. Relegated to remain in fleet formation, they are doomed when

attacked. Not even Japan's largest battleships could save them against a determined American air attack. Their usual role in *MIDWAY* has been to provide additional aircraft in an attack. This is fine up to a point, as in the case of the Zuiho assisting in a "Jaws Attack". As time progresses with the Japanese advancing towards Midway; what of them then?

It has been found through experience that both CVL's stand an extremely good chance for survival through *independent* action. In the case of the Zuiho, she could drop back into the A or B areas as the CV group begins its westward movement into the C or D areas without the Americans being aware of her missing. The Hosho can easily be dispatched as the battleships move on towards Midway. These carriers can function as undetected floating replacement depots. Replacement aircraft could be flown up to 14 zones to land on one of the advanced fleet carriers already attacking Midway. Even when denuded of aircraft they would be able to save many valuable fighter squadrons after an American attack had sunk the mother carrier.

REDUCTION OF MIDWAY

In the tournament game, Midway must be reduced through air attack before the Atago can commence the invasion. The actual invasion should not be attempted until you are positive that the Americans do not have sufficient air power to pounce upon the Atago and sink her—a most embarrassing situation. Before reaching this stage, note in your mind how many American carriers are left, what aircraft complement remains, and how far away are they? Remember, if your fleet was very close to Midway, he could fly a distance greater than seven zones if the field on Midway was available to receive his aircraft.

If the American holds back his fleet and you are unable to locate him, do not foolishly steam into range of Midway without any idea as to where he might be. Rather, send out three advanced surface scouts spread over a definite area so that, combined with your three normal searches, you will have a total of six adjacent areas to call out. These scouts should consist of two CLs and one CA. By alternating the announcement of the searches, the Americans will never be sure exactly which are which. American searches in these areas will leave him fewer attempts to locate your CV fleets. If one of the scouts is sunk, its loss will be small and well spent, as the American would have to disclose his location. Note: Insure that individual scouts do not approach within seven zones of Midway as island based aircraft could unleash such an attack, sink them and you are no wiser than before.

In reducing Midway there are innumerable variables that could come into play: how many aircraft each of you possess and of what type; whether his are carrier-based or in combination with the Midway force. If the Japanese are strong in carriers and aircraft, then brute strength might prevail and little tactics are necessary; but what if this were not so? Supposing that the Japanese player has sunk all three American carriers but in return has lost the Hiryu, Soryu and Kaga. For simplicity's sake, with no other losses on either side, the Japanese would be only slightly ahead on points. With an unknown number of aircraft on Midway, the Japanese must be cautious for the loss of the Zuiho or Hosho could result in an American victory. Here again, the Japanese might apply a "mini-jaws" attack tactic by moving a heavily escorted Akagi from eight zones to six zones from Midway, while the Hosho and Zuiho remained eight zones away from Midway. Of course, the aircraft composition cannot be determined due to past aircraft losses, but the maximum total number can be in flight—attacking Midway, without endangering the Zuiho or Hosho. The conditions though, will determine how many of

what type of aircraft you will have available to send in to attack.

Even if the Japanese retain a large percentage of their carriers and aircraft, it is more feasible to initially attack Midway at 1:1 odds (not counting fighters), rather than trying to reduce it all at once with forty squadrons. Two consecutive turns with 20 squadrons will increase from 33% to 67% the chances of reducing Midway completely. Another reason to not commit a large number of aircraft at one time is the possibility of a lurking American carrier maneuvering in for a sneak attack while your aircraft are being readied. An immediate follow up attack will destroy those aircraft which flew CAP over Midway.

Figure 2: Saving the *Chikuma*. According to AH ruling, fighters may be combined with a ship's screening value (of "1"). Thus, the two T# attacks are resolved at 1-1 odds, and the D3 (on both ships) at 1-2 odds.
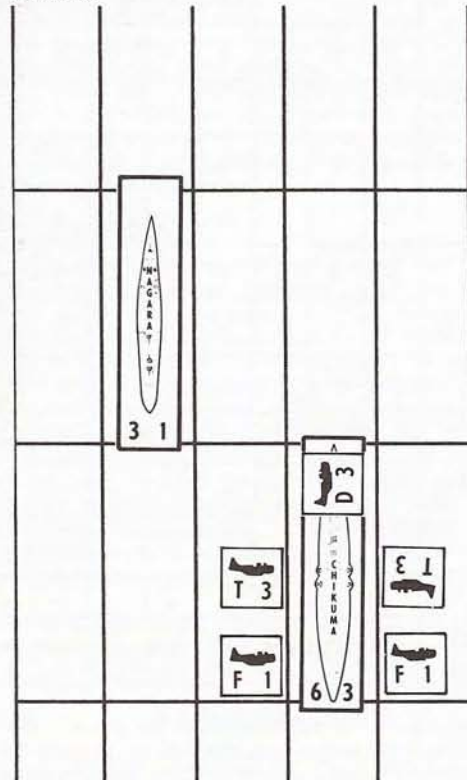
MINI-TACTICS

To further keep the Americans off balance, you might add this psycological tactic to your bag of tricks. On 0500 June 3, instead of combining the entire fleet, move the Hiryu to A11 and the Soryu to A7C, while the remaining fleet is in A4F. Through his initial search, the Americans will locate the main body and possibly one, but not both of the independent carriers. The one not spotted will be the attacking carrier on Midway. The other will proceed to rejoin the main fleet. With aircraft readied by 0700, all fighters except for one squadron are flown off the attack carrier to be exchanged with a combination of six squadrons of attack aircraft from the other carriers, giving the attack carrier a total of 20 squadrons. By moving straight across the board (0500-1100), and then at an angle (1300-1700), the carrier will be within strike range by the last daylight hour of June 3.

Previously, the Americans will have exchanged eight carrier fighters for Midway's T2 and D6 squadrons, leaving Midway with a total of 14 fighter squadrons. Now ponder flying CAP over Midway on the first day. Fourteen fighter squadrons lined up wing tip to wing tip under the bombsights of the attacking Japanese. With average reduction results, ten American fighter

Figure 3: Japanese Search Pattern (see page 28) and "Jaws" Attack.

squadrons can be destroyed on the ground. This blow to the Americans is two-fold: 1) a physical one as approximately one-third of his total fighter force lies crushed on Midway; 2) he is suddenly confronted with the phycological fact that at least one carrier is to his rear. The former definitely has far reaching consequences. Like a small pebble dropped into a pool causing larger and larger expanding rings of ripples, so to does the effect of this on the Americans. The Japanese will have fighter superiority to protect their ships and planes. In upcoming carrier battles the tide of battle could very well depend on the number of fighters flying CAP or escort.

The Americans will certainly try to exact revenge upon this carrier, but they will have to wait until the nights of June 3/4 have passed by. With the American determined to sink this lone carrier come 0500 June 4, two words of advice to the Japanese carriers captain: "Get Lost". Do not try to get in one more strike to finish off Midway. The American will be expecting it and will be flying CAP over the island, while searching a seven-zone perimeter around Midway. If you were to launch a second air strike, you would give away your new location and there is simply no way the ship would be able to hide for seven daylight turns.

Another thing; don't try to run westward to reach the protection of the fleet. You very well will not make it and be caught in the open by the Americans conducting a four-area vertical search in the C row. Even if it could reach the protection of

the fleet, its arrival would be disclosing the fleet's location, which up to now might not be known. It is far better then, to lay low outside these two areas and wait for your chance later on to join up with a CV group. Later on the lone carrier could very well participate in a three-way "Jaws Attack" with her own aircraft absorbing the losses, leaving little or no aircraft to return to her deck. With one, or possibly two, ten point American carriers sunk, her own loss on the following turn would be worth the effort expended. Diverting the American's attention toward Midway may even cause him to lose sight of the other Japanese groups. An added bonus to expand upon.

For those players who consistently lose the *Atago* in battle, this mini-tactic may help you. As the Japanese CV groups move towards Midway, drop the *Atago* back to sail independently. When the Yamato group steams into sight the *Atago* can then slip into the group while the *Sendai* is dispatched elsewhere. This is a subterfuge in case the group is spotted and the *Atago* is now defended by the largest gunned battleships. The carriers should have already reduced Midway to zero and pulled back out of range by the time the *Atago* arrives within the area. Additional cruisers could be added to the Atago force to provide even greater AA power prior to arriving at Midway—the second night turn of June 5. Between then and 0700 June 6, the Americans would only have one chance to sink the *Atago* before Midway falls. Ten points would go to the American and 15 to the Japanese.

FIGHTER AND ATTACK AIRCRAFT

Japanese fighters are the most misused aircraft of those types possessed. The American player normally exchanges eight carrier fighter squadrons for the T2 and D6 as he passes Midway—leaving him with only 18 carrier-based fighter squadrons amongst three carriers. On June 3, the Japanese have 28 fighter squadrons; these are increased to 32 with the *Zuiho*'s arrival on June 4. The readers already know that through a successful "Jaws Attack", at least one or two enemy carriers with readied aircraft will go down. This means that he will only have six to twelve fighter squadrons left. This is important information when deciding how many fighters should go in as escort or remain above the fleet as CAP. Through the initial surprise attack, the Japanese will have caught all of his readied aircraft on board the carriers. In this case your attacking aircraft will not require any escort fighters as the Americans will believe that you were out of range and be caught by surprise. If one American carrier were sunk, you could expect a retaliation raid, but escorted with only 12 fighter squadrons. With an American attack expected, do not throw up the full 32 squadrons CAP since he may elect to fake your fighters up without attacking. With all your fighters faked up in CAP, there would be none for escort duty on the following attack, whereas the Americans would have 12 squadrons to assist in his ships' defense.

If a counterattack is expected, fly off only 20

fighter squadrons as CAP. This will still allow you to fly eight squadrons for ship defense; possibly even more if the enemy does not send in any escort fighters. Eight squadrons may not sound like much, but their power is equal to having an additional battleship and heavy cruiser, with the ability to breakdown their fire power into more than one attack. Of course, if two American carriers were lost, then the fighter figures can be adjusted accordingly. When estimating fighter requirements and priorities (CAP/escort), always look to see if his carriers are within 14 zones of Midway; later in the game he could fly out these fighter squadrons as CAP over his fleet while his carrier fighters go in as escorts.

Although you may rarely have fighters to strip off for ship defenses, knowing how to deploy them properly could save a ship where as before it might have been thought impossible to save it. Before, it would seem impossible to save the *Chikuma* with two fighters. By proper deployment, there now exists a chance to save her and to inflict additional aircraft losses on the Americans.

Important as their role is in CAP of escort on fleet to fleet missions, the fighters play no small part in protecting their attack aircraft engaged in reducing Midway. Attack aircraft can abort a mission against ships, but not against Midway. It would be most embarrassing to say the least, if 20 unescorted attack squadrons over Midway were suddenly shot down by 20 American fighter squadrons. In some cases this one action could break the back of the Japanese ability to take Midway.

In attack aircraft (torpedo and divebombers), the Japanese have a more well balanced strike force than the Americans—total of 35T and 28D from five carriers. Only the torpedo bombers are able to split their attack by coming in on each side of a ship and each is under the AA range of less ships than a divebomber group—making them the most valuable of the Japanese airplanes. A large loss of divebombers would not hamper the Japanese very much; the Japanese player would still have his double torpedo attack capability. Not so for the Americans concerning his torpedo planes. In an initial attack of four torpedo groups against two Japanese carriers, he would lose at least eight squadrons or approximately 50% of this force. Follow up strikes would be more hampered and even with a large number of divebombers would not be as effective. Eventually the last torpedo squadron would fall in flames, leaving just the American divebombers. Once the Americans have lost most or all of his torpedo squadrons, your heavier battleships can sail independently, so enlarging your chances for a decisive surface engagement.

DOOLITTLE STRATEGY

For every strategy, there is developed a counter strategy. For the Americans here this takes the form of a first day sneak attack upon the Japanese. Instead of combining all the American ships together as they proceed west, split them up into two groups. One group will consist of two carriers and two cruisers to act as the decoy force (DF), while the remaining carrier, *Hornet* or *Yorktown*, and six cruisers will make up the strike force (SF). Starting from the east edge of the board, the decoy force would proceed across the center, while the SF moves across the northern or southern route. On the second turn, two objectives are performed. First, move the DF into one of the F3, F4, or F5 areas so to deliberately be located so the SF can move on undetected. Second, to launch and transfer aircraft from the decoy carriers and Midway to the strike carrier and vice versa so that the final aircraft complement on the strike carrier will be 16 torpedo, 10 divebomber and no fighter squadrons. With the

Japanese under the assumption that he has located the entire American fleet, he will concentrate all of his future searches to keep this group in sight. Meanwhile the SF would be steaming westwards and be in range at the latest on 1700 June 3. The DF, so as to not alarm the Japanese, could slow down just enough so that it would appear the Americans are unable to strike on the first day. By 1700 June 3, your SF unleashes its 26 attack squadrons. The Japanese fleet caught by surprise with readied aircraft on deck will be in trouble. The target should be either the *Hiryu* or the *Soryu*. With two torpedo attacks of eight squadrons each and 10 divebombers from above, you sould get at least two 1-2 and a 1-1 attack. With readied aircraft, the thinskined *Hiryu* or *Soryu* can only sustain two hits before sinking.

Again it is important to remember that any strategy once tried successfully, twice tried against the same opponent could prove disastrous. Japanese counter strategy could be to fly 14 fighter squadrons CAP every dayligft turn that he could be in range of a suspected sneak carrier. By staying within the B row, he might even entice the Americans into launching a 1500 attack. With 14 fighter squadrons to assist in ship defense, they would be stronger and more versatile than the four 1500 arriving cruisers. The Americans in turn will have given away their position and are then open to a 1700 counterattack.

Another strategy the Japanese could use would be to be in an A, D, or G zone of an A area by 1700 June 3, search areas seven zones away to locate you and then throw up his full 28 fighters as CAP, while his attack planes pounce and sink your lone carrier. An American counter-counter move would be to have previously shifted all available fighters out to his decoy carriers and then on 1700 to fly all 28 fighter squadrons CAP over the SF. So there are numerous strategies and counter strategies to be used to fit each and every situation. These were but a few of them.

If the strike force was successful, what then? With two night and daylight turns, the American has a maximum of six zones to retreat and meet up with his decoy force. American strategy differs from player to player. Some may desire to remain hidden to the north, south or circle behind the Japanese. If you suspect that the Japanese might still be using a split CV group strategy (*Zuiho* pressed into service to replace the sunk carrier), then it might be wiser to fade out of sight northeast of Midway and make the Japanese come to you. This is a good psychological tactic because the Japanese player is normally very shy about moving towards Midway until he locates the Americans. As time passes by without any further information as to the Americans' whereabouts, the Japanese will become increasingly more apprehensive and will be more suspectible to making tactical errors.

There is no sure tactical defense for Midway other than sinking the *Atago* or destroying a large number of Japanese aircraft. Another line of defense for Midway would be for the American carriers to position themselves within seven zones of Midway and fly CAP over it. Up to 30 attack squadrons could be based on Midway to strike out at the Japanese fleet, while the Americans would remain undetected; as long as they did not launch a direct attack. By delaying the fall of Midway, additional points will be credited to the Americans. One disadvantage of this plan is to be able to spot the Japanese CVs within range and not have your aircraft grouped where they could be destroyed.

SURFACE COMBAT

Surface combat is very uncommon and the art of such in Midway has a few tricks which a player can exploit. Although it is impossible to cover all possible fleet actions, the most common would be

that of a Japanese scout cruiser or a battleship coming into contact with the American fleet. The basic rule is—if you are the weaker or wish to avoid combat, place your ship(s) in the far corner(s): A1, A17, G1, G17. For a Japanese cruiser this won't help much other than limiting the number of cruisers (four) that could initially bring their guns to bear for the first salvo; but for the Americans meeting a battleship, it could mean quite a difference. The Japanese normally places his ship first on the battle board, in A9 usually. By splitting up carriers into the corners, the battleship will not be able to fire upon them on his second turn. The earliest he could fire into any single corner would be on his fourth turn, but only if he initially started moving across the board at an angle. Three turns should be enough time to roll the die for a fast fade away, but if you are unlucky at least he will only be able to go after one of the corner carrier(s). For him to move directly to within range of one corner and then move to within range of the other corner would consume 12 battle board turns. The cruisers should remain in the G row by moving sideways until the battleship has moved into the C row. The cruisers would then move forward into the F row to nullify the Japanese gun range superiority, as they would then be within three squares of one another.

CONCLUSION

Over the last few months the "Jaws Attack" strategy has been playtested amongst several competent players. In nearly every case, the Japanese player won with a comfortable point margin. It was readily evident, however, that the Japanese must be a bold and competent player and be tactically flexible. The handling of his carrier arm is of the utmost importance—not only carrier movement, but in how he utilizes his fighters and attack aircraft. This should certainly make the play much more interesting for the Japanese as he strives to confuse and dismay the Americans. Instead of huddling together like a school of fish, the Imperial Navy can now use its jaws to attack like a shark. ☆

SERIES REPLAY
BULL RUN

Confederate Player: Rex A. Martin
Union Player: Paul O'Neil
Neutral Commentator: Richard Hamblen

This piece is the conclusion of a Series Replay begun in the last issue (Vol. 20, No. 5), which we left with the Union player riding a tide of victory. A quick summary to the Union 12:30 PM turn: The Confederates set up north of Bull Run and placed the trestle in the hopes of offensive action. Richardson and Keyes crossed at Sudley and are now positioned to attack Evans, Bee and Bartow at the Stone Bridge. The 2nd and 3rd Divisions attacked Ewell, crossed Union Mills Ford at noon, and took the point of the hill at 12:30 PM. At Centreville, the rest of the Union Army faces Cocke to the west, Johnston to the south and Beauregard coming up from McLean's Ford, pursued by Burnside. Early, out of command, guards McLean's Ford.

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12:30 PM

Confederate: The Union forces, catching me flat-footed (since I'd not expected him to waste time on hex TT29 until he had cleared SS31, the key to this ridge), drive off Walton and gain a foothold on the hilltop. Paul is in great good humor now. However, when he finds that I've taken revenge by smashing his premature move into Yates Ford with an entire brigade and two commanders, he may not be so cocky. His impatience is showing in his exposing such without reason in a ford this near to the fighting front. As a bonus, I get rid of Palmer (the only Union cavalry that could cause me any trouble in the region) on an exchange in the soak-off with the 2nd Va. boys. In reflection, this all should take some steam out of his assault at the south fords. At the very least, it should make him expend a turn or two regrouping.

Meanwhile, in the center, I've two brigades now flanking the Centreville ridge. Beauregard leads Jones north toward Little Rocky Run to threaten from the east, while Cocke should cross Cub Run this turn coming to threaten from the west. The main battle force in the center of my line draw up to ready themselves for the first assault. The damnyankees will need to stretch themselves thin for one or two turns. I've put forth the independent regiment of Longstreet to guard the secondary road for a turn, separating Davies and Burnside. The 6th Alabama again serves as rearguard to Jones. And Johnston crosses back to wake up Early, who will cross, go north or south depending on Burnside's actions. Indeed, Burnside now is in a curious position and I will be interested in seeing what Paul does with him the next turn.

In other developments, the west remains quiet (I was half convinced he would launch an attack here this turn to open the battle for the stone bridge; I would have). So, a mere shifting of the line and bringing of Bartow back into the fold. I am most happy with the actions of my heavy cavalry this game—the 30th Va. are now in position to force him to cover the northern end of Centreville Ridge and the 1st Va. will continue to dog Hunter and wait for a target of opportunity. All goes well at this hour with the Confederate command.

Marching onto the field at the last moment, Smith's brigade smashed the southern prong of the Union advance.

Delay, here is thy sting. Reinforcements arrive in the nick of time. Facing disaster, the Rebels make a desperate attack and roll lucky. Smith's brigade makes an attack that kills all the units in the ford, including both Union leaders and the cavalry to boot. They are not out of the woods yet, so the 1st Va cavalry blocks Burnside's return and Johnston goes to lead Early south. To emphasize Centreville as a diversion, Beauregard rushes into the Union rear and the Rebel center moves within command range of the ridge (it should actually move even closer to maintain activation without Johnston). Evans and Bee remain too fragmented and weak to fight for the Stone Bridge.

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1:00 PM

Union: Ouch! Maybe he didn't slip after all. Two leaders and one brigade dead in the water! Adding even more injury was his exchange on a 1-1 against Palmer. My die rolls definitely have not been as deadly. Part of the problem was my overlooking the halving of defense factors in the ford. I just didn't see this attack coming. In the south now, I could attack the enemy artillery surrounded, but I'm not willing to make the soak-off. I'll move the 14NYM towards Manassas and see what happens. Heintzelman readies a crossing at Yates for when Rex reacts to the 14 NYM. I'm in for some tough times as both my 1-1 attacks missed; when the die is cold, it's really cold.

At least the 3-1 assault was successful. My soak-off units haven't survived, but that's to be expected. My forces on the right provide the only bright spot this turn. The bridge is mine while Bee, Bartow and Evans must scramble back. Perfect. This diversion may yet count for something.

In the center area, my 1-1 attacks may seem foolish but I've a one-third chance of winning, and even a 5 or 6 won't hurt too bad. Burnside continues his quickstep north, with Hunter keeping him active. I try again on the 6th Alabama rearguard, this time at 4-1. (Another DB, that is a very charmed unit!)

Porter and Howard fell gallantly defending Yates Ford.

Heintzelman should move his force to the trestle, where he could command both sides of the river without being in a ford. Instead, Paul masses at Yates Ford and leaves the other side of the river without command. With Beauregard out of reach, Hunter should take Burnside to Union Mills (clearing away the enemy cavalry en route) rather than make low-odds attacks. He is lucky to lose only a few units—he could be ridden down if the cavalry had retreated and Davies did not.

Maneuver is crucial to both sides around Centreville (the Rebels have to find weak spots and the Union must conduct a mobile defense), but with brigades deployed far from their division and army leaders, both players are forced to use the enemy to

activate major forces. In Tyler's part of the ridge, only the 1st Division has command; and with Johnston's departure, the Rebel center has no command at all! McDowell has a golden opportunity to mass against Beauregard while evacuating to STOP the Rebels; but he passes up the chance because his own command structure is so rickety.

Richardson finally wins the Stone Bridge, and next turn he must decide whether to cross. In an unstable situation with many opportunities, only Richardson made any real progress.

Confederate: His successful assault on my forces in the west, executed with great panache and skill, springs the bridge for him. But I've little concern, since Richardson's force is hardly going to figure in any of the important happenings for two or three turns yet. If he does drive towards Centreville, my Rebs will dog his heels, putting three brigades behind him and one across Cub Run before him (Cocke). Davidson is sacrificed to allow Evans to muster his lost regiment next turn.

At Centreville, I've finally the chimneys of the town in sight. As the tired mounts of the 30th Cav. climb the ridge, Jones' brigade masses to threaten the eastern slopes. The brave boys from Alabama (remnants of Ewell's) again serve yeoman duty as rearguard. Meanwhile, my center brigades form and shift westward to leave Davies out of command. They are in position to try a lightning assault on the southwestern point of the ridge should he thin the line here to secure his northern flank against Jones. At long last, Cocke must cross—I am surprised that Paul has hung on to this position for so long (and may pay for it). And, my long-shot attack on Hunter's escort in an attempt to leave Burnside out of command (an exchange followed by a 50ᵉ chance of Hunter's demise) works. This should cause him great discomfort, the loss of Hunter meaning much more than that of Miles.

To the south, I'll stretch his command problems a bit and withdraw to put most of my force out of command. Instead, the bulk of my forces shift to overwhelm the ragtag 14 NYM—which also allows me to form Smith into brigade on the next turn. No advance is necessary here; I'd rather keep my troops near the star and nothing is gained by occupying the hex. Jackson shifts in such a manner that he will, along with the closing Early, secure the stream line to contain the damnyankees while Smith and Walton hold the objective hex.

Smith then scattered the 14th New York Militia.

Game theory advises minimizing risk while maximizing enemy risk (i.e., favor gambles you can afford to lose but your enemy cannot), so the 1-1 attack on Hunter is excellent play because it attacks an important leader; but the 5-1 on the 14 NYM is wrong because it could lose the game. Evacuating to STOP the Union is a fine idea, but Smith should screen the 14 NYM away from the road: if it retreats it can move to Manassas and win the game. As it happens, Rex rolls lucky and kills both pieces. There's a lesson there somewhere.

Evacuating to STOP the Union Mills bridgehead is clever, but pulling the same trick on Davies allows McDowell to return the favor. Swapping
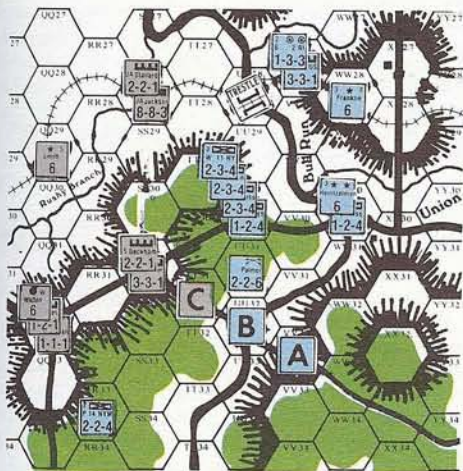
12:30 PM: Position following Confederate Turn. Letter coded counters represent: A—Willcox, 1 Mich, 38 NY, D/2 US, I/1 US, G/2 US; B—Porter, Howard, 3 Me, 4 Me, 5 Me; C—2 Va, 1 Md, 3 Tenn, 10 Va, 13 Va, 6 NC.

STOPS hurts the leaderless Confederates more, but they cannot lose much: McDowell might not evacuate, he can STOP some Rebels in any case and Kershaw makes it impossible to STOP everyone (Schenck must either activate Kershaw or allow Cocke across Cub Run).

Out west it isn't clear which way Richardson will go, so the Rebels stay in the middle and screen.

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1:30 PM

Union: *Expletive deleted.* Lost another leader on a 1-1 attack (compute the odds on that Richard!); that is a hurting blow as Hunter was keeping Burnside active. It can be really depressing to come in and see the results of Rex's good rolling (and playing, I'll grant he's as good as I've heard). At least he isn't the gloating type. (Note the 1 Va. is the one that survived a 5-1 attack on turn 5.)

Rex's pull-back to place my units out of command doesn't leave me with much to move. Jones is no threat but he is tying down valuable units. The 2-1 attack on the 30th Virginia Cavalry is important—I commend Rex on his use of cavalry. Hurray, a DB2 that kills something. Even though the cavalry go down, Schenck must scramble back. My position erodes a little more each turn and I feel like I'm being forced into a sack.

And in the south, even as the 14 NYM dies for the cause, Willcox crosses with a healthy stack. Heintzelman moves to keep everyone active.

I keep pressing with Richardson. I'll have to be more aggressive there now. I wonder when Rex will fall back there. He is busy marshalling his forces. I wonder when his big push will come? Only five turns until my reinforcements.

1:00 PM: Position following Union Turn.
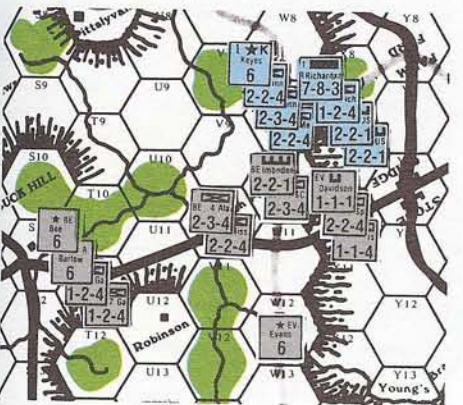
Heintzelman set up headquarters at Yates Ford to command both sides of the river.

With crises everywhere, the Federals need to regain control of the game by activating stranded brigades and removing threats without running any risks. They should still shift to the trestle, but instead persevere at Yates and risk Heintzelman in the ford. Paul is short of troops at Centreville, but he is unwilling to abandon the ridge so is limited to a risky 2-1 against the 30th Virginia. Without reinforcements, Schenck must retreat and let Cocke cross Cub Run. Richardson grabs the crossroads to start for Manassas.

Confederate: Jones, having served as a major distraction, pulls back to freeze the Union forces along the northern ridge of Centreville. I don't anticipate him being troubled, so I'll send Beauregard along to keep him moving and to bring Beauregard near to my main thrust at the point of the hilltop. Meanwhile, Miller moves to cut off any damnyankee reinforcements. Once on the hilltop in CCC3, he has found his role in this battle. Cocke crosses Cub Run at last, but I hold him on a tight leash in order to allow time to develop my position and to worry him, as well as keep those enemy forces frozen. My central brigades merely march around some more to worry him until I can get more units into the fray here. And, I want several turns of bombardment—begun admirably by blasting one of his few batteries on the ridge to pieces. This, for a tactical advantage, is important. Otherwise, rather than using my preferred ''soak-off'' methods, I might have to face infantry-artillery packets and formed brigades when the brave southern boys charge up the slopes.

But the truly interesting development is again at the southern fords. An attack by the formed Smith, with artillery, succeeds in eliminating the two units between him and the unescorted Heintzelman (a previous 1-1 ''soak-off'' forced the retreat of the other two damnyankee units in the hex). My advance of the survivors of the exchange catch the Union general in the ford and shoot down him and his staff. Stuart's cavalry moved to be in position to threaten the Union commander if my attack had gone awry. With three Union division and two brigade commanders now *hors de combat*, Paul is faced with some severe command control problems (since he has three separate commands and only two active commanders now). On my next turn, regardless of what he does here, I will fall away to freeze his forces and end any immediate threat to Manassas or the objective star. The 1 Virginia Cav. should guarantee that no Union commander sneaks in to reactivate this wing of his army. Jackson and Early will press north at all speed to join in my assault on Centreville, which should be about ready to commence as they arrive.

With the neutralization of one of Paul's flank forces, I can concentrate on Centreville for a couple of hours undistracted by other developments. For the next few turns I've the initiative—if I want it.

Smith's tired brigade wheeled one last time and drove back the Federals filing out of Yates Ford.

Again Rex kills a vital leader with a 1-1 attack preceeded by a soak-off: excellent game theory and excellent luck. This practically ends the Union Mills threat. Smith so ends a short, lucky and brilliant career by forcing the Yankees back and eliminating Heintzelman. Apparently though Rex was preoccupied with Smith's attack; his center inches forward (Cocke barely crosses Cub Run) and Beauregard retreats towards Burnside just to STOP Centreville! This is playing the trick for its own sake: Jones should stay forward as a threat and to guard Miller. Bee also blunders by stacking with a one-point unit in the battle line; he is the only source of command for two brigades and risks elimination.
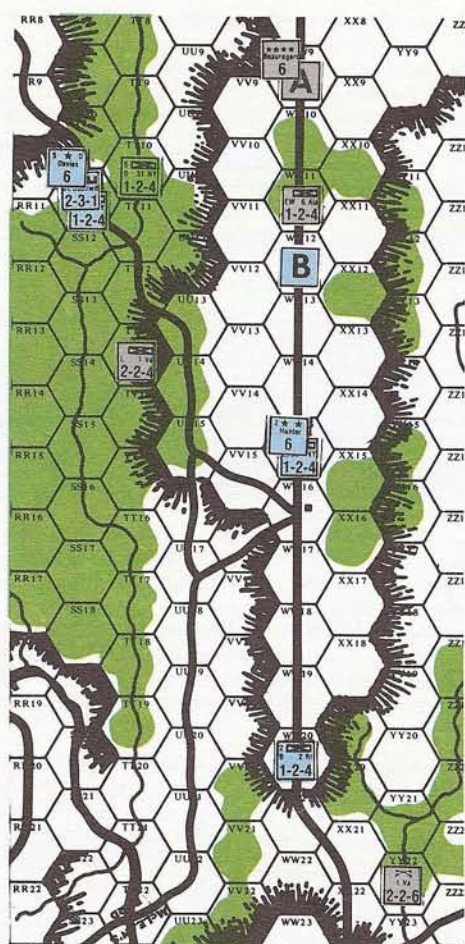
1:00 PM: Position following Union Turn. Letter coded counters represent: A—Jones, 17 Miss, 18 Miss, 5 SC, Miller; B—Burnside, 2 NH, 71 NYM, 1 RI, REG.

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2:00 PM

Union: This is really depressing. Rex has made 1-1 attacks and won them all; each time an important unit of mine has gone down. I just didn't think he had a chance at Willcox. It seems that mistake may cost me the game. But it ain't over yet! I've got Jones surrounded—he and Beauregard are dead. It is only a question of whether his counterattacking units survive to keep me active. May the 6th Alabama continue to live!

My pull-back from the ridge is two-fold. First, it shortens my defensive line and concentrates my units. If I stay where I am, his artillery picks me off. Second, I buy time and also hope to kill the small units he puts up there. It is a shame that Bookwood moves so slow; otherwise, only Kershaw would be

1:30 PM: Position following Confederate Turn.

active. And I screen Centreville at the same time.

On the right I make an important attack. If I roll exchanges on my 1-2 soak-offs, I will destroy his units too. Nothing but DB2 on my 3-1. I'm getting tired of that result. At least the 1-2 attackers didn't die.

I take what I can get down south—a 5-1 revenge on the 1st Maryland by Franklin and the remnants of the once proud southern wing of my army. It's only a question of time until he moves back there to freeze me.

I may be in a coffin, but the corpse still has some kick in it!

Beauregard led Jones' brigade into a devastating ambush.

Apparently Paul thrives on catastrophe. He eliminates Beauregard, Jones and Smith. Out west Richardson should maximize the odds on the 11 Miss in hopes of killing Bee, not lower the odds by including the 2 Miss. Good luck would repair the error, but no such luck.

At this point, the top priority for the Federals is to activate McDowell to activate Union Mills before Centreville falls, so they should defend the ridge line to gain a long delay (and stay active with McDowell gone). Instead they evacuate to STOP the Rebels until Johnston arrives and McDowell moves north to command them. In the long run, however, not having to fight for the ridge will speed the Rebel attack.

Confederate: His reaction to eliminate Smith is the last gasp of the southern front, as the rest of my forces fall away to freeze the now confused and leaderless Union troops. The cavalry move to block any shift by an unescorted McDowell to get these damnyankees moving again. Early and Jackson now move north in the hopes that they can take part in the advance on Centreville. Walker and the batteries will roll to join my three brigades to the west and defend the Bethlehem Church.

Around the Centreville ridge, my first gross error. Jones, and Beauregard unfortunately, are surrounded and have little hope of coming out of this mess. I should have sent Beauregard with Miller, both to save him from this disaster, and to keep Miller active as a threat to the eastern edge of

the slope. To make the best of a bad situation, Beauregard and Jones effectively surrender with low-odds attacks which will freeze the forces attacking them (consider the Union troops busy for the next half-hour rounding up and disarming the valiant Rebel force). However, in compensation for this, Paul gives me the point of the Centreville Ridge—a position I've often lost much more than one brigade taking. With the exception of Beauregard, I would not have minded the exchange of Jones for the ridge positions. Now, I am going to have to shift Langhorne over to threaten the east slopes and keep him spread.

To the west, Richardson finally shows some creativity (and activity), pressuring the brigades blocking him. I have to fall back much more hurriedly than I had wanted, putting Bartow and Evans out of position, leaving only Bee to block the main road. I am unsure if Paul will assault here yet, but he could brush Bee aside and proceed down the road toward Bethlehem Church. Paul has not shown any great proclivity to undertake well-considered tactical soak-offs. But, I've no real option here but to hope that he doesn't change and merely pressures Bee into falling back by outmaneuvering him.

Johnston daringly evacuated Union Mills to reinforce the other fronts.

Johnston evacuates to STOP the entire Union Mills force, leaving three Federal threats viable: Richardson, the Centreville army—and Union Mills if McDowell can get there. Rather than win three battles, Rex wisely decides to concentrate at Centreville and screen the other two. The 1st Virginia cavalry guards the approach to Union Mills and Walton reinforces the stalemate in the west. Everyone else heads for Centreville at top speed, not even pausing to pick up Smith's remnants. The few active Rebels in the center are content to inch onto the ridge and wait for reinforcements, and out west the Rebels defend as far forward as possible—but Evans and Bartow are too far from the road and Bee is not enough to protect the road alone.

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2:30 PM

Union: The 6th Alabama lives no more—too bad. I wanted one unit to keep me active. There is no fairness for the just! The loss of Hunter really hurts now, but at least McDowell is still around. At long last Jones is no more; my cup of revenge runneth over.

His placing of Miller is a cute trick but I don't think I'll need the 4PM troops. I should be strong enough to hold Centreville unless Rex makes some low odds attacks. I've been told many stories of Rex's hot die rolling and I've seen it now, but can it last? I'm forming up in Centreville for an attack next turn. My bombardment odds are improving, but even there I'm not getting the rolls. Sherman prepares to form brigade to fight for the hilltop.

I send Richardson and Keyes down the road at Bee again, but I can't quite get there (No such luck; it's a bloody EX and an AE on the 1-2 soak-off). I must now be careful about my rear. Rumors of free booze and loose camp followers back in Washington are running among my troops. They are spread, no doubt, by Rebel spies.

In a fierce melee, Federal numbers shattered Bee's brigade.

McDowell activates Tyler, who sends command to Schenck, who activates Burnside in the same hex. Clever, but McDowell should be at the other end of the chain, on his way to Union Mills. As McDowell's window of opportunity narrows, Richardson suddenly becomes a real threat by opening the road to Manassas! Richardson pounces and the casualties leave Bee alive but too weak to defend alone. Evans and Bartow are too far away to reach the road. The Federals have the road, but they cannot rally without slowing their advance.

Confederate: No sooner do I put down one of his flank threats than he promotes another. Sure enough, he brushes aside Bee (my luck that he survived at all)—the danger of underestimating one's enemy. However, he loses badly needed units in the process. This determines my strategy on this flank. Bee steps aside while Bartow and Evans move up to protect him and carefully keep out of the way of the damnyankees. Meanwhile Jackson must countermarch to the west, trailing Walton. I hope that the vision of an open road to Bethlehem Church will hypnotize Paul, and that he makes a dash for it. There, with Walton and Jackson assaulting from one direction and Bee, Bartow and Evans from the other, I can engage in a battle of attrition. If he tries to stand in the open around Bethlehem Church, my artillery superiority should come into play and I may simply pound him to pieces. Otherwise, a slow grinding assault by the infantry, with no quarter given. I've plenty of time to engage in such a strategy. Needless-to-say, Bee will rally while I strive to keep Paul from rallying the pieces of Richardson and Keyes he has lost.

Around Centreville, not much of note. Langhorne moves to provide a distraction. And a skirmish line protects my toehold on the ridge while Johnston moves up to provide direction to my strike force. I hope to put Cocke into brigade this next turn, get my forces onto the hilltop, and position my artillery to take advantage of my superior number of guns. It is unfortunate that Cocke's batteries could not prevent Sherman from going into brigade, but I'll deal with that problem later. It looks like the main battle for Centreville takes place just in front of the town, but I'll not risk such until late in the game. Instead, I will simply bombard what I can and continue to jockey for position. If I smash Richardson and Keyes, all I need do is prevent him from breaking through to assure a victory.

Cheers greeted Joe Johnston as he rode onto the field.

The Rebels gather in striking range of the

SERIES REPLAY

COMBATS CHART

Turn	Units Attacking	Units Defending	Odds	Die Roll	Result
8	2 Va	Palmer	1-1	2	EX
8	Beckham, Walker, 13 Va, 1 Md, 3 Tenn, 10 Va, 6 NC	4 Me, 3 Me, 5 Me	3-1	1	DE (Porter & Howard KIA)
Bombardment:					
8	Imboden	M/2	1-1	5	—
9	REG, 1 RI, 71 NYM, 2 NH	6 Al	4-1	5	BD2
9	Richardson Bgd, M/2, G/1, 1 Conn, 2 Conn, 2 Me	3 SC, Imboden	3-1	6	DE
9	31 NY, 32 NY	1 Va	1-1	4	AB2
9	2 RI, 18 NYM	1 Va Cav	1-1	6	AE
9	2 Mich	La Sp, 11 Miss, Davidson	1-4	6	AE
Bombardment:					
9	I/1, D/2, G/2	Beckham	2-1	2	—
9	A/2, E/3	24 Va	1-1	6	—
9	1 Va	32 NY	1-1	2	EX (Hunter KIA)
9	13 Va, 1 Md, 3 Tenn, 10 Va, Walton, 6 NC	14 NYM	5-1	6	DE

Note: Grey shaded sections are Confederate attacks.

road, where they can follow Richardson towards Manassas or delay him if he attacks. Jackson marches back to defend Manassas alone, since detaching Johnston would delay the decisive battle at Centreville. Richardson's threat has accelerated, so the Rebels accelerate their own advance: Cocke advances onto the stream and Johnston outruns Early to activate Longstreet.

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3:00 PM

Union: Rex's move with Evans is no surprise; I would have pulled back also. If I move south I can be caught front and rear, so I attack Bee one more time. I can still get his brigade and I am also in position to head for QQ32, Manassas, or even the McLean House. I must smash these units before the Reb reinforcements arrive.

No surprises at Centreville either. His moves break the stream defense, but the units are exposed. Let's see how many Rebs die. I thought hard about sending McDowell south, but I think Burnside will be better at Centreville and McDowell is needed to keep him active. I think I may need those 4PM reinforcements after all; they will be useful in attacking Cocke.

The attacks this turn are a little disappointing again. The AE on my 1-1 continues my pattern of poor luck with soak-offs; and the DB on the 2-1 assault will allow Bee to rally his brigade. The 4-1 attacks split kills, but at least the 8-1 was a DE! I make no advance as I like it where I am. Those rumors about whiskey and women are still around but at least they're not getting any stronger.

Richardson tried to finish the nearby Rebels.
Richardson attacks into irrelevancy. He should advance on Manassas, not attack Bee; now the game will be decided at Centreville before he can get there. The delay alone removes him as a threat and his losses emphasize the point. Similarly, by coming to Centreville, Burnside ends the last hope of getting to Union Mills in time.

Confederate: Surprising developments all over the map this hour. To take the most critical first, the damnyankees launch an ill-advised attack on Bee, who is sheltered by Bartow. Things go wrong for him from the start—as both his soak-off and the main attack misfire. As Walton and Jackson hurry along, my other forces take up the battle of attrition he has started by surrounding his. Paul will be forced to cut his way out, risking both Keyes last piece and Richardson himself. My strategy here—to bleed the enemy on this flank, trading him brigade for brigade if necessary, while massive reinforcements approach. Of course, these may be unnecessary if his desperate attacks to get out of the trap fail (meaning the death of Richardson and Keyes).

To the north, not much activity around Centreville. I merely shift to consolidate my foothold on the ridge and bring my grand battery into play. Early is put back into command. The brave 3SC moves into position to cut the main road east from Centreville (this to insure that McDowell makes no dash down it to awaken those happily sleeping survivors of the battle at Yates' Ford). Langhorne continues to prove himself a nuisance, forcing the enemy to maintain a continuous line to the northeast of Centreville. The minute a hole opens, he goes through it. And, Cocke will rally one of the picket units destroyed by the Union advance this turn past. I want as much in the area as possible for when my major assault comes, for I plan to hit him from the west and south simultaneously.

Bee surrounded the attacking Federals.
Bee neatly traps Richardson and Keyes, and with no pressure Johnston can spare the time to pick up Early. Rex can be as deliberate and careful as he pleases in the coming battles.

COMBATS CHART

Turn	Units Attacking	Units Defending	Odds	Die Roll	Result
10	1 Conn,2 Conn,G/1 2 Me, Richardson Bgd	Davidson	6-1	4	DE
10	79 NY,2 Wisc,27 Pa	30 Va	2-1	3	DB2 (elim)
Bombardment:					
10	E/2	17 Miss	1-2	4	—
10	13 Va,6 NC	1 Mich,G/2	1-1	3	DB2
10	Smith Bgd, Beckham, Walker, Squires	38 NY,D/2	3-1	2	EX
10	Advancing 1 Md shoots down Heintzelman				
Bombardment:					
10	Pendleton, Garnett, Kemper, Shields	E/3	2-1	1	DL1
11	3 Mich, G/1	4 Al	1-2	4	AB2
11	1 Mass	Bartow Bgd	1-2	4	AB2
11	1 Conn,12 NY,2 Me, 2 Conn,3 Conn	2 Miss,11 Miss	3-1	4	DB2
11	Burnside Bgd, REG, 2 NYM,1 RI	5 SC	3-1	4	DB2
11	31 NY	17 Miss, 18 Miss	1-6	6	AE
11	I/1, G/2, 27 NY, Franklin Bgd	1 Md	5-1	1	DE (Smith KIA)
Bombardment:					
11	M/2	La Sp	1-1	1	DB2
11	D/5, 2 RI	Stanard	3-1	4	DB2
11	E/2	8 Va	1-1	1	DB2
11	6 Al	2 NYM,1 RI	1-5	2	AE
11	17 Miss,18 Miss	Burnside Bgd, REG	1-4	6	AE (Beauregard & Jones KIA)
Bombardment:					
11	Heaton, Rogers, Latham	A/2	1-1	6	—
12	3 Conn, M/2	4 Al	1-2	5	AE
12	G/1,2 Conn,3 Conn, 2 Me,12 NY	2 Miss,11 Miss	3-1	2	EX
Bombardment:					
12	A/2, E/2	8 Va	3-1	5	—
Bombardment:					
12	Heaton, Rogers, Latham	79 NYM	1-1	6	—
13	3 Mich,1 Mass	Bartow Bgd	1-2	5	AE
13	12 NY,1 Conn,2 Me	4 Al	2-1	3	BD2
13	1 Ohio,2 Wisc	49 Va	4-1	5	DB2
13	Blenker Bgd,8 NY, E/2	19 va	3-1	1	DE
13	Sherman Bgd	8 Va	AV		DE
13	La Sp	12 NY,2 Me	1-3	5	AE
13	Bartow Bgd,4 SC,4 Al	1 Conn	4-1	6	DE
Bombardment:					
13	Pendleton, Garnett, Shields, Kemper	A/2	4-1	4	DB
14	2 NYM,2 Ohio	Miller	3-1	1	DE
14	Sherman Bgd,2 Wisc, 1 Ohio, A/2, E/2	Kershaw Bgd	3-1	2	EX (Kershaw KIA)
14	2 Me, M/2	4 SC	1-1	1	DE
14	12 NY	4 Al, Bartow Bgd	1-4	1	AB2
14	Bartow Bgd	2 Me	1-1	3	DB2
14	Cocke Bgd,1 Va,19 Va 49 Va, Latham, Rogers, Heaton	27 Pa	2-1	1	DE
14	Bonham Bgd, Shields, Longstreet Bgd, Garnett, Pendleton, Kemper	Burnside Bgd, A/2, E/2	2-1	1	DE (Burnside KIA)
14	Rosser, 11 NC	2 Wisc, 69 NY, 1 Ohio	1-3	2	AB2
15	69 NYM, 2 Wisc, 39 NY, 1 Ohio	Longstreet Bgd	1-1	6	AE

UNION CONCEDES VICTORY ON 15TH TURN

Note: Confederate attacks indicated by grey shading.

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3:30 PM

Union: Driving home after completing the last turn, I realized that Richardson and Keyes could be surrounded. Too bad that Rex took advantage of that oversight. Now I need to win a 1-2 attack to even continue the game.

Elsewhere, I can use those maligned NJ troops, so Schenk attacks the lone battery. I'm positioning my leaders to keep them active no matter where Rex moves. This lets the lurking cavalry unit get within two hexes of Centreville; but if he does, it is only to die next turn. I'd rather see that happen than have the road cut before the reinforcements arrive. I can also get a 3-1 on Kershaw and I'll take it. So Sherman, Burnside and Blenker open my last counter-attack. The line is getting a bit tight now, especially with some troops off at CCC3, but Rex still can't get a 3-1 anywhere. McDowell *now* heads for the trestle. Travelling with the REGs, he should get there in about three turns.

Hurray for the New England troops! A 2-1 DE is just what I needed to free Richardson. Even the 12 NY managed to survive the 1-4 soak-off. I have to slow the advance now to get some troops rallied. The 3-1 is a "push"; we both lost troops, but Rex can't get his back; Who needs that booze in Washington?

> Miraculously, Richardson cut his way out.
>
> *Richardson escapes at New Market and McDowell starts for Union Mills, but both are for the far future. Right now the Federals must survive the battle of Centreville. They start with a good attack on Kershaw, but much of Sherman's force goes down in an exchange. This is intolerable—the outnumbered Federals cannot afford the casualties.*

Confederate: If the last turn was a bit of a surprise to me, this turn the damnyankees absolutely astounded me. Even worse, all the luck seemingly went his way.

To the west, Keyes and Richardson manage to extricate themselves from my trap with no loss whatsoever. In the process, Evans' infantry are eliminated. To attempt to rectify this rather one-sided state of affairs, Bartow and Bee will attack with all thier might. I can afford to risk the 1-1 and 1-2 attacks, given the close approach of Jackson and Walton and circumstances around Centreville. I look for there to be several turns of fierce combat across the board. Only this near the end do I ever launch low-odds attacks that could hurt if I lose. All I hope for is the destruction of Keyes, leaving a battered Richardson to face Jackson/Walton. As an aside that will probably play no part in the game conclusion, Evans goes in search of the errant Terry.

Turning to the critical area of Centreville, McDowell makes his break toward the south (looking to snatch a cheap victory). By my calculations, using the 1st Va Cavalry to delay for one turn, I've four or five turns to win the game by entering the town. So, Langhorne, finding the gap in the Union line he had hoped for, moves to screen Centreville from the north—forcing many of his units to be engaged putting him down and keeping them out of the town. The damnyankee exchange on Kershaw provides me with an added incentive to attack in the south, since he is out of position now. And, to the west, the long-planned 2-1 attack on the Penn boys to break Cocke across the stream and threaten Centreville from there. To the echo of rolling cannonades and the gleam of bayonets, the long grey lines roll forward at last. I can suffer one loss in these two low-odds attacks, but not both. If either succeeds, I have the damnyankees in a vice. Meanwhile, the South Carolinians find an open road themselves and quick-step toward town from the
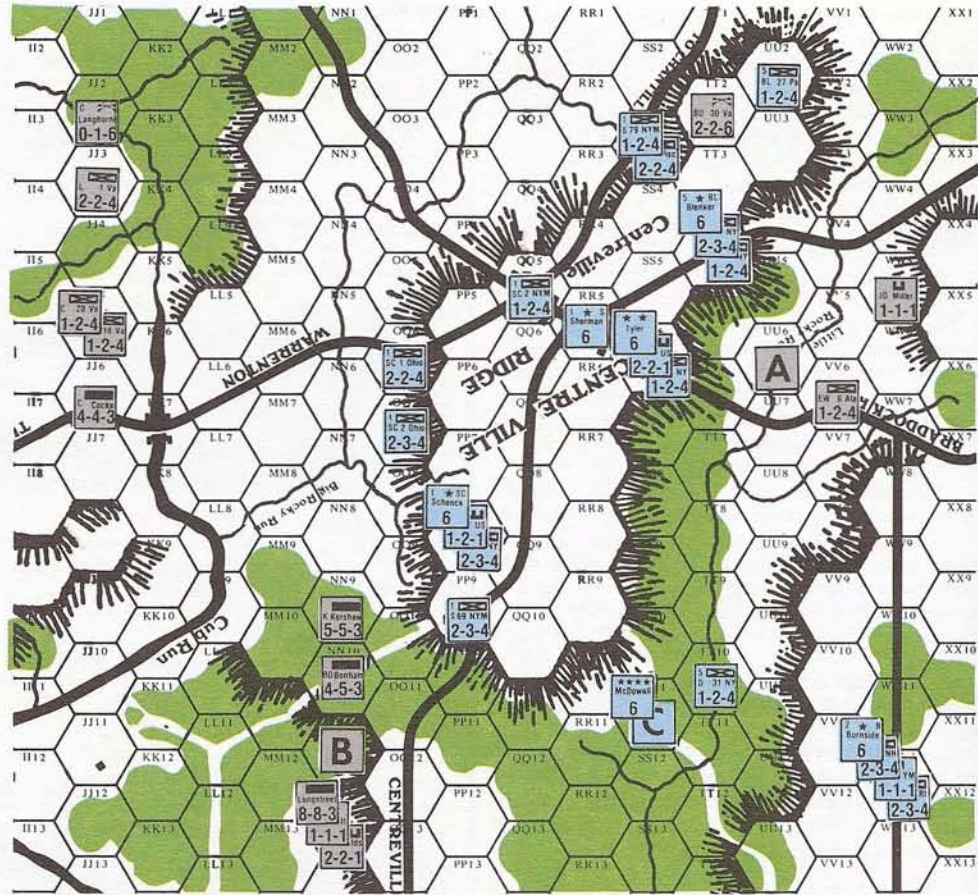
1:30 PM: Position following Union Turn. Letter coded counters represent: A—Beauregard, Jones, 17 Miss, 18 Miss, 5 SC; B—Pendleton, Rockbridge, Alburtis, Kemper, 11 NC, 3 SC; C—Davies, 16 NY, 18 NY, Bookwood.

2:00 PM: Position following Union Turn. Letter coded counters represent: A—Cocke, 8 Va, 19 Va, 49 Va; B—Longstreet, 5 NC, 11 Va, 17 Va, 24 Va; C—Pendleton, Rockbridge, Alburtis, Kemper, Garnett; D—Jones, 17 Miss, 18 Miss, 5 SC.
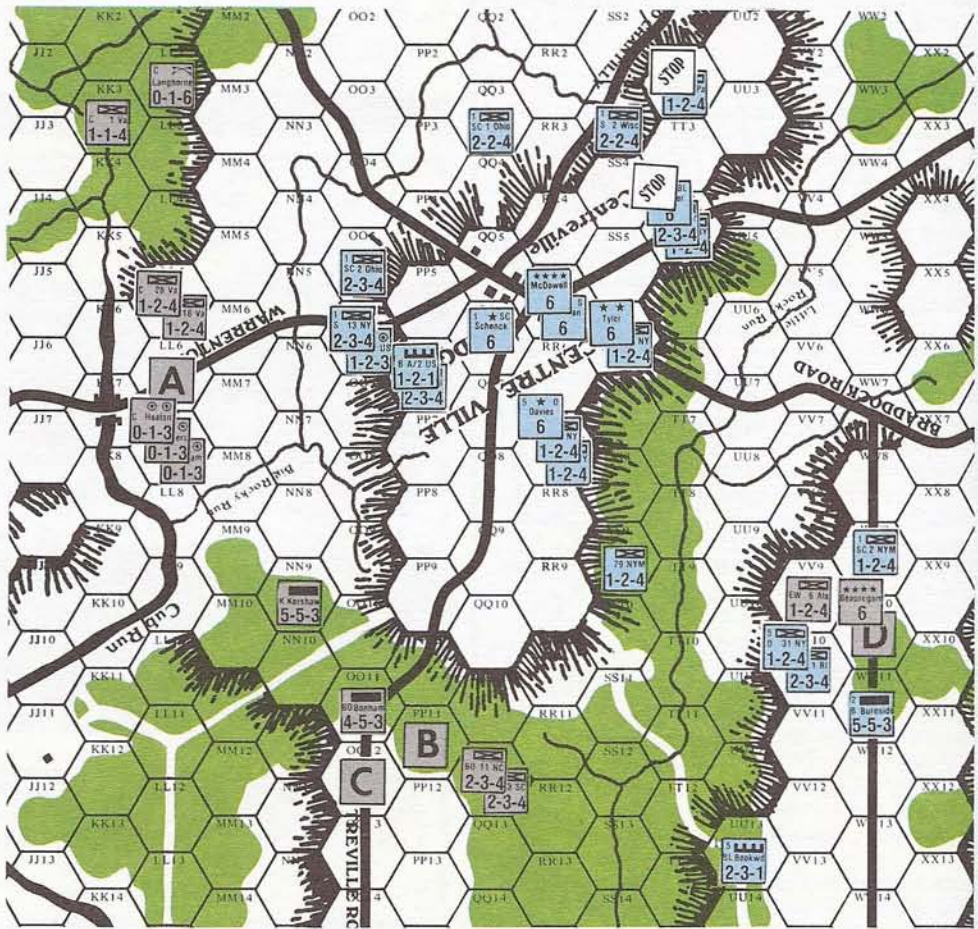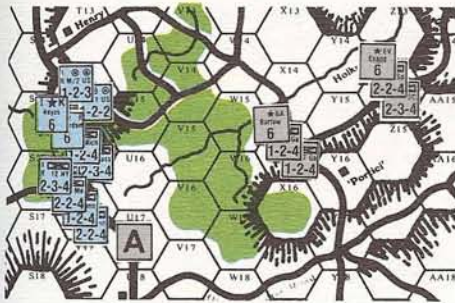
2:30 PM: Position following Union Turn. Letter coded counter represents: A—Bee, 1 Miss, 2 Miss, 4 Ala.

east. Since I'm committed to winning now by taking Centreville, Early might as well move north to provide backup in case of severe losses among the ranks and ignore the distraction of McDowell's antics.

Thus, with Confederate cavalry on the outskirts to the north and Confederate infantry approaching from the other compass points—with McDowell several turns from any influence on this game —with only one damnyankee brigade in position to reach the town—with Early marching to the sounds of guns—with Paul's 4:00 reinforcements now sprung but still two turns from the action—with Sherman's brigade shattered and the remnants bypassed—I must admit to a certain fleeting feeling of optimism.

The Confederate lines rolled towards Centreville.

With more troops, the Confederates will settle for exchanges; so they make low-odds attacks—and eliminate Burnside with no loss. That's the result Paul needed, not Rex. Along the western slopes, Cocke also breaks the stalemate he has faced.

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4:00 PM

Union: *EXPLETIVES DELETED!* The attacks of Rex last turn resulted in the best die rolling I have seen in years. The only thing I can do is win a 1-1 or the game is over. Adding injury to the insult, I forgot that road movement would bring his grey cavalry next to Centreville instead of two hexes away. The unit is dead on a 3-1 surrounded, but I could sure use the units elsewhere this turn. Sherman is shattered; Longstreet and Cocke will certainly press forward now they've the scent of blood. Richardson moves south while Keyes rallies, but that's merely being optimistic.

I just can't beat the die. The AE result means the game is over since automatic victories will allow a Rebel stroll into Centreville. Now, where did they say the beer and broads are?

I wasn't beaten by the die alone; my mistakes surely helped. I should have guarded Heintzelman at all times; I didn't and so allowed an enemy wing to need no troops at all. I also missed the attack across the trestle at Stanard. Still, give me a "6" on his 2-1 attack against Burnside and we would still be playing. I played well, but just poorly enough to lose. Rex made almost no mistakes and won. He is as good a player as I have heard and I look forward to the rematch promised.

One last assault was shot to pieces by "Stonewall" Longstreet's brigade, and then the rout began.

Paul's last hope it to dice out. He doesn't.

Confederate: I must admit that, with both my 2-1 attacks bringing the best possible results for me, I had expected a last-ditch attack by the desperate damnyankees to force me to pause a turn or two. And the loss of Longstreet's brigade would certainly

have distracted me and bought Paul a turn. But, instead, the loss of his final gamble leaves my forces in position to AV the pitiable defenders he has thrown into the town. So, his conceding me the victory after the throw of the dice brings it all to an end. With Stuart and Terry chasing the scampering scallywags back to Washington, the rest of the Confederate Army settles down for a well-earned rest and repair of shoe-soles.

As for my final analysis, as far as I'm concerned Paul simply didn't take advantage of my errors in judgement (with the exception of the loss of Beauregard—which I had not expected). I look forward to our casual rematch, but have no plans to play the same type of strategy again. I learned long ago that when playing the same person at the same game to overcome my natural inclinations and change my style. A lesson that this replay displays well, I think.

Students of the battle observe that the Confederates had more time to study the map . . .

Paul's plan to smash through at Union Mills was good, but he weakened it by dispersing his strength and then giving the Confederates time to bring up reinforcements. His failure to control the roads connecting his army meant that he was unable to repair the situation when his plan started to go sour. He did not allow for contingencies.

Rex, on the other hand, planned only for contingencies. Rather than impose a plan on the game, he grabbed key roads and then maneuvered skillfully to balance threats and opportunities. His position prospered as the Union plan unravelled. His final advance was not the end of a race; it was the climax after the enemy had been stopped. He passed up many chances to speed up the pace. This approach worked only because Paul was stopped cold —Paul was ahead in the race.

3:00 PM: Position following Union Turn. Letter coded counter represents: A—Richardson, Keyes, 12 NY, 1 Conn, 2 Me.

The tactics were an interesting contrast. Paul fought his units skillfully, but crippled his mobility by being careless with leaders. Rex showed flair with leaders (he exploited the command rules shamelessly), but his unit placement was often flawed. Rex was more effective because he avoided Paul's strength (technique with units) while Paul challenged Rex and started playing command games. Also, Paul's technical edge was partly offset by his luck.

3:30 PM: Position following Union Turn. Letter coded counters represent: A—Cocke in Brigade, 49 Va, Latham, Rogers, Heaton; B—Bonham in Brigade, Pendleton, Alburtis, Kemper, Shields, Garnett. Note that in the Confederate response, Burnside's force and the 27 PA are destroyed. This leads to a last frantic counterattack by the Union on Longstreet (in QQ9); the failure of it leads to Union surrender.
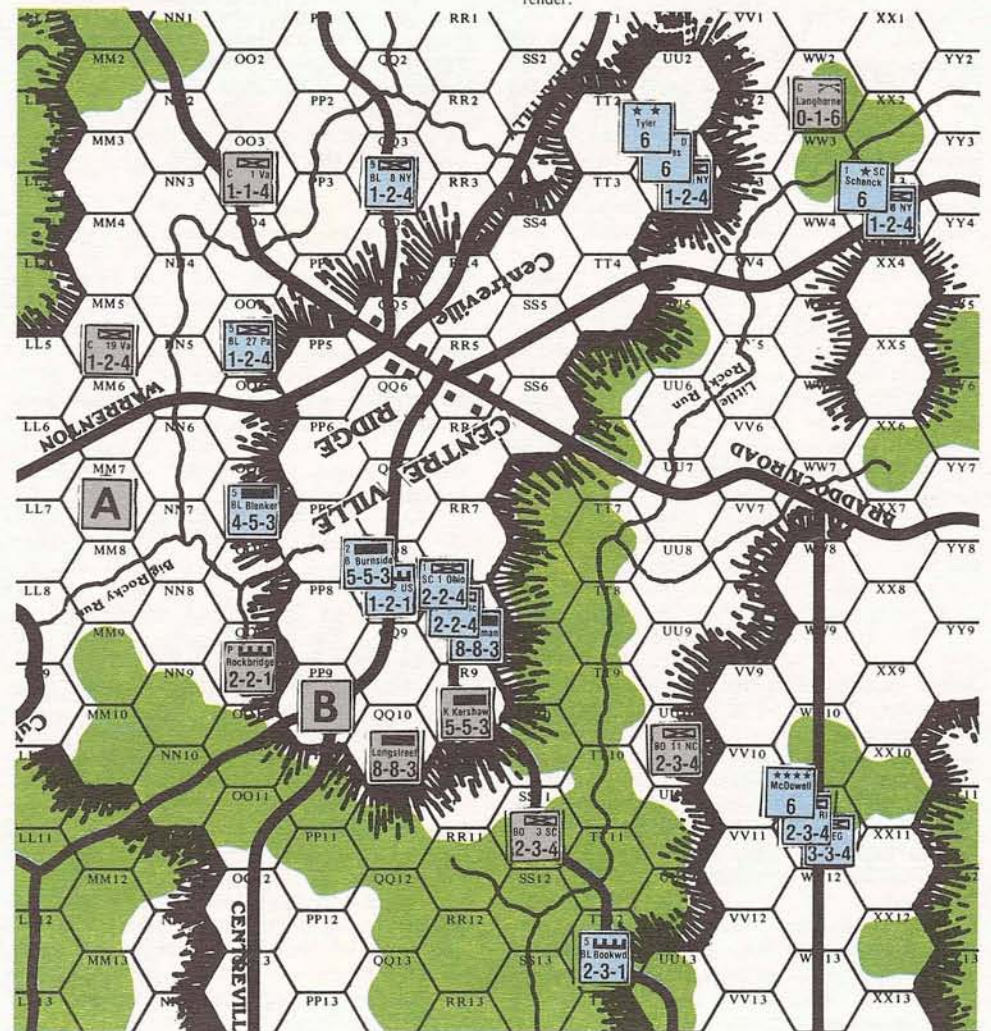
THE SECOND BALKAN WAR
A Scenario for GUNS OF AUGUST
By Gerald McDaniel

The Second Balkan War grew out of dissent among the allied Christian states in southeastern Europe which had joined forces the year before in expelling their former masters, the Moslem Turks, from all but a small segment of the European continent. True enough, Bulgaria, Serbia, Greece, and Montenegro had signed an agreement in May 1912 to expel the Ottomans; but the pact did not address itself to the issue of dividing the anticipated territorial gains. The first Balkan War began in October 1912, with the king of tiny Montenegro given the privilege of challenging the Turkish Sultan first to combat.

These allied kingdoms surprised Europe with a quick and complete victory over the supposedly invincible Turkish army, each attacking Turkey in the area most accessible to it. Serbia drove deep into Macedonia, Greece northward into Epirus and the lower Varder Valley around Saloniki, and Montenegro into northern Albania. But the Bulgarian armies made the most powerful onslaught against their erstwhile Turkish overlords, driving them down the Maritsa Valley toward the gates of Constantinople itself. The first Balkan War continued until the late spring of 1913. On May 30, the belligerent countries signed the Treaty of London, calling for an independent Albania and the virtual expulsion of Turkey from Europe.

But discord among the allies arose even before the war had ended. The Bulgars sent a token force to assist Greece in occupying Saloniki, but the Greeks expelled them. Bulgaria had fought the Turks primarily in the Maritsa Valley in Thrace, but its foreign-policy posture before and during the war had made it clear that its real aim was the annexation of Macedonia and the obtaining of an Aegean port. Here its interests clashed with those of Serbia, eager for expansion both eastward and westward, which made no signs of withdrawing its armies from either Macedonia or northern Albania. Moreover, Bulgaria's northern neighbor—Rumania, which had not even been a party to the conflict—took advantage of Bulgaria's fierce fighting with the Turks by demanding a strip of northeastern Bulgarian territory to compensate for what it foresaw as a significant Bulgarian acquisition of Turkish territory. While Bulgaria agreed to cede this portion of territory (the Dobrudja) to Rumania, it took quick action to strengthen its positions on its borders with Greece and Serbia.

Classical Balkan intrigue, pitting claim against counterclaim obscures the instigator of the Second Balkan War, but Bulgarian claims that it was attacked sounded hollow, causing one French diplomat to quip, "C'est le lapin qu'a commence'" (The rabbit started the fight). The order came from the war office in Sofia for the Bulgarian forces to start a severe attack against all Serbian positions in Macedonia at 8 a.m. 28 June 1913—a night attack that garnered for Bulgaria the first of many charges of violations of the rules of war. (Gladstone had invented the phrase "Bulgarian horrors" in the late 19th century to characterize Turkish atrocities against their Christian subjects, but throughout the Balkan Wars the phrase would come to mean Bulgarian attacks upon civilian populations in Macedonia.)

King Ferdinand's five army groups attacked quickly against the Serbs and prepared for the Greek thrust up from Saloniki. Bulgarian war strategy was based on the supposition that the Greek armies would be totally ineffectual and that

patriotically inspired Bulgarian soldiers, desirous of reclaiming territory that had been a part of the medieval Bulgarian Empire, would defeat the Serbs in the southwest before Rumania could mobilize. (Rumania had joined the Greco-Serbian alliance two weeks before hostilities began.) Allied strategy, on the other hand, was based on a consolidated front against the enemy from the Aegean to the Danube, until Rumania, which had not fought in the first Balkan War, would bring fresh, unexhausted military pressure in from the north. Help for the Allies arrived from an unexpected corner when the Turkish leader Enver Bey directed his armies against Bulgaria's southeastern border, in hopes of regaining Adrianople, which had been awarded to Bulgaria by the Treaty of London.

Bulgaria's defeat was quick and unequivocal. The Greek armies, often led by King Constantine himself, were far stronger and far more aggressive than anyone in Europe had expected, pushng up from Saloniki and threatening to turn the Bulgarian would-be invasion into a defensive position. The Bulgarian plan for a highly co-ordinated attack on the entrenched Serbs foundered in the rough mountain terrain and in miscommunication between the commander general Ivanov and his subordinates. (Bulgarian lieutenants after the war testified to the fact that high staff-officers had lied to the King about the army's strength and morale.) The Bulgars faced stalemate with the Serbs in the west and the Greeks in the south when the first Rumanian forces crossed the Danube July 11th. King Ferdinand announced that the Rumanian invasion would not be opposed because it could not. However, Sofia did not sue for peace until the Turkish armies began their advance through Thrace and up the Maritsa Valley.

Hostilities ceased on July 30, 1913, when an armistice was signed in Bucharest. Serbia agreed to the cease-fire since it had secured Macedonia, its primary object, and the Serbs knew that deeper penetration into Bulgaria proper would be sufficient provocation for Austria-Hungary to attack them. Secret reports indicate that despite Greek claims that its armies had stoutly held off the Bulgarians, Greece had urged its Rumanian ally to arrange an armistice because its defenses were about to break. Ironically, Turkey gained nothing—indeed, the "sick man" lost territory in the final reckoning.

The Treaty of Bucharest, signed the month after the war concluded: divided Macedonia between Greece and Serbia. Rumania gained an additional strip of Dobrubja on the Bulgarian northeast Black-Sea coast. But Bulgaria was not totally excluded from sharing the gains the Christian states had made at Turkey's expense in the First Balkan War. Bulgaria received much of formerly Turkish Thrace, including the access to the Aegean which it had coveted. But its Aegean foothold was short-lived; when Bulgaria signed a separate peace accord with the Ottomans in September 1913, it surrendered the lands and city of Andrianople as well as a segment of land containing the only railroad access to its newly gained Aegean seaport of Dedeagetch.

The result of the Second Balkan War of 1913 was a Bulgarian desire for vengeance that drove it even deeper into consort with the Central Powers; a self-assuredness on Serbia's part which the Austrians would interpret as arrogance and which would play no small role in igniting the powder-key

at Sarajevo a year later; and the unexpected and ironic re-emergence of Turkey as a factor in Balkan politics, that fact too would play a role in the upcoming drama of 1914.

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THE SECOND BALKAN WAR

The Second Balkan War is a short wargame between the armies of Bulgaria and her Austro-Hungarian ally and the armies of an alliance of Serbia and Greece, joined later by Rumania and Turkey. The game is based on an actual conflict that took place in the year before Sarajevo. This game allows owners of Avalon Hill's *GUNS OF AUGUST* to play a limited war, without losing the distinctive features of artillery involvement, weather modification, terrain effects, and fortification potential that characterizes the larger game.

1.0 SCENARIO LENGTH The game lasts six game turns, each representing one month from June to November, 1913.

1.1 Since hostilities did not actually begin until June 29, 1913, movement in the June game-turn is cut in half, rounded up, and railroad movement is limited to five hexes.

1.2 A victory check will be made at the end of the November game-turn.

1.3 Since Bulgaria was the instigator of the conflict, the Bulgarian player phases first.

2.0 DEPLOYMENT The troops are deployed on the Eastern Front mapboards of *GUNS OF AUGUST* game-board, all within the borders of the Balkan countries.

2.1 The single Montenegrin infantry unit available in *GUNS OF AUGUST* counter-mix is to be considered in this scenario an integral part of the army of Serbia and may be deployed by the Allied player in Serbia.

2.2 One Bulgarian infantry unit each will be initially deployed in Sofia and Varna. All other Bulgarian units available in *GUNS OF AUGUST* counter-mix must be deployed in border-hexes with Serbia and Greece.

2.3 All Serbian troops available in *GUNS OF AUGUST* counter-mix must be deployed at least one hex away from the Bulgarian frontier.

2.4 All Greek troops available in *GUNS OF AUGUST* counter-mix may be deployed anywhere in Greece.

2.5 All Rumanian and Turkish troops available in *GUNS OF AUGUST* counter-mix are deployed at the start of the game but do not become belligerents until the July game-turn.

2.51 Rumanian troops may be initially deployed anywhere in Rumania except in frontier hexes with Bulgaria

2.52 Turkish troops are initially deployed in Constantinope and adjacent hexes.

2.53 When the Rumanians and Turks enter the war at the beginning of the Allied Movement Phase of the July game-turn, their movements for that game-turn alone are reduced by one.

2.6 No troops other than Austro-Hungarian troops may ever be deployed or moved in hexes of the Austro-Hungarian monarchy.

2.7 No more than three infantry units and one artillery unit may ever be stacked in the same hex at the end of the phasing player's Movement Phase.

3.0 AUSTRO-HUNGARIAN INVOLVEMENT Although Austria-Hungary was not engaged in the historical Second Balkan War of 1913, had the war lasted longer, the chances are great that the Dual Monarchy would have made some effort to prevent the complete conquest of its Bulgarian ally. The following hypothetical involvement reflects this likelihood.

3.1 An Austro-Hungarian army consisting of two 2/4/3 infantry units and one 2/2/2 artillery unit is initially deployed in Budapest by the Bulgarian player. It may be moved at half-movement, rounded up, within the borders of the Empire during the June game-turn. It may continue to move in successive game-turns at full movement allowable by weather and terrain, but it must remain in Austria-Hungary until the Bulgarian player brings the Austro-Hungarian force into the war (see 3.2.)

3.1.1 In each successive game-turn, two more 2/4/3 infantry units are brought into play at Budapest as reinforcements during the Inter-Phase by the Bulgarian player. They may move at full movement within the boundaries of the Empire.

3.1.2 Austria-Hungary may replace infantry units, according to Rule 4.0, but the artillery regiment can never be replaced.

3.2 The Austro-Hungarian support force will be brought into the actual war by a roll of the die made by the Bulgarian player at the beginning of his Movement Phase. These enter if he rolls a 1 or 2 in June, 4 or less in July and August, 5 or less in September. If the Austro-Hungarian force is not brought on by die-roll by the opening of the Allied October Movement Phase, then they enter automatically.

4.0 REPLACEMENT POINTS During the Replacement and Reinforcement Phase, the belligerent nations have the following replacement points: Serbia, 2; Rumania, 2; Bulgaria, 2; Austria-Hungary, 2; Greece, 1; Turkey, 1.

4.1 Replacement points begin accumulating from the opening of the conflict then continue accumulating from month to month. Thus, a country may be accumulating replacement points even before it enters the war.

4.2 Each country with artillery capacity will receive during the calculation of replacement points one artillery point for each two infantry replacement points.

4.2.1 NOTE: The Austro-Hungarian artillery replacement regiment is never replaced.

4.3 When a city is captured and garrisoned by enemy forces, that country's replacment points are reduced by one.

5.0 SURRENDER OF A COUNTRY If both cities in Serbia or Rumania fall to Bulgaria and/or Austro-Hungarian armies, that country is considered conquered and its forces are all withdrawn from the war. Greece withdraws if Salonica falls, as does Turkey if the Bulgarians capture Constantinople.

5.1 Bulgaria does not surrender unless all its armies are eliminated through combat. (See VICTORY CONDITIONS, 8.0.)

6.0 FORTIFICATIONS AND ENTRENCHMENTS Fortifications and entrenchments function essentially the same as in *GUNS OF AUGUST*, with the following modifications:

6.1 Each belligerent capital (i.e., Sofia, Belgrade, Bucharest, and Constantinople) is a permanent fortress, thereby modifying the die roll in defense by -2.

6.1.1 Forces inside a fortress may never attack unless they are moved on top of the fortress. They thereby lose the die-roll advantage of the fortress. They may not move back into the fortress until the next Movement Phase.

6.2 The process of entrenchment is the same as in *GUNS OF AUGUST*. Entrenched forces modify the die roll in defense by -1. When used for attack, they lose the entrenchment advantage, but may be considered re-entrenched at the end of the Combat Phase.

6.3 For each two artillery attack strength points participating in an attack, the die roll is modified by -1.

7.0 WEATHER AND SUPPLY These factors operate the same as in *GUNS OF AUGUST*. Bulgarian units in Bulgaria are always considered to be in supply.

8.0 VICTORY CONDITIONS The game ends whenever either side gains a Total Victory (see below). Otherwise, the game continues until the end of the November game-turn, when levels of victory are determined.

8.1 Total Victory Conditions

8.1.1 Total Allied Victory: The complete conquest of Bulgaria by occupying Sofia and Varna and eliminating all Bulgarian army units.

8.1.2 Total Bulgarian Victory: The holding of Sofia and occupying any three Allied cities.

8.2 Operational Victory Conditions

8.2.1 Operational Allied Victory: The occupation and garrisoning of both Bulgarian cities.

8.2.2 Operational Bulgarian victory: Holding Sofia and having sufficient forces around an Allied capital to be able to launch an attack at odds of 2 to 1 or better (calculated in the usual manner of attack strength points to defense strength points, but irrespective of die-role modifiers).

8.3 Strategic Victory Conditions

8.3.1 Strategic Allied Victory: Allied forces in an attack position around Sofia at 3 to 1 odds (see 8.2.2).

8.3.2 Strategic Bulgarian Victory: Holding Sofia and having Bulgarian and Austro-Hungarian force capable of making an attack of 3 to 2 odds against an allied capital (see 8.2.2).

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☆

Squad Leader Clinic

HAVE YOUR OWN SCENARIO PUBLISHED?

By Jon Mishcon

You and your opponent are picking over the scenarios again. "This one is too big. This other too small. This is interesting but there is no armor. Say why don't we write our own?" Out come the SS and Engineers. The 10-3 and 10-2 leaders. The Nebelwerfer and King Tiger. Say 72 Russian regular infantry, conscripts and assault troops backed up by a solid phalanx of T-34s form up four boards away. Fifty turns played to total elimination of one side or the other. I think I'll leave before the sound of clashing cardboard begins.

Most such efforts die aborning. Of those that survive the first playing, 99% gasp their last on the second run through. However, with thousands of fairly bright players meeting thousands of times every year, there manages to be a steady stream of scenarios to Don Greenwood and Rex Martin for possible publication. Now 99% of these die horribly—a lot of them at our hands. We'd like more scenarios to make it to publication—we really would. So . . .

What kills a scenario at playtest? How can you avoid getting your hard work rejected? Let's review problem areas point by point.

Prelude and Aftermath: These never kill a scenario but can affect its survival chances. Include within them who is doing what and why. They should represent a real, researched historical event. The outcome should be clear and indicate why it occurred. If possible, try to integrate the scenario within the context of a campaign. And, remember brevity.

Victory Conditions: Keep them simple. Unambiguous. Try for things like eliminating or exiting x number of squads by turn y. Make sure that these force the attacker to actually attack. Insure that tie games are impossible. Not that draws are historically unreasonable, rather that cautious players will rarely risk all to win if they keep a draw as an out. As the advantage seesaws, both players will tend to back towards a draw and suddenly there is a profusion of tie games. A lot of draws means a lot of boredom.

Force Allocation: Clarity is vital here. ("Which 88mm AA gun?") When in doubt, remove—don't add—pieces. Insure reasonable historical accuracy (no Panthers in 1941 or Boys ATRs in '45). And try exceptionally hard not to violate the counter mix limits.

Game Length: Fairly simple—who moves first; who sets up first; exactly how many turns.

Setup: Again, we look for clarity. Never specify in or out of "the town". Try to specify hexlines (and always state whether inclusive or exclusive).

Special Rules: These are those that alter terrain or normal *SL* system rules. Every one is a potential killer, even the most innocuous. They must be crystal clear. Obviate but don't contradict the established rules. (For example, it's fine to discard the offboard artillery rules, but don't expect to get away with mobile field phones.) More than ten special rules are too many for any normal scenario. Make sure your rules are never absurd (say, fighters that lay ten hexes of smoke per turn). And, of course, be comprehensive—the special rule that is

vital and overlooked is as bad as the unnecessary one put in.

All the above is the skeleton of a publishable scenario. To breathe life into your creation, the next hurdle is the toughest. The dread *Playbalance*. Good to excellent play by both sides should yield no more than a 60/40 split in victories. It is far too easy for the would-be designer to see the "obvious best approach" and miss other lines of play. Always have someone other than yourself playtest for you, free from your immediate interference.

The last element of a truly great scenario is to give both players tough choices. If there is an optimum play line, then most gamers will muck about until they find the best defense/offense and then never touch the scenario again. If, however, the scenario is engineered so that each attack route or defensive position has both advantages and flaws, then your game will be played over and over again.

As part of this Clinic, find the first and second drafts of Martin Shaw's "Death's Head at Lusho". In many ways it represents a substantial portion of submitted scenarios. Lots of poorly led Russians with scads of armor take on the magnificently led but few SS. Take the time to play SSTK 1a. See if you can find the flaws that prevented its publication. That's OK, I'll wait.

Now permit me to "replay" the playtest evaluation:

DEATH'S HEAD AT LUSHO

Scenario SSTK 1a

LUSHO, EAST OF THE VALDAI HILLS, September 24th, 1941: Noon: as Army Group North continued to press at the gates of Leningrad, to protect its right flank the German 16th Army and SS Totenkopf Division has been compelled to entrench west of the Pola River. Following fierce engagements in the region since September 8th, the Germans were convinced that the adverse weather and heavy fighting had hurt the Russians far more that it had hurt themselves and still anticipated the collapse of all Soviet resistance before the end of the winter. Not surprisingly, in spite of information received from deserters on the previous day, warning them of the impending attack scheduled for noon, the Germans were caught completely off guard by the size and intensity of the assault. The heaviest blow fell on Lusho where two Soviet regiments, charging behind a screen of tanks, crashed into the German defenses.
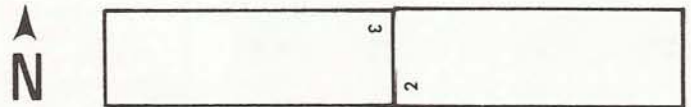
VICTORY CONDITIONS

The Russians win either by being the last side to have uncontested control of all five stone buildings on Board 3 initially in German hands or by exiting two tanks, with functioning main armament, off the west edge of Board 3.

Board Configuration

TURN RECORD CHART

✠ German sets up first								
★ Russian moves first	1	2	3	4	5	6	7	8	END

Elements of the 2nd Battalion, 3rd SS Totenkopf Infantry Regiment set up on Board 3 on any of the following hexes, one squad beneath each entrenchment counter: Hill 534 hexes east of row L, Hill 547 hexes east of row I, wood hexes J4 and F5. The roadblock between roadhexes K3 and B5. In addition to the concealment counters given, all entrenched units are considered concealed at the start of play:

Elements of the 2nd Co. of the SS Totenkopf Tank Destroyer Battalion set up on Board 3 between rows V and L inclusive. Squads are set up in stone buildings, no more than one per building:

Ad hoc Battery of the SS Totenkopf Artillery set up on Board 3 west of row BB inclusive, only one gun on Hill 498:

Elements of Assault Infantry set up in any woods hex east of row 3E inclusive, but not adjacent to any German entrenchment:

Elements of Armor Spearhead set up on Board 2 on any road hex east of row G inclusive:

SPECIAL RULES

1. There are no artillery modules.
2. The Germans may not request indirect fire until their own player turn.
3. All hexes south of 3B3, 3A4, 2B6, 2C7, 2D7, 2E9, 2F8 and 2G9 are considered woods hexes.
4. The wooden building at 3I10 does not exist.
5. The Russian player receives air support from two IL2 Sturmoviks available on Turn 1.
6. Russian infantry may not prep fire on its first turn. However, in the advancing fire phase, units that have not moved may fire with full effectiveness.

DEATH'S HEAD AT LUSHO

Scenario SSTK 1b
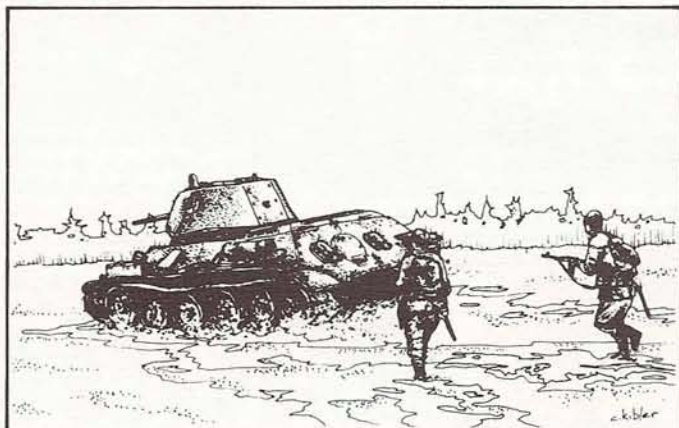
LUSHO, EAST OF THE VALDAI HILLS RUSSIA September 24, 1941: Noon: as Army Group North continued to press at the gates of Leningrad, to protect its right flank the German 16th Army and SS Totenkopf Division had been compelled to entrench west of the Pola River. Following fierce engagements in the region, the Germans were convinced that the adverse weather and heavy fighting had weakened the Russians far more than themselves. In spite of information received from deserters on the previous day warning them of the impending attack, the Germans were caught completely off guard by the size and intensity of the assault. The heaviest blow fell on Lusho where two Soviet regiments, charging behind a screen of tanks, measured the German defenses.

Board Configuration
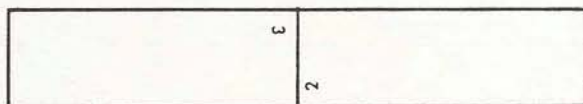
VICTORY CONDITIONS

The Russian player wins by being the last side to have uncontested control of all five stone buildings on Board 3 initially in German hands *or* by exiting two tanks, with functioning main armament, off the west edge of Board 3. The German player wins by avoiding both Russian victory conditions.

TURN RECORD CHART

SPECIAL RULES

1. There are no artillery modules.

2. The Germans may not request indirect fire until their own player turn.

3. All hexes south of 3B3, 3A4, 2B6, 2C7, 2D7, 2E9, 2F8 and 2G9 are considered woods hexes.

4. Lusho lay close to the swampy banks of the River Pola; therefore all hill terrain on Board 2 is designated marsh. All relevant rules for Marsh are in effect for these hexes.

5. The Russian player receives air support from two IL2 Sturmoviks available on Turn 1. This air support was employed to strafe German en-

trenchments; the Sturmoviks are therefore prohibited from attacking further than seven hexes west of the westernmost unbroken Russian squad.

6. Russian infantry may not prep fire on its first turn. However, in the advancing fire phase, units that have not moved may fire with full effectiveness.

7. SS squads set up west of Hex Row L on Board 3 must be initially placed in stone buildings, no more than one squad to each building.

8. All German weaponry eligible to do so may utilize bore-sighting.

9. There is no HEAT ammunition available to German anti-tank guns.

10. The wooden building in Hex 3I10 does not exist.

Prelude/Aftermath: Generally good, but doesn't follow up on what happened afterward.

Victory Conditions: Clear and unambiguous. Board 3 requires no definition of which buildings are stone. Allowing two victory types is always tricky but looks OK in this case. Tie games impossible; attacker has to attack to win.

Force Allocation: Historically accurate; specific enough; within the counter limits. Oops—did he intend HEAT availability?

Game Length/Setup: No outstanding errors here.

Setup Positions: Doesn't use "inclusive" well, but notes hexlines and terrain features clearly.

Special Rules: Changing clear terrain to woods is always a bummer; leaves a lot of LOS questions and is visually distasteful. In this case, the hexes chosen for transformation are uninvolved in combat, so we allowed the change. Otherwise, rules seem evident and are used to recreate the specific situation well. No absurd changes.

Playbalance: The intention of the designer, as noted in a separate cover letter, was to have the Sturmoviks try to clear a path for the attacking infantry while the tanks swirled through the village. Unfortunately, at playtest this never happened. The Russian instantly used his air power to attack the German artillery. Further, the thoroughly nasty Russian instantly whisked his tanks onto the level three hexes of Board 2. From these commanding heights, his guns were able to both suppress surviving German artillery and blast selected defensive positions in the town. Result: 85/15 proRussian—unacceptable.

Generally the skeleton was sound. So the results were sent back to Mr. Shaw. He reworked the entire scenario and mailed it back to Avalon Hill. After some minor changes, we felt it might be alright. But . . .

Now play SSTK 1b. Not our cup of tea. Too many troops in too little terrain. Hard to finetune ones like this. All in all though, it does what Mr. Shaw set out to do. But we figure it is still unbalanced—60/40 proRussian. Forgive us for not mentioning what tactic gives the Soviet player the edge; that's the fun of playtesting for AH. Good luck on playing this version.

And that's it. I hope you are able to use some of these pointers to get your own work into print. One last remark—forgive my beating to death the critical importance of getting two other players to test your work—naturally without the benefit of your guidance on "how the scenario should be played". You'll learn a lot that way, and save yourself some disappointment.

[Our thanks to Mr. Martin Shaw of Leeds, England for allowing his scenario drafts to be published as an example.]

TRADE CARDS for CIVILIZATION

Introduced by Mick Uhl in his article on expanding trade in the popular multi-player game CIVILIZATION (The GENERAL, Vol. 19, No. 4), these cards are now available from Avalon Hill. The deck of 50 cards, readily incorporated into the Trade Deck in the game without cumbersome variant rules, include new commodities: Timber, Oil, Wine, Silver, Resin, Dye and Ivory. These do affect the fine game in three fundamental ways. First, because of the increased number of cards, calamities will occur with lesser frequency. Second, the increased number of cards in play will mean that empty stacks will occur far less often; players with a large number of cities will not be inadvertently penalized by the exhaustion of the lower value stacks as the other players draw first. Third, it will be more difficult to build up sets of the same card type. For both veterans and novices of this exciting game, the new Trade Cards are an intriguing addition. These may be ordered from The Avalon Hill Game Company (4517 Harford Road, Baltimore, MD 21214) for $4.00 plus the usual 10% shipping and handling (20% Canadian, 30% overseas). Maryland residents please add 5% state sales tax.

In the first half of this replay, published in the last issue, the Confederates lost four points less than expected at Centreville; otherwise the real losses matched the expected losses for both sides. The second half of the game showed much more variation: at Union Mills the Union lost five extra points and the Confederate losses were average; at Centreville (including Burnside), the Union lost 12 extra points and the Confederates lost 12 less than expected; and in the west both sides lost five points less than expected (after Richardson cut his way out of the pocket—until then Union losses were one above average). In addition, the Confederates had only about a 4% chance of killing both Hunter and Heitzelman the way they did.

It is clear that the Confederates had much the better luck. When you reflect on how often they needed every unit, it is tempting to speculate what a few extra losses would have done . . .

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AREA TOP 50 LIST

Rank	Name	Times On List	Rating	Previous Rank
1.	K. Combs	37	2596YOV	1
2.	B. Dobson	12	2368SJR	2
3.	D. Burdick	36	2156GFN	3
4.	P. Siragusa	31	2152DGI	4
5.	B. Sinigaglio	22	2150GHI	5
6.	D. Garbutt	35	2138GIM	6
7.	E. Mineman	7	2090CEE	7
8.	J. Kreuz	31	2063GGL	8
9.	F. Preissle	34	2052LNX	9
10.	W. Scott	34	2042KIT	10
11.	P. Kemp	8	2024EEI	11
12.	D. Barker	2	2014GHM	12
13.	P. Landry	11	2012HHM	13
14.	M. Sincavage	26	1993EEJ	15
15.	J. Zajicek	39	1959HJQ	17
16.	J. Cormier	2	1957CEF	14
17.	R. Phelps	18	1943HIP	18
18.	J. Beard	26	1940GHP	19
19.	F. Freeman	11	1932EFG	25
20.	B. Remsburg	20	1926GIL	20
21.	S. Sutton	4	1926DGJ	23
22.	L. Kelly	30	1921VWZ	21
23.	R. Leach	39	1916ILS	16
24.	F. Reese	17	1898GDF	24
25.	M. Simonitch	7	1897CEG	26
26.	P. Gortman	2	1879GEF	27
27.	P. Flory	13	1875CFI	22
28.	B. Schoose	2	1856GHM	38
29.	B. Salvatore	5	1844FJN	28
30.	F. Ornstein	20	1843FHL	42
31.	R. Beyma	12	1836CDE	29
32.	J. Sunde	12	1830KKS	30
33.	B. Downing	26	1830FHL	31
34.	J. Anderson	13	1829DDF	32
35.	S. Martin	30	1828GIL	33
36.	H. Newby	2	1827LHH	35
37.	C. Wannall	13	1825GKN	34
38.	W. Ownkey	6	1812CEI	36
39.	B. Sutton	5	1806EFE	37
40.	D. Giordano	1	1802CEG	—
41.	J. Baker	9	1799CDI	39
42.	R. Hoffman	1	1798EGL	—
43.	P. Ford	2	1797GCP	40
44.	R. Shurdut	3	1785DDJ	41
45.	D. Greenwood	37	1779FFJ	44
46.	N. Cromartie	22	1776GGN	46
47.	K. McCarthy	2	1770CEH	47
48.	J. White	4	1769CFI	48
49.	E. Miller	23	1765GHO	49
50.	D. Kopp	1	1763FIM	—

Mr. Michael Sincavage is 34, married with one child, holds a B.A. in history and works for the federal government in Woodstock, Georgia.

Favorite Game: ANZIO
AREA Rated Games: AZ,WAS,AK,WAT
AREA W-L Record: 19-1   **% Time PBM:** 0%
Gaming Time/Week: 8 hrs.   **Play Preference:** FTF
Hobbies: Basketball, Video Games
Pet Peeve: Pedantic game reviewers; "after all, who *really* cares whether the 14th HQ is set up one hex away from its historical location?"

Mr. Sincavage airs his views on our hobby:

"On games, I'm pleased by the industry's return to simpler rules. I enjoy playing games, not reading rules; and the need to constantly reference rules makes me lose interest fast. I also enjoy dissecting a system myself, so overblown self-indulgent game reviews focusing on *correct* play are a turn-off. Of gamers, unfortunately the public has a distorted view. We are often regarded as freaks or wimps. While this may be true for the D&D ilk, it is far from the truth for historical gamers. Some of the nicest, most gracious normal *people* I've met have been gamers and I've enjoyed countless satisfying friendships with them. Your readers should never feel guilty about liking wargaming. I'm open about it and surprisingly my hobby involvement tends to pique interest rather than be a put-off among the people I meet."

The cave mouth yawns before you, a dark abyss bearing mute witness of the stygian terrors that may lie just within. Intrepid, you approach the cavernous maw, pondering a faint sulphuric stench that pervades the air. As the first rays of the morning sun seek out the inner reaches of the cave, your eyes are transfixed by the sudden glimmer of golden treasures. Before your joy can give wind to your feet, a blast of fiery vapors threaten to tear your cloak from your body. Your back is seared with heat, as if the gates of hell have suddenly been left ajar. Drawing breath slowly, you turn and match gazes with an immense Dragon . . .

The streets are quiet 'ere the Fires of Law bring light to the skies. It is your time, a time to wander the avenues and see what prey fate delivers to your judgment. Before you is the corner leading into the Avenue of the Juggler. As you make your way into this palely-lighted street, you detect a cowled figure heading in your direction. Silently, you melt into the shadows and await your prey, daggers drawn.

Noiselessly, with silent awkward motions, the figure glides by. Heedless of the crawling at the nape of your neck, you spring forth and drive your daggers deep into the enemy. The dagger hilts jam into his clammy flesh until they will go no further, yet he does not bleed. Slowly the figure begins to turn . . .
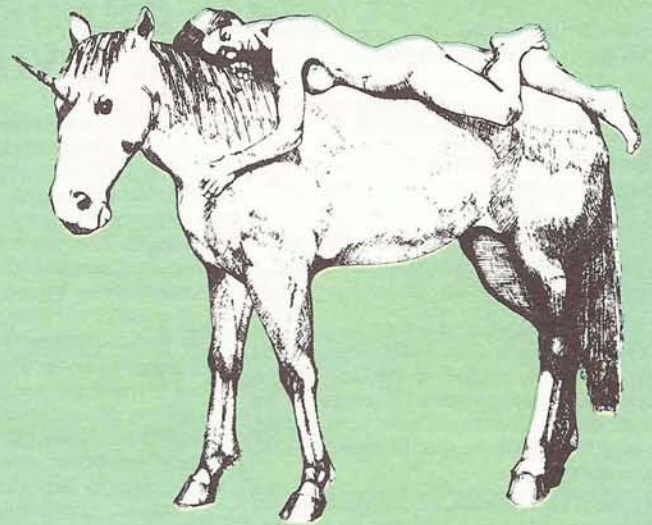
Powers & Perils presents you with new dimensions of Role Playing excitement. It transports you from the drudgery of mundane existence into cataclysmic worlds where the Shadows live and myriad eldritch encounters await the valiant.

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Powers & Perils is a Fantasy Role Playing game in the finest sense. With the systems provided, in partnership with the imagination, the game allows you to create worlds both unique and challenging. It is the ultimate test for the tested FRP gamer, while its systems are simple enough for the novice to understand and enjoy.

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Going beyond the finely detailed Character Book, you will discover a game system that logically details all facets of combat, encounter and magic without bearing you down in waves of picayune detail. The general systems are further aided by simple generation tables that allow you to expand on this system as you desire, creating spells and creatures unique to your campaign. With this system, you are never limited to a campaign waged with assembly line artifacts against one-dimensional enemies.

Powers & Perils provides finely detailed creatures, magical artifacts of all descriptions and magics, both natural and learned, beyond the standard parameters of a fantasy game.

As sure as the Sun rises, **Powers & Perils** will provide you with unique, challenging and constantly dynamic adventure. In partnership with your Referee, **Powers & Perils** will lead you on a journey into the infinite and allow you to grasp the intense variability possible in a truly fantastic world.

Powers & Perils is available from the Avalon Hill Game Company (4517) Harford Road, Baltimore, MD 21214) for $24.00. Please add 10% for shipping and handling (20% for Canadian orders, 30% for overseas). Maryland residents please add 5% state sales tax.

Dear Rex,

I would like to thank all who wrote to me in response to my article "A Historian's Guide . . ." [which appeared in Vol. 19, No. 6] for their constructive comments. Due to my recent reassignment to an overseas post I have been unable to personally respond to each as was my original intention—but as most of the comments were in the same vein, perhaps this letter will suffice.

In response to Mr. Hock's letter, with the assumption he made, his rules on morale are reasonable. Now that they are openly stated the historically minded gamer can make his own judgement as to whether the assumptions are warranted or not. If not, I see no reason not to generate your own modifications reflecting the reality you believe existed. Mr. Hock has always been willing to defend his work by reasoned argument and supported his viewpoints with sound evidence. I believe he is an example for other game designers who wish their designs to be taken seriously on historical grounds to emulate.

Likewise Mr. Stahler came to the studied defense of his D-DAY work with a number of well-made points. I am convinced to the point that I will agree that FE deserves a "3" for Strategy and DD a "3" also in the same category. This does not change the letter grades for either, which gives me the opportunity to make a point about my rating scheme. There is certainly room for argument over a point here and there (it is after all "One Man's Views"), but there seems to be concensus that the letter grades are pretty well on the mark; so I feel my point was made and the guide useful to those who need it.

One writer was kind enough to send me a copy of an article by a British historian which was quite critical of the OB work done on the British Army in THE LONGEST DAY. I was unaware of this work when I first wrote my article and am still unsure how it would have affected the points assigned. I think I would leave them intact because the cases raised by this professional were generally points of interpretation arguable either way. Some legitimate questions of fact arose, however, and it would be nice to hear from Mr. Reed in defense of his work some day.

A few writers have asked me what my favorite game is, probably expecting one of the "A" graded titles in reply. But as I stated in my conclusion, I am not a pure "historian" type and, while I rate BISMARCK, FLATTOP, WS&IM and ALESIA among my favorites, my personal gem — if I must have but one — would be NAPOLEON. The operative word in this hobby is GAME. Very few of us would spend long hours pushing little bits of cardboard across multicolored sheets of paper if it weren't fun.

William S. Owen
APO, New York

★★★★★

Dear Editor:

I'd like to make a rather large comment concerning a little something said in a letter you printed in Vol. 20, No. 1. The writer of this letter was happy to see the "SQUAD LEADER Clinic" come to an end. His reasons were very good, and I agree with them wholeheartedly. The "Clinic" was boring, and more or less unproductive and useless. The best example of this was the "Quiz on Infantry Tactics", an article I enthusiastically disliked. I personally liked the article on the Advance Phase more than any other "Clinic".

This boredom is not solely confined to just the "SL Clinic". Boredom runs rampant through all the SL articles ever printed in the pages of the GENERAL. Every SL article seems doomed to overflow with massive doses of probabilities and statistics, with maybe a paragraph or two of comprehensible suggestions stuck in somewhere. All of that's more boring than Heaven (which, as you may imagine, is a pretty boring place).

Perhaps what's needed are a couple of articles on DYO scenarios. I enjoy designing scenarios almost as much as I do playing them out. I've always played more DYO scenarios than all those "official" scenarios. Point values do aid somewhat in construction of the opposing forces in a game, but they don't stand up on their own very well. I've never once made a balanced scenario by "fairly" distributing a certain number of points to each side. Perhaps players might like to know things like—

What's the organization of a German '44 Infantry recon battalion in terms of SL counters?

What percentage of British Infantry in 1941 would be considered to have a morale of "8"?

Say I really want 20 tanks and only six squads in a scenario; what are the ways I can alleviate the infantry's situation in a DYO scenario?

Letters to the Editor ...

Yes, I know it's an uncommon vehicle, but was it fielded as a single supporting vehicle, or maybe in platoons of four or five—or what?

This is just an example of the subjects that could be covered in a possible article on SL DYO scenario design. Surely there are a host of others. Instead we continue to get boring analytic pieces ad infinitum. I know The GENERAL can do better.

William Bowers
Reno, Nevada

While I agree that articles on some aspects of DYO play for the SQUAD LEADER system would be welcome (in point of fact, no one has submitted any), I see no reason to disparage the efforts of those experts whose inclination is toward the more analytic approach. Certainly their work is greeted with interest by many readers, as indicated by the ratings for each such article and Clinic that has appeared to date. The elastic system of SL is broad enough to encompass both types of articles, surely. However, I also feel that any SL enthusiast competent in historical methodology can ferret out the type of information you desire, an enjoyable activity in its own right (at least for this gamer). But this editor remains open to suggestions—and submissions.

★★★★★

Dear Mr. Martin:

Thank you very much for publishing my article "Alone Against the Bugs" in Vol. 20, No. 4. I appreciated your editorial changes, but there is one point on which I feel the reader may be confused.

Although Humanoid installations were included on the Beam Fire Priority Table, the rule concerning them was inadvertently omitted. I feel that the rule gives the player some interesting strategic trade-offs. The rule should read as follows:

The Terran player may use Humanoid installations to *subtract* casualty points in a sector. They are placed as desired before the game begins. If there is no Arachnid hive in a sector where an installation has been placed, its points are no longer subtracted, but are *added* instead. Installations have the following point values:

Communications—25 pts.
Power—50 pts.
Water—75 pts.

Installations are automatically destroyed by an Arachnid demo or beam, or by a functional warrior which ends its turn in the hex with no functional Terrans or Humanoids present.

I might also add that I appreciate your obvious playtesting of my ideas. It shows you care enough to check for "bugs" (pun intended) in a variant before you publish it.

Rick Matthews
Lebanon, Oregon

★★★★★

Dear Editor:

Mr. Palmer hit a sensitive cord in his FREEEDOM IN THE GALAXY article in Vol. 20, No. 4. He recognized that there are basically two groups of gamers—traditional historical wargamers and those into fantasy and science fiction. Some gamers enjoy both equally, but many have a preference for one or the other. Invariably, one group will protest loudly whenever an issue of The GENERAL swings too far in one direction or the other (especially towards the fantasy end of the spectrum). This is a natural phenomenon since most subscribers like to read articles of interest to them; thus, equally naturally, the Editor strives to please everyone.

What are the causes of the dilemma? The root of the problem is the proliferation of games in the Avalon Hill line during recent years. Not too long ago Avalon Hill published a much smaller number of titles, most of which were traditional historical wargames. An expanded GENERAL seemed well able to keep up, although a minority usually complained about the lack of coverage of the old favorite classics. Today there are a large number of fine games being published that are not traditional wargames. The Editor is faced with the nearly impossible task of providing "balanced" coverage of the existing games while

continuing to publicize the newly published ones. The contents of The GENERAL are being diluted for whatever type of game the subscribers would like to see covered.

What then is a solution to this problem? I propose the establishment of a new magazine to cover the expanding Avalon Hill fantasy and science fiction line. There is already a separate magazine for sports game buffs in your line. This new effort would give Avalon Hill three major magazines to cover the three principal branches of their adult game line; this should satisfy most of the readers in the aforementioned groups. I suppose in time there will also be Avalon Hill role-playing and computer-game magazines. This solution will leave the harassed Editor of The GENERAL free to cover the traditional historical games (as he would obviously prefer) which commanded principal coverage until recently.

Robert J. Beyma
Pocomoke, Maryland

The task of keeping several thousand readers satisfied with the coverage of several dozen game titles reminds one of picking a path through a minefield. Certainly, as recent ratings on a fantasy oriented issue (Vol. 20, No. 2) and a science-fiction oriented issue (Vol. 20, No. 4) show, the readers react to "alternate history" themes with some disdain. Mr. Beyma's suggestions are excellent; indeed, we've already taken them up.

April sees the first issue of HEROES, Avalon Hill's newest periodical (48 pages, full-color, bi-monthly). Devoted to the role-playing line of games in the Avalon Hill stable, it will also regularly publish material on the science-fiction and fantasy boardgames—relieving much of the pressure for The GENERAL to feature these titles. Rates for HEROES are as for The GENERAL ($12.00 for a one year subscription, $18.00 for two years). Those who in the past have wanted a healthy dose of fantasy gaming can now revel in such regularly.

Turning to Avalon Hill's extensive line of microcomputer games, 1982 saw the premier issue of MICROCOMPUTER GAMES (what else?). A newsletter-format quarterly periodical devoted to news and articles on that facet of our hobby, it has gained a respectable readership in a short time. Subscription rates for the burgeoning fans of machine gaming are nominal—$4.00 for a one-year subscription and $7.50 for two years.

Only the sports gaming fans are disappointed. ALL-STAR REPLAY, Avalon Hill's sports-oriented periodical, has ceased publication. With a subscription list falling to such a point that continued publication was a burden and with the departure of Mr. Balkoski and Mr. Hughes, it was decided that the effort expended on the struggle to keep the magazine in production could be better spent on other projects. I would imagine, however, that a number of fan-published periodicals will spring up to fill the gap.

★★★★★

Dear Editor;

Your decision to publish a full-length feature on BLITZKRIEG was a most welcome one. The game is in many ways a neglected masterpiece. In his praise of the game, Mr. Harmon forgot to add one other important factor: it's one of the few games that is truly balanced (because it is contrived rather than quasi-historical). Most games, as AHIKS recognizes, have to be played twice, once from each side, to get a true "winner". However, Mr. Harmon's knowledge of the game is not what it might be in some respects. There are various mistakes and oversights in his article, some mechanical . . .

1) Armor cannot go from L6 to BB15 on Turn 1. The distance is 14 road hexes (4.66 MP) plus two non-road hexes (total, 6.66 MP). No unit may pass through an unreduced city (29.4).

2) Infantry cannot go from NN48 to JJ39 on Turn 1. The distance is seven road hexes (2.33 MP) plus two non-road hexes (total, 4.33 MP).

3) Bombing 2- and 3- resource cities is no more difficult than the 1-hex ones. Only one hex need be bombed (or in ZOC) to take out that city for resource purposes. (The rules are not so clear here, but that was the answer to a rules query I made of AH three yeears ago).

4) He has six units parachuting in his "White-Brown-Black" invasion plan. The limit is four.

The tactical errors are a more serious matter, however:

1) Mr. Harmon doesn't recognize the value of rule 30.8. Attacking at double strength on Turn 1 with TAC and MDM releases up to 16 ground factors for garrison and sea duty.

2) He fails to note that attacking a neutral city achieves its reduction in the city only two times in six (with an average loss of 4.5 factors). Even the best result puts just eight factors in HH31 in his White-Brown-Black attack, and Blue can come at him with a BBT attack better than 20 factors and then polish them off with a 3-1 or 4-1 surrounded.

3) He assumes that in a first turn invasion, one must take all the cities in a country. If Red is tackling Brown, it is quite safe to leave OO30 unreduced. The cost is four infantry factors for supply; but if Blue takes the bait and flies in his limit of four infantry units, their inevitable loss will compensate the Red player well enough. Nor is there any disadvantage to Blue leaving AA42 or CC15 unreduced (he can only take one of them in the Yellow-Green option). Red can pour in quite a few factors but both are natural traps for the defender. The siege may last several turns, but Red will lose most of what he puts in, and with their loss the strategic initiative passes to the Blue player.

If Red wants to try the White-Brown-Black option, perhaps against a defensive-minded Blue opponent, the proper lineup is:

Units	Start	Finish	Attacks
(3) 4-4	OO48	KK46	JJ46
6-10	NN48		JJ46
(2) 6-6	NN48	KK39	JJ38
(2) 6-6	NN49	JJ39	JJ38
(2) 6-6	SS25	NN39	OO40
4,4, 8-4-4	RR46	OO41	OO40
(2) 6-4	WW45	VV43	VV42
6-10	YY43		VV42
4-4	ZZ41	VV37	UU37
4-4, (2) 8-4-4	ZZ42	VV38	UU37
(2) 4-4, 8-4-4	AAA36	XX33	WW32
4-4	BBB36	XX32	WW32
4-8	BBB33		WW32
(3) 4-4	CCC29	WW25	VV25
4-4, 8-4-4	DDD29	WW26	VV25
(2) 8-6, 4-6	YY43	OO34	NN33
(2) 4-4 ABN	ZZ48	HH30	HH31
(2) 2-6 AAS	ZZ48	HH30	HH31
4-8	Sea Area C		HH31
4-4 ABN, 1-6	NN49	KK28	Block Road
2-4	UU45	NN37	29.6

Thomas Butcher
Shibuya-ku, Japan

★★★★★

Dear Mr. Martin:

I would like to take this opportunity to respond to Mr. John Alsen's letter on the "SQUAD LEADER Clinic" (Vol. 20, No. 1).

Mr. Alsen states that "SQUAD LEADER is a game based on quick decisions and luck." Granted, luck is a vital part of this game, as it is a part in any game where one must roll dice to produce results. But the luck "portion" in any game can be vastly reduced by the "proper" placement of one's pieces. Conflict simulations, or wargames, should not be condemned as "games of quick decisions" but rather viewed as an intricate game of chess, requiring the use of foresight and planning to achieve one's goals. If one wants a game of quick decisions, he (or she) should take a pocketful of quarters down to the local video arcade. Mind you, I am definitely not advocating the type of play highlighted by "Now let me check this just once more", nor do I approve of a slap-happy style of play. Wargames should provide the players with some insight, but mainly they are intended to provide enjoyment. You can't enjoy a game if you argue over every minute detail. The "SQUAD LEADER Clinic" was a series intended (I think) to help players clarify the rules that are often argued over, not to continually dissect and analyze the rules. It was intended to make all serious players better. Many, including myself, have had enjoyable games destroyed by one person playing to the "letter of the rule" and his opponent playing by the "intent of the rule". I for one am thankful for Avalon Hill and Jon Mishcon for clearing some obscurities from a complex system for both types of players. I personally feel that the "SL Clinic" should be continued on an occasional basis.

Mark Sockwell
Canton, Ohio

B-17 Errata

Table BL-3 should read "Roll *1D* per attempt to extinguish fire."

Fighter attack die roll modifiers are cumulative for additional FCA and FBOA hits, except that a roll of "6" always hits. Remember that a fighter destroyed (even by an accumulation of hits) does not get to attack.

The notes to Table G-7 apply to Tables G-6 and G-8 as well.

If the Navigator is KIA or Seriously Wounded, Table P-1 *Note (b)* applies.

On Table B-5, "6 O'Clock High, Die Roll 11—Walking Hits/Fuselage" should be *Type (a)*.

In the rules on Page 11, Section 6.4 should read "'3' − 1 = '2' = One Wave."

If one or two engines are out, there are no landing dice roll modifiers.

The B-17 takes a hit on Table P-1 (Nose Compartment), #10, rolls a second die "4-6" = Bomb Run − 3. If this damage was done by flak, the Bomb Run roll is now − 4 (− 3 for the damage and − 1 for being hit by flak during the Bomb Run).

If the "No Attackers" result is rolled on Table B-3, then the additional fighters which attack the lead and tail position bombers do not appear.

Spray Fire is directed at a specific clock position, *not* at individual attacking fighters. If more than one fighter attacks from this position (during a

THE QUESTION BOX

successive attack), roll once on Table M-5 for each.

If a B-17 takes a fuel tank hit which doesn't leave it enough fuel to bomb the target and return, the B-17 may abort the mission and still consider part of the 25-mission campaign.

If a fuel tank which is already leaking is hit again, roll for damage (either fire, leak or self-seal) normally. The previous hit has no effect on this die roll.

A B-17 is *never* required to spend more than two turns in a zone.

On Table BL-1, Roll "10", (Case (g) should read "4, 5, or 6 Turns" left—not "Zones."

If the Pilot Compartment Windshield is knocked out (Table P-2, #11), the Heat is also out for this compartment ("Pilot and Co-Pilot Heat Out").

Rouen is in Zone 4, not in Zone 5 as shown on Chart G-11, Log Gazetteer.

Vegesack is a U-Boat type target with increased flak (+ I to die roll on Table 0-2).

A B-17 can be "irreparably damaged" only by a flak BIP or Crash Landing.

Crew members may voluntarily bail out over

England (Table G-6) before attempting a dangerous landing.

When a B-17 lands in England with no landing gear, an additional roll is made for irrepairable damage. If the plane does *not* crash, roll 1D: 1-3 = B-17 is reparable; 4-6 = B-17 irrepairably damaged.

The Radio Operator must be in the radio Room to consider the radio operational and so avoid the negative modifier for landing.

The altitude drop required by the loss of oxygen does not occur during the turn in which the damage takes place. Begin the *next* turn at 10,000 feet.

When a result of "2" is rolled on Table G-11 Random Events, roll for feathering the affected engine according to *Note (c)* on Table BL-1.

Any guns jammed by extreme cold (from a result of "10" on Table G-11 random Events) are automatically unjammed if the B-17 drops to 10,000 feet.

A B-17 which must make a mandatory crash landing its next turn must resolve fighter attacks normally before landing.

When entering the designated Target Zone, roll for weather *before* determining Fighter Cover (Table G-5) or attacking enemy fighter waves (Table B-2).

The Ace bonus does not apply to Tail Guns passing shots (see 9.2). The leading gunner ace of the 8th Air Force was a Tail Gunner proficient with this technique (twelve credited kills).

PANZER LEADER

Q. Assume an armored unit conducts an overrun in such a manner that it ends its movement in the same hex it started from. Will the unit be considered spotted by non-adjacent enemy units at the completion of its movement?

A. It will be spotted by any non-dispersed, non-adjacent combat unit which has a LOS to both the overrun hex and the end-of-movement hex.

Q. Does the dispersal or destruction of an engineer unit's designated vehicle have any effect on the engineer's attempt to destroy a bridge or to create/remove a block?

A. The engineer's capabilities are not affected by the dispersal of the vehicular unit, but the latter's destruction eliminates the engineer's ability to henceforth perform these functions (although it does not affect their mine clearing ability).

B-17, QUEEN OF THE SKIES   **$16.00**
Solitaire Game of the American Bomber Offensive, 1942-43.

A strong response to Avalon Hill's first venture into solitaire boardgaming brought excellent ratings for *B-17* in its wake. Indeed, the Overall Rating for the game places it seventh on our ongoing RBG chart—earmarking it as a "classic". The unusual topic, complemented by an unusual approach to simulation, makes the game a perfect companion for rainy days and lonely nights when your regular opponents are busy elsewhere. And for the host of wargamers who draw "baby-sitting" duty, *B-17* is a natural.

The reader ratings for the game, as can be seen, are uniformly superior. Only in terms of the ratings for "Counters" and "Player's Aids" do they fall below the average for the Avalon Hill line. Even more impressive, the value assigned to the title by our respondents for "Playability" is the lowest to date, as is the value for "Game Length (Shortest)"—a mere half-hour. Nor does the effort to make the game playable seem to have been made at the expense of "historical accuracy"; the ratings for "Authenticity" are a credit to Mr. Frank's and Mr. Shelley's efforts. Obviously, this is a fast-playing, challenging *and* realistic solitaire exercise. Nor do the respondents seem to tire of flinging their cardboard bomber skyward; a number of them included personal observations noting that they've yet to find the game repetitious (a failing of many a solitaire "game" in my mind). Despite its avowed

limitations, *B-17, QUEEN OF THE SKIES* looks to be a title that should grace every bookshelf.

The abbreviated ratings for the game will appear on the Wargame RBG henceforth. The complete ratings for *B-17, QUEEN OF THE SKIES* are as follows:

Overall Value: 2.51
Components: 2.62
Map: 3.31
Counters: 3.13
Player's Aids: 2.31
Complexity: 3.21
Completeness of Rules: 2.52
Playability: 1.86
Excitement Level: 2.64
Play Balance: 2.82
Authenticity: 2.21
Game Length
  Shortest: 33 min.
  Longest: 1 hr., 55 min.
Year: 1983
Sample Base: 87

AVALON HILL RBG RATING CHARTS

The following Avalon Hill games are ranked by their reader-generated overall Value rating. Further aspects of reader response to our titles are indicated by the ratings in other categories. By breaking down a game's ratings into these individual categories, the gamer is able to discern for himself where the title's strengths and weaknesses lie in the qualities he values highly. Readers are reminded that the Game Length categories are measured in multiples of ten minutes (thus, a rating of "18" equates to three hours).

WARGAME RBG

Title	Overall Value	Components	Complexity	Completeness of Rules	Playability	Authenticity	Game Length Shortest	Longest	Year	Sample Base
1. GI	2.02	1.93	10	3.01	3.38	1.88	12.84	35.33	1982	264
2. COI	2.06	1.95	9	3.29	3.13	1.99	11.61	29.27	1978	532
3. 3R	2.21	2.67	10	3.81	3.40	2.73	25.94	69.24	1981	273
4. COD	2.23	1.97	10	3.12	3.08	1.85	12.15	30.20	1980	224
5. TRC	2.29	2.53	4	2.52	2.12	3.11	17.44	37.74	1976	540
6. SL	2.31	2.09	8	3.48	2.87	2.45	10.17	27.90	1977	680
7. B-17	2.51	2.62	3	2.52	1.86	2.21	3.30	11.51	1983	87
8. WS&IM	2.53	3.04	6	2.93	2.67	2.39	7.01	34.90	1975	464
9. W&P	2.61	2.76	5	3.46	2.93	3.04	13.04	57.19	1980	374
10. BB'81	2.67	2.46	4	2.53	2.94	2.91	19.62	35.09	1981	277
11. TLD	2.68	1.95	8	3.72	3.54	2.04	24.44	170.68	1980	119
12. VITP	2.72	2.86	2	2.89	2.22	4.52	16.96	22.36	1977	420
13. CAE	2.85	3.01	4	2.32	2.89	2.52	25.14	32.57	1976	252
14. SON	2.92	3.03	10	3.72	4.09	1.92	29.50	81.78	1981	123
15. SOA	2.97	2.79	3	2.73	2.41	3.88	18.22	22.57	1981	232
16. FE	3.00	2.72	7	3.21	3.21	3.00	21.17	49.05	1980	345
17. FRED	3.00	3.41	4	2.93	2.58	2.75	12.25	24.67	1983	58
18. SUB	3.08	2.64	8	3.13	3.08	2.74	9.41	26.15	1978	281
19. MD	3.13	3.51	3	2.80	2.21	3.44	14.75	20.74	1964	395
20. AZ	3.17	2.72	7	3.18	3.86	2.68	18.63	63.40	1978	292
21. PL	3.19	2.94	7	3.31	3.13	3.50	9.49	25.80	1974	479
22. 1776	3.21	2.97	7	3.09	3.03	3.10	10.16	45.09	1974	373
23. FT	3.23	3.12	10	3.22	3.67	3.16	24.51	57.39	1981	196
24. PB	3.35	3.08	6	3.73	2.90	3.94	10.35	23.07	1970	448
25. BIS	3.45	2.96	6	3.43	3.25	3.06	12.41	26.35	1979	248
26. AAOC	3.52	2.95	5	3.02	3.26	3.07	15.52	26.53	1978	239
27. FITW	3.53	3.14	4	3.17	2.94	3.72	16.14	30.01	1981	100
28. CL	3.54	3.35	5	3.15	3.33	3.79	12.53	25.53	1975	136
29. DL	3.61	4.02	7	3.85	3.22	3.29	6.66	19.94	1981	146
30. GOA	3.66	3.37	5	3.67	3.79	2.98	18.68	60.06	1981	297
31. WAS	3.71	3.67	1	2.48	2.37	5.98	9.09	12.71	1976	396
32. GE	3.72	3.12	6	4.64	4.41	2.84	13.25	57.13	1977	248
33. AF	3.74	4.16	7	3.98	3.34	3.35	5.61	16.02	1980	192
34. AIW	3.74	3.05	8	2.92	3.52	3.06	8.69	25.36	1977	308
35. LRT	3.75	3.60	4	3.53	3.39	2.96	13.04	17.00	1982	56
36. TR	3.80	3.76	3	3.33	3.60	3.70	9.51	25.79	1980	72
37. WAT	3.83	4.17	2	2.95	2.64	5.00	17.08	23.13	1962	296
38. NP	3.87	3.29	3	3.27	2.56	4.89	9.69	14.40	1978	129
39. AK	3.92	4.38	2	3.30	2.48	5.09	14.49	19.13	1964	492
40. AL	4.03	4.05	5	3.69	3.18	3.57	12.34	17.93	1974	217
41. TB	4.06	3.53	7	3.48	4.47	2.50	11.28	32.50	1975	304
42. RW	4.14	3.14	5	3.32	2.91	3.98	4.22	21.15	1973	311
43. JU	4.17	3.20	6	3.61	3.83	3.22	16.01	36.66	1974	193
44. PAA	4.17	4.24	5	3.79	3.99	3.70	15.51	25.24	1981	144
45. DD	4.22	4.07	2	3.04	2.88	4.64	17.54	26.25	1977	367
46. CH	4.39	3.80	4	3.35	3.52	4.67	14.76	24.96	1961	140
47. STAL	4.39	4.29	2	2.88	2.75	5.83	20.57	28.85	1963	320
48. LW	4.45	3.75	5	3.77	3.79	4.79	13.36	34.14	1971	372
49. FR	4.79	3.49	4	3.47	3.75	4.06	16.27	26.95	1972	244
50. BL	4.73	4.16	7	3.65	3.77	5.27	20.43	41.44	1965	336
51. TAC	5.62	5.25	1	2.79	3.23	6.34	11.70	19.29	1961	285

As was to be expected, the ratings for Vol. 20, No. 4 of The *GENERAL* were less than stellar (overall rating—3.46). However, a number of interesting observations were gleaned from the readership's response to the individual articles. For instance, Mr. Mathews' "Alone Against the Bugs", a solitaire scenario for *SST*, drew raves and out-polled all articles on the more traditional Avalon Hill titles. And a close look at one of the "out-dated" classics of wargaming—*BLITZKRIEG* by a past master of the game showed very well. The reader-generated ratings for the articles of Vol. 20, No. 4:

The premier issue of Avalon Hill's newest periodical, *HEROES*, is now available. *HEROES* (48 pages, four-color), under the editorial guidance of William Peschel, is devoted to the Avalon Hill line of role-playing games and, to a lesser extent, to AH boardgames treating science fiction and fantasy themes. In the first issue can be found, among a number of fine articles on *RUNEQUEST* and *POWERS & PERILS* and *LORDS OF CREATION*, a new scenario for *DUNE* and a fine article on strategy in *AMOEBA WARS*. Mr. Peschel has indicated that there will be one or two such articles in each issue. Players of the popular sci-fi and fantasy boardgames should insure that they see each issue. Subscription rates for *HEROES* are the same as for The *GENERAL* ($12.09 for one year, $18.00 for two years). Anyone interested in drafting articles on these Avalon Hill games may wish to contact Mr. Peschel.

Jeff Cornett reports that nine teams, ranging from an organization based in Princeton to a club from Boston, met in the fourth annual *Northeast Gaming Association Playoffs*. Losing in the semifinals were the teams representing the West Point Wargames Committee and the Southeastern Massachusetts Wargamers. Prior to the finals, the Central Connecticut Wargames were undefeated and heavily favored over the defending champions from the University of Massachusetts. But, after trailing by a 10-5 score (points awarded for game wins) the team from U. Mass. scored the last nine points to earn a 14-10 "come-from-behind" second NGAP championship. Game selections for the 1983 tournament included *SQUAD LEADER, VICTORY IN THE PACIFIC* and Victory Games' *NATO: The Next War*. Information on the next NGA Playoffs now being planned may be obtained from Mr. Jeff Cornett, 11 Robert Frost Drive, Shelton, CT 06484.

Two innovative and energetic gamers have combined to produce one of Great Britain's finer 'zines—*Cut & Thrust*. Under the guidance of Derek Wilson and Glyn Roberts, the offset, bimonthly magazine can be ordered for 35p an issue (321 Headley Road East, Woodley, Reading, Berkshire, Great Britain RG5 4SE). Besides the usual reports of ongoing pbm games, *Cut & Thrust* reviews new releases, often before their appearance in the UK shops frequented by our overseas readers. Recent issues, for example,

Infiltrator's Report

have featured insightful reviews of *CIVILIZATION, UP FRONT, WIZARDS; B-17, QUEEN OF THE SKIES* and VG's *AMBUSH* headline their upcoming issue on solitaire games (Issue No. 24). The hardcore gamers around Picadilly owe it to themselves to glance over an issue of this earnest effort from their brethren.

INVENTIONS is the second paperback from the Avalon Hill Press, the publishing arm of the firm. Following on the heels of the success of last year's *DILEMMAS,* the book is (as too be expected) part book, part game. An entertaining collection of old, crazy and unbelievable products of American ingenuity—drawn from the files of the U.S. Patent Office in Washington—it is amusing, and educational, reading. Everybody has crazy ideas; but how many went to the trouble to patent them? Thousands did, and many hours of hilarious research turned up some of the wildest and most far-fetched (as, for example: the "Pregnant Piggy Bank", the "Dead Duck Decoy", the "Face a Fire Cage", and the "Mother-in-Law Chair"). *INVENTIONS* is also intended for use as a party-game. Players take turns, based just on the original drawings of the item, in quessing what each invention is, what it is intended to do, and how it worked (or not). The answers are often as outrageous as the original less-than-bright idea. *INVENTIONS* retails for $1.95 and can be found in bookstores and book sections of leading department stores across the nation.
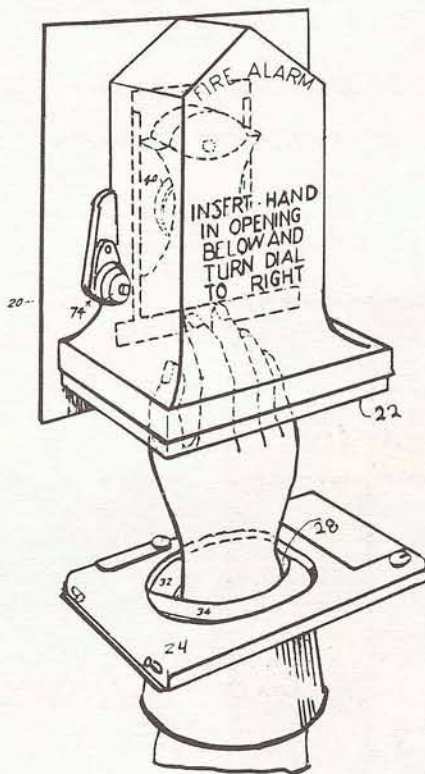
With the success of his first venture into the art of counter production, Mr. Street has branched out—offering now to the readers mounted counter sets for Mr. Ramiro Cruz's *PanzerBlitz '41* (Vol. 13,

No. 3). These have long been in demand, and the shortage of suitable counters have been commented on often. Cost is $1.50 for the counter set. Order from Mr. Ralph Street, Rt. 1, Box 132, Lebanon VA 24266. Mr. Street also informs us that he is laboring now to perfect a set of counters for the *MIDWAY* variant found in the *Wargamer's Guide* for that classic game.

On Saturday, the 10th of December 1983, the *USS McClusky* was commissioned under Commander Robert Lynch at the US Naval Station Long Beach, California. As long-time Avalon Hill fans will remember, the late Rear-Admiral Wade McClusky, hero of the battle of Midway, was the Technical Advisor for the game and author of the Designer's Notes section in the original rulebook (1964). The commissioning of the *McClusky* is a tribute to a superb officer and fine American. All at Avalon Hill join others in expressing our pride in this living memorial, and voice our faith that Commander Lynch and his crew will serve us well.

Even in the lair of the fantasy dragon, excellence is recognized. The Strategists Club Awards are presented annually at the "Gen Con" game convention. At the banquet held to present the 1982 awards, it was a supreme pleasure to all ' at Avalon Hill that *G.I.: ANVIL OF VICTORY* won the award for "Outstanding Board Game of 1982". We would like to commend the Strategists Club on their percipience of reality.

Those readers determined to save all the troopers in Contest #116, despite their laudable inclinations, still lost. War is "hell" and the answer revolved on leaving one Terran trooper behind to make the final close combat. Even with this clever ploy, quite a few erred in placement of the various explosives. Yet we were still left with many correct answers, and so were reduced to a random drawing from among them to select our winners. The ten winners, each awarded Avalon Hill merchandise credits, are: Mark Bannach, Plover, WI; Bob Holzmacher, Lansing, NY; David McKinnis, Durham, NC; John Morgan, West Valley, UT; Jed Mosenfelder, New York, NY; Gregory Palmer, Flushing, NY; Dick Shea, New York, NY; Paul Sidhu, Boston, MA; Pat Storto, Deerfield, IL; and Kendall Whitesell, Washington, DC.

The correct solution to Contest 117 revolved on a thorough grasp of two unique aspects of *BULL RUN*—the ability to break/form brigade and the concept of the infantry-artillery packet. With only two brigades still fighting, and given that they need hold only one turn until reinforcements arrive, *and* aware of the Union player's disinclination to attack at low odds, the solution required some careful plotting of movement. Both Kershaw and Bee break their brigades apart. Then, each unit moves to arrive in the following positions:

Kershaw—Hex U18; 2 SC—U18; 8 SC—S18; Kemper—U18.

Bee—Hex Y19; 1 Miss—Y20; 2 Miss—Y19; 4 Ala—V18; Imboden—BB19; 6 NC—BB19.

Walton—Hex V18; Squires—V18; Richardson—Y19.

The Union player is unable, due to the fact that he cannot soak-off the infantry from the artillery and that terrain modifications lower all his attacks to less than 1-1, to trouble the Confederates until he rearranges his troops. Note also that a large part of the Union army is left without direction, and so cannot move at all. The Confederate player has bought time to fight on.

NAPOLEON AT BAY $22.00
Strategic Rendering of the Campaign in France, 1814

INSTRUCTIONS:

Rate each category by placing a number ranging from 1 through 9 in the appropriate space to the right (1 equating "excellent"; 5, "average"; 9, "terrible"). EXCEPTION: Rate items 7a and 7b in terms of minutes necessary to play the game, in ten-minute increments. (Example: If you've found it takes two and a half hours to play the basic scenario of *FRANCE 1940*, enter "15" for category 7a.) For an explanation of the categories, refer to the AH Philosophy of Vol. 19, No. 4. Sub-categories are indicated by italics. Enter ratings only for those categories relevant to the game in question. Note that AH's ratings for **Complexity** and **Year of Publishing** have been provided; do not rate these categories.

1. **Overall Value**	—
2. **Components**	—
2a. *Mapboard*	—
2b. *Counters*	—
2c. *Player's Aids*	—
3. **Complexity**	9
3a. *Complexity*	—
4. **Completeness of Rules**	—
5. **Playability**	—
5a. *Excitement Level*	—
5b. *Play Balance*	—
6. **Authenticity**	—
7. **Game Length**	—
7a. *Basic/Shortest*	—
7b. *Advanced/Longest*	—
8. **Year of Publication**	1983

WHAT HAVE YOU BEEN PLAYING?

Top ten lists are seemingly always in vogue these days. Whether the subject is books on the Best Seller List, television's Nielsen ratings, or even games, the public never seems to tire of seeing how their individual favorites stack up numerically against the competition. Our preoccupation with this national pastime is almost akin to routing the home team on to victory every Sunday. So to further cater to your whims (and to satisfy our own curiosity) we unveil *THE GENERAL's* version of the gamer's TOP TEN.

We won't ask you to objectively rate any game. That sort of thing is already done in these pages and elsewhere. Instead, we ask that you merely list the three (or less) games which you've spent the most time with *since* you received your last issue of *THE GENERAL*. With this we can generate a consensus list of what's being *played* . . . not just what is being bought. The degree of correlation between the Best Selling Lists and the Most Played List should prove interesting.

Feel free to list any game regardless of manufacturer. There will be a built-in Avalon Hill bias to the survey because you all play Avalon Hill games to some extent but it should be no more prevalent than similar projects undertaken by other magazines with a special interest-based circulation. The amount to which this bias affects the final outcome will be left to the individual's discretion.

The games I've spent the most time playing during the past two months are:

1. _____

2. _____

3. _____

Opponent Wanted   50¢

NAME_____ PHONE_____

ADDRESS_____

CITY_____ STATE____ ZIP_____

CONTEST #118

Indicate, using standard *AIR FORCE* plotting, all Me-110 moves for Game Turns 13-17. When firing, indicate the number of the target Lancaster and the Hit Table Number for each shot. Total all Hit Table Numbers at the bottom.

TURN #	In. Speed	In. Altitude	In. Bank	Moves	Altitude Change	Fire
13	6	13.0	L			
14						
15						
16						
17						
18						
19						
20						

Total Hit Table Numbers:

Issue as a whole . . . (Rate from 1 to 10, with 1 equating excellent, 10 equating terrible)
Best 3 Articles

1. _____

2. _____

3. _____

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

B-17 Defensive Fire Chart

12:00 --5,6

*Top Turret --6
Nose --6

HIGH

10:30 --5,6
*Top Turret --6
Port Cheek --6
Port Waist --6

*Top Turret --6
Nose --6

LEVEL

1:30 --5,6
*Top Turret --6
Starboard Cheek --6
Starboard Waist --6

Port Cheek --6

*Ball Turret --6
Nose --6
LOW

Starboard Cheek --6

*Ball Turret --6
Port Cheek --6

*Ball Turret --6
Starboard Cheek --6

9:00 --4,5,6
*Top Turret 190,109 --5,6
110 --4,5,6
Port Waist --6

*Top & Ball Turret 190,109 --5,6
110 --4,5,6
Port Waist --6

*Ball Turret 190,109 --5,6
110 --4,5,6
Port Waist --6

*Ball Turret 190,109 --5,6
110 --4,5,6
Starboard Waist --6

*Top & Ball Turrets 190,109 --5,6
110 --4,5,6
Starboard Waist --6

*Top Turret 190,109 --5,6
110 --4,5,6
Starboard Waist --6
3:00 --4,5,6

See Instructions Table B-3

See Instructions Table B-3

VERTICAL CLIMB --4,5,6

VERTICAL DIVE --5,6

*Ball Turret &
Tail Guns
190,109 --4,5,6
110 --3,4,5,6
LOW

*Tail Guns 190,109 --4,5,6
110 --3,4,5,6
LEVEL

*Top Turret 190,109 --4,5,6
110 --3,4,5,6
Radio Room --6
*Tail Guns 190,109 --4,5,6
110 --3,4,5,6
HIGH

6:00 --3,4,5,6

* = Twin Guns
Green = Spray Fire
Red = No Spray Fire
Diagram by Neal Schlaffer
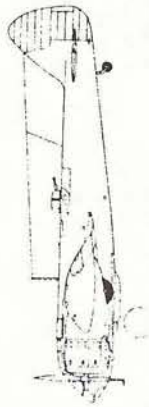
This chart is intended as a graphic depiction of resolution of B-17 Defensive Fire (Table M-1) and German Offensive Fire (Table M-3). Players may well wish to substitute Mr. Schlaffer's chart for these tables in the copy of the game.
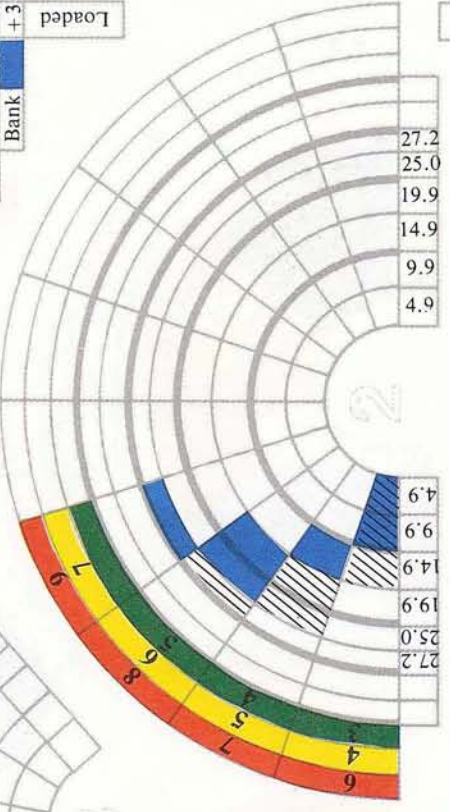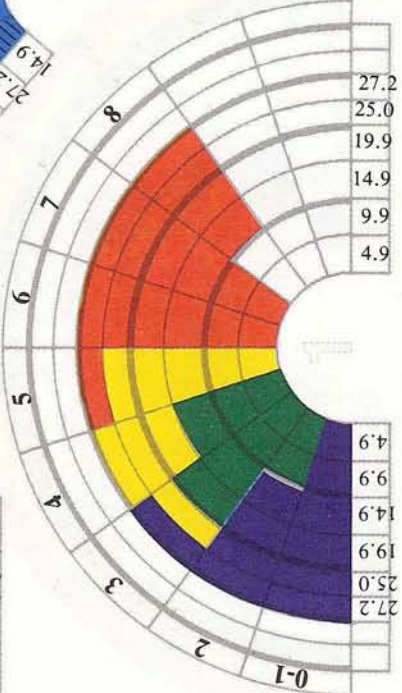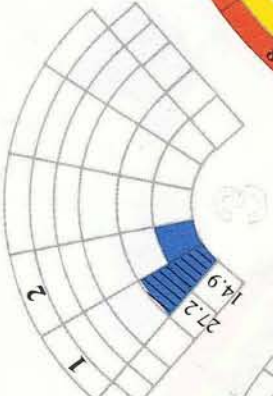
BLENHEIM

Bristol Blenheim Mk. 1 Light Bomber
PV: 18 Engine Type: R Producer: Great Britain
Operational in 1937. A total of 5231 built.
Loaded: Carried 1000 lbs. of bombs; has sights for level bombing.

Speed Change

Maneuverability Requirements

Altitude Change

Speed Increments

Target Characteristics

W	7	Cn		Mg	6
F	4	L	3		
C	2	C			
E	3	E	E	E	3
G		1M			
		(4) (5)			
		FF F			

Variants Nightfighter IE   PV:20

	1M	2M	2M
	(4)	(3) (5) (5)	
	FF	FF	F FF
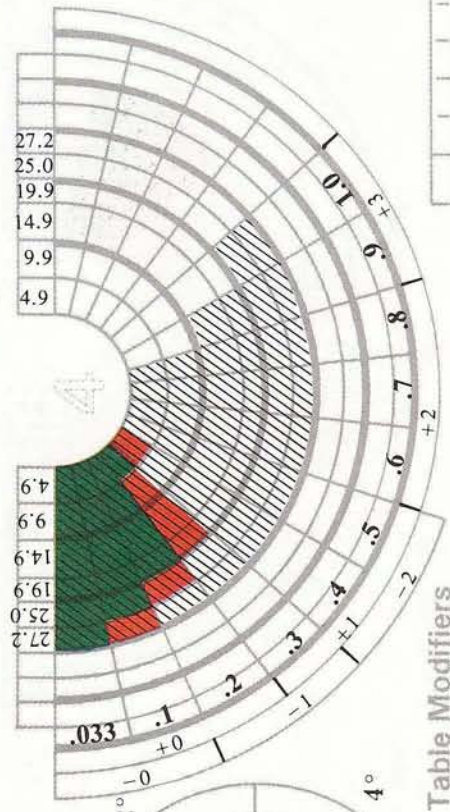
"F" Gunnery Play
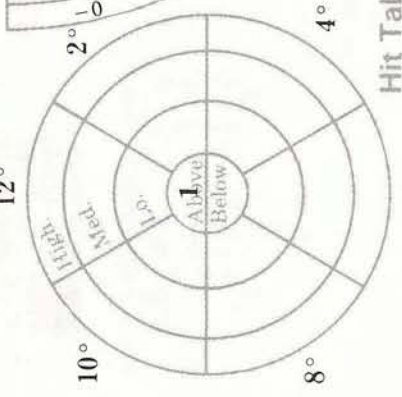
Hit Table Modifiers

Silhouette	+3
Fire	+2

Loaded
Turn or Slip		+4
Bank		+3

Loaded
Dive Acceler		+1
Climb Deceler		–1
Max Dive		–.2
Dive Sp. Climb		–.1
Max Climb		–.1

Power Factors
Brake Factors

Stall Speed
Maneuver Sp
Level Speed
Dive Speed
Loaded (Opt.) –1

HALIFAX

Handley Page Halifax Mk III Heavy Bomber
PV: 28 Engine Type: I Producer: Great Britain
Operational in Spring 1941. Some 2050 built.
Loaded: Carried 13000 lbs. of bombs; has sights for level bombing.

Stall Speed	
Maneuver Sp	
Level Speed	
Dive Speed	
Loaded (Opt.)	− I

Speed Increments

Speed Change

Altitude Change

Maneuverability Requirements

"F" Gunnery Play

High 2	Med 2	Low 2	Bow 0.2

Silhouette	0
Fire	+6

Hit Table Modifiers

Variants

				Cn	Mg
W 9	E 2	L 3	C 2	E 2	
F 8					
C 2	E 2	C 2	E 2		
G		(5)		E 2	
		F			

Target Characteristics

	Power Factors
	Brake Factors

			Loaded
Dive Acceler	+1		
Climb Deceler	−1		
Max Dive	−.2		
Dive Sp. Climb	−.1		
Max Climb	−.1		

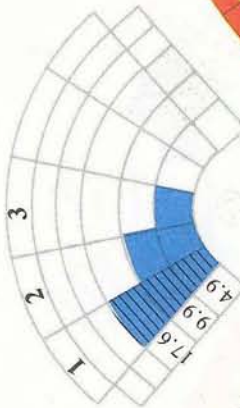|			Loaded
Slip		+6	
Turn		+7	
Bank		+3	

WHITLEY

Armstrong Whitworth Whitley Medium Bomber
PV: 20 Engine Type: I Producer: Great Britain
Operational in 1939. Over 1814 built.
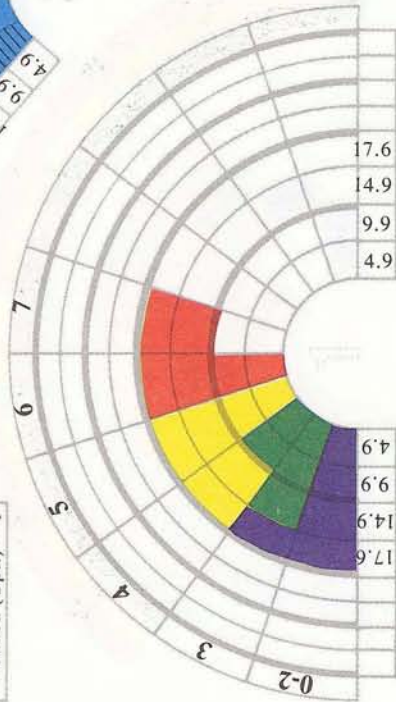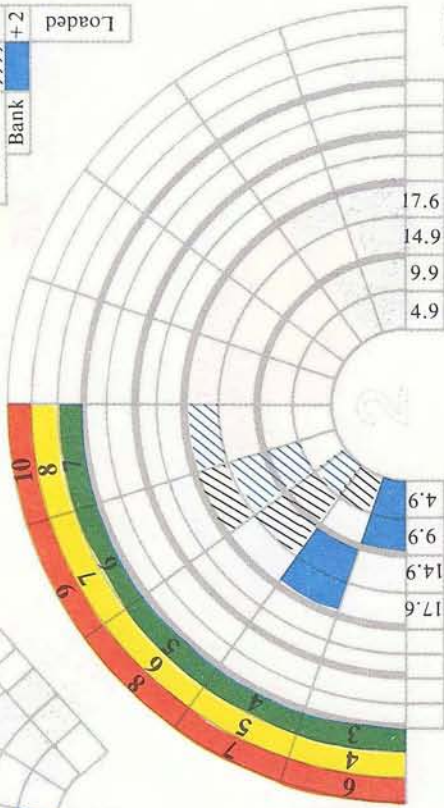Loaded: Carried 7000 lbs. of bombs; has sights for level bombing.

Speed Change

Power Factors	
Brake Factors	

Slip	+3
Turn	+4
Bank	+2
	Loaded
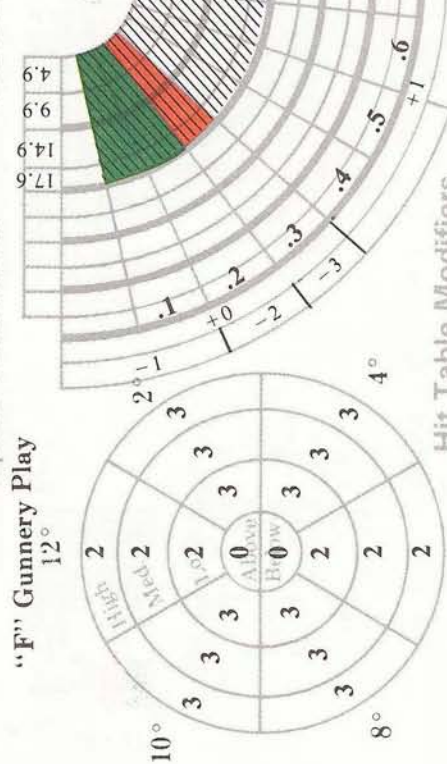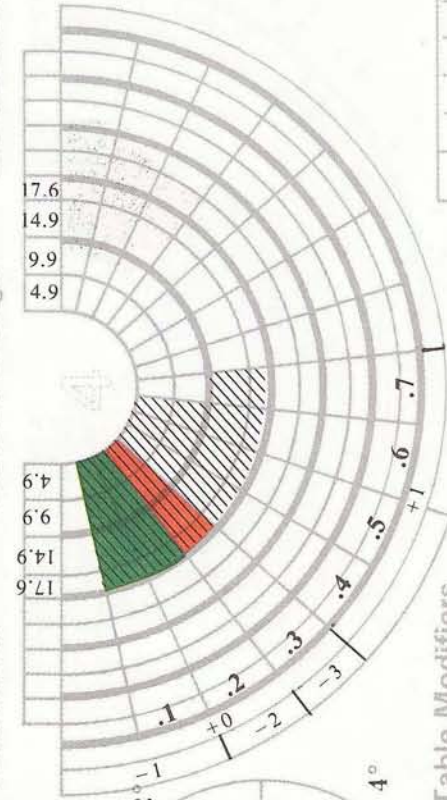
Maneuverability Requirements

Dive Acceler	+1
Climb Deceler	−1
Max Dive	−.2
Dive Sp. Climb	−.1
Max Climb	−.1
	Loaded

Target Characteristics

W	7	Cn	Mg
F	7	L	3
C	2	C	2
E	3	E	E	3
G		(5)	
		F	

Variants

Altitude Change

Speed Increments

Hit Table Modifiers

| Silhouette | +4 |
| Fire | 0 |

"F" Gunnery Play

Stall Speed	
Maneuver Sp	
Level Speed	
Dive Speed	
Loaded (Opt.) −1	

STIRLING

Short Stirling Mk. 1 Heavy Bomber
PV: 31 Engine Type: R Producer: Great Britain
Operational in Fall 1940. Total of 2371 built.
Loaded: Carried 14000 lbs. bombs; has sights for level bombing.

Stall Speed	
Maneuver Sp	
Level Speed	
Dive Speed	
Loaded (Opt.) − 1	

Speed Increments

Speed Change

Altitude Change

Maneuverability Requirements

	Power Factors	
	Brake Factors	

		Loaded
Dive Acceler	+1	
Climb Deceler	−1	
Max Dive	−2	
Dive Sp. Climb	−1	
Max Climb	−1	

		Loaded
Slip	+4	
Turn	+5	
Bank	+3	

"F" Gunnery Play
12°
10°
8°
6°
6°
2°

	High	Med	Lo
Above	4	4	4
Level	2	2	2
Below			

Hit Table Modifiers

Silhouette	
Fire	0

Variants

Target Characteristics

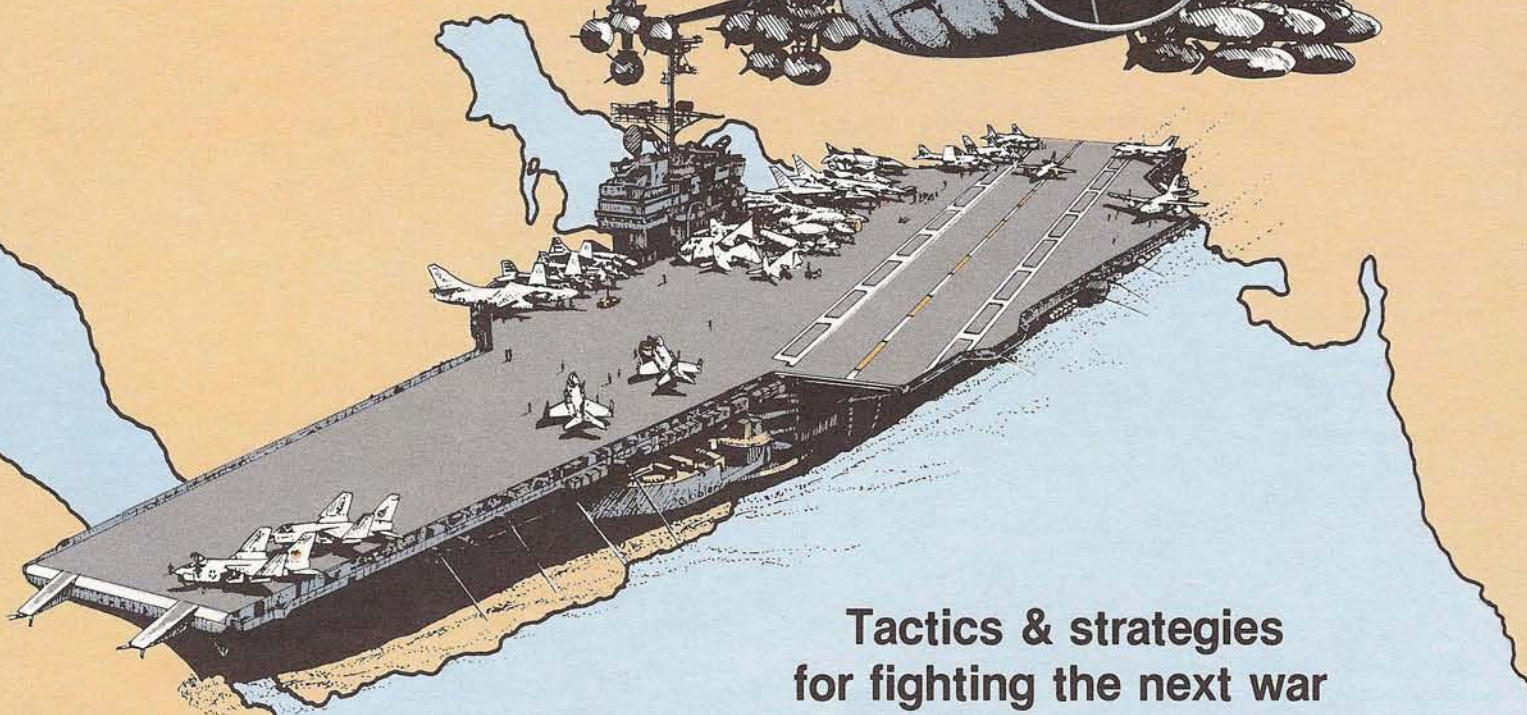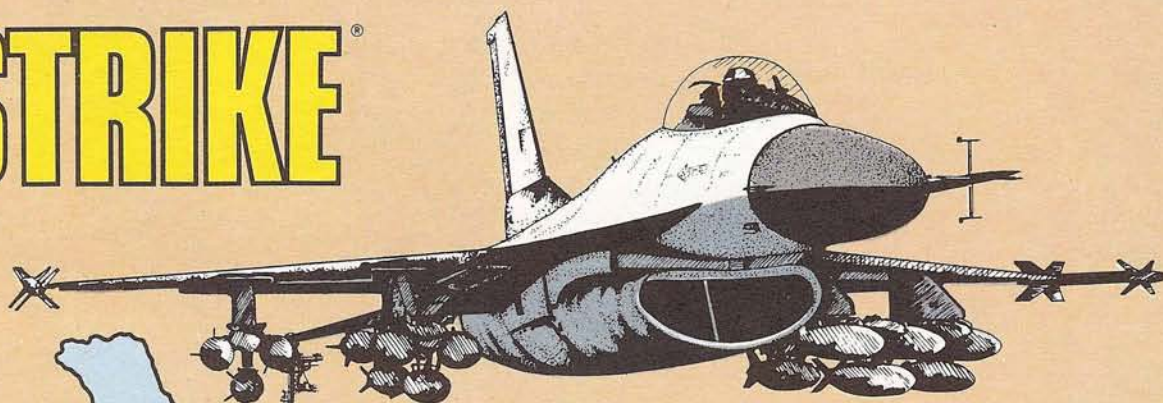|		Cn			Mg
W	8				
F	6	L	3		
C	2	C	2		
E	2	E	2	E	2
G		(5)		F	

GULF STRIKE

**Tactics & strategies
for fighting the next war**

INTRODUCTION

Gulf Strike is a game of combined arms warfare at the operational and strategic level. The combat elements consist of the land, air and sea forces potentially available in the volatile Persian Gulf region. The game system allows the commanders to move their eligible forces during a phase without restrictions based on unit type. This extreme level of fluidity opens up many new movement and combat combinations giving the player the full range of options open to a Theater CinC (Commander in Chief). To reflect the simultaneity of combat the non-phasing player has many reaction options available. Given a detection of an imminent attack the properly postured defender can launch interceptors to thwart the strike. This type of system emphasizes the importance of detection aircraft such as the E-2 Hawkeye which was effectively used by the Israelis during their air offensive against the Syrians over the Bekaa valley.

Gulf Strike has 5 scenarios included. Scenario 4 is for solitaire play only whereas Scenario 5 is a training scenario. The meat of the game resides in scenarios 1 through 3. In scenario 1, the Iranian forces have defeated the Iraqis and have had their ground forces revitalized with equipment from the Soviet Union. Once the Iranian forces are ready they launch a Jihad against the other Gulf
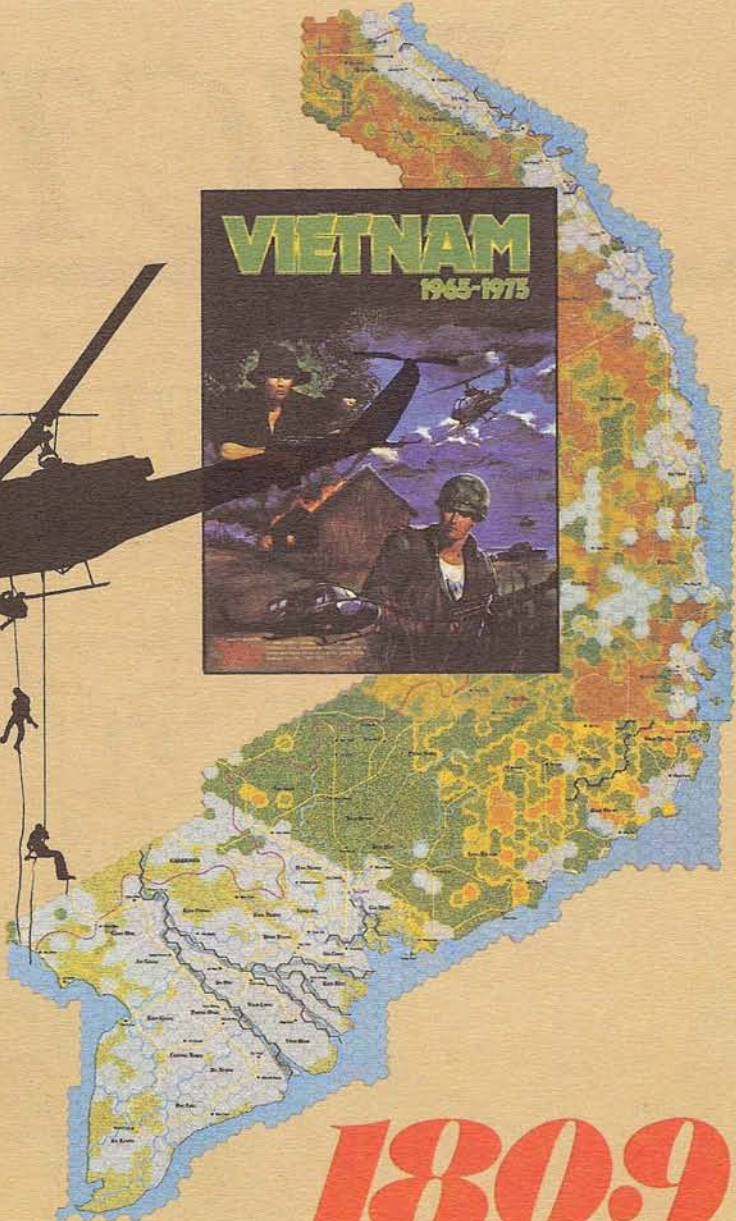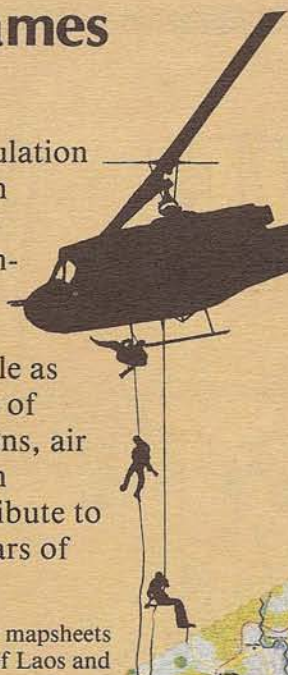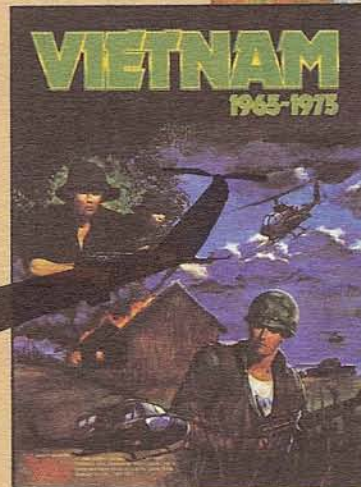
Thrilling TALES OF VICTORY

After numerous letters, phone calls and personal appeals, the Victory Games staff has decided to create and publish (with the kind assistance of The General and Heroes magazine staffers) *Victory Insider*. This type of enthusiasm has always been the inspiration which has fueled the efforts of Victory Games. The intent of this publication is to create a forum for designers and aficionados of our military simulations to elaborate on design insights, new scenarios, strategy and tactics.

It has always been my feeling that a game review which is intended to inform the reader on the basic quality and innovation of a particular game falls far short of providing player-oriented information. Even as a designer, I still feel the need to return to my roots as a game player and enjoy the intense mental stimulation which games have always provided. *Victory Insider* will fill this gap with one to two articles per issue on recently released or established games and systems.

From its inception, VG has been guided by the philosophy that each game it produces must be of the highest quality. Obviously, all companies make this statement. At VG, it translates into a concerted effort on each game to create a new and innovative system, keeping us on the leading edge of game technology. To accomplish this, the staff works together, both formally and informally, in a maximum effort to refine each product. All games in addition to being ex-haustively tested with the public and distant "blind testers" are internally scrutinized and reviewed by all members of the staff to achieve maximum input. This type of game design organization has created a situation whereby the talents of the whole staff are greater than the sum of its individual parts. We have to date found great success with this process, if the feedback cards and buyer comments are any measure.

I want to personally thank all those who took the time to respond by sending in their Feedback cards. It is through this type of input that VG understands both your feelings about the games and the type of products you want to see in the future. I want to stress to all those that have not sent in cards that you are denying yourself a powerful medium for influencing future decisions at Victory Games.

To give the readership of *Victory Insider* a more rounded view of the staff, the authorship of this column will rotate among the various designers, editors and artists (yes, artists) on the staff. It is my desire that this exchange of views will enhance the enjoyment which we strive to bring to our audience. If anyone has any comments that will not fit on the feedback card, please feel free to drop us a letter. I promise that all responses are read, but cannot be answered. Thank you for your continuing patronage and hobby enthusiasm.

Mark Herman/Director

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While *Victory Insider* is being published inside *The General*, it is actually put together by a different staff, and has some features that will require some introduction.

"Thrilling Tales of Victory", of course, is our version of "The Avalon Hill Philosophy". The topic will vary with the writer(s) and the style will be looser than in an article.

For errata fans, we have one of our more valuable staffers working on a column just for you. "W. Bill's Oversights" will contain the lastest compilation of errors, addendum, mistakes, and typos that occasionally slip into our products.

In the future, we will also be publishing some of the more interesting letters that we receive, and we encourage you to consider submitting something to the magazine about our products. Since we are not bound into the pages of *The General*, our page count will vary from issue to issue depending upon the amount of material we receive.

William E. Peschel/Managing Editor

countries in retaliation for their support of Iraq during the war. Both the U.S. and U.S.S.R. eventually send forces into the conflict.

Scenario 2 and 3 postulates that the Soviet Union invades Iran for supporting the Afgani rebels and to gain certain strategic objectives (ie. control of the oil fields). The U.S. sends its forces to thwart these objectives. The difference between the two scenarios is that in the latter the Iran/Iraq war is still in progress.

This article will examine the various strategies available to both sides during the opening, middle and end game play in scenarios 1 through 3 and a discussion of operational tactics for the different combat units. The Opening and Middle game Superpower sections that follow apply primarily to scenarios 2 and 3 whereas scenario 1 is covered under the Arab forces section in greater detail. The section on Superpower End Game Strategy applies to scenarios 1 through 3, for at this point the basic strategies are similar. Clearly other scenarios are possible and the players are encouraged to invent their own.

SUPERPOWER STRATEGY—THE OPENING SALVOS
(Scenarios 2 and 3)

The major emphasis for the superpowers during the opening game is at the strategic level. In these scenarios both of the superpowers have the same types of problems. Their forces need to be moved into the operational map area in strength with the Straits of Hormoz having significant value to both sides.

The major objectives for the U.S. commander are to preserve the forces that are already in theater and to maintain an area where the reinforcements can arrive without being molested by enemy forces. This requires that Diego Garcia the major U.S. base in the area be adequately defended. A good strategy is to send one of the F-14's from CV-63 (USS Kitty Hawk) to the island to augment the F-15 squadron and move the carrier southeast of the island to keep it out of Tu-26 (Backfire) range. While the U.S. reinforcements are arriving use the P-3 stationed on Diego Garcia and the S-3 from the carrier to conduct anti-submarine operations against Soviet submarines in the theater. Any submarines destroyed early will benefit the U.S. position when the Middle game begins.

The U.S. land and air reinforcements should be based on the mainland as soon as possible. The first forces to arrive will be the brigade of the 82nd airborne division and a wing (3 squadrons) of F-15's. These units should be deployed to a secure site to begin the build-up of US forces in theater. The F-15's should be mainly concerned with maintaining an air defense zone over the U.S. buildup site. Later in the game this will be the place from which the counter-offensive will originate from and long range planning should take this fact into account when choosing the site. Use the U.S. B-52's initially to conduct strikes against Soviet Airbase units in order to restrict the locations from which Backfire aircraft can be launched. It should be noted that the high ECM rating of the B-52's represents the ability of these aircraft to jam the detection capability of interceptors and ground radars in addition to jamming missiles. If the U.S. commander under these conditions can neutralize the Backfire and submarine threat while maintaining the buildup of forces in the theater the opening game will have been decided in his favor.

Whereas the U.S. commander requires success during the Opening game to insure any chance of victory the Soviet commander can win the game in the Opening by denying the U.S. sea supremacy. Therefore it is incumbent on the Soviet commander to maintain his surface fleet "in being", as opposed to seeking surface engagements with the U.S. surface units. A good place to do this is under the Mig-23 air umbrella in a South Yemen coastal hex where the land based air units will help protect the fleet. In addition, by placing submarines to screen the surface fleet the threat from U.S. submarines is reduced. Maintaining the integrity of this position in South Yemen will compound the U.S. supply line problems as a sortie from the flank of the SLOC (Sea Line of Communication) is possible at any

time, assuming that naval units have survived. (Figure 1)

Mines can effectively block U.S. supply lines prior to the movement of the U.S. Supply Head to the mainland if certain key coastal hexes are targeted. These mines should be delivered by air and submarine. Since the U.S. mine clearing capability is resident in their SH-3 helicopters the only way these hexes can be cleared is by moving the carriers close in making them vulnerable to Backfire attack.

Above all else, if the U.S. commander gives the Soviets the opportunity, the carriers should be attacked whenever an opening presents itself. The best units to accomplish this with are the SSGN's and Backfires (Tu-26). See the section on Tactics: Naval Operations.

The Arab naval forces in the game do not play a major role at the strategic level but do have an impact on the operational naval situation in the Persian Gulf. Each side should use the forces of their Arab allies to neutralize the other side's naval and air forces in order to gain an advantage for the middle game.

The Soviet commander in scenarios 2 and 3 has a preponderance of land forces at his disposal. Early in the campaign several axis of advance should be decided upon and exploited with the resources available. Do not try to advance across the entire front. The ability to protect the Lines of Communication (supply lines) with ground based air defense units is limited. In the beginning most cities that are defended should be bypassed, allowing spearhead units to penetrate as far south as possible. The earlier this is accomplished the better the ground position will be during the middle game when U.S. air power will begin to slow the advance. During the late middle game and end game play these bypassed cities can be reduced with the later Soviet ground reinforcements.

There are four primary north-south axis of advance. Each of these attack routes has a defined objective and will be characterized in this narrative by the major cities it encompasses. Starting in the west is the most direct approach to the Iranian oilfields (2 victory cities) in Megahex F-06. The route is Tabriz, Kermanshah, and Ahvaz/Abadan or Tabriz, Hamadan, Arak, and Ahvaz/Abadan. The major disadvantage of this axis concerns the mountainous terrain that must be transited to enter Megahex F-06 (Khuzistan). In scenario 3, when the Iraqi forces are active the Soviet commander should leave the capture of this southern objective to the Iraqis and concentrate these assets on another advance route. When playing scenario 2, a well timed airborne drop can open things up if the spearhead units get bogged down in the mountains.

The western Caspian sea route moves along the coastal highway to Rasht/Qazvin, Tehran, Qom, Kashan, Esfahan, and Bandar Abbas. This axis of advance should be one of the more heavily defended and will usually require bypassing several infantry garrisons early in the scenario. The primary objective of this pincer is Esfahan where a link up with the eastern Caspian pincer should be affected. The eastern Caspian advance route moves down the coast and then to Tehran, Qom, Kashan, and Esfahan. A well executed offensive or a poorly conducted defense may see a sizeable portion of the Iranian mobile forces caught in this classic double envelopment.

The last route starts near Ashkhabad and moves south toward Kerman and Bandar Abbas. Mashad should initially be bypassed unless it is heavily garrisoned with armored units. Combat units moving along this route should meet light ground resistance but can expect some attention from the US Air Force. If sufficient air cover can be provided the Soviet commander may decide to gamble and use extensive travel mode. When units assigned to this axis penetrate to Kerman, the ground forces in Afghanistan should move forward and reinforce the advance spearhead.

Airborne forces should be used to gain important objectives deep in enemy territory. The more interesting objectives are Megahex F-06, Esfahan, and Bandar Abbas. The Soviet commander should be prepared to conduct an operational drop to block retreating forces and effect their elimination if the opportunity presents itself. It is useful to hold at least one airborne division in reserve for employment late in the game. This reserve airborne division can be used to gain an important victory objective in addition to forcing the US commander to maintain forces to protect his rear areas.

SUPERPOWER STRATEGY—THE MIDDLE GAME
(Scenarios 2 and 3)

The Middle Game begins ostensibly when the land and air forces

of the superpowers close and begin intensive combat operations. During the Middle Game it is imperative for the U.S. commander to maintain his SLOC (Sea Line of Communication) in order for operations on the mainland to continue without interruption. If the Soviets manage to interrupt this flow of supply long enough they can win the Middle Game almost by default. It should be noted that this is very hard for the Soviet commander to accomplish and will be partly due to U.S. errors.

The major issue for the Middle Game will center on the outcome of air operations over and around the Persian Gulf. If either side is able to gain permanent air superiority at this point in the game that side should be capable of dictating the scenarios outcome. Air superiority requires the destruction of the enemies' airbases and air units. In this way sortie generation (the launching of air units) will be reduced for one side to the point whereby the other side's forces (the one with air superiority) cannot effectively be attacked from the air.

The U.S. commander must as a prerequisite maintain his supply source (U.S. supply head). This can be accomplished in two ways. First, gain sea supremacy and prevent air units from laying mines in coastal waters. Leave the U.S. supply head on Diego Garcia and maintain the SLOC to the mainland. The second way is to move the supply head to the mainland by airlift and dispense with the need for a secure SLOC. The positioning of the supply head on Diego Garcia prevents it from being overrun by ground forces and reduces air strike opportunities due to the shortage of air units with sufficient range. The second method dispenses with the necessity of maintaining absolute sea supremacy but the supply head is now within range of the majority of the enemy air assets and substantial forces must be assigned to defend it until the air and ground situation has been resolved in the U.S. commanders favor. Since many assets required to gain air and ground supremacy will be tied up in defense this situation will be harder to achieve. (Figure 2)

Assuming a secure source of supply the U.S. commanders main concern during the Middle Game is to begin the counter-offensive from the buildup site. This requires that the air offensive be prosecuted successfully and air superiority or at least a draw be achieved. While the air battle is occurring, keep at least one third of your air units on strike missions in order to attack targets of opportunity such

FIG. 2

Air Defense Zone

Iran

Kuwait

Bahrain

Qatar

Persian Gulf

(U.A.E.)

Straits of Hormuz

Gulf of Oman

Oman

Arabian Sea

Pakistan

Democratic Yemen

Socotra (D.Y.)

Indian Ocean

Maldive Islands

Somalia

Seychelles

Diego Garcia

= Airbase Present

Beachhead

N
W   E
S

as airbases and supply depots. These types of attacks will force the Soviets to keep air units on intercept to protect their logistic infrastructure and reduce their available strike sorties. The U.S. needs to establish air superiority in order to maximize chances of victory during the End Game but at a minimum must ensure that the Soviets do not gain air superiority or even an advantage in the air battle.

Since the Soviets have more air units than the U.S., a potential strategy is to overwhelm the U.S. air defenses. Penetration of strike missions to lucrative targets can be accomplished by sending more strike sorties than there are interceptors available in a given phase. This strategy can be very expensive but can often pay large dividends later in the game. If the Soviet commander can prevent the U.S. from gaining air superiority during the Middle Game then the scenario outcome will be determined by the situation on the ground.

At this point in the scenario the US resources will begin to affect the ground offensive. The close of the Middle Game should see the limit of the Soviet ground advance. Although this is very dependent on the resources remaining and the overall situation in the scenario. As the scenario transitions into the End Game the Soviet commander must begin the reduction of bypassed city garrisons and the consolidation of the territory gained. If little or no Iranian units remain in the Soviet rear areas then the offensive should continue.

The Soviet commander must also be concerned about his logistic supply lines and maintain adequate ground based air defense units on supply depots near the front lines. In this area interceptors will usually not have enough reaction time to engage enemy strike aircraft before they have dropped their ordnance and the need for a substitute defense is required. Supply depots in the rear areas should be under an air defense zone of air units and Early Warning Detection Aircraft (EWDA). Continuous disruption of the flow of supply will slow if not halt the ground advance with the obvious victory condition repercussions.

SUPERPOWER STRATEGY—THE END GAME
(Scenarios 1 to 3)

It is at this point in the game, usually the last 3 or 4 game turns, during which the final outcome of the game will be determined. Both commanders should take inventory of the situation on the map and evaluate what level of victory they have or have not achieved. Sometimes a commander is able to posture his forces to maintain the situation on the map or try and alter it thereby reducing the oppositions victory level. Often a decision point has been reached and the actions of the disadvantaged side are unable to affect the outcome. This can occur due to poor results earlier in play. If the outcome has not been decided then the strategies employed by both sides during the End Game must be played with accuracy.

The U.S. commander will have his major land reinforcements employed in scenarios 2 and 3 but in scenario 1 which is only 14 game turns long this will not be the case. Scenario 1 is essentially decided by the ability of the U.S. to halt the Iranian/Soviet advance with air power and Arab land assets. In scenarios 2 and 3, the 24th Mechanized division and the 5th Marine Amphibious Brigade with its associated assets will be available. Even with these units, the option to launch an offensive can only be undertaken if a substantial portion of the Iranian land units have avoided elimination or severe reduction. The primary objective should be to regain lost territory especially objectives in and around the Straits of Hormoz.

The USSR/Iranian commander in scenario 1 can employ the Soviet power projection forces (3 airborne divisions plus air assets). These forces can paradrop into the Straits of Hormoz to gain victory objectives or eliminate pockets of resistance which the Iranian forces have been unable to reduce. Careful employment of these elite formations can alter the outcome of the campaign.

In all scenarios, it is especially important that the enemy logistic infrastructure be attacked (air strikes and special forces) to attrite and halt further enemy ground advances. This will cause forward elements to retreat or be weakened through lack of supplies. Thus, creating favorable opportunities for ground counterattacks. Proper timing and location of counterattacks during the end game must always maintain the goal of effecting the scenario Victory Conditions.

In the final analysis it is the Soviet ability to "dispute" the straits

that will allow a greater than marginal victory. It is therefore important for the Soviet player to keep the Strait mined if friendly ground or naval forces cannot project a presence into Megahex J-09. It has been found that the late use of chemicals aids the process of eliminating bypassed enemy city garrisons for victory purposes. This will also allow the end game to be conducted with an economy of ground force.

ARAB FORCES

This section will deal with the usage of the various arab forces in the region during each of the scenarios. Scenario 1 is treated in greater detail as this was neglected under the superpower strategy sections. For the most part the use of arab forces is dictated by the type of offensive presented by the aggressor.

GULF WAR SCENARIO (#1)

Iran

Iran is the aggressor in this scenario and except for the Soviet power projection forces introduced later in the scenario, supplies the totality of the ground forces available to the Iranian/Soviet commander. The initial thrust of the Iranian ground forces is to move through Kuwait and the Neutral Territory as quickly as possible. Remember, the Gulf Council countries in this scenario cannot react in conjunction with each other until the subsequent Global Political Phase. Therefore, what is done prior to the violation of the Kuwait/Neutral Territory border is important.

The Saudi Arabian AWAC unit presents a problem to the Iranian/Soviet commander as most air or naval operations will be detected prior to mission completion. The Iranian commander should initially launch a series of anti-air missions with the express purpose of forcing the AWAC unit out of the play for the first game turn. These actions will bring Saudi Arabia into the conflict. Once the AWAC is forced out of play the majority of subsequent air and naval strikes will be conducted against Saudi Arabia. Remember that on the first game turn no other arab forces can move until their territory is violated. Therefore the first attacks must not involve another Gulf Council arab force unless it is necessary.

Regardless of the Naval Determination die roll the Iranian/Soviet commander has three naval actions available. These three or more actions should concentrate on eliminating the units of the Saudi Arabian navy. Move the Iranian naval units out to attack the in-Port Saudi naval units and attempt to eliminate them. Those that survive a naval attack should be sunk with air strikes. Once the Saudi Navy has been eliminated the remaining air strikes should concentrate on the other arab fast attack craft (FAC) and air forces. Remember that once the Saudi AWAC is forced out of play the majority of Saudi air units will be unable to intercept negating the need to escort most strike air units. Conduct most air sorties with single air units in order to insure that valuable first turn strikes are not wasted. Eliminate an enemy airbase should the opportunity present itself.

During later game turns the Iranian/Soviet commander should be able to achieve temporary air superiority before US airpower is available. Any Iranian air units that take one hit should not be sortied again until they are repaired. The lack of spare parts and pilots is reflected by a two hit capacity making these air units very fragile. Heavy attrition of air units during the beginning of the scenario will severely limit the air assets available during the critical end game. All of these Iranian air sorties will expend significant amounts of supplies. A decrease in air sorties during subsequent game turns should be justified by the damage inflicted. It is important that this draw down of supplies be replenished during later game turns.

If the initial air and naval action neutralize the opposition's forces as desired the subsequent ground force advance should have an easier advance toward their objectives. Those objectives can be characterized by three phases. The first is the initial breakthrough. Kuwait can usually be smashed in one game turn. Use all available ground units except the second armored corps (4th and 5th Armored, 6 Mech, and 2 Artillery Brigade). This corps should move through the Neutral territory and bypass Kuwait. The rest of the forces should attempt to force the Kuwaiti ground forces to retreat into the capital. These attacks should be supported by the attack

helicopters (AH 1). Once this is accomplished (continue during game turn 2 if not initially accomplished) take the first armored corps (1st and 2nd Armored, 3 Mech, and 1 Artillery Brigade), bypass the city and advance as quickly as possible down the coast road toward the Straits of Hormoz. The second armored corps should advance on Riyhad with the ultimate aim of capturing the city. The forces in Kuwait city should be sieged and reduced by the infantry divisions (7th and 8th) and the 11th armored brigade (prevents the Armor vs. Non-Armor shift). It can be also useful to use the DD naval unit to bombard the city and speed its capture.

The second phase of the campaign is the advance. The second armored corps should continue its advance toward Riyhad while the first armored corps advances on Qatar and the United Arab Emirate border. The first armored corps should capture Doha and take Qatar out of the war. Bahrain is a special case and is covered in the next paragraph. This advance phase must be conducted aggressively for the time of US intervention draws near. Once this has occurred a new set of problems will arise to slow and possibly halt the advance of the ground forces. During the entire advance phase remember to maintain the Iranian Lines of Communication and guard the depots with air defense units. Move one or more airbases forward and establish the attack helicopters and some interceptors (F-5's) plus the F-14 within range of the front. This will give the forward ground elements close air support and more responsive interceptors to protect the Lines of Communications.

The capture of Bahrain is an interesting military problem which illustrates the games emphasis on combined operations. Whenever temporary air and naval superiority over Bahrain has been achieved conduct the following operation. Move the Iranian Airmobile brigade by CH-47 helicopter to Bahrain with two supply depots carried by the other CH-47 and the C-130. Next move two marine battalions using the Amph and HC naval units. during the subsequent combat one of the supply depots will be expended and the other will be used to prevent the airmobile brigade from taking a hit for being out of supply. Once again remember, do not attempt this operation unless the Saudi AWAC has been forced out for that game turn or no Saudi interception sorties remain available for that phase. The affects of F-15's intercepting helicopters requires little imagination.

The third phase of the campaign is the intervention. At this point in the game (usually game turn 7) the US forces are available, with the Soviet power projection forces entering one game turn later. It is sometimes useful to conduct massive USSR naval and air strikes on US aircraft carriers prior to game turn 7, but if this opportunity does not present itself or fails the subsequent acceleration of US force, appearance will be detrimental to the overall campaign.

This phase of the scenario is characterized by major air operations both to gain air superiority and destroy enemy lines of communication. The outcome of this phase will decide the outcome of the game unless one side has made major mistakes early in the scenario. For more elaboration reread the Superpower strategy section on End game play.

Gulf Council Forces

Kuwait has one basic strategy in scenario 1. Block the Iranian advance as long as possible. Failing to accomplish this, retreat into the capital and hold until relieved. The experience from all of the playtests indicate that one should not hold one's breath waiting. Therefore, use the Kuwaiti forces to inflict maximum hits on the assaulting Iranian forces.

Bahrain and Qatarian forces should follow the Kuwaiti strategy. The Bahrainian infantry battalion has its best chance of survival by remaining in the capital. The Bahrainian Fast Attack Craft (FAC) if it survives the initial strikes should sortie and attempt to sink one of the Iranian amphibious capable naval units (Amph or HC) to reduce the force available for an assault. The Qatarian forces should defend the capital and attempt to impede the coastal advance of the Iranian forward ground elements. The Qatarian Mirage can be used to prevent airmobile operations and air strikes against Qatar.

The Saudi Arabian naval forces are the equal of anything in the Iranian inventory but usually few survive the initial Iranian air and naval onslaught. If any are available, destruction of the Iranian amphibious capable naval units may save Bahrain later in the game

whereas destruction of the Iranian DD naval unit (with its adequate bombardment strength) may help prolong the siege of Kuwait. The type of strategy pursued with these units depends on the style of the commander.

Prior to intervention, the Saudi air and ground forces are the most significant available to the US commander. It is important to US strategy that the majority of these forces survive the middle game for use during the end game counter-offensive. Defense of the Saudi Arabian northern border will allow the Iranian forces to quickly engage the Saudi army. This situation is to be avoided as the strength of the Iranian forces will seriously attrite even the most casual defense. A more productive tactic is to fall back on Riyhad and prevent its capture. The terrain around the capital is conducive to defense and preservation of the ground forces.

The coast will initially have to be yielded to the Iranian advance but it is within this situation that an enemy vulnerability can be created. The Iranian forces will by necessity use the coast road as a line of communication. With the Saudi forces positioned around the capital they are a consant flanking threat to the Iranian logistic infrastructure. Thus, forcing the Iranian/Soviet commander to, at a minimum, screen these forces or capture Riyhad outright. Either way substantial forces will be drained from the enemy advance toward the Straits. During the end game, as US forces arrive in strength, various amphibious assaults can be launched in conjunction with Saudi ground attacks to disrupt the Iranian lines of communication, necessitating a major retreat of their forward ground elements or a concerted air transport supply effort. If the Saudi ground forces are eliminated prior to US intervention the Iranian/Soviet end game problems will have been significantly simplified.

The Saudi air force is an integral element in the preservation of the Saudi ground forces and the retention of the capital. One or both airbases should be positioned initially near the capital. If one of the airbases is initially located near the coast be sure to co-locate a truck and an airdefense unit at the airfield. The truck will allow for quick evacuation from advancing enemy units while the air defense unit reduces the possibility of an enemy airmobile assault. The positioning of an airbase near the coast will enhance the Saudi interception capability over the airspace of Bahrain and Qatar. The majority of Saudi air units should remain on interception. The objective of the Saudi airpower is to prevent the Iranian air force from being a decisive factor in the ground battle. The air battle outcome will affect the US/Arab commanders situation during the end game.

Defense of the Straits of Hormoz falls primarily on the United Arab Emirates and Oman. The majority of the UAE forces should set up within the area of Megahex J-09 with the airfields and cities in the area getting the lion share of the ground forces. The armored car unit can be used to screen the Saudi/UAE border to slow any Iranian ground force advance. Place the airbase in Dubay (4062) to provide some protection from airborne drops and enemy air strikes. The naval FAC if it survives should attempt to inflict maximum damage until it is destroyed or runs out of SSM's.

The Omani forces have a supply source secure against ground attack allowing the commitment of the Omani ground forces to the defense of the UAE and the small, but important airfield on the operational map (4458). The initial placement of Omani forces on the operational map should consist of the guard infantry battalion. Battalion size units do not require supply if they are in a defensive posture. A ground unit cannot be eliminated due to lack of supplies, a battalion which takes only one hit is automatically immune from taking a supply penalty hit although it still may not initiate combat. Placement of the Omani airbase on the airfield (4458) is a fairly risky move but if it is not eliminated by enemy air strikes it can play a role in the defense of J-09 which it cannot as effectively accomplish from the Strategic map. Some consideration should be given to placing the airbase on the strategic map in Megahex K-09 to prevent the Iranian/USSR commander from mining the hex with air units, allowing for a US force buildup in this location.

The rest of the Omani land forces should move from the strategic map to the operational map as early in the game as possible and reinforce the defense of Megahex J-09. The Omani naval unit should also attempt to inflict as much damage as possible until it is either destroyed or runs out of SSM's.

FIG. 3

This section on scenario 1 in conjunction with the information given in the Superpower strategy sections should be taken as guidelines. Individual play will in most probability make each game somewhat unique. A careful application of the principles described should improve the utilization of a player's forces.

USSR INVASION SCENARIO (#2)

This scenario depicts a Soviet invasion of Iran with the US intervening on their behalf. The Gulf Council Countries remain neutral while the superpowers battle for possession of the Persian Gulf. The basic Soviet and US strategies are discussed in the Superpower strategy sections.

Iran

One of the primary objectives of the Iranian forces in this scenario is to delay the USSR ground forces as long as possible while the US forces buildup in the south. During the opening phase of the invasion the mountains in northern Iran present the Soviet commander with difficult terrain to traverse. The Iranian/US commander should defend and delay Soviet forces in this area but not to the last man. Use the militia infantry divisions that set up in the major cities as permanent garrisons. The Iranian 1st and 2nd corps should initially be used to conduct the delaying action in the mountains but do not allow these forces to be closely engaged and eliminated early in the game. The US forces are powerful but lack a significant ground element. Therefore keep as much of the Iranian armored units from being eliminated for later use during the end game counteroffensive. Retreat the bulk of the armored units south when the Soviet offensive nears Tehran while leaving militia forces to exact a toll against the advancing Soviet units when they directly assault the city. Place all militia infantry divisions into deliberate defense during the third action stage of game turn one. This will effectively neutralize the troop quality effect suffered by these low grade units.

One soviet tactic that must be defended against during the opening and middle game is the paradrop. The Soviet commander possesses three elite airborne divisions in his order of battle. Guard important rear area facilities and key cities such as Esfahan, Bandar Abbas, and Megahex F-06. Loss of Bandar Abbas will create serious problems for the US commander especially if the Soviet ground forces are able to link up with the paratroopers. The easiest way to defend against airborne drops is to maintain interceptors over southern Iran. Remember to retreat Iranian airbases prior to their being overrun by the Soviet advance. Keep truck units stacked with forward airbases for this purpose. This will allow the Iranian airforce to survive the opening game and help defend the south later in the scenario.

The Soviet forces require 11 cities to achieve a marginal victory. The cities in northern Iran alone will give the Soviets this result. In order for the Soviets to raise their level of victory they must advance south and capture three more cities and dispute control of the straits. Therefore the Iranian/US defense should initially center on Esfahan, Ahvaz, Abadan, Kerman, Shiraz and Bandar Abbas. A good tactic to employ in slowing the soviet advance is to use airpower to attack supply depots and disrupt the supply infrastructure. The final victory will go to the commander who can better implement strategy with the forces available.

SOVIET INVASION OF IRAN (#3)

This scenario is identical to scenario 2 with the addition that the Iran/Iraq war is still in progress when the invasion occurs. The Iranian strategy in this scenario is fundamentally the same as in the previous one except that Megahex F-06 must be allocated more resources. This will drain vitally needed forces from opposing the Soviet advance but in this scenario northern Iran will initially have to be given up without much of a fight. The objective is to hold the southern part of the country and prevent the Soviets from achieving a victory level above marginal until the US forces arrive in strength.

The Iraqi/Soviet commander should use the Iraqi ground forces to conduct a holding action early in the scenario. This should freeze the Iranian units in the area and prevent them from reinforcing the units defending northern Iran. If subsequent Iranian moves draw

down the forces in Megahex F-06 an offensive should be launched to capture this region. Therefore, either the Megahex F-06 will be vulnerable to an Iraqi offensive or the northern half of Iran will be captured more easily by the Soviet ground force advance.

Whereas the basic Iraqi ground force strategy in the beginning of the scenario depends on the Iranian force dispositions the air force should be used aggressively in an attempt to debilitate the Iranian air force as early in the scenario as possible. The Iranian/US air forces in the scenario depend on the Iranian air units for the majority of their offensive missions as the early US air reinforcements are tasked to defend the US buildup area. Heavy attrition of the Iranian air assets will reduce the offensive nature of the opposition air missions or leave air defense vulnerabilities which can be exploited.

Overall, the position and balance of forces in this scenario are more favorable to the Iraqi/Soviet commander. These advantages should be exploited early to offset the US forces which appear in strength during the middle portion of the scenario. These advantages at the very least should assure a marginal victory for the Iraqi/Soviet commander with excellent chances for a substantive victory.

TACTICS

The focus of this section is on the nuances of play and the proper implementation of tactics. The points raised in this section are general principles which will apply to the majority of combat situations. It is through the correct implementation of tactics that a Commander's vulnerabilities to enemy actions will be minimized and chances of successful offensive operations maximized.

Air Operations

The Gulf Strike game system places strong emphasis on detection which makes the Electronic Warfare Detection Aircraft (EWDA) units the most important prerequisite for successful air operations. Use EWDA units to tie several airbases into an air defense zone whereby several airbases can provide mutual support to each other. The absence of this capability fragments the defense allowing each airbase to defend only itself. This type of vulnerabilty can then be exploited by the opposing commander. As a corollary when conducting offensive operations the prime target early in an attack should be an EWDA unit. Once an air defense zone has been fragmented it is easier to saturate the defenses of individual airbases and destroy them and other lucrative targets with strike missions. Attacking a cohesive air defense zone can be prohibitive in cost and once penetrated the remaining strike sorties may be insufficient to inflict commensurate damage.

The rules state (30-R-4) that a player may sortie air units from one airbase at a time, and can move up to three air units as a stack. Therefore it is important to position strike and interceptor air units at the same airbase so that the maximum amount of flexibility is available when launching sorties. The advantages of multi-role aircraft, such as the F-4, lie in their automatic flexibility coupled with effective ratings for several mission configurations.

During an air to air combat adjudication, the air units being fired on use the highest ECM rating in the stack. Mix aircraft types with high ECM ratings, such as the E-6, in with less capable air units to reduce attrition results. Additionally if a strike mission is being conducted in an area with a high probability of an enemy interception, provide escort aircraft.

One of the most lucrative ground attack targets are improperly defended supply depots. A supply depot must be destroyed over the course of a game turn or its damage is removed during the End Stage. Plan to have enough sorties available to eliminate a supply depot target or do not bother to attack it in the first place. The potential attrition and cost in supply points should not be spent, if the objective is unattainable due to inadequate force.

Land Operations

Movement for the most part should be done in Movement to Contact formation. Travel mode should only be used when the prospects of attack (including air strikes) are negligible and a swift advance will further the strategic direction of the campaign. The more intense offensive formations (Hasty and Deliberate Assault) are expensive vis-a-vis supply points and should be used sparingly. It is often useful to

go into Hasty Defense formation when the ground unit is acting as a blocking force and does not anticipate moving any great distance in the near future for the cost of changing formation will reduce its movement. Deliberate Defense formation is primarily used by infantry type units defending in cities. Militia units garrisoning a city should be permanently placed in Deliberate Defense formation to offset their poor troop quality combat shifts.

When conducting attacks derive the maximum column shift and die roll modifications through the proper use of support units (engineer, artillery, and close air support). Support units (especially artillery and engineers) should not be placed in reserve but utilized in the forward battle area. Additionally, do not mix troop quality types in an attack. The loss in column shifts is usually not compensated for by the additional attack factors.

When conducting offensive operations it is important that the forward battle area be properly supported. To ensure maximum movement and protection of the spearhead units provide engineer and air defense support. Supply depots near the front should also have ground based air defense provided. The rear area supply infrastructure and transportation assets can be covered with interceptors to free the air defense units for front line service. Maintain transport air units with supply depots and available sorties for contingency missions when enemy air power isolates friendly frontline ground units from their supply source.

Naval Operations

The Gulf Strike system places strong emphasis on combined naval warfare operations. Successful naval operations require the integration of a commanders air, surface and sub-surface assets. Within this framework detection has a major impact on play. A naval unit that can penetrate undetected to within firing range of an enemy naval unit has a good chance of inflicting extensive damage before it is retaliated upon. It is suggested that the players use the Optional Detection rule (41-L-7) and should consider the "new" detection rule following this section for increased game versatility. Therefore, well positioned EWDA units are as important in naval operations as they are for air operations.

"TenSHUN! The Lieutenant's asked me to say that we're looking for volunteers to fill the ranks of the _Victory Insider_. This mission requires split-second timing, in-depth knowledge of the lastest games from Victory, and a willingness to get the job done.

"The Lieutenant also says that this job will pay the same rates as _The General_. That's $18 per magazine page, $27 per page if you want AH or VG products.

"So who's volunteering? Moore! Ryer! Koller! Herman! Report to the Lieutenant at 0300 hours in full field pack and typewriter. On the double!"

"DISMISSED!"

Both sides possess aircraft carriers, with the US commander controlling all the large tail hook versions. Naval aviation has tremendous flexibility as well as increased vulnerability. For the USSR commander the name of the game is sink the US carriers and neutralize the US naval aviation advantage. An aircraft carrier which is within strike range of a Tu-26 (Backfire) can almost always be successfully attacked but must then contend with the F-14 retaliation that inevitably follows. (Figure 3)

The issue being highlighted by the system concerns the fact that current US naval detection ranges (E-2) closely coincide, with the launch point required for USSR long range ASM's. Therefore, unless an earlier detection can be achieved by another detection platform, which is then communicated to the naval battlegroup the air strike must inevitably achieve some level of success. Gulf Strike makes the assumption that both sides will isolate the theater by attacking communications satellites and conducting strategic EW (jamming and sabotage). The new optional detection rule will allow players to modify this basic Gulf Strike strategic assumption. Aircraft carriers that cannot obtain early detection of Tu-26 sorties must stay out of their range until these aircraft can be destroyed by air strikes and air to air combat attrition. The other major carrier killer is the SSGN which is most effective if it can avoid detection.

The US commander is not without effective military options. All forward Soviet airbases must be destroyed early in the game to prevent forward basing of Tu-26 air units. Later in the scenario the surviving Backfires should be based in the Soviet Union. As the carriers move closer to the Gulf create a picket line of EWDA units to give at least a five hex warning to the F-14 interceptors (requires new optional rule) or if not using the new optional rule ensure that the Backfires must fly through an air force air defense zone before reaching their ASM launch point. Either way, the trouble the US commander is forced to contend with highlights the effectiveness of these advanced supersonic land based air systems with their long range ASM's. The submarine threat on the other hand can be more easily handled if extensive ASW missions with SSN, P-3, and S-3 units are conducted early in the scenario leading to the destruction of the Soviet submarine force. Remember to always keep the F-14's, a strike, and an ASW air unit on interception at all times to make full use of all interception and CAP opportunities that occur during the action stage. Failure to implement this can lead to unacceptable damage to the US carrier battlegroups in the scenario.

The US commander should conduct mine clearing operations whenever the opportunity presents itself as should the USSR commander create minefields to complicate the overall naval and supply situation to his benefit. Whenever a naval unit becomes SSM depleted attempt to replenish this capability as early as the situation and the supply of these items allows. As stated earlier in the Superpower strategy section sea supremacy is a requirement for the US commander to achieve victory whereas if the USSR commander can prevent this, it is a victory.

Optional Rules

Satellite Communications

A US or USSR interception can be launched if the enemy air unit is detected and is within the air detection range of a friendly unit. The interceptor air units do not have to be within the friendly air detection range either at the time of launch or thereafter.

Jordanian RDF

The first time that a random event is rolld which has occurred before during the scenario instead of rolling again implement the following random event.

The US commander receives the Jordanian RDF unit. It is a Brigade sized formation with a combat strength of 3, an air defense rating of 3, a movement allowance of 4, and is an elite unit. To bring the unit into play a US C-130 unit must fly off the strategic map A-07. During the next Global Military Phase the C-130 and the Jordanian RDF brigade are available in Strategic map hex A-07. This unit uses US supply.