

Spring-Summer
2010

ULTRA

Free

A quarterly newsletter devoted to *A WORLD AT WAR*, GMT Games' strategic simulation of World War II.
To order *AWAW*, go to www.gmtgames.com or phone 1-800-523-6111.

THE WAR AT SEA

What is it Good For?

by Bruce Harper

Introduction

It is well known that World War II was the first major war in history to be fought on land, in the air and both on and under the sea. It is this last category to which *ULTRA* now turns. This is the first of a series of issues which will deal with the creation and employment of naval units in *A WORLD AT WAR*.

The war at sea involves economics (the construction of naval units is expensive; increasing shipbuilding levels always comes at a cost), grand strategy (the importance of controlling of the various sea lanes for each alliance will vary, depending on their overall plan), tactics (the other side will have naval forces too), and inter-service cooperation (land-based air units can dominate the seas within range of their bases; ground units rely on their navies to cross open waters). It is this complexity which makes the war at sea so interesting, and provides so much material for articles about it.

A Quick Look Back

The bulk of this (double) issue consists of a hypothetical Pacific naval battle, but first I thought it useful to provide a brief recap of the history of the naval rules. The original *THIRD REICH* was, after all, an exclusively European theater game in which the war at sea was an afterthought. This is not a criticism (I have never found fault with *THIRD REICH*, as I consider all the changes made to the original game to be a tribute to

its astonishing potential) – there was just much to be done in designing *THIRD REICH* and the naval system could not be a priority.

The current naval system is therefore just what we've made it, and some veteran players have played using every version of the rules. In my view, the naval rules as they are now are as good as they have ever been, or probably ever will be. Time will tell. In the meantime, there are invasions to be made and naval battles to be fought.

Learning the Naval Rules

The naval rules are sufficiently daunting that they have kept many players confined to Europe (and many an Italian navy confined to port). These "land animals" will raid with the German navy, but, one suspects, only with the secret hope that the raiders will be sunk and they will be free to concentrate on the land war in Russia.

These players eventually come to a crossroads. Either tolerant and enabling friends allow them to always play a European alliance faction, or eventually they are persuaded or compelled to try out the Pacific. In almost every instance where the latter has occurred, the players find that the waters are not nearly as deep and cold as they had imagined. In short, they find that naval warfare in *A WORLD AT WAR* is *fun*.

The naval rules, taken individually, are actually not that difficult. Naval construction, for example, becomes

The War at Sea

What is it Good For?..... Front Cover
By Bruce Harper

How We Got Here 4
By Bruce Harper

How Naval Combat Works..... 6
By Bruce Harper

After Action Reports28
By Ed Schoenfeld, Randy Scheers, Tim Schroeder
and Bruce Harper

Next Issue: The Naval War Continues

second nature after only a few games. Even the more difficult naval combat rules are mostly intuitive, and it is easy to visualize what happens in the course of a naval battle. I think what makes the naval rules a bit trickier than, say, the rules relating to attrition and ground combat, is that naval combat occurs less often. This sends players to the rulebook more often, to make sure they aren't doing something out of sequence.

The solution? Experience, and some of the many useful player aids which summarize the steps followed in naval battles.

The Hypothetical Naval Battle

For the hypothetical naval battle, I have postulated an American invasion of an undefended Pacific island, supported by what appear to be sufficient forces. Whether the American priority is to successfully complete the invasion or to bring a portion of the Japanese fleet to battle has been deliberately left ambiguous. As will be seen, this strategic duality, which also characterized the Japanese operation at Midway, will be the subject of comment by our Monday morning admirals in their post mortems.

The main goal of recounting the course of this hypothetical naval battle, however, is not to analyze such broader strategic questions, but rather to show how the naval combat rules work. For this reason, both sides are given carriers and are considered to have land-based air units within range of the battle hex. The Japanese even have several submarines.

What this issue tries to do is both illustrate the operation of the rules themselves, as well as alert the reader to the "decision points" which arise in the course

of naval combat. Earlier I referred to the "complexity" of the naval rules which causes some players anxiety. But, as will be seen, there are actually surprisingly few occasions during naval combat where the players must make decisions. Why, then, does naval combat sometimes seem so complicated?

The Complexities of Naval Combat

I think there are two reasons naval combat can seem difficult.

The first is that there are some picky rules which would be easily handled by a fully intelligent computer program (for example, the number of search dice rolled by each player and their effects). In the heat of battle, mistakes can be made in these areas, even by experienced players. It is important to remember that the players are carrying out a number of automatic functions during naval combat – search results are what they are, and the players have no say in them once they've committed their air and naval forces and decided whether or not to play codebreaking cards. Much of naval combat just happens, once the forces are set into motion.

The second reason, which is more critical, is that the decisions the players *do* make are necessarily based on imperfect information. If ground combat is chess (or, for 1:1 attacks, craps), naval combat is often poker or even rock-paper-scissors. In naval combat, hindsight is almost always 20-20, but during the actual battle, it can be very difficult to know just what to do.

This problem – having to make important decisions based on incomplete or misleading information – is compounded by the emotional component of naval battles. The players must try to go beyond hope and fear, while at the same time taking into account their opponents' psychology. Historically, the Japanese "chickened out" at Pearl Harbor and Leyte Gulf, but at Midway were almost criminally reckless (and unlucky). And no one could ever accuse Halsey of being gutless at Leyte – regardless of what other faults might be found in his actions.

The same is true in A WORLD AT WAR. The same decision can sometimes be criticized as being either overly cautious or too risky, depending on the result. It might even be both, until you find out what your opponent does. To excel at naval combat, it is necessary to develop a "feel" for the naval system, so you can judge whether specific naval battles should or shouldn't be fought, and whether specific actions have or don't have a reasonable chance to work.

EDITOR: Bruce Harper
ASSOCIATE EDITORS: Markus Kässbohrer, Ed Schoenfeld
PROOFREADERS: Randy Scheers, Tim Schroeder, Eric Thobaben
BUSINESS MANAGER: Bruce Harper
ULTRA BOARD: Bruce Harper, Eric Thobaben, Ed Schoenfeld, Markus Kässbohrer, Mike Crowe,

ULTRA would like to express its gratitude to GMT Games and ULTRA Publications without whose cooperation and support this newsletter would not be possible.

ULTRA is available at no charge to all A WORLD AT WAR players either by direct e-mail or from the website www.aworldatwar.com.

The entire contents of this issue are copyright 2007 by ULTRA Publications. All rights are reserved. No part of ULTRA may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical or otherwise without the prior written permission of ULTRA Publications, other than for non-commercial purposes and the promotion and play of A WORLD AT WAR. Published opinions are solely those of the authors.

A WORLD AT WAR is available from GMT Games, www.gmtgames.com
 Tel. 1-800-523-6111.

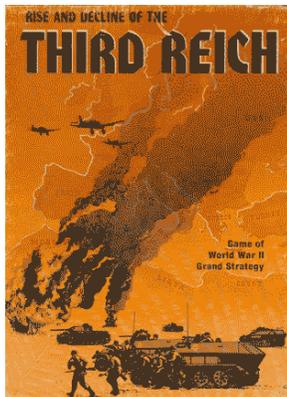
HOW WE GOT HERE

A Brief History of the Naval Rules

by Bruce Harper

Introduction

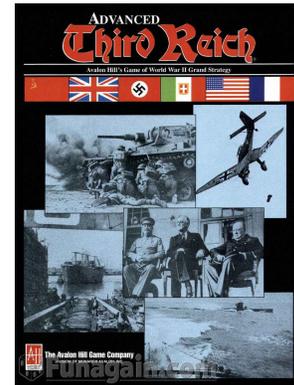
While A WORLD AT WAR has continued to gain new adherents, there are still many veterans who played the original THIRD REICH, which was published in 1974. While the game has certainly evolved since then, I am always impressed that so many of the fundamental concepts of the original game have survived to this day.



THIRD REICH

I find it difficult to even remember the original naval rules – perhaps it's enough to say that the emphasis in THIRD REICH was on ground and air combat, with naval affairs being almost an afterthought. This is not surprising, for two reasons. Firstly, THIRD REICH dealt only with the European theater, and did not include the Pacific. Secondly, the main goal of THIRD REICH, it seems to me, was to recreate the tactics of *blitzkrieg* and give players an economic and strategic framework for using those tactics. This involved the development of many revolutionary concepts and there just wasn't enough time and energy for naval matters, especially in the pre-computer age, when play testing and rule development literally went at a snail's pace.

It was only with the development of ADVANCED THIRD REICH, which was intimately connected to the Pacific theater game RISING SUN (they were developed concurrently), that the naval rules started to catch up. I will therefore begin with ADVANCED THIRD REICH and its companion game, which were released in 1991 and 1995, respectively.



ADVANCED THIRD REICH

The most important naval development in ADVANCED THIRD REICH was the Fleet Combat Table, which replaced the cruder system used in THIRD REICH. However, this was still applied to the abstract “fleet factors” which were passed down from the original game.

This had the advantage of simplicity. The naval rules, in their entirety, were only six (!) pages long; fleet combat (there were no carriers) was covered in slightly more than a page. But this simplicity came at a price. Who can forget the following tables (most of us, I suspect...)?

- The Naval Interception Table, with automatic interception within four hexes, interception on a single die roll of “1” to “5”, etc., with the only modifier being for air factors within range of the interception hex.
- The Fleet Combat Table, which paralleled the Air Combat Table.
- The Fleet Staying Power Table, which let Germany, Britain and the United States fight a second round of fleet combat, while no one else could.

Fleet combat was abstract and quick – and to a large extent perfunctory and preordained. Despite the reverse engineering connected to RISING SUN, the naval war was still something of a necessary evil in ADVANCED

THIRD REICH, and quantity mattered much more than quality in determining who had control of the seas.

It was only with the subsequent publication of RISING SUN that individual counters for aircraft carriers were introduced. After all, it was unthinkable to have a Pacific game without the most famous and important ships being represented.



RISING SUN

The RISING SUN naval rules were twice as long as those in ADVANCED THIRD REICH, which is not surprising, since the naval war in the Pacific *was* the war in the Pacific.

A number of very critical components of the A WORLD AT WAR naval system were introduced in RISING SUN, including:

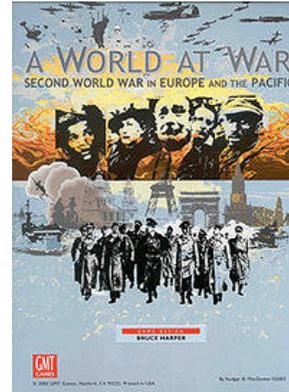
- Task force counters, which concealed the contending naval forces.
- Patrols during the movement phase, which allowed players to position naval forces in order to control an area during the subsequent combat phase.
- The employment of combat groups to conceal naval forces during combat and to break naval combat down into smaller encounters.
- Searching for enemy combat groups.
- Surprise air strikes from hidden combat groups.

And most of all:

- Distinct units for aircraft carriers.

The RISING SUN naval combat system had several noticeable flaws. First of all, while the concepts were right, the system wasn't sufficiently intuitive and it was difficult to fight a naval battle without referencing the

rules. Secondly, the naval combat system was only used in the Pacific. This relates to the third problem – while the carriers were cool, the Pacific naval system still used generic fleet factors, and in the European theater carriers weren't represented. RISING SUN clearly was a stopping point on an unfinished journey.



A WORLD AT WAR

That brings us to A WORLD AT WAR. It is difficult to overstate just how much better A WORLD AT WAR is than ADVANCED THIRD REICH/RISING SUN. The naval system is just one example, although a very a good one, of how the game has improved.

How did we ever play without named ships? For years I resisted this change, for two reasons. As the “Global War 2000” project gathered momentum, it split the “THIRD REICH” community into “classicists” (play ADVANCED THIRD REICH/RISING SUN as published) and “revisionists” (go with the flow and see just how good the game can get). At times I was concerned about alienating the classicists and held off on making radical changes to the game. Needless to say, this was rarely the governing consideration, as otherwise A WORLD AT WAR would not exist.

The second reason was more practical. While I could see the advantages of named ships, and how they would improve the naval combat system, I had great difficulty in figuring out just how they would come into play.

It was only when this stumbling block was removed with the development of the naval construction rules that named ships were brought into the game. I consider the naval construction rules to be one of my best design concepts. Ironically – and perhaps instructively too – I obstructed the named ship concept itself, so I tip my hat to those playtesters who refused to let the idea die!

So let's have a look at the A WORLD AT WAR naval combat system.

HOW NAVAL COMBAT WORKS

A Guide to the A WORLD AT WAR Naval Combat Rules

by Bruce Harper

Introduction

Every now and then it pays to take a long, careful look at one of the game's sub-systems. This exercise can pay dividends for players, both by improving their level of play and by making the game easier (and therefore more fun) to play.

In this article I will look at the A WORLD AT WAR naval combat system, analyze the naval combat resulting from the Japanese interception (rules 22.1 and 22.2) of a hypothetical American seaborne invasion protected by three nearby task forces, ready to counter-intercept. I will assume that all naval interception has been resolved, although often additional naval forces enter the battle in subsequent rounds (22.241D), so in this sense naval interception can continue even during naval combat.

Naval combat is dealt with in rules 22.3-22.5. In our example, carriers, submarines and land-based air are involved, so the naval battle will be as complex as possible. It is worth mentioning that naval combat is resolved more simply if each side has only one combat group, with no possibility of reinforcement, and neither side has any land-based air, fast carriers, or submarines involved in the battle (immediate fleet combat – 22.371) and for raiders (one combat group each, no searching or surprise – 22. 372).

General Considerations

Before describing the contending forces, there are several other more general factors which can play large roles in determining the outcome of a naval battle.

Air and Naval Nationality DRMs

Air and Naval Nationality DRMs are critical, because they affect almost every air/naval action. They can be increased by research, but we will assume that neither side has managed to obtain the necessary results before this battle takes place. The applicable Nationality DRMs are highlighted in the tables reproduced in the next column (yellow for Japan, green for the U.S.):

Air Nationality Chart - 19.31A, 23.441A	
DRM	Nationality
2	Germany, Japan , United States , Britain, Finland, Sweden, Australia
1	Italy, Russia, France
0	All minor countries except Finland, Sweden and Australia
Modifiers	
+1	Elite Japanese naval air
+1	Defending interceptors
-1	British naval air
-1	Air units subject to a winter effect of 8 or more
-1	Air units in partial supply or subject to air oil effects

Naval Nationality Chart - 22.552A, 23.441B	
DRM	Nationality
3	Germany, Japan
2	Britain, United States , Sweden, Australia
1	Italy, France
0	Russia, Greece, Rumania, Spain, Turkey, Dutch East Indies
Modifiers	
+1	Five-factor battleships
-2	Japanese and American CVBs, CVs, CVLs; all CVEs
-1	German, Italian and British CVLs
-1	Naval units in partial supply or subject to naval oil effects.
Explanation: When fleets with different DRMs engage in fleet combat, the two DRMs are compared. The higher ranking side adds the difference to its fleet combat dice roll, and the lower ranked side subtracts the difference from its fleet combat dice roll. Air attack dice rolls against naval units are reduced by the DRM of the attacked naval units.	

Air Defense

Air defense results are achieved by research. We will consider that Japan has achieved one air defense research result – the Western Allies have been too busy researching air range and strategic bombers to bother with anything as low-tech and mundane as air defense research. We will see how their priorities turn out, at least as far as naval combat is concerned.

Radar

The Western Allies haven't been entirely idle. They have one radar result, which reduces the effect of surprise. Some Japanese who are still unsatisfied with the outcome of the real war blame their loss on the Japanese failure to develop radar. We shall see.

Submarine Warfare Modifiers

Because Japanese submarines are involved in the battle, the relative torpedo-ASW research modifiers are relevant. Japan has its initial Long Lance torpedo result; the Western Allies have three ASW results.

Codebreaking

Codebreaking in the Pacific is determined each turn by drawing Magic cards (Ultra cards are drawn in Europe, but they have no application in the Pacific).

Japan is assumed to have drawn one tactical card, which naturally makes the Japanese player more inclined to risk a naval battle. This is a good thing, as otherwise this would be a very short issue.

MAGIC

Japan



MAGIC

Japan

Tactical

The American player, as is usually the case, has done better. He has drawn a tactical card and a wild card. He could have done even better, because ASW cards reduce the effectiveness of enemy submarine attacks, but you either make do with what you have or don't fight at all, which can lead to missed opportunities:

MAGIC

U.S.



MAGIC

U.S.

Tactical

MAGIC

U.S.



MAGIC

U.S.

Wild Card

Round 1



Step 1: Combat Groups

The first step in a naval battle is for both sides to form and secretly number their combat groups, as a prelude to searching for the opponent's naval forces.

The basic principle is simple enough – each task force involved in the battle becomes a combat group (22.421A). Let's first look at the intercepting Japanese forces.

The Japanese Forces

The first Japanese naval force to intercept is TF1, which consists of four CVs with their full complement of NAS (nine elite, three normal), plus two battleships (including the mighty *Yamato* – unlike his historical counterparts, the Japanese player in this game is not afraid to risk his biggest ship) and five light ship factors (CA2 and DD3). This is not only a legal task force (the twelve fast carrier factors are accompanied by thirteen fleet factors, meeting the requirement of 20.162F), but is also a balanced, powerful naval force, as the twelve NAS give it considerable striking power. The escorting battleships and light ships are capable of taking care of themselves, and the three destroyer factors provide some additional protection against submarine attacks. The entire force is also fast, which lets it make a

surprise air strike or possibly combine with the other Japanese combat group in fleet combat.



Japanese TF1 becomes a combat group. The combat group number doesn't have to correspond to the task force number, although it can't exceed the number of combat groups in the battle (22.422A). Since the Japanese player has more than one combat group in the battle, he designates TF1 as CG2:



The Japanese player also intercepts the American invasion with two naval forces of less than 10 factors. These do not become separate combat groups, because they are not large enough. Where smaller, non-task force naval forces engage in naval combat (a task force must contain at least 10 naval factors – 20.162A), these smaller forces combine to form a single combat group (if this would lead to a combat group bigger than the allowable 25-factor maximum, an additional combat group is formed).

Here the first small Japanese naval force consists of nine fleet factors:



and the second consists of another nine fleet factors:



These two smaller forces combine in what the Japanese player designates as combat group 1 (this is consistent with his designation of his task force as combat group 2):



The Japanese player therefore ends up with two combat groups, composed of the following naval units. One is a heavy duty puncher, the other a more agile boxer, but with a powerful air component:



CG1 is slow, because it contains slow ships (designated by the orange stripe), and it will do the dirty work. CG2, which is fast, is the strike force the Japanese player is relying upon to stop the American invasion and, if things go well, smash the opposing naval force.

The Japanese also intercept independently with two submarine factors and have two AAF and one NAS within range of the invasion hex:



These forces are important. Submarines can be deadly if they hit the right targets (and roll well), although (as is often the case) whether they realize their full potential will be known only after the battle is fought.

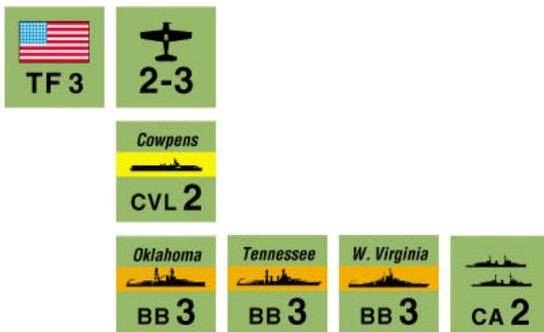
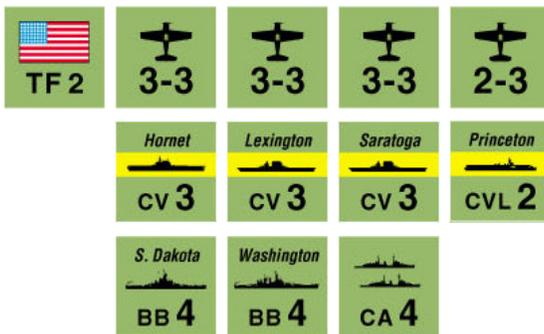
Land-based air units either distract and wear down the enemy carrier-based naval air or provide valuable assistance to their own naval forces, depending on how the opponent decides to deal with them. The two attack AAS are unimportant, but the two cover and search AAS and the one NAS could be very helpful.

The American Forces

The American invasion force consists of a small naval force carrying only one ground factor. The invasion hex was undefended, and by keeping the American naval force small, the Japanese player rolled one fewer die for his naval interceptions (22.232D).



The American invasion force is supported by three counter-intercepting TFs:



As with his invasion force, the American player has used some care in putting together his support TFs with the ships I have given him.

TF2 is his striking force, which he hopes will inflict serious damage on the Japanese, or at the very least wear down the Japanese navy and naval air forces in the type of attritioning that almost always favors the Americans. In order to confuse the Japanese player, and quite possibly himself, the American player designates TF2 as CG3.



TF4 is a decoy force, which gives the U.S. an extra search roll and may draw a Japanese air strike, leaving TF2 untouched. TF4 is designated CG1.



TF3 is slow, but includes the fast carrier *Cowpens* for several reasons. The first is that a slow naval force rolls one fewer die for interceptions (and counter-interceptions), unless it contains at least one operational fast carrier, so the carrier helped TF3 get to the battle. Secondly, the presence of even one carrier makes a force less vulnerable to air strikes. Thirdly, the *Cowpens* has got to be the coolest name of any ship in the game, so it was definitely going to be included in this battle.

In committing TF3 to the battle, the American player is availing himself of the other qualification to the rule that each unencumbered TF forms a separate combat group. Rule 22.421A (third bullet) states:

- A naval force carrying cargo, including an unprotected sea supply line and transports carrying cargo, may be strengthened by combining with an unencumbered combat group.

TF3 will therefore combine with the invasion force to form a larger, less vulnerable combat group:



Normally the more vulnerable (and important) invasion force would be designated CG3, so that there is no corresponding Japanese combat group. Then the invasion force couldn't blunder into fleet combat (which occurs when two corresponding combat groups find each other) – the invasion force could only be attacked by a fast hidden Japanese combat group.

But, as noted above, the American player is hoping to confuse his opponent, and in any case reckons that his invasion force is fairly robust and might achieve something useful in fleet combat. Different considerations would apply if the invasion were bigger and more of the American combat group carrying the invading group units were screened from fleet combat.

Finally, the Americans have three AAF within range of the invasion hex, which break down into nine AAS:



Had the American land-based air been within range of the Japanese land-based air (the two AAF and NAS mentioned earlier), the American player likely would have counterair the Japanese land-based air earlier in

the turn with at least some of his land-based air. Each side's land-based air would then literally cancel out the other's, and neither side's land-based air would take part in the naval battle. Alternatively, if the American player held back some of his land-based air, he might have one AAF left over which could take part in the naval battle. But often it isn't possible to counterair the opponent, and it isn't as much fun.

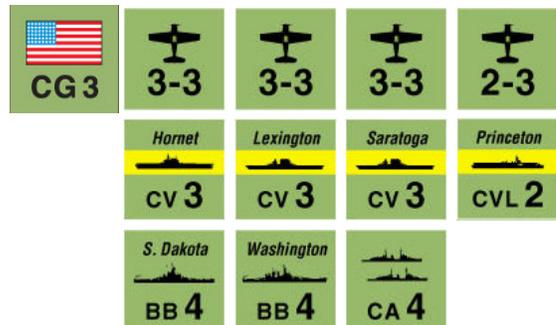
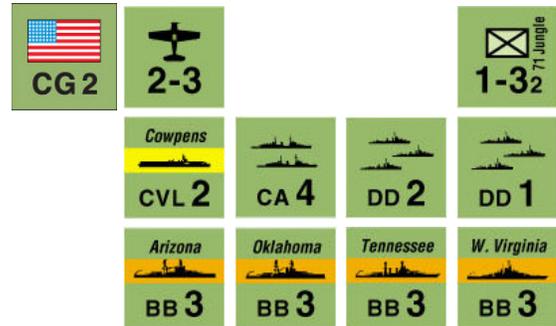
Round 1 – Order of Battle

Here are the naval units available to each side at the start of the battle, organized into combat groups, along with the land-based air participating in the battle

Japan



United States



Who has the edge?

It isn't obvious who has the edge in this battle. The forces are fairly evenly matched, and while the Japanese have an edge in fleet combat, both because of their Naval Nationality DRM and because one American combat group is carrying ground units and therefore incurs a -1 DRM in fleet combat, the U.S. has a slight carrier edge and two additional land-based air squadrons. The Americans also have one more combat group, which gives the U.S. a slight search advantage – but which also offers the Japanese an extra target. The naval combat system does not always favor the side with more forces. The Americans also, as is often the case, have a codebreaking edge.



Step 2: Attacks against enemy bases

In my experience, this is one of the most overlooked steps in naval combat. Having just completed the rock-paper-scissors exercise of designating their combat groups, players naturally turn their minds to trying to balance the opportunities provided by carrier air strikes and the risks incurred by scrimping on combat air patrol. Since part of this analysis involves calculating the number of search dice rolled by each side, it's easy to get ahead of yourself.

But the rules are very clear as to the next step in naval combat. Carrier-based NAS may counterair enemy land-based air units (22.43). These counterair attacks are resolved before carrier air strikes against enemy naval units, before search rolls and even before the players allocate their NAS to air strikes or combat air patrol.

Certainly counterair attacks – and their results – affect these next steps, so they can't be decided upon in a vacuum, but the sequence is important.

Taking time to knock out land-based air during a naval battle has a somewhat tainted reputation after Midway, but *A WORLD AT WAR* players can do better. In deciding whether it is worth counterairing an enemy air base, a number of factors have to be taken into consideration. Sometimes it's a good idea, sometimes it isn't, and sometimes you only know afterwards.

On the plus side, counterairing land-based air ensures that your carrier-based NAS does something. Naval air held back for air strikes against enemy naval units may only attack after a successful search result, but the position of the enemy air bases are known, and the counterair attack will always be executed.

A second argument in favor of counterairing enemy air bases at the outset of a naval battle is that any land-based air which are eliminated are permanently out of the battle (aborted land-based air are only neutralized for the combat round in which they are attacked). In other words, as MacBeth said, if it is to be done, "then 'twere well it were done quickly". Rather than fight several rounds of naval combat under the shadow of enemy land-based air, it might be better to have done with it and counter it right away.

But (and now it's Hamlet), "there's the rub". Will there be several rounds of naval combat? It's not always easy to tell, both because the other side's naval forces are concealed and because the outcome of the crucial first round of naval combat is always hard to predict. Eliminating a handful of land-based air units while losing several important ships can be a strategic, as well as a tactical, disaster.

Apart from the opportunity cost of diverting naval air units to counterair attacks, there is a real cost too – NAS will be lost, often in exchange for army air units. Because the ability of each major power to rebuild NAS is limited by its naval air training rate, this is usually an undesirable exchange. NAS which sits unbuilt is useless, but of course the status of each player's NAS force pool is always either "I have enough NAS on the board" or "I don't". If you do, then a pile of unbuilt NAS is not that big a deal, other than being evidence of a certain planning inefficiency (30 unbuildable American NAS could be 10 AAF on the board fighting).

Another important consideration is that a counterair attack, which is done openly, telegraphs your intentions to your opponent. If most of your carrier-based naval air is used to attack enemy air bases, it will be clear that

you won't be launching any serious air strikes against your opponent's naval units, and your opponent can allocate his naval air accordingly.

Finally, the players must assess the effectiveness of the opposing land-based air. Land-based air units always break down into squadrons in naval combat, and each squadron may perform one of three tasks: search, fly air cover, or attack (23.11).

Search is always valuable, in a probabilistic sense, but the additional search die rolls from searching land-based air may be ineffective. In any case, land-based air squadrons can, at most, add three search rolls – additional searching squadrons don't assist.

Air cover during naval combat must be assigned to specific combat groups before search die rolls are made. Land-based air squadrons providing air cover therefore often must leave friendly combat groups uncovered in order to offer any significant help to the most important combat groups.

Land-based air attacks against naval forces at sea are often ineffective, because abort results count (in contrast to carrier-based attacks by naval air units). It is up to the defender to engage attacking land-based air with his own air cover or combat air patrol (23.4121A), so land-based air attacks can't even be sure of "softening up" a target by weakening its defending air.

If a player feels the opponent's land-based air won't play a significant part in the ensuing naval combat, he may want to ignore it.

Such is the case here. The Japanese player decides to ignore the three American land-based AAF, both because it is too big a target and because he feels his elite NAS can shoot down any American AAS flying air cover without too much inconvenience. The three American attack AAS are irrelevant. As for the three additional search die rolls for the three American search AAS...

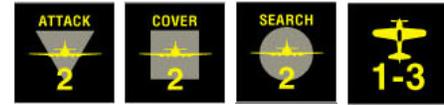
The American player makes a different decision. He is happy to grind down the Japanese player and decides to try to knock out the Japanese land-based air, in order to reduce the number of Japanese search die rolls. The American player sends one NAS from CG2 and seven NAS from CG3, intending to hold back his remaining NAS for combat air patrol. The American player hopes to deal with the Japanese naval units in the second round.

The attack is resolved by breaking the Japanese AAF down into AAS. All three types of AAS are treated the same for air combat purposes, although ultimately the Japanese player decides which remnant he prefers.

The counterair battle looks like this:



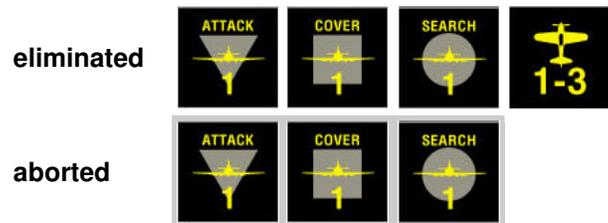
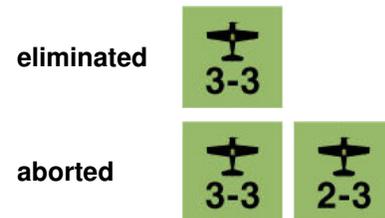
vs.



The attack is resolved on the Air Combat Table, with neither player having a modifier. Both the American and Japanese players roll a "9":

Air Combat Table - 19.2											
	Dice Roll										
AF AS	2	3	4	5	6	7	8	9	10	11	12+
7	1/3	1/3	2/2	2/3	2/4	3/3	3/4	3/5	4/4	4/5	4/6
8	1/3	2/2	2/3	2/4	3/3	3/4	3/5	4/4	4/5	4/6	5/5

As a result of these somewhat bloody air combat dice rolls, the American lose three NAS and the Japanese lose four air squadrons, and the surviving Japanese AAS are aborted for the first round of air combat. The Japanese player loses one AAS, one NAS, then two more AAS, and winds up with one aborted AAS of each type. The Japanese AAS are not converted back to an AAF factor until the end of the player turn (23.141C), though in practice they could just as well be converted to an AAF when the aborted squadrons are inverted at the end of the naval combat (22.434).



Steps 3 and 4: Allocation of carrier-based air units Allocation of land-based air cover

Technically these two steps are distinct, but both are done secretly and neither one involves interaction with the opponent. They are also related, because if a player can fly air cover over a carrier group, that may let him get away with a smaller combat air patrol and therefore launch a stronger air strike.

Thanks to the American counterair attack, the Japanese no longer have any land-based air available to fly air cover. This means Japanese CG1 is on its own, as it doesn't have any carriers and combat air patrol may only be flown over its own combat group. Japanese CG2, on the other hand, has 12 NAS and, secure in the knowledge that the nearby Japanese air base has absorbed most of the American striking power and that his air defense research result and the *Yamato* boost his air defense level, the Japanese player decides to attack with all 12 NAS. This is permitted because the higher Air Nationality DRM of the elite Japanese NAS allows it to participate in a larger air strike:

23.71 RESTRICTIONS:

...

E. SIZE OF AIR STRIKES: The number of NAS which may carry out air strikes from a combat group against one or more enemy combat groups during naval combat is limited by the Air Nationality DRM of the attacking NAS, as follows:

- NAS with an Air Nationality DRM of one: up to four NAS.
- NAS with an Air Nationality DRM of two: up to eight NAS.
- NAS with an Air Nationality DRM of three or more: up to 12 NAS.
- This limit applies separately to forces containing NAS with different Air Nationality DRMs:
 - The first four NAS conducting air strikes may have an Air Nationality DRM of one;
 - The next four must have an Air Nationality DRM of at least two;
 - The final four must have an Air Nationality DRM of at least three.

The American player sticks to his game plan, ruthlessly depriving his decoy CG1 of air cover. CG2 is allocated one cover AAS as air cover, and flies its remaining NAS on combat air patrol; the more important CG3 is allocated the other two cover AAS and flies four NAS on combat air patrol. The American player is really hoping that the Japanese don't find any of his forces.

After air is allocated, the contending forces look like this:

Japan

	<i>Mutsu</i> BB 4	<i>Nagato</i> BB 4	<i>Fuso</i> BB 3	<i>Hyuga</i> BB 3
	CA 2	DD 2		
Air strike	3-3	3-3	3-3	3-3
	<i>Akagi</i> CV 3	<i>Hiryu</i> CV 3	<i>Kaga</i> CV 3	<i>Soryu</i> CV 3
	<i>Yamato</i> BB 5	<i>Hiei</i> BC 3	CA 2	DD 3

The United States

	<i>Maryland</i> BB 3	<i>Mississippi</i> BB 3	CA 6
Cover	COVER 1		
CAP	1-3		
Used	1-3		1-3 ₂ 71 Jungle
	<i>Cowpens</i> CVL 2	CA 4	DD 2
	<i>Arizona</i> BB 3	<i>Oklahoma</i> BB 3	<i>Tennessee</i> BB 3
			<i>W. Virginia</i> BB 3

Cover	COVER 2					
CAP	3-3	1-3				
Used	3-3	1-3				
CG 3	Hornet CV 3	Lexington CV 3	Saratoga CV 3	Princeton CVL 2		
	S. Dakota BB 4	Washington BB 4	CA 4			



Step 5: Search

We now come to the crucial – and nerve wracking – search die rolls, which can make or break a naval battle. First, a quick rule reference:

22.451 SEARCH ROLLS: After carrier-based air units have been assigned to offensive or defensive tasks, and land-based air units have been assigned to air cover against enemy carriers, each player determines how many search die rolls, if any, he may make to search for his opponent's combat groups. The number of search rolls made is determined as follows:

A. COMBAT GROUPS: One die for each friendly combat group consisting of at least ten undamaged naval factors (22.425). (Maximum: +6).

B. AIR: One die for each air squadron assigned to search (22.4422). (Maximum: +3).

C. ADDITIONAL COMBAT ROUNDS: One additional die is rolled for each round of naval combat which has been resolved in that naval battle. (one die in the second round; two dice in the third round; and so on. There is no maximum).

D. CODEBREAKING: If either player obtained a search advantage from playing tactical codebreaking cards (48.32B) or from the tactical advantage associated with a Magic interception (48.62), that player rolls one additional search die and his opponent rolls one fewer search die.

The Japanese force contains two combat groups and no land-based air. Unafraid of American air strikes, the Japanese player holds onto his tactical card.

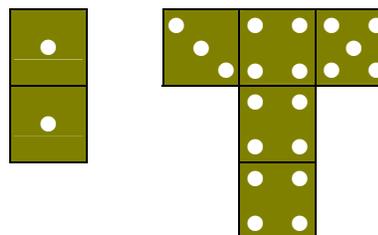
The American force contains three combat groups and is assisted by three search AAS. Since the American player doesn't want the Japanese to find him in the first round, he also plays his tactical card (which the Japanese player doesn't oppose). This gives the Americans one more search die roll and gives the Japanese one fewer search die roll.

The net result: in this round of naval combat, the Japanese roll only one search die, while the U.S. rolls seven search dice. The Japanese player isn't worried, though, as he has only two combat groups, and the U.S. has already used most of his naval air.

Japanese Search Roll



American Search Rolls



The search rolls turn out to be an American success, of sorts. None of the American combat groups have to face the anticipated massive Japanese air strike, and the Japanese fail to find any of the three American combat groups. But the Japanese player has reason to be content as well.

Step 6: Revealing combat groups

The number of search results achieved determines how much information the searching player learns about each enemy combat group from his searches. Naturally nothing is learned about enemy combat groups which aren't found.

The Japanese player informs his opponent that Japanese CG1 has no carriers – information which is of little help to the Americans. Japanese CG2 wasn't found, nor were any of the three American combat groups.

Search Table - 22.45

Search results	
No search result	The enemy combat group remains hidden and may not be attacked.
One search result	The enemy combat group is found and is eligible to be attacked. Whether the combat group consists of less than ten naval factors must be revealed.
Two search results	The number of carriers, including CVEs, but not the type of carriers, in the enemy combat group is revealed.
Three or more search results	The exact composition of the enemy combat group is revealed.

Step 7: Carrier-based air strikes

There aren't any, because the Americans did not allocate any naval air to air strikes, and the Japanese, who did, didn't find any targets. The ships literally do pass in the night...

Step 8: Land-based air attacks

In theory the Americans could attack Japanese CG1 with three attack AAS, but this would be a futile gesture. The American player knows that Japanese CG1 has no carriers (from his two search results), and because the Japanese intercepted with two unconcealed non-TF naval forces, the American player can deduce that Japanese CG1 is the combination of those two small naval forces. Three attack AAS would have no effect against that Japanese naval force, since abort results on the air defense dice roll count against land-based air.

So the American player waits.

Step 9: Fleet combat

At this point the American player has to decide whether to try to take advantage of his good search rolls by engaging in fleet combat with Japanese CG1. This is an application of an exceptionally important rule:

22.453 ATTACKS ON ENEMY COMBAT GROUPS LIMITED BY SEARCH RESULTS:

A. For each search result relating to an enemy combat group, one friendly combat group may attack that enemy combat group by either launching an air strike (22.47) and/or engaging in fleet combat (22.5). One search result allows one combat group to engage the found enemy combat group; two search results allow two combat groups to engage the found enemy combat group; and so on.

B. Compulsory fleet combat between corresponding combat groups (22.511) counts towards this limit.

C. The number of search results has no effect on attacks by land-based air units (22.48), which may attack any found enemy combat groups.

The much maligned American decoy combat group, CG1, is slow, but it may still engage the corresponding Japanese combat group (22.513B, second bullet). American CG3, the main American carrier group, is fast and, because of the second search result, it may also engage Japanese CG1 in fleet combat, in combination with American CG1.

Should the American player improvise and throw his decoy combat group and his carrier escorts against Japanese CG1? The Americans will have a 24 to 18 fleet factor edge, which offsets the Japanese Naval Nationality DRM advantage. Both sides will likely incur damage which will carry over into a second round of naval combat, and the dice will determine who comes out on top. Most of all, though, the Americans ultimately will outbuild the Japanese, so the American player can never be afraid of trading punches.

So we proceed to fleet combat.

Screening

The first step in fleet combat is to determine which ships, if any, are screened (22.53). The American fast carriers are automatically screened, and neither player has any interest in voluntarily screening any additional ships, so the players immediately proceed to the fleet combat sequence:

22.54 FLEET COMBAT SEQUENCE: Each round of fleet combat follows the sequence set out below. The "attacker" is considered to be the side with more unscreened capital ships (screened capital ships and fast carriers are not counted). If both sides have the same number of such ships, the attacker is the side with more such ship factors. If both sides have the same number of such ship factors, the attacker is the side with more unscreened light ship factors (the intercepting player, if tied). The "defender" is the other side:

As it happens, the Americans and Japanese both have four capital ships, and both have two four-factor battleships and two three-factor battleships! The final tiebreak (the number of light ship factors) is needed to establish that the Americans are the attackers.

The defender ranks his ships

The defender then ranks his ships, in accordance with 22.54A:

A. THE DEFENDER RANKS HIS SHIPS: The defender ranks his naval force in the following order:

- heavy ships in order of size, from largest to smallest (five-factor battleships, four-factor battleships, three-factor battleships and battlecruisers, two-factor battlecruisers and pocket battleships). Heavy ships with hits which are not screened are ranked within their size group as the defender wishes;
- light ships;
- screened ships.

Japanese CG1 was already ranked.

The attacker's heavy ships select targets

B. ATTACKER'S HEAVY SHIP TARGETS: The attacker selects targets for his heavy ships.

- The attacker must target the first ranked (largest) unscreened enemy heavy ship with at least as many factors of his own heavy ships, if possible, before targeting the second (next largest) unscreened enemy ship, and so on.
- Subject to this restriction, the attacker may concentrate his fire against enemy targets of his choice:
 - The attacker may assign additional heavy ships to any enemy heavy ship already selected as a target, either concentrating all his heavy fire on the largest enemy ship, or targeting the largest enemy ship with a number of heavy ship factors equal to the size of that ship, then concentrating all his remaining heavy fire on the second largest enemy ship, and so on.
 - Enemy light ships and screened enemy ships may only be targeted if all unscreened enemy heavy ships are targeted by an equal number of attacker heavy ship factors.

Rather than try anything fancy, the American player decides to pair up his heavy ships against the Japanese heavy ships on a 1:1 basis, and win with his light ship superiority. If the U.S. player uses more than one battleship against the Japanese four-factor battleships (say by making 7-factor attacks), this would free up the Japanese three-factor battleships to return the favor or to fire on the American light ships. If the American player had more than three times the number of light ships as the Japanese player, he could switch the surplus light ships to help against the Japanese heavy ships (22.54E), but his superiority isn't great enough to do this.

			
CG 1	CG 3		CG 1
		vs.	
		vs.	
		vs.	
		vs.	
		vs.	 

		
Screened		
		
Screened		
		
CAP		
		
Used		

The defender's heavy ships select targets

The Japanese player now follows a similar procedure to that carried out by the American player:

C. DEFENDER'S HEAVY SHIP TARGETS: The defender selects targets for his heavy ships.

- A defending heavy ship which is targeted by one or more of the attacker's heavy ships must target one of the heavy ships which is firing at it.
- Defending heavy ships which are not being fired upon may select their targets freely, without restriction, targeting any attacking heavy ship, the attacker's light ships or screened enemy ships.

Because all of the Japanese heavy ships are targeted by American heavy ships, the Japanese player actually has no option but to return fire. The two battle lines are sailing by each other and each battleship has targeted its counterpart.

Resolve heavy fire against lights

D. HEAVY SHIP FIRE AGAINST LIGHT SHIPS RESOLVED: Once all heavy ships have been assigned targets, heavy ship fire against light ships is resolved.

- All enemy light ships are treated as a single target.
- Light ships which are sunk by heavy fire are removed from the board.
- Cruisers which are damaged from heavy fire are automatically screened and need not be sunk to permit fire on other screened ships (22.54H).

Since every heavy ship is firing at an opposing heavy ship, this step is skipped.

Light ships select targets

E. LIGHT SHIP TARGETS: Once heavy ship fire against light ships is resolved:

- All remaining light ships for both sides automatically target each other, unless one side has more than three times as many light ship factors as the other.

- Such “surplus” light ships may target enemy light ships, or instead may select enemy heavy ships as targets or may withhold their fire in the hope of attacking screened enemy ships (22.54H).
- “Surplus” light ships may select enemy heavy ships as targets by:
 - Combining their fire with any friendly heavy ships which may have already targeted that enemy heavy ship; or by
 - Firing independently on one or more enemy heavy ships not targeted by friendly heavy ships. A second untargeted enemy heavy ship may be attacked by the remaining “surplus” light ship factors, provided the first enemy heavy ship is engaged by an equal number of “surplus” light ship factors (so seven “surplus” light ship factors could attack an enemy BB4 and a second enemy BB4, or could all attack the first enemy BB4).

According to the first bullet, the light ships have no choice but to target each other. At this dance, which is about to turn ugly, everyone has a partner.

Resolve light fire

F. LIGHT SHIP FIRE AGAINST LIGHT SHIPS RESOLVED: Once all light ships have been assigned targets, light ship fire against light ships is resolved.

- All enemy light ships are treated as a single target.
- One fleet combat dice roll is made for each target and the results implemented.
- Light ships which are sunk by light fire are removed from the board.

Resolve heavy fire

G. FIRE AGAINST HEAVY SHIPS RESOLVED: Once light ship fire against other light ships is resolved, all fire against opposing heavy ships by friendly heavy and “surplus” light ships is resolved simultaneously.

- One fleet combat dice roll is made for each target and the results implemented. Excess hits inflicted after sinking the initial targets are disregarded.

Before fleet combat begins, the Japanese player (as the intercepting player – 48.32B, first bullet) tries to gain an additional modifier in fleet combat by playing his tactical card. Tactical cards may also be used to obtain a search advantage, as we have seen, but this is a potentially crucial encounter and the Japanese player wants every advantage he can get.

But you can’t always get what you want. The American player counters with his wild card, and the two Magic cards cancel out. The Japanese go into combat with a +1 modifier for their higher Naval Nationality DRM.

It actually doesn’t matter whether light or heavy fire is resolved first, because it is all simultaneous (except for heavy fire against lights, which can damage or sink light ships before they come within range of the heavy ships firing at them). Most players resolve heavy fire first, because it’s more fun, but we’ll stick to the rules.

Because all of the Japanese heavy ships are targeted by American heavy ships, the Japanese player actually

has no option but to return fire. The two battle lines are sailing by each other and each battleship has targeted its counterpart.

The dice are rolled and the shells begin to fly. For each fleet combat exchange, the results on the Naval Attack Table are shown, as well as the effect on the targeted ships.

First the lights:

FF	2	3	4	5	6	7	8	9	10	11	12+
3-4	0	0	0	1	1	1	1	2	2	2	3
10-12	1	1	2	2	2	3	3	3	4	4	5

Then the heavies:

FF	2	3	4	5	6	7	8	9	10	11	12+
3-4	0	0	0	1	1	1	1	2	2	2	3

FF	2	3	4	5	6	7	8	9	10	11	12+
3-4	0	0	0	1	1	1	1	2	2	2	3

FF	2	3	4	5	6	7	8	9	10	11	12+
3-4	0	0	0	1	1	1	1	2	2	2	3

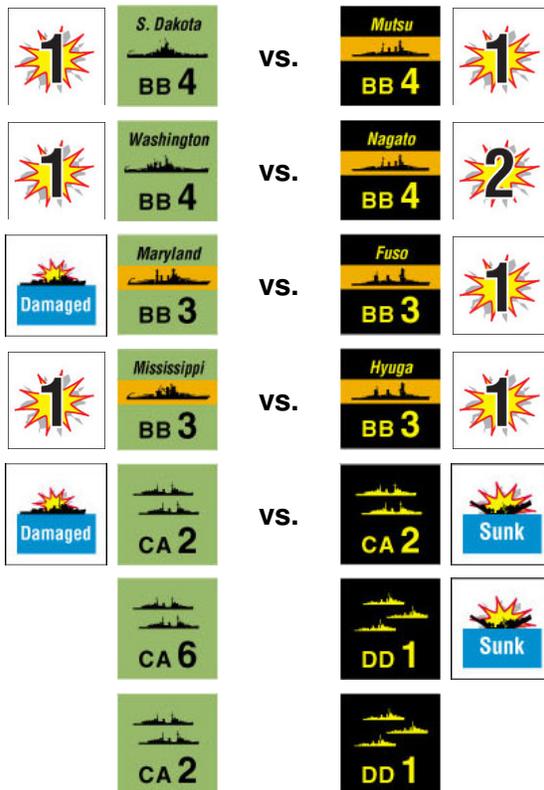
FF	2	3	4	5	6	7	8	9	10	11	12+
3-4	0	0	0	1	1	1	1	2	2	2	3



Resolve fire against screened ships

Since no ships targeted the screened carriers (and wouldn't be able to fire on them even if they had, since not all the screening ships were sunk), fleet combat is over. So who won?

This might be easier to judge by looking at all the results together.



The strategic edge has to be given to the Americans. His lights dominated (three of the four Japanese lights were sunk), and while the *Maryland* was damaged, all four Japanese battleships took hits, and the *Nagato* is only one hit away from being damaged.

Here a detailed reference to a relatively recent, but exceptionally important and interesting, rule is appropriate:

20.512 ACCUMULATING HITS:

A. DURING NAVAL COMBAT: During naval combat, combat effects on named ships accumulate during and between rounds. Combat results which are insufficient to damage or sink a named ship are repaired at sea after all naval combat in the hex has been resolved, before the named ship leaves the hex in which the naval combat took place.

The indicated hits carry on into the second and subsequent rounds. This relatively recent refinement to the naval rules has significantly changed naval combat, because ships with hits are more fragile and their increased vulnerability has to be taken into account.

Post fleet combat actions

I. AFTER FLEET COMBAT: After fleet combat is resolved for the round:

- Submarines may attack.
- Each side may withdraw some, all or none of its naval units from combat (22.6).
- Naval units in combat groups which engaged the same enemy combat group in fleet combat may be recombined into new combat groups (22.423B).
- Players may renumber their combat groups between combat rounds (22.423A).

Submarine attacks

Now the Japanese submarines could and should attack, despite the fact that the Japanese search roll failed to find an American combat group, because the Americans revealed their location by engaging in fleet combat (22.914). There will never be better targets than the American carriers, which he has a fairly good chance of finding. However, the Japanese player mistakenly holds back his submarines.

Withdrawal

Notwithstanding *Bushido*, the Japanese player faces the harsh reality of the fleet action and decides to withdraw CG1. The hits will be repaired in port at no cost, but all his battleships are vulnerable and either an air strike or another round of fleet combat would be disastrous.

The American player withdraws the *Maryland* and his damaged CA2, but decides to tough it out with his remaining ships, despite their hits.

Reconstituting combat groups

The two American combat groups that combined for fleet combat can reconstitute themselves as the American player sees fit. This is a very practical rule, because only in an ULTRA article could the players easily recall what was in the original combat groups.

The American player wants to keep his carrier force as strong as possible, which means he can't keep ten

factors in his decoy force. This isn't all that important, because each side can also renumber its combat groups. For the sake of simplicity we will combine these two steps.

Renumbering combat groups

The Japanese task is easy – there is only one combat group left. But the American player faces a difficult decision. He has one weak decoy combat group; his invasion force, which includes a CVL and a destroyer factor which will be screened and which will incur a -1 modifier for fleet combat; and his carrier strike force, which has lost four NAS and which has two four-factor battleships which have each taken a hit. Which group should be CG1?

The American strategy for round 2

How the American player numbers his combat groups is linked to a number of other factors, all of which relate to the basic American strategy at this point in the battle. Apart from accepting a minor tactical and major strategic defeat by running, how can the American player best continue the fight?

In considering this question, the American player can make several assumptions. The first is that the Japanese combat group contains the maximum four carriers, as otherwise the Japanese are simply overmatched. The second is that the Americans will make six search rolls, because the Japanese will not counterair the American land-based AAS. After all, if the Japanese use their NAS to counterair the American AAS, there will be little threat to the American ships (the remaining 13 Japanese fleet factors aren't that much of a threat). Finally, the Americans know that the Japanese will make either two search rolls (one for their combat group and one for the second round), or three (if the Americans ignore the remaining Japanese land-based air).

With a likely search edge of six to three die rolls, and three combat groups to one, the Americans might appear to have an edge, but they have to be careful. The Americans are searching for a single, powerful Japanese combat group, while the Japanese will be happy to hit any of the three American groups. The American strategy is to wear down the Japanese naval air, so that the battle ends up being decided by fleet combat. There are two ways to do this.

One is to launch an air strike, and hope to find the Japanese force. Apart from the possibility of surprising

the Japanese, air combat against Japanese air flying combat air patrol will likely cost the Japanese a NAS, and if the Americans can damage or sink some Japanese carriers, this will reduce the naval air capability of the Japanese force further (the Americans would also have the option of attacking the escorting Japanese fleet factors to weaken them for fleet combat, if there was any).

The second, entirely different, strategy is to defend and try to wear down the Japanese naval air by engaging them with American air cover, combat air patrol and defensive fire from the attacked American ships. This could cost the Japanese three NAS, and if only a few Japanese NAS carried out their air strike, the American losses might be minimal. Whether this plan works or not depends on which American combat group the Japanese find and attack, as the three American cover AAS cannot be everywhere.

There is a third, and best, American strategy – withdraw from combat while most of his forces are still in one piece. But for illustrative purposes, we won't allow the American player to choose discretion over valor.

The American player decides on the defensive strategy of counterairing the remaining Japanese AAS and flying the strongest possible defense over his carrier and invasion combat groups, leaving the hapless decoy to fend for itself. If the Japanese fail to find any American combat groups (a 50% chance with two search rolls) or if the Japanese only find and attack the decoy combat group, the American player will be content. This is risky, as even a single search result reveals whether the found combat group consists of fewer than ten naval factors, so the "decoy" is not as good a decoy as before – if the Japanese also find one of the other combat groups, they will know which one to attack.

With all this in mind, the American player decides to make his invasion force CG1. If both players roll a "1", fleet combat is automatic (22.511A). If the American player rolls two "1"s and the Japanese player rolls no "3"s, then his carrier group, as the only fast hidden combat group in the American force, can join in that fleet combat, as happened in the first round. The Americans would be fighting at a -2 modifier, but would have a numerical superiority.

If the Americans don't find the Japanese combat group, then whatever combat group the Japanese find might be in for a rough ride...

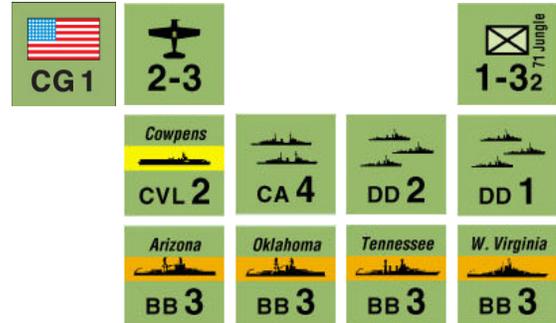
Round 2 –Order of Battle

Here are the forces for each side for the second round of combat, organized into combat groups for the second round of naval combat, along with the land-based air participating in the battle

Japan



United States



Round 2

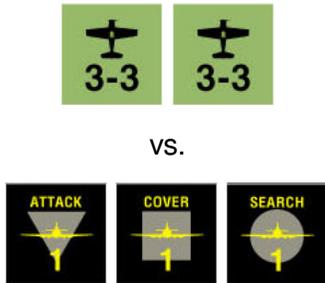
Step 1: Combat Groups

As discussed, the Americans designate their invasion force as CG1, their decoy as CG2 and their carrier strike force as CG3.

Step 2: Attacks against enemy bases

In accordance with their plan, the Americans counterair the Japanese land-based air with six NAS, hoping to knock out two Japanese AAS. Because one of the NAS comes from CG1, this lets them hold back the maximum three NAS for combat air patrol over their carrier group.

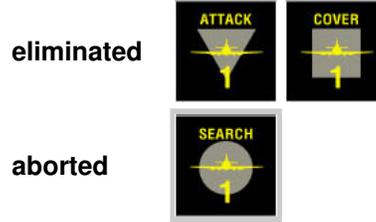
The counterair battle looks like this:



The American player rolls a "7", while the Japanese player rolls an "11".

AF AS	Dice Roll										
3	1/0	1/0	1/1	1/1	1/2	1/2	1/3	1/3	2/2	2/3	2/4
6	1/2	1/3	1/3	2/2	2/3	2/4	3/3	3/4	3/5	4/4	4/5

This isn't what the American player had in mind! His two counterair attacks have cost him six NAS and have crippled his naval air striking power. Well aware of this, the Japanese player elects to eliminate an attack and a cover AAS, keeping one search AAS for the next round.



Steps 3 and 4:

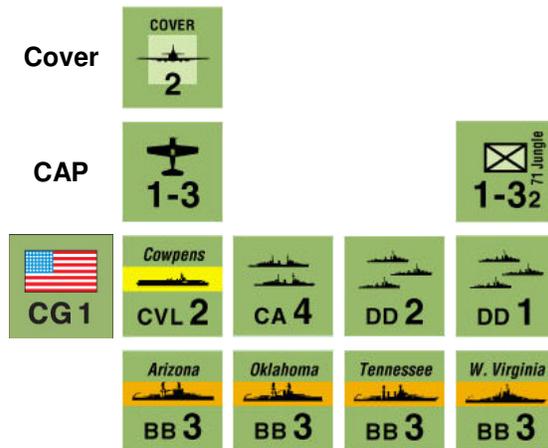
Allocation of carrier-based air units Allocation of land-based air cover

For the Japanese, this is an easy decision. He again assigns all his NAS to a single, massive air strike, hoping to find a target. The Americans split their air cover over their two main groups, giving priority to the invasion group, which has less combat air patrol.

Japan



The United States



The diagram shows American naval forces and search results for Step 5. At the top, CG 2 consists of the *Mississippi* (BB 3) and CA 4. Below this is a Magic card with a 1. The 'Cover' section shows a ship icon and the number 1. The 'CAP' section shows an aircraft icon and 3-3. The 'Used' section shows two aircraft icons with 3-3 and 1-3. Below this, CG 3 consists of the *Hornet* (CV 3), *Lexington* (CV 3), *Saratoga* (CV 3), and *Princeton* (CVL 2). Below CG 3 are the *S. Dakota* (BB 4), *Washington* (BB 4), and CA 4. At the bottom are two Magic cards with 1s.

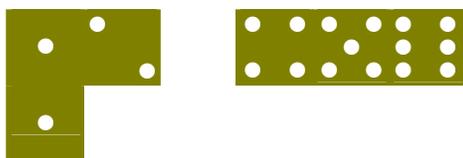
Step 5: Search

Each side gets one search roll because it is the second round of naval combat. The Japanese have one combat group, and no land-based air. The American force has two combat groups large enough to search and three search AAS. Both players have used all their Magic cards.

Japanese Search Rolls



American Search Rolls



While the American player can complain about his luck in air combat, his good fortune holds in the crucial search rolls. The Japanese find only the decoy combat group, and the Americans (almost) get the fleet combat they wanted. The plot thickens.

Step 6: Revealing combat groups

The Japanese player informs his opponent that Japanese CG1 has four carriers, confirming his worst-case scenario assumption. The Americans are taking on the cream of the Japanese navy! The American player informs his opponent that American CG2 contains fewer than ten naval factors.

Search Table - 22.45	
Search results	
No search result	The enemy combat group remains hidden and may not be attacked.
One search result	The enemy combat group is found and is eligible to be attacked. Whether the combat group consists of less than ten naval factors must be revealed.
Two search results	The number of carriers, including CVEs, but not the type of carriers, in the enemy combat group is revealed.
Three or more search results	The exact composition of the enemy combat group is revealed.

Step 7: Carrier-based air strikes

If the Americans had any air committed to air strikes, the Americans would launch their air strikes first. But they don't. The Japanese air strike is a cake walk. It's easy to picture the Japanese pilots taking out their frustration at missing their primary targets by attacking the decoy group with particular vigor...

Air strike

Four aircraft icons, each with 3-3.

vs.

CG 2: *Mississippi* (BB 3) and CA 4.



The only real question is whether the Americans can take one Japanese NAS with them, which would be handy if the battle continues. But, having refrained from air defense research, this is not to be.

Air Defense Table - 23.42											
Air DF	Dice Roll										
	2	3	4	5	6	7	8	9	10	11	12+
1	0	0	0	0	0	0/1	0/1	1/0	1/0	1/1	1/1

All 12 Japanese NAS get through to the hapless American combat group. A quick look reveals that 5 NAS guarantee sinking the damaged Mississippi, so the other 7 NAS attack the American cruisers.

Just for fun, let's roll for both attacks:

Naval Attack Table - 20.51, 22.55, 23.44												
AS	FF	Dice Roll										
		2	3	4	5	6	7	8	9	10	11	12+
5	13-15	2	2	2	3	3	3	4	4	5	5	6
7	19-21	2	3	3	3	4	4	5	5	6	6	7

Step 8: Land-based air attacks

The American player again has to decide whether to use his three attack AAS. He knows that Japanese CG1 contains four Japanese carriers and that none of the 12 Japanese NAS were held back as combat air patrol. He also knows that it must contain at least 24 naval factors, because there must be one fleet factor for each carrier factor. We will assume that he also knows that Japan has one air defense research result. This means that the Japanese will roll on the "4" row of the Air Defense Table, so a Japanese dice roll of "6" will mean the attack fails:

Air Defense Table - 23.42											
Air DF	Dice Roll										
	2	3	4	5	6	7	8	9	10	11	12+
4	1/0	1/0	1/1	1/1	1/2	1/2	2/1	2/1	2/2	2/2	2/3
5	1/0	1/1	1/1	1/2	1/2	2/1	2/1	2/2	2/2	2/3	2/3

In fact the odds are worse than this, because the Japanese also have a five-factor battleship in their force, which increases their air defense level by one. Aware of this possibility, the American player decides the time has not yet arrived for desperate measures, although, as we are about to see, the American force has actually

already passed that point and probably he should have used his three AAS and hoped for the best.

Step 9: Fleet combat

The American player achieved two search results against Japanese CG1, which allows two American combat groups to attack it. American CG3 may certainly do so, as it is hidden and contains only fast ships (although it used its naval air to counterair the Japanese land-based air, so it can only engage in fleet combat). But what about American CG1? It is slow, but Japanese CG1 is the corresponding enemy combat group, so that's okay, isn't it?

No, it's not, because before you get to rule 22.513B, which the above accurately describes, there is 22.512:

22.512 HIDDEN COMBAT GROUPS: Fleet combat is not mandatory for hidden combat groups. A hidden combat group may, at the owning player's option, engage a found enemy combat group in fleet combat if:

A. The hidden combat group is not carrying cargo.

B. The hidden combat group did not make a surprise roll if it launched an air strike (22.4611C).

22.513 RULES OF ENGAGEMENT FOR HIDDEN COMBAT GROUPS:

• ...

B. Subject to this restriction [in 22.513A]:

• a fast hidden combat group may engage any found enemy combat group in fleet combat.

• a slow hidden combat group may engage a found enemy combat group with the corresponding number.

Damn! American CG1 is carrying cargo, and so is prohibited from engaging Japanese CG1. Ironically, had the Japanese player rolled a "1" search roll, the two CG1s would have blundered into each other and both American combat groups could have taken part in the ensuing fleet combat.

So what should the American player do? American CG3 has 12 fleet factors, which is about the same amount as Japanese CG1 (the American player can expect that it probably has 13 fleet factors, which is in fact the case). The two American BB4s also each have a hit. In addition, the Japanese will have a +1 Naval Nationality DRM advantage. All things considered, the Japanese will have a number of advantages in the fleet combat.

The one thing the Americans have going for them is that they have more naval units (especially fleet factors) in the battle as a whole, and an increasing naval advantage overall. The stakes are also higher for the Japanese, as their strategic position will deteriorate if the

invasion succeeds.

If the Americans somehow win, or even draw, the fleet combat, they might be able to tough out the battle by wearing down the Japanese fleets which are protecting the Japanese carriers. Even if the American carrier force withdraws (and this might well also depend on how the fleet combat goes), the American invasion force, with three AAS flying air cover and one NAS flying combat air patrol, might give a good account of itself in fleet combat against the Japanese.

Wishful thinking? Probably. In this position, I would not initiate fleet combat and withdraw both American combat groups, accepting defeat with a feigned good grace, silently (or perhaps not so silently) cursing the consistently high Japanese combat dice rolls (especially the “9” and “11” rolled by the Japanese army air).

But many American players would press on, because they would fail to realize just how the battle has turned against them, because they wouldn’t want to admit that the American idea of hitting the Japanese army air may have been wrong, or because their motto is “no balls, no babies”. With that in mind, let’s take a walk on the wild side and join the American player in hoping that the luck evens out.

Screening

The American carriers are screened. They are not in any danger – at this point.

The defender ranks his ships

We’ve seen this already. It’s easy for the Americans – their two BB4s are identical and ranked first and second in either order, then the American light ships.

The attacker’s heavy ships select targets

B. ATTACKER’S HEAVY SHIP TARGETS: The attacker selects targets for his heavy ships.

- The attacker must target the first ranked (largest) unscreened enemy heavy ship with at least as many factors of his own heavy ships, if possible, before targeting the second (next largest) unscreened enemy ship, and so on.
- Subject to this restriction, the attacker may concentrate his fire against enemy targets of his choice:
 - The attacker may assign additional heavy ships to any enemy heavy ship already selected as a target, either concentrating all his heavy fire on the largest enemy ship, or targeting the largest enemy ship with a number of heavy ship factors equal to the size of that ship, then concentrating all his remaining heavy fire on the second largest enemy ship, and so on.
 - Enemy light ships and screened enemy ships may only be targeted if all unscreened enemy heavy ships are targeted by an equal number of attacker heavy ship factors.

The Japanese now have to match the first American

heavy ship. This forces the *Yamato* to take on the *South Dakota*. The only Japanese choice involves the *Hiei*. Should it team up with the *Yamato*, so the Japanese fire with eight fleet factors, or fire independently at the *Washington*? The right course of action for the Japanese is fairly easy to determine, especially after looking at the Naval Attack Table:

Naval Attack Table - 20.51, 22.55, 23.44												
AS	FF	Dice Roll										
		2	3	4	5	6	7	8	9	10	11	12+
1	1-2	0	0	0	0	1	1	1	1	2	2	2
-	3-4	0	0	0	1	1	1	1	2	2	2	3
2	5-6	0	0	1	1	1	1	2	2	2	3	3
3	7-9	1	1	1	1	2	2	2	3	3	3	4

Remember that the *Yamato*, as a BB5, has a Naval Nationality DRM of +2, so if the *Hiei* combined with it, this advantage would disappear (the lower of the two Naval Nationality DRMs would govern). A Naval Attack dice roll on the “5-6” row with a +2 modifier is not much different than a roll on the “7-9” row with a +1 modifier. In additional, two targets are definitely better than one, since it is almost certain that both will result in at least one hit.

So the two Japanese battleships wish each other well and pair off against the two American battleships. The five Japanese lights face off against the four American cruiser factors. All the advantages lie with the Japanese. Will the Emperor be overjoyed?

The line up looks like this, prior to the resolution of fleet combat. As can be seen, the Americans are outgunned at every level and their battle plan is in serious danger of falling apart. Only poor Japanese fleet combat dice rolls can save the two American four-factor battleships:



Ouch! That’s a kick in the head. The American cruisers are almost annihilated and the Japanese aren’t scratched. Was this a night action?

Resolve heavy fire

Now the American player really holds his breath. He isn’t receiving any radio transmissions from his cruisers, which were assigned to keep the Japanese light ships at bay, so concern is mounting on the American flagship.

FF	Dice Roll											
	2	3	4	5	6	7	8	9	10	11	12+	
3-4	0	0	0	1	1	1	1	2	2	2	3	
5-6	0	0	1	1	1	1	2	2	2	3	3	

FF	Dice Roll											
	2	3	4	5	6	7	8	9	10	11	12+	
3-4	0	0	0	1	1	1	1	2	2	2	3	

The defender’s heavy ships select targets

The American ships have no choice but to return fire.

Resolve heavy fire against lights

Not applicable.

Light ships select targets

The lights fire on each other.

Resolve light fire

FF	Dice Roll											
	2	3	4	5	6	7	8	9	10	11	12+	
3-4	0	0	0	1	1	1	1	2	2	2	3	
5-6	0	0	1	1	1	1	2	2	2	3	3	

In a textbook illustration of how important fleet combat modifiers can be, the Japanese smash the rest of the American force. The *Yamato*’s +2 modifier sinks the *South Dakota* (two hits would only have damaged it), and the *Hiei*’s +1 modifier damages the *Washington* (one hit wouldn’t have been enough)

It could have been worse – at least the Americans inflicted hits on the two Japanese battleships.

Resolve fire against screened ships

Not applicable.

Post fleet combat actions

Submarine attacks

The Japanese submarines now attack what’s left of American CG3. On a die roll of “1” to “4”, the first Japanese submarine attacks one of the American

carriers; on a die roll of “5” it attacks the *Washington*; on die roll of “6” it attacks the damaged American cruiser (22.93E). The Japanese roll a “2”, and execute their submarine attack against the *Lexington*, using the Submarine Attack Table. The net modifier is 0, because of the reduced Naval Nationality DRM of fast carriers. The dice roll is a “9”, and the American carrier is sunk.

Submarine Attack Table - 22.94												
DR	2	3	4	5	6	7	8	9	10	11	12+	
Sub	*	0	0	1	1	2	2	3	3	4	5	
Modifiers												
+3	Naval Nationality DRM (22.552A, 22.9411)											
-2	Relative torpedo and ASW research levels (22.9412)											
-1	Every three land-based air squadrons used for search in the submarine attack hex, operational fast carriers and CVEs in the attacked naval force (round down) (22.9413)											
-	Every three destroyer factors in the attacked naval force, including destroyers which are carrying units or BRPs (round down) (22.9414)											
-	Every three ASW factors in the relevant SW box in excess of the corresponding number of enemy submarines (round down) (22.9415)											
-1	For each previous submarine attack made against the defending naval force in that naval combat round (22.9416)											
+1	If the attacked naval unit is damaged or involved in carrying out a naval activity which reduces its effectiveness (22.9417)											
-	Submarine or ASW codebreaking advantage (22.9418)											

The second Japanese submarine then attacks. The targeting roll is a “3”, and the Japanese attack the *Princeton*, with a -1 modifier. The Japanese roll a “11”, which goes to a “10”, and the rout is complete.



Withdrawal

The round has been a disaster for the Americans, mainly because of his rash decision to engage in fleet combat with the Japanese. Here are the remaining forces

after the first two rounds:

Remaining forces

There is simply no way the Americans can continue the battle. Their two remaining carriers are completely vulnerable in fleet combat as they have no protecting fleet units – they would be slaughtered. If the invasion force stays in alone, it is vulnerable to Japanese air strikes, as the three cover AAS, the single combat air patrol NAS and the air defense of the naval force itself would stop no more than half the Japanese naval air

striking force, which is still completely intact. The only slim American hope would be fleet combat, but the presence of the American invasion force prevents the Americans from initiating fleet combat as a hidden force, so the only fleet combat that could occur would be preceded by a Japanese air strike. Then there would still be the +2 fleet combat modifier in favor of the Japanese to overcome.

Could the Americans win if they control the dice? Only if the American carrier force could find the Japanese while remaining hidden, and launch a surprise air strike which bypassed the Japanese combat air patrol. This might weaken the Japanese force, without the Japanese being able to retaliate. Without surprise, the result would just be an exchange of NAS, which would no longer be to the American player's advantage.

Even so, if the entire Japanese naval air strike force somehow disappeared, the battle would come down to a fleet action between the slightly damaged *Yamato*, *Hiei* and five lights, against the marginally larger escorting American fleet units. The Japanese would have a +2 modifier in the fleet combat (+1 for their Naval Nationality DRM and +1 because the American fleet units are escorting the invasion force). The *Yamato* would have an additional +1, for a staggering +3 net modifier!

So the Americans withdraw, and study their After Action Reports to determine just what went wrong. Meanwhile, every officer and sailor in the Imperial Japanese Navy is issued an extra ration of sake.



Post-Mortem

While a comparison of the remaining forces makes it clear that the Americans can't continue, a comparison of the losses in the first two rounds make it obvious that the Americans have suffered a shattering defeat by any standard.

Losses

Sunk	Lexington CV 3	Princeton CVL 2
	S. Dakota BB 4	Washington BB 4
Damaged	CA 6	CA 2
	Maryland BB 3	CA 2
air losses	3-3	3-3
Sunk	CA 2	DD 1
Damaged		
air losses	2-3	1-3

What went wrong? Did the Americans try for too much with the forces they had available, did they make mistakes during the battle, or were they just unlucky?

We have solicited the opinions of several experienced players, who will each have the opportunity to second-guess the American approach to this ill-fated engagement. Without stealing their thunder, we can finish by pointing out a few key points:

- Nationality modifiers are very important in naval combat. In fleet combat, a higher-quality force has a significant advantage.
- As a corollary, if one side has an encumbered combat group, it is at a serious disadvantage.
- Land-based air is often not as important as it appears.
- Submarines can be very effective in naval combat.

AFTER ACTION REPORTS

The Armchair Admirals Share Their Thoughts

by Various

With the battle decided, it's time to give the news to supreme headquarters on both sides. The Japanese will have a pleasant time, and may be invited to a tea ceremony with the Emperor. The Americans, on the other hand, will have to endure a severe critique from Admiral Nimitz and his A WORLD AT WAR counterparts ...



Strategic Confusion

by Ed Schoenfeld

The Americans have a lot of blame to spread around, and it's tempting to concentrate it on the over-aggressive move to use a carrier TF in fleet combat or deflect it onto bad dice in that combat. But while the engagement decision and the subsequent poor dice rolls are the immediate causes of the American disaster, the possibility of such a result was created by the American player's confused strategic decisions before the naval combat ever started.

At the start of this combat, the American player had two distinct strategic objectives:

- Sneak a quick invasion onto an undefended Japanese-controlled island
- Draw out the Japanese fleet and use superior counter-intercepting forces to (hopefully) inflict serious damage on it or (at the very least) win a strategic victory by grinding the Japanese air and naval forces down.

The American player was correct to think that both these possibilities should be part of his plan – the best road to victory is one that wins along multiple paths. But these options are sequential – it's a mistake to try for both of them at the same time.

Once a Japanese force successfully intercepts the small invasion force, that part of the American strategy is done and it is a mistake to try to force the invasion through. While the invasion might still succeed *if the U.S. wins the naval battle*, the American player's strategic focus must shift to winning the battle. He should not let himself be distracted by attempts to ensure the success of the invasion. At the very least, if the American player is still focused on making the invasion succeed (as was the case here), he needs to make all his combat decisions in that context and not get sidetracked by marginal opportunities to hurt the Japanese fleet.

Similarly, the chances of decisively crushing part of the Imperial Japanese Navy were greatly reduced once the Japanese intercepted with forces roughly equal to what the Americans could get into the fight. Again, a tactical blunder by the enemy combined with hot dice can wipe out an enemy combat group – that's how the Japanese won the battle, after all. But no one can *count* on that. Given the correlation of forces, the American player must make an active decision to go for a decisive win in naval combat; he simply doesn't have the force superiority to get a decisive win with part of his fleet while other parts do the grinding down. (If he did, the Japanese might not have come out to play!)

So now we come to the choice to grind the Japanese down. I'll leave it to other commentators to discuss whether counterair against the Japanese land-based air was the most effective way to do that. Here I'm going to focus on two decisions, one regarding the allocation of forces, the other when to engage the enemy.

First, if the American player is going to base his strategy on trying to hurt the Japanese in fleet combat, it is imperative to have a "hammer" combat group – one optimized for fleet combat – that will be free to engage when the search dice make it possible. Combining the invasion force with the heaviest fleet combat group

available, while useful in illustrating the somewhat tricky, but very important, rule on how combat groups may be organized for naval combat, is thus strategically risky.

If one assumes that the invasion was itself a decoy, the encumbered naval force should remain a decoy. Arguably one more naval factor should have been assigned to it so that its size would remain a mystery to the Japanese should they have obtained a single search result for it. But this is a subtlety, and the real point is that in this battle the forces are even enough that the invasion force inevitably will be at risk. Left as it was, the invasion force could be wiped out by an enemy air strike or in fleet combat, but this is a more acceptable result in *A WORLD AT WAR* than it would have been in the real war. But in any case, against one or two Japanese combat groups with Japan's land-based air search capability neutralized that chance is small, and in the battle that developed the point was no longer to invade but to hurt the Japanese fleet.

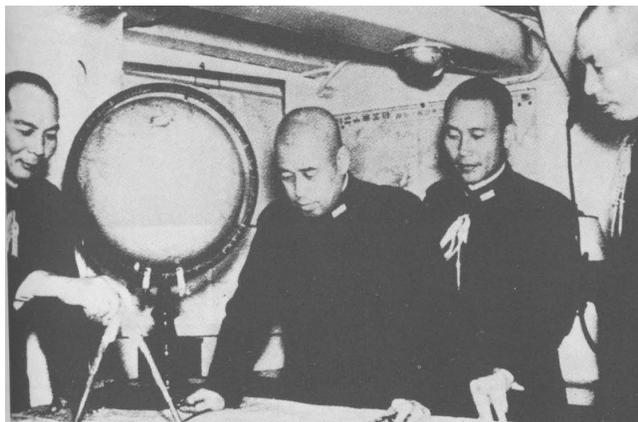
Whether the American player could have brought about a favorable fleet engagement with the Japanese is problematic, given his reliance on his slow three-factor battleships. Fast four- and five-factor battleships are ideal for this task, because if they are not found by the enemy they may, as fast, hidden combat groups, force a found enemy combat group into fleet combat. Of all the naval combat rules that it is useful to know, understanding how the search rules impact the composition of combat groups is perhaps the most important. In relation to this battle, the point is that with the heaviest American combat group encumbered by the invasion forces, *there was no chance to force favorable fleet combat.*

Second, with the American forces allocated as they actually were (to optimize supporting the invasion), the American player's decision to force fleet combat in the second round was, while instructive from the rule perspective, excessively optimistic. At that point, the American player knew that the Japanese combat group contained 12 fast carrier factors, which means it must also contain either 12 or 13 fleet factors. The Americans had 12 fleet factors, including two four-factor battleships which each had one hit. The Japanese had at least a +1 Naval Nationality DRM advantage (and possibly a +2 modifier, depending on how many five-factor battleships were in their force). The odds of the Americans winning (or even surviving) this fleet combat were very small.

It's interesting to speculate what might have happened

in subsequent rounds if the Americans had not chosen to engage in fleet combat in round two. The Japanese would still have a powerful force of 12 NAS, but the Americans had eight NAS and nine AAS (three search, three air cover and three attack squadrons). Unless the Japanese took a round or two to counterair the American land-based air, the U.S. would continue to have a search advantage, although the encumbered American combat group makes that advantage difficult to exploit. Tactically, the Japanese would have an edge against any single American combat group, but they likely need to keep some NAS back for combat air patrol and would be more vulnerable to a surprise air strike. Absent the Japanese forcing fleet combat and rolling dice as hot as in the actual example, it seems likely that the Americans would have succeeded in bleeding the Japanese somewhat, although less than would have been possible with combat allocations optimized for combat. Very possibly the American might have gotten the invasion through. And even if the Americans had been forced to withdraw, the Japanese losses would probably have been greater and the American losses less critical (which isn't saying much, considering the actual outcome).

Perhaps the main lesson from this battle is that when picking a fight, it's important to keep your eye on the strategic objective.



The Gambler

By Randy Scheers

From *The Gambler*, by Kenny Rogers:

*You got to know when to hold 'em, know when to fold 'em.
Know when to walk away, know when to run
You never count your money, when you're sittin' at the table.
There'll be time enough for countin', when the dealin's done.*

Naval combat is always a gamble. When things go well, you can look like a genius, and when the luck turns, even the best admiral can look like a fool.

So, while there are many things that could be said about this naval combat, I think there are two key decisions that far outweigh everything else.

The first decision was made by the Japanese after round one. They decided to pull out their battleship task force even though they had only lost some light factors thus far, as they had three battleships within one point of being damaged. Rather than hang around and hope to inflict more hurt on the U.S., they withdrew while in good shape. If they had stuck around and lost two or three of their battleships, the Japanese wouldn't be celebrating right now.

The Americans, on the other hand, decided to push things. Every battleship in their non-encumbered combat group had at least one hit on it and they had lost three of their 13 NAS, yet they decided to keep fighting. And since they didn't quit, they paid dearly.

Another way to look at it is to consider the composition of forces at the start of round two (see page 19). The Japanese had a fully functional carrier combat group. The U.S. had their best battleships in an encumbered combat group that likely couldn't fight and, if it did, would fight poorly; a carrier force with no air punch and weakened surface ships; and a remnant of a combat group asking to get sunk. Given that, the results were not a surprise.

So what should the American admiral have done differently in combat round two?

First, they should have recognized that the situation was no longer in their favor and not continued the fight at all. They should have withdrawn at the end of the first combat round, accepting a damaged three-factor battleship and a failed invasion as the cost for sinking three more factors of Japanese light ships and using up some Japanese oil.

Second, having decided to keep fighting, no combat group with a just slow three-factor battleship (and with a hit on it at that!) and CA4 should be kept around. The odds of it doing anything useful are slim and the odds of it getting eliminated are great. It should have been sent home after round one.

Third, with only 10 NAS, the Americans couldn't afford to waste it on land-based air. They should have allocated nine NAS to the carrier combat group at the end of round one (leaving one NAS for CAP on the encumbered combat group), and held those nine NAS back to attack the Japanese navy. If the Americans had

done that, they would have had a shot at the Japanese carriers, which would have made their losses more acceptable.

There is one last point that is important enough to mention. Naval combat with an encumbered group can be extremely hazardous. The Americans should have had at least a second carrier task force before they tried this invasion. As it was, they did not have enough air to deal with both the Japanese navy and the Japanese land-based air, so the odds were stacked against them from the start. The American land-based air, while helpful, could not completely make up for the basic inadequacy of the American forces – and undertaking an operation with insufficient forces necessarily involves an element of risk, which here morphed into a catastrophe.



Hindsight is 20-20

By Tim Schroeder

The context of any military operation can be crucial, and the introduction to this naval battle was vague as to the specific goals for each side and the overall balance of forces in the Pacific theater. Before getting caught up in the details and excitement of the naval battle, one should have a clear sense of the goal. In this battle, are the Americans determined to take the island no matter what? Or is the invasion just bait to lure the Imperial Japanese Navy out from port? On the Japanese side, how important is that undefended island? Is it already

late in the war, when the odds for any future naval battle are likely to be worse? Knowing what one hopes to get from a naval battle may or may not affect one's tactics, but it will certainly help in making the decision as to when to withdraw and return to fight another day. In other words, before fighting a naval battle, decide what "winning" means: a mission accomplished, more losses inflicted than taken, inverting important enemy naval units, or something else?

In this case, I'll have to trust that the commanders kept their goals firmly in mind, although this wouldn't be the first naval battle ever fought where the commanders weren't clear as to their goals or were trying to achieve inconsistent objectives. And this is not a criticism of A WORLD AT WAR players – the historical battle of Midway is a perfect example of the dangers of trying to do too many things at once. What follows are my comments on the execution of the battle, made without "looking ahead," either to the results or to the other commentaries.

I can't really take issue with the forces either side brought to the battle. Sure, it would be nice (on both sides!) to have more, but there's more to the war than just one naval operation. Few commanders have ever entered a battle without thinking they should have had stronger forces, but the strategic situation often determines what forces can be committed, while the tactical position of units on the mapboard will impose other limits. And when forces are concealed by TF markers, one often has to guess as to what the enemy has brought to bear. Sometimes you just have to fight with what you've got. One minor quibble, though – the Americans sent TF4 as a decoy force, but it contains 12 fleet factors. Why didn't they leave a CA2 behind before counter-intercepting? Ten factors makes just as good a decoy; it's not as if 12 factors would be a viable decoy for more than one round anyway, and it needlessly risks two extra factors.

(Editor's note: This is true in hindsight, but if the American TF4 engaged in fleet combat and had only a CA2 sunk or damaged, it would still contain 10 fleet factors and therefore would count for searching and would have a higher air defense level. There is something to both sides of this debate, which illustrates two distinct points: 1) this game is often not easy to play well; and 2) it is almost always better to have more units in a battle than fewer units – unless you lose them...)

In arranging their combat groups for action in round one, I think the Americans were being overly optimistic

about what their invading naval force might accomplish in fleet combat.

First, it contained only 18 fighting fleet factors, so there is a decent chance that it will be outnumbered by the Japanese. Even if it were to engage with a Japanese carrier combat group, it will have only a slight numerical advantage during fleet combat (and that could easily disappear during the air strike that would likely precede the fleet combat).

Second, the Americans underestimated the disadvantages of fighting with an adverse -2 fleet combat modifier, especially with the backbone of their combat group being relatively brittle three-factor battleships. Even matched against their Japanese counterparts, the odds that the American ships will be damaged are *twice as great* than that the Japanese ships will be damaged. That's not to say one must blindly place an invading force in an "unopposed" combat group slot, but expecting it to accomplish anything positive in fleet combat is the sort of excessive optimism that can easily cause things to go wrong.

Should the U.S. have counteraired the Japanese land-based air during round one? It would be easy to argue that this was a mistake, and that the U.S. didn't have any "spare" NAS to allocate to counterair (as an aside, does anyone ever say, "I have too many NAS on the board"?). However, if just two Japanese air squadrons are eliminated (a "2/#" result), the Japanese NAS would be destroyed, which would limit the Japanese to two additional search dice from air; eliminating four squadrons (unlikely unless the U.S. reduces its combat air patrol) would limit the Japanese to one additional search die from air. In both cases the Japanese search capabilities would be reduced for the remainder of the battle; a one-round sacrifice to make the counterair attack could yield several rounds of advantage. Of course, whether this is worthwhile depends on whether the naval combat lasts several rounds.

The counterair attack doesn't necessarily even telegraph the American intentions. With three combat groups, the Japanese have to at least consider the possibility that the eight NAS used against the air base was only a portion of the American striking power. I tend to think the decision to fly the counterair was reasonable, and was neither "brilliant" nor "foolish".

On the other hand, I think the Japanese were exactly right to ignore the American land-based air; three AAF are too tough a target for what the Japanese had available. The search squadrons are the most crucial, and the Japanese would have to eliminate three AAS to

eliminate even one search squadron. However, the Japanese were being rather gutsy allocating all their NAS to strike. They are “secure in the knowledge that the nearby Japanese air base” absorbed most of the American firepower *only* if the contents of the American combat groups are known. In fact, the counterair could have represented less than a third of the American naval air strength. The Japanese were playing with fire.

(Editor’s note: This is hard to say. In real games, of course, the players have less knowledge of the opposing forces than in an analysis of this sort, which was conducted by a single person to illustrate some of the more common naval combat rules and strategies. But there will also be battles where both sides have a fairly accurate idea of the opponent’s maximum carrier strength. Probably the most important point to take away from this part of the battle is that the opponent’s carrier-based counterair attacks are an important factor to take into account when determining your own naval air allocations.)

While I was willing to support the American decision to neutralize the Japanese land-based air, I think they erred in not sending their three attack AAS against the Japanese CG1 in round 1 (see page 14). Because the Americans know from their search result that there are no carriers in CG1, and saw two small naval forces intercept, they have a very good idea of what is in CG1 (the American player knows exactly what is in CG1 unless neither Japanese combat group contains fast carriers, which would be good news for the Americans). Japanese CG1 has no air cover, no combat air patrol and an air defense level of three. The most likely result of the air attack is one squadron eliminated (which will probably round away to no loss later in the turn), one squadron aborted, and one squadron attacking. Against the light ships, that one squadron would probably damage a Japanese cruiser. That would in turn give the U.S. light ships a 10:2 ratio for the ensuing fleet combat, allowing a 6:2 attack vs. the Japanese DDs, while the remaining two CA2 join with the *Maryland* and *Mississippi*, raising each of their 3-factor attacks to 5-factor attacks – improving those attacks by an entire row on the Naval Combat Table. I’m not sure what better use the Americans hoped to find for those three squadrons – a carrier? But after air cover, combat air patrol, and probably a better air defense, there isn’t likely to be any effect, even if that chance presents itself.

(Editor’s note: There are elements of fantasy and

hindsight in this analysis, but there is also something to be said for the “nothing ventured, nothing gained” approach in naval combat. At most the American player would “waste” his attack air squadrons (and lose an AAF if the Japanese air defense dice roll was high), and in return he would have a chance of improving his overall result in the ensuing fleet combat.)

The American decision to engage Japanese CG1 with his two combat groups in round 1 was a good idea. In addition to the logic presented in the article, the Americans will have a chance to replace any losses in their carrier escort group with ships from the decoy group, as they are allowed to reorganize after the round ends (22.423B).

I do disagree with both (!) players’ decisions to use Magic cards to obtain fleet combat modifiers in this situation. This battle will be won or lost by air power, not the surface ships, and the codebreaking cards on both sides should have been committed to search. There are certainly situations in which fleet combat is more important and the use of codebreaking can be justified, but in this case the invasion combat group isn’t involved in the fleet combat.

As noted in the article, the Japanese player was wrong to hold back his submarines in round 1. There are four American carriers – a Japanese submariner’s dream come true.

After round 1, the Japanese player wisely withdraws his combat group. His remaining carrier group can stand up to any American combat group, and the manner in which search results limit the way combat groups can engage means he is unlikely to have to fight more than one combat group in round 2 – if there is one.

At the end of round 1, the American player makes several mistakes (in my opinion):

- The American player is right in wanting to keep his carrier group as strong as possible, but to be consistent he should return all 10 NAS to that combat group after fleet combat is resolved (22.473). At the very least, he should return nine NAS to his carrier group and leave only one NAS in the invasion group, which would allow for a small combat air patrol over the invasion group, although I think it’s more important to keep the carrier group as strong as possible rather than have a single squadron of combat air patrol over the invasion group.
- When reconstituting his combat groups after the round, the American player neglects to transfer a

CA2 from the “decoy” combat group to the carrier group (which would strengthen it from 23 to 25 factors).

- The American player also failed to withdraw the *Maryland*, which has become nearly useless. A combat group that isn’t large enough to provide a search roll is of very little value, especially since even a single search result means the combat group must be identified as having less than 10 factors. The remaining CA2 should probably be withdrawn as well, along with the *Maryland*, although it could remain in the battle. It would be fast, and might be able to join one of the other combat groups in fleet combat.

The American player also makes some mistakes once round 2 begins:

- Placing the invasion combat group as CG1 for round 2 only repeated the “irrational exuberance” of round 1. With an adverse -2/+2 net DRM for fleet combat, that combat group isn’t strong enough to handle a strong Japanese combat group, especially if it has to first weather an air strike before engaging in fleet combat
- I really didn’t like the American counterair of the Japanese land-based air in round 2. Going into round 2, the American carrier group (assuming all 10 NAS and the additional CA2 are there) would still be at nearly full strength. The round 1 counterair eliminated two Japanese search dice; the U.S. should try to ride that advantage for the rest of the combat. A second round of counterair needed three kills before the final search die provided by the Japanese LBA is eliminated, and wore down the American NAS force. Instead, the Americans should have gone for a combination of combat air patrol and an air strike.

It’s hard to play “what should have been”, but the Americans brought much of the round 2 disaster on themselves. Searching in round 2, the Americans found the Japanese combat group twice, and the Japanese found one American combat group once. At worst this should have resulted in an exchange of air strikes – probably 8 NAS for Japan and 6 NAS for the U.S. The Americans would have three cover AAS vs. only 1 cover AAS for Japan. If the American combat group Japan found contained carriers, after air cover, combat air patrol and air defense, the results should have been roughly even. If Japan found the invasion combat group,

they would have had to endure a nasty surprise air strike, then done significant damage to the invasion force. And if Japan found a lone CA2, they would curse their luck, take the nasty surprise air strike, then sink the CA2 in revenge. All these are much more palatable results than what the Americans actually suffered.



Lessons Learned

By Bruce Harper

No one naval battle, especially one contrived for illustrative purposes, can teach A WORLD AT WAR players everything they might want to know about naval combat. But to finish up this issue, here are some key principles which were reinforced by the battle analyzed in this issue:

1. Carrier-based NAS are more valuable than land-based AAS, and the strategy of trading the former for the latter has to be carefully thought out.
2. In fleet combat, modifiers are very important; a -1 modifier gives the other side a big edge, while a -2 modifier makes winning almost impossible.
3. Because encumbered combat groups incur an adverse -1 modifier in fleet combat, it is risky to try to force through an invasion in the face of serious enemy resistance.
4. The number of combat groups which can engage a single enemy combat group is limited by the number of search results achieved, so having more naval units in a battle is not as useful as it seems.
5. Submarines can be dangerous.
6. Good rolls always help!