Avalon Hill Philosophy Part 86

Although not all the games we mention in our annual Work in Progress reports eventually see publication, readers have shown an interest in knowing what's on the drawing boards for the year ahead. Doubtless some of the titles mentioned in the following report may rival THE RISING SUN as a game that was not to be, but most of them should eventually be published under the Avalon Hill banner. The list below is not all-inclusive as we reserve the right to sneak some surprises in between our annual reports, but it should give you a good idea of what you can expect from AH in the foreseeable future.

GOLD!: The International Investment Game

Finally, a financial game that combines simplicity and the feel of high finance. Designed by the same investment expert who did FOREIGN EXCHANGE, this one is a large drop in complexity from its predecessor. For two to eight players, only three pages of rules and less than an hour playing time.

Game includes a 22" x 16" gameboard, 8 Prices Change/Yields Change Cards, 2 Playing Aid Cards, 450 Investment Certificates, 35 Risk Cards, 25 OPTION Cards, 8 playing pieces, a pack of money, two dice, one special die, and a rulebook.

Released at ORIGINS 81 for the princely sum of $25.00.

FLAT TOP

The long awaited AH revision is finally drawing to a close, and I think the result is a game that has been well worth waiting for.

Continued on Pg. 11, Column 1

AIR FORCE ANALYSIS

Aircraft Performance Breakdowns

DESERT DECEPTION

A Hidden Movement Variant for AFRIKA KORPS

DESIGN ANALYSIS

The 3rd THIRD REICH

STATE OF THE ART TOBRUK

COMBAT System Variations

AIW POINT BY POINT

The Design Your Own Formula Rides Again

PEARL HARBOR DEFENDED

Response to the Ideal Japanese VTP Strategy

THE ASYLUM

Bean Soup & Other Recipes

STRATEGY IN DIPLOMACY

Part II of the DIPLOMACY Trilogy

HIT THE BEACH

Invasion Defenses in D-DAY 77

SQUAD LEADER CLINIC

Everything You Always Wanted to Know About Bunkers

STAFF BRIEFING

An Interview with Dale Shrafer

Copyright 1981

The AVALON HILL
Game Company

4517 Harford Road
Baltimore, Md. 21214
This revision of a classic game you've long awaited is the culmination of five years of intensive research and playtest. The result, we believe, will provide you pleasure for many years to come. For you historical buffs, BATTLE OF THE BULGE is the last word in accuracy. Official American and German documents, maps and actual battle reports (many very difficult to obtain) were consulted to ensure that both the order of battle and mapboard are correct to the last detail. Every fact was checked and double-checked. The result—you move the actual units over the same terrain that their historical counterparts did in 1944.

For the rest of you who are looking for a good, playable game, don't look any further. "BULGE" was designed to be FUN! This means a simple, streamlined playing system that gives you time to make decisions instead of shuffling paper. The rules are short and clear-cut so you can get into play quickly and easily. Because important locations are clearly marked on the mapboard, set-up is a snap. The Player Aid Cards are designed to handle all the detail work, so you have more time for play.

Just because the game mechanics are easy to learn and remember, doesn't mean that "BULGE" is a simple game. Many special game features provide the color and that "feel" of reality that makes this an exciting recreation of the actual battle. Fortunately, these have been carefully incorporated so as to enhance the flow of play instead of bogging it down in detail.

Some of the Many Special Features:
- Tactical Air Strikes
- Strategic Bombing Effects
- German Airborne Drop
- German Infiltration
- Launching the Fifteenth Army
- Bridge Demolition
- Artillery Bombardment
- Special German Rocket (Nebelwerfer) units
- British Participation
- Several What It's Triggered by Battlefield Conditions
- Fuel Dumps

What's Inside . . .
- 22" x 28" Full-color Mapboard of Ardennes Battlefield
- Countersheet with 260 American, British and German Units
- Countersheet of 117 Utility Markers
- Time Record Card
- German Order of Appearance Card
- Allied Order of Appearance Card
- Rules Manual
- One Die

BATTLE OF THE BULGE is an operational recreation of the famous Ardennes battle of December, 1944—January, 1945.
- Each unit represents one of the regiments that actually participated (or might have participated) in the battle.
- Each hex is approximately 2 miles across.
- Each turn covers twelve hours of real time.
- Playing time averages between 3 and 9 hours, depending upon the scenario being played.
- Recommended for anyone 12 years and up.

Two Scenarios
- The Tournament Scenario covers the period of the German advance. Average playing time is two to four hours. Designed to be played at all official Avalon Hill tournaments.
- The Campaign Scenario extends the Tournament Scenario to include the Allied counterattacks. This is the ENTIRE battle. Average playing time four to nine hours.

BATTLE OF THE BULGE is available now for $16.00 plus 10% postage and handling charges (20% for Canadians; 30% for overseas) from Avalon Hill, 4517 Harford Rd, Baltimore, MD 21214. Maryland residents please add 5% state sales tax.
**Black Spy Card Game**

**FOR SNEAKY PLAYERS**

**BLACK SPY** is an intriguing card game for the whole family. The object is to be the player with the lowest score when one player goes out by getting 200 Points.

The **BLACK SPY** card deck is composed of five suits, instead of the regular four. Four of the suits have only one spy. But the black suit has six spies. Those are the guys you have to look out for.

The rest of the cards are other types of sneaky and shady characters: the Informer, the Interrogator, the Infiltrator, the Saboteur, the Assassin, the Agent, the Double Agent, the Code Breaker, the Deputy Director, and the Director. As with the spies, the black suited guys are the ones to look out for. All the others are on your side.

You never know what will happen when you lead a trick in **BLACK SPY**. It's not like regular card games where everyone just follows suit. You may find a spy in your midst. Or you may wind up taking the trick and leading again!

The rules to the game are less than one page. You can be playing the game within five minutes. Each game should last no more than an hour. Several variations are provided for those who want a little more strategy.

**BLACK SPY** includes a scorepad, card deck, and discard tray and is available from Avalon Hill, 4517 Harford Rd., Baltimore, MD 21214 for $6.00 plus 10% postage and handling (20% for Canadians, 30% overseas). MD. residents please add 5% state sales tax.
AIR FORCE ANALYSIS
by David Bottger

An Evaluation of the Planes of the New AIR FORCE

AIR FORCE is Avalon Hill's tactical simulation of aerial combat in the European theater during World War II. In its revision, Avalon Hill has preserved the best features of the original Battleline design while cleaning up the rules and adding several significant new ones. This article will examine these changes and then analyze the game and the aircraft portrayed with an eye toward the formulation of successful tactics.

THE "NEW" AIR FORCE

For those unfamiliar with the game, Dr. Bieksza's article "The View from the Cockpit" in volume 17, number 3 of the GENERAL describes the AIR FORCE system. Avalon Hill has retained this basic system with modifications that contribute to realism or ease of play.

The most common criticism of the Battleline version centered, ironically, on the game's greatest strength, the simultaneous movement system. Since movement for an entire turn must be plotted in advance, neither player can react to his opponent's maneuvers until the following turn. The result has been analogized to a pilot flying with his eyes closed for ten seconds at a time.

Players soon discovered that there was virtually no advantage to being on the enemy's tail, since it was almost impossible to stay there. This was perceived as unrealistic, although my reading suggests that the tail position was less important than commonly believed, particularly late in the war.

Sequential movement presents the same problem to the player moving first. The second player, on the other hand, knows the final position of his opponent before performing any movement himself. As a result, the first player keeps his blindfold while the second receives an unwarranted advantage. In essence this rule interjects sequential movement into the simultaneous movement system but it awards the advantage of moving second to the player who has earned it, rather than arbitrarily.

Two problems arise. First, as in standard sequential movement games, the advantaged player knows his opponent's final position before performing any movement himself. He also knows the final position of all other disadvantaged aircraft, including those over which he does not hold an advantage.

Avalon Hill has elegantly solved both of these problems by a single rule requiring the advantaged aircraft to follow as closely as possible the movement of the disadvantaged plane. This rule excellently recreates the historical situation of a pilot pursuing the enemy as he moves, rather than simply flying toward his final position. It also prevents the advantaged player from using his knowledge of the movement of other disadvantaged aircraft. He may, of course, choose to pursue a different enemy aircraft but must first waive his advantage.

In this regard, the Sequence of Play states that aircraft which are neither advantaged nor disadvantaged maneuver that turn. The actual penalty may be several hundred feet, counting the 200-300 feet which most fighters can climb without the loss of speed points. This rule discourages the common but unrealistic tactic of flying about in a perpetual right or left bank in anticipation of future maneuvers.

The next most significant rule change from the Battleline version imposes a 100-foot altitude loss on aircraft which end movement in a non-level bank without performing a non-banking maneuver that turn. The actual penalty may be several hundred feet, counting the 200-300 feet which most fighters can climb without the loss of speed points. This rule discourages the common but unrealistic attitude of flying about in a perpetual right or left bank in anticipation of future maneuvers.

For example, under the old system a plane with five gunnery factors and a fire modifier of two on the tail of an enemy aircraft with a silhouette modifier of two gained only three hit tables as a result. Under the new system, the benefit is a full six hit tables. However, at a range of four hexes the attacker in this hypothetical situation starts with the basic (before application of modifiers) hit table of one, while under the old system he would start on table three. The net result is a gain of only one hit table with the revised rules.

<table>
<thead>
<tr>
<th>Gun Factors</th>
<th>Range in Hexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>3-4</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>5-6</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>7-8</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>9-10</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>11-12</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>13-15</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>16-18</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>19-22</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>23-26</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>27+</td>
<td>1 2 3 4 5 6</td>
</tr>
</tbody>
</table>

2a Aircraft Gunnery Effectiveness

<table>
<thead>
<tr>
<th>Gun Factors</th>
<th>Range in Hexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>3-4</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>5-6</td>
<td>1 2 3 4 5 6</td>
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<td>7-8</td>
<td>1 2 3 4 5 6</td>
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<td>9-10</td>
<td>1 2 3 4 5 6</td>
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<td>11-12</td>
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</table>

For example, under the old system a plane with five gunnery factors and a fire modifier of two on the tail of an enemy aircraft with a silhouette modifier of two gained only three hit tables as a result. Under the new system, the benefit is a full six hit tables. However, at a range of four hexes the attacker in this hypothetical situation starts with the basic (before application of modifiers) hit table of one, while under the old system he would start on table three. The net result is a gain of only one hit table with the revised rules.

Figure 1: Old (top) and New Aircraft Gunnery Tables
Without calculating every possibility, it appears that generally the new combat system diminishes the firepower of aircraft in the 1-15 gunnery factor range at lower modifiers but increases it at higher modifiers; has no effect in the 16-18 gunnery factor range; and slightly increases firepower at all modifiers for 21 + gunnery factors.

The firepower effectiveness of bombers has been reduced by a rule providing that their gunnery factors must be applied in increments of no more than four, whose fire must be resolved separately. This rule dramatically affects well-armed heavy bombers like the B-17 and B-24, but not without good reason. With a minimum of eight gunnery factors in every clock sector, the B-17G was more than a match for any fighter under the old rules. This revision more accurately portrays the lack of coordination among bombers.

Of the new rules, my personal favorite involves the optional Pilot Characteristics section. First, players roll one die on the Pilot Characteristics Determination Table (figure 2) and read the results under the column corresponding to the year of the nationality of their pilot. Then they consult the Pilot Characteristics Table of effects (figure 3) to discover what benefits they enjoy from their pilot's superior vision, reflexes, training, or experience. A pilot with exceptional reflexes, for example, who finds himself disadvantaged need only reveal one-half of his movement plot to his pursuer. This rule adds a needed "human" touch to a game which otherwise emphasizes machinery.

Figure 2:
PILOT CHARACTERISTICS DETERMINATION TABLE (OPT)
Find Your Own Line Corresponding to the Nationality

<table>
<thead>
<tr>
<th>German 1939-42</th>
<th>early '43</th>
<th>late '43-'44 1945</th>
<th>American late '43-'45 late '42-'43</th>
<th>early '42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diet ETTRV</td>
<td>ETTRV</td>
<td>ETTRV</td>
<td>ETTRV</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>E</td>
<td>T</td>
<td>R</td>
<td>V</td>
</tr>
<tr>
<td>5</td>
<td>RV</td>
<td>RV</td>
<td>R</td>
<td>+</td>
</tr>
<tr>
<td>6</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Key: E = Experience (roll again to determine ace), T = Training, R = Reflexes, V = Vision and Reflexes.

Players may discover for themselves the few other changes incorporated into the new AIR FORCE. As might be expected, the graphics are better, although it is not clear that the new aircraft data cards are more functional than the old. Given the overall quality of the game, it is tempting to see a new game on the subject for some time, and certainly not a better one.

BASIC TACTICS
AIR FORCE is a game of resource management. The resources are altitude, speed, power and ammunition. Maneuverability is the ability to consume the first three of these effectively. Victory will go to the player who can get the greatest output from his resources.

Central to this proposition is the deceptively simple rule that the number of speed factors available to an aircraft each turn depends on what it did the previous turn. This rule makes each turn less a discrete unit than part of a continuum. Thus climbing and every maneuver except banking reduces next turn's speed, while diving increases it.

These principles may be illustrated by considering the common situation where enemy fighters approach each other head-on. At this point the players' goals are the same—maneuver into good firing position while avoiding enemy fire. Once they become familiar with the game players tend to employ the "slip-turn" maneuver in attempting to reach this goal. This maneuver permits a plane to perform a slip followed immediately by a turn of two hexes. The result is a 120 degree turn which may put the enemy directly in your line of fire.

The costs of this tactic are high, however. The slip costs two speed factors and each turn another factor, for a total loss of four speed factors. Since most fighters have only one or two power factors available to counteract this loss, next turn's speed is reduced by two or three factors. This loss can be made up by diving, but then it is valuable altitude which is lost.

If serious damage can be inflicted on the enemy, the result will be worth the price. If not, several turns will be required to regain the lost speed or altitude. Meanwhile the enemy has the opportunity to climb and/or maneuver into an advantageous position. The addition of the "advantage" rule compounds the problem, since the loss of speed and altitude which the "slip-turn" entails may allow the enemy to get on your tail, a position he may be unwilling to surrender. In short, this technique resembles the two-to-one attack on Tobruk in AFRIKA KORPS—a gamble sometimes worth the risk, but not to be taken lightly or used indiscriminately.

The insightful player will conclude that the proper tactic under these circumstances is to make a head-on pass and then climb. And, as students of World War II aerial combat know, this is the same conclusion reached by the actual combatants, particularly when up against an aircraft superior in maneuverability.

The larger lesson is that every choice in AIR FORCE has its long-range consequences. The decision to maneuver, climb or dive dictates the range of options available in future turns. The player who risks exposing his plane to enemy fire in the hope of gaining a positional advantage may find himself too damaged to use it. Conversely, the player who thinks two, three or more turns ahead will be successful. In short, AIR FORCE rewards the far-sighted.

As a corollary, players should endeavor to end each turn with a few hexes of straight movement. These hexes "in the bank" can pay dividends in the next turn by making a maneuver possible much sooner than would otherwise be the case. Granted, this tactic takes advantage of the fact that games divide time into separate turns, but it nonetheless works.

Beyond these broad principles, it is difficult to generalize on tactics other than to advise that players know their own and their enemy's aircraft, so that they can maximize their plane's advantages while minimizing those of their opponent. The pilot of a P-47D can afford to trade shots with almost anyone; the pilot of an Me-109F cannot. The maneuverability advantage enjoyed by a Spitfire IX against an Me-109G disappears when it meets an Me-109F.

Nor is performance an absolute. Up to 19,900 feet the FW-190A is slightly more maneuverable than the P-51D, but from 20,000 to 24,900 feet the Mustang has the advantage. From 25,000 to 29,900 feet they are equal while the P-51D regains the edge from 30,000 feet up.

The bulk of this article is devoted to such comparisons. First, however, it is necessary to take a closer look at the hit tables, where superior tactics are rewarded.

Table 1 represents such an analysis. The hit tables from one to 20 are grouped according to the number of hits possible, followed by a row representing all 20 tables. The columns headed "Proportion of Hit Types" show the proportion of each type of hit in each group of tables. Thus, wing hits comprise 23% of the hits in tables seven through twelve, while the percentage falls to 22 for tables 13-16. The columns headed "Expected Hits" show the average number of hits of each type for each hit table. On tables four-six, for example, one-half of an engine hit can be expected per die roll.

Predeterminately, expected hits in each category increase with the higher hit tables. Each category does not increase proportionally, however. From table two to 20, expected fuselage hits increase from .42 to 1.50, or about three and one-half times; while expected engine hits rise from .25 to 1.17, or five times.

On the other hand, the proportion of hits in each category remains virtually the same throughout the hit tables. Above table one, the percentage of gun hits varies between six and nine, and cockpit hits from 12-14.

At most levels, fuselage hits are most likely, followed by wing, engine, cockpit, fuel tank and gun hits. Thus, the fact that three fuel tank hits will down a Hurricane II may be less significant than the fact that five fuselage hits will accomplish the same result.
AIRCRAFT EVALUATION

Fighters

AIR FORCE includes 15 “pure” fighters consisting of 14 single-engine aircraft and the twin-engine Me-262A. Although players will develop favorites, they should be familiar with the strengths and weaknesses of all potential opponents in five important areas: durability, firepower, maneuverability, power and speed.

Tables 2-6 rate the 15 fighters in these five categories. Each table is organized in the same way: aircraft designation on the left, followed by the “raw score” in each category, then percentage score, with the best fighter in each category rated at 100 percent.

Durability—An aircraft’s durability could be represented simply by the total damage it can absorb. However, as discussed above, each hit type does not occur with equal frequency on the hit tables and thus in the game. Fortunately the proportion of each hit type remains fairly constant throughout the hit tables, so that wing hits are twice as common as fuel tank hits regardless of the firepower employed.

Durability can be expressed more precisely, therefore, by multiplying the number of hits an aircraft can take in each area by the frequency with which that hit type occurs on the hit tables, then totalling these products. The result, called the Durability Index (D.I.), is computed as follows, using the Me-109G as an example:

\[(6 \times .23) + (3 \times .25) + (3 \times .19) + (3 \times .13) + (4 \times .11) = 4.05\]

Gun hits are not included in the D.I. for two reasons: (1) elimination of all guns does not destroy the aircraft but merely results in excess gun hits becoming fuselage hits, which are already included in the formula; and (2) gun hits are so infrequent that in most cases an aircraft will be shot down before losing all of its guns.

Table 2 presents the D.I. for all AIR FORCE fighters. Not surprisingly, the P-47D heads the list. More surprisingly, two German mainstays, the Me-109E and F, bring up the rear, with the Me-262A not far ahead. All three are weak in the fuselage and wings, which, as Table 1 shows, are the most common hits.

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**TEN AIR FORCE SCENARIOS**

The following historical or quasi-historical scenarios are offered for those who have exhausted the few historically-based scenarios accompanying these games and who have tired of throwing randomly selected aircraft into battle. Scenarios 1, 2 and 9 employ aircraft from AIR FORCE, scenarios 5, 8 and 10 aircraft from DAUNTLESS and scenarios 3 and 4 aircraft from STURMOVIK (formerly AIR FORCE/DAUNTLESS Expansion Kit). Scenario 6 requires planes from DAUNTLESS and STURMOVIK and scenario 7 requires planes from all three.

All of these scenarios were designed for two players. Scenarios 4 and 8 are well suited for solitary play, however, and scenarios 5 and 10 would make good multi-player games.

These scenarios were selected not because they are perfectly balanced, although they should be reasonably even. Rather, in accord with the comments under “Creating Your Own Scenarios” in the AIR FORCE rulebook, they were picked in the hope that they will be interesting to the players.

All standard and (at the players’ option) optional rules apply unless stated otherwise. All scenarios are twenty turns long.

**Scenario 1—Meeting Over Metz**

**Victory Conditions**

**British:** Destroy at least one more enemy aircraft than own losses

**German:** Avoid British victory

**Special Rules**

Any aircraft not in the original six board sections at the end of turn twenty is considered destroyed for the purpose of determining victory.

**Commentary**

This scenario depicts the first combat between the Hawker Hurricane and the Messerschmitt Bf-109. On March 29, 1940, three Hurricanes of No. 1 Squadron encountered two ME-109’s of JG 53 near Metz. Flying Officer Ritchey scored the only kill, downing one German. These two aircraft would meet many more times before the issue was decided.

**Scenario 2—The Battle of Britain**

**Victory Conditions**

**British:** Destroy at least one more enemy aircraft than own losses

**German:** Avoid British victory

**Special Rules**

Neither Ju-88A may be downed by ramming. Opposing aircraft which end movement in the same hex at the same altitude are assumed to have missed each other.

**Commentary**

Before being shot down on January 28, 1942, outside Boulogne, Dick Tuck, D.S.O., D.F.C., tallied 30 kills officially, 36 by his own count. He survived German POW camps until January 1945 when he escaped to Russia, then escaped from the Russians to the British Embassy in Moscow.

In August 1940 a section of 92 Squadron led by Tuck intercepted three Ju-88’s eight miles north of Cardiff. Although one Spitfire was quickly put out of action by a bullet in the radiator, the remaining three destroyed the invaders, Tuck personally flaming two.

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**Table 2**

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Raw Score</th>
<th>D.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-47D</td>
<td>5.28</td>
<td>100</td>
</tr>
<tr>
<td>Tempest V</td>
<td>5.03</td>
<td>95</td>
</tr>
<tr>
<td>P-47B</td>
<td>5.03</td>
<td>95</td>
</tr>
<tr>
<td>FW-190A</td>
<td>4.30</td>
<td>81</td>
</tr>
<tr>
<td>P-51D</td>
<td>4.30</td>
<td>81</td>
</tr>
<tr>
<td>P-51B</td>
<td>4.30</td>
<td>81</td>
</tr>
<tr>
<td>Hurri. II</td>
<td>4.17</td>
<td>79</td>
</tr>
<tr>
<td>Spit. IX</td>
<td>4.05</td>
<td>77</td>
</tr>
<tr>
<td>Me-109G</td>
<td>4.05</td>
<td>77</td>
</tr>
<tr>
<td>Hurri. I</td>
<td>3.92</td>
<td>74</td>
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<tr>
<td>Me-262A</td>
<td>3.88</td>
<td>73</td>
</tr>
<tr>
<td>Spit. V</td>
<td>3.69</td>
<td>70</td>
</tr>
<tr>
<td>Me-109F</td>
<td>3.44</td>
<td>65</td>
</tr>
<tr>
<td>Me-109E</td>
<td>3.44</td>
<td>65</td>
</tr>
</tbody>
</table>
Scenario 3—The Defense of Greece

British: 3 Gladiators at 14,000 feet begin turn 1 anywhere
Italian: 2 CR-42, 1 SM-79 (loaded) at 12,500 feet enter along board edge 1 on turn 1

Victory Conditions
British: Exit loaded SM-79 from board edge 4
Italian: Avoid Italian victory

Special Rules
The SM-79 cannot be loaded at sea. See special rules for scenario 2.

Commentary
No one knows how many victories Marmaduke St. John Pattie of the RAF scored during World War II. Estimates range from 28 to over 40.

In 1940 Pattie was a member of 80 Squadron stationed at Sidi Barrani, Libya. In November the squadron was sent to Paramythia in northwest Greece near the Albanian frontier to oppose the Italian invasion of Greece. This hypothetical scenario depicts a typical encounter between 80 Squadron and an Italian bombing mission.

Scenario 4—Attack on Taranto

British: 6 Swordfish armed with torpedoes enter anywhere along board edge 5-6 on turn 1 at altitude of British player's choice
Italian: 1 BB-1 each in hex IV-K4, facing direction 6 (Andrea Doria), hex IV-M15, facing 4 (Giulio Cesare) hex IV-M7, facing 6 (Cavour) and hex VI-E1 facing 1 (Canti di Cavour) 1 BB-2 each in hex IV-I7, facing 6 (Littorio) and hex IV-N13, facing 6 (Vittorio Veneto) 1 CA-2 each in hex II-G13, facing 4 (Zara), hex IV-A1, facing 4 (Fourume), and hex IV-D1, facing 1 (Gorizia) 1 barrage balloon each in facing hexes: I-V14, II-M2, V-M1, V-M3, V-M5, V-M7, III-N7, III-N15, V-N8, II-A13, II-B11, II-D10 and II-E9

Victory Conditions
British: Sink Italian ships worth at least 2000 points
Italian: Avoid British victory

Special Rules
All Italian ships are at anchor and cannot move. For this reason, a DRM of 0 applies to all torpedo attacks from fore and aft and >2 to torpedo attacks from all other directions.

Torpedoes cannot be dropped more than six hexes from their target.

Each turn, before the fire phase, a die is rolled for each Italian ship. On a roll of one or two, that ship may not fire its antiaircraft that turn.

Commentary
On November 11, 1940, 21 Swordfish from the carrier Illustrious struck a telling blow to the Italian fleet anchored at Taranto. The first wave, commanded by Lieutenant Commander Williamson, consisted of six Swordfish with torpedoes and six with bombs and flares. While the bombers made a diversionary attack on shore installations and smaller ships, torpedoes struck the battleships Conte di Cavour and Littorio. The second wave hit Littorio again and Caio Duilio. As a result of this attack, Conte di Cavour was put out of action for the war's duration and Littorio and Caio Duilio were disabled for six months.

Of the 21 attacking aircraft, only two were shot down with the loss of only one crew member. Less than 13 months later, the Japanese naval air arm would again demonstrate the vulnerability of a fleet at anchor.

Scenario 5—The Battle of Midway

Japanese: 4 D3A Val (loaded) at 3,000 feet enter along board edge 1 on turn 1
British: 2 A6M2 Zero at 4,000 feet enter along board edge 2-3 or 5-6 (see special rules)
U.S.: 3 F2A Buffalo, 1 F4F Wildcat at 3,500 feet enter along board edge 2-3 or 5-6 (all need not enter along same edge) on turn 1

Victory Conditions
U.S.: Destroy at least 2 D3A Val and exit at least 2 U.S. fighters from edge 4
Japanese: Exit at least 3 D3A Val loaded from board edge 4 or destroy all U.S. fighters
Any other result is a draw

Special Rules
Each turn beginning with turn 2 the Japanese player rolls one die. On a roll of one, the Zeros enter that turn. Subtract one from the roll for each turn after turn two.

On the turn of entry, the Japanese player rolls another die. An odd number means the Zeros enter along board edge 5-6, while an even number means they enter along board edge 2-3.

Commentary
Accounts of the Battle of Midway widely dwell on the successes of American carrier-based aircraft, but to a large extent these successes were made possible by Marine Air Group 22 based on Eastern Island, the smaller of the two islands comprising Midway. Equipped with seven F4F's, 19 SBD's, 21 F2A's and 17 Vindicators, Air Group 22 was ordered by Nimitz not only to defend its airstrip but to attack the Japanese carriers.

On June 4, 1942, 12 fighters of A.G. 22 intercepted 13 Japanese carrier-based bombers west of Midway but were bounced by escorting Zeros, suffering the loss of nine fighters with two more badly damaged.

Despite these losses, the tenacious defense of Midway convinced the Japanese that a second strike was necessary. This in turn led to the now-famous indecision by the Japanese which allowed U.S. naval dive bombers to catch their Japanese counterparts on the deck. The rest, as they say, is history.

Table 3
Firepower Index

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Raw Score</th>
<th>F.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Me-262A</td>
<td>768</td>
<td>100</td>
</tr>
<tr>
<td>Tempest V</td>
<td>480</td>
<td>62</td>
</tr>
<tr>
<td>P-47D</td>
<td>480</td>
<td>62</td>
</tr>
<tr>
<td>P-51D</td>
<td>420</td>
<td>55</td>
</tr>
<tr>
<td>FW-190A</td>
<td>420</td>
<td>55</td>
</tr>
<tr>
<td>P-47B</td>
<td>400</td>
<td>52</td>
</tr>
<tr>
<td>Spitt. IX</td>
<td>300</td>
<td>39</td>
</tr>
<tr>
<td>Hurri. II</td>
<td>256</td>
<td>33</td>
</tr>
<tr>
<td>P-51B</td>
<td>240</td>
<td>31</td>
</tr>
<tr>
<td>Me-109G</td>
<td>220</td>
<td>29</td>
</tr>
<tr>
<td>Me-109E</td>
<td>210</td>
<td>27</td>
</tr>
<tr>
<td>Me-109F</td>
<td>204</td>
<td>26</td>
</tr>
<tr>
<td>Spitt. V</td>
<td>184</td>
<td>24</td>
</tr>
<tr>
<td>Hurri. I</td>
<td>128</td>
<td>17</td>
</tr>
<tr>
<td>Spitt. I</td>
<td>128</td>
<td>17</td>
</tr>
</tbody>
</table>

Maneuverability—Maneuverability is harder to quantify objectively than durability or firepower. The airplane data cards list the number of hexes of straight movement required before each of the five maneuvers at each altitude, but they cannot predict many maneuvers of each kind will be performed in a game.

As a rough approximation, the Maneuverability Index (M.I.) is the total average cost of two banks, one turn and one slip. Experience suggests that half-loops and half-rolls occur relatively rarely in the game. Until AH added the rule requiring a 100 foot altitude loss for each turn of banked movement without maneuvering, banking was a less frequent and therefore less important maneuver. This revision guarantees that banks will occur at least twice as often as any other maneuver under normal circumstances, giving the advantage to planes with long bank requirements and disadvantaging otherwise maneuverable planes like the Spitfire I and V.

Table 4
Maneuverability Index

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Raw Score</th>
<th>M.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-47B</td>
<td>224</td>
<td>100</td>
</tr>
<tr>
<td>P-47D</td>
<td>226</td>
<td>95</td>
</tr>
<tr>
<td>FW-190A</td>
<td>275</td>
<td>89</td>
</tr>
<tr>
<td>Hurri. I</td>
<td>286</td>
<td>85</td>
</tr>
<tr>
<td>P-51B</td>
<td>288</td>
<td>85</td>
</tr>
<tr>
<td>P-51D</td>
<td>289</td>
<td>84</td>
</tr>
<tr>
<td>Me-109E</td>
<td>300</td>
<td>81</td>
</tr>
<tr>
<td>Spitt. IX</td>
<td>300</td>
<td>81</td>
</tr>
<tr>
<td>Me-109F</td>
<td>306</td>
<td>80</td>
</tr>
<tr>
<td>Spitt. V</td>
<td>306</td>
<td>80</td>
</tr>
<tr>
<td>Tempest V</td>
<td>312</td>
<td>78</td>
</tr>
<tr>
<td>Hurri. II</td>
<td>312</td>
<td>78</td>
</tr>
<tr>
<td>Spitt. I</td>
<td>314</td>
<td>78</td>
</tr>
<tr>
<td>Me-109G</td>
<td>312</td>
<td>78</td>
</tr>
<tr>
<td>Me-262A</td>
<td>562</td>
<td>43</td>
</tr>
</tbody>
</table>
As Table 4 indicates, many of the more maneuverable fighters saw action early in the war. This reflects a shift in emphasis rather than a decline in technology. As Allied pilots in the Pacific discovered, maneuverability is an advantage only if the enemy agrees to dogfight, while speed, firepower and durability cannot be neglected.

Power—Later fighters emphasized power, as shown on Table 5’s listing by Power Index (P.I.). The Power Index is the product of the total number of power factors available up to 29,900 feet and the amount of altitude gained per speed factor.

Table 5

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Raw Score</th>
<th>P.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tempest V</td>
<td>3.9</td>
<td>100</td>
</tr>
<tr>
<td>Me-109G</td>
<td>3.6</td>
<td>92</td>
</tr>
<tr>
<td>Spit. IX</td>
<td>3.6</td>
<td>92</td>
</tr>
<tr>
<td>P-47D</td>
<td>3.6</td>
<td>92</td>
</tr>
<tr>
<td>Me-262A</td>
<td>3.6</td>
<td>92</td>
</tr>
<tr>
<td>Spit. III</td>
<td>3.3</td>
<td>85</td>
</tr>
<tr>
<td>P-51D</td>
<td>3.3</td>
<td>85</td>
</tr>
<tr>
<td>Me-109F</td>
<td>3.3</td>
<td>85</td>
</tr>
<tr>
<td>Hurri. II</td>
<td>3.0</td>
<td>77</td>
</tr>
<tr>
<td>P-51B</td>
<td>3.0</td>
<td>77</td>
</tr>
<tr>
<td>Me-109E</td>
<td>2.1</td>
<td>54</td>
</tr>
<tr>
<td>FW-190A</td>
<td>2.0</td>
<td>51</td>
</tr>
<tr>
<td>Spit. IV</td>
<td>1.8</td>
<td>46</td>
</tr>
<tr>
<td>Hurri. I</td>
<td>1.8</td>
<td>46</td>
</tr>
<tr>
<td>P-47B</td>
<td>1.6</td>
<td>41</td>
</tr>
</tbody>
</table>

Speed—Finally, Table 6 provides an indication of the ability to get there, and more importantly, to get back. Since most movement occurs in either maneuver or level speed, the Speed Index (S.I.) is the average top level speed in each altitude band, which roughly reflects both maneuver and level speeds. As expected, the Me-262A literally and figuratively runs away from the competition.

Table 6

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Raw Score</th>
<th>S.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Me-262A</td>
<td>10.50</td>
<td>100</td>
</tr>
<tr>
<td>P-51B</td>
<td>8.11</td>
<td>77</td>
</tr>
<tr>
<td>P-51D</td>
<td>8.00</td>
<td>76</td>
</tr>
<tr>
<td>Tempest V</td>
<td>7.75</td>
<td>74</td>
</tr>
<tr>
<td>P-47B</td>
<td>7.56</td>
<td>72</td>
</tr>
<tr>
<td>P-47D</td>
<td>7.50</td>
<td>71</td>
</tr>
<tr>
<td>FW-190A</td>
<td>7.12</td>
<td>68</td>
</tr>
<tr>
<td>Me-109G</td>
<td>7.00</td>
<td>65</td>
</tr>
<tr>
<td>Me-109F</td>
<td>6.87</td>
<td>65</td>
</tr>
<tr>
<td>Spit. IX</td>
<td>6.78</td>
<td>64</td>
</tr>
<tr>
<td>Spit. V</td>
<td>6.37</td>
<td>61</td>
</tr>
<tr>
<td>Spit. I</td>
<td>6.28</td>
<td>60</td>
</tr>
<tr>
<td>Me-109E</td>
<td>6.25</td>
<td>59</td>
</tr>
<tr>
<td>Hurri. II</td>
<td>5.62</td>
<td>53</td>
</tr>
<tr>
<td>Hurri. I</td>
<td>5.57</td>
<td>53</td>
</tr>
</tbody>
</table>

And the Winner Is—Table 7 summarizes the results of Tables 2-6. The percentage ratings of each fighter in each category are totalled, providing a measure of the relative worth of these fighters. By this admittedly subjective method the top fighter is the P-47D Thunderbolt. Of the top ten fighters, only three are German and only three entered action before 1943, surely a tribute to the quality of this

Scenario 6—Night Mission Over Hengyang

**U.S.:** 2 P-40C at 14,000 feet enter anywhere along board edge 2-3 on turn 1

**Japanese:** 3 Ki.27 Sally (loaded) at 15,000 feet enter anywhere along board edge 4 on turn 1

**Victory Conditions**

**U.S.:** Destroy all Japanese aircraft

**Japanese:** Score at least 2 points of damage on U.S. airfield

*Any other result is a draw.

**Special Rules**

This scenario occurs at night, so optional rule XII (visibility options) is in effect. No aircraft are equipped with radar.

The U.S. airfield consists of hexes IV-A7-A10. The Japanese bombers must make one pass over these hexes before dropping their bombs. Both the practice run and the bombing run must pass over all four airfield hexes from the same direction at the same altitude.

**Commentary**

On July 30, 1942, Major John R. Alison and Captain Albert T. Baumber of the 75th Fighter Squadron stationed at Hengyang attempted a night interception of Japanese bombers attacking their airfield. Flying P-40’s not equipped for night combat, they nonetheless succeeded in downing four of the six intruders. For their exploit, Alison was awarded the D.S.O. and Baumber the D.S.C. Alison finished the war with ten kills in the China-Burma-India theater, making him the fifth-ranking American ace there.

Scenario 7—New Guinea Sweep

**U.S.:** 3 P-47B at 1,000 feet enter from board edge 2-3 on turn 1

**Japanese:** 3 G3M Nell at 500 feet enter from board edge 1 on turn 1

**Victory Conditions**

**U.S.:** Destroy all three Japanese bombers before they exit board edge 4

**Japanese:** Destroy at least 1 U.S. aircraft.

*If neither or both players achieve their victory conditions, the result is a draw.*

**Special Rules**

The turn of entry of the Ki.43 is determined by a die roll made after the movement plotting phase. On turn two, a roll of one is required for entry; on turn three, a roll of one or two, etc. On the turn of entry, the Japanese player may then plot the movement of the Ki.43 for execution during the immediately following movement execution phase.

**Commentary**

On March 5, 1944 three P-47s of 348th Fighter Group, 5th Fighter Command conducted a sweep in the Wewak area of New Guinea. Colonel Neel Kearly, who finished the war with 22 victories, accompanied by captain William D. Dunham (16) and Captain Samuel V. Blair (7), flying at 22,000 feet, spotted three Nells near Degan Strip at 500 feet. In the process of downing the bombers, Colonel Kearly was bounced by an Oscar. The Japanese fighter was destroyed, but not before inflicting fatal damage on its target.

Scenario 8—Debut of the Superfort

**U.S.:** 1 B-29 (loaded) at 16,000 feet enters from board edge 1 on turn 1

**Japanese:** 6 Ki.43 at 15,000 feet begin anywhere on boards III and/or IV on turn 1

**Victory Conditions**

**U.S.:** Exit B-29 loaded from board edge 4

**Japanese:** Avoid U.S. victory

**Special Rules**

The Japanese player may not ram the B-29 (see scenario 2 special rules).

**Commentary**

On April 26, 1944, Major Charles H. Hansen, piloting his B-29 over the Indo-Burmese frontier with a cargo of fuel, spotted 12 Oscars 2,000 feet below. After the Japanese pilots studied their new adversary accompanied by captain William D. Dunham (16) and Captain Samuel V. Blair (7), flying at 22,000 feet, spotted three Nells near Dagan Strip at 500 feet. The Japanese attempt to down the B-29 was a formidable opponent.

Scenario 9—Escape Over Falaise

**British:** 1 Spitfire IX at 4,700 feet

**German:** 6 ME-109G at 5,000 feet begin anywhere within 4 hexes of hex IV-A8, all facing same direction

**Victory Conditions**

**British:** Survive for duration of scenario

**German:** Destroy British aircraft

**Special Rules**

After the German player has plotted his movement for turn one, the starting position of the Spitfire is determined by rolling three dice. The first roll indicates the direction from IV-A8, the second roll the number of hexes in that direction, and the third roll the Spitfire’s facing. The British player then plots his movement and play proceeds.

The fire phase is omitted from turn one.

The British player is an ace and uses the concentrated fire column of the hit tables (optional rule XIX).
Commentary

Johnnie Johnson was officially the top-scoring RAF pilot of World War II with 38 kills. A master tactician and leader, this scenario represents the only occasion on which his aircraft was hit by enemy fire.

In June 1944, Johnson and his companions had engaged the German fighters providing air cover for Axis troops in the Falaise Gap. His wingman had headed back to base with engine trouble, so Johnson found himself alone. Spotting six aircraft above him, one waggling its wings, Johnson assumed they were friendly. Only when he had climbed to within 300 feet of them did he discover his error. At the same time the Germans recognized his nationality and gave chase. Johnson finally escaped by climbing to 12,000 feet, where the supercharger of his Spitfire allowed him to outrun his pursuers.

Scenario 10—Last Blood for the Fifth

U.S.: 5 P-38G at 12,500 feet begin anywhere on board 111 or 1V (all on same board)

Japanese: 6 Ki.84 Frank at 13,500 feet enter anywhere along board edge 2-3 and/or 5-6 on turn 1

Victory Conditions

U.S.: Destroy at least three more enemy fighters than own losses

Japanese: Avoid U.S. victory

Special Rules

Japanese pilots are considered novices (optional rule XIX).

Any Japanese aircraft not on one of the six original board sections at the conclusion of turn 20 or which spends more than three consecutive turns not on the original six board sections is considered destroyed for victory purposes.

Commentary

August 14, 1945, marked the last combat and the last aerial victories for the 5th Fighter Command in World War II. On that date, five P-38’s of the 35th Fighter Squadron providing cover for two rescue planes over the Inland Sea between Kyushu, Shikoku and Honshu were jumped by six Franks. Final score: four Franks downed, one P-38 lost.

As the war progressed, maneuverability became less and less a consideration in aircraft design. To reflect the effect of this shift in emphasis, Table 8 provides some insight into the evolution of the Me-109. The earliest model included in the game, the Me-109E, was roughly equivalent in durability and firepower to its successor, the Me-109F, marginally inferior in speed and marginally superior in maneuverability. The F model showed a marked improvement only in speed. The Me-109C sacrificed some maneuverability for durability and power and to a lesser extent firepower and speed. On the whole, the Me-109 series proves a mediocre fighter.

AH’s “advantage” rule weakens this argument somewhat by placing a premium on maneuverability as the way to get and stay on the enemy’s tail. Still, if the enemy can outrun you, the advantage is lost.

Single-engine Bombers

**AIR FORCE** includes only two single-engine bombers, the Ju-87B and D. Table 9 provides an analysis of their performance data. The data for these two aircraft as well as the twin-engine and four-engine aircraft to follow are computed as they were for the fighters, with the exception of firepower. Since flexible armament has unlimited ammunition for game purposes, the Firepower Index is simply the product of fire rates and range. And since flexible guns have varying firepower in different clock sectors, the fire factor used for these guns is their average fire factor.

As with the Me-109, the D model of the Ju-87 sacrificed maneuverability (less important for a dive bomber anyway) for durability, firepower, and speed.

Twin-Engine Aircraft

Twin-engine aircraft in **AIR FORCE** range from the Me-262A, included above as a fighter, to the He-111H, a heavy bomber by Luftwaffe standards. In between are fighter-bombers such as the Me-110 and Mosquito F.B.VI. The performance data for these planes reflect their divergent purposes.

Table 10 contains data for the twin-engine aircraft. The bombers dominate in durability while the fighter-bombers excel in the other categories. The exception is the Mosquito B.V, designed to avoid rather than absorb punishment. Table 10 does not, of course, consider payload, a prime consideration in evaluating a bomber.

Since the Me-110 was originally intended as a fighter, reviewing its data may provide some clue into the reasons for its failure in that role. Compared to the pure fighters, the Me-110C would rank 13th overall with 313 index points. Although high in durability (89 D.L.), it falls short in firepower (64 F.I., giving the flexible gun 20 ammo points), maneuverability (61 M.L.), speed (58 S.L.) and power (41 P.I.).

Its successor, the Me-110G, fares considerably better as a fighter, totalling 362 points, placing it just behind the P-51D. With a Firepower Index of 1306 for a new high, it rates like this in the other categories: D.L. = 94; M.L. = 62; P.L. = 51; S.L. = 55.

Ignoring maneuverability for the reasons stated above, the Me-110G and C rank fourth and tenth, respectively. Based on their game ratings, therefore, the failure of the Me-110C in particular may be attributed to the way it was used rather than any inherent weaknesses in design.

Four-engine Bombers

Durability and firepower are the mainstays of the heavy bomber. Speed and power occupy positions of lesser importance while maneuverability is virtually irrelevant. For this reason, Table 11, which ranks the heavy bombers, ignores maneuverability.

The B-17G scores first in three of the four categories, second only to the Lancaster in power. The B-17G reflects improvements over the F model in all categories, most notably in firepower, with the addition of a nose turret. Similarly the B-24J shows upgrading in firepower but also a marked improvement in speed over the D model.

**CONCLUSION**

None of this myriad of numbers will guarantee your success in your next game of AIR FORCE. Rather, they are intended to highlight the relative strengths and weaknesses of the aircraft as an aid in developing tactics. As in the war itself, the aircraft was only one component of the aerial fighting machine. It was and is the pilot’s job to get the maximum from his aircraft.
Anahad with one of Rodger MacGowan’s best, the game gets even better once inside the box. There are 1300 counters including every reduction of the mapboard for easy plotting of creating a game with total secrecy. The observation procedures have been simplified to streamline well as ships to move on the log sheets, thus result is the ultimate game on carrier warfare, and treachery in which players compete against the King, but must always be wary of the stab in the back. A player cannot afford to make too many enemies though, because opponents are never completely out of the game. A player who is killed just misses a turn and then returns as the former player’s heir, usually with revenge in mind. This is not a game where everyone sits around while one player takes a turn. Players can play cards, modify die rolls, and take part in many of the actions during their opponents’ turns. There will be constant player interaction. A player can go from rags to riches and back again several times in the game. The winner will never be certain till the game is over. If intrigue and treachery are what you know best, DOWN WITH THE KING is for you. The beloved King will not be strong enough to suppress the evil insurrections you will bring into his kingdom. You are the bad guys in this game, but then maybe that’s just so much fun. After all, we are all pretenders to some throne or other. To be released at GENCON EAST 81.

FORTRESS EUROPA
A PBM Kit for the game should be out in August. Eventually we will publish a revised second edition rulebook which will contain many clarifications, corrections, and additions. In addition, there will be more Optional Rules and OB Charts for the “Battle Of The Bulge” and “On To Berlin” scenarios. Although this project will not win an award, it is still a great product. We will notify you when it becomes available.

FURY IN THE WEST
The revision of this game will be mostly artistic. The rules will be untouched except for several clarifications. The big changes will be a new, more pleasing mapboard, bookcase packaging, and beautiful new box cover art by Rodger MacGowan.

STARSHIP TROOPERS
A second edition rulebook is finally in the works. While I am coordinating this project, the work is being done by Jim Stahl and Chester E. Hendricks, both enthusiast experts. Should be done by January 1982.

CONQUISTADOR
I have also been given the AH development chores on this SPI game, which sits fine with me as it has long been one of my favorite games. The revision should be extremely minor, dealing mostly with an expansion of the counter mix. Should be done in late 1981.

NEW GAMES
I have finally been turned loose to design my own games. The first one out of the chute should be a fantasy board game, tentatively entitled LAND...
Back in the days when Avalon Hill was the only wargame company in existence and non-Avalon Hill die-cut counters were scarcer than hen's teeth, Richard Gutenkunst was the only source of decent variant counters in existence—at least to my knowledge. I still remember the thrill of opening the first set of STALINGRAD variant counters from Richard with their upgunned panzer corps and German airpower in the form of stuka counters (thus explaining my deja vu feelings upon seeing RUSSIAN CAMPAIGN for the first time). Well, fifteen years later Richard is still at it—producing variants for Avalon Hill games with quality components at ridiculous prices. Not only has he shared Hill die-cut counters were scarcer than hen's teeth, you as Richard you are interested. You'll find ordering information at the end of the article. Let us know if this option to buyaspect variant article appeals to you as Richard is just full of good ideas.

Wargamers are blessed with perfect intelligence—to the point where they're uncomfortable with the fact. We all have to be smart to play these games but I think you know what I’m talking about: you know exactly where your opponent is and exactly what his strength is. It may be no consolation, but I think you know what I'm talking about: you just full of good ideas.

If you're playing a historical game, that is, one that attempts to recreate a historical campaign or battle, trying to recreate the situation where the opponents didn't know what each other had and where they had it very difficult. The World War II North African campaign is an exception in this regard. Both sides knew pretty much what forma­tions were available to the other. However, exactly where they were was something else. Both took great pains to mislead each other. It's hard to hide a unit in the desert, but you can do all kinds of things to make a unit look like something else (disguise your tanks as trucks and your trucks as tanks) and make the enemy think it's somewhere else. AFRICA KORPS can easily be converted to a game with the emphasis on deception and reconnaissance—with the addition of a few rules and counters of course.

THE DECEPTION COUNTERS
Note the Allied and Axis Deception Counter Cards. Each consists of six pairs of “fakes”, A and B for the Axis, Y and Z for the Allies. Each fake has a corresponding board counter. To use a fake, a counter or counter stack is removed from the board and replaced with a fake counter pair. Put the real unit or units on the upper or lower fake on the Deception Counter Card. You can now move each fake counter subject to the limitations of the real unit or units.

Note that movement factors and unit types are printed on the fake counters. These are for conven­tion only. It is easier to use a fake counter with the same movement factor and type as the real counter, but the characteristics of the fake are governed by the real counters they represent. You can have all twelve of your counters represent infantry with a movement factor of six, for instance.

As soon as the fakes get into combat, the one representing the real unit has to be revealed. One way to do this is to write the designation of the fake counter that represents the real unit on a slip of paper, put it information side down, and turn it over when one of the fake pairs gets into combat. However, there is another way, which I think is more fun. A commander rarely has the full control over his units that the wargamer enjoys. You can simulate this lack of control by using these deception counters. What you do is roll the die when it’s time to reveal a fake. If the fake represents a German unit or a mixed German-Italian unit stack, the Axis player chooses which counter represents the real unit or units, removes the fakes from the board and replaces them with the real unit or units.

That is, if he rolls anything but a 1. In that case, the Allied player chooses which fake is real. If the fakes represent pure Italian forces, the Axis player chooses which fake is real unless he rolls a 1 or 2. If the fakes are Allied units, the Allied player chooses which fake is real unless he rolls a 1 or 2. For those of you who want to be historical, you can vary the Allied die roll with the respective commanders in charge. For instance, Montgomery was so careful with his unit assignments that you might want to eliminate the die roll altogether when he arrives.

The foregoing assumes you are using fake pairs. If you desire, you can use your fake counters to represent a unit or units. With four fake counter standing in for your real units you put the real units at the juncture of the four fakes you are going to use (on your Deception Counter Card). You roll the die to decide if the fake going into combat is real or not. If it is an actual fake it is removed from the board. When you are reduced to two fakes representing the unit or units, go back to pair rules.

With four piece fakes, the odds have to be changed in favor of the owner of the fakes. This is because his opponent can declare the piece in combat real, thereby eliminating the other three fakes. Consequently, when using a three or four piece fake, if the owner of the fake loses the roll, his opponent must roll an odd number before he can declare the fake in question real or not. Otherwise the choice reverts to the owner.

One point needs emphasizing. A fake must be resolved as soon as an enemy unit comes in contact with it. If a fake is attacked, the attacker can bring up reinforcements if it's real. If it's a true fake the attacking piece can keep on going to the limit of its movement factor. So plan your moves carefully.

When a stack of units is represented by fakes, you can split the units between paired fakes when revealed, but when there are three or four fake pieces, one piece must represent all the units in the
stack. If the fakes get reduced to two pieces by fake elimination, paired fake rules hold and you can then divide the units. However, the player who sets up the fakes may declare them non-splitable when he makes the initial substitution. In this case, one fake must represent all the units in the stack. To indicate this put your bottom-most counter on the Deception Counter Card upside down. Your lowest counter should be on top.

If you plan to attack with the units represented by a set of your fake counters you roll the die for the counters in question before you move. If you lose the roll for a three or four fake, your opponent removes the counter he most desires to be false. You keep rolling until your real position has been decided.

**RECONNAISSANCE**

It is quite possible to play the game with the fake counters alone, with the victory going to the sneakiest personality, but reconnaissance adds a whole new skill.

Reconnaissance ability is limited to "RECCE" type counters. Recon counters are moved first on a turn. They perform reconnaissance by entering the zone of control of a fake. If a fake is not screened you go through the steps to reveal a fake. If its movement factor allows, the recon unit can then leave the zone of control it entered, but it must leave by the same hexagon it entered the zone of control by.

This is independent of supplies and cutting off lines of retreat. A recon unit is only allowed one reconnaissance mission per move, but it can move into combat afterwards if it has enough of a movement factor left. This of course could also reveal a fake. To simplify this rule, consider a recon unit to have only one back-out or disengagement privilege per move.

**Screening**

If a fake has a friendly reconnaissance unit within two hexagons (one hexagon between the two units) it is considered screened.

You will note that a reconnaissance unit can be in position to screen more than one fake. When an enemy recon unit tries to reconnoiter a fake, the fake’s owner then declares which units are screening the fake in question. After the reconnaissance attempt has been resolved, the screening units are temporarily turned upside down to indicate that they cannot be used to screen other units for that turn. To assure a successful reconnaissance against a screened unit, you must have at least three to one odds against the screening unit(s). At two to one odds, the reconnaissance is successful if an odd number is rolled on the die. At one to one odds or less the reconnaissance fails.

To have fun with reconnaissance, it can be seen that you’re going to need a lot more Allied reconnaissance units. Fortunately they had scads of them. The reason they were left out of the original game was that they were purely armored car formations, with plenty of snoop ability but very little combat value. The corresponding German unit was a much more balanced force that included motorcycle infantry, engineers and anti-tank guns with the armored cars. Light AA guns mounted on halftracks (murderous against infantry) and 88's (murderous against tanks) were normally attached.

However, enter the “Jock” columns.

**The Jock Columns**

The Jock columns were originated by Major General “Jock” Campbell, the commander of the British Seventh Armored Division. They were fast moving ad hoc units usually consisting of a fully mobile battalion of infantry and a battery of 25 pounder field guns supported by anti-tank and anti-aircraft guns. The material and manpower was usually obtained by cherry picking the infantry brigades. One of their missions was to support armored car units on reconnaissance. Therefore, if we consider all the Allied recon units supported by Jock columns, they have enough combat value to show up as a counter.

Perhaps the seemingly non-historical weakness of the Allied 1-1-6 infantry brigades bothers you. One reason they’re so weak is to relieve you of continuously pulling them in and out of the game. Also, some of the divisions represent almost complete national armies. Historically the British had to be very careful about these. Since a nation’s war effort was geared to these units, letting them take crippling casualties could knock the parent nation out of the war for practical purposes. Strength could be assigned to these units by “counting rifles”, but allowing for the hindrance to their use and pulling them in and out of the battle in a historical fashion would be a nightmare. However, now that you’ve got the best part of some of the infantry brigades supporting the reconnaissance units, the 1-1-6’s should be easier to live with. I find it so anyway.

A deception-reconnaissance version of AFRICA KORPS is a new game and consequently needs new counters to make it work. The following are descriptions and arrival data for these counters.

**ADDITIONAL ALLIED UNITS**

2/2DGG (1-1-12) The King’s Dragoon Guards (Also facetiously known as the King’s Dancing Girls). This unit is stacked with 2/3 (4-4-7) at initial placement.

7/11 Hussars (1-1-12) This unit can be started at the Allied home base at initial placement, brought on with the November 1941 reinforcements or brought on with the November 1941 reinforcements. Why the choice of arrival times? The idea is to put it on the board at its effective arrival time. That is, when it best suits game playability. The 11 Hussars were available at the beginning of the game, but they were not completely equipped. They were equipped by June however, with South African Marmon-Harrington armored cars. However, they were completely refitted with the superior Humber armored cars for the November Crusader offensive. If you opt for the latest arrival, you can consider the 11 Hussars as part of the South African armored car formations to which their Marmon-Harringtons reverted upon their conversion to Humpers.

LRDG (1-0-14) The Long Range Desert Group. Use this in the main like an ordinary reconnaissance unit. The zero defense factor means it can be destroyed by any enemy unit with a non-zero attack factor, and the enemy unit doesn’t have to use a supply unit to do so. The LRDG cannot be used to screen a friendly unit. It is independent of supplies except for attacks. It cannot travel by sea. If you wish, you can allow the LRDG to destroy Rommel if he is not stacked with an Axis unit. The full movement factor of this unit is 28, done in two phases of 14 each. This is so it can use one phase to get over an escarpment. This unit starts at the Allied home base at initial placement.

1/12 Lancers (1-1-12) This unit is brought on the board the first Allied move in November, 1941.

1/Royal Dragoons (1-1-12) This unit is placed on the board the first Allied move in December, 1941.

10/2DY (1-1-12) The 2nd Derbyshire Yeomanry. This unit is brought on the board the first Allied move in August, 1942.
7/4 SAAC (1-1-12) and 6 SAAC (1-1-12) The 4th and 6th South African Armored Car regiments. These are intended to back up the 7/4 SA Motor (1-1-6) and 50/6 SA Motor (1-1-6). These were probably used as 1-1-6's to get a reasonable strength for the South African Infantry divisions without giving them 2-2-6 counters. However, since the emphasis is now on reconnaissance substitute the 1-1-12's as needed.

7/7 S.G. (2-2-7) The 7th Armored Division's support group. It contained two infantry battalions, 2 RB and 1 KRRC, plus the divisional engineers, anti-tank, anti-aircraft, and field artillery. The 2nd Armored Division's support group had exactly half this strength in Libya, which is why the 7th support group is assigned a 2-2-7. Now then, 1 KRRC was available (at the Allied home base) March 29, 1941, but 2 RB wasn't. Therefore, for the purposes of this variant we can be very flexible. 7/7 S.G. can be brought on in June, 1941, as a 1-1-7 or a 2-2-7. Another option would be to start as a 1-1-7 at the Allied home base at the beginning of the game. If it is not in an isolated (surrounded) position change it to a 2-2-7 in June, 1941. If the 1-1-7 gets eliminated before June, 1941 bring 7/7 S.G. on again as a 1-1-7.

70/16 (1-1-6) If you change your South African motor regiments to 1-1-12's you may need this unit. It arrives July, 1941. Only 70/23 was included in the original Allied units. It was available to be brought on in Libya in December of 1941. Right. One of those in-and-out units that give game designers royal pains. 2NZ/D.Cav. (1-1-10) The divisional cavalry regiment of the 2nd New Zealand division. This was a light tank and Bren gun carrier formation. It has enough to make dangerous end runs. To counter this and allow it screening ability only. It arrives at the beginning of the game.

79/107 (1-1-6) Isolated (surrounded) position change it to a 2-2-7 in June, 1941. This was one of five separate infantry battalions sent to Africa. Most of them became part of the 90th Light Division. This particular battalion combined with sv 288 to become Panzengrenadier Regiment Afrika at the end of October, 1942. Until then it guarded the rear areas. With all the Allied 1-1-12's running around this is what you'll have it doing. Arrives May, 1941.

Arko 104 (2-2-6) All of the German heavy artillery was lumped under this unit. It fought as a separate entity, perhaps more familiarly known as Group Boether or Group Mickl. German combat units can be stacked four high if this unit is one of them. It has an attack and defense factor of 2 when stacked with another combat unit, 0 when it is alone or with only Rommel or a supply unit. The presence of this unit was historically critical to a successful attack on Tobruk. Therefore, since much of an armored unit's strength depends on its mobility, you can have Arko 104 cancel the defensive doubling of any one armored unit it attacks. If it were to attack a 4-4-7 isn't in Tobruk, the combined defense factor would be 12. In this case you would want to use the 9A (4-4-6) substitution counter. Arrives November, 1941.

sv 288 (2-2-10) Sonderverband 288. This was a special completely self-sufficient motorized unit of all arms that was originally scheduled to be sent to Iraq. It usually fought under the command of the 90th Light Division. Since it had strong reconnaissance powers and it can be used as a reconnaissance unit. Arrives February 1942.

90/155 (2-2-10) This regiment of the 90th Light Division was completely motorized in February of 1942. If you need its speed, you can substitute it for 90/55 (2-2-7) in February, 1942. Actually, this unit was available in its incompletely motorized form for the Crusader offensive. For play balance you can bring 90/55 (2-2-7) and 90/361 (3-3-7) on the board in September of 1941—also the Italian Trieste division if you have to. Trade 90/155 (2-2-10) for 90/55 (2-2-7) in February of 1942 if it survives.

164/220 (1-1-12) The reconnaissance unit of the 164th Light Division. It is doubtful if it ever was adequately equipped. It can be brought on the board June 1942 if the Axis player uses one of his replacement points.

1/2G/F (1-1-6) The original type is 91/2S (1-1-6). This unit was a pretty good substitute for a German armored division. In the game, it is cut easiest in sets of 12 and 14 so why give you blanks?

If you try to use all the counters immediately you'll bog down in a welter of confusion. A suggested start is a maximum of four fake counters per player. Substitute the 4 and 6 SAAC 1-1-12 units for the two SA Motor 1-1-6 units and you have a good beginning. Once you have experience you can throw in units as you desire. If you balance a unit on one of the other side brought on at approximately the same time, things should stay pretty even. In addition to balancing the units, for every extra Allied unit added, the Axis player gets an extra supply unit to Axis players, you can use a 4-4-7. The Axis player must then cancel a for a bad supply roll for every extra Allied unit added. Thus, if the Allied player takes two extra units, the Axis player gets supplies for two turns he normally would not.

If more and more Allied reconnaissance units get added to the game, the more the Axis player will have to deal with them in the southern part of the board. If this gets out of hand, cancel a reconnaissance unit's defensive doubling if it is not within five squares of a supply unit or a road square. Due to its initial position 2/KDG (1-1-12) can be particularly pesky in this regard. In actual fact, it had a straight run from the Axis player's starting position to the Allied player's starting position.

If you need to bring them on, bring the 15th Panzer on as 15/8 (7-7-10), 15/33 (2-2-12), 1/204 (3-3-10) and 90/155 (2-2-10). 90/155 is standing in for 115/15 (2-2-10), 21/104 was originally a two battalion unit of the 15th Panzer. The division's motorcycle battalion is added to 31 motor (2-2-6). The arrival of 90/200 (2-2-10) becomes 90/200 (2-2-7), 90/155 becomes 115/15 (3-3-10) and 90/55 becomes 90/155 (2-2-10) if you wish.

134 (4-4-10) Originally this was the brigade command for the 15th Panzer Division's two Panzengrenadier regiments. It was used by the Germans for numerous command duties. You can give the Germans yet more clout by using it as a substitute counter. The combat factors of the substituted units must add up to 4 and the movement factors must be 10 or more. Alternately, you can put the substituted four counters aside and govern the 15th Brigade counter's speed by the slowest unit substituted for.

It/Trento (2-2-4) and It/Trento (1-1-6) These can replace It/Trenta (2-3-4). The Italian Trento division was supposed to be a fully motorized division like Trieste. Like Trieste, it had three regiments instead of the normal two in a standard Italian infantry division. However, only the 7th Bersaglieri was motorized. The 7th Bersaglieri was eventually detached for use as a corps unit leaving the rest of Trento the composition of a normal infantry division. The substitution of these two units for It/Trenta (2-3-4) is normally performed to counter-balance the Allied use of 31 Motor (1-1-8) and 1/CIH (1-1-8).
Until you think you can handle it, do not allow fakes in the fortresses of Benghazli and Tobruk.

I'd also like to soapbox about AFRIKA KORPS a little bit. I feel that luck is too much of a factor. The supply rolls for instance can make the difference between a win or a loss. I would like to suggest the following alternate: The German gets only one supply unit per month (every other turn) from June 1941 to November 1941. From April 1941 to June 1941, the Allied Player can prevent a new German supply unit from appearing three times, but the German can cancel one of these. From December 1941 to the end of the game the Allied player can declare an arbitrary sunk 5 times, two of which the German can cancel. This gives you the average result of the die roll all the time. Also, supplies are most likely to be sunk when the Allies put maximum effort into it. If the German is in desperate need of supplies he will put maximum effort into convoy protection. Note that this method can be adjusted for perfect game balance.

ORDERING INSTRUCTIONS
You can order precut counters and deception counter charts for this variant directly from:
Richard Gutenkunst
Box 3301, Traffic Station
MPLS, MN 55403
Cost is $1.00 plus a sturdy stamped self-addressed envelope bearing 18¢ postage. The stamped, self-addressed envelope is vital for same day service. If you have questions that can be answered in a few words or a simple yes or no the answers can be included with the counters.}

### SO THAT'S WHAT YOU'VE BEEN PLAYING

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The Frequency Ratio is derived by dividing the number of votes received by the number of votes for the 20th place entry. Ties in rank are resolved in favor of the article status in Vol. 17, No. 6.

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### Design Analysis

**PzKw V1a**

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### The Third Reich

**By Larry Bucher**

Larry Bucher was both the main instigator behind the THIRD REICH revisions and the chief contributor thereto. Not only has he been the inspiration and main guiding light of the third edition, but he has also handled the THIRD REICH nuinual chores ever since the project got underway over a year ago. If anyone has a better understanding of the product than Larry does, I'm not altogether sure that he believe himself when he says his recent overseas assignment with the state department in Haiti was purely coincidental.

If a poll were ever to be taken in the category "Most Mystifying Rules of an Avalon Hill Game" THIRD REICH would surely be on the ballot, in the company of the original ANZIO, 1914, and (judging solely from RBG ratings) GETTYSBURG 77 and MAGIC REALM. I would not want to call this a "new" game. It maintained its popularity, and won its awards, despite those rules, speaks volumes for the other qualities of the game. I certainly found it intriguing that the game, now seven years old, fared no less than third in the first "What Are You Playing?" survey.

I would take mild issue with a phrase of a few GENERALS ago that described THIRD REICH '81 as "completely new". I do not feel that the change is that great. There are perhaps four brand new rules, half a dozen rule areas that are drastically different, and a myriad of differences that some will see as changes and some as clarifications—without two players able fully to agree on which are which.

Until 1978 I harbored misconceptions that Leinigk stood on an equal footing with Moscow as a Russian supply source, and that fleets of less than nine factors could not perform the supply function. In 1979 I encountered players—good players—who played that Italy and Germany did not take their turn in union until they were allied. Such examples could continue. The point is that many third edition rules that strike them as good, bad, too complex, too simple, or whatever, and tailor the rules they use exactly to their taste. I think the trend is inevitable, but it's accompanying drawbacks should be recognized: no two players are likely to agree right down the line, and each new opponent plays entails a new round of discussion and compromise over the rules to be used. It thus becomes all but impossible to play the same game against more than one opponent. The acquisition of expertise is harpered, and the lessons learned against one opponent may have to be painfully unlearned when using a different rule mix against another foe.

— in a broad sense, all rules are optional and do not need to be labeled as such. Whenever players can agree to ignore a rule, to modify it, or to insert one of their own inspiration, they are perfectly free to do so without seeking advance sanction from Baltimore. The key word is "agree". It is when players do not agree that the "official" rules should be treated as gospel.

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### A Tour of the Mapboard

It doesn't look at all different at first glance. You have to look closely to spot the significant changes, but they are there. All coastlines have been redrawn and sharpened so that there should no longer be doubt as to whether land (or sea) movement between hex A and hex B is legal. In perhaps a dozen cases the coastline was drawn exactly to coincide with the intersection of three hexes, these spots are specified in the rulebook. Hexes with two or more fragments of unconnected land—whether mainland and island, or bits of mainland—have been eliminated. Troublesome islands (such as the
two-hex island near Athens) and bits of mainland have been “blackened out” in the process of correcting this problem. Switzerland and the unplayable hexes around the border with France are still grayed out. Traditional hex-grid coordinates have been printed along the mapboard edges.

A crossing arrow in Scotland has been replaced by river, and all others appear clearly on hexsides, eliminating former rule difficulties arising from crossing rivers within a hex. Scotland, Wales, and the Balkans contain some added mountains. The river Thames appears south of London.

Ireland has been separated into British Ulster (two hexes) and neutral Eire (zero BRPs). A beach hex has been added, and thus the rules no longer need to worry with “islands without beaches”.

The Hague has migrated a hex northwest (and France has been given two replacement counters at start, to compensate for what this does to her 1939 defenses). The Vichy border has been more accurately placed, to encompass Lyons and touch Switzerland. Tunis has gained a port status while Bengazi has lost it. Sevastopol has become a fortress, and is in Russian hands at 1942 scenario start. Istanbul is another “new” port. And it, and Gibraltar, become full two-front ports with the same privileges as Kiel. The West Wall appears on the map in a gray shade, and the sometime capital, Vichy, is a gray star.

The Scenario Cards . . .
... contain comparatively few changes of substance, but do include a good bit more information and cross-referencing to the rulebook than previously. France and the U.S. have separate cards now, with assorted useful tables printed on the reverse of each. Russia is reduced to two fleets in the 1944 scenario; Germany gets six factors of Italian partial naval counters. (The latter is to cure a 1944 catch-22 for Germany—she controls several Mediterranean islands, but had no way to supply a unit placed on one. For the same reason, Germany now is able to seize a remnant of the Italian fleet when Italy departs the war in other scenarios.)

“Surplus SW” appears on 1942 and 1944 cards. SW construction may now take place before the start of these scenarios; the surplus represents sub (1942) and SAC (1944) left over from the previous year.

On to the Rulebook:
There is no essential difference in the rules for two-player and multi-player games other than the victory conditions. A two-player game may see a player make any “diplomatic agreements” between nations he controls, or with the enemy, that would ordinarily be impossible.

In a two-player campaign game, the Allies must defeat both Germany and Italy to fulfill their victory conditions. If the Axis fulfill one of their victory conditions the game doesn’t necessarily end, unless the Allied player wishes to concede—it is still theoretically possible, no matter how unlikely, for the Allies to attain an equal or higher level of victory.

While on this subject, players might enjoy a question that was posed in the recent numjits: two-player campaign game; Italy already gone. Allies, moving second in summer 1945, occupy Berlin. Do the Allies win a marginal victory? Answer: no, because a major does not fall until its opportunity to counterattack its capital fails. This cannot occur until fall; the Axis are not conquered in Summer.

The correspondent did not explain how the Allies could have been moving second under such circumstances? Perhaps the players had agreed not to use the turn flip-flop rule.

France now achieves stalemate if she is not conquered until Fall 1940, a marginal victory if she is not conquered until winter, tactical for not falling until Summer 1941, and a decisive victory if she survives the victory by surviving the game to the time limit, but in the campaign game she needs, respectively, three and four objective hexes. Note that if Rome is occupied in the second half of a Winter 1944 turn that the 1942 scenario would end in a decisive Italian victory even if the Allied player could not recapture Rome the following turn, because the Italian chance to recoup would come in the Spring 1945 turn—after the scenario time limit. In essence, the Italian player has been saved by the bell.

Neutral objectives are no longer counted when determining 1944 scenario victory conditions.

Scenario card deployment limits are clarified. The specified forces may be added to, where stacking/basing limits permit, but never altered. Thus Britain could not start 1939 with a 5-4 air unit in Malia in place of the mandatory 1-4, but she could move a 1-4 air unit there to augment unit she had deployed the I-3. Starting a 4-5 armor in Egypt would not release the 2-5 WDF to start elsewhere. And let’s close a couple more loopholes at Malta while on the subject: Britain can’t start more air there by placing an airborne counter; Malta can never base more than five factors, period. Britain can’t break down a 5-4 air in order to start another partial in Malta; using partials during setup has been newly prohibited.

Fortress hexes, except for Malta and Gibraltar, now lose their fortress status permanently as soon as occupied by an enemy unit. This cures a couple of former ills: if the Axis occupied a Maginot hex they were able to place a fortress there, and they could exploit it imperiously to the ZOC of any adjacent Allied armor. If the Maginot hexes haven’t been entered at all by the Axis, they still lose their status when France falls.

Overstacking when retreating during an attrition phase is no longer at the retreater’s option—it is allowed only if he has no other choice.

When an entirely cross-river attack is made on a fortress hex, a bridgehead counter may be placed even though the defense was quadrupled rather than tripled. A BH counter may also be placed when a cross-river attack is untripled solely by an airborne drop, thus not penalizing attacker for using his airborne. Attacker must place his BH counter when his first ground unit advances into an eligible hex; he can’t change his mind and place it later. A player may place a BH counter, provided he has the required units, even without the concurrence of his allies but a neutral Russia or Italy may place only one such counter with concurrence.

A BH counter may be removed whenever the player who placed it desires, even if he’s run out of counters and wants to reuse it immediately. It must be removed if the player has no longer needed to provide support to any unit and no enemy ground units are within four hexes by land. If removal leaves an overstack at the end of the player’s turn, the owner must eliminate units of his choice.

ASW now eliminates 1½ sub per factor in 1943, two per factor from 1944 on. When a 17 BRP loss occurs, Germany must remove a 5-4 air unit from the board. It is not placed in the German force pool (it is out of the game, at least for a year but Germany gets five additional interceptor factors for next year. If Germany again loses BRPs to SAC, she loses another 5-4 similarly. But if she does not, she may retrieve a 5-4 from limbo, exchanging five interceptors for it. If Germany has to give up 5-4, but doesn’t have one on the board, she must build one in Spring and immediately exchange it for five interceptors.

Some SW changes were inserted with one eye on play balance and the other on putting some guesswork back into the SW building, which had become a stereotype all-subs, all-ASW affair. I suspect that the end result, when players have digested the changes, will be another stereotype in which Germany builds just enough interceptors to offset any possible Allied SAC; while the Allies, expecting Germany to do exactly that, will build all ASW in the early years and improve their long-term BRP situation. But the opportunities to burn one’s opponent or perhaps burn him departing by that stereotype should be significantly increased.

For similar reasons, the 1944 scenario is Alex’s favorite; it allows the Allies to keep up an offensive on a front where he has few or no units, and to open a number of any variant counters affecting BRPs. If any turn should end with BRP levels exactly equal, the order of play from the previous turn remains unchanged.

11.13 Italian BRPs are always included in the Axis total and Germany and Italy conduct their turn together whether or not Italy has entered the war. Russian and American BRPs are no longer included in the Allied total until they are in their own country with either France or Germany. However, Russia and the western Allies conduct their turn together throughout the game, even if a neutral Russia has a larger BRP total than the Axis.

This alleviates the “unwanted initiative” problem for Russia, previously pointed out by David Bottger in Vol. 14, No. 3. Germany could formerly go into Spring 1941 with first in scenario, getting two devastating moves against the Russian defense. It has not been made impossible—but Germany must now spend much more freely and get her Winter 1940 BRP figure below that of Britain in order to pull it off. If Britain’s BRP total is no greater than her German spending, she may not have enough reserve left to absorb SW losses, and will then suffer the consequent BRP base reduction.

In order to take an attrition option on a front, a nation no longer needs ground movement with its ground units in contact with enemy ground units.

The only penalty for failing to do so is inability to roll on the Attrition Table (which, incidentally, now reads 1-10 vice 0-10 in the first column). The pass option will consequently be more rare, but will still be needed when a player doesn’t join his ally’s offensive.

When Allies can’t agree on what option to use on a front, the player desiring an offensive prevails.

But a nation choosing an offensive must, on that front, either make at least one ground attack or conduct one air or naval mission. This is to deter a BRP-rich anti-social player from spending for an offensive on a front where he has few or no units, solely to inconvenience his ally who wants to attrition. For similar reasons, Russia, once at war with the Axis, always determines the Allied option to be used on the Eastern Front. Until Italy is at war with the Allies, she may take an offensive option on a front where the Germany takes attrition and vice versa.

Units may be voluntarily destroyed by their owner, but this can be done only just before his movement phase begins. This can’t be used to evade the permanent loss of an airborne unit (the same restrictions apply as if it were lost in combat) nor avoid the effects of prefiring (isolated units so destroyed can’t be rebuilt until the following turn).
For obvious reasons, French units can't be destroyed under this rule. All air and naval units are inverted immediately after use (or after being countermarked, or designated to provide supply) and are placed on the board inverted where constructed; all are then faced up at the end of each game turn. Although a rule, this is actually more of a bookkeeping device or “playing aid”. It is easy for a player to unintentionally use these for more than one purpose in the complexities and confusions of combat, particularly so in the case of supply fleets. In Ff/Pf play it is all too easy for the opponent to fail to notice such lapses.

Fleets providing supply must be based on the same side of the water as the supply source (rather than being anywhere on the front as previously). The supply line must run by land from the source to the fleet’s base. It is possible for a movement-phase change to open a supply to a line to otherwise unsupplied units. Such units are then considered supplied at the start of their turn and able to move. Conversely, it is possible for such a base change to put units out of supply at the start of their turn. For these reasons fleets are now required to move first during the movement phase, before ground and air unit movement. It is also possible to have SR of a supply fleet open a supply path to unsupplied units which are otherwise about to be eliminated.

A detailed sequence of play chart has been placed on the back of the new rulebook. The offensive option combat phase sequence is particularly worthy of attention:

1. Attacker announces all naval and air missions (excluding only possible interceptions and exploitation missions).
2. Counterair is resolved and losses removed.
3. Defender announces any defensive air support, attacks on naval forces at sea, and naval interceptions.
4. Attacker announces any air interceptions, any naval counter interceptions, and any air attacks on naval interceptors at sea.
5. Steps 3 and 4 can be repeated indefinitely where naval units are involved, until one side or the other wishes to commit no further missions or has none. Combats are then resolved in the reverse order they were announced.
6. As a result, most sea transport missions are concluded and the naval units returned to base.
7. Airborne drops. (May also be made during movement phase.)
8. Attacker announces and resolves his attacks. He may resolve each attack before announcing his next, thus being able to cancel a planned attack if it is made undesirable by the success or failure of earlier attacks. If he committed ground support to any hex, he must make a legal attack on that hex or lose his air units there.
9. Post-combat advances may be made after each movement phase. Counters may be placed where entitled. All invading and shore bombardment fleets return to base.
10. Exploiting units move to breakthrough hexes.
11. Air attack on naval units in port are resolved. As before, this is so that air can’t reduce a 9-factor fleet in time to permit an invasion.
12. Exploitation movement, air activity, airdrops, and combat.

When two or more allies have ground forces participating in an attack, they must agree on which one of them will control a vacated hex prior to occupying it after combat. If unable to agree, neither one may advance. This becomes particularly relevant when the hex to be occupied is a BRP-producing capital or an objective hex—such hexes may no longer be transferred from the control of one ally to the control of another.

During exploitation, the first exploiting unit may not move more than two hexes. Each subsequent exploiter may do the same, or may duplicate exactly the move of a previous exploiter then move two additional hexes of its own. (The unit’s movement factor remains a “speed limit.”) For example, Marcus Watney for the “duplicate exactly” wording which expressed perfectly the idea I was trying to get across in much less understandable fashion. The rule restricts somewhat the number of behind-the-lines hexes that exploiting units are able to place units of this option, however, thereby makes units encircled by exploiters a bit more reasonable.

When exploiting units cross a frontier boundary, they must conform to whatever option their owner chose for the entered front. If it’s a pass-option front, they could exploit only over hexes controlled at the start of the turn, couldn’t pass adjacent to enemy units and couldn’t attack. If it’s an attrition-option front, the exploiters could even add their factors to the attrition total there if they’re able to advance next to enemy and provided their owner had begun the attrition option (or luck) to conduct the combat phase on the offensive attrition front before turning to the attrition front!

Breakthrough and exploitation can now be achieved by “attacking” any vacant hex. (This was previously possible when invading an undefended hex.) This is intended to allow a player with armor to space to advance more rapidly across a vacant area (e.g. North Africa); I dare say inventive players will find additional uses for the tactic.

Russia can no longer receive BRPs, either Murmansk or Lend-Lease, unless it’s at war with the Axis. The cost of opening the Lend-Lease route can’t be lifted, the defender must provide it, since this will prevent the unrealistic Allied ploy of having France spend her soon-to-vanish BRPs for this purpose early in the game.

Russia gets some free construction. She may place four ground units (from her at-start force pool only) free in Winter 1942, two more in Summer and one in Fall. These represent transfers from Siberia. The number of armor taken in each turn can’t exceed the number of infantry; no airborne can be taken. But there’s a catch: If Russia advances in the Breakthrough, she may gain BRPs. (Allied conditions in a two-player game are gained by one objective hex or season as appropriate. In the multiplayer campaign game only, they are raised by two objective hexes.)

Britain’s SRs have been raised from six to seven. Since BRPs travel from capital to capital, they can’t be SR’d if an enemy unit is adjacent to either capital. Russia is excepted, naturally.

U.S. initially deploying units may go to France on an equal footing with Britain (if France has not been defeated). The defender begins by allocating all these hexes that he wants. But he must be careful, since the U.S. and France both fall, but one or both falls after U.S. entry, initial deployment may go through any Atlantic port still in U.S. hands. Initial deployment may be made by sea transport (if only ports the U.S. controls are ineligible to receive sea escort SRs because of adjacency of Axis units).

It is worth mentioning, also, that, U.S. ships invading, sea transporting, or bombarding from the U.S. box do not themselves deploy. They perform a mission from their U.S. base and return there.

Counters removed as attrition losses must belong to a defending nation that had ground units active in the situation. If Britain and France both fall, but one or both falls after U.S. entry, initial deployment may go through any Atlantic port still in U.S. hands. Initial deployment may be made by sea transport (if only ports the U.S. controls are ineligible to receive sea escort SRs because of adjacency of Axis units).

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It is worth mentioning, also, that, U.S. ships invading, sea transporting, or bombarding from the U.S. box do not themselves deploy. They perform a mission from their U.S. base and return there.
However if Germany occupies Paris in the last half of a winter turn, the tenth point of the law prevails. Germany gets nothing—because conquest of the major cannot occur until the following spring, when France's counterattack on her capital fails.

And another however: if the Allies get Paris back from Germany in the last half of a winter turn, at any time after the fall of France, a dual award is made.

Capture of Paris in the 1942 and 1944 scenarios, and of Rome in the 1944 scenario, does yield 42 and 37 BRPs respectively to the Allies at year start. Those captures were previously of no BRP value. However, if Germany had been active in Vichy territory, the number of BRPs present in Vichy would have increased. The enemy of the victor would have increased as well. The victor would have gained an additional 27.22 A unit is in supply if it can trace a line of movement from the supply line. The bridgehead itself can be considered to have been counteraired and converted to the attacker's disposal.

BRPs derived from a cooperative conquest may be shared in any manner the conquerors agree on; they are split evenly only if all allies fail to agree. Thus if Britain and France conquer Libya together, they may each give five BRPs to Libya at any time after the fall of France, provided they are agreed upon. If the Allies subsequently occupy Belgrade and hold it for one Axis turn, and one Axis nation alone reconquers Belgrade, that nation receives all of the Yugoslav BRPs and controls Belgrade. However, if all the other Axis nation has units in, or makes an attack on, any Yugoslav hex, the reconquest is Cooperative and the resulting BRPs may be split in any agreed manner. Regardless of the manner in which Yugoslavia was conquered, if the Allies subsequence with Russia. This prevents Germany from claiming any BRPs to Russia by doing so. The 20-factor maximum which Germany may place in her minor allies while inactive has been retained. An added restriction is that no more than five of the 20 may be in Finland. Unions may not be combined, though they may be made to surrender, somewhat as in the real war. The rule was plagiarized (but modified considerably) from a proposal by David Ritchie in Vol. 15, No. 3. Italy surrenders if all of the following apply:
- supplied Allied ground unit (not airborne) is in mainland Italy at the end of an Axis combat phase;
- there are no Axis forces in Africa (unactuated Vichy don't count).
- Allies control every hex of Sicily, or of both Sardina and Corisca.
- Allies moved first in the current game turn.
- While Paris is Axis-controlled, France may attack hexes other than Paris if “success could conceivably permit exploitation movement into, or a 1-2 or better attack on Paris.” Similarly a 1-3 or 1-4 French attack on Paris may be made if “an EX result would remove all Axis ground units from Paris” (presumably, the Vichy forces). The definition of “conceivably” made it possible for France to count a 2 on a die roll to be “conceivably” successful. France can’t counterattack against Axis air units in position to interfere with a legal French ground attack, can’t take an offensive anywhere but the Western Front, can’t attrition anywhere, and can’t declare war on anyone.
- Britain can’t normally recapture Paris, because she’s banned from the hex until France falls. But it’s theoretically possible for a British unit to prevent the fall of France by moving through a vacant, Axis-controlled Paris. Britain, if this plan works, and Russia loses, 15 BRPs each from the capture of Leningrad and Moscow. This is clarified as a one-time event; there is no further gain or loss if control of a city seesaws back and forth. But 15 BRPs per city are subtracted from Russia and added to Germany at each year start when appropriate.
- France and Russia. French surrender, Russia must now be reduced to 50 land and air factors. This shrinks the role of the Russian navy, the continued existence of which had been vital to the Russian player—a situation somewhat at odds with history. Axis factors must now exceed Russia’s by a 3-2 ratio to force surrender. The Axis factors must be inside Russia’s original borders; the Russian factors may be anywhere on the mapboard.
- Tunisia and Beirut are supply sources for French units only (including Vichy and Free French). The U.S. is a supply source, but only if both London and Paris are Axis-controlled or isolated from Atlantic ports. Britain can thus supply a counterattack on an occupied London if she can move naval factors to the U.S. base (before U.S. entry), or may be supplied by U.S. ships after U.S. entry. Konigsberg and Durazzo are supply sources at the start of the game, and when the Allies conquer Africa; they lose their status as soon as the Axis open a land supply route to Prussia and Albania.

The supply rule contains a hazy area that escaped notice until too late to clarify:

27.22 A unit is in supply if it can trace a line of control through its own, or enemy BRP, zone of control (ZOZ), or both. Enemy ZOC over the unit and/or the source does not block the supply line as long as all hexes in the supply line between the unit and the source are free of enemy ZOC. Units adjacent to a supply source are always in supply unless both the supply source and the adjacent unit are in ZOC of the same enemy unit.

If hex A is not controlled by red, Red is clearly unsupplied because of the “unless” phrase of the last sentence. But what if Red does control hex A and it is not in enemy ZOC? Answer: Red is in supply. The first two sentences override the unclear clause.

A word about supply from bridgeheads may be in order, because the old rules mentioned bridgeheads as supply sources. But they never were, really—the true source was across the water. If an enemy player uses a bridgehead, that ends the supply line. The bridgehead itself can be supplied by sea, but the line cannot continue out of it. The same principle applies at a port, of course.

Armor and airborne units which are automatically in supply by virtue of having exploited or dropped lose their privileged status if they are not employed by an Axis player to play an attack or block a supply line.

Airbase counters may be used only by air units of their own nationality during the player turn they are initially placed on the board. This is intended to hamper an Axis player who places Italian airbases primarily for German use, or an Allied player who places American airbases for British use.

Air combat has been thoroughly revised. Each combatant rolls a die. The roll is modified for nationality: -1 for Italy, France and Russia, -2 for all minors, and zero for the other three majors. It’s also modified for superiority, the superior side getting +1 for each factor of excess.

British, Italian and Russian air factors equal the difference between rolls; the winner eliminates half as many (rounded down). If it’s a tie, a third die roll is made and each side eliminates half that many factors (but never more than were present in the smaller force).

Counterair attacks are no longer required to equal the factors being attacked, success is simply made unlikely. If defender had the larger force and won the air combat, any of his surviving factors are not considered to have been counterattacked and continue to be available for use.

The BRP awards defend against a counterair attack, but any inverted units present are taken as casualties also, if the face-up factors are insufficient to meet the verdict of the die rolls. A hex containing only inverted air may be counterattacked. Defender has zero factors defending, the die roll is modified for attacker’s superiority above zero, but not for defender’s. If the attacker rolls 1, the defender may have to eliminate all defending air present.

Attacks on naval units are themselves changed: one die roll is made for each attacking air factor. The die is rolled, 1 or 2 eliminates a naval factor, 5 or 6 eliminates the air factor. If the turn starts with no air, 6 eliminates air.
A limitation has been put on DAS. Like ground support, it may not exceed three times the number of ground factors defending.

Moving on to naval matters, Istanbul’s two-front port status now allows the Turkish Navy to operate in the Black Sea. For Sea-escorted SR or sea supply lines to pass all the way through the Turkish straits, all four fleets adjacent to the crossing arrows must be controlled.

Fleets at two-front ports may escape to either front if their port is overrun. You, the German player, enter Gibraltar. Force H heads for Plymouth. You hopefully point out that Free French Oran is much closer. Sorry—you lose. The owner of the fleets has his choice of front—within the chosen front he must then flee to the closest friendly base.

At all straits containing crossing arrows, fleets may not move through unless both land sides are under friendly control. They may move into, as distinct from through, an uncontrolled strait to execute a mission.

Fleets based in the U.S. box may:

- carry supply only if both London and Paris are Axis-controlled or isolated from Atlantic ports.
- intercept at maximum range, after U.S. entry.

A U.S. fleet may initially move from the U.S. box to Europe only during SR, as an initially deploying unit. Once having done so, it (and other Allied fleets) may freely move to and from the U.S. box during movement or SR phase. It is not again counted as an initially deploying unit if it returns to the U.S. box and subsequently leaves there by SR. U-boat actions are raised to 2-1-1, and unoccupied may nevertheless sail during combat or SR phase, but must return to the box at the end of the phase.

Shore bombardment has been sharply curtailed. It may be used only against hexes being invaded by sea, fortresses, and one-hex islands. To kill off a major converter, a full-uncontrolled rule decipherer: fleets never bombard into an adjacent hex—rather, they enter the water portion of the same coastal hex they are bombarding. French and British fleets cannot, as some previous articles have implied, bombard the same hex before 1942 by remaining in separate, adjacent hexes.

Both ports involved in a sea transport mission must have been friendly at the start of the player turn. (The paradrop followed by sea transport tactic is dead.) A given sea transport mission may load units at more than one port, but it may discharge them at only one port. Attacker can of course move more than one such mission. Embarkation costs ground units no movement factors, embarkation costs one—but enemy armor adjacent to the port of embarkation limits movement normally; embarkation would cost 2 MF in such circumstance, even if both naval unit and transported unit begin their turns in the same coastal hex. Unoccupied units can’t be sea transported because of the embarkation cost.

Transported air units must have started their turn in the port of embarkation; they treat the port of embarkation as their new air base but cannot fly counterair missionstherefore (sequence of play problem). Free French Oran is the only unoccupied ground support mission or attack on naval units in port must be announced when attacker announces his other air missions.

Invading fleets may use any surplus factors (not required to carry their ground units) for bombardment. Invading units must start their turn in a port, and the fleet that carries them must be based in the same port. (It could change base during movement phase to get there.)

EXAMPLE: Two 9-factor fleets carry a 4-5 armor unit and a 1-3 infantry unit. Only 15 naval factors are required to carry the ground units; the other three may provide one factor of Shore Bombardment.

Moving fleets may be intercepted, or attacked by air, at their base hex (since they enter the water portion of that hex as soon as they leave port), or at their target hex, or at any intervening hex. Their target hex is their new base (in the case of movement-phase base changes), the port of departure (for sea transport), the invaded hex, or the hex being bombarded.

EXAMPLE: An Italian fleet attempts Sea Transport from Taranto to Tripoli. One British fleet from Gibraltar and two from Alexandria attempts to intercept it in the Tripoli hex. The Interception die roll for Gibraltar is 3-1, for the other two is 3-1. Same owner, same control. All attempts to Counter-Intercept the Alexandria fleet at 1124 with a second Taranto fleet and succeeds. Italy now announces an air attack by a unit from Tobruk on the Alexandria fleet in 1124. France then tries to Counter-Intercept the second Italian fleet, at 1124, with fleets from Marsellesles and succeeds. British fleets from Naples now try to par, where the nation with ground forces closest (as the crow flies) to the country in question gets first construction and first choice of placement.

PARTISAN CONSTRUCTION

Partisan construction is allowed in Italy (1) and Britain (3) if they leave the war. Partisans may not be constructed in nor move into Vichy France until Vichy has been activated or deactivated.

When Allies disagree on who gets to construct partisans, the country with the fewest factors closest (as the crow flies) to the country in question gets first construction and first choice of placement.

Russia and Britain both want to build partisans in Greece. Britain has ground units closer. She gets to build two and has first and third choice of placement; Russia gets one and second choice. A partisan unit is controlled and moved by the nation that constructed it. “Russian” and “Western” partisans can’t stack or attack together. A partisan- controlled hex is controlled by no one for victory condition purposes.

So how do you get rid of a partisan on an objective hex? Unless you constructed it and therefore can move it, you don’t! This allows some underplayed play in a close multi-player game: “Russian” partisans sitting in Marseilles or Lyons to deny it to the Western Allies; “Western” partisans in Belgrade to frustrate the Soviets. This can be regarded as simulating in a small way the struggles within the liberation movements for postwar political control. The Axis may also face choices—given the relative victory prospects of the opponent, it sometimes may be better to pass up a chance to attack a particular partisan.

Axis variant 2 (Irish resistance) now has no effect if any part of Ireland is under Axis control when it is played.

In Axis variant 4 (Spain) to be played, Italy must be at war with a major power and France must have been conquered.

Variant 5 can now activate all four Axis minors early. It is no longer played at a specific time point, Germany must have conquered France and be at war with the U.S.

Variant 8 (reduction of U.S. initial deployment) is playable if submarines outnumber ASW by a 3-2 ratio. This was lowered from 2-1 because of the strategic warfare changes.

Variant 10 (jet fighters) has the additional effect of raising the U.S. naval combat die modifier to +1.

Allied variant 3 (Free French) is void if France falls before winter 1940, and if it is played, Free French armor, air and naval units may not be reconstructed if lost in combat.

Allied 5 had drawn some criticism: all other variants represented something that might have happened—but this one represented something that did happen, and Britain unfairly was being deprived of her 50 four-stackers. On the other hand, Britain normally can build only four (rarely five) ASW in 1940. The ancient destroyers can hardly be said to have much ASW capacity, as they used to in the game. The outcome:

U.S. Navy makes full commitment to protect shipments to Britain from unrestricted submarine warfare. Allies lose only two BRPs (instead of three) for every surviving submarine factor in Strategic Warfare resolution for the remainder of the game. Play only in 1941 VSS for immediate resolution.

Allied 6 (U.S. Navy in Atlantic) has the additional effect of raising the U.S. naval combat die roll modifier to +2.

I’ll have more to say on the subject of variant counters when we publish our THRUD REICH feature. Making the variant counters part of the game as opposed to an optional rule has obviously increased their importance. To counteract this increased role we feel there should be an even greater variety of variants represented in the game as opposed to an optional rule has obviously increased their importance. To counteract this increased role we feel there should be an even wider selection of variants which might occur—thus decreasing the likelihood of any particular one being drawn. And we have a number of good ones to add to the current list.

The intelligence rule is completely new and owes its existence at least in part to a desire to give players a chance to overcome the increased role of fate encompassed in the now mandatory Variant Events. One player per side may spend five BRPs during each construction phase to roll two dice on the following table:
The U.S. can't roll while neutral, Russia and Italy can. When two or more players on the same side want to roll, they settle it by die roll. If the die ties, the player with most BRPs wins.

The opposition can spend five BRPs on counterintelligence. If they do, one is subtracted from the intelligence roll; if they don't, one is added.

The rolling player may select any lower result instead of the result he actually rolls. He may keep any information gained to himself, or may share it with his allies. He may even choose to use the result of the roll against a fraction or untrustworthy ally rather than against the enemy.

Also completely new is the "Foreign Aid" rule, under which BRPs may be granted to various minor countries to reduce or enhance the chance of their activation. Both Germany and Britain may grant BRPs to the four "standard" Axis minor allies, and to Turkey, Spain, Vichy, Ireland, and Iraq. Italy may grant to Spain and Iraq only; Russia may grant to Bulgaria, Hungary, and Rumania. (But Russia is unlikely to use the option with Rumania, the grants are very small.) Allied counterintelligence (if the Minor must do if she wishes the East European BRPs.)

The granted BRPs actually evaporate, since the minors have no independent BRP levels or force pools of their own. Grants to minors are limited to 10% of the granting power's year start BRP total. There is no chance of BRPs reducing the active fronts in the Mediterranean (or fighting them).

Units may SR through the strait if Gibraltar is controlled, regardless of enemy forces on any hex near Gibraltar. This is unchanged. They may also SR into Gibraltar (remaining there) regardless of adjacent units. The converse is not true; enemy units may not SR into hex Z8. Gibraltar may be blockaded by either front and sea transport missions from either front may land there.

At Suez city, displaced fleets must escape to the Mediterranean if the canal is usable and Gibraltar is not hostile. If either condition does not apply, they may escape to the Western Front, but they don't receive until their side's next SR phase, and then SR cost.

Whenever a hostile unit enters a canal-side hex, the canal becomes inoperable and cannot be used again until one side or the other has controlled all canal-side hexes for two complete game turns. (This rule also applies to the canal at Kiel—the two ports are usable, only as one front ports until the damage is repaired.) Either side may use the Suez-Western Front Sea Escort SR route (throughout the game) at double SR cost, but the Allies may prevent the Axis from using it by removing one 9-factor fleet from play. (This simulates a Red Sea blockade force.)

Iraq has been labeled a British colony. Technically it was independent (from 1932)—but technically so was Egypt (from 1922). World War II era maps generally showed Iraq in the pink of the British Empire; British bases and forces were present much as in Egypt. The Iraqi revolt variant is still quite playable, if British forces are in Mosul, the opposition cannot capture it for their supply. BRPs cannot be SR'd through this. The prohibition became necessary to prevent cost-free circumvention of the Lend-Lease route.

Even though Persia is located within the Mediterranean Front, a player who pays the Lend-Lease activation costs does not thereby gain an offensive capability against another front. In fact, if the old "declaration of war and offensive option" phrasing has been abandoned entirely in favor of a flat 25 BRP charge.

Lend-Lease BRPs have been reduced to a maximum of 20 per turn. They require sea escort only for the first turn of the two-turn transfer process. The Axis player wins against SRs during both turns, but are charged against American internal deployments (if coming from the U.S.) only on the first of the two turns.

BRPs in the Lend-Lease box can be moved back to the West instead of on to Russia if surrender of Russia is considered. No cost, but no bonus. The Allies can decrease this maximum limit in a similar manner to which Malta acts on Libyan supply sources if they have an air unit on Cyprus or Malta. CRFs may have one in the Mediterranean east of the Suez Canal, and 10 BRPs in the box. The Allies may increase this same maximum limit in a similar manner to which Malta acts on Libyan supply sources if they do not have an air unit on Cyprus or Malta (as mentioned earlier, Turkey, if attacked, will automatically try to hit Sofia, unless her intelligence roll is 3-2). The Allies may increase this maximum limit in a similar manner to which Malta acts on Libyan supply sources if they do not have an air unit on Cyprus or Malta (as mentioned earlier, Turkey, if attacked, will automatically try to hit Sofia, unless her intelligence roll is 3-2).

BRPs may be SR'd in the Suez Canal box at 25 BRPs in the Suez Canal box at 25 BRPs, but only as one front ports until the damage is repaired (if successful). Either side may use the Suez-Western Front Sea Escort SR route (throughout the game) at double SR cost, at double SR cost, but the Allies may prevent the Axis from using it by removing one 9-factor fleet from play. (This simulates a Red Sea blockade force.)

Iraq has been labeled a British colony. Technically it was independent (from 1932)—but technically so was Egypt (from 1922). World War II era maps generally showed Iraq in the pink of the British Empire; British bases and forces were present much as in Egypt. The Iraqi revolt variant is still quite playable, if British forces are in Mosul, the opposition cannot capture it for their supply. BRPs cannot be SR'd through this. The prohibition became necessary to prevent cost-free circumvention of the Lend-Lease route.

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die is rolled to see if the air factor survives. The air factor survives on any die roll less than “6”, there is a -1 die roll modifier for any accompanying -2 to -4 factors, thus providing protection (i.e. not needed for transport of BRPs) if the convoy does not scatter.

42.44 For each submarine factor in excess of escorting ASW factors, 4 BRPs are lost from the convoy (4 if convoy portions). Scatters and ASW counters are mutually eliminated as in SW resolution in whatever ratio was in force during the YSS of the current year.

Germany’s required 25-factor commitment to the Eastern Front has been reduced to 20, but must be composed of ground and air only. It must be met at the start of the next German movement phase and player turn. (The same principle has been applied to Britain’s 10 factors in Ireland when the IRA variant is played, and to the 45-factor Axis post-conquest garrison in Russia.) This pretty well ends the German threat to the Baltic States if controlled.

If Germany fails short of the 45-factor requirement the penalty is more elaborate: Germany must abandon one Eastern Front objective hex of her choice and return to it the Russian player, must lose 15 BRPs as penalty, and may not use SR for any purpose other than to correct the shortage until the 45 factors have been reinstated. Neither Russia nor Germany may enter the Baltic States until war with Germany, Germany may, but must withdraw to her own side as soon as Poland falls. If a reckless Nazi declares war on Russia before Russia declares war on East Europe, Russia may enter any part of Poland without further ceremony.

Left or right, neither Russia nor Germany may enter the Baltic States unless and until they have declared war on that area. Bessarabia remains a permanent part of Rumania.

If neither Russia nor Germany dares to declare war on East Europe by the end of spring 1940, eastern Poland belongs to whoever controls Warsaw. The Baltic States become a separate area worth 25 BRPs, and Bessarabia again remains part of Rumania.

Previously Germany could evict much or all of the effect of the Russian Winter rule by arranging to declare war on a full or winter turn and having few or no units across the original Russian frontier at the on-set of winter. This is now applied to the first winter following German declaration of war on Russia, and Russia may even then be able to postpone the first winter effects. Four dice are rolled at the beginning of the first winter following declaration of war. If the dice sum exceeds the number of non-Finnish Axis units east of the original border, Russia may choose to postpone first winter effects until the following winter.

All pre-1942 restrictions on France-British cooperation apply equally to cooperation between Russia and the Western Allies, throughout the game. The prohibition on combining to attack the same hex is retained. Neither may give the other any type of aid or naval support, neither may draw supply from a source controlled by the other, and neither may use air/naval bases controlled by the other. No more than ten factors of Western Allied units may ever be in Russia, and even these would have to be able to trace their own supply from a Western-controlled source.

If the Axis declare war on their fellow fascists in Spain, their good will with other authoritarian-inclined regimes plummet. Axis variants 1, 3, 5, and 7 are cancelled if not yet played, and the Axis must roll six or higher with one die (as opposed to 1) to activate a minor ally.

Corseca becomes Vichy upon the fall of France. Although Free French colonies yield BRPs to Britain, Vichy colonies do not yield BRPs to the

**BRP CALCULATIONS**

The BRP calculations necessary in a year start sequence are one of the most difficult portions of the rules—both old and new rules—due to the flexibility of BRPs to grow. They have not been changed, and are summarized here:

1. **Previous Base**
2. **ADD previous year’s leftover BRPs multiplied by the nation’s growth rate (omit this if in 1940 YSS)**
3. **SUBTRACT any BRP deficit resulting from SW losses**
4. **NEW BASE**
5. **ADD BRP value of appropriate minor countries, conquests, etc.**
6. **Germany only: add Moscow/Leningrad BRPs if controlled.**
7. **ADD (in 1940 only) 1939’s leftover BRPs multiplied by growth rate**
8. **SUBTRACT any BRP deficit not caused by SW losses.**
9. **Russia only: SUBTRACT Moscow/Leningrad BRPs if not controlled.**
10. **YEAR START TOTAL**
11. **SUBTRACT any BRPs spent for SW construction.**
12. **Divide by two, dropping any fraction. This gives the spending limit per turn for the coming year.**

**Axis upon Vichy activation.** If a French colony was conquered by the Axis before France fell, or if a Vichy colony was lost to the Allies and recaptured by the Axis, then the Axis could receive BRPs.

Vichy ceases to exist, and her units are removed, when the Allies enter Vichy city, or when Germany fails to recapture an Allied-controlled Paris. Parisianists in either city don’t result in the deactivation of Vichy.

If the Axis declaration war on Spain, the Baltic States become a separate area worth 15 BRPs as penalty, and may not use SR for any purpose other than to recapture the Baltic States.

**No Axis units are in Africa.** Not only are they more complete and better organized, but they contain many design changes which drastically improve play of the game. Paramount among these changes are revisions to the Strategic Warfare rules which bring the U-boats under control by 1944 and account for the Luftwaffe’s absence from the battlefield as they are withdrawn to protect the Reich from Allied strategic bombing. A free Russian Replacement rule portrays the influx of Siberian forces at the crucial point of the Eastern Front, and major changes to the Murmansk Convoy rules make that aspect of the game almost a game in its own right. A completely new innovation is provided in the form of Intelligence and Foreign Aid rules which allow more political maneuvering outside the purely military sphere of the game.

**THIRD REICH ’81** is available now in a revised 3rd edition box for $16.00 plus 10% (20% Canadian; 30% overseas) postage charges from Avalon Hill. Those wishing only to update their old game may order the parts separately (mapboard $8.00, rules $2.00, scenario cards $2.00). Maryland residents please add 5% state sales tax.

Those who playtested the new edition have been credited in the rulebook and praised in these pages, and rightly so. I wish also to credit some unknown participants—who care passengers if they ever have a reply with a star next to some of your questions, you may have had a hand in the new game. Such started questions often, although not always, resulted in a change or an addition to the new rules; at the very least they sent me back to the manuscript to ponder and review what had been done. I will conclude with my favorite:

**Q:** If Berlin falls, can I SR to Argentina?

**A:** Yes, if the Russian player doesn’t SR you to Siberia first.

**THIRD REICH ’81** Few wargames have maintained their popularity over the years as well as THIRD REICH; the winner of various hobby “Best” awards, and to this day the holder of CAMPAIGN magazine’s “Best Game of all Time” honors. This popularity is even more remarkable in light of the game’s admittedly poorly developed rules. In recognition of the special qualities of this title, Avalon Hill has put THIRD REICH through the development process again. A team of THIRD REICH enthusiasts from all around the globe assembled to test the revised edition. Years of experience with the earlier edition helped formulate the revision during a blind playtest session. The results have been more than gratifying with our most enthusiastic testing response ever.

**THIRD REICH ’81** is much more than a cleaned up version of the old game, although the rules presentation itself is much improved over the first edition. Among the changes is a completely revised mapboard with terrain changes that have profound effects on the game, while being more realistic, more historically accurate, and attractive. The scenario cards have been revised to provide more useful information at the player’s fingertips and also provide the U.S. and French players with their own separate cards.

However, the biggest change is in the rules themselves. Not only are they more complete and better organized, but they contain many design changes which drastically improve play of the game. Paramount among these changes are revisions to the Strategic Warfare rules which bring the U-boats under control by 1944 and account for the Luftwaffe’s absence from the battlefield as they are withdrawn to protect the Reich from Allied strategic bombing. A free Russian Replacement rule portrays the influx of Siberian forces at the crucial point of the Eastern Front, and major changes to the Murmansk Convoy rules make that aspect of the game almost a game in its own right. A completely new innovation is provided in the form of Intelligence and Foreign Aid rules which allow more political maneuvering outside the purely military sphere of the game.
STATE OF THE ART TOBRUK

By Lorrin Bird

It is hard to believe that anyone would challenge the realism of TOBRUK. Playability or excitement level sure, but the historicity? Designer Hal Hoch brought more impressive credentials to his design than anyone else before or since. We're not saying Mr. Bird is correct; we'll let you decide if his changes give the game a better "feel".

When TOBRUK first came out in 1975, many of the ideas included in the game were among the most advanced concepts in armor miniatures gaming. Over the last five years, however, innovations and improvements in the world of armor simulation have reached the point of TOBRUK's rules covering out-of-date. This article investigates several of the major rules where current thinking has evolved to the point where a revision might help, and offers optional solutions.

When our group first played TOBRUK back in 1977, there was no doubt in any of our minds that the game represented the ultimate in armor gaming on the 1:1 scale (one tank equals one tank, unlike PANZER LEADER where a tank counter was a platoon). From the relative rate of fire (which caused many a sore wrist the next day for the British players) to the different armor thicknesses over the parts of a tank (upper hull, lower hull, turret mantlet, etc.), this game had it all, and in a simpler system than many of the fancy miniatures rules.

As time went on, and we experimented with the various miniatures rules that started to become available, problems with TOBRUK came to light. Rules for miniature tank battles with scale models contained many shortcuts which served to shorten playing time, although they did overly generalize some of the combat steps. We occasionally found the forty turn TOBRUK scenario a little unwieldy, and felt that we were actually sitting out there in the sweltering desert as the hours ticked by with dice rolls predominating. We all agreed that the game could use some streamlining.

Combat results also held a few relative misgivings, as some of the determinations conflicted with armor miniatures rules and what thinking we could drum up regarding the issue. In particular, the large number of automatic ricochets on frontal hits sometimes left one feeling odd, as the ferocious "88" rounds trickled off of the tinniest armor. It appeared that some of the thickest armor miniatures rules.

The end result is that the favored 88, after bouncing off armor due to angle of hit is a function of shell penetration to armor relationships, and the general procedure of having hits ricochet without distinction was too simple.

This, of course, requires an adjustment to the hit determination and shell damage charts, but fortunately it was relatively simple. Instead of a different hit chart for every tank, our group decided on a common chart for everyone. The issue of ricochets, since it is very particular and is a function of tank armor, would be included in the damage resolution procedure.

We decided to use the following for hit determination:

<table>
<thead>
<tr>
<th>Die Roll</th>
<th>Aspect Hit</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5</td>
<td>Turret</td>
</tr>
<tr>
<td>6-7</td>
<td>Upper Hull</td>
</tr>
<tr>
<td>8-9</td>
<td>Lower Hull</td>
</tr>
<tr>
<td>10-12</td>
<td>Suspension or Track</td>
</tr>
</tbody>
</table>

In our system, front, side and rear hits would all use the same chart, which is a gross simplification but speeds things up considerably.

The simplified handling of turret mantlet and frontal face hits will be handled as part of the damage determination, where a lot of the separate steps previously required will be wrapped into a number of very basic assumptions.

Having done away with the automatic ricochets, the next step is to work them into the damage system. As previously noted, the tendency of shells to bounce should be a function of how much their penetration exceeded the armor they hit. More particularly, consider the following data that was derived from U.S. Army Field Manuals:

<table>
<thead>
<tr>
<th>Angle of Hit</th>
<th>Increase in Armor Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>30°</td>
<td>25%</td>
</tr>
<tr>
<td>45°</td>
<td>75%</td>
</tr>
<tr>
<td>60°</td>
<td>100%</td>
</tr>
</tbody>
</table>

A 40mm plate, when hit at an angle of 30 degrees from the perpendicular (see figure one), resists penetration as if it were 25% thicker, or 50mm in thickness. While a shell capable of wounding 130mm of armor wouldn't feel too much more resistance at a 30 degree angle, a round with 45mm penetration would probably ricochet since the effective armor exceeds the shell penetration. So ricochets should be a function of penetration to armor, but how do we pop this into our game system in a playable manner?

Resorting to the old gross assumption toolbox for a "quick and dirty" method, the following policy was formulated:

If a shell can penetrate an armor plate out to a given range when hitting head on, towards the outer limits of that range there will be a tendency to bounce off due to angle hits.

In game terms, we just assumed that at the outer six hexes where penetration is possible, one third of all hits will bounce off (besides angle effects, individual rounds always deviate a little from the average penetration figure). This means that if a 50mmL/42 shell can damage a tank out to 12 hexes, from 7-12 hexes one third of the hits will ricochet.

Six hexes was chosen since it represents 450 meters, a distance within which shells usually lose a good share of their penetration, and the one-third ricochet factor was picked so that a fair share of non-bouncing hits would accrue.

So, if our 50mmL/42 did hit at 11 hexes a piece of armor it was only capable of damaging out to 12 hexes, after the hit one die would be rolled. On a roll of five or six, the shot failed to damage (this also provides for penetrations that go into the tank but did nothing).

The end result is that the favored 88, after hitting a Stuart front at any range, will never ricochet (a change my British opponents will never forget or forgive). Besides being a bit more logical, things like this will help speed up play, since ricochets helped build the number of rolls needed to knockout a target vehicle.

Target Aspect Definition

As defined in TOBRUK, where the vehicles face the flat part of a hex (figure 2), the angle of front hits is limited to 30 degrees either side of the target direction. While this selection simplifies the frontal angles that might conceivably come up, it makes it too simple to score a flank hit, and distorts the armor rating system.
To get into it a little deeper, the arc in which flank shots are defined extends for a range of 120 degrees, twice that of the frontal arc. Since getting a flank hit often spells doom for the poor target, the relative liberal range of flank hits makes careless placement a deadly game.

Figure 3: The TOBRUK flank shot definition allows side hits at 60° angles.

What compounds the large flank arc is the effect on armor resistance of allowing hits at 60 degrees from head on to be treated as perpendicular flank shots. Figure 3 shows a target PzKw IIIh being hit from just inside the flank arc, a round that will probably KO the tank due to the flimsy side armor. In reality, at that angle of shot, the flank armor will resist penetration as if it were 2.6 times its basic thickness (due to the effects of angled hits that were previously described).

Instead of being a chintzy 30mm thick, the side of the panzer III will react to armor piercing shot as if it were 78mm thick, the equivalent of a Matilda II's front.

Figure 4: Alternative target aspect system (movement into one of two frontal hexes).

This all suggests that the arc of flank shots be reduced, both to more realistically reflect what constitutes a side hit (at 60 degrees from the side perpendicular, many hits would land on the frontal armor, a problem we would like to glance over for playability purposes), and to resolve the angle effects issue with the least offensive assumptions possible.

The solution appears to be, at its simplest level, to ape the SQUAD LEADER system and point tanks towards the corners of the hex. This greatly reduces the ease with which one previously scored a flank hit, and while avoiding a direct confrontation with angle effects (which would really fill out the playing hours with die rolls and mathematical gyrations), gives us a more reasonable model of target aspect problems. While things are still too simplistic for the purity freaks, TOBRUK's primary concern should be a playable game, and not something that Einstein would have trouble finding fault with (let alone playing a game inside of a light year).

Suspension Hits
If TOBRUK were taken literally, the answer to the King Tiger would have to have been the Bofors anti-aircraft gun. What better tactic could one think of than attacking the most heavily armored beast on the battlefield, one which could defeat hits by any gun, with a weapon that almost always would blow the tracks off the Tiger I. Once the giant were immobilized, the assault would peter out, and artillery could bury the enemy panzer as it stands now, track hits always immobilize, which is a very simplified version of the truth, if ever there were one.

Logic would tell us, right off the bat, that a track capable of carrying around a seventy ton tank would sometimes be able to ward off hits by 1/2 inch anti-tank rifle shells, let alone shells with practically no penetrating capability at all. While nothing in North Africa approached a King Tiger (or even half of one), the assumption that Bofors, anti-tank rifle and 20mm hits would always tear apart tracks and bust wheels is just too general and weak.

Without getting into considerations of relative track strengths, one can put together a reasonably detailed and realistic model by assuming the following:

<table>
<thead>
<tr>
<th>Weapon Type</th>
<th>Roll to Immobilize</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 pdr.</td>
<td>6 hexes</td>
<td></td>
</tr>
<tr>
<td>41mm (AP)</td>
<td>10 hexes</td>
<td></td>
</tr>
<tr>
<td>50mm (AP)</td>
<td>13 hexes</td>
<td></td>
</tr>
<tr>
<td>75mm (AP)</td>
<td>16 hexes</td>
<td></td>
</tr>
</tbody>
</table>

The added lethality of larger shells is due to their size, weight (75mm rounds scale out at about 15 pounds, 46mm rounds are under 2 pounds), and explosive charge (they have more chance of blowing off a wheel, or bending an axle).

High Explosive Tank Fire
While the Grant is one of the most inaccurate long distance tanks when it comes to firing its 75mm gun, the rules indicate that the 75mm HE factors will always land in the target hex. A 75 meter wide hex may be a big area (about 250 feet across), but having a gun incapable of hitting a tank at 1200 meters landing an HE shell inside a 75 meter circle at that range boggles the mind. And this is more than a moot point, since the Grant can immobilize trucks, halftracks and infantry in the open with direct fire weapons should have to undergo the same process as anti-tank fire (but no target size modifiers in deference to the lethal radius of HE rounds).

Armor and Shell Revisions
While the various sources commonly used for armor gaming almost always differ in their armor thicknesses and shell penetration, we prefer sources that give different results from TOBRUK.

Using Von Senger and Etterlin and the TANK CHARTS set of armor miniatures rules, we modified the following damage ranges:

<table>
<thead>
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<th>Weapon Type</th>
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<tr>
<td>75mm (AP)</td>
<td>16 hexes</td>
<td></td>
</tr>
</tbody>
</table>

These changes are basically major problem areas that were discovered while pouring over every armor statistic and gun capability. Given the enormous amounts of research that were required to put the game together, we assume that somewhere along the line a few mistakes were input into the machinery. For instance, the Valentine had 60-65mm of frontal armor, with 65mm on the turret front. The German 30mm long could penetrate 75mm at 500 meters, so should be able to destroy a Valentine frontally beyond the 225 meter range that TOBRUK now allows.

The PzKw IIIh changes are somewhat more subtle, since they are based on the relative mix of the various Mark III models in the desert.

The Afrika Korps could never claim strict adherence to a firm mix of tank models, since at the time of Gazala the Pz III's were made up of IIIf, g and h models, each with differing armor. And even the IIfh's could differ, since a solid 75mm hit on the frontal spaced armor would probably blow the plate to bits (most of the IIfh's that are shown in pictures don't retain the spaced armor, the likely victim of a 6 pdr. or 75mm hit). What is included in our optional changes is a fairly common ground upon which to determine likely damage results, and no claim to strict purity is advanced.

We did not try to get into the different levels of tank design that TOBRUK does with our revisions, but would suggest that players treat damaging hits as KO's for simplicity sake.

Rate Of Fire
This, as far as we could tell, was one of the worst causes of the W. AFRICA SCENARIOS that permeated most of the dice throwing TOBRUK games. Throwing for 3-11 shots per weapon, target section hits and then damage was just too much. So, along comes another one of those beautiful simplifications that will make the game more playable.
Instead of rolling for every shot, why not roll once but allow for multiple hits?

For example, a weapon with one shot rolls once for a hit, but if two shots are called for, rolling the hit score results in one hit, but rolling two above the hit score results in two hits. Three above the hit score allows three hits (given a ROF of 3, of course, etc.). Say a PzKw III is firing on an acquired Crusader, and needs a hit score of 6 for a successful shot. Then here is how the dice rolls would be interpreted:

- If the ROF had gone up to six, then the chart would have been extended.
- Note that while this chart does not strictly relate the probabilities of throwing individual hits to the percentages presented on the table, it has enough "saving graces" to excuse the differences. For one thing, a weapon with 35 shots will never score more than six or seven hits (depending on the hit score), which not only saves your wrist from future arthritis pains, but assumes multiple hits on one target section will not create the additional mayhem that more rolls would require. Cutting down on the plethora of hits has got to lessen things up.

On the negative side, an awful lot of shot throws will result in no hits, which may be a wild assumption considering that six shots may be involved. Keep in mind, however, that this will really speed things up and will even bring a little suspense into the game (it's now a totally "hit or miss" affair. It also intuitively brings into play the duel concept, since if all six shots miss with one roll, one can assume that the enemy hit the tank before the majority of rounds could be fired off (if it is done). Since tank combat is a wild and woolly affair, and is not easily simulated (a few Churchill tanks once overran a horde of firing "88's", PzKw III's and IV's and 75mm anti-tank guns, a feat none of my games ever duplicated), assumptions really can't be proved or disproved with any degree of certainty.

In fact, carrying this a bit further, the use of alternate turn firing in TOBRUK is an assumption that aids in the play but has no relationship to reality. No tank is going to wait until the other tanks have fired off all of their rounds before opening up. The use of one roll to simulate many shots is no more "in the wrong" than alternate tank shots, and it is upon this gross assumption that the use of "many shots rolled into one" systems is based. TOBRUK is a game, and assumes things for playability (or should have) that are not technically correct. So there, nitpickers!

While on the subject of alternating fire, here's an additional rule to consider:

Instead of alternating fire, tank by tank, why not use a priority system that bases fires first on ROF, crew morale, and a random roll. Before combat starts (but after movement), each side rolls two six-sided dice, with the higher score giving the thrower the first shot based on the following system:

1. ROF always goes first if they've acquired a target.
2. Higher ROF always goes first if they've acquired a target.
3. Anti-tank guns always fire first.

Modifiers: +1 to roll if British and defending.

If two PzKw III's are firing on a Matilda, and one Pz III and the Matilda are firing on acquired targets, and the roll is higher for the panzers (or is a tie, which goes to the DAK), the firing order is: PzKw IIIH with acquisition, Matilda, remaining PzKw IIH.

Instead of playing these sort of games, we usually limit tanks to their initial rate of fire (battlefields are confused, dusty and panic stricken, and proving ground ROF may be too high), and whoever rolls higher fires off all their weapons first. Allowing for no hits helps to reduce the overwhelming advantage first fire might otherwise allow. Players can experiment with their own firing order, and make their own conventions, but anything that quickens play will be a big plus.

Visability

While the good old 88 is quite capable of hitting targets out to 1600 meters and beyond, many British tankers commented on the fact that glare, dust and whatever often limited visibility to 1000 meters. In addition, some targets, like infantry on foot, just can't be seen beyond 500 meters, especially if they're stationary. Add on to this the fact that hedgehogs, weapon pits and other defensive positions were often camouflaged, and one can appreciate the fact that Rommel did not look on his TOBRUK board and count hexes to see where his troops were to go.

The following rules are very basic, and simple, but help to bring the problems of visibility into the game.

1. No fire may be directed at weapons in hedgehogs, weapon pits or other depressed cover until the turn after they open fire.
2. Camouflaged weapons that are in depressed cover will not be detected until the enemy is in the same hex.
3. Towed weapons in the open cannot be fired upon until the nearest radio equipped unit is ten hexes away ("88's" and other large guns are treated as vehicles in the open, and guns in the open when they're in depressed cover).
4. Infantry on foot are invisible if more than eight hexes from an enemy unit.

Range Measuring Ruler

Counting hexes can sometimes be a real drag, and range determinations are really speeded up by using a ruler. Just take a piece of cardboard, about 16 inches long and 1-1/2 inches wide, and using one of the maps lay out the one-hex intervals (basing the length on center-to-center distances). When measuring, anything more than a full hex is rounded upwards.

This is a relatively simple thing, but when all of the end runs mentioned in this article are used, the end result is a streamlined game of TOBRUK that becomes considerably more playable and enjoyable.

Machine Guns On Tanks

TOBRUK is presently one of the few WWII system games that the turret MG was more lethal than the hull version. This is open to discussion.

Turret MGs depend on the rotation of the turret for sweep and accuracy, which is more constraining than a ball mounted hull machine gun. There also appears to be better visibility from the hull. On the other hand, turret mortars won't vibrate as much, so the fire will be more accurate.

Our final arbiter, in this issue, was CROSS OF IRON, where hull MG's generally get twice as many hits as turret models. So be it.

The following rules are a simplification of the turret MG factors, and halved the hull MG effects, since our play indicated that tank machine guns were having too lethal an impact at long range and while groups of vehicles were firing on the move. Once again, players are urged to experiment with this on their own, since these things are subjective to a great degree.
If imitation is truly the sincerest form of flattery, Tom Oleson has to be feeling pretty good by now. The premise for his 1971 article "Situation 13" has fostered more spin-offs than Mary Tyler Moore and D&D combined. The concept should be getting a bit tired by now, but on the off chance that some AIW enthusiast out there is frustrated because someone hasn't applied the formula to his game, here we go again.

In the spirit of Tom Oleson's "Situation 13" (THE GENERAL, Vol. 14, No. 1) and Robert Chiang's "Abstract Panzer Leader" (Vol. 14, No. 6), this is a third generation article. The objective is to re-establish the system for 'free unit selection' scenarios using the same basic concept of 'unit point totals'. A single point value is derived for all units in the game, and each player may choose whichever units he desires as long as the total number of points expended does not exceed an agreed upon maximum.

Although all three games are similar, each has its own unique pieces and game system which is developing new standards for calculating the point totals. In AIW, there are new unit capabilities to consider, along with the new unit types that have arisen in modern armies, and a variety of changes in these weapons' effectiveness. Another difference between AIW and the earlier games is the increased participation of air units, in Basic and Advanced capacities, allowing a number of weapon types to be carried.

For most units, the four basic factors (AF, RF, DF, MF) are summed with allowances and modifications for twelve capabilities (or inabilities), some of which are in contrast to the systems devised in the earlier articles. A few units have specific modifiers that apply only to that weapon type, which will be explained with their respective categories.

In the chart below are listed the modifying factors, and the changes that they enact.

### Hull Down

- **DF + 1 or 2 Cross Country** MF - 1
- **Smoke**: DF Truck MF - 1
- **Overrun**: AF & MF + 2 Amphibious 2MF - 1
- **without SMF & MF - 1 Carry** "T" MF \times 2
- **without Carry**: MF + 2 Special Infantry MF \times 2
- **CA**
- **Wire Guidance**: DF - 1/2

Since tanks and "A" type tank destroyers are the basic weapon in all three games, that is the starting point for summing the basic factors. The standard capability of the tanks and TD's, when their factors are combined into a single total, is the model against which all other AFVs will be compared and modified.

Contrasting the earlier articles, all tanks, plus the Arab SU-100, add two to their AF and MF for overruns, representing the addition to the die roll and the movement points required. The RF remains the same, and the DF is raised for Hull Down (two for the Israelis, one for the Arabs), and for Smoke (if the unit is capable). All Arab units, plus the Israeli TDs, are without Split-Fire-and-Movement and Carrying abilities, both lowering the MF by one-quarter. (The base MF is lowered by one-quarter, twice, before the two is added for Overrun.)

The light armor category contains a mixture of units, with the common element being mobility (and Hull Down). The light tanks are totalled as regular tanks, although the Israeli AMX-13 is without Carry; the Arab PT-76 is missing Carry, SMF and Smoke, but it is Amphibious. The recoilless rifle jeeps have a modification for Cross Country movement only. The Israeli armored infantry and scout jeep mount "I" class weapons, counting their RF, one, while the Arab infantry also possessing Smoke and Amphibious movement.

Regular infantry units raise their AF by two for Close Assault Tactics, while combat engineers add three, accounting for die roll modifications (as with Overrun). The RF is one, since that's the only effective range for CAT attacks. All infantry and engineer units have Hull Down and Smoke, and the regular infantry types also have Special Infantry capabilities.

Only the Arabs are equipped with infantry anti-tank weapons of an "A" class, and against armored targets the split in effectiveness is at a range of three hexes, rather than the 1.5"RF" cut-offs in the earlier games. If the RF is greater than six, the AF is halved, otherwise the total AF is used. The only other modifier is Hull Down, raising the DF.

The major new weapon type included in AIW is the "G" class missile, including infantry anti-tank weapons, and the Israeli TOW M113A1 (the only units which can be used at ranges of one or two hexes). Wireguided fire direction and Hull Down alter the DF, and various other types of AF, Cross Country or Amphibious abilities, or at the Truck rate.

Transportation is provided by trucks and several types of armored personnel carriers, carrying "I" and "A" class weapons, and moving at various rates. The BMP and OT-62, with "A" weapons, are treated as mobile TDs, retaining the total AF because their RF is under six. All other units total these factors as infantry (AF, RF or one). None of these units have Smoke, but all have Hull Down and Overrun (except the trucks). Movement rate modifiers include Cross Country, Amphibious, and lack of SMF, plus the truck rate for the BTR 152 and 60, and the tracks (surprise), which also double their MF for towing artillery.

Engineer vehicles present a unique problem because their standard factors do not include any allowance for special engineering abilities. The basic factors are totalled like other units, except that no points are lost for lacking an ability, and then an individual modifier is applied to each unit to cover its engineering specialty. The flail tanks add 1.5MF for flailing ability; the AVLB bridges add 3MF + 1, to include the single turn expenditure in laying a bridge and the maximum of three per game that can be installed. Ferry units are Amphibious, and must expend their entire MF twice to transfer one unit; their MF is totalled as 2 (2MF-1). Finally, the Arab BMP bridge and MLG mine layer are totalled exactly the same, each moving at the Truck rate, and doubling their MF for engineering abilities.

Artillery comes in four varieties: towed (including mortars), self-propelled, off-board, and anti-aircraft. Beyond the standard DF and MF modifications (disregarding SMF and Carry), regular artillery is factored mainly for indirect fire ability, counting RF-1/2 (the usable percentage) and AF-1/4 (strength against armored targets); AA units use 1/2AF if the RF is over six. Off-board AFs come from the game scenarios, and is combined with "3AP" for the RF.

Assessing the totals for Basic Air Strikes is similar to that for Off-board artillery. First, the AFs are taken from the game scenarios; the Arabs can use 10 or 16, while the Israelis choose from 10, 21 or 27, depending upon "A". Next, the standard range for Basic strikes is one, but there is the option to shift the target hex by one on the turn of attack, making the RF two. Combining the class "A" weapon and the range of two on the WEC doubles the AF for all strikes. There is no DF or MF involved in the Basic rules, and each strike can be used only once.

Advanced Air Strikes differ from the Basic in that they use jet and helicopter counters, and can carry a variety of weapon types, attack strengths, and corresponding range factors. In addition, the Israeli helicopters have organic weapons, and both sides have units capable of transporting infantry types.

The Israeli Huey Cobra, with an "A" class weapon, is totalled as an anti-tank weapon, retaining all four factors as they appear. The UH-1 mounts an "I" weapon, but retains its total AF against strictly non-armored targets. Both transport units, the UH-1 and the Arab Mi-8, double their MF for their Carry "3I" ability. Jet units have a DF, but no MF because of their unlimited movement. They can be placed on any hex on any turn.

The MF and RF for air strikes carried by these units varies according to the weapon type and the WEC. Individual point totals for the "A", "G" and "H(H)" class AFs are restricted to those used in the game scenarios. Class "A" strikes use the same AFs as the Basic game (doubled), plus an RF of three. The Israeli "G" strikes have an AF of 40, while the Arabs use 80, with a range factor of twelve. With "H(H)" attacks, the Israelis use 45, the Arabs 20, and the range is zero. The AF for "G" strikes is totalled at face value, while the last type is halved; jet units add their DF, and helicopters also add their MF. Like Basic strikes, Advanced strikes can only be used once (although the helicopters can use their organic weapons any number of times).

Neutral counters are also included in the calculations, and given point totals appropriate for their participation in the game. Fort counters start with their DF of ten, and add two for the die roll addition, and four for the improvement on the morale table, for infantry types. The last two totals also apply to Improved Position counters.

Minefields are totalled by adding all relevant factors; specifically the odds they attack at, the number of favorable results, and the factors involved in removing them: the odds that engineers "attack" at them to remove their chances for a favorable result, and the minimum number of turns for this activity. The three types of minefields, 1-1, 2-1 and 3-1 have five, four and six factors for 3, 2 and 1 respectively. Engineers always "attack" at 2-1 odds (giving them two chances for a result), and must attack at least twice to disarm the entire field.

Block and Trench counters each cost five points for their relative effect on movement, and the engineering requirements to remove them. Assault Boats, though not included as counters, have costs for their DF (1), their singular usage (1), and MF costs (x3) in transporting units across the canal.
Bridges have totals equal to their DF (24), if they are in place at the start of the game. Otherwise, their costs are determined according to construction time. Normal Bridges taking 60 turns, Infantry Bridges 5, and Cuts taking 40 turns to place in the same manner.

With the individual unit point totals established, there are still several aspects of any potential scenario remaining to be qualified. These can be divided into three sections. First, these are the determinants prior to the initial setup, including Morale levels, number of turns to be played, number of boards to be used and their configuration, and, most importantly, the total number of points available to each side to use in selecting units. The second group involves initial deployment, and any factors that take place during play, such as late entry, air strikes, etc. Lastly, there are the objectives, conditions, and levels of victory that each side is striving for.

The Morale levels to be used can also be accorded a point total, requiring each player to "purchase" them as they would regular units. The Israeli player picks first, and can choose either A or B; the Arab player can select C, D, or E. The costs of these levels are equal to the number of chances for that side's units to become undeployed, using the levels available to them (9, 7, 5, 3), multiplied by two, for the two different types of units (infantry, non-infantry) on the Morale chart. An alternate method is to multiply the total number of units that each side selects by the percentage of favorable rolls (55%, 60%, 40%, 25%), and use that as the Morale cost; an opposite approach to this item is to apply the cost of the morale level chosen, not as a total subtracted from those used to obtain units, but as the starting victory point total for the opponents.

The number of boards, their configuration, and the number of turns are probably the most arbitrary items. This can easily be left up to the whim of the players, depending on how large a scenario they wish to play. In lieu of this option, all three parts can be determined by a roll of the die:

<table>
<thead>
<tr>
<th>die roll</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of boards</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>die roll</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of turns</td>
<td>7</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>20</td>
<td>25</td>
</tr>
</tbody>
</table>

Board configuration can really be trivial, except when the Suez Canal edge is being used, but if a die roll index is appreciated, it exists:

<table>
<thead>
<tr>
<th>die roll</th>
<th>1-3-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>number of sides</td>
<td>2</td>
</tr>
<tr>
<td>number of length</td>
<td></td>
</tr>
</tbody>
</table>

Point totals for both sides can also be set randomly by the players, 500 or 1000 is the total suggested in earlier articles, although the pieces covered in earlier articles, although the pieces associated of areas to the victory conditions. Often, when a specific hex (such as a town or road junction) is to figure in determining victory, one side will be required to place specific units on that hex. This usually entails a fort counter and infantry, or perhaps artillery, unit inside it.

There are many alternate methods for setting up, beyond the requirements for specific units noted above, that apply to the general situation of the scenario. The basic method is for each side to deploy all of their units on-board from the beginning, each with a board to consider as their territory, and all units face up. Building from this setup, one or both sides can turn some of their units upside down (except static counters, like bridges, forts, etc.), even to the extent that all units begin in a "hidden" state. It is quite easy for an attacker to be in the dark as to the deployment and strength of his opponent before he joins battle, just as a defender may not always know what force is approaching him. (I am a firm believer in hidden movement for tactical games, not just until the point of sight or contact, but also at any time that a unit has broken contact to the point where it cannot be seen by any enemy units.)

The next step in deployment variation is to reserve some units off-board at the start, determined either by a percentage of the total number of units, or simply a percentage of the total units. If either side is allowed more than one board for setting up, a set percentage can be determined for each board that they occupy, plus an additional total for off-board. The most logical division here is to halve the total in question, allowing one group on-board and the other off. While one side sets up in this manner, the other can be allowed to deploy in a hidden state, giving each side an advantage of some kind.

In addition to limiting each side to one or two boards for deployment, there can be further restrictions according to area or Battlegroup designation. The first is derived from examples found once again in the game scenarios and serves as a general restriction for deployment, while the second point is an extension of the first (also suggested for

<table>
<thead>
<tr>
<th>Arab Unit Point Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>T-24/85</strong></td>
</tr>
<tr>
<td><strong>T-55</strong></td>
</tr>
<tr>
<td><strong>T-10M</strong></td>
</tr>
<tr>
<td><strong>T-62</strong></td>
</tr>
<tr>
<td><strong>Centurion III</strong></td>
</tr>
<tr>
<td><strong>T-34/100</strong></td>
</tr>
<tr>
<td><strong>SL-100</strong></td>
</tr>
<tr>
<td><strong>PT-76</strong></td>
</tr>
<tr>
<td><strong>106mm NR on jeep</strong></td>
</tr>
<tr>
<td><strong>Infantry</strong></td>
</tr>
<tr>
<td><strong>Commando</strong></td>
</tr>
<tr>
<td><strong>Combat Eng.</strong></td>
</tr>
<tr>
<td><strong>Const. Eng.</strong></td>
</tr>
<tr>
<td><strong>107mm RG</strong></td>
</tr>
<tr>
<td><strong>178br ATG</strong></td>
</tr>
<tr>
<td><strong>85mm ATG</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Israeli Unit Point Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sherman 50</strong></td>
</tr>
<tr>
<td><strong>Sherman 51</strong></td>
</tr>
<tr>
<td><strong>Sherman 51 Hv</strong></td>
</tr>
<tr>
<td><strong>M-48A1</strong></td>
</tr>
<tr>
<td><strong>M-50A1</strong></td>
</tr>
<tr>
<td><strong>Centurion VIII</strong></td>
</tr>
<tr>
<td><strong>Charniot</strong></td>
</tr>
<tr>
<td><strong>AMX-13</strong></td>
</tr>
<tr>
<td><strong>Armored Infantry</strong></td>
</tr>
<tr>
<td><strong>Soviet Jeep</strong></td>
</tr>
<tr>
<td><strong>106mm NR on jeep</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neutral Counters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fort</strong></td>
</tr>
<tr>
<td><strong>I.P.</strong></td>
</tr>
<tr>
<td><strong>Trench</strong></td>
</tr>
<tr>
<td><strong>Block</strong></td>
</tr>
</tbody>
</table>

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In addition to limiting each side to one or two boards for deployment, there can be further restrictions according to area or Battlegroup designation. The first is derived from examples found once again in the game scenarios and serves as a general restriction for deployment, while the second point is an extension of the first (also suggested for
by the situations given). An area restriction can be either within a certain distance from a point, or outside of the same; the most common usage of this is for a player to deploy within 14x the board edge nearest the "his" side, or to be at least 14x the board edge away from the nearest enemy unit. Areas surrounding, or one side of, static units or terrain features can also be used as reference points for this type of deployment restriction.

With separate groups being used, each one should be given a different area to deploy in, or else a different turn of entry. Obviously, the more boards being used, the more units being used, and the more battlegroups, static units, and terrain features being included in the initial deployment, the more confusing it all gets. But if that weren't enough, there is still the third major set of alternatives: late entry.

The easiest method to use for determining which turn the reinforcements will arrive on is to leave it entirely up to the players; units staring off-board can enter when ready. This can be used with either or both teams having units off-board, and with further division into battlegroups.

A die roll can determine the turn of entry, corresponding to the results for number of boards, game turns, etc.:  

<table>
<thead>
<tr>
<th>Turn of Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

These expressed turns of entry can be used as the specific turn for deployment, or they can be a reference point, allowing entry either no earlier or no later than indicated. With more than one group entering late, each should deploy on a different turn, consecutively, beginning with the turn rolled for on the chart above.

The method of entry concerns the area along which the units deploy, usually a specified map edge, but at times restricted to a road hex. Another point to consider is to vary the turn of entry for units within a group, which would otherwise be entering together. Two die rolls are used for this procedure, though the best results are obtained by rolling the die only once, and then using the same total twice. The number obtained determines two factors, the turn on which the units will begin to deploy, and the number of units that can deploy per turn. For example, a roll of five (being used for both parts) would allow five units to arrive each turn, for five turns; any units in excess of this total would enter on turn five plus.

The grand finale to all of this is the victory determination, just as in an actual game. As with the general aspect mentioned previously in this article, victory can be built around several alternate, often supplementary, ideas.

Victory at the battle level revolves around the elimination of unit points, and the differential between the total elimination by either side determines the level of victory, as in the game scenarios. With this scenario, the spread of points look like this:

<table>
<thead>
<tr>
<th>Differential</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-30</td>
<td>Draw</td>
</tr>
<tr>
<td>31-60</td>
<td>Minor</td>
</tr>
<tr>
<td>61-90</td>
<td>Minor</td>
</tr>
<tr>
<td>91-120</td>
<td>Substantial</td>
</tr>
<tr>
<td>121-150</td>
<td>Major</td>
</tr>
<tr>
<td>151+</td>
<td>Decisive</td>
</tr>
</tbody>
</table>

Aside from counting just the initial unit point costs in determining the respective totals, the role of the static units, or specific hexes on the board, can be emphasized by awarding more points for elimination, occupation or location.

10 pts for assaulting town held by enemy
15 pts for occupying town held by enemy
10 pts for assaulting enemy fort
15 pts for occupying enemy fort
1 pt for occupying road junction
20 pts for eliminating bridge
30 pts for eliminating bridge with enemy unit on it

In addition to, or instead of, counting victory points solely from the elimination of the opposing forces, there can be points awarded for activities, both offensively and defensively. In most cases, for each activity of one kind (offensive) there is an opposite (defensive) activity that the other player can be concerned with, so that in a particular scenario each side can have its own objectives.

**Offensive**
1. Winning victory points: 5 pts for placing bridge across canal
2. 10 pts for occupying bridge
3. 15 pts for occupying road junction
4. 20 pts for eliminating bridge

**Defensive**
1. 5 pts for placing bridge across canal
2. 10 pts for occupying bridge
3. 15 pts for occupying road junction
4. 20 pts for eliminating bridge

Using these activities in the victory conditions can give the players a much harder problem to solve; one side can be given points for exiting the map and not using Air Strikes, while the opponent aims to keep a majority of the forces (more than the first player) on one board and retain possession of towns or forts on another. The combinations can go on and on with each side having any number of options to obtain points; another idea is to give each side a Defensive goal and an Offensive one, with the opponent taking the respective opposites.

**Offensive**
1. Moving units across Canal
2. Defending units not crossed

**Defensive**
1. Retaining possession of specific hex; preserving unit
2. Preserving units not used

The unit point totals can be used to evaluate the level of victory, just as when totaling the points eliminated by either side, the difference being that only those units which are successful in their activity are counted (unless unit point elimination is also included in a combination).

One last variation on determination of victory is the chance for an early victory, based on a ratio of the victory points obtained at any given time. The players keep a running total of the victory points obtained from whatever source (unit elimination or activity), and at any time one side can claim a victory based on the ratio with the levels awarded as follows: less than 2:1 equals marginal, 2:1 equals minimal, 3:1 equals minor, etc., continuing up to 6:1 or more equalling a decisive victory. The players might agree on a starting point for this quick victory, such as any time after turn five, or decide to count points after both players have moved and attacked on a particular turn.

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At the end of each calendar year an EDITOR'S CHOICE article will be selected. The author of this article will receive a $100 bonus and a lifetime subscription to the GENERAL.
PEARL HARBOR DEFENDED
A FLEXIBLE RESPONSE TO AN IDEAL JAPANESE STRATEGY

By James M. Lutz

VICTORY IN THE PACIFIC is one of the better releases put out by Avalon Hill in terms of playability and balance. It combines broad strategic considerations and some interesting and enjoyable tactical components. It provides an opportunity for many varying approaches by individual players in efforts to defeat a particular opponent by attempting to take advantage of perceived weaknesses or a fortuitous if it concentrates in one of the two areas. Such a concentration might permit the American player to approach parity in terms of air power in a given area. (If the Japanese keep their carriers as raiders, the American placement of all land based air in Samoa to be joined by the American fleet carriers can be countered by sending all the carriers to the US Mandate). The inevitable carrier exchange that would destroy the striking power of the American fleet, particularly since the fewer American carriers are at a distinct disadvantage facing a larger number of Japanese CVs and CVLs with fewer shots, the need for a carrier’s airstrike to attack only one ship. American surface craft might possibly outnumber the Japanese surface units, but the attack bonus of the Japanese cruiser offsets this advantage if it should exist.

The above two strategies are very compelling ones for the Japanese commander. A cautious commander will go for the Hawaiian Islands counting on the loss of Pearl Harbor with its POCS and repair facilities to give him the needed edge to win the game. A more aggressive Japanese player appearing early in the turn for the Location Uncertain carriers and requisite support groups appears in the Location Uncertain carriers and requisite support groups because the Location Uncertain groups combined with the mounting of serious threats to the Japanese home areas, and second, the delayed defense of the Hawaiian Islands and the US Mandate. The two phases are related and can go a long way to disrupt the ideal strategy. At the very least, they should prevent any Japanese attempt to control both the Mandate and the Hawaiian Islands except at a high probability of failure.

The first key decision regards the location of the Location Uncertain carriers and requisite support groups when they return to port at the end of Turn 1. If these craft are misplaced, the ideal strategy may in fact become that for the Japanese player. When retreating from the Hawaiian Islands in the face of the Pearl Harbor raiding force, some of the carriers, two or three if possible, should retire to Samoa and be even more threatening than at Pearl Harbor at the beginning of Turn 2 or being sent to Samoa in the return phase of Turn 1. From Australia the American carriers in conjunction with the British fleet can pose a serious raiding threat to Indonesia. They can also combine with forces from Samoa or Pearl Harbor to threaten the South Pacific, or the Marshalls (usually a poor third choice). If the Japanese commander pursues his ideal strategy, he may lose control of Indonesia. If so, Lae, Singapore, and the Philippines cannot be converted to Japanese use until Turn 4 at the earliest except by marline assault in the case of Lae and the Philippines. The British fleet based at Singapore, becomes more useful and a much more potent threat than one based at Ceylon. Raids by the Allies into the Japanese Home Islands and the Marianas will be possible. Obviously, the Japanese player may beef up defenses in Indonesia, but this move can only come at the expense of attempts to control the Hawaiian Islands and the US Mandate. Negation of control in the South Pacific has similar advantages. Access to Indonesia and the Marianas is again enhanced for raiders. Lae remains an Allied base, and a fleet negating control of the South Pacific could retreat to Lae or Guadalcanal and be even more threatening than at Ausma or New Guinea. Raids by the Allies into the Japanese Home Islands may have marines available to assault these bases until Turn 2 for Lae (the Sasebo Marines out of Japan moving into Indonesia) and Turn 4 for Guadalcanal (Kure staging from Japan and Yosokusa and Sasebo reinforcing at Truk). Again, the forces to defend the South Pacific must come from the forces designated to control the other two areas.
The ships based in Australia, Lae, or Guadalcanal will remain available for the defense of the Hawaiian Islands and the Mandate on Turn 3. Of course, if the Japanese player is on both areas, they will probably be unable to give aid in the Hawaiian Islands unless Japanese control in the Marshalls has also been negated by raiders on Turn 2. Some of the older battleships might fail their speed rolls if the decisive action is to take place in the Hawaiian Islands. Their numbers will be limited in any event since most available American air units will be cruisers and carriers which do not have any speed roll disabilities. If the Japanese force attempts to control the Mandate, the battleships can always be returned to Samoa so as to be available for Hawaiian Island action.

If the dangerous key area by the American and British fleets in the southern areas is not enough, ships appearing at Pearl Harbor on Turn 2 can pose yet another threat. These ships, including some carriers can move as raiders on the northern flank. A raid to the Aleutians saves Attu as an American port and as a base for land-based air for future turns. The Japanese cannot return to these areas if the ships are available to come to the defense of the Hawaiian Islands in Turn 3 or to move on the Japanese, alone or in conjunction with a move from the direction of Indonesia. Their ultimate use will depend on Japanese dispositions in Turn 3, but their options can be held in reserve for threats on the Japanese player. The raiding threats to both flanks might be utilized to destroy isolated Japanese units, thus weakening the forces available for the climatic battles the Japanese commander is seeking to force. If the Japanese player is serious about controlling the Hawaiian Islands and perhaps the Mandate, the lost POCs in various other areas may offset the disabilities that the American player will suffer from the lack of his major repair facilities.

The Japanese player who is committed to one of the variations of the ideal strategy may ignore the raiding possibilities presented by the above dispositions of the existing American forces. He may decide that if he controls both Samoa and Pearl Harbor and prevents the major American fleet reinforcements from arriving, he can deal with the fleet forces and land-based forces that are available in the southern areas that will keep reappearing, even if these land-based air units have a multitude of areas that they can contest. The arrival of limited reinforcements for the American late in the game (if Samoa is reconverted) may give the Japanese player time to gain enough POCs in the other areas and whittle down the Allied forces.

Defending on ship losses in the battles for the Hawaiian Islands and the Mandate, a relatively small Japanese POC lead may not prove to be enough to win the game, particularly if the Americans have a raiding lane open to key Japanese bases. The American player always moving second, it is not clear that a demilitarized Imperial Japanese Navy will be able to hold off weak Allied units. The key battle may become the contest for the US Mandate in Turn 3 and by the American land-based air units that will have reapereased. Thus, at least three and maybe four of the five American carriers also will be available. The Japanese will have, assuming no losses, 11 carriers with 32 bonus air factors plus one additional carrier with 3 strikes if a speed roll is passed. The Americans will have the six air factors with 12 shots and 12 to 16 bonus shots from their three or four carriers. Thus, the lineup is 9-10 American units versus 11-12 Japanese ones. It is by no means clear that the edge in this case is with the Japanese given the greater staying power of the American carrier units. The American surface fleet will be roughly equal to the Japanese total, although again the attack bonus of the Japanese cruisers gives the Japanese player an edge in a surface action. By comparison, on Turn 2 the American player would have only two or three air forces and four or five carriers. Depending on Turn 3, the American player still has three or four carriers, and even more than if they join a largely unhurt fleet.

The net effect of the dispositions outlined above is that the Japanese player may still try to follow the ideal strategy and it might still work, but if it fails, the game is likely to be lost on the spot. Failure to negate the arrival of American reinforcements would mean that a decimated Japanese fleet would have to face the remnant of the American forces plus the substantial reinforcements due to arrive. With a diminished POC lead due to Allied raids, the possibility of another Japanese victory will all but disappear. Thus, the ideal strategy may turn out piloting the outcome of the game on major battles in the Hawaiian Islands and the Mandate in which the advantages to the Japanese player are much fewer than supposed. If the Japanese player simply opts to try to oust land-based air in the Coral Sea or elsewhere will be at odds more advantageous to the American player and will permit favorable attrition. It should be noted that this is the Japanese carrier forces to damage land-based air in the Coral Sea or elsewhere will be at odds more advantageous to the American player and will permit favorable attrition. It should be noted that this is the American player will already have defeated the ideal strategy as presented.

On Turn 3, the Japanese challenge can be met in earnest with all available American forces. Six land-based air units should be available, a formidable force versus carriers subject to disabled results. At least three and maybe four of the five American carriers also will be available. The Japanese will have, assuming no losses, 11 carriers with 32 bonus air factors plus one additional carrier with 3 strikes if a speed roll is passed. The Americans will have the six air factors with 12 shots and 12 to 16 bonus shots from their three or four carriers. Thus, the lineup is 9-10 American units versus 11-12 Japanese ones. It is by no means clear that the edge in this case is with the Japanese given the greater staying power of the American carrier units. The American surface fleet will be roughly equal to the Japanese total, although again the attack bonus of the Japanese cruisers gives the Japanese player an edge in a surface action. By comparison, on Turn 2 the American player would have only two or three air forces and four or five carriers. Depending on Turn 3, the American player still has three or four carriers, and even more than if they join a largely unhurt fleet.

The second measure to utilize in facing the Japanese ideal strategy is designed to enhance the prospects of the American player winning the critical battle by choosing the time in which to participate. This measure is delayed defense of the Hawaiian Islands and the US Mandate. Rather than defending the threatened area on Turn 2, the American player concedes them to the Japanese, saving strength for the crucial battle on Turn 3. The American fleet forces and land-based air will probably be insufficient on Turn 2, thus simply being defeated in detail by the Japanese. Rather, the ship units threaten the Japanese perimeter areas and the land-based air units are placed out of harm’s way. Since the Japanese effort calls for a maximum concentration in the key areas, any fleet moves to knock out land-based air in the Coral Sea or elsewhere will be at odds more advantageous to the American player and will permit favorable attrition. It should be noted that this is the American player will already have defeated the ideal strategy as presented.

The American reinforcements will arrive, and the POC gains that the Japanese expect will be fewer than specified in the ideal strategy, permitting the American player to compensate for the loss of Pearl Harbor repair facilities and the Hawaiian Island POCs.

Delayed Defense

The second measure to utilize in facing the Japanese ideal strategy is designed to enhance the prospects of the American player winning the critical battle by choosing the time in which to participate. This tactic requires the delayed defense of the Hawaiian Islands and the US Mandate. Rather than defending the threatened area on Turn 2, the American player concedes them to the Japanese, saving strength for the crucial battle on Turn 3. The American fleet forces and land-based air will probably be insufficient on Turn 2, thus simply being defeated in detail by the Japanese. Rather, the ship units threaten the Japanese perimeter areas and the land-based air units are placed out of harm’s way. Since the Japanese effort calls for a maximum concentration in the key areas, any fleet moves to knock out land-based air in the Coral Sea or elsewhere will be at odds more advantageous to the American player and will permit favorable attrition. It should be noted that this is the American player will already have defeated the ideal strategy as presented.

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Based air have superior staying power. The Japanese will have at best 11 carriers since the 10th cannot move on the Japanese Islands. The American could have four carriers and six air forces, hardly an adequate force. In effect, the delayed defense of the key areas will permit the American player to challenge the Japanese thrust from a position of much greater strength than would have been the case during Turn 2. The chances of the knockout punch succeeding are greatly reduced.

Of course, the simplest and most effective counter to any Japanese designs on the Hawaiian Islands is to attack the heavy Japanese carrier on turns 2 and 3 to prevent them from participating in the mainland action. A carrier can destroy two of the Japanese carriers, and the air forces, employing a carrier strike, can destroy one of the American carriers. The chances of victory are greatly increased.

The foregoing discussion of the ideal Japanese strategy would indicate that it fails to take into account the potential mistakes by his opponent later in the game. If a veteran Japanese player has determined that the later phase of VITP favors the Americans or that his particular opponent will win if the game is not decided early, then he would quite logically force an early conclusion to the game. He could not, however, expect to emerge victorious more often than the American. Allied raiders threaten no vital area, and, in fact, the American player will obligingly commit his forces piecemeal on turns 2 and 3. It must be admitted that if the American player does act so predictably, then the strategy will not work. Few players, however, are willing to assume that their opponents will be so kind. A more thoughtful American response provides a greater element of chance and largely creates the advantages gained by the Japanese capture of Pearl Harbor and makes the Hawaiian Island-Mandate strategy a risky one.

### Table 1
**Hypothetical Decisive Action in US Mandate**

<table>
<thead>
<tr>
<th>Forces with air capability available</th>
<th>American: 3 CVs with 12 airstrikes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ROUND 1</strong></td>
<td></td>
</tr>
<tr>
<td>3 CVs sink or disable 3 Japanese CVS</td>
<td>3 CVs sink or disable 3 Japanese four strike CVS</td>
</tr>
<tr>
<td>8 CVs and CVLs attack air forces with 3.3 expected hits and 11.5 expected damage (2 AFs sunk)</td>
<td></td>
</tr>
<tr>
<td><strong>ROUND 2</strong></td>
<td></td>
</tr>
<tr>
<td>4 CVs with 11 strikes attack the 4 AFs with 1.8 expected hits and 6.3 expected damage (2 AF sunk, including previously damaged one)</td>
<td></td>
</tr>
<tr>
<td>2 CVs and CVLs attack 2 AFs with 1 expected hit for 3.5 damage (1 AF sunk at best)</td>
<td></td>
</tr>
<tr>
<td><strong>ROUND 3</strong></td>
<td></td>
</tr>
<tr>
<td>6 AFs attack six CVs and CVLs with 2 disables and two hits with 7.0 expected damage (2 sunk)</td>
<td></td>
</tr>
<tr>
<td>4 AFs attack 4CVs and CVLs with 1.3 expected disables and 1.3 expected hits with 4.5 damage (1 sunk and 1 disabled)</td>
<td></td>
</tr>
<tr>
<td>2 AFs attack 2 CVs and CVLs with .67 disabled and .67 hits for 2.4 damage (1 sunk and 1 disabled)</td>
<td></td>
</tr>
<tr>
<td>1 AF remaining ensuring American control</td>
<td></td>
</tr>
<tr>
<td>Total expected Japanese damage versus American AFs: 21.3</td>
<td></td>
</tr>
<tr>
<td>Total expected damage by American AFs: 13.9</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2
**Japanese Strategy Variation and the American Flexible Response**

<table>
<thead>
<tr>
<th>Japanese Variation</th>
<th>American Counter</th>
</tr>
</thead>
<tbody>
<tr>
<td>I: Control Hawaiian Islands on Turn 2 and 3 with major portion of fleet</td>
<td></td>
</tr>
<tr>
<td>II: Control Hawaiian Islands and US Mandate on Turn 2 and 3 by dividing Japanese fleet on both turns</td>
<td></td>
</tr>
<tr>
<td>a) Yokosuka Marines assault Johnson Island on Turn 2</td>
<td></td>
</tr>
<tr>
<td>b) Yokosuka Marines assault Johnson Island on Turn 2</td>
<td></td>
</tr>
<tr>
<td>Raid north from Pearl Harbor</td>
<td></td>
</tr>
<tr>
<td>Threaten Indonesia and South Pacific from Australia</td>
<td></td>
</tr>
<tr>
<td>Continue raids on Turn 3</td>
<td></td>
</tr>
<tr>
<td>Possibly contest Hawaiian Islands with land-based air on Turn 3</td>
<td></td>
</tr>
<tr>
<td>Threaten Control of the Marshall Islands</td>
<td></td>
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<tr>
<td>Raid as above on Turn 2</td>
<td></td>
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<tr>
<td>Land-based air unit to attempt to sink or disable a Japanese cruiser on Turn 2</td>
<td></td>
</tr>
<tr>
<td>Continue raids on Turn 3</td>
<td></td>
</tr>
<tr>
<td>II: Yokosuka Marines assault Johnson Island on Turn 2</td>
<td></td>
</tr>
<tr>
<td>Raid as above on Turn 2</td>
<td></td>
</tr>
<tr>
<td>Land-based air defend Hawaiian Islands on Turn 3 with fleet in Mandate, or combined fleet and land-based air defense of Mandate</td>
<td></td>
</tr>
<tr>
<td>Raid as above on Turn 2</td>
<td></td>
</tr>
<tr>
<td>Land-based air to attack sink or disable two Japanese cruisers on Turn 2</td>
<td></td>
</tr>
<tr>
<td>Maximum effort in Mandate in Turn 3 if Johnson Island has fallen with marine counterattack in Hawaiian Islands</td>
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</tbody>
</table>

The American without overlap or overkill can expect to disable two ships and score two hits. The expected 7 damage points should sink or inflict maximum damage on two Japanese carriers. Thus, in the exchange, four Japanese carriers are removed from the next round of action. The surviving four carriers will have approximately nine shots versus the remaining land-based air units with eight. At this stage, the advantage shifts to the land-based air. The ultimate outcome is likely to be at least one land-based air unit surviving to control the area and a significant number of the Japanese carriers sunk or damaged. Thus, while the American carriers are virtually gone, the Japanese fleet will be virtually impotent from Turn 6 onward to deal with the threat of the American carriers that begin appearing in large numbers. Of course, if the opening air round goes poorly, the Japanese player can withdraw from the area, accepting the failure of the strategy but preserving his carriers for later action.

### Conclusions

From the above comments, it is obvious that the Japanese player can force a key battle as early as Turn 3 in the game if he so desires by following the Hawaiian Island-US Mandate variation of the strategy. The gamble involved, however, is noticeably larger than assumed. The delayed defense, however, combined with the losses of valuable POCs to American and British raiders elsewhere may well prove that a double assault on the Mandate and the Hawaiian Islands will succeed less often than it fails. Even the Japanese concentration on the Hawaiian Islands combined with a dispersal of the forces slated for the US Mandate to the perimeter defense is less likely to achieve ultimate victory. The American could very well survive the loss of Pearl Harbor if he has had successful raids elsewhere.

The counterstrategy of an American flexible response to the variations of the ideal Japanese attempt to win an early victory are summarized in Table 2. Forces available to both sides will vary, depending on previous actions and speed rolls, but the outline is the same, with the key action probably occurring in Turn 3, perhaps in the Hawaiian Islands and perhaps as a result of raids elsewhere. The chances of victory are equal from the American point of view. If the game is decided in Turn 3 under these circumstances, then so be it. All the ideal Japanese strategy will have accomplished is to bring the game to a major decision early rather than later. Balance is still present, given the fact that a few rolls of the dice may deter victory or defeat. If a veteran Japanese player has determined that the later phase of VITP favors the Americans or his particular opponent will win if the game is not decided early, then he would quite logically force an early conclusion to the game. He could not, however, expect to emerge victorious more often than the American. Allied raiders threaten no vital area, and, in fact, the American player will obligingly commit his forces piecemeal on Turn 2 and 3. It must be admitted that if the American player does act so predictably, then the strategy will not work. Few players, however, are willing to assume that their opponents will be so kind. A more thoughtful American response provides a greater element of chance and largely destroys the advantages gained by the Japanese capture of Pearl Harbor and makes the Hawaiian Island-Mandate strategy a risky one.
### AVALON HILL BEST SELLER LIST

As is our custom, we once again present the sales rankings for the Avalon Hill game line based on totals for our 1980 Fiscal Year which began May '80 and ended April '81. Figures for the All Time list include all versions of a title sold to date provided the game system has not changed over the years. D-DAY and FOOTBALL STRATEGY for instance have collectively gone through eight different editions, but are considered to be basically the same game. GETTYSBURG, on the other hand, changed drastically in each of its four versions and is therefore omitted from the list even though the collective totals of its many versions would ordinarily qualify for 10th place. Note that the current edition of BATTLE OF THE BULGE will soon disappear from the list when it is replaced by the new version which constitutes an entirely new game. Titles are placed on the All Time list only after having sold in excess of 100,000 copies while under Avalon Hill ownership. Sales rankings do not include sales made by a different publisher.

#### 1980 AH BEST SELLERS

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### BEAN SOUP AND OTHER RECIPES

By Alan R. Moon

Throughout history a major weapon at the disposal of any army has been overlooked. Bean soup. Garbonzo beans being especially effective. But bean soup is only one of many physically harmless, but psychologically deadly tactics gamers can use in their quest for victory. So, this should be seen as a recipe book for gamers. My ten best.

1. Operant conditioning. From the moment you sit down at the table, hum constantly, preferably in a low tone. Whenever your opponent makes a good move, raise the tone of your humming slightly. He will begin to hesitate and listen for the higher hum at crucial moments in the game as reassurance he is making the right move. That's when you have him. He's conditioned. You can now use your new found power in one of two ways. One, don't hum when he is about to make a good move. He'll wait, and think about it, but he'll inevitably make another move instead. Two, hum higher when he makes a bad move to confuse his conditioning. This negative feedback will turn him into a mess of mixed responses and from then on can hum or not hum at random.

2. Consulting The Oracle. At important moments during your opponent's turn, pick up the rulebook. Ask him if he's sure his move is legal. Ask him repeatedly how many times he's played the game. Mumble "ahah" or "hmmm" a lot when looking through the rulebook. 3. The Prim Rose Path. Study and know the historical situation and tell your opponent the mistakes he can make by following an historical pattern. Keep trying to tell him how his strategy is leading him to a disastrous historical conclusion. Make parallels between his play and the mistakes made by the actual commanders. If your opponent doesn't know anything about the actual history of the game, try to convince him to follow the historical path or an ahistorical path, depending on which will lead to disaster.

4. Time In Your Pocket. Play quickly and complain loudly if your opponent takes longer than you do. Look at your watch a lot. If he's drinking beer, complain about the delay everytime he goes to the bathroom.

5. Jiggling Jugs. Bring your girlfriend along as a distraction. Have her wear a halter top and lean towards your opponent a lot.

6. The Expert. Talk like you have a reputation. Use self fulfillment with chatter such as, "I beat my last thirty-seven opponents with this strategy so I'm not too worried about your defense".

7. Cohorts. Bring along a friend or two. Tell them to stop by and look the game over every once in a while. They should say things like, "Isn't that the same strategy the last guy you were playing tried?"

8. Smokescreen. Light up a cheap cigar in the middle of a tight contest and direct the smoke towards the board. You should then be able to move some counters around using the smoke as cover, especially since your opponent will probably be coughing and feeling ill. However, make sure you position yourself on the correct side of the board, upwind, or the smoke will backfire. Avoid rooms with variable winds.

9. The "Lucky Me" Syndrome. A few gamers claim to be able to control the die by the power of thought. Of course, they don't come out and say it. They intimate it through hints and subtle actions. It's amazing how gullible people are and how easily they are taken in by such phonies. You'll never hear anyone accuse another of having this ability though, as this is an open admission that "the power" does indeed exist, with all its frightening ramifications. You too can have "the power" simply by announcing that you have always been lucky with the die. (This works best when playing an opponent for the first time.) When you roll a favorable result, say "you're sorry you are so blessed. When your opponent throws a bad result, say "you're sorry; you didn't know you could control his rolls so well. If you lose, sigh deeply as if relieved, and say "you're glad you don't win all the time. If you win, act matter-of-factly. The word will get around that you are a "lucky guy", and you'll be well on your way to becoming the Kreskin of Kriegspieling.


Of course, after using these tactics, you may find that no one will play with you anymore. After all, a gamer without opponents isn't worth the soup his beans are in. I know, I know, I should just clam up.
Strategy in Diplomacy

By Lewis Pulsipher

Part II of a Three Part Series on the Game With No Dice

While negotiation is a means of convincing other players to act as you desire, the art of strategy is choosing the combinations of countries, and overall direction of movements (thrust east instead of west, by land instead of by sea) which, if executed as planned, will result in a win. It is the most neglected of the three aspects of DIPLOMACY play, the one in which the average player is most likely deficient, and the one which separates most experts from merely good players. The average player is content to let his negotiations determine his strategy rather than vice versa. Consequently he seldom looks beyond the next game year, the immediate identification of enemy and ally, to what he ought to do later in the game.

I assume in the following that the player's objective is to win, or failing that, to draw. Those who eschew draws in favor of survival as someone else wins will approach some points of strategy differently, but until late in the game there is virtually no difference between the two approaches.

Strategy in DIPLOMACY is strongly influenced by the shape of the board. Spaces near the edge are larger than central spaces, so that movement around is as fast as movement through the middle. More important, the board is divided into two strategic areas or "spheres". The eastern sphere includes Austria, Russia, and Turkey, while the western is England, France, and Germany. Italy sits astride one of three avenues between the two spheres. The northern route through Scandinavia and the Barents Sea enables Russia to have some influence in the western sphere. The central route, between Germany on one hand and Austria and Russia on the other, looks short but is rarely used early in the game.

Normally the game revolves around efforts to dominate the two spheres. Early in the game a country rarely moves out of its own sphere—it can't afford the diversion of effort until the conflict in its own sphere is resolved. However, the country or alliance which gains control of its own sphere first, enabling it to invade the other sphere, usually gains the upper hand in the game as a whole. A continuous tension exists between the need to completely control one's own sphere and the need to beat the other sphere to the punch. Commonly, two countries in a sphere will attack the third, attempting at the same time to arrange a long indecisive war in the other sphere so that it will be easy to invade later. Sometimes the two countries will fight for supremacy before the winner goes on to the other sphere; more often, the players of the other sphere, becoming aware of the threat from the other side of the board, will intervene and perhaps patch up their own differences. Poor Italy is trapped in the middle. Naturally an alliance which endeavors to dominate a sphere wants Italy to move into the other sphere, probably to establish a two vs. two stalemate. And the odd man out in a sphere turns first to Italy to redress the balance of power. In either case Italy is stuck in a long war. An Italian win is usually a long game.

This discussion shows us the most important principle of strategy: everything that happens anywhere on the board affects every country. If you concern yourself only with two or three neighboring powers you'll never become an expert player, though glib negotiation skill can go far to compensate for strategic deficiency. If you as Turkey can influence the move of one French or English unit it may make the difference between a win and a draw, game years hence. If you can strongly affect the entire country's movements, even at that distance, you should go far along the road to victory. The expert strategic player knows where many foreign units will be ordered each season, and he tries to do so subtly, by misdirection and through intermediaries; it doesn't do to attract too much attention.)

One of the most important considerations of strategy is the attainment of a "stalemate line" by your country or alliance. Your long-range goal is to win, but unless you are a quite romantic player who prefers instability, your immediate objective is to be sure you can't lose—then worry about going on to win. A stalemate line is a position which cannot possibly be breached or pushed back by the enemy. The area within of protected by the line includes supply centers sufficient to support all the units needed to form the line. There are many stalemate lines, but these have been discussed at length in
books and fancies about DIPLOMACY. I will describe the two major lines, which roughly coincide with the two spheres (and not by accident!), and you can find variations and other lines by studying the board. (U = unit, that is, either army or fleet)

**Western Line:**


With 13 to 15 centers, or as many as 17 within a line, a player is almost certain of a draw. If he reaches the line soon enough, and alone, he can move on to prevent any other player from conquering the rest of the board, and a draw or win is assured.

A drawback of reaching a stalemate line is that it can put other players on their guard against you. If they know they can't knock you down to size, they'll be reluctant to fight another. This is dangerous for the country facing you, however, and it must be noted that a perfectly played DIPLOMACY game will end in a draw, not a win. (This depends partly on the players' styles of game—a game among seven extreme "placers" will never be a draw.)

You also have the advantage of other players making mistakes. The better the players, the more likely a draw will be.

So far we've been discussing the fundamental strategic structure of the game. Next we'll consider what to think about as you devise a strategy, and lastly we'll talk about individual differences between countries.

When you devise a strategy you plan the general direction of your movement, expected alliances, expected enemies, and what you want countries not adjacent to yours to do. At each step you should have several alternatives, for barring great good luck, there will be wrong. Often the styles and personalities of the players will strongly affect the strategy you choose. But let's assume that one player is as suitable (or unsuitable) to your purposes as another. First, consider the nature of your country. Is it a natural land power, a sea power, or both? Is it an open outer edge of a sphere, an inner edge (Germany or Austria), or in between (Italy)? Think about this, look at the board, and decide where you're going to get 18 supply centers to win the game. You must take several centers in one sphere, or in Italy, even if you control the other sphere entirely. (1) blue control of your sphere without hostile incursion from outside it, (2) attainment of a stalemate line in at least one part of the board, and (3) penetration into the other sphere (or Italy) to reach 18 centers. (Note that Italy is within the eastern stalemate line, and that the western line is anchored in the eastern sphere (St. Petersburg). There seem to be no major points of attack that may have a strong effect on your plans.)

You can plan to jointly control your sphere with an ally, but then the penetration must amount to eventual control of the opposite sphere as well. You must include a means of reacting to any attempt to disrupt your plan from outside your sphere. You must provide for other contingencies; for example if someone dominates the other sphere before you dominate yours you must be prepared to stop him. You must be flexible, though you'll try to implement your original plan.

It is left out in the cold. Italy must either be sure that neither sphere is dominated by any country or alliance early in the game, allowing Italy time to grow, or it must quickly dominate one sphere. From the strategic point of view Italy is definitely the hardest country to play.

It is a brief example of a strategic plan for England. You don't like the Anglo-German alliance, or the German player is notoriously unreliable, so you plan to offer a limited duration alliance to France for a joint attack on Germany. You'll offer Belgium, Munich, and Holland to France while you take Denmark, Kiel, and Berlin. You don't mind if Russia and Germany get into a fight over Sweden, but you want Russia to concentrate, with Austria, on attacking Turkey. This will leave Italy free to peck away, initially at Germany, later at France. When your alliance with France expires you will attack France with Italian help, and, at the same time, pick off Russia's northern centers (Germany should fall sooner than Turkey—if necessary you'll give Turkey tactical advice). You want Austria to attack Russia after Turkey falls. This is important, because Austria-Russia would be a formidable alliance against you. It is also possible that this could result in a stalemate line as Italy collapsed on an attack from Austria, but it is much better to have most of the eastern units fighting one another. In the end you should be grinding down an outnumbered Italy (England will gain more from attacks on Germany and France than Italy will, by nature of the position) as Italy is a natural defensive position, expected enemies, and what you want countries not allied with. Patience is a necessity, however, unless Italy or Russia comes into the western sphere. If either does, one to attack France (or even Germany), the other to attack Germany, England must gain centers rapidly or be squeezed to death between its former ally and the interloper.

England can win by sweeping through Germany and Russia, but all too often the eastern stalemate line stops this advance short of victory. Similarly, a southern Mediterranean drive can founder in Italy, but this part of the defender's stalemate line is harder to establish. If England can get up to its seven units it has many alternatives to consider.

Usually England opens with F London-North, F Edinburgh-Norway, A Liverpool-Edinburgh. The army can be conveyed by either fleet while the other can intervene on the continent.

France. Balanced land and sea, natural neutrals Spain and Portugal. France may be the least restive of all the countries, yet with Russia for that distinction. There are many options in a good defensive and offensive position. Alliance with Germany or England are equally possible, though it is easier to cooperate with England. An astute French player can usually obtain Belgium regardless of which country he allies with. Italy's movements are important to France, since some penetration into the Mediterranean is usually necessary late in the game if not sooner. Russia can be helpful against England or Germany. In fact, a French-Russian (Italian) alliance against the Anglo-Germans is possible. If France is attacked there are several players to ask for help.

A common French opening is F Brest-Mid-Atlantic (heading for Iberia), A Paris-Burgundy, A Marseilles-Spain.

Germany. Land power, natural neutrals Holland, Denmark. Like Austria, Germany must scrabble early in the game. But the defensive position is better, alliance options are broader—and Italy isn't quite at one's rear.

Alliance with England is difficult because England usually sits in the German rear as the game goes on. (As England has been stubbed (ineffec- tively) several times by Germans who couldn't stand the strain, though I had no plans to attack them.) Germany-France is a better alliance, though France may gain more from it, and you can be left dangerously extended between France and Russia. Either romantic methods or great patience are re-
quided. Fortunately, Austria rarely interferes early in the game (nor should Germany waste effort in the eastern sphere) and conflicts with Russia are rare if Germany concedes Sweden.

A common opening is F Kiel-Denmark, A Munich-Ruhr, A Berlin-Kiel. Kiel-Holland or Munich-Burgundy are also common.

Italy. Balanced, natural neutral Tunis. Italy needs patience or luck. Unfortunately the defensive position is good, but immediate expansion possibilities are very poor. Don’t be hypnotized by all those Austrian centers so near. If Russia and Turkey ally Italy’s lifespan isn’t much longer than Austria’s — full support of Austria is required. Italy tends to become involved in the eastern sphere more than the western. Unless England and Germany are attacking France, Italy stands to gain little in that direction. Although Turkey seems far away Italy can attack her using her “Lapanto Opening”.

Spring 1901 A Venice H, A Rome-Apulia, F Naples-Ionian (which is also the most common Italian opening, followed by Fall by A Apulia-Tunis, F Ionian C Apulia-Tunis, build F Naples. Spring 1902 F Ionian-Easter Mediterranean (or Aegean), F Naples-Ionian. Then in Fall 1902 Italy can convoy A Tunis to Syria. This attack requires Austrian cooperation, of course.

Russia. Balanced, natural neutrals Sweden, Rumania. With a foot in the western sphere owing to its long border, Russia has an advantage in expansion but its defensive position is weak despite the extra unit. Russia often feels like two separate countries fighting two fronts, and in it makes history in one area while failing in the other. The eastern sphere is more important and usually gets three of Russia’s starting four units.

Russia has no obvious enemy. Because the Austro-Turkish alliance is so rare Russia can usually choose its ally—but don’t become complacent. In the north Germany can usually be persuaded not to interfere with Sweden. An Anglo-German attack will certainly take Sweden and threaten St. Petersburg, but Russia can lose its northern center and still remain a major power. A Franco-Russian alliance can be very successful provided Germany and England start the game fighting one another.

A common Russian opening is F St. Petersburg (sc)-Bothnia, F Sevastopol-Black, A Warsaw-Ukraine, A Moscow-Sevastopol. Moscow-St. Petersburg is rarely seen (and very anti-English). Warsaw-Galicia is anti-Austrian (with Moscow-Ukraine). Sevastopol-Rumania is very trusting of Turkey.

Turkey. Balanced, natural neutral Bulgaria. Turkey has the best defensive position on the board. In the north expansion prospects are not bad, and at one time it was notorious in postal circles for “spreading like wildfire” once it reached six or seven units. Now players realize that an Austro-Russian alliance, or the Italian Lapanto opening, can keep Turkey under control.

Austria is an unlikely ally—see Austrian notes for why. Russia-Turkey cannot be with excellent alliance, but if Russia does well in the north Turkey will find itself slipping behind. Nonetheless, beggars can’t be choosers. The Italo-Turkish alliance is seldom seen, perhaps because all too often Italy becomes the next victim for Russia and Turkey. A fight between Italy and Turkey on one side and Russia and Austria on the other is rare, for Italy prefers to go west and hope Austria will attack Russia after finishing with Turkey. Turkey has plenty of time to look for help from the other side of the board while fighting a dour defensive, but help usually comes too late.

A common Turkish opening is A Constantinople-Bulgaria, A Smyrna-Constantinople (or Armenia, to attack Russia), F Ankara-Black. The favored alternative if Russia is definitely friendly is Ankara-Constantinople, Smyrna H.

Next time we’ll turn to an examination of tactics in DIPLOMACY.

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AH Philosophy... Continued from Pg. 11

OF THE GIANTS. It will contain many different types of scenarios including wars between kingdoms, quests, treasure hunts, escapes, and pursuits. In most scenarios players will be able to select their own voices and objectives. Characters will include many of the familiar fantasy and heroic types like dwarves, goblins, ogres, and magicians. Of, and, of course, giants. Designed for two to eight players.

Three of the others are card games; one about gangsters, one about the Middle East, and one about senatorial politics.

... Alan R. Moon

SAMURAI

Work has just begun on the SAMURAI update, so there is not really that much to report. A new game map is now in preparation which is both attractive and functional. Each province will be a different color from its adjacent provinces; thus permitting immediate recognition. This gives the map an appearance similar to those U.S. maps you see in schools. You know — the kind with each state in a different color. The mountainous provinces will be distinguished by terrain symbols rather than the solid orange color used on the current mapboard.

We’re planning to add two additional noble families, thereby increasing the number of players to six. This will necessitate slight alterations to the victory conditions to reflect the increased number of players. SAMURAI is most enjoyable when diplomacy takes an active role; and this increase in the number of players will definitely increase the diplomatic intrigue.

Several new game mechanics are being considered with a view toward adding new play options to the game system. The most ambitious of these is the use of durk cards to determine the sequence of play. Each player would choose one card from a hand of six. The player with the lowest valued card would take his turn first and so on. Each card contains certain advantages and disadvantages; so a player wanting to go first can also find himself severely penalized in another area. That about where I am right now. There’ll certainly be more later as the game progresses.

... Mick Uhi

STRUGGLE OF NATIONS

A first phase playtest kit was sent out in March, with five prototype components. However, the rules were in rough shape, and the playtesters have had difficulty getting into play with what’s been provided to them so far. Our weekly testing sessions here are proceeding fine, and a “first draft” of the rules is in progress. This will go out to the “Second Phase” playtesters this summer. Right now the game is completed for a winter release. Work is also underway correcting the provisional components for a final production press run.

The unusual step of sending out a “design sketch” with rules indicated but not always specified, was tried in an attempt to hurry up development toward an Origins release.

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OBJECTIVE ATLANTA

Progress on the Avalon Hill revision of OBJECTIVE: ATLANTA has understandably been slow due to the great number of other projects I am involved with. However, the rules are currently undergoing a massive revision which I feel is necessary to eliminate out-of-date and obscure terminology. The rules will also be presented in a more clearly defined format. After this has been accomplished to my satisfaction I will begin work on redesigning the charts and organization displays.

The counters and mapboard I also intend to discard as I want to introduce standard period symbolism onto both items. As far as graphics are concerned, my plans include color-coding the counters to distinguish the units and their various functions.

The board and I would like to airbrush and, if it goes well, should be a vast improvement over the original.

... D. A. Sheaffer

GUNSLINGER

GUNSLINGER is in final playtest at last. Production delays and an unexpectedly large number of suggestions and comments from enthusiastic playtesters have led to our missing the early summer ORIGINS deadline, but the final game will be out later this summer. Actually, the fulsome response might have been expected, for GUNSLINGER is a completely new tactical system—and nothing generates enthusiasm and discussion like novelty and tactical systems.

The basic game is a straightforward system that explains combat in split-second showdowns. Additional rules add stalking for longer periods of time, campaigns that combine showdowns into longer games, and play rules that allow the players to develop their characters from game to game. The result is a simple, fast game that can be extended into a longer, more serious game for role-playing enthusiasts and gaming clubs.

MAGIC REALM

The initial rewrite of the MAGIC REALM rules has travelled strange paths. Many people have offered some intriguing suggestions for improving the game, so rather than simply rewriting the rules as we planned last summer, we are reorganizing and adding to the presentation. With the gunfighters finding the surly sometimes at a loss we would start a playtest of the new MAGIC REALM rules sometime later this summer, yes, we will playtest the second edition rules. Players who are familiar with the existing rules will find the overall game unchanged, with some very nice changes to the details of play here and there. The delay comes from these changes and the reorganization in the presentation.

ALPHA OMEGA

The biggest problem with ALPHA OMEGA is restructuring the game to fit the Avalon Hill format (have you seen the size of those maps?). It is a good deal like going through a major surgery without losing anything. We’re working on this, but progress is problematic with other projects intruding. Fortunately, the game system is quite

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The German beach defense is crucial to the game. This is one aspect of D-DAY which has remained constant throughout the game's long history. A poor defense can give the game away right from the beginning; while a good defense can give the Allied player certain defeat if he invades the wrong beach. This is true in D-DAY '77 as in its predecessors.

One approach to forming a good defense is trying to hold everywhere, not allowing the Allies a 3-1 attack on an undefended beach hex anywhere. I have seen a defense that allows the Allies ashore free only in one hex in Normandy; even the most remote beaches in South France and the Bay of Biscay are 3-1 proof. However, a good die roll at 1-1 or 2-1 in Pas de Calais can put the Allies on the beach with little between them and the Rhine. I call this type of defense an iron ring with a marshmallow center. If the outer ring is pierced, the rest falls. A defense of this type is useful if you believe that the Allies will inevitably win should they get a beachhead. It gives the German player a good chance of winning on Turn 1. It also gives him a good chance of losing on Turn 1.

I prefer a more conservative defense that makes North Sea, Pas de Calais, and Le Havre impossible, invasions at Normandy, Brittany, and South France subject to being tightly bottled up, and Bay of Biscay a very long, slow march to the Rhine. An example of such a defense is shown in Figure 1. Let us take a tour of this defense, hex by hex and beach by beach, to see how effective it is, and how it can react to an invasion of any of the seven beaches.

We will start our tour at the German port of Emden. This is safe from any Allied attack, even airborne. What is interesting about Emden is the masses of tanks and panzer grenadiers right outside the city. From here the 3SS, 15SS, 25SS, and 9SS divisions can quickly cover a North Sea invasion within a turn or two. Their high mobility can enable them to reach as far as Lyons or Rennes in four turns to help bottle up a South France or Brittany invasion.

A more central position for these units would be the starred hexes near Frankfurt, but it would take them too long to backstop a North Sea invasion. They could also be halted by a nasty river interdiction on hex 010.

Continuing along the coast we come to Holland and the North Sea invasion area. Here we do not want to give the Allies any easy opportunity to get ashore, since it is so close to Germany. The first five hexes are all defended by five or six defensive factors, with a tight screen of static divisions and headquarters to the rear to keep away anyone falling from the sky. The most that the Allies can get against any one of these hexes is two infantry divisions invading from the sea, plus one factor of air support, for a total of nine factors. Thus, the best attack that the enemy can make is a 1-1 on any hex.

Even if he wins one or two of these attacks, he is not home free. 116 and 117 are easily bottled up by the surrounding rivers, and the other three hexes are subject to counterattack by the four major divisions, 3 and 5 Parachute, and 77 and 271 Infantry, with 15 attack factors, supported by plentiful static divisions. Even if the Allies do succeed in getting a toehold on the coast and survive the ensuing counterattack, their supply situation will be critical until they capture a port. The available ports are Amsterdam and Rotterdam, and Antwerp in neighboring Belgium. Holding the fortress of Rotterdam, with its tripled defense, prevents the Allies from using either Amsterdam or Rotterdam. The Panzer divisions streaming from the West, along with the river barriers, will keep Antwerp out of Allied hands.

Note a couple more features about the North Sea defense. The hexes most likely to be attacked, 116 and 117, are defended by static divisions. The more valuable units are positioned on hexes less likely to be invaded, making these units safer. They also are farther west, allowing them to quickly assist their comrades defending Pas de Calais, Le Havre, Normandy, and Brittany.

Continuing along the coast we enter France at the Pas de Calais. This is the closest invasion area to Britain, the beach that Hitler expected the Allies to invade. It is the scene of the British evacuation at Dunkirk, and the debacle at Dieppe. Should the enemy choose Pas de Calais as their invasion area, it will be three in a row.

Pas de Calais is a very different sort of area from North Sea. Supply is generally not a problem at Pas de Calais, whereas it made an offensive nearly impossible from North Sea. There are five coastal ports to choose from, which are the key to the area. They are hard to take, because they are double or triple the defender; however, this makes them easier to hold once taken. Pas de Calais has better exits to the interior than North Sea, making an invasion more difficult to bottle up. Since Pas de Calais is farther from the Rhine than the North Sea, a beachhead is not quite as dangerous; a line can still be formed on the Meuse. The biggest danger comes from isolating the bulk of the German army West of the Seine, should the Allies successfully invade and quickly break out.

**Figure 1:**

"HIT THE BEACH!" by Jim Stahler

But What Happens When The Beach Hits Back?

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About the best that the Allies can expect to do against the North Sea is to make a 2-1 with three airborne divisions against Amsterdam, coupled with a successful invasion against one of the two beach hexes adjacent to Amsterdam. The Germans need only retreat a couple static divisions across the dyke, beef up Rotterdam, and use the Emden armor to hold the Rhine. The Allies will be bottled up in a tiny beachhead with supply for two divisions, and hordes of Panzers on the march (See Figure 2). And this is what the Allies get after risking their valuable airborne divisions in a 2-1 attack. The Allied player can write off most of the North Sea as a viable invasion area.

There is one more beach hex in the North Sea: K19. It looks like an easy, unopposed landing, but look closer. Units invading K19 must attack the adjacent 2SS in Ostend, with retreat blocked by 15 HQ. Since 2SS is doubled, even paratroopers are required to make a 1-1. With the masses of German armor and infantry stationed to the West, the most that the Allied player can hope for is a beachhead bottled by Dunkirk, the Scheldt River, and Antwerp (see Figure 3). Not much gain for risking an airborne division and the first invasion.

Note a couple more features about the North Sea defense. The hexes most likely to be attacked, 116 and 117, are defended by static divisions. The more valuable units are positioned on hexes less likely to be invaded, making these units safer. They also are farther west, allowing them to quickly assist their comrades defending Pas de Calais, Le Havre, Normandy, and Brittany.

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Dunkirk, Calais, and Boulogne are next. All are fortress defended by two static divisions, worth 12 factors. The best attack without paratroopers consists of two armored divisions with air support, or 1 factor, against a factor short of a 2-1. Dunkirk can be attacked at 1-1 with paratroopers dropping on N22, but a soakoff must be made against 6/2 Parachute Regiment. Paratroopers landing at N23 can up the odds to 1-1 against any two of the fortresses, but the 84 Infantry must be attacked also. Since at 1-1 only has a 33% chance of succeeding against the coast, it is not too likely that the Allied player will take the chance, nor succeed if he does. In the unlikely event of one of the fortresses falling, you should crush the airborne division exposed in the open, hold onto the other fortresses, and build a wall of units directly outside of the captured fortress. If worse comes to worse, it is back to the Meuse, but this will happen only if you are facing a very bold, very daring, and very lucky opponent.

"Come on in" said the spider to the fly. Hexes O25 and P26 look weak, but they are a trap for an inexperienced Allied player. They are airborne-proof, but they are each defended by only two static divisions. The allies can hit both hexes with a tempting 2-1 (however they are one factor short of a 3-1). The strength of these hexes comes not from the garrisons in the hexes but the large units behind the lines. They can be counterattacked on the first turn by 2SS, 1SS, 84, 85, 91L, and 352 Infantry, the 6/2 Parachute, and some static divisions, with at least 30 factors. This is enough to crack units ashore on both hexes. Don't forget about an additional 20 factors from Normandy that will be available to attack on turn 2. If the Allies get ashore here, they will soon wish that they hadn't attacked elsewhere.

The last hex in Pas de Calais, Dieppe, is defended by the crack 1SS Panzer Division. Being doubled in the city, it is worth 14 factors. Two armored divisions, an airborne division, and air support are required to make a 1-1. Note that retreat cannot be cut off without attacking the 91 INF Infantry. Attacking Dieppe is taking a big risk, with small chance of success. Should the Allies be foolish enough to attack Dieppe, and lucky enough to win, tears are in order. When your eyes dry, try counterattacking the lone airborne division, soaking off against the city. If you can't do that, all is still not lost. Hold onto Amiens and Rouen for dear life, and form a line including the Somme and the lower Seine. Figure 4 shows what can be done to bottle up Dieppe. Beware: you will have quite a fight on your hands; be sure to evacuate everything to the west, so that it won't be trapped in case the Allies do break out.

The third hex, Le Havre, is a fortress garrisoned by two static divisions. It is worth 12 factors in defense. Using four infantry divisions, two airborne divisions on P30, and a factor of air support, the Allies can attack with 23 factors—not quite 2-1. The 352nd Infantry division discourages airborne units from landing across the Seine. Note that if the 352nd Infantry were on P30, it could be attacked from R29 in conjunction with airborne divisions, leading to a bridgehead across the Seine on Turn 1. However, in T30 it can only be attacked by airborne, a 2-1 at best, requiring three airborne divisions. If Le Havre falls, but there is no bridgehead across the Seine, the invasion can be halted along the lower Seine. If airborne seize a bridgehead but Le Havre holds, a counterattack can wipe out the invasion and isolate the paratroopers. Should Le Havre fall and the paratroopers be successful, you should be able to eliminate a few airborne divisions and fall back to the Seine — if you still hold Rouen.

The defenses of North Sea, Pas de Calais, and Le Havre all follow the same strategy. Depend on strong forces to hold the beaches or counterattack lucky beachhead, with bottling up of the enemy only a last resort. In Normandy, Brittany, and South...
France, our primary goal is to bottle up the Allies in a small area, rather than hold all the beaches and rely on counterattacks. Normandy is the site of the actual invasion, and for that reason you can expect some Allied players to invade Normandy. After all, if it worked for Eisenhower, it should work for me. We will make that a lovely trap to fall into.

The key feature of Normandy is that it is a small peninsula, with good defensive terrain at the base. Our strategy consists of strongly defending the base of the peninsula against the initial seaborne invasion, and then to hold it against land attack from any beachhead that may be established. The key to hold against the seaborne invasion are Caen and Bayeux. Five factors on each, doubled because of the cities and surrounded by anti-paratrooper defense, are sufficient to prevent 1-1. At 2-1, the chance of holding the beachhead would almost certainly be tossing away two infantry divisions, and he usually won't take the risk.

Part of the paratrooper defense is the 12SS on Carentan, which serves a dual role of defending R34 and S35. The Allies can land at these hexes, but will have to fight to stay. The best that they can get against the 12SS is four infantry divisions, two airborne in T35, and an air factor, totalling 23 factors, one short of 2-1. Cherbourg must be held by a static division. Not only does that serve to slow down the Allies, it prevents them from landing a paratrooper in Cherbourg in conjunction with a landing in Brittany or Le Havre, giving them two beachheads for the price of one.

A likely attack on Normandy would involve landing all around Cherbourg, and using airborne divisions and tactical air to gain 30-6 (5-1) odds against Cherbourg. Soaking off against 12SS from S35 and attacking Cherbourg from R34 will force the Germans to evacuate Carentan or come out into the open to fight for it. I advise retreating to an impenetrable line along the Vire.

The key cities are now Bayeux again, and St. Lo and Avranches. Hold these with your armored strength nearby, protect them against paratroopers, and worry mainly about the second invasion. The Allies will have a tough time getting even a 1-2 anywhere, to make carpet bombing useful. See Figure 6 for the German defense at the end of Turn 1, and note that there are plenty of reinforcements on the way. A Normandy Invasion will be bottled up with the cork welded on.

Moving around the coast of France we come to Brittany, which looks like a large Normandy. The method for holding Brittany is similar to that for holding Normandy, but on a larger scale. Since it is farther from Britain, the Allies have fewer troops landing and supply is less plentiful than in Normandy. On the other hand, since it is a larger peninsula, it will require much more of a commitment of German troops to hold a line at the base.

This latter fact requires the Brittany garrison to slow up the Allies for a few turns to enable reinforcement from Normandy, Bay of Biscay, and Pas De Calais to arrive to man the trenches. Since the Allies will have fewer troops and supplies, the task is easier.

We want to deny the Allies the use of a port on turn 1. The idea is to force them to use an extra turn to acquire a port with its large supply capacity before they can attack the main line. Avranches and St. Malo are well defended. Avranches is 1-1 proof; the best attack that the Allies can make against it is 12-14. This is important since Avranches is also the key to the main defense line. St. Malo is also needed for the main line. It can be attacked at 1-1, but not 2-1. (Would you believe another 23-12?).

Brest is of double importance. Not only is it the best port in Brittany, but its value as a sub base keeps the Allies from bottling up Cherbourg. Normally, we can expect an Allied invasion of Brittany to involve four infantry divisions landing on the beach hexes from V39 to U42, with airborne landing to seal off Brest. It is tempting to counterattack this weak force with your nearby panzers, but this strategy could easily lead to disaster. Remember that the Allies have air power, airborne divisions, and six combat divisions landing every turn, fuelling their attack. The Germans will take a long time to concentrate, will be outnumbered in a short time, and the loss of a few key German units can hurt badly. In this case, discretion wins over valor. It is better to avoid combat and fall back to the St. Malo-St. Nazaire line. The 712th Static Division is used here to delay the Allies for a turn, in X40, while other units move into position. See Figure 7 for the positions after turn 1.

Figure 7: Allied invasion of Brittany and start of German withdrawal to St. Malo-St. Nazaire line at the end of turn 1.

Figure 8 shows the St. Nazaire-St. Malo defense line after turn 2, ready for the first Allied assault. St. Malo can fall; if so merely retreat to Avranches. Rennes is the key point of the defense, along with St. Nazaire. If either city is taken by the Allies, the Germans must retreat to the Seine or fight the Allies in the open. Hex AA40 is undoubled. This isn't too dangerous because the Allies can attack it from only one hex, and the powerful German armor nearby can counterattack any Allied success against AA40.

Figure 8: Allies bottled up by the St. Nazaire-St. Malo defense line at the end of turn 2.

Beware of paratroopers landing right behind your front line to surround your strongpoints, or landing deep to the rear to grab ports. Garrison Cherbourg, Avranches, and Nantes for certain. Keep units in La Rochelle, Bayeux, and Caen, just to be safe. Having an enterprising airborne capturing a port behind your back, followed by armor and infantry landing unopposed, can be embarrassing, to say the least.

You should be moving everyone available from South France, Pas de Calais, and replacement centers in Germany, to your critical line. Put additional units in W37, and Y38, to force the Allies to soak off additionally if they try to attack St. Malo or Rennes. Counterattack any threat from your doubled and tripled positions. With any luck, the Allies will require a second invasion at Normandy, South France, or Biscay to spring the Brittany beachhead free, and you will be able to fall back to the Seine with no threat of a second invasion, and your replacements not too far away.

The Bay of Biscay is an enigma. On the surface, it looks like a poor choice for an invasion. It is very far from the Rhine. Troops landing there will wear out their weather and truck tires before they reach Germany. Since it is so far from England, the heavy shipping requirements severely limit the number of divisions that can land at Biscay to only four per turn. This is a mere trickle compared to any other invasion area. On top of that, the supply situation is not very good. The Allies must secure a port early to even have a chance of staying ashore. The open terrain behind the beaches makes it easy for the Germans to crush an invasion with a strong armored counterattack. The Bay of Biscay can be ignored as a feasible invasion area by the Germans.

But not safely ignored.

The danger of a German counterattack on the first couple of turns is negligible because the Germans cannot afford to commit much counterattack strength to such an out-of-the-way part of France. Similarly, they cannot put much strength there to prevent landing in Biscay. But static divisions in Biscay will be stranded by an Allied breakout anywhere else, and Panzers are needed to discourage landings in more critical areas.

But the wide open terrain that exposes Allied troops on the beach to a counterattack also prevents the Germans from forming a line to bottle up an invasion short of the Loire. Strategic movement will allow a division to rush from La Rochelle to Paris in only two turns, so it wasn't as far removed from critical areas as it seems. The shortage of supplies and reinforcements can be overcome by capturing a port in nearby Brittany or marching overland to Marseilles. No, comrades, the Bay of Biscay cannot be ignored.
The problem of defending Bay of Biscay is how to defend a long stretch of beach with only a few mobile units that won’t be trapped if the action is elsewhere. My solution is to hold the cities of St. Nazaire, Nantes, La Rochelle, and Bordeaux, using only medium Panzer formations (4-4-4’s) and a couple of static divisions.

St. Nazaire can at best only be attacked at 2-1 by two infantry divisions, the airborne division, and air support. Since it is a fortress, units can be pinned inside it, and there is a lot of counterattack strength next door in Brittany. Nantes can only be attacked at 1-1, and losing Nantes is meaningless if St. Nazaire holds, because the Allies can use Nantes as a port only if they own St. Nazaire and the far bank of the lower Loire.

La Rochelle is more promising, but the Allies can only get a 1-1 attack here also. A victory here would put the Allies solidly ashore; a defeat here would effectively eliminate the first invasion. If the Allies are going to risk it all on one trick, they would be wiser to do it in the North Sea or the Pas de Calais, not in the Bay of Biscay.

Bordeaux is the soft spot of the German defense. Here the Allies can make a 3-1 attack (see Figure 9) without fear of counterattack or of being easily bottled up. Note that Bordeaux is very, very far from the Rhine. If you have to give the Allies a freebie, this is the best place. Nevertheless, if I had one more division, I would put it in Bordeaux or Nîmes, to help hold the left flank of the Bay of Biscay.

Figure 9: Allied 3-1 attack on Bordeaux requires TAC support. German retreat is shown in red.

If the Allies do attack in the Bay of Biscay, the German player must be careful to avoid two tempting traps. Do not get involved in a mobile battle out in the open. If you are not doubled, you can expect even attrition, which you cannot afford. Although the Allies can throw four divisions per turn, they get those four divisions every turn, and don’t forget about airpower and those sneaky airborne divisions, which can isolate half your attacking forces if you are not careful. And if second invasion comes with your best troops slugging it out near Bordeaux, you are in trouble; the flower of the Wehrmacht can be cut off by a dash across France. Only attack if you are guaranteed to crush the Allied invasion immediately. Otherwise slowly withdraw.

The second trap is to attempt to bottle up the invasion with a line along the Loire, from St. Nazaire to Vichy. What works in Brittany will not work in Biscay, because the line is too long to hold. It is 24 hexes long, as compared with 21 hexes of the Seine line (Besançon to Le Havre), and you still have to defend Normandy and Brittany. A breakthrough at Orleans will trap everything west of there, and a successful invasion at Normandy will be equally fatal. With such a long line garrisoned, there will be barely enough troops available to hold North Sea and Pas de Calais.

The best move to handle an invasion of Bay of Biscay is to slow retreat all the way to the Seine, using your panzers as a screen to prevent the Allies from utilizing strategic movement. If you are clever, the Allies will arrive at the Seine in strength only around Turn 9. Our tour of the French coast ends at the Mediterranean beaches of South France. Long a favorite resort area, it was also a favorite invasion area, until the 1965 rules made an invasion of South France futile because supply lines could not reach all the way from the ports to the Rhine. Now, in the 1977 edition, Marseilles can support up to 22 divisions up to 24 hexes away, far enough to include Strasbourg and 9 hexes across the Rhine. An invasion of South France must be reckoned with.

Since South France is so far from the other invasion areas, any troops committed there will be on their own for quite a while, until they can be reinforced from across France. Similarly, they cannot be used against an invasion at any other area for quite a while. For this reason, I do not defend the beaches at South France, nor do I plan a counterattack. Rather I use the same strategy as I use at Brittany: bottle up the invasion. The Rhone valley makes an excellent bottle, and Lyons makes a very good cork. However, beware of a very dangerous leak at Sete.

Initially, the Allies can walk ashore anywhere but Sete; they will be unopposed. At Sete they can only get a 1-1, which they will frequently pass up in favor of easier pickings to the East. However, Sete is the key to the whole area.

Figure 10: First German resistance to an Allied invasion of South France is established on turn 2.

Withdraw to Valence and the mountain hex MM31. This denies the Allies Strategic Movement on their second turn; the safest they can get is to use Panzer IV’s to move up the valley from Lyon to the Valley-Grenoble area, and rush everything that moves from the Atlantic to Lyons. On Turn 2, you can build a formidable line with units in Grenoble and Valence, with a delaying unit in MM30 (see figure 10). Be wary of putting anything in hex MM31 on Turn 2 if MM30 is vacant; if Valence is successfully attacked from MM30, everyone in MM31 is cut off.

On turn 3 the Allies will normally attack the sacrifice unit; they cannot mount effective attacks against Valence and Grenoble. Now you can put strength on hexes L129 and L130, continuing to hold Valence. You can use Panzer IV’s to move up the valley from Lyon to MM31 on MM30, and MM30 is vacant; if Valence is successfully attacked from MM30, everyone in MM31 is cut off.

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Mention “bunker” to a wargamer. Images course through his mind. Casemated guns at Pas de Calais. Serried rows of “Dragon’s Teeth” entwined with squat concrete strongpoints in the West Wall. Perhaps a concealed log and rock command post within a reverse slope of Okinawa’s Shuri line. Massive structures outside; inside Errol Flynn brushes off falling dust as the light bulb swings to the tune of a direct hit by a 12" shell. These are not the bunkers of SQUAD LEADER.

Most field bunkers were dugouts with a roof. Pits or trenches lined with whatever was close to hand. Coconut logs shared honors with crushed pumice on many a Pacific island. House foundations and simple wood patchwork were used routinely by the Germans. Relatively small, cheap, and easy were construction standards. Sure it took a lot of time to throw together but Organization Todt was busy elsewhere and a good squad leader used whatever was available.

Why bother to cheapen the SL bunker image? The value of a fortification is measured against its intended use. Avalon Hill did not provide you with a portion of the Maginot Line in its original counter mix. Understand the structure to get the best tactical use from it. Now that we’ve agreed on exactly what we’re talking about let’s review the SQUAD LEADER bunker’s strengths and weaknesses.

A Bunker’s Strengths:

53.2—If in a wire hex cannot be entered directly from an adjacent hex in one Advance Phase. It may enter the bunker in the next Movement Phase unless occupied by enemy units in which case it may enter during the next Advance Phase.

55.—Minefields (but not booby traps) may be placed in a bunker hex (i.e. on top of a bunker) to protect against closing infantry without hurting friendly infantry within the bunker.

56.1—Strong fire modifiers, especially from rear. Note the effect on firegroups listed in the Q & A section of page 34.

56.21—Units inside do NOT count against exterior hex stacking limits.

56.5—Indirect fire uses rear fire modifiers.

56.51—AP ammunition is treated as Area Fire and the most effective result which can be gained is a normal (M) Morale Check. This is a planned, but yet unpublished, modification of 134.12.

56.52—Flamethrowers outside the covered arc, add rear modifiers.

56.54—Overruns, use rear modifier.

56.6—Units may rout to a bunker as if it were a building and broken units within bunker may stay adjacent to enemy.

56.81—Units inside may never force Close Combat on units atop a bunker.

56.82—Units may NEVER leave bunker when enemy is atop.

56.83—Units within may never fire at own bunker top (and vice versa).

56.9—Concealment counters do not halve incoming fire.

75.9—Not placable in marsh.

105.2—No morale bonus for being next to AFVs pre-1942.

107.6—Suppression fire effects units within bunker same as those outside.

110.1—Subject to critical hit.

111.81—Snow smocks no advantage within.

Boil down the weaknesses. Bunkers are traps...alluring traps, but traps nonetheless. The essence of all-or-nothing defense. The only pre GI/covering terrain they may occupy is orchard. That means the vast majority of the time your bunker...
will be in open terrain. And that means you can't get out without moving in the open. Regardless of modifier are you sure you want adjacent units to be able to fire in when you can't fire back? Never forget that one lousy scoop sitting atop can trap a platoon within the strongest bunker. Most players soon learn that bunkers are a nice place to avoid. Why did so many nationalities spend so much time building them?

The answer lies in balancing the various features a bunker offers. I will offer general usage ideas and how they may apply to specific scenarios in the following paragraphs before answering the above question.

The Backward Loner. This bunker faces toward your lines. Usually in front of your main line of resistance. Perhaps just within small arms range. If an enemy moves past it without neutralizing it, its covered arc may allow a rear ATR shot or may prevent a rout. Attempts to engage it through its Covered Arc Defense Modifier places the attacker between your forces. It is most vulnerable to entry during the Advance Phase from an adjacent hex. Consider this for covering the roads in Scenario 21.

The Command Post. This bunker is behind your lines in some covered spot. A reverse slope is ideal. Stick an 8-0 leader within and you've created a central rally point for an extended firing line. Stacked with an additional three squads it makes a powerful counterattack jumpoff point. Hex 304 in Scenario 21 can be used for all the troops entrenched atop hill 546.

The Magic Circle. Popularized by fighter pilots of a bygone era. Three bunkers may be placed in a triangle such that the covered arc of each has a clear LOS to the top and rear of its neighbor. Better still, six bunkers can be grouped in a perfect circle around a central open hex. Any attempt to approach the blind side of one is met by a hail of fire from the others. Review Scenario 9 in this light.

Why were so many bunkers built when their use is so limited? I believe there were two basic reasons. First SQUAD LEADER players have yet to experience a powerful preparatory bombardment. The roof of a bunker allows defenders to suffer through a Field Marshal Monty style blasting with minimal casualties. Further, if you don't trust your troops to be able to survive the rigors of fire and movement the plus modifiers of a bunkers do substantially even the odds. Refer to Bob Medrow's excellent table on probability of unit survival in Volume 17, Number 2. A 6 morale unit is 8% less likely to a 7 morale unit to survive a 120A attack at 0 DRM. Change the DRM to +3 for both and now the 6 morale unit is only 4% less likely to survive the same attack. Low morale units benefit more from cover than do crack troops.

Each of these ideas stresses the key points of bunker usage. A bunker must be protected; either by other bunkers in a mutual protection plan of interlocking fires or by outside troops. The fire and morale advantages are most valuable when used for troops with limited fire and morale abilities. Used properly they may add substantially to your defensive capacity. A new scenario has been included in this issue's insert page to allow players to experiment with the ideas contained herein.

One last note on bunkers: the original rules booklet showed a bunker incorrectly facing a hexside rather than a spine. Bunkers, like A.F.V.s, must face a hex spine to determine their Covered Arc.

AH Philosophy . . . Continued from Pg. 35

nice—apart from the upgraded presentation, the only changes we are contemplating fall into the nature of "chrome" to jazz up play somewhat. . . . Richard Habenb

RED SKY AT MORNING

With the exception of ARAB-ISRAELI WARS, up to now Avalon Hill hasn't produced a single contemporary era wargame despite the fact that most gamers seem highly interested in the present military situation. Now we are taking a long overdue step to meet the demand for modern era games.

Keeping in mind our stated policy in favor of playable, competitive-oriented games, I have come up with a game that sounds too good to be true. This game simulates the course of a worldwide struggle as an atom bomb attack. The fire and troops with limited fire and morale abilities. Used properly they may add substantially to your defensive factor. This also symbolizes that it may now more of a "hit or miss" affair. Infantry units have been brought into the Weapon Effects Chart with their firepower and weapons types adjusted by nationalities and year of the war, etc.

It is our hope with this revision to produce a scenario or two which can be added as an expansion kit for PANZER BLITZ and PANZER LEADER. On the negative side most of your counters will be obsolete, but on the plus side, all equipment, rules etc will be 100% inter-changeable.

Kirk Bramlett

STRUGGLE FOR ARNHEM BRIDGE

The intense street fighting during the Market Garden Operation for control of the famous road bridge at Arnhem is depicted in graphic detail. The game is tactical in nature and deals with only that portion of the city in the immediate vicinity of the bridge where elements of the British 1st Airborne Division fought for its control and finally its surrender.

The mapboard is 22" x 32" with a scale of approximately 1" = 100', and units representing individual squads or two-three vehicles. To many this may sound like SQUAD LEADER all over again, but it has very little in common with the SL system. A first glance at the mapboard which lacks a hex or square of any kind will tell you that. Instead, the game uses a map divided into various city block areas—each based on the actual street configuration at the time of the battle. All the famous buildings and streets have been noted for added color, but there is a minimum of complexity associated with the terrain—such information not having been factored into the configuration of the areas themselves.

The game itself revolves largely around the Movement/Fire phase of each game turn. Each one of these phases is divided into a variable number of alternating player impulses. During an impulse a player may either move or fire any number of units currently occupying a common area. Once a unit moves or fires it is considered committed and is turned over to show, in most cases, a reduced defensive factor. This also symbolizes that it may not move or fire again during that phase. If a player should decide not to perform any action, he may pass. Players must pass if they have no units eligible to move or fire and the phase ends if both players pass consecutively. The strategy and timing that must accompany a pass option is extremely important and keeps the excitement level high throughout. The net result is a game turn with a simultaneous feel, yet with the action reaction of sequential movement games.

Combat is resolved without a Combat Results Table of any kind and requires both players to interact during each attack. The defender will usually have the choice of retreat or remaining in place and taking gradual damage. Offensive fire and artillery effects are also included, as well as the ability to set fire to buildings within a block to flush units from their positions.

Victory is determined by control of the all important areas surrounding the bridge ramp and the bridge itself. How fast and how thoroughly the Ger-
ARM: What is your job at Avalon Hill, Dale?
DAS: Well, I was hired on as a graphics person and generally I turn out most of the components inside the game boxes.
ARM: Would you explain how a mapboard is put together?
DAS: Usually there’s a prototype map to work from. To do the final map though, we start from scratch by first creating a base art which usually consists of the areas and symbols which will appear in black. Then overlays are added in order to create the other colors and terrain features.
ARM: Is there any limit to how many colors you can use?
DAS: What we use here at Avalon Hill is a four-color process which simply means we can only use four colors, but since the four colors are usually black and the three primary colors there is technically no color that we cannot create.
ARM: You are also in charge of doing most of the color process which simply means we can only use black, red, blue, and yellow. The material we use for overlays is called amberlith. This is a clear plastic with a kind of coating over it which can be cut away in areas. So, when we add colors to a black and white illustration we merely leave the amberlith in the areas where we want color. The camera department makes a negative from this which is the reverse of the overlay, which means that the amberlith becomes a clear area in the negative. The camera department then makes a plate from the negative, with these clear areas becoming holes the printers run the color through.

DAS: No. Since box covers are usually paintings, there is no base art so we can’t use the overlay method. Instead, we shoot a color photograph of the actual painted artwork and then separate this photographically into four different colors; black, red, blue, and yellow. These four colors are then made into four negatives which reproduce the painting when printed. This process is called a color separation.

ARM: Which of the two methods mentioned produces the more vivid color?
DAS: There are advantages and disadvantages to both. Color separation eliminates the problem of constructing a base art and overlays which is probably its biggest plus.

ARM: Why isn’t this method used for the diagrams?
DAS: Two reasons. It is much quicker and much cheaper to do it the other way. We have, on occasion, done full color illustrations in THE GENERAL, mostly mapboards that were hand painted originally.

ARM: Were you surprised at what your duties turned out to be at Avalon Hill, having been trained in art school for something completely different? Did that bother you in any way? Do you ever feel that your artistic talent is being wasted?
DAS: Not really. First off, I took commercial art which is exactly the kind of training you need for a job like this. I was a good pen and ink man which also helps. I haven’t done much in the way of pen and ink illustrations yet, but you never know what I’ll be doing in the future. As for my talent being wasted, I would also have to say no. It’s been channeled into other directions. There is a lot of challenge in what I do now, especially in trying to reproduce exactly what I want through the photographic process.

ARM: I get a great deal of satisfaction from seeing the finished product of a game I’ve worked on. Do you get that same kind of satisfaction from working on the components?
DAS: I’m always glad when they finally come out right, but no real artist is ever truly satisfied with
any of his finished products. The minute I see a finished map, I immediately think of a new or a different idea or how to do it.

ARM: Of all the things you've worked on, what is the one thing you feel most satisfied with?

DAS: To date, the things I am most pleased with are the GUNS OF AUGUST and FORTRESS EUROPA counters.

ARM: What makes them better than some of the other things you've worked on?

DAS: In the case of the counters for FORTRESS EUROPA, they finally came out looking the way I wanted them to look. Almost all the little problems that we had with them were taken care of and we got a finished product that satisfied me. In the case of the GUNS OF AUGUST map, I was experimenting with new techniques and procedures and the end product, while not exactly one of our flashier maps, satisfied me personally because it meant that what I had attempted to do worked and worked well.

ARM: How much time did it take to do the GUNS OF AUGUST map?

DAS: If I could have sat down and done it all at once, it might have taken a week and a half or two weeks. As it was, the project extended over about two months due to the fact that we weren't sure until the very end what information was actually going to appear on the finished product.

ARM: How much time does it take you to put together all the art for an issue of THE GENERAL?

DAS: About a month or so, depending on the difficulty of the illustrations and the difficulty of getting the components themselves together.

ARM: Do you play games. Would you consider yourself a wargamer?

DAS: Yes. My father brought home an original GETTYSBURG one day, and my brother and I literally played it to death. My sister even got into the act. We were hooked from there on.

ARM: How do you think being a gamer affects you as an artist working on the components of the games?

DAS: I know what I would like to see in terms of graphics in games. I'm responsible for the gray Westwall symbols on the new THIRD REICH map, because I always forget about them when I played it. I remember purchasing games when I was younger that used to make me wince with some of their graphics so now I try not to stare at myself.

ARM: Do you think it's more important for a map to be functional or attractive?

DAS: I think there's room to make components both functional and attractive at the same time. When I do a map I'm not just interested in including all the pertinent information, although that's most important. I also attempt to create an appearance for the players so the pieces and the mapboard impart a suggestion of the period the game takes place in.

ARM: It sounds to me like you are also interested in history and games as simulations. Is that true?

DAS: Yes, both.

ARM: How does that relate to your work on a game?

DAS: In the case of a game from a particular period in history, I will try to find samples of maps that were in use at the time. For instance, for a World War II game I'll try to use the actual symbolism that was in use then. This enhances the appearance of the components and increases the enjoyment of people who play the game.

ARM: You have to work pretty closely with the developers at Avalon Hill. Since everyone's artistic taste differs, does this pose any problems?

DAS: Only when I haven't been warned beforehand. I'm perfectly willing to do a map for a developer or designer according to his complete directions. The trouble that we sometimes get into is when the designer doesn't have a clear idea of what he wants. Usually, however, the finished product is the result of input from both the developer and the artist.

ARM: But aren't there times when you disagree artistically with what the developer wants and you just know that it would look better some other way? What happens in those cases?

DAS: You win some, you lose some.

ARM: Does that bother you. Or is that just part of the job?

DAS: It bothers me sometimes, but I also get a chance to tell the developer "I told you so," later on.

ARM: Do you feel this restricts your artistic ability in any way?

DAS: Sometimes the designer or the developer will ask me to do something which I may feel is wrong or won't look right. The challenge then is to make whatever it may be fit in with what I may already have constructed. I'm always glad if it turns out well, for the players' sake anyway.

ARM: There's always a lot of talk about innovation in games and a lot of it has to do with how the components and the artwork are presented. How do you feel that Avalon Hill rates along the lines of innovation?

DAS: That's a tough question. All the components that are created at Avalon Hill are done from scratch. There is no hard and fast way of doing things. There are no two maps that look alike. We don't have any kind of standard symbology that we use or anything like that. So, it's very difficult to say. On the other hand, it allows me to be creative and experiment with new symbols for terrain, new color schemes, etc.

ARM: Are there restrictions on the format and size of the components?

DAS: Yes. We always have to work within the tolerances that have been created for the games. We have standard sizes from mapboard panels, charts, and counters. The main consideration here is the box. Avalon Hill has two standard boxes: the bookcase style and the flat box. These create their own limits, but you can usually get around any problems that might come up.

ARM: What game components are you working on at the moment?

DAS: Well, I've just finished BATTLE OF THE BULGE. Currently I'm working on components for GUNSLINGER. I am also working on the revised FURY IN THE WEST.

ARM: Can you tell us a little bit about the components for GUNSLINGER?

DAS: There will be eight double sided mapboards which were hand painted by an outside artist which have already been printed. The counters will be circular as well as square. There will also be a myriad of charts and two decks of cards.

ARM: Along with everything else, you're also doing the development of Ballentine's OBJECTIVE ATLANTA aren't you? Can you tell us a little bit about that?

DAS: I have grandiose plans for OBJECTIVE ATLANTA but due to the press of my other work here it's a very slow process. At this date I have a revised set of rules in manuscript form, but that's about all. My long term hopes for the game include a hand painted mapboard and new counters.

ARM: It seems like anyone who plays games winds up trying to design them too. Do you design games on your own time?

DAS: Yes, but between working on games and playing them I don't have much time anymore.

ARM: We've got a lot of letters from people who want to submit art for THE GENERAL. Do you have any tips for these people?

DAS: They should write to Don Greenwood first. He will send them a form with the guidelines, and let them know if we are looking for anything special in the way of artwork. It helps to know the tolerances and size limitations. We don't have to chop up someone's piece of art because it isn't the right size. Most illustrations that we use are pen and ink, done in black and white.

ARM: What do you think of the latest Avalon Hill boxcovers?

DAS: I think Avalon Hill boxcovers are constantly getting better. Rodger MacGowan and Mark Wheatley who we've used a lot lately unanimously impressed me with the quality and professionalism of their work.

ARM: What do you think about the standard of art in the hobby?

DAS: As far as the industry itself is concerned, it has definitely been improving. Knowing what has been done in the past, all of us in the industry are constantly trying to do better.
NEWS FROM THE SPORTS DEPT.

With the hiring of Joe Balkoski, we expect to be able to speed up both your production of new sports games and accessories, and to finally get ASR onto some sort of a regular schedule. Of course this last requires the magazine not being given the bottom priority it has received for the past four years, when every other project was deemed more important. The most recent issue (the "March" issue, which was first delayed because of the Spring releases, and then later because of the Summer releases), which with luck was mailed out before the end of June, was the last quarterly issue, and from now on ASR will be bi-monthly. Please don’t laugh—we are serious.

Moving onto more cheerful matters, the STASIS-PRO FOOTBALL game is near completion, and we hope to have it printed and on sale in August. It will include individual cards for every member of every NFL team, with even third-string quarterbacks being rated. We believe that it will be the best and most playable statistical football game on the market.

Other works in progress include a tennis and hockey game, both in their early stages, and some discussion of whether or not we would like statistical golf and horse racing games. Joe Balkoski is in the process of writing a narrative history of the 1961 baseball season, which will accompany our set of player cards for the season for MAJOR LEAGUE BASEBALL, and if our typesetters are able to get to it, we also have a set of great teams of the past for SUPERSTAR BASEBALL which have been provided by Bob Biscontini.

Don Greenwood

G.I. ANVIL OF VICTORY

G.I. should be approaching the blind playtest stage in about a month. The basic rules have undergone about ten drafts in pre-playtest "scrimmage" with a few hand-picked experts from the SL playtest crew. Actual testing of the twelve scenarios now remains the largest hurdle to publication.

Aside from the press of other duties, the biggest delay in getting G.I. onto the presses has been an extensive revision of the game system itself. The next project in store for the SL game system is a completely rewritten compendium of the entire system. This set of Advanced Squad Leader rules will be published in loose-leaf binder format inside a cookbook sleeve. The net result should be a much shorter set of rules and a much cleaner set with no leafing through page after page of rules to decipher the differences between the basic rules and the advanced rules. Along the way, many design improvements have been made to the existing game system (some of which are unveiled in G.I.) to make the game more playable while maintaining the rigid attention to detail that SL players seem to crave so much.

Plans to establish a system of CE reverse side armor counters have been dropped, although a set of wreck counters will be provided to distinguish burning wrecks from the more palatable variety. Similarly, plans to expand the Covered Arc in order to improve the performance of non-turreted vehicles have been shelved in favor of a new streamlined TO HIT system which is infinitely cleaner than the old version.

G.I. will have much more of everything than anything in the preceding series (except perhaps rules). The game will include five mapboards, terrain overlays to alter existing mapboards, 12-14 scenarios, and more unit counters than I care to admit. Consequently, you can expect the highest price you've yet encountered for a SL item—but it should represent the best value of the series. Look for it next spring.

Many of you have written us requesting to be allowed to become a SL playtester. Usually, we've had to turn down such requests as the existing playtest crew is a large and experienced group. However, we are constantly on the lookout for people whose actions back up their boasts and are happy to expand our existing playtest crews for people who demonstrate they have what it takes to be a valuable contributor. An opportunity for such a display occurred at the SL seminars at both ORIGINS and GEN CON EAST this year when volunteers were given copies of the existing G.I. rules and asked to submit critiques. Those who do a creditable job will be "rewarded" with an invitation to join the actual blind playtest that will start this fall.

Hold on fellas...it's coming, and it will be worth the wait.

...Don Greenwood

THE WARGAMER'S GUIDE TO MIDWAY

Containing thirty-six pages of the best of THE GENERAL articles on the game plus previously unpublished material as well, this guide is a must for every fan of the game. Several official rules changes update the game and erase its few minor flaws. A tribute to one of the hobby's eldest citizens that has never needed a major revision. A game which has grown old gracefully, maturing by getting better.

Almost all of the reprinted articles are from unavailable issues of THE GENERAL, many from volume 9 or earlier. Included is the first major variant, "Leyte Gulf", and the most in-depth article on the game to date "The MIDWAY Thesis" by two of the game's experts, Harold Totten and Donald Greenwood. "The Pacific Theatre Via MIDWAY", the other major variant that spawned the MIDWAY Variant Kit, has been expanded to include many more optional rules (some applicable to the MIDWAY game as well) and an additional scenario. "The Battle For Australia", a previously unpublished article adds the ultimate with a hypothetical monster scenario using the components of both the game and the variant kit. Other articles deal with strategy, analysis, variants, and other hypothetical situations. The best of three Series Replays that have appeared in THE GENERAL is also reprinted, useful in itself as a fine example of the subtle strategies involved when experienced players meet.

THE WARGAMER'S GUIDE TO MIDWAY sells for 44% plus 10% postage and handling charges, and is available from our mail order dept. Maryland residents please add 5% sales tax.

SQUAD LEADER T-SHIRTS

Yes, we are following up on the success of the PANZERBLITZ T-shirts with yet another offering on what has become our hottest game. Now you too can become a SQUAD LEADER whether you play the game or not. The back of the shirt is adorned with the same Avalon Hill logo you've seen before on the PANZERBLITZ shirts. Be sure to specify size: small, medium, large, or extra large. $5.00 plus 50c for postage and handling. Maryland residents please add 5% state sales tax.

MAGNETIC GAMES

Now you can convert your favorite game for vertical display or secure in-play storage with magnetic tape, unmounted boards and just an hour of your time. All you’ll need is a metal surface and an unmounted gameboard. We supply the magnetic strips with self sticking adhesive already applied. You just cut the ½" x ½" strips into 3½" squares and apply them to the unit counters which came with your game. The result is a ¾" thick counter which will stack six high even when the mapboard is mounted in a vertical position for display purposes. Never worry about that pbm move being jostled again between turns.

 Naturally this magnetic treatment will be less valuable for counters with two-sided printing, but that still leaves them with a multitude of uses. NOTE: it will be necessary to be sure that the top portion of all unit counters are uniformly applied to the top half of the magnetic strips. Otherwise the polarity may be reversed and the counters will actually repel each other rather than attract. Therefore, it is wise to mark the back of the magnetic strips uniformly across the top so as to be sure to apply the top half of the counter to the top half of the magnetic strip.

Magnetic strips are available from Avalon Hill for 90c a foot or $7.50 for ten feet. Unmounted mapboards are available upon request for $6.00 apiece. Usual postage charges apply, as do the 5% state sales tax for Maryland residents.
Letters to the Editor

Gentlemen:

Have you ever purchased a really neat and nifty new game and then discover that you have no one to play with? So you play it solo a few times, get bored and put the game on a shelf and gather dust. I have several dust-gatherers on my shelf. Recently I took TORUK to the shelf, dusted it off and then began experimenting with scenario 1. Scenario I is fairly simple and readily lends itself to computerized play, I decided to develop a program that would play the German side.

The computer plays a fast, hit-and-gaming type of a war. The first game sequence will have to be modified, first the computer plays, then you do. This is a game turn. Limit the game to 30 turns. If any of the above doesn’t work out, move the board, simply remove them, but don’t count them as victory points. You should also remove all tasks that have been killed. Any other instruction needed are found at the beginning of the computer program.

This program has specific beginning, mid, and end game routines similar to a chess program. A required status test with a random variation is built into the program to keep a human opponent from second guessing the computer too often. TORUK פארנ저 occupies about 4500 bytes of memory. If the instructions are left out it might fit into a 4K machine. This program is written in Level II BASIC.

I hope you have as much fun playing this variation of TORUK’s Scenario III as I did creating and playing the program. I am sure the program sparks interest in other possibilities for home computers in gaming. We have only begun to play.

Bruce Duthie, Ph.D.
Richardson, Washington

10 REM TORUK PANZERS
15 REM Bruce Duthie, Ph.D.
20 Oct. 1980

Print “Toruk Panzers”
Print “Program is designed to play the German side in scenario”
Print “One of Avalon Hill’s Toruk Game. Randomly place Panzer”
Print “I.H.-H’s on hexes B-R. The Panzer IV will not be used. To”
Print “make it more fair for the computer, all German Panzers are”
Print “assumed to be shooting APCs. Shells will not penetrate tank”
Print “should be taken off as soon as they have been”
Print “Knocked out. The turn sequence has to be somewhat simplified”
Print “The Germans move first then you do, if not you move or you lose”
Print “not, the computer will ask you a question when it is your turn.”
Print “As a whole, the computer is fair for both”
Print “will answer with a number. Your answer should follow”
Print “mark on the screen, then you press enter. If a question”
Print “appears, search for a mark with no question, just press enter.”

100 Print C L S
120 Print “Move all PZ’s to J-2”
150 Print “Move ’Panzers’ number, S-1-17 three hexes forward”
210 Print “Your Turn”
220 A = 1
300 A = 2
400 B = 1
500 B = 2
600 B = 3
700 B = 4
800 C = 1
900 C = 2
1000 C = 3
1100 C = 4
Print “type in the number of hexes to the closest grant”
Input C
2100 C = 1
2200 C = 2
2300 C = 3
2400 C = 4
2500 C = 5
2600 C = 6
2700 C = 7
2800 C = 8
2900 C = 9
3000 C = 10
3100 C = 11
3200 C = 12
3300 C = 13
3400 C = 14
3500 C = 15
3600 C = 16
3700 C = 17
3800 C = 18
3900 C = 19
4000 C = 20
4100 C = 21
4200 C = 22
4300 C = 23
4400 C = 24
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4600 C = 26
4700 C = 27
4800 C = 28
4900 C = 29
5000 C = 30
5100 C = 31
5200 C = 32
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7200 C = 52
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7800 C = 58
7900 C = 59
8000 C = 60
8100 C = 61
8200 C = 62
8300 C = 63
8400 C = 64
8500 C = 65
8600 C = 66
8700 C = 67
8800 C = 68
8900 C = 69
9000 C = 70
9100 C = 71
9200 C = 72
9300 C = 73
9400 C = 74
9500 C = 75
9600 C = 76
9700 C = 77
9800 C = 78
9900 C = 79
10000 C = 80
10100 C = 81
10200 C = 82
10300 C = 83
10400 C = 84
10500 C = 85
10600 C = 86
10700 C = 87
10800 C = 88
10900 C = 89
11000 C = 90
11100 C = 91
11200 C = 92
11300 C = 93
11400 C = 94
11500 C = 95
11600 C = 96
11700 C = 97
11800 C = 98
11900 C = 99
12000 C = 100

Letters to the Editor...

Wargamers have never been at a loss for war stories in their games, but what about modern warfare? Figures, analysis, play, strategy, tactics, as well as trick play and rule exploiting. Lately, two workshops have emerged, “Air Power in VITP” (Lockenhaus, T, Angiolillo in 17.6), and have targeted the same game to be emulated. They want to analyze warfare using VITP, but we must weight the coverage to those games that present a flank or rear sho!.

If a rule could be evolved, for example, the “gambit declined”, and “combination”, we may even create a whole new set of rules. The game. If a rule could be evolved, for example, we might alter entirely the times at which units enter play. If a rule could be evolved, for example, we might even change the entire game. If a rule could be evolved, for example, I believe it would go far toward capturing the feeling of occupying the post of CNO.

Perhaps technical, I might mention that the “theoretical” one, was more of an actual. The superfly, superfly superfly superfly “Shyamala” could be fitted into VITP as carrier task groups, and into WAS as “hunter killer” and and and so forth. If I were to place a computer in the counter mix, why not Card, Rogue or an oddball? (even if only in abstracted form)."

I look forward to receiving the revised complete WAS Expansion Kit and strongly urge that, after another year or two, you turn your talents toward the composition of WAGAMES. Initial reaction by, the non-wargame player to the idea of play, “gambit declined”, and “combination”, illustrates how much we need to better try to compare a board game like the Atlantic Ocean.

Gentlemen:

As a short time but loyal AH fan, I would like to express my opinions on what I feel has been an overall project. We have never owned any of these features as SQUAD CO, SQUAD leader game system in the pages of THE GENERAL. Since I never own any of these features as SQUAD CO, SQUAD leader game system in the pages of THE GENERAL. So far out of line. To master a wargame, assuming that the Japanese player has been a favorite. I was struck by the expansion, artwork, particularly in the fantasy/s f fields, has been somewhat unskilled. The truly an academy game will provide for certain people to feel elitist (while they...)

Robert Morris
Westerville, OH

Gentlemen:

The idea developed by Craig Burke in his “Air Power in VITP” (THE GENERAL, Vol. 17, No. 1, and discussed in “Return Fire” by Richard Hoben, is tantamount to any game that enjoys playing the VITP/VITP system. They offer far more expansion and increased flavor to a game I previously enjoy very much, and I was happy to see them appear.

In reading Hoben’s “Return Fire”, I’m envying him the more as he rethinks some of the more important points of his ideas and comments favorably on one or two, I was struck by the fact that a game in a game of strategic simplicity, VITP must be considered—a strict adherence to historical accuracy, while commendable in setting combat values and speeds of individuals, is often effec­tively deprives the players of historical options available to the respective supreme commander when playing.

One could argue, for example, that the development of a “High Sea Supremacy” policy on the part of the Kriegsmarine at the beginning of the year would have stimulated increased shipbuilding in Germany; the presence of the Oly Zepplin et al. in the VITP game implies that such an event wouldn’t have been. It would have been almost equal to assume that an increase in naval airpower might have led to the successful completion of Sodom (a Hipper-class CA hull), Europa and Gneisenau (both Panzer langers) or aircraft carriers? Or that the Scharnhorst and Gneisenau’s BC might have meant their main armament upgraded to 15-inch caliber, with corresponding increase in gunnery factor values.

In VITP, assuming that the Japanese player manages to carry his power play on into the end game, it might be logical to infer that American naval policy might have been to build military bases in the Middle East, to one extent, I hope I’m being too complimentary. I believe we should go forward toward capturing the feeling of occupying the post of CNO.

Mark Cotter
Old Town, ME

I try to present as varied a format as possible but we must weight the coverage to those games that appeal to the bulk of our readership. Based on “What Have You Been Playing” surveys thus far an answer has been overwhelmingly SQUAD LEADER.


**AIR FORCE ERRATA**

**Charts & Tables:**

A number of modifications, though specified correctly in the text of the rules, do not appear or are stated incorrectly on the Charts (page 31). For Players’ convenience they ought to make a note on the appropriate Charts.

**Nr. 16 Optional Modifiers, add**

Target in Slip

-1

Dive Speed Firing

-1

Slop, Loop, Roll

Firing (each)

-2

Spin Firing

-1

**Spottinig Modifiers, add**

Inverted

-2

Altitude: Towards

+1

Away

-1

Dive & Glide Bomb Modifiers, correction

These modifiers are for the 1st die.

**Example of Loaded Modifiers (page 17)**

Moreover, level and dive speed increments , . . . would be “3.4,” “5.6,” and “7.4” respectively.

**Aircraft Identification, Procedural (page 20)**

**Subtract “one” from Identification die roll for “F”1 guns.**

**Inline Engine Table (page 20)**

**Add the result on each die together.**

**Scenarios (page 25ff)**

*Map edge sides are referred to by the numbers on the compass rose pointing toward that side.*

**Altitude Loss at Non-Level Bank (page 11)**

A number of conditions have been added to the mandatory altitude loss. An aircraft which ends the Game in a non-Level Bank attitude must lose 100 feet of altitude unless:

1. The a/c was plotted to perform a Turn, Slop, Half-loop or Half-rollo (as before)

2. The a/c had spent half its turn (rounding fractions down) in Level bank.

3. The a/c has not expended enough Move for the loss, the aircraft is still Nose-Level altitude.

Nose Altitude Rules for combat:

-1. The aircraft is nose-level or greater.

-2. If any aircraft are going to be fired upon by the most dangerous enemy plane, the aircraft need not be spotted by the unit firing on it.

-3. Do ground targets have to be spotted to be destroyed?

A. Yes.

**QUESTIONS & ANSWERS**

**Q. What happens when an aircraft already at its maximum dive speed makes a further dive?**

A. The aircraft is destroyed. In order to dive the aircraft would have to reduce its airspeed first, which can be applied by applying factors.

**Q. Does the a/c spend time climbing for altitude loss?**

A. No. It begins the climb immediately after the loss.

**Q. Does the a/c spend time climbing for altitude loss?**

A. Yes.

**Victory in the Pacific: 7.72 Does a damaged CV lose its airstrike attack bonus?**

A. No

**AVALON HILL RBG RATING CHART**

The games are ranked by their cumulative scores which is an average of the 9 categories for each game. Without it may be fairly argued that each category should not have weight against the other, we use it only as a generalization of overall rank. By breaking down a game’s ratings into individual categories the gamer is able to discern for himself where the game is strong or weak in the qualities he values the most. Readers are reminded that the Game Length category is measured in multiples of ten minutes and that a rating of 18 would equal 3 hours.
Avalon Hill was well represented among the nominees. Both CIRCUS MAXIMUS and WAR & PEACE were on the ballot for Best Pre-20th Century Boardgame but lost out to SPI's EMPIRES OF THE MIDDLE AGES. CRESCENDO OF DOOM beat out FORTRESS EUROPA and three other nominees in winning Best 20th Century Boardgame. The entire 1980 line of AH computer games was nominated in the Computer category but lost to a program called "Second Coming" by Automated Simulations. THE GENERAL was a bride's maid for the 7th time in as many tries as FIRE & MOVEMENT again took top honors in the Professional Boardgaming Magazine category. Gary Gygax gained overdue admittance to the Hall of Fame as its 7th inductee. SQUAD LEADER added CAMPAIGN magazine's Best Game of All Time award to its collection of Kudos.

The second annual Northeast Gaming Association Playoffs will consist of a between-club single elimination wargame tournament based on popular 2-player war boardgames. The rules for TEAM GAMING will govern play. Teams will consist of four players competing in four independant six-hour matches. Each of the two teams in a match will be "veto" one of the six eligible wargames, thus leaving four games to actually compete in. Suggested (but yet to be finalized) "base" games to be played in NGAP '81 are: SQUAD LEADER, Victory in the Pacific; The Russian Campaign; Chickamanga; WAGN!; and SOUTHERN WINDS. A 10-team tournament is planned. But please note: there are absolutely no player eligibility rules. Anyone may play (including somebody who has already played for another team!) in this manner, it will specifically encourage the formation of "all-star" teams and help to guarantee the best possible play in the final stages of the tournament. The tournament is scheduled to begin in September. A registration fee will be charged for the tournament ($10.00 per team). The registration fee will be refunded for a copy of the 1981 revised rules for TEAM GAMING as well as a contribution toward the trophy fund. More details on the scheduling of the tournament will be announced later. Send all directory requests and NGAP correspondence to Jeff Cornett, 11 Robert Frost Drive, Shelton CT 06484 (203-529-6147).

Avalon Hill always on the lookout for new product offerings, has recently released a line of seven "Puzzle Stick Games." Although not typical fare for wargamers, they may make an interesting gift idea for the non-wargamers in your life who are nonetheless into puzzle solving. Puzzle sticks are far removed from traditional table puzzles, and may well represent the only new puzzle idea to be patented in several decades. To solve one of these multi-solution puzzles calls for a keen sense of perception. Your eye must single out related shapes, color, shadings, and density of print. To make a whole out of seemingly unrelated parts containing minute bits of information is challenging to a high degree. Each individual stick is almost exactly alike. Since each puzzle has more than one solution, the Puzzle Sticks player must soon decide which picture to attempt first. Often the puzzle is almost finished before disclosing the beauty of its complex subject... and once complete the picture on the other side might be hopelessly scrambled. An interlocking frame is enclosed in each package. Puzzle Sticks are playable either as solitary devices or in a variety of versions with opponents. Current subject offerings in the Stick Puzzle line include: GIRL BIRDS, PRESIDENTIAL MUNCHIES, HAND SCAPES, AUGUST FRUIT, THE BUCK STARTS HERE, STICK PUZZLE POKER, and WIND, WHEELS AND STEAM. All are priced at $6.00. For more information on the Puzzle Stick line send us a stamped, self-addressed envelope to Avalon Hill, POB 656, Wyandotte, MI 48192.

Due to the difficulty of answering game questions correctly on two very different sets of rules, Avalon Hill will no longer answer questions pertaining to out-of-date rulebook editions. Questions must be based on the current rulebook edition, or they will be returned unanswered. This policy is aimed specifically at THIRD REICH, but also applies to games such as D-DAY, AFRIKA KORPS, BATTLE OF THE BULGE, GETTYSBURG and BLITZKRIEG. Where rule changes in current editions are only of a minor nature this policy will not apply, but where changes are extensive such as in the above mentioned titles we can only answer questions based on play of the most current editions.

Avalon Hill has been busy acquiring games from other companies again. The latest acquisitions are ex-OSG products PANZERKRIEG, ROBIN HOOD, NAPOLEON AT BAY, AIR COBRA, BONAPARTE IN ITALY, BATTLE OF THE 100 DAYS, NAPOLEON AT LEIPZIG, and DEVIL'S DEN. It is not known at this time when these titles will be made available from Avalon Hill, or to what extent—if any—they will be revived from their original versions.

Anyone interested in applying for a playtest position for the 2nd Edition of STARSHP TROOPERS should address their inquiries to Alan R. Moon. Both expert STARSHIP TROOPERS players and inexperienced players will be used. Please state which category you qualify for in your letter.

A line of copy was erroneously omitted from the "WAR & PEACE" rulebook. Players may want to make the following addition to their rulebook: Page 29, Section F, part 5: "Non-French Player Reinforcements." Add to subsection f. "January, 1814—All English, Portuguese, and Spanish forces listed in Scenario VI. January-August, 1814—Each turn...etc.

The winners of Contest No. 100 who correctly surmised that the German's best chance of final victory lay in a low odds attack taking Rostov were: A. Battaglin, Chicago, IL; S. Packwood, Tuba City, AZ; R. Bouvier, Portland, OR; G. Hendrix, Houston, TX; R. Papandrea, Warren, MI; C. Drong, Spring Grove, IL; D. Kaiser, Lawrenceville, NJ; G. Phillips, Austin, TX; R. Preisle, State College, PA; and P. Siraus, Houston, TX. Merchandise credits were awarded to all of the above despite their resemblance to a list of semi-finalists at the AH 800.

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 will 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 under 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.

CONTEST NO. 102

Merely write the winning move in the appropriate space of the contest form in this issue's insert. Ten winning entries will receive certificates redeemable for free AH merchandise. To be valid an entry must be received prior to the mailing of Vol. 18, No. 3 and include a numerical rating of the issue as a whole, as well as list the best three articles. Remember that in our rating system the lower the number the better the rating, and vice versa. The solution will be announced in Vol. 18, No. 4. One entry per subscriber.

Assume that both aircraft have executed enough forward movement in previous turns to perform any maneuver. The actual versions of the aircraft concerned are the FW190A and P47D.

Ten winning entries will receive certificates redeemable for free AH merchandise. To be valid an entry must be received prior to the mailing of the next GENERAL and include a numerical rating for the issue as a whole as well as list the best three articles. The solution will be announced in the next issue and the winners in the following issue.

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
OORDEREN, SOUTHERN HOLLAND, September 27th, 1944: Lieutenant C.P.J. Des Groseillers urged his straining men to push again. D Company had found a German 75mm antitank gun in the ruins of Oorderen. The breech had been hidden and the weapon had been left in the town center with some 200 rounds of ammunition. Well it just so happened that an enterprising scrounger had found this curious metal block. Lt. Des Groseillers did a little work. Now D Company had its own artillery. Everyone knew that C Company was going to be attacking the German bunker line north of the town. D Company would make sure that Jerry got back his 75mm shells. Perhaps in a slightly used condition. The Rileys looked out for their own.

857th Grenadier Regiment of 346th Infantry Division. Must set up within bunkers North of row O inclusive:

Royal Hamilton Light Infantry Regiment (RHLI or "Riley"). May set up in any building hex South of row Q inclusive and enter on either (not both) East or West board edge any troops and support weapons not setup on board:

SPECIAL RULES

1. All buildings are wooden and first level except hex 10W8 which is wooden and second level.
2. German 75mm is a captured weapon and must be setup on board. Smoke is available.
3. There are no wheatfields.
4. All German units have just survived a suppression bombardment. All of rule 107.6 applies as if the Germans have undergone two consecutive game turns of FFE.
5. Fire is allowed against a bunker's Covered Arc Defense Modifier only from hexes the bunker may fire out at.

AFTERMATH: Division HQ had ordered a brief but heavy barrage that would creep northward through the German lines. Lieutenant-Colonel W.D. Whitaker didn't believe the bombardment would affect the bunkers. Therefore, using covering fire from the town, he sent C Company around the west flank of the bunkers. The plan was to attack away from the bombardment while the Germans concentrated on their front.

The bunkers easily withstood the blast effects but the Germans directed their defensive fire southward against the town while the Rileys swept in from the rear. Within one hour the attack was successful at a cost of four Canadian dead. The entrapped Germans had been isolated and destroyed. Regrettfully, Lt. Des Groseillers used up all his ammunition in attempts to reduce some of the bunkers, and D Company had to leave their private artillery behind as the Rileys advanced to the Scheldt Estuary.