

run 5



THE JOURNAL OF STRATEGIC STUDIES GROUP

Issue 3

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Featured in this Issue

- ★ **Guadalcanal** – a scenario for *Battlefront*
- ★ **Zitadelle** – a scenario for *Europe Ablaze*
- ★ *Battle of Antietam* reviewed
- ★ Part 3 of our directory of World War II warships in *Carriers at War* format.

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"*Carriers at War* is the best game available on World War II carrier operations. It is, perhaps, the best wargame of 1984 on any topic."

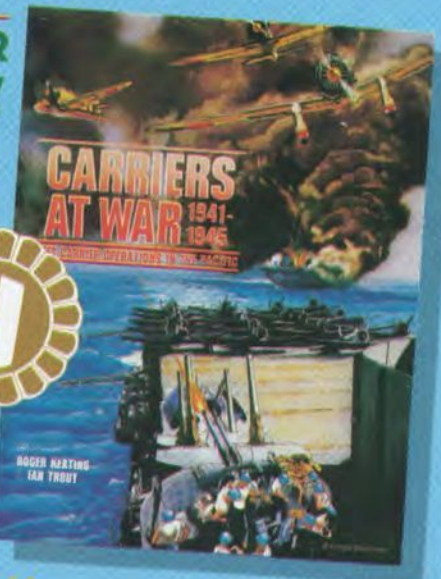
"In actual play, the computer is no more predictable than a human counterpart. It is capable of undertaking daring and risky manoeuvres, or it might play conservatively. You can never be sure."

"...It's an excellent game — playable, enjoyable and tense. Kudos to SSG, and I hope they continue producing products of this high level for others to try to emulate."

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"All in all, *Carriers at War* is one of the best computer wargames around, and is definitely the finest programming accomplishment in quite some time. You gotta get it!"

Winner of U.S.A.'s Charles Roberts Award for Best Computer Game 1984-1985, the first Australian Game to win this award.



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"*Reach for the Stars*... is just about the best science fiction game for the thinking person available on any microcomputer."

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"*Reach for the Stars* is a stimulating program."

"*RFTS* is, after a little playing, a very user friendly game... (It) offers features to be found in no other space game. Its great artificial intelligence and careful design could only be expected after Roger Keating's many successful designs for SSI and Ian Trout's long hours of work in development. My only hope is that *RFTS* is soon followed by more games of the same quality."

"... once mastered this might be the only game you'll ever want to buy for your C-64. Indeed, it would be worth buying a computer to play it. Definitely one of my most favourite games and a classic."

"In summarizing, *RFTS* is an excellent game. It is fast and intelligent, and the game mechanics are simple but the strategy required is quite devious. Add to this the natural strengths of a game employing four people in subtle but all out competition and you have a winner."



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Run 5

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July, 1986

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Run 5 is available wherever you buy our games or you can order it direct from SSG. The subscription rates are shown elsewhere on this page.

EDITOR'S CHANCE

I suspect the painting on the front cover of this issue has given away the fact that we have released a new game.

Well... we have!

*Battlefront is now available everywhere (we hope). If you're having trouble finding a copy, give **Electronic Arts** a ring on (415) 571-7171 if you live in North America, otherwise contact our Australian Office.*

Given that there is probably a certain amount of personal bias in my evaluation, I'm happy to inform you all that **Battlefront** is a terrific game.

What's more, there is an almost limitless source of material for additional scenarios. Enough to keep this magazine humming forever!

In coming issues we plan to explore a wide variety of battlefields; from the muddy trenches of World War I to the bitter-cold plateaus of North Korea.

There will be two **Battlefront** scenarios in the next issue. The topics will be chosen from the Gallipoli fiasco of 1915, the Russo-Finnish War of 1939, the British counter-attack at Arras in 1940, the struggle for the Kokoda Trail over the Owen Stanley Mountains of New Guinea in 1942, the opening phases of the Smolensk envelopment in 1941 and the Italian invasion of Greece from Albania in 1941.

The winning **Carriers at War** scenario from our Design Contest will be published if we get the judging completed in time, otherwise we'll publish a **Europe Ablaze** scenario covering an episode from the air war in China in 1944 using a reduced ground scale.

Other articles will include a detailed breakdown of World War II armies for use in creating **Battlefront** scenarios and a listing of World War II aircraft types for use in **Europe Ablaze**. We'll publish some of your letters (only the complimentary ones, of course!) and, wherever possible, disparage our competitor's products. Speaking of disparaging... there will be a review of something. Just what we'll pick on we haven't decided yet.

THE DESIGN CONTEST

We have received 46 entries for the **Carriers at War** contest but only 3 for

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To subscribe, consult the schedule of fees above and make sure you include your computer type (Apple or C-64) with your cheque or money order if you want a disk subscription. A disk subscription entitles you to however many disks are necessary to complement all the scenarios in the magazine.

For those of you who don't want to spend this extra money. . . don't worry. All the data necessary to build the magazine scenarios will be provided for you.

US subscribers should send a cheque or money order to our US office. Everyone else should send their cheque, money-order, Visa or Mastercard to our Australian office.

Individual scenario disks can be purchased for \$15.00 each.

Europe Ablaze. We are going to extend the time for the **Europe Ablaze** contest for another three months; i.e. you have until September 30th to lodge an entry.

You can get the details from either the first or second issue of **Run 5**.

Continued on Page 32

GUADALCANAL

The Battle for Bloody Ridge
12th - 21st September, 1942

A SCENARIO FOR BATTLEFRONT

By Ian Trout

*The Island of Guadalcanal lies at the southeastern end of the Solomon's chain; a group of tropical islands which extend a further 900 hundred miles to the northwest. The airfield facilities there, captured by the marines in **Operation Watchtower**, were the only ones of note in the Solomons. Some seaplane facilities and the never properly completed fighter strip at Buin on the southern tip of Bougainville were the only Japanese bases between Guadalcanal and Rabaul over 1,000 miles away.*

The first serious attempt to recapture the airfield, named Henderson in honour of a gallant marine flyer, was to take place on September 13th. At such a distance, and in the teeth of enemy air superiority, the attack was foredoomed. Inadequate planning and rigid doctrine magnified the scale of the disaster.

American troops, employing simple and sensible defensive techniques, were able to destroy their opponents with surprising ease.

From this point in the war, the Japanese Army's hitherto almost unbroken string of successes became a similarly unbroken string of defeats.

The Japanese military philosophy, more suited to the medieval world, was manifestly inadequate to wage war in the modern era against a resolute opponent.

Could the Japanese forces have done any better. . .

THE SITUATION

On the morning of August 7th, 1942, two reinforced regiments of the 1st Division of the United States Marine Corps invaded the islands of Guadalcanal, Tulagi and Florida at the southern end of the Solomon's Group.

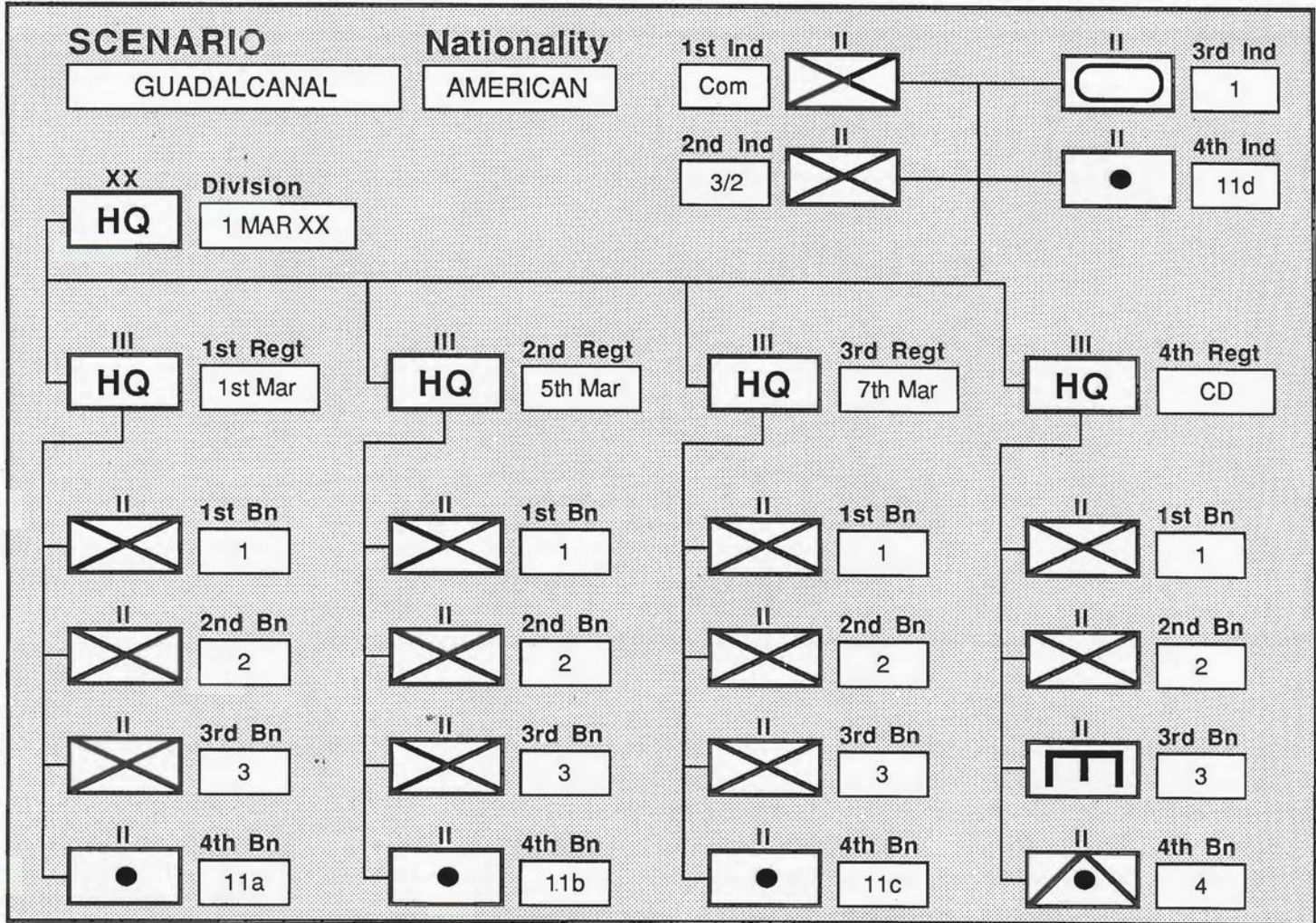
Only the seaplane facilities on the island of Tulagi were seriously contested. The 400 or so Japanese marines defending them fought fiercely and bravely; within a day they were dead.

On Guadalcanal, there was no resistance at all. Brigadier-General Alexander A. Vandegrift, in command of the expedition, got his troops ashore and more or less deployed by the end of the first day. By late that afternoon the lack of amphibious operation experience had turned the marines' landing beaches into a first class fiasco. What supplies had been landed were hopelessly muddled.

To cap the confusion, Admiral Turner, in response to the pasting received by USN surface ships in the Battle of Savo Island, then sailed away with many of the transports only partially unloaded.

Happily, the Japanese on Guadalcanal were not combat troops, but rather a miscellaneous collection of construction and garrison personnel from the 8th Base Force. The airstrip they were building was all but completed on the day of the invasion; just in time to be put to good use by advance echelons from MAG 23 which began arriving from August 20th.

The first attempt to recapture Henderson Field was made by a single battalion of



HEADQUARTERS DATA

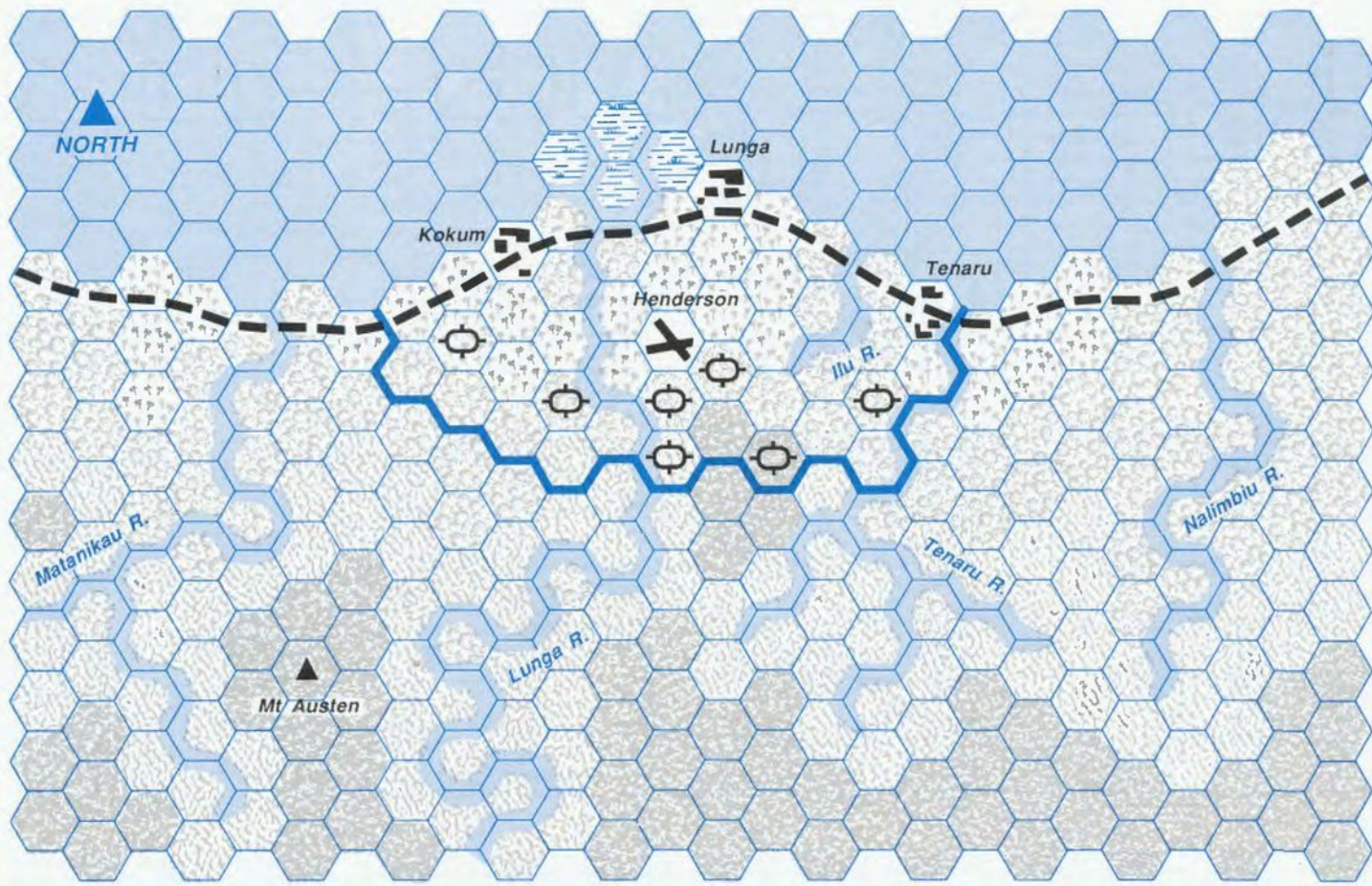
| FORMATION | | XX HQ | 1/RHQ | 2/RHQ | 3/RHQ | 4/RHQ |
|------------|-------|----------|---------|---------|---------|---------|
| HQ I.D. | [8] | 1 MAR XX | 1st Mar | 5th Mar | 7th Mar | CD |
| UNIT TYPE | [8] | MARINE | MARINE | MARINE | MARINE | DEFENSE |
| HQ ADMIN | 0-7 | 5 | 5 | 5 | 5 | 4 |
| LEADERSHIP | 0-7 | 5 | 5 | 5 | 4 | 4 |
| HQ SUPPLY | 0-7 | 5 | 6 | 6 | 6 | 6 |
| ARRIVAL | 0-63 | 0 | N/A | N/A | N/A | N/A |
| LOCATION | (x,y) | 13,3 | N/A | N/A | N/A | N/A |

BATTALION DATA

| FORMATION | II/III | 1/1 | 2/1 | 3/1 | 4/1 | 1/2 | 2/2 | 3/2 | 4/2 | 1/3 | 2/3 | 3/3 | 4/3 | 1/4 | 2/4 | 3/4 | 4/4 | 1/- | 2/- | 3/- | 4/- |
|------------|--------|------|------|------|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| UNIT I.D. | [3] | 1 | 2 | 3 | 11a | 1 | 2 | 3 | 11b | 1 | 2 | 3 | 11c | 1 | 2 | 3 | 4 | Com | 3/2 | 1 | 11d |
| LOCATION | (x,y) | 14,7 | 12,7 | 16,6 | 14,4 | 8,5 | 8,4 | 11,5 | 10,4 | 13,1 | 13,1 | 14,2 | 14,2 | 17,4 | 10,3 | 13,2 | 15,3 | 10,6 | 13,5 | 13,1 | 12,3 |
| CLASS | 0-13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 13 | 0 | 0 | 7 | 9 | 0 | 0 | 11 | 13 |
| MODE | 0-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| EQUIPM'T | 0-31 | 11 | 11 | 11 | 9 | 11 | 11 | 11 | 9 | 11 | 11 | 11 | 9 | 2 | 2 | 2 | 7 | 1 | 11 | 6 | 10 |
| MOVEMENT | 0-31 | 8 | 8 | 8 | 12 | 8 | 8 | 8 | 12 | 8 | 8 | 8 | 12 | 6 | 6 | 8 | 12 | 8 | 8 | 12 | 12 |
| STRENGTH | 0-15 | 11 | 10 | 11 | 4 | 12 | 11 | 11 | 4 | 14 | 14 | 14 | 4 | 9 | 9 | 8 | 6 | 7 | 13 | 9 | 8 |
| RATING | 0-15 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 6 | 8 | 7 | 6 | 11 |
| RANGE | 0-15 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 10 |
| ARRIVAL | 0-63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 26 | 25 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 |
| FATIGUE | 0-7 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 6 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 7 | 6 |
| EXPERIENCE | 0-7 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 6 | 5 | 4 | 5 |
| ATTACHM'T | 0-4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1 | 1 | 3 | 1 |

GUADALCANAL - Map

FRONT LINE BOUNDARY

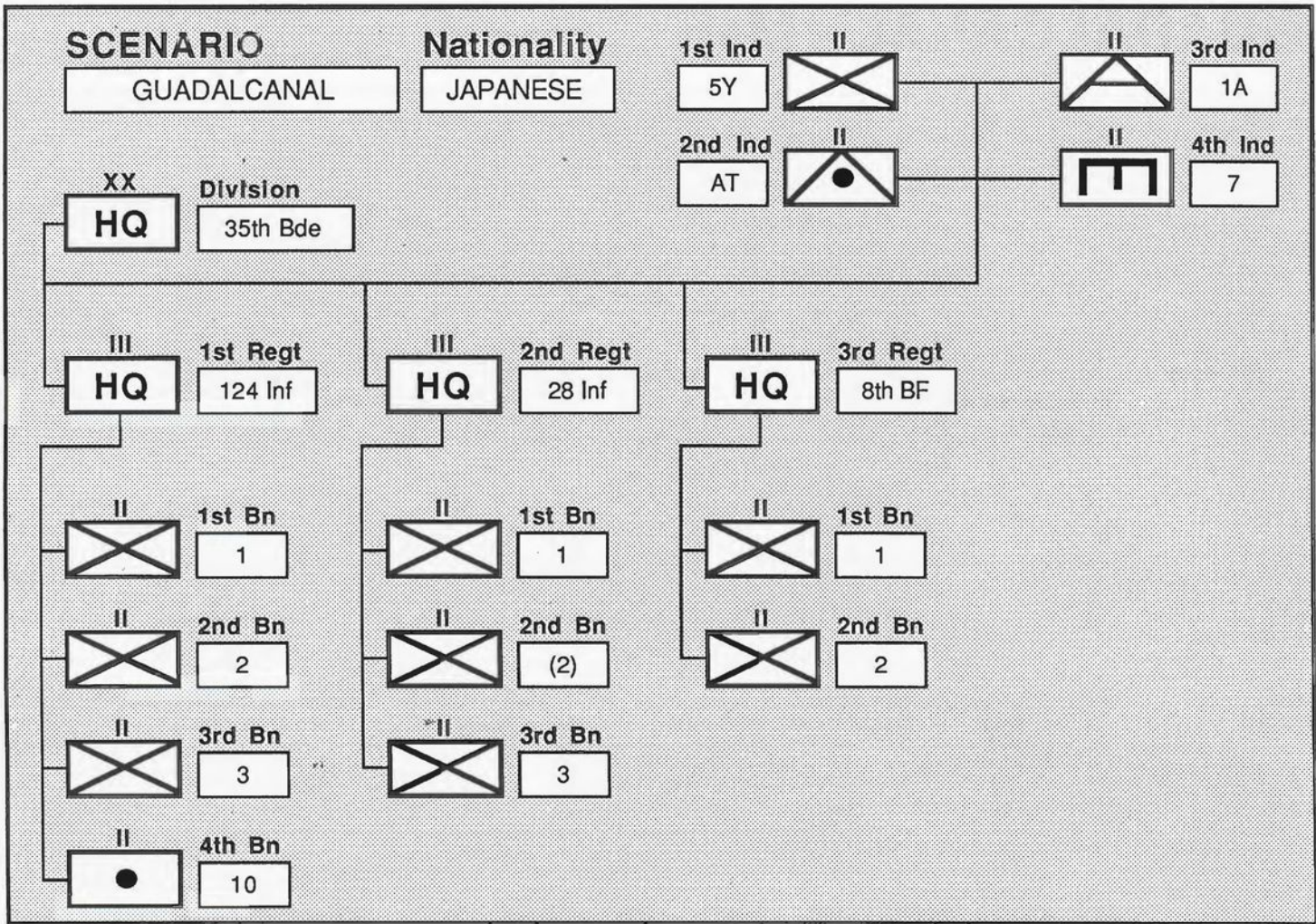


TERRAIN KEY

| | | | | | | | | | |
|--|--------------|--|-----------------|--|--------|--|------------|--|---------------|
| | ROUGH/JUNGLE | | MOUNTAIN/JUNGLE | | SWAMP | | PLANTATION | | HEAVY JUNGLE |
| | TRACK | | FORT | | TOWN | | AIRFIELD | | MOUNTAIN PEAK |
| | | | OCEAN | | BRIDGE | | | | RIVER |

GUADALCANAL - Equipment

| | | | | | |
|---|----------|----|----------|----|----|
| 0 | | 8 | 70mmPack | 16 | 24 |
| 1 | Raiders | 9 | 75mmHow | 17 | 25 |
| 2 | Shore Gd | 10 | 105/155H | 18 | 26 |
| 3 | ConsUnit | 11 | Riflemen | 19 | 27 |
| 4 | BaseUnit | 12 | 75mm AA | 20 | 28 |
| 5 | SNLF | 13 | Assault | 21 | 29 |
| 6 | Lt Tanks | 14 | 81mm MOR | 22 | 30 |
| 7 | 37mm AT | 15 | | 23 | 31 |

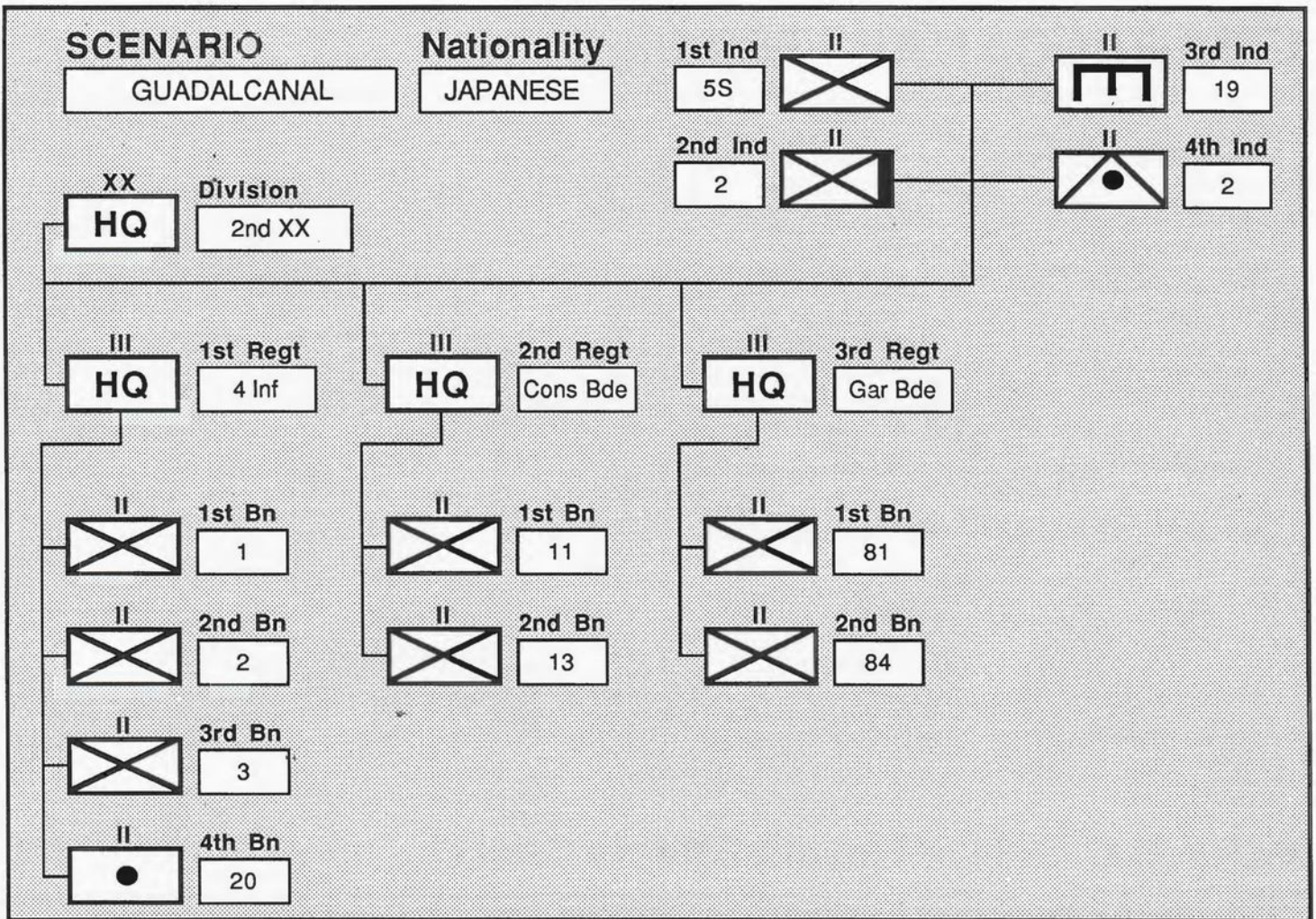


HEADQUARTERS DATA

| FORMATION | | XX HQ | 1/RHQ | 2/RHQ | 3/RHQ | 4/RHQ |
|------------|-------|----------|----------|----------|----------|-------|
| HQ I.D. | [8] | 35th Bde | 124 INF | 28 INF | 8th BF | |
| UNIT TYPE | [8] | INFANTRY | INFANTRY | INFANTRY | GARRISON | |
| HQ ADMIN | 0-7 | 2 | 2 | 1 | 2 | |
| LEADERSHIP | 0-7 | 6 | 6 | 3 | 2 | |
| HQ SUPPLY | 0-7 | 1 | 6 | 4 | 4 | |
| ARRIVAL | 0-63 | 0 | N/A | N/A | N/A | N/A |
| LOCATION | (x,y) | 22,6 | N/A | N/A | N/A | N/A |

BATTALION DATA

| FORMATION | II/III | 1/1 | 2/1 | 3/1 | 4/1 | 1/2 | 2/2 | 3/2 | 4/2 | 1/3 | 2/3 | 3/3 | 4/3 | 1/4 | 2/4 | 3/4 | 4/4 | 1/- | 2/- | 3/- | 4/- |
|------------|--------|------|------|------|------|------|------|------|-----|------|------|-----|-----|-----|-----|-----|-----|------|------|------|------|
| UNIT I.D. | [3] | 1 | 2 | 3 | 10 | 1 | (2) | 3 | | 1 | 2 | | | | | | | 5Y | AT | AA | 7 |
| LOCATION | (x,y) | 15,8 | 19,6 | 16,8 | 19,8 | 12,9 | 13,9 | 13,8 | | 24,3 | 25,2 | | | | | | | 22,4 | 25,2 | 25,2 | 18,9 |
| CLASS | 0-13 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | | 0 | 0 | | | | | | | 0 | 9 | 8 | 7 |
| MODE | 0-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | | | | | | 0 | 0 | 0 | 0 |
| EQUIPM'T | 0-31 | 11 | 11 | 11 | 8 | 11 | 11 | 11 | | 4 | 4 | | | | | | | 5 | 7 | 12 | 13 |
| MOVEMENT | 0-31 | 8 | 8 | 8 | 6 | 8 | 8 | 8 | | 6 | 6 | | | | | | | 8 | 6 | 6 | 8 |
| STRENGTH | 0-15 | 9 | 9 | 9 | 3 | 9 | 9 | 9 | | 9 | 9 | | | | | | | 8 | 3 | 2 | 4 |
| RATING | 0-15 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | | 3 | 3 | | | | | | | 6 | 6 | 4 | 7 |
| RANGE | 0-15 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | | 0 | 0 | | | | | | | 0 | 1 | 1 | 0 |
| ARRIVAL | 0-63 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | | 0 | 0 | | | | | | | 0 | 3 | 7 | 0 |
| FATIGUE | 0-7 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | | 7 | 7 | | | | | | | 4 | 5 | 5 | 5 |
| EXPERIENCE | 0-7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | 2 | 2 | | | | | | | 7 | 5 | 5 | 6 |
| ATTACHM'T | 0-4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 3 | 3 | 3 | 1 |



HEADQUARTERS DATA

| FORMATION | | XX HQ | 1/RHQ | 2/RHQ | 3/RHQ | 4/RHQ |
|------------|-------|----------|----------|----------|----------|-------|
| HQ I.D. | [8] | 2nd XX | 4 INF | Cons Bde | Gar Bde | |
| UNIT TYPE | [8] | INFANTRY | INFANTRY | GARRISON | GARRISON | |
| HQ ADMIN | 0-7 | 2 | 2 | 0 | 0 | |
| LEADERSHIP | 0-7 | 5 | 7 | 1 | 1 | |
| HQ SUPPLY | 0-7 | 1 | 7 | 1 | 1 | |
| ARRIVAL | 0-63 | 6 | N/A | N/A | N/A | N/A |
| LOCATION | (x,y) | 0,5 | N/A | N/A | N/A | N/A |

BATTALION DATA

| FORMATION | II/III | 1/1 | 2/1 | 3/1 | 4/1 | 1/2 | 2/2 | 3/2 | 4/2 | 1/3 | 2/3 | 3/3 | 4/3 | 1/4 | 2/4 | 3/4 | 4/4 | 1/- | 2/- | 3/- | 4/- |
|------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| UNIT I.D. | [3] | 1 | 2 | 3 | 20 | 11 | 13 | | | 81 | 84 | | | | | | | 5S | 2 | 19 | 2 |
| LOCATION | (x,y) | 0,4 | 0,4 | 0,4 | 0,4 | 1,5 | 1,6 | | | 2,4 | 3,5 | | | | | | | 4,5 | 0,4 | 0,4 | 0,4 |
| CLASS | 0-13 | 0 | 0 | 0 | 13 | 0 | 0 | | | 0 | 0 | | | | | | | 0 | 4 | 7 | 9 |
| MODE | 0-3 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 | | | | | | | 0 | 0 | 0 | 0 |
| EQUIPM'T | 0-31 | 11 | 11 | 11 | 8 | 3 | 3 | | | 4 | 4 | | | | | | | 5 | 14 | 13 | 7 |
| MOVEMENT | 0-31 | 8 | 8 | 8 | 6 | 4 | 4 | | | 4 | 4 | | | | | | | 8 | 7 | 8 | 6 |
| STRENGTH | 0-15 | 9 | 5 | 9 | 4 | 9 | 9 | | | 7 | 7 | | | | | | | 8 | 4 | 4 | 3 |
| RATING | 0-15 | 6 | 5 | 6 | 5 | 0 | 0 | | | 2 | 2 | | | | | | | 6 | 9 | 7 | 6 |
| RANGE | 0-15 | 0 | 0 | 0 | 7 | 0 | 0 | | | 0 | 0 | | | | | | | 0 | 1 | 0 | 1 |
| ARRIVAL | 0-63 | 5 | 7 | 11 | 13 | 0 | 0 | | | 0 | 0 | | | | | | | 0 | 10 | 9 | 14 |
| FATIGUE | 0-7 | 5 | 4 | 5 | 5 | 3 | 3 | | | 3 | 3 | | | | | | | 5 | 5 | 5 | 5 |
| EXPERIENCE | 0-7 | 6 | 6 | 6 | 6 | 1 | 1 | | | 3 | 3 | | | | | | | 7 | 6 | 6 | 6 |
| ATTACHM'T | 0-4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 3 | 1 | 1 | 1 |

GUADALCANAL - Briefing

| AXIS | | | ALLIED | | |
|--|-------|----------------------|-----------------------------------|-------|--|
| SIDE [16] JAPAN | | | SIDE [16] UNITED STATES | | |
| CORPS [16] 17th ARMY DET. | | | CORPS [16] MARINE CORPS | | |
| COMMANDER [16] Gen. Kawaguchi | | | COMMANDER [16] Gen. Vandegrift | | |
| DAY | NIGHT | SUPPORT | DAY | NIGHT | |
| 6 | 15 | QUANTITY (0-127) | 12 | 0 | |
| 1 | 0 | RELIABILITY (0-3) | 3 | 0 | |
| 4 | 15 | RATING (0-15) | 7 | 0 | |
| AIR SUPERIORITY (0-7) | | | | | |
| STATUS = <input type="text" value="6"/> | | | STRONG ALLIED | | |
| RELIABILITY = <input type="text" value="4"/> | | | LIKELY | | |

| | |
|--|---|
| SCENARIO [16] GUADALCANAL | |
| BRIEFING [26] The Attack on Bloody Ridge 12 - 21 Sep, 1942 | |
| START DATA | |
| (1-31) DATE = <input type="text" value="12"/> | <input type="text" value="12th SEP 1942"/> |
| (1-12) MONTH = <input type="text" value="9"/> | |
| (0-63) YEAR = <input type="text" value="42"/> | |
| (1-16) LENGTH = <input type="text" value="10"/> | |
| (0-3) WEATHER = <input type="text" value="3"/> | <input type="text" value="PRECIPITATION STABLE"/> |
| (0-7) FORECAST = <input type="text" value="4"/> | |
| (0-31) MECH MIN = <input type="text" value="12"/> | |

GUADALCANAL - Terrain Effects Chart

| TERRAIN CODE (T0-T15) | TERRAIN NAME [10] | TERRAIN COSTS PER HEX | | ATTACK EFFECTS | | |
|--------------------------|----------------------|-----------------------|--------------------|----------------|--------------|--------------|
| | | MECH (0-31) | NON-MECH (0-31) | ARM (0-7) | ART (0-7) | INF (0-7) |
| T0 | OCEAN | 0 | 0 | 0 | 0 | 0 |
| T1(RET) | - | 0 | 0 | 0 | 0 | 0 |
| T2 | PLANTATION | 5 | 3 | 7 | 7 | 7 |
| T3 | ROUGH/JUNG | 7 | 5 | 4 | 5 | 6 |
| T4 | HVY JUNGLE | 6 | 4 | 5 | 6 | 6 |
| T5 | MOUNT/JUNG | 10 | 6 | 3 | 4 | 5 |
| T6 | SWAMP | 12 | 5 | 4 | 4 | 6 |
| T7 | - | 0 | 0 | 0 | 0 | 0 |
| T8 | AIRFIELD | 2 | 1 | 7 | 7 | 7 |
| T9 | - | 0 | 0 | 0 | 0 | 0 |
| T10 | MOUNT PEAK | 12 | 6 | 3 | 4 | 5 |
| T11 | - | 0 | 0 | 0 | 0 | 0 |
| T12 | - | 0 | 0 | 0 | 0 | 0 |
| T13 | - | 0 | 0 | 0 | 0 | 0 |
| T14 | - | 0 | 0 | 0 | 0 | 0 |
| T15 | - | 0 | 0 | 0 | 0 | 0 |
| - | ROAD | 1 | 1 | N.A. | N.A. | N.A. |
| - | FORT | N.A. | N.A. | 4 | 4 | 5 |
| - | TOWN | N.A. | N.A. | 7 | 7 | 7 |
| - | BRIDGE | 1 | 1 | 4 | 7 | 5 |
| - | RIVER | N.A. | 4 | 2 | 7 | 4 |

GUADALCANAL - Objectives and Misc. Factors

| I.D. (1-24) | NAME [11] | MAP LOC [x,y] | START (0-63) | END (0-63) | POINTS PER TURN (0-30) | POINTS AT END (0-255) |
|----------------|--------------|------------------|-----------------|---------------|---------------------------|--------------------------|
| 1(AX) | Henderson | 12,5 | 1 | 39 | 10 | 150 |
| 2(AX) | Kokum | 9,3 | 1 | 39 | 1 | 20 |
| 3(AX) | Lunga | 13,2 | 1 | 39 | 1 | 30 |
| 4(AX) | Tenaru | 17,4 | 0 | 0 | 0 | 15 |
| 5(AX) | Mt Austen | 5,10 | 0 | 0 | 0 | 10 |
| 6(AX) | Bloody Rid. | 13,8 | 1 | 39 | 3 | 75 |
| 7(AX) | U Nalimbiu | 21,8 | 0 | 0 | 0 | 10 |
| 8(AX) | - | - | - | - | - | - |
| 9(AX) | - | - | - | - | - | - |
| 10(AX) | - | - | - | - | - | - |
| 11(AX) | - | - | - | - | - | - |
| 12(AX) | - | - | - | - | - | - |
| 1(AL) | Henderson | 12,5 | 1 | 39 | 2 | 25 |
| 2(AL) | Matanikau | 5,4 | 21 | 39 | 3 | 50 |
| 3(AL) | Mt Austen | 5,10 | 29 | 39 | 3 | 50 |
| 4(AL) | Kokum | 9,3 | 0 | 0 | 0 | 5 |
| 5(AL) | Lunga | 13,2 | 0 | 0 | 0 | 5 |
| 6(AL) | Bloody Rid. | 13,6 | 1 | 39 | 1 | 25 |
| 7(AL) | Tenaru | 17,4 | 9 | 39 | 1 | 25 |
| 8(AL) | L Nalimbiu | 22,4 | 19 | 39 | 2 | 50 |
| 9(AL) | - | - | - | - | - | - |
| 10(AL) | - | - | - | - | - | - |
| 11(AL) | - | - | - | - | - | - |
| 12(AL) | - | - | - | - | - | - |

| ADJACENT ENEMY HEX PENALTY (0-15) | |
|--|--|
| 1st HEX = <input type="text" value="0"/> | 4th HEX = <input type="text" value="3"/> |
| 2nd HEX = <input type="text" value="0"/> | 5th HEX = <input type="text" value="4"/> |
| 3rd HEX = <input type="text" value="1"/> | 6th HEX = <input type="text" value="5"/> |

| VICTORY POINTS PER STRENGTH POINT LOST (0-15) | | |
|---|--------------------------------|--------------------------------|
| | MECH | NON MECH |
| AXIS | <input type="text" value="2"/> | <input type="text" value="2"/> |
| ALLIED | <input type="text" value="3"/> | <input type="text" value="2"/> |

| MAP SIZE | |
|-----------------|--------------------------------|
| ACROSS (0-2) | <input type="text" value="1"/> |
| DOWN (0-3) | <input type="text" value="1"/> |

Colonel Ichiki's 28th Infantry Regiment on the following day. Brought in by a fast destroyer run three days earlier, these troops launched their vainglorious assault from the Tenaru River on the eastern end of the marine positions. The battalion was annihilated; over 800 killed from a roster of less than 900. Marine casualties did not reach 100.

Debilitated by a wide variety of exotic bacterial and fungal infections, the victory was a much needed tonic for Vandegrift's men. The myth of Japanese invincibility was demonstrably shattered.

In the next three weeks both sides did what they could to resupply and reinforce their positions on the island.

The Japanese Imperial CHQ seemed reluctant to face up to the seriousness of the threat this American operation posed. Operations in New Guinea were to take priority until the debacle of mid-September finally convinced CHQ of Guadalcanal's importance.

The rest of the 35th Bde was hastily shipped to Guadalcanal together with some elements of the 2nd Infantry Division and various support units. General Kawaguchi was placed in command. Marine dive-bombers, operating from dawn to dusk took fearful toll on the reinforcing Japanese. Only the fast destroyer runs were generally free from interdiction.

A co-ordinated assault was planned for September 13th by which stroke Henderson Field would be wrested from its defenders.

It is this battle that our Guadalcanal scenario simulates.

Supported by a nightly naval bombardment, the 28th and 124th Regiments would strike at Henderson Field from the south by way of the now fortified ridge line which would soon become known as 'Bloody Ridge'.

There were some anxious moments for the marines but, as before, the combination of inadequate planning, lack of effective artillery, poor co-ordination, tactical inflexibility and marine determination, proved too much for the Japanese and they were bloodily repulsed.

Marine air strength on the island continued to grow. The 7th Marine Regiment arrived on the 18th September together with the first tanks.

American reinforcements, and more importantly supply, poured in at a rate the Japanese could not match. Further assaults were attempted in October and November. They achieved nothing.

The American perimeter gradually expanded, pushing the Japanese forces toward Cape Esperance at the western end of the island.

In early 1943, the Japanese at last recognised the hopelessness of their position and evacuated the survivors. Paradoxically, this was their most skillfully executed operation of the campaign.

THE SCENARIO

The *Guadalcanal* scenario begins on September 12th. The Orders of Battle display the forces available and the arrival of reinforcements. The scenario briefing, terrain effects table and objective chart will provide the basis for your initial plans.

In summary, the Japanese player must time his attacks carefully. The poor resupply facilities available will quickly fritter away what resources are initially on hand if too many fruitless attacks are launched. Night attacks are best, especially so when ample naval bombardment support gets through. Even if you can't capture Henderson Field, hold as many of your secondary objectives as long as possible.

The US player has only to maintain an adequate defense until the Japanese commander runs out of supplies. He can then counter-attack. It is more productive to drive to the Matanikau River rather than the east; it is also easier. Once the 7th marines arrive, you will have more than enough manpower to launch an attack to capture your end game objectives.

The advice on tactics in the rulebook holds good. Do not ask your men to mount repeated assaults (or exploits form that matter). It will ruin them.

Regiments in reserve have the greatest chance of receiving replacements although the low supply values of the Japanese Divisional HQs make for a poor replacement rate for them. Even so, something is better than nothing.

It is tempting to place all of your support points with an assaulting regiment. Resist this impulse. Regiments on the defense in tight situations really need every point of help they can get.

Use your divisional assets wisely. The Japanese have the advantage here with two formations as opposed to the single American formation. Keep an eye on their fatigue, however; they also need rest.

Finally, keep some sort of reserve. This is probably impossible for the American

player until the 7th Marines arrive, but the Japanese player must maintain at least one fresh regiment at all times. A fresh regiment can make all the difference in a battle.

SOME VARIATIONS

There are no shortage of these! Try out any of the following that interest you.

1. In the Order of Battle for the Japanese 35th Bde, you'll notice the 2nd Battalion of the 28th Regiment has its I.D. code bracketed and its arrival date set at turn 63; well beyond the end of the game.

This is the battalion destroyed in the foolhardy charge across the Tenaru River on the 21st August. To include it in the Japanese initial strength, simply enter the battalion creation routine and alter its arrival turn from 63 to 0. Its location is already defined.

2. The delivery of reinforcements to Guadalcanal was haphazard and unco-ordinated resulting in considerable delay and troop/materiel loss. This could have been avoided.

Increase the strength of all Japanese infantry battalions from 28th, 124th and 4th Infantry Regiments to 10 and their rating to 7. Increase the strength of all artillery battalions to 4. Increase the supply values of both Japanese divisional HQs to 3.

Advance the arrival date of the 2nd Infantry Division HQ to turn 0. All components of the division which arrive as reinforcements should have their arrival turn brought forward to turn 1.

3. Had the fighter facilities at Buin been properly prepared, the Japanese could have effectively contested American air superiority.

In the Corps Briefing routine, change the Japanese day support points to 10, their reliability to 2 and their rating to 6. Change the air superiority status to 4 and its reliability to 3.

4. The American 7th Marine Regiment was awaiting shipment to Guadalcanal from early September. Assume the transport to move it had been made available earlier.

Subtract 20 from the arrival turn of each battalion in the regiment as well as the battalion of light tanks attached to it. Thus, these battalions will arrive between turns 5 and 7.

ZITADELLE

The Air War for the Kursk Salient
5th - 11th July, 1943

A SCENARIO FOR EUROPE ABLAZE

By Gregor Whiley

Operation Zitadelle was Hitler's last throw of the dice in Russia. Conceived and then delayed against the advice of his Generals, it was planned to restore the initiative on the Eastern Front, which had been slipping away from the Germans since the disaster at Stalingrad in the previous summer.

Over thirty divisions and two thousand planes were mustered to take the Russian salient centred on Kursk and annihilate its defenders. When, after armoured and aerial fighting on a colossal scale, the offensive failed, there was only the long and desperate road home for the defeated Germans.

THE SITUATION

By the summer of 1943 the Russian Front had stabilised in the south along the Donets and Mius rivers, with Kharkov back in German hands. To the north of Kharkov stretched a large Russian salient with its shoulders at Belgorad and south of Orel.

Discussion of a defensive strategy for Germany was impossible, as Hitler insisted that final victory was achievable and to even hint to the contrary was dangerous defeatism. *Zitadelle* was to be a grand envelopment attack against the Kursk salient after the fashion of the *Wehrmacht's* previous victories.

That neither the *Wehrmacht* or *Luftwaffe*

were the superb striking forces that they had been was not a matter for consideration. In any case the Ninth Army, and the Fourth Panzer Army had over thirty divisions, including nineteen Panzer divisions, at their disposal. Ninth Army attacking south of Orel was supported by *Luftflotte 6* and Fourth Panzer attacking near Belgorad by *Luftflotte 4* with over 2,000 planes between them, almost 70% of the available aircraft on the Eastern Front. If the Germans had any hope left in Russia, this was it.

Unfortunately, the Russians knew they were coming. The *Lucy* spy ring had told Stalin everything except the actual date of *Zitadelle*.

While Hitler delayed the offensive to await the delivery of the new Panther and Tiger tanks, the Russians prepared for the onslaught. Formations were reinforced and re-equipped, defensive lines and strongpoints constructed in great depth, and large reserves created. Three Soviet fronts were involved, Central, Voronezh and South West, each with their attached Air Armies.

The Air Armies had been equipped with the latest products of the burgeoning Russian armaments industry and had been heavily reinforced by units from the STAVKA's special AFRLO reserve making a total of about 3,000 planes. Such reinforcements were a sure sign that life in the area so favoured was about to become very interesting!

The air war in Russia was characterised by its almost exclusively tactical nature.

ZITADELLE - Airfields

| AIRFIELD NUMBER | 1-127 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-----------------|-------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| AIRFIELD NAME | [11] | Mikoyan #1 | Mikoyan #2 | Mikoyan #3 | Mikoyan #4 | Mikoyan #5 | Kharkov E#1 | Kharkov E#2 | Kharkov E#3 | Kharkov E#4 | Kharkov S#1 | Kharkov S#1 |
| LOCATION | (x,y) | 20,15 | 20,15 | 20,15 | 20,15 | 20,15 | 20,16 | 20,16 | 20,16 | 20,16 | 20,16 | 20,16 |
| ASSIGNED SONS | [4] | 1-3 | 4-6 | 35-38 | 39-42 | 32,33,43,44 | 7-9,11 | 10,17,18,20 | 19,29,34 | 25-28 | 48-50 | 51-53 |
| THEATRE | 1-5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| DAMAGE STATUS | 0-15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| DAMAGE CONTROL | 0-3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| SEALED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |

| AIRFIELD NUMBER | 1-127 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|-----------------|-------|-----------|----------|---------|-------------|-------------|----------|---------|---------|---------|-------------|-------------|
| AIRFIELD NAME | [11] | Bebarovka | Zolochiv | Poltava | Dnepropet#1 | Dnepropet#2 | Orel #1 | Orel #2 | Orel #3 | Orel #4 | Karachev #1 | Karachev #2 |
| LOCATION | (x,y) | 19,15 | 20,15 | 16,18 | 18,22 | 18,22 | 19,6 | 19,6 | 19,6 | 19,6 | 17,5 | 17,5 |
| ASSIGNED SONS | [4] | 45-47 | 30,31 | 21-24 | 12-14 | 15,16 | 54-56,71 | 57-60 | 61-63 | 90-93 | 64-66,72 | 67-70 |
| THEATRE | 1-5 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| DAMAGE STATUS | 0-15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| DAMAGE CONTROL | 0-3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| SEALED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |

| AIRFIELD NUMBER | 1-127 | 23 | 24 | 25 | 30 | 31 | 28 | 29 | 30 | 31 | 32 | 33 |
|-----------------|-------|------------|------------|------------|------------|------------|----------|----------|---------|---------|-----------|-----------|
| AIRFIELD NAME | [11] | Bryansk #1 | Bryansk #2 | Bryansk #3 | Bryansk #4 | Bryansk #5 | Kerch #1 | Kerch #2 | Stalino | Minsk | Fatezh #1 | Fatezh #2 |
| LOCATION | (x,y) | 16,5 | 16,5 | 16,5 | 16,5 | 16,5 | 21,32 | 21,32 | 24,22 | 2,3 | 20,10 | 20,10 |
| ASSIGNED SONS | [4] | 73-76 | 77-80 | 81-84 | 85-87 | 88,89,94 | 85,96 | 99-102 | 97,98 | 103-106 | 113-116 | 117,118 |
| THEATRE | 1-5 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 2 | 1 | 1 |
| DAMAGE STATUS | 0-15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| DAMAGE CONTROL | 0-3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| SEALED | Y/N | N | N | N | N | N | N | N | N | Y | N | N |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | Y | Y |

| AIRFIELD NUMBER | 1-127 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 |
|-----------------|-------|-----------|-----------|-----------|-----------|----------|----------|-----------|-----------|-----------|-----------|------------|
| AIRFIELD NAME | [11] | Fatezh #3 | Kolpay #1 | Kolpay #2 | Livny #1 | Livny #2 | Kursk #1 | Kursk #2 | Yelets #1 | Yelets #2 | Yelets #3 | Karocho #1 |
| LOCATION | (x,y) | 20,10 | 22,9 | 22,9 | 23,7 | 23,7 | 20,11 | 20,11 | 24,7 | 24,7 | 24,7 | 23,13 |
| ASSIGNED SONS | [4] | 213-214 | 129-132 | 133-5,215 | 136-8,144 | 145-148 | 124-127 | 128,201-3 | 119-122 | 139-142 | 123,143 | 149-152 |
| THEATRE | 1-5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| DAMAGE STATUS | 0-15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| DAMAGE CONTROL | 0-3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| SEALED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

| AIRFIELD NUMBER | 1-127 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 |
|-----------------|-------|------------|------------|---------|-------------|-------------|-------------|-----------|-----------|--------------|--------------|--------------|
| AIRFIELD NAME | [11] | Karocho #2 | Karocho #3 | Podolki | StaryyOsk#1 | StaryyOsk#2 | StaryyOsk#3 | Obayan #1 | Obayan #2 | Kastornoya#1 | Kastornoya#2 | Kastornoya#3 |
| LOCATION | (x,y) | 23,13 | 23,13 | 22,13 | 23,12 | 23,12 | 23,12 | 21,11 | 21,11 | 21,11 | 23,10 | 23,10 |
| ASSIGNED SONS | [4] | 153,154 | 169,216 | 165-168 | 160-163 | 164,217 | 175-177 | 178-181 | 182-184 | 155-158 | 170-172 | 159,218 |
| THEATRE | 1-5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| DAMAGE STATUS | 0-15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| DAMAGE CONTROL | 0-3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| SEALED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

| AIRFIELD NUMBER | 1-127 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 |
|-----------------|-------|--------------|-----------|---------|------------|------------|------------|-------------|-------------|-------------|------------|------------|
| AIRFIELD NAME | [11] | Kastornoya#4 | Nov Oskol | Valuyki | Budenni #1 | Budenni #2 | Budenni #3 | Krasnodar#1 | Krasnodar#2 | Krasnodar#3 | Voronezh#1 | Voronezh#2 |
| LOCATION | (x,y) | 23,10 | 24,14 | 24,16 | 25,14 | 25,14 | 25,14 | 28,32 | 28,32 | 28,32 | 26,10 | 26,10 |
| ASSIGNED SONS | [4] | 173,174 | 185-7,219 | 188-190 | 191-194 | 195-198 | 199-200 | 204-207 | 208-211 | 212 | 220-223 | 224-227 |
| THEATRE | 1-5 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 2 |
| DAMAGE STATUS | 0-15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| DAMAGE CONTROL | 0-3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| SEALED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

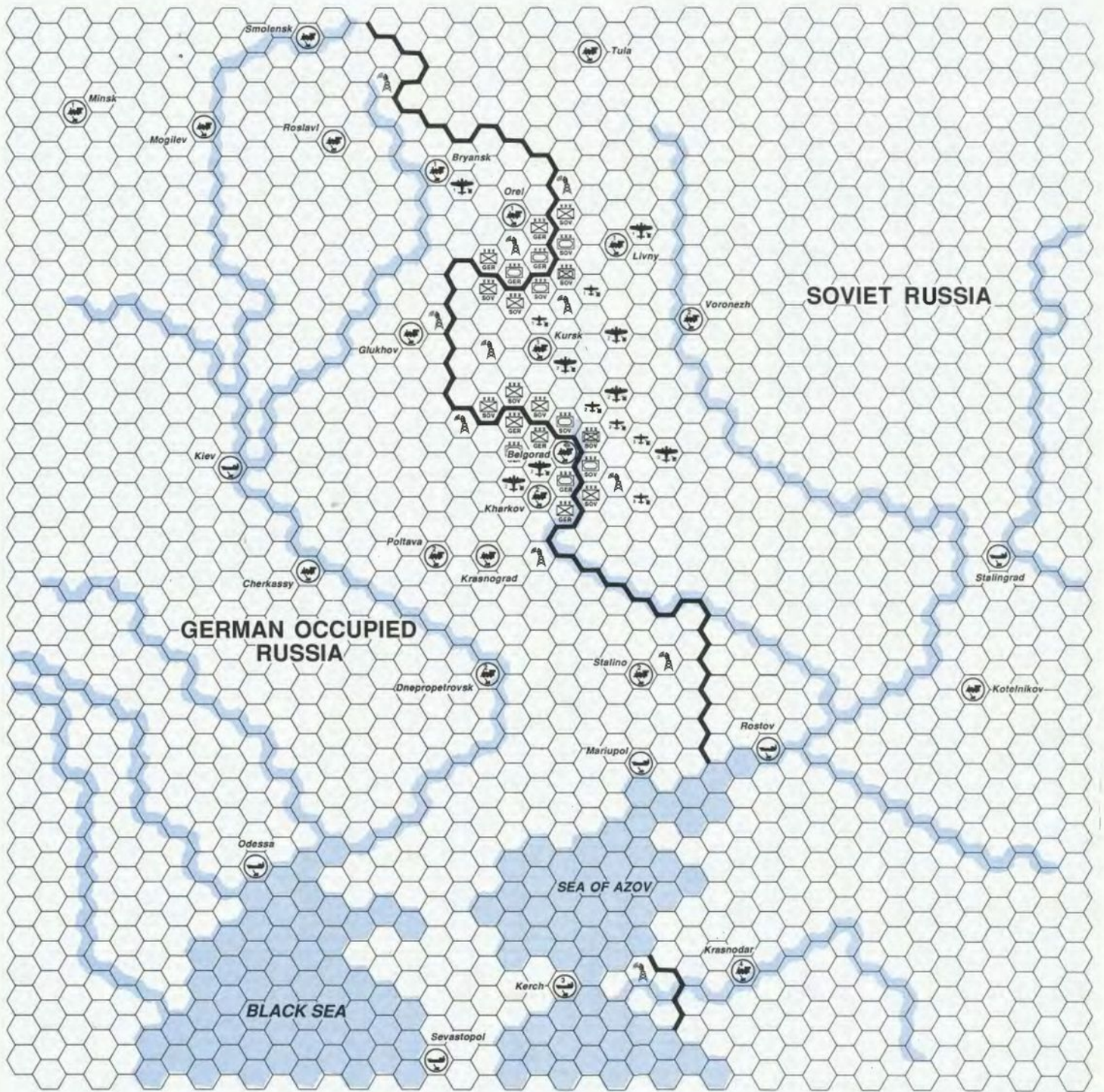
ZITADELLE - Centres

| CENTRE NUMBER | 1-63 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----------------|-------|----------|-------|---------|---------|---------|------|---------|------|---------|
| CENTRE NAME | [11] | Smolensk | Minsk | Mogilev | Roslavl | Bryansk | Orel | Glukhov | Kiev | Poltava |
| LOCATION | (x,y) | 11,0 | 2,3 | 7,3 | 12,4 | 16,5 | 19,6 | 15,10 | 8,15 | 16,18 |
| POPULATION | 0-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| INDUSTRY | 0-3 | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 2 | 0 |
| PORT FACILITIES | 0-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 |
| COMMUNICATIONS | 0-3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N |

| CENTRE NUMBER | 1-63 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|-----------------|-------|----------|---------|------------|-----------|------------|---------|----------|--------|------------|
| CENTRE NAME | [11] | Belgorad | Kharkov | Krasnograd | Cherkassy | Dnepropet. | Stalino | Mariupol | Odessa | Sevastopol |
| LOCATION | (x,y) | 21,14 | 20,16 | 18,18 | 11,18 | 18,22 | 24,22 | 24,25 | 9,28 | 16,35 |
| POPULATION | 0-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| INDUSTRY | 0-3 | 0 | 2 | 0 | 1 | 2 | 0 | 0 | 2 | 2 |
| PORT FACILITIES | 0-3 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 3 | 3 |
| COMMUNICATIONS | 0-3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 2 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N |

| CENTRE NUMBER | 1-63 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
|-----------------|-------|-------|------|-------|----------|-------|------------|------------|--------|-----------|
| CENTRE NAME | [11] | Kerch | Tula | Livny | Voronezh | Kursk | Stalingrad | Kotelnikov | Rostov | Krasnodar |
| LOCATION | (x,y) | 21,32 | 22,1 | 23,7 | 26,10 | 20,11 | 38,18 | 37,22 | 29,24 | 28,32 |
| POPULATION | 0-3 | 0 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | 0 |
| INDUSTRY | 0-3 | 0 | 3 | 1 | 2 | 0 | 1 | 0 | 1 | 0 |
| PORT FACILITIES | 0-3 | 2 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 |
| COMMUNICATIONS | 0-3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 |
| ALLIED | Y/N | N | Y | Y | Y | Y | Y | Y | Y | Y |

ZITADELLE - Map



| SCENARIO SEVEN 'ZITADELLE' | |
|-------------------------------|-----------------|
| Allied Commands | Axis Commands |
| # 1 Rudenko | # 1 Von Greim |
| # 2 Krasovsky | # 2 Dessloch |
| # 3 Sudets | # 3 Crimea A.C. |
| # 4 Vershinin | |

ZITADELLE - Squadrons (Cont.)

| | | | | | | | | | | | | | | | | | | |
|---------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|------|------|------|------|------|------|------|------|------|
| SON NUMBER | 1-255 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 |
| SON I.D. | [6] | 175/S | 309/S | 310/S | 63/1GI | 64/1GI | 65/1GI | 66/1GI | 67/1GI | 1/61 | 2/61 | 3/61 | 4/61 | 5/61 | 1/3B | 2/3B | 3/3B | 4/3B |
| PLANE TYPE | 1-37 | 21 | 21 | 21 | 17 | 17 | 17 | 17 | 17 | 19 | 19 | 19 | 19 | 19 | 20 | 20 | 20 | 20 |
| OFFICIAL EST. | 1-31 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| INITIAL EST. | 1-31 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 |
| VETERAN | 0-31 | 4 | 4 | 4 | 8 | 6 | 6 | 10 | 10 | 2 | 3 | 4 | 5 | 5 | 4 | 8 | 6 | 4 |
| EXPERIENCED | 0-31 | 12 | 11 | 14 | 17 | 19 | 19 | 19 | 15 | 10 | 15 | 13 | 18 | 10 | 11 | 15 | 11 | 13 |
| FATIGUE | 0-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| NIGHT OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| RECON OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| NAVAL OPS | Y/N | Y | Y | Y | N | N | N | N | N | N | N | N | N | N | Y | Y | Y | Y |
| PATHFINDER | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| | | | | | | | | | | | | | | | | | | |
|---------------|-------|------|------|------|------|------|------|------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| SON NUMBER | 1-255 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 |
| SON I.D. | [6] | 5/3B | 1/6C | 2/6C | 3/6C | 4/6C | 5/6C | 5G/I | 8G/I | 32G/I | 32/I | 40/I | 41G/I | 311/B | 312/B | 313/B | 314/B | 315/B |
| PLANE TYPE | 1-37 | 20 | 18 | 21 | 21 | 21 | 21 | 19 | 19 | 19 | 18 | 18 | 19 | 20 | 20 | 20 | 20 | 20 |
| OFFICIAL EST. | 1-31 | 25 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 | 25 |
| INITIAL EST. | 1-31 | 25 | 30 | 30 | 30 | 30 | 30 | 26 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 |
| VETERAN | 0-31 | 6 | 8 | 8 | 5 | 2 | 6 | 5 | 10 | 11 | 4 | 3 | 8 | 2 | 3 | 4 | 4 | 4 |
| EXPERIENCED | 0-31 | 15 | 10 | 10 | 15 | 12 | 14 | 16 | 13 | 12 | 9 | 11 | 13 | 11 | 12 | 14 | 13 | 10 |
| FATIGUE | 0-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| NIGHT OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| RECON OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| NAVAL OPS | Y/N | Y | N | Y | Y | Y | Y | N | N | N | N | N | N | Y | Y | Y | Y | Y |
| PATHFINDER | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| | | | | | | | | | | | | | | | | | | |
|---------------|-------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|--------|--------|
| SON NUMBER | 1-255 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 |
| SON I.D. | [6] | 62/S | 90G/S | 141/S | 142/S | 143/S | 1/41 | 2/41 | 3/41 | 4/41 | 5/41 | 1/1B | 2/1B | 3/1B | 4/1B | 5/1B | 165/1S | 166/1S |
| PLANE TYPE | 1-37 | 21 | 21 | 21 | 21 | 21 | 21 | 17 | 17 | 17 | 17 | 20 | 20 | 20 | 20 | 20 | 21 | 21 |
| OFFICIAL EST. | 1-31 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 25 | 25 | 30 | 30 |
| INITIAL EST. | 1-31 | 30 | 30 | 30 | 30 | 30 | 30 | 26 | 26 | 26 | 26 | 30 | 25 | 25 | 25 | 25 | 30 | 30 |
| VETERAN | 0-31 | 5 | 11 | 5 | 4 | 2 | 7 | 5 | 4 | 5 | 8 | 5 | 2 | 4 | 3 | 3 | 5 | 5 |
| EXPERIENCED | 0-31 | 11 | 18 | 13 | 14 | 12 | 11 | 13 | 17 | 11 | 12 | 9 | 12 | 14 | 12 | 13 | 13 | 10 |
| FATIGUE | 0-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| NIGHT OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| RECON OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| NAVAL OPS | Y/N | Y | Y | Y | Y | Y | Y | N | N | N | N | Y | Y | Y | Y | Y | Y | Y |
| PATHFINDER | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| | | | | | | | | | | | | | | | | | | |
|---------------|-------|--------|--------|--------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SON NUMBER | 1-255 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 |
| SON I.D. | [6] | 198/1S | 667/1S | 672/1S | 1/5S | 2/5S | 3/5S | 4/5S | 5/5S | 438/I | 283/I | 512/I | 519/I | 581/I | 728/I | 321/B | 322/B | 323/B |
| PLANE TYPE | 1-37 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 18 | 18 | 18 | 18 | 18 | 18 | 20 | 20 | 21 |
| OFFICIAL EST. | 1-31 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 25 | 25 | 25 |
| INITIAL EST. | 1-31 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 26 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 25 |
| VETERAN | 0-31 | 5 | 4 | 6 | 8 | 6 | 4 | 5 | 4 | 5 | 2 | 4 | 3 | 8 | 7 | 8 | 2 | 3 |
| EXPERIENCED | 0-31 | 13 | 14 | 15 | 13 | 12 | 11 | 14 | 9 | 15 | 14 | 15 | 12 | 9 | 12 | 13 | 11 | 15 |
| FATIGUE | 0-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| NIGHT OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| RECON OPS | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |
| NAVAL OPS | Y/N | Y | Y | Y | Y | Y | Y | Y | N | N | N | N | N | N | N | Y | Y | Y |
| PATHFINDER | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| | | | | | | | | | | | | | | | | | | |
|---------------|-------|-------|-------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SON NUMBER | 1-255 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 |
| SON I.D. | [6] | 324/B | 325/B | 93/S | 176G/S | 525/S | 614/S | 812/S | 347/R | 348/R | 349/R | 240/I | 270/I | 152/I | 88G/I | 335/B | 336/B | 337/S |
| PLANE TYPE | 1-37 | 20 | 20 | 21 | 21 | 21 | 21 | 24 | 24 | 24 | 24 | 19 | 19 | 19 | 17 | 20 | 20 | 21 |
| OFFICIAL EST. | 1-31 | 25 | 25 | 30 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 30 | 30 | 30 | 30 | 25 | 25 | 30 |
| INITIAL EST. | 1-31 | 25 | 25 | 30 | 30 | 30 | 30 | 30 | 25 | 25 | 25 | 26 | 26 | 26 | 26 | 25 | 25 | 30 |
| VETERAN | 0-31 | 4 | 4 | 3 | 10 | 5 | 4 | 4 | 6 | 8 | 6 | 7 | 6 | 4 | 9 | 3 | 4 | 5 |
| EXPERIENCED | 0-31 | 12 | 11 | 14 | 15 | 17 | 15 | 15 | 15 | 18 | 13 | 16 | 14 | 16 | 16 | 13 | 10 | 14 |
| FATIGUE | 0-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| NIGHT OPS | Y/N | N | N | N | N | N | N | N | Y | Y | Y | N | N | N | N | N | N | N |
| RECON OPS | Y/N | N | N | N | N | N | N | N | Y | Y | Y | N | N | N | N | N | N | N |
| NAVAL OPS | Y/N | Y | Y | Y | Y | Y | Y | Y | N | N | N | N | N | N | N | Y | Y | Y |
| PATHFINDER | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| | | | | | | | | | | | | | | | | | | |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SON NUMBER | 1-255 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 |
| SON I.D. | [6] | 338/S | 339/S | 340/R | 341/R | 342/R | 343/R | 344/R | 345/R | 346/R | 1/LRB | 2/LRB | 3/LRB | 4/LRB | 5/LRB | 6/LRB | 7/LRB | 8/LRB |
| PLANE TYPE | 1-37 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 23 | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| OFFICIAL EST. | 1-31 | 30 | 30 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| INITIAL EST. | 1-31 | 30 | 30 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |
| VETERAN | 0-31 | 6 | 5 | 6 | 5 | 4 | 3 | 4 | 5 | 6 | 4 | 5 | 5 | 4 | 1 | 2 | 5 | 6 |
| EXPERIENCED | 0-31 | 16 | 18 | 10 | 9 | 11 | 10 | 9 | 14 | 10 | 20 | 16 | 14 | 15 | 18 | 20 | 16 | 16 |
| FATIGUE | 0-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| NIGHT OPS | Y/N | N | N | N | N | N | N | N | N | N | Y | Y | Y | Y | Y | Y | Y | Y |
| RECON OPS | Y/N | N | N | Y | Y | Y | Y | Y | Y | Y | N | N | N | N | N | N | N | N |
| NAVAL OPS | Y/N | Y | Y | N | N | N | N | N | N | N | Y | Y | Y | Y | Y | Y | Y | Y |
| PATHFINDER | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

ZITADELLE - Ground Units (See Note A)

| | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|--------|------|------|------|------|-------|-------|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|----|
| UNIT # | 1-63 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| I.D. CODE | [1] | G | G | G | G | G | G | G | G | G | R | R | R | R | R | R | R | R | R | R | R | R | R |
| LOCATION | (x, y) | 20,7 | 20,8 | 19,8 | 18,8 | 19,13 | 19,14 | 20,14 | 21,15 | 21,16 | 21,6 | 21,7 | 21,8 | 20,9 | 19,9 | 18,13 | 19,12 | 20,13 | 21,13 | 22,14 | 22,15 | 22,16 | |
| DENSITY | 0-7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

ZITADELLE - Plane Types

| PLANE NUMBER | 1-37 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 17 |
|-----------------|-------|---------|-----------|---------|-----------|----------|-----------|----------|---------|-----------|--------|--------|--------|--------|--------|
| PLANE TYPE | [11] | Bf 109F | Bf 109G-6 | Fw 190A | Fw 190F-3 | Ju 88A-4 | Bf 109G-8 | Ju 88D-1 | He 111H | Bf 110F-2 | Ju 87D | Ju 87G | Hs 129 | Fw 189 | La 5FN |
| ROLE | 0-3 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 2 | 3 | 0 |
| CREW | 0-7 | 1 | 1 | 1 | 1 | 4 | 1 | 4 | 5 | 2 | 2 | 2 | 1 | 3 | 1 |
| FUEL | 1-255 | 22 | 25 | 26 | 35 | 85 | 25 | 135 | 83 | 42 | 63 | 63 | 29 | 35 | 33 |
| PAYLOAD | 0-63 | 0 | 0 | 0 | 7 | 26 | 0 | 0 | 24 | 4 | 13 | 10 | 10 | 0 | 1 |
| SERVICE CEILING | 11-41 | 36 | 39 | 37 | 37 | 27 | 36 | 29 | 26 | 35 | 24 | 24 | 29 | 23 | 31 |
| MAXIMUM SPEED | 0-41 | 19 | 19 | 20 | 18 | 14 | 19 | 18 | 13 | 17 | 13 | 13 | 13 | 11 | 20 |
| OPT. ALTITUDE | 0-31 | 20 | 23 | 20 | 20 | 20 | 19 | 15 | 16 | 20 | 14 | 12 | 13 | 8 | 21 |
| CRUISING SPEED | 0-31 | 16 | 14 | 15 | 15 | 12 | 16 | 13 | 11 | 12 | 8 | 9 | 10 | 10 | 15 |
| CLIMB RATE | 0-15 | 15 | 15 | 12 | 11 | 4 | 15 | 5 | 2 | 11 | 7 | 7 | 8 | 5 | 15 |
| PREPOWER | 0-7 | 4 | 4 | 5 | 5 | 2 | 3 | 1 | 3 | 5 | 1 | 2 | 5 | 1 | 4 |
| MANOEUVR. | 0-7 | 6 | 6 | 7 | 5 | 2 | 5 | 3 | 2 | 3 | 4 | 4 | 3 | 4 | 6 |
| VULNERABILITY | 0-7 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 5 | 2 | 5 |
| RADAR | 0-7 | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 2 |
| REPL. RATE | 0-7 | 2 | 5 | 4 | 2 | 4 | 0 | 1 | 4 | 2 | 4 | 2 | 1 | 2 | 5 |
| ECM | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | Y |
| NIGHT | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| PLANE NUMBER | 1-37 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|-----------------|-------|--------|-------|------|--------|--------|------|-------|
| PLANE TYPE | [11] | Yak 7B | Yak 9 | Pe 2 | Il 2m3 | Yak 9R | Il 4 | Pe 2R |
| ROLE | 0-3 | 0 | 0 | 2 | 2 | 3 | 2 | 3 |
| CREW | 0-7 | 1 | 1 | 3 | 2 | 1 | 3 | 3 |
| FUEL | 1-255 | 20 | 36 | 42 | 36 | 36 | 72 | 60 |
| PAYLOAD | 0-63 | 0 | 0 | 9 | 10 | 0 | 16 | 0 |
| SERVICE CEILING | 11-41 | 33 | 35 | 29 | 20 | 35 | 32 | 30 |
| MAXIMUM SPEED | 0-41 | 19 | 20 | 17 | 12 | 20 | 13 | 18 |
| OPT. ALTITUDE | 0-31 | 16 | 20 | 16 | 10 | 20 | 22 | 20 |
| CRUISING SPEED | 0-31 | 15 | 14 | 13 | 10 | 14 | 10 | 13 |
| CLIMB RATE | 0-15 | 15 | 15 | 11 | 7 | 15 | 9 | 11 |
| PREPOWER | 0-7 | 3 | 3 | 3 | 4 | 3 | 2 | 2 |
| MANOEUVR. | 0-7 | 5 | 6 | 3 | 3 | 6 | 3 | 3 |
| VULNERABILITY | 0-7 | 5 | 5 | 4 | 6 | 5 | 3 | 4 |
| RADAR | 0-7 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| REPL. RATE | 0-7 | 6 | 4 | 3 | 5 | 3 | 4 | 3 |
| ECM | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y |
| NIGHT | Y/N | N | N | N | N | N | N | N |

Note A

1. In this scenario, shipping lanes have been replaced with ground units. To attack a ground unit, you must use the shipping lane procedure.

2. Russian radar stations represent advance warning information from partisans operating behind German lines.

ZITADELLE - Radar Stations (See Note A)

| RADAR STATION # | 1-63 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------|------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------|-------|
| I.D. CODE | [1] | F | F | F | F | F | F | F | F | R | R | R | R |
| LOCATION (x,y) | | 14,2 | 19,7 | 16,10 | 17,13 | 21,14 | 20,18 | 25,21 | 24,32 | 21,5 | 21,9 | 18,11 | 23,15 |
| MIN. DET. ALT. | 1-15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| MAX. DET. ALT. | 1-41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 25 | 25 | 25 | 25 |
| RANGE | 1-8 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 7 | 7 | 7 | 7 |
| RELIABILITY | 0-3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| DAM. STATUS | 0-15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| DAM. CONTROL | 0-3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| 360 SCAN | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | Y | Y | Y | Y |

ZITA. - Time

| | | |
|----------|-------|----|
| DATE | 1-31 | 5 |
| MONTH | 1-12 | 7 |
| YEAR | 0-63 | 43 |
| LENGTH | 1-31 | 7 |
| DAWN | 3-10 | 5 |
| DUSK | 15-22 | 19 |
| MOON | 0-27 | 8 |
| FORECAST | 0-3 | 0 |

ZITA. - Weather

| | | |
|-------|-------|-------|
| C = 2 | C = 4 | C = 1 |
| W = 3 | W = 1 | W = 0 |
| C = 3 | C = 2 | C = 1 |
| W = 1 | W = 1 | W = 0 |
| C = 3 | C = 3 | C = 2 |
| W = 2 | W = 1 | W = 1 |
| C = 4 | C = 3 | C = 3 |
| W = 2 | W = 2 | W = 1 |

ZITADELLE - Doctrine

| NATIONALITY | | AXIS | ALLIES |
|-----------------|------|------|--------|
| MISSIONS | 0-15 | 0 | 0 |
| POPULATION | 0-7 | 1 | 0 |
| INDUSTRY | 0-7 | 1 | 1 |
| COMMUNICATIONS | 0-7 | 7 | 7 |
| PORT FACILITIES | 0-7 | 2 | 2 |
| AIRFIELDS | 0-7 | 7 | 7 |
| RADAR | 0-7 | 0 | 0 |
| SHIPPING LANES | 0-7 | 7 | 7 |
| SUPREME COM. | 0-7 | 5 | 5 |
| C-IN-C | 0-7 | 4 | 5 |
| GROUND ECM | 0-7 | 0 | 0 |
| ORDNANCE EFFECT | 0-3 | 3 | 2 |
| AA FIRE CONTROL | 0-3 | 3 | 2 |

ZITA. - Axis Commands

| | NAME | CURSOR | THRSH. | PRIOR. |
|--------------|-------------|--------|--------|--------|
| C-IN-C | GOERING | 3 | N.A. | N.A. |
| COMMANDER #1 | VON GREIM | 3 | 160 | 6 |
| COMMANDER #2 | DESSLACH | 3 | 150 | 6 |
| COMMANDER #3 | CRIMEA A.C. | 3 | 20 | 4 |
| COMMANDER #4 | - | - | - | - |
| COMMANDER #5 | - | - | - | - |

ZITA. - Allied Commands

| | NAME | CURSOR | THRSH. | PRIOR. |
|--------------|-----------|--------|--------|--------|
| C-IN-C | NOVIKOV | 2 | N.A. | N.A. |
| COMMANDER #1 | RUDENKO | 2 | 290 | 7 |
| COMMANDER #2 | KRASOVSKY | 2 | 420 | 7 |
| COMMANDER #3 | SUETS | 2 | 120 | 7 |
| COMMANDER #4 | VERSHININ | 2 | 30 | 5 |
| COMMANDER #5 | - | - | - | - |

ZITADELLE - Flak Units

| | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-------|------|-----|-----|------|------|------|------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| FLAK UNIT # | 1-63 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| I.D. CODE | [1] | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P | P |
| LOCATION | (x,y) | 11,0 | 2,3 | 7,3 | 12,4 | 16,5 | 17,5 | 19,6 | 15,10 | 8,15 | 16,18 | 21,14 | 20,15 | 19,15 | 20,16 | 18,18 | 11,18 | 18,22 | 24,22 | 24,25 | 9,28 | 16,35 |
| AA GUNS | 1-255 | 24 | 36 | 12 | 24 | 54 | 36 | 60 | 24 | 18 | 12 | 54 | 36 | 36 | 54 | 24 | 12 | 30 | 42 | 30 | 18 | 18 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N |

| | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| FLAK UNIT # | 1-63 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 |
| I.D. CODE | [1] | P | A | A | A | A | A | A | A | A | A | C | C | C | C | C | C | C | C | C | C | C |
| LOCATION | (x,y) | 21,32 | 20,7 | 20,8 | 19,8 | 18,8 | 19,13 | 19,14 | 20,14 | 21,15 | 21,16 | 22,1 | 23,7 | 24,7 | 22,9 | 20,10 | 20,11 | 21,11 | 23,10 | 26,10 | 22,13 | 23,12 |
| AA GUNS | 1-255 | 36 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 20 | 44 | 18 | 22 | 22 | 36 | 18 | 18 | 42 | 18 | 18 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

| | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| FLAK UNIT # | 1-63 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |
| I.D. CODE | [1] | C | C | C | C | C | C | C | C | U | U | U | U | U | U | U | U | U | U | U | U | U |
| LOCATION | (x,y) | 23,13 | 24,14 | 25,14 | 24,16 | 38,18 | 37,22 | 29,24 | 28,32 | 21,6 | 21,7 | 21,9 | 20,9 | 19,9 | 18,9 | 18,13 | 19,12 | 20,13 | 21,13 | 22,14 | 22,15 | 22,16 |
| AA GUNS | 1-255 | 18 | 18 | 18 | 18 | 44 | 8 | 28 | 12 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |

Both sides used their forces as flying artillery although for slightly different reasons. The *Luftwaffe* had only ever been defined as a close support arm. Confusion and incompetence at the top meant that it never successfully defined and accomplished a more strategic role.

The same incompetence and confusion meant that by 1943 the *Luftwaffe* was operating from an inadequate logistical base, lacking in men, machines and fuel. There was simply not enough to go around, and the weakened state of the *Wehrmacht* meant that demand for air support would always exceed supply. However, wherever the *Luftwaffe* did operate it was superior to its opponent and Kursk it achieved a formidable concentration.

The Red Air Force was definitely on the way up by 1943. It had not, and would never completely recover, from the trauma of the pre-war years and the disasters of 1941. Pilot training and morale was at times uncertain and the organisation of the Air Force suffered from some severe defects. A basic expression of this was a lack of individuality and flexibility in the thinking of all levels of the Air Force.

Soviet flyers were capable of adhering rigidly to a battle plan, even in the face of certain destruction, or abandoning all thoughts of the mission and going home. Commanders had to do precisely what they were ordered, regardless of changed circumstances. Only Stalin seemed to be allowed to change a plan. However, the Red Air Force, like the Army, worked around these problems.

At Kursk the air forces were better equipped and led than they had been in the previous year. Relative successes at Stalingrad and the Kuban peninsular had raised morale. Indeed certain units, mostly Guards or *Sturm* were every bit as tough as the Germans.

Necessarily, the Red Air Force substantially outnumbered the *Luftwaffe* and was determined to gain the advantage at last.

THE SCENARIO

Although *Europe Ablaze* is an immensely detailed game it necessarily takes a strategic view of things. In order to simulate the tactical nature of the Eastern Front air war a few slight artifices have been necessary. The hexes on either side of the front which contained the ground formations involved in the fighting are marked with tank and/or infantry symbols. These are actually entered in the game as sea lanes! All bombers on either side are capable of Naval Ops. There are no other sea lane hexes in the game.

When you wish to strike against enemy ground units, you must access them as though they were shipping lanes.

Each special front line hex has been given a high flak value to reflect the high risks of low level attacks on dense ground formations.

To simulate the provision of information by partisan units behind the German lines, we have added four radar stations to the Russian Order of Battle.

The ground attack aircraft Hs 129, Fw 190F-3 and Il-2 have been given a payload in excess of their actual bomb load to reflect the effectiveness of the anti-tank cannon, bombs or rockets that they carried.

The Russians had large numbers of Po-2's, an obsolete bi-plane which they used for night nuisance bombing. In the interests of reasonable airplane numbers and given their irrelevance to the battle at Kursk, they have been omitted. The Germans retaliated with obsolete bi-planes of their own and these and night

fighters may be added if desired. Small forces are represented in the Kuban peninsular and Kerch areas as fighting here was virtually continuous.

The scenario lasts for seven days. On the twelfth, with no breakthrough in the north and things finely balanced in the south, the Soviets launched a counter attack north of the salient aimed at Orel and Bryansk. In the south a massive tank battle at Prokhorovka resulted in tremendous casualties but no breakthrough. The battle for Kursk and the *Wehrmacht's* last offensive hopes for the Eastern Front had been defeated.

SOME VARIATIONS

Well, not too many for this scenario.

Disk subscribers will note that the *Zitadelle* scenario disk also contains the 15th Air Force scenario from the Design Manual. This is in response to dozens of letters over the past six months.

Both sides produced a maximum effort at Kursk. Just about every available aircraft was thrown into the struggle for air superiority and consequently, effective ground support.

1. We could be very generous to Germany and allow them to introduce the peerless *Schwalbe* (Swallow), better known as the Me 262A, to this contest. Replace the existing fighters in up to 6 *Jagdgeschwaden* with the same number of Me262As. (The characteristics are - 25, Me262 A1, 0,1, 24, 0, 36, 27, 22, 22, 15, 6, 5, 6, 4, 4, 0, N, N.)

2. Similarly, we can make things tough for them. Suppose the Allied landings on Sicily had come a little earlier. Remove 4 *Kampfgeschwaden*, 6 *Jagdgeschwaden* and 2 recon units. The fighters must be Bf 109Gs or Fw 190As. The bombers and recon can be of any type.

BATTLE OF ANTIETAM

17th September, 1862

David Landrey and Chuck Kroegel present
their view of America's Bloodiest Day

On the morning of 17th September 1862 a harried Army of Northern Virginia numbering 35,000 men stood with its back to the Potomac River. Across Antietam Creek the 67,000 strong Army of the Potomac deployed to crush its adversary. It should have been a walkover. Instead, the Union Commander George B. McClellan, managed to bungle the opportunity and the Confederate army was allowed to slip away to fight again.

Strategic Simulation Inc's *Battle of Antietam* comes packed in a standard SSI box, containing a double sided 5.25" disk, a plastic coated data card and rule book; all produced to the usual high SSI standard. The rule book is brief, to the point and tells you nearly all you need to know. It also contains a well written account of the battle and the events leading up to it, complemented with some good maps. My only criticism of the physical components is that a second data card would have been useful for two player games.

Booting up the game is straightforward and you are immediately into the player options. There are a large number of these but broadly speaking they include -

(i) **Choice of Side** - the computer can play itself.

(ii) **Handicapping.**

(iii) **Level of Game** - beginner, intermediate and advanced. All levels are quite enjoyable, the higher levels simply adding more features such as command control and leaders. The basic game is a good introduction for people not used to computer games.

(iv) **Move Time Limits** - useful if you have opponents who take a long time moving.

(v) **Activation** - a must for a balanced game. Under this option, the number of divisions the Union player may move is severely restricted.

(vi) **Hidden Movement** - enemy units are not displayed on the map unless in the line of sight of at least one of your own units. Another nice feature.

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Once the options have been chosen, they cannot be changed, which is a disappointment. Some options could not be changed, of course, such as game level and handicapping, but it would be nice to be able to swap sides if the computer is giving you a hiding.

The screen is clear in monochrome and really comes up well in colour. There is a lot of different terrain - slopes, cornfields, towns, woods, fords, rivers etc - on a 42 by 36 grid square. Not all of the map can fit on the screen at once and thus it scrolls back and forth as you move the cursor around. There is no facility to see the whole screen and it is not really necessary.

Each unit represents a half brigade for infantry and cavalry and about three batteries for artillery. The game scale is 183 metres to the grid square and 1 hour per turn. Information on enemy units is very limited; you know only their location (and not always that if using the *hidden movement* option). There is no indication as to strength or abilities. This creates an excellent *fog of war* environment.

The game proceeds sequentially, each game turn beginning with both players tracing command control, reviving battered troops and resupplying those without ammunition. This is all done by the computer.

Then comes a Union movement and combat phase, followed by Confederate combat and movement, a mid-turn recovery phase where disruption can be removed and ammunition resupplied and then a second movement and combat phase for the Union and Confederate. At the end of the turn, a full body count and victory point update is given.

During his turn the player moves, designates target priorities if desired and

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|--------------------|---|--|
| TITLE | - | Battle of Antietam |
| AUTHOR | - | Landrey/Kroegel |
| PUBLISHER | - | Strategic Simulations Inc 883 Stierlin Rd, Bldg A-200 Mountain View, CA. 94043 U.S.A. |
| FORMAT | - | Apple/Atari/C-64 one/two drives |
| PRICE | - | \$60 (US), \$90 (AUST) |
| REVIEWED BY | - | Mark Holman |

orders advance after combat and melees. At the end of his turn the computer takes over, resolving, in order, artillery fire, infantry fire and finally melees. The defender always fires before the attacker's fire is resolved in each of the above segments, and in the case of melees receives an additional defensive fire phase, so assaults have to be carefully planned and carried out in the knowledge that heavy losses will be suffered.

The movement and combat system makes excellent use of the computer's number crunching ability. Each unit is rated for number of men, weapon type, fatigue, morale and effectiveness. Losses are calculated on a per man basis (it even gives killed, wounded and missing - always the same proportions; but a nice piece of chrome).

Fatigue is constantly updated depending on terrain traversed or casualties taken, while morale is reduced by fatigue and refreshed by taking a unit out of the battle line. Fire combat can disrupt units which prevents them carrying out melees, while attackers can gain ground or be repulsed from melees. If a unit's morale falls too low, it may rout after taking casualties and if below a certain strength, routed units will not rally.

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The smoke of battle obscures artillery targets, units run out of ammunition at random and critical moments, leaders can help rally men, lead them to greater glory and get shot - its all great stuff, as much detail as you could ever want.

Leadership and command control are a major factor in the game and it is a delight to see the emphasis placed on them. Divisional commanders (and corps commanders for the Union) have a command span. Any subordinate unit outside this command span has its movement reduced by half, cannot rally if routed and cannot be resupplied if out of ammunition. A proper emphasis is therefore placed on maintaining higher unit cohesion.

Leaders also increase the fire strength of units they are stacked with and the closer units are to their leader, the better their chance of being resupplied. When leaders take losses (they do not die; just get wounded so they can gasp out some famous last words and die later in the best Civil War tradition), replacement leaders are promoted though there seems to be one problem with this feature as noted later.

The computer does take a while to get through its moves if you do not have a speed card, but it is not unbearably slow.

I do have a number of criticisms of the movement system, which I found more than a little tedious. To move units you have to locate them with the cursor and move them one by one to the desired spot. Once you get there the next unit in the order of battle is automatically located, moved by you and so on. The designers have made players responsible for every hop, step and jump each unit takes.

When you think that each side has the best part of 100 or more units, this can mean a lot of work. To my mind, it would be desirable to allow players the option to identify objectives on the map and order units to proceed towards them in divisional groupings at their best pace. This style of facility already exists in SS's *Kampfgruppe* and *Mech Brigade* and works, except with rivers.

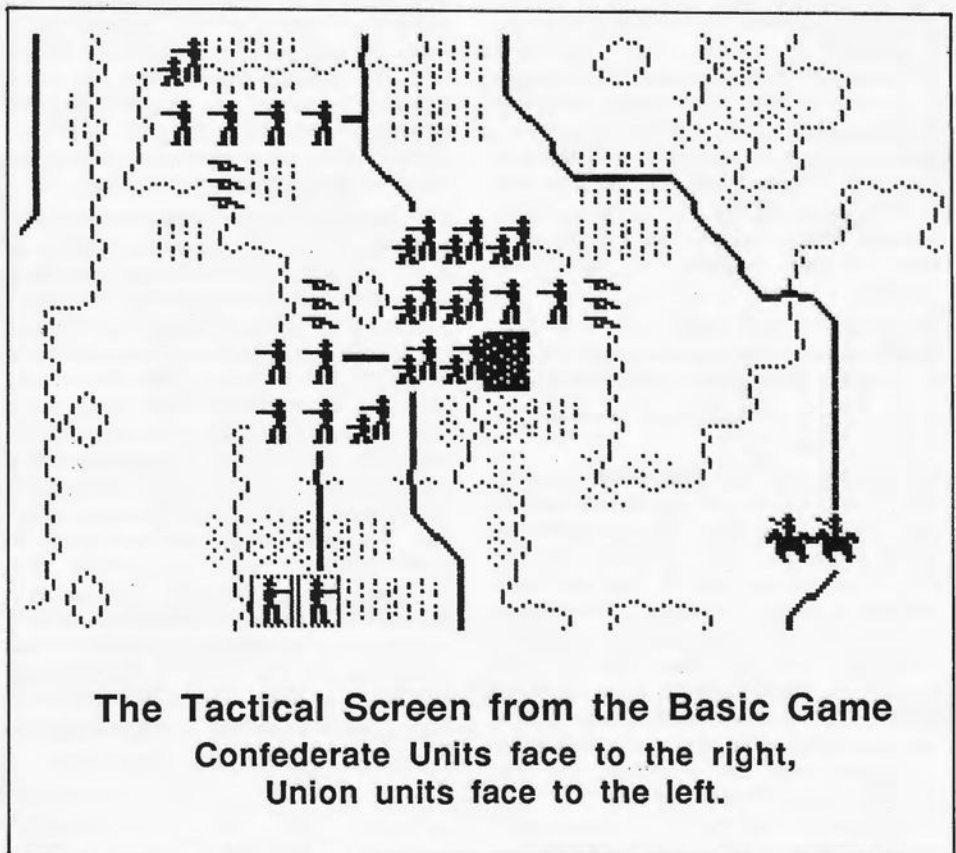
I appreciate that *Antietam* is a radically different game and a system of moving units on a 'grouped' basis would not be easy to program, but on the other hand

the game's movement system is little better than a board game. The design in this aspect does not reduce player load so that he can concentrate on decision making.

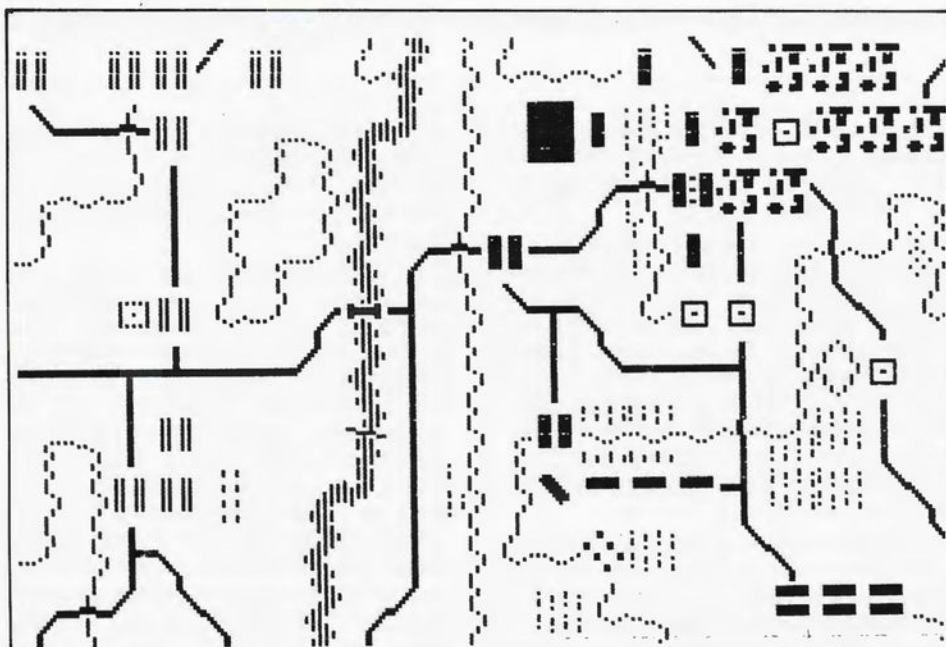
Even if a group movement system could not be developed, I am sure a better method for cycling through units could be. The units basically operate in divisional/corps groupings for the Union and divisional groupings for the Confederate. When moving units you cycle through them one at a time. If you miss a unit, you cannot go back to it, you have to either cycle forward or try to locate it manually. At various times whole divisions will not be moving due to activation restrictions, yet you have to cycle through them all to get to active units. The game in my view would be improved immensely if -

- (I) a cycle back facility was available,
- (II) whole divisions could be skipped when locating units and
- (III) you could cycle around the units within one division/corps.

Once movement is complete, a few quick key strokes take you into combat, which



**The Tactical Screen from the Basic Game
Confederate Units face to the right,
Union units face to the left.**



The Tactical Screen from the Advanced Game
 Confederate Units are the solid rectangles,
 Union units are hollow rectangles.

the computer plays out before your eyes, showing each combat and the carnage committed. There are no sound effects, personally I like them and would prefer to have them available. The options allow varying times for information concerning casualties to be on the screen, depending on whether you want a quick impression or want to write it all down (you would have to be keen). The combat system works well, combining the firing unit's weapon type, number of men or guns, fatigue and unexpended movement points to come up with a number that is further modified by the target unit's density, range, terrain and facing. The result is the number of casualties inflicted.

The whole thing is pretty exciting as you watch the combat progress and your plans either come off or end in disaster.

I have only two criticisms of the combat system. These are -

(i) Routed men run back four squares and then can only be moved one square per turn until they rally. This is a common game technique which probably has its origins in Richard Berg's *Terrible Swift Sword*. In reality, however, units did not rout en masse so much as the less willing members of the unit (about 95% of those present) tended to drift off in the opposite direction to where the fighting was. These were casualties in a real sense, but if the unit was pulled out of action and the straggler pickets were doing their job, they could be regained. In my mind routs should only occur when units are reduced

below the non recovery level (300 men for the Union, 100 for the Confederates), while casualties should be higher with an ability to recover stragglers. A similar system is used in West End's *Shiloh/South Mountain* games and should not be difficult to adapt to the computer. It is of course conceded that catastrophic routs did occur in many battles - Shiloh and Chancellorsville to name but two - however Antietam was fought with great courage and determination by the common soldiers of both sides and mass panic was not a feature of that day.

(ii) Leader promotion becomes a problem if too many of them meet their maker. In one game I played, the Union 1st Corps Commander and his three divisional commanders were all rendered *hors de combat* (it was a bad day, I can tell you!) The program did recognise the senior brigade commander as the new corps commander but would not let him transfer to a unit outside his division as an original corps commander, or divisional commander promoted to replace him, can. This can have a serious effect on your ability to move men, rally and resupply them. It may be that this is a deliberate feature to reflect the serious command problems which would doubtlessly arise given so many senior officer casualties. If so, it would have been nice to have had it confirmed in the rules.

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As your opponent, the computer can give a novice player a fearful time, however its mode of play is not too hard to work out and once done so, it is an easy-beat. This is especially so when when I played the Confederate. I found that moving men and artillery to the edge of slopes and building fortifications created an extremely tough defensive line that the machine threw its men against in true McClellan style. There was no subtlety, no attempt to turn flanks, avoid strong points or bring up close range artillery to blast me out of them. The result was a slaughter. In addition, if playing solo and using the command control restriction, the Union corps are released at predetermined times known to the Confederate. Hence, he can strip his line at points, knowing that the enemy troops opposite will not move. Allowing the computer the choice of which divisions to move would add a lot of anxiety to the Confederate player's job.

As the Confederate, the computer does do a much better job but generally it is programmed to seek out good defensive terrain and will not attack. Several times the machine massed on my exposed flank or got units behind my lines but once in position, it just seemed to dither around and not go in for the kill. Consequently the Union player is pretty safe from the devastating counter-attacks which were a feature of Lee's defense in the actual battle.

Furthermore, the computer will nearly always pick up its artillery and run if Union soldiers get too close. This is understandable as captured guns are worth a lot of VP's, however, their close range fire can chop an attack to pieces.

In conclusion, I really do like the game, however I am sure that my main reason is that it is the best game available in this field. The data base detail, the uncertain atmosphere and the combat system are all fine achievements, but in the final assessment, *Battle of Antietam* really is a board game on a screen, only making use of the computer to perform a record keeping function. The game can be long, hard work for a player if you have a lot of units to move - the computer really should be used to take much more of the load.

The basic system can be used for further Civil War battles and undoubtedly will be if *Battle of Antietam* is a success in the market. These new games will be well worth buying if the movement system can be developed into a more player friendly format.

CARRIERS AT WAR

TECHNICAL DATA ON SHIP CLASSES

PART THREE

French, German, Italian, Russian, Norwegian, Swedish, Dutch, Spanish, Greek and Turkish Warships in Service (1939-1945)

This installment completes our warship design feature. Some very small navies (such as Portugal, Poland, Romania and all the Latin American navies) are not included. Notwithstanding their absence, the technical data presented in this series of articles will allow you to construct just about every warship which saw action in the Second World War.

For the most part, the entries in this installment follow the same pattern as the previous installments. For some of the minor navies, however, provision has been made to include smaller warships such as torpedo boats and sloops, especially where these vessels formed an important part of a country's naval doctrine.

Ships not completed in time to take part in the war have, for the most part, been excluded from the directory. A few exceptions however, specifically the more interesting capital ships, have slipped through.

Part One appeared in the January '86 issue. Part Two appeared in the April '86 issue. Both issues can be ordered from our Australian or US office while stocks last.

To make use of the information, locate the required ship from the listing and note the ship class to which it belongs. Now find this ship class from the appropriate table and enter these values either directly into your computer or (recommended) onto a blank design sheet.

Note that the pennant numbers for CV's are included even though there is enough space in the carrier creation routine to enter most names in full.

The ship class tables also include the specialized data needed to create aircraft carriers and submarines. This information appears in the top row, in brackets, beside the number of ships in the class. For carriers, air capacity and spot number are read as (A,S). For subs, depth and speed are read as (D,S).

We can illustrate the procedure with some examples. To design a scenario on the 1940 battles in the Mediterranean you will require, among others, the *Bartolomeo Colleoni*. Consult the Italian ship listings (under light cruisers) and you'll find the pennant number of the *Bartolomeo Colleoni* is CL 5 and the ship class is CL 1928. Locate CL 1928 in the ship class tables and enter the data found there onto a blank design sheet.

The *Komsomolec* is a Russian submarine belonging to ship class SS 1929. The bracketed numbers in the top row of the class data are the submarine's depth value and underwater speed value, namely (3,3) These two values are needed for the other ship creation routine. *Komsomolec's* pennant number is SH304.

The pennant number designation for most ships in this directory is chronological and alphabetical; i.e. within a given class the ships are sorted alphabetically. To use historic pennant numbers would lead to confusion, especially for non-English speaking navies.

In those instances where warships were not given names (for example German U-boats), the historic pennant number or I.D. code has been used.

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Throughout the interwar years, the reconstruction of the French Navy was hampered by chronic political crises (and

FRENCH WARSHIPS

| | | |
|----------|-------|-----------------|
| CV 1914 | CV 1 | Bearn |
| CV 1938 | CV 2 | Joffre (inc.) |
| AV 1927 | AV 1 | Com. Teste |
| BB 1910 | BB 1 | Courbet |
| | BB 2 | Jean Bart |
| | BB 3 | Paris |
| BB 1912 | BB 4 | Bretagne |
| | BB 5 | Lorraine(a) |
| | BB 6 | Provence |
| BB 1932 | BB 7 | Dunkerque |
| | BB 8 | Strasbourg |
| BB 1935 | BB 9 | Jean Bart |
| | BB 10 | Richelieu(a) |
| CA 1924 | CA 1 | Duquesne |
| | CA 2 | Tourville |
| CA 1926 | CA 3 | Colbert |
| | CA 4 | Dupleix |
| | CA 5 | Foch |
| | CA 6 | Suffron(a) |
| CA 1931 | CA 7 | Algerie |
| CL 1922 | CL 1 | Duguay Trouin |
| | CL 2 | Lamotte-Picquet |
| | CL 3 | Primaguet |
| CL 1928 | CL 4 | Jeanne D'Arc |
| CL 1931A | CL 5 | Emile Bertin |
| CL 1931B | CL 6 | Georges Leygues |
| | CL 7 | Gloire |
| | CL 8 | Jean de Vienne |
| | CL 9 | La Galissoniere |
| | CL 10 | Marseillaise |
| | CL 11 | Montcalm |
| DD 1922 | DD 1 | Chacal |
| | DD 2 | Jaguar |
| | DD 3 | Leopard |
| | DD 4 | Lynx |
| | DD 5 | Panthere |
| | DD 6 | Tigre |
| DD 1923 | DD 7 | Bourrasque |
| | DD 8 | Cyclone |
| | DD 9 | Mistral |
| | DD 10 | Orage |
| | DD 11 | Ouragan |
| | DD 12 | Simoun |
| | DD 13 | Sirocco |
| | DD 14 | Tempete |
| | DD 15 | Tournade |
| | DD 16 | Tramontane |
| | DD 17 | Trombe |
| | DD 18 | Typhon |
| DD 1925 | DD 19 | Basque |
| | DD 20 | Bordelais |
| | DD 21 | Boulonnais |
| | DD 22 | Brestois |
| | DD 23 | Forbin |
| | DD 24 | Foudroyant |
| | DD 25 | Fougueux |
| | DD 26 | Frondeur |
| | DD 27 | L'Adroit |
| | DD 28 | L'Alcyon |
| | DD 29 | La Palme |
| | DD 30 | La Railleuse |
| | DD 31 | Le Fortune |
| | DD 32 | Le Mars |
| DD 1927 | DD 33 | Bison |
| | DD 34 | Guepard |
| | DD 35 | Lion |
| | DD 36 | Valmy |
| | DD 37 | Verdun |
| | DD 38 | Vauban |
| DD 1928 | DD 39 | Aigle |
| | DD 40 | Albatros |

| | | |
|---------|-------|-------------------|
| | DD 41 | Epervier(a) |
| | DD 42 | Gerfaut |
| | DD 43 | Milan(a) |
| | DD 44 | Vautour |
| DD 1929 | DD 45 | Cassard |
| | DD 46 | Chevalier Paul |
| | DD 47 | Kersaint |
| | DD 48 | Maille Breze |
| | DD 49 | Tartu |
| | DD 50 | Vauquelin |
| DD 1931 | DD 51 | L'Audacieux |
| | DD 52 | L'Indomptable |
| | DD 53 | Le Fantasque |
| | DD 54 | Le Malin |
| | DD 55 | Le Terrible |
| | DD 56 | Le Triomphant |
| DD 1936 | DD 57 | Mogador |
| | DD 58 | Volta |
| DD 1937 | DD 59 | Casque |
| | DD 60 | Epee |
| | DD 61 | Fleuret |
| | DD 62 | Lansquenet(a) |
| | DD 63 | Le Corsaire(a) |
| | DD 64 | Le Filibustier(a) |
| | DD 65 | Le Hardi |
| | DD 66 | Mameluck(a) |
| DE 1930 | DE 1 | Amiral Charner |
| | DE 2 | Bourgainville |
| | DE 3 | D'Entrecasteaux |
| | DE 4 | D'Iberville |
| | DE 5 | Dumont D'Urville |
| | DE 6 | La Grandiere |
| | DE 7 | R. de Genouilly |
| | DE 8 | Sav. de Brazza |
| TB 1934 | TB 1 | Baliste |
| | TB 2 | Bombarde |
| | TB 3 | Bouclier |
| | TB 4 | Branlebas |
| | TB 5 | L'Incomprise |
| | TB 6 | L'iphigenie |
| | TB 7 | La Bayonnaise |
| | TB 8 | La Cordeliere |
| | TB 9 | La Flore |
| | TB 10 | La Melpomene |
| | TB 11 | La Pomone |
| | TB 12 | La Poursuivante |
| SS 1923 | SS 1 | Caiman |
| | SS 2 | Dauphin |
| | SS 3 | Espadon |
| | SS 4 | Marsouin |
| | SS 5 | Morse |
| | SS 6 | Narval |
| | SS 7 | Phoque |
| | SS 8 | Requin |
| | SS 9 | Souffleur |
| SS 1924 | SS 10 | Ariane |
| | SS 11 | Calypso |
| | SS 12 | Circe |
| | SS 13 | Danae |
| | SS 14 | Doris |
| | SS 15 | Eurydice |
| | SS 16 | Galatee |
| | SS 17 | Nalade |
| | SS 18 | Nymphe |
| | SS 19 | Ondine |
| | SS 20 | Sirene |
| | SS 21 | Thetis |
| SS 1926 | SS 22 | Acheron |
| | SS 23 | Achille |
| | SS 24 | Acteon |
| | SS 25 | Agosta |
| | SS 26 | Ajax |
| | SS 27 | Archimede |
| | SS 28 | Argo |
| | SS 29 | Beveziers |
| | SS 30 | Casabianca |

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|----------|-------|----------------|
| | SS 31 | Fresnel |
| | SS 32 | Henri Poincare |
| | SS 33 | L'Espoire |
| | SS 34 | Le Centaure |
| | SS 35 | Le Conquerant |
| | SS 36 | Le Glorieux |
| | SS 37 | Le Heros |
| | SS 38 | Le Tonnant |
| | SS 39 | Monge |
| | SS 40 | Ouessant |
| | SS 41 | Pascal |
| | SS 42 | Pasteur |
| | SS 43 | Pegase |
| | SS 44 | Persee |
| | SS 45 | Poncelet |
| | SS 46 | Protee |
| | SS 47 | Redoutable |
| | SS 48 | Sfax |
| | SS 49 | Sidi Ferruch |
| | SS 50 | Vengeur |
| SS 1927 | SS 51 | Diamant |
| | SS 52 | Nautilus |
| | SS 53 | Perle |
| | SS 54 | Rubis |
| | SS 55 | Saphir |
| | SS 56 | Turquoise |
| SS 1928A | SS 57 | Surcouf |
| SS 1928B | SS 58 | Amazone |
| | SS 59 | Amphitrite |
| | SS 60 | Antiope |
| | SS 61 | Arethuse |
| | SS 62 | Argonaute |
| | SS 63 | Atalante |
| | SS 64 | Diane |
| | SS 65 | La Psyche |
| | SS 66 | La Sultane |
| | SS 67 | La Sybille |
| | SS 68 | La Vestale |
| | SS 69 | Meduse |
| | SS 70 | Ondine |
| | SS 71 | Oreade |
| | SS 72 | Orion |
| | SS 73 | Orphee |
| SS 1933 | SS 74 | Ceres |
| | SS 75 | Iris |
| | SS 76 | Junon |
| | SS 77 | Minerve |
| | SS 78 | Pallas |
| | SS 79 | Venus |
| SS 1938 | SS 80 | Aurore |
| | SS 81 | La Creole |

GERMAN WARSHIPS

| | | |
|----------|------|--------------------|
| CV 1936A | CV 1 | Graf Zeppelin (i.) |
| CV 1936B | CV 2 | Seydlitz (inc.) |
| BB 1935 | BB 1 | Gneisenau |
| | BB 2 | Scharnhorst |
| BB 1936 | BB 3 | Bismarck |
| | BB 4 | Tirpitz |
| CA 1929 | CA 1 | Adm. Graf Spee |
| | CA 2 | Admiral Scheer |
| | CA 3 | Deutschland |
| CA 1935 | CA 4 | Admiral Hipper |
| | CA 5 | Blucher |
| | CA 6 | Prinz Eugen |
| CL 1921 | CL 1 | Emden |
| CL 1926 | CL 2 | Karlsruhe |
| | CL 3 | Koln(a) |
| | CL 4 | Konigsberg |
| CL 1928 | CL 5 | Leipzig |
| CL 1934 | CL 6 | Nurnberg |

DD 1934 DD Z1 Leberecht Maass
 DD Z2 Georg Thiele
 DD Z3 Max Schultz
 DD Z4 Richard Beitzel
 DD Z5 Paul Jacobi
 DD Z6 Theodor Riedel
 DD Z7 Herm. Schoemann
 DD Z8 Bruno Heinemann
 DD Z9 Wolfgang Zenker
 DD Z10 Hans Lody
 DD Z11 Bernd von Arnim
 DD Z12 Erich Giese
 DD Z13 Erich Koellner
 DD Z14 Freidrich Ihn
 DD Z15 Erich Steinbrinck
 DD Z16 Freidrich Eckoldt
 DD Z17 Diether v. Roeder
 DD Z18 Hans Ludemann
 DD Z19 Hermann Kunne
 DD Z20 Karl Galster
 DD Z21 Wil. Heidkamp
 DD Z22 Anton Schmitt
 DD Z23 - DD Z30
 DD 1938 DD Z31 - DD Z34
 DD 1939 DD Z37 - DD Z39
 DD 1940 DD Z35 - DD Z36
 DD Z43 - DD Z44
 DE 1934 DE F1 - DE F10
 TB 1924 TB 1 Albatros
 TB 2 Falke
 TB 3 Greif
 TB 4 Iltis
 TB 5 Jaguar
 TB 6 Kondor
 TB 7 Leopard
 TB 8 Luchs
 TB 9 Mowe
 TB 10 Seeadler
 TB 11 Tiger
 TB 12 Wolf
 TB 1937 TB T1 - TB T21
 TB 1940 TB T22 - TB T36
 SS 1935 U1 - U24
 U56 - U63
 U120 - U121
 U137 - U152
 SS 1936A U25 - U26
 SS 1936B U27 - U36
 U45 - U55
 U69 - U102
 U132 - U136
 U201 - U212
 U221 - U232
 U235 - U291
 U301 - U329
 U331 - U394
 U396 - U458
 U465 - U486
 U551 - U683
 U701 - U722
 U731 - U779
 U821 - U828
 U901 - U908
 U921 - U930
 U951 - U1031
 U1051 - U1058
 U1063 - U1065
 SS 1938 U37 - U44
 U64 - U68
 U103 - U111
 U122 - U131
 U167 - U176
 U183 - U194
 U501 - U550
 U801 - U806
 U841 - U846

U853 - U859
 U865 - U870
 U877 - U881
 U1221 - U1235
 U1501 - U1530
 SS 1941 U116 - U119
 U219 - U220
 U233 - U234
 SS 1944A U1405 - U1409
 SS 1944B U2501 - U2546
 U2548 - U2551
 U3001 - U3035
 U3037 - U3041
 U3501 - U3530
 SS 1944B U2321 - U2371
 U4701 - U4712

ITALIAN WARSHIPS

CV 1925 CV 1 Aquila
 BB 1910 BB 1 Conte di Cavour
 BB 2 Giulio Cesare
 BB 1912 BB 3 Andrea Doria
 BB 4 Caio Duilio
 BB 1934 BB 5 Littorio
 BB 6 Roma
 BB 7 Vittorio Veneto
 CA 1925 CA 1 Trento
 CA 2 Trieste
 CA 1929 CA 3 Fiume
 CA 4 Gorizia
 CA 5 Pola
 CA 6 Zara
 CA 1930 CA 7 Bolzano
 CL 1910 CL 1 Taranto
 CL 1913 CL 2 Bari
 CL 1928 CL 3 Abercio da
 Barbiano
 CL 4 Amberto di
 Giussano
 CL 5 Bartolomeo
 Colleoni
 CL 6 Giovanni delle
 Bande Nere
 CL 1930 CL 7 Luigi Cadorna
 CL 8 Armando Diaz
 CL 1931 CL 9 Raimondo
 Montecuccoli
 CL 10 Muzio Attendolo
 CL 1932 CL 11 Emanuel Filiberto
 Duca D'Aosta
 CL 12 Eugenio di Savoia
 CL 1933 CL 13 Luigi di Savoia
 Duca D'Abruzzi
 CL 14 Giuseppe
 Garibaldi
 CL 1939 CL 15 Attilio Regolo
 CL 16 Pompeo Magno
 CL 17 Scipione Africano
 DD 1914 DD 1 Augusto Riboty(a)
 DD 2 Carlo Mirabello
 DD 1921 DD 3 Leone
 DD 4 Pantera
 DD 5 Tigre
 DD 1923 DD 6 Francesco Crispi
 DD 7 Quintino Sella
 DD 1924 DD 8 Aquilone(a)
 DD 9 Borea(a)
 DD 10 Cesare Battisti
 DD 11 Daniele Manin
 DD 12 Espero(a)
 DD 13 Euro(a)

DD 14 Francesco Nullo
 DD 15 Nazario Sauro
 DD 16 Nembo(a)
 DD 17 Ostro(a)
 DD 18 Turbine(a)
 DD 19 Zeffiro(a)
 DD 1927 DD 20 Alvise da Mosto
 DD 21 Antonio da Noli
 DD 22 Antonio Pigafetta
 DD 23 Antoniotto
 Usodimare
 DD 24 Emanuele
 Pessagno
 DD 25 Giovanni di
 Varazzano
 DD 26 Lanzerotto
 Malocello
 DD 27 Leone Pancaldo
 DD 28 Luca Tarigo
 DD 29 Nicoloso
 da Recco
 DD 30 Nicolo Zeno
 DD 1929 DD 31 Ugolini Vivaldi
 DD 32 Alfredo Oriani
 DD 33 Baleno
 DD 34 Dardo
 DD 35 Folgore
 DD 36 Freccia
 DD 37 Fulmine
 DD 38 Giosue Carducci
 DD 39 Lampo
 DD 40 Maestrале
 DD 41 Saetta
 DD 42 Scirocco
 DD 43 Strale
 DD 44 Vincenzo
 Gioberti
 DD 45 Vittorio Alfieri
 DD 1937 DD 46 Alpino
 DD 47 Artigliere
 DD 48 Ascarì
 DD 49 Aviere
 DD 50 Bersagliere
 DD 51 Bombardiere
 DD 52 Camicia Nera
 DD 53 Carabiniere
 DD 54 Corazziere
 DD 55 Corsaro
 DD 56 Fuciliere
 DD 57 Geniere
 DD 58 Granatiere
 DD 59 Lanciere
 DD 60 Legionario
 DD 61 Mitragliere
 DD 62 Vellite
 DE 1935 DE 1 Pegaso
 DE 2 Procione
 DE 3 Orione
 DE 4 Orsa
 DE 1941 DE 5 Allseo
 DE 6 Animoso
 DE 7 Ardente
 DE 8 Ardimentoso
 DE 9 Ardito
 DE 10 Ciclone
 DE 11 Fortunale
 DE 12 Ghibil
 DE 13 Groppo
 DE 14 Impavido
 DE 15 Impetuoso
 DE 16 Indomito
 DE 17 Intrepido
 DE 18 Monsone
 DE 19 Tifone
 DE 20 Uragano
 TB 1911 TB 1 Insidioso

| | | |
|----------|-------|-----------------------------|
| TB 1913 | TB 2 | Antonio Mosto |
| | TB 3 | Fratelli Cairoll |
| | TB 4 | Giuseppe Cesare Abba |
| | TB 5 | Giuseppe Dezza |
| | TB 6 | Giuseppe Missori |
| | TB 7 | Ippolito Nievo |
| | TB 8 | Simone Schiaffino |
| TB 1915 | TB 9 | Audace |
| TB 1916 | TB 10 | Angelo Bassini |
| | TB 11 | Enrico Cosenz |
| | TB 12 | Francesco Stocco |
| | TB 13 | Giacinto Carini |
| | TB 14 | Giacomo Medici |
| | TB 15 | Giovanni Acerbi |
| | TB 16 | Giuseppe La Farina |
| | TB 17 | Giuseppe La Masa |
| | TB 18 | Giuseppe Sirtori |
| | TB 19 | Nicola Fabrizi |
| | TB 20 | Vincenzo Giordano Orsini |
| TB 1917 | TB 21 | Confienza |
| | TB 22 | Palestro |
| | TB 23 | San Martino |
| | TB 24 | Solferino |
| TB 1919 | TB 25 | Achille Papa |
| | TB 26 | Antonio Cantore |
| | TB 27 | Antonio Chinotto |
| | TB 28 | Antonino Cascino |
| | TB 29 | Carlo Montanari |
| | TB 30 | Marcello Prestinari |
| TB 1920 | TB 31 | Calatafimi |
| | TB 32 | Castelfidardo |
| | TB 33 | Curtatone |
| | TB 34 | Monzambano |
| TB 1933 | TB 35 | Airone |
| | TB 36 | Alcione |
| | TB 37 | Aldebaran |
| | TB 38 | Altair |
| | TB 39 | Andromeda |
| | TB 40 | Antares |
| | TB 41 | Aretusa |
| | TB 42 | Ariel |
| | TB 43 | Astora |
| | TB 44 | Canope |
| | TB 45 | Callipo |
| | TB 46 | Calliope |
| | TB 47 | Cassiopea |
| | TB 48 | Castore |
| | TB 49 | Centauro |
| | TB 50 | Cigno |
| | TB 51 | Circe |
| | TB 52 | Climene |
| | TB 53 | Clio |
| | TB 54 | Libra |
| | TB 55 | Lince |
| | TB 56 | Lira |
| | TB 57 | Lupo |
| | TB 58 | Pallade |
| | TB 59 | Partenope |
| | TB 60 | Perseo |
| | TB 61 | Pleiadi |
| | TB 62 | Polluce |
| | TB 63 | Sagittario |
| | TB 64 | Sirio |
| | TB 65 | Spica |
| | TB 66 | Vega |
| SS 1925A | SS 1 | Antonio Sciesa |
| | SS 2 | Balilla |
| | SS 3 | Domenico Millelire |
| | SS 4 | Enrico Toti |
| SS 1925B | SS 5 | Ciro Menotti |
| | SS 6 | Delfino |

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|---------|-------|------------------------|
| | SS 7 | Des Geneys |
| | SS 8 | Fratelli Bandiera |
| | SS 9 | Giovanni Bausan |
| | SS 10 | Giovanni da Procida |
| | SS 11 | Goffredo Mameli |
| | SS 12 | Luciano Manara |
| | SS 13 | Luigi Settembrini |
| | SS 14 | Marcantonio Colonna |
| | SS 15 | Narvalo |
| | SS 16 | Pier Capponi |
| | SS 17 | Ruggiero Settimo |
| | SS 18 | Santorre Santarosa |
| | SS 19 | Squalo |
| | SS 20 | Tito Speri |
| | SS 21 | Tricheco |
| | SS 22 | Vettor Pisani |
| SS 1926 | SS 23 | Ettore Fieramosca |
| SS 1929 | SS 24 | Acciaio |
| | SS 25 | Adua |
| | SS 26 | Alabastro |
| | SS 27 | Alagi |
| | SS 28 | Ambra |
| | SS 29 | Ametista |
| | SS 30 | Anfitrite |
| | SS 31 | Aradam |
| | SS 32 | Argento |
| | SS 33 | Argo |
| | SS 34 | Argonauta |
| | SS 35 | Ascianghi |
| | SS 36 | Asteria |
| | SS 37 | Axum |
| | SS 38 | Avorlo |
| | SS 39 | Bellul |
| | SS 40 | Berillo |
| | SS 41 | Bronzo |
| | SS 42 | Cobalto |
| | SS 43 | Corallo |
| | SS 44 | Dagabur |
| | SS 45 | Dessie |
| | SS 46 | Diamonte |
| | SS 47 | Diaspro |
| | SS 48 | Durbo |
| | SS 49 | Fisalia |
| | SS 50 | Galatea |
| | SS 51 | Gemma |
| | SS 52 | Giada |
| | SS 53 | Gondar |
| | SS 54 | Grantò |
| | SS 55 | Iride |
| | SS 56 | Jalae |
| | SS 57 | Jantina |
| | SS 58 | Lafole |
| | SS 59 | Macalle |
| | SS 60 | Malachite |
| | SS 61 | Medusa |
| | SS 62 | Naiade |
| | SS 63 | Neghell |
| | SS 64 | Nereide |
| | SS 65 | Nichello |
| | SS 66 | Ondina |
| | SS 67 | Onice |
| | SS 68 | Perla |
| | SS 69 | Platino |
| | SS 70 | Porfido |
| | SS 71 | Rubbino |
| | SS 72 | Salpa |
| | SS 73 | Scire |
| | SS 74 | Serpente |
| | SS 75 | Sirena |
| | SS 76 | Smeraldo |
| | SS 77 | Temblen |
| | SS 78 | Topazio |

| | | |
|----------|--------|----------------------------|
| | SS 79 | Turchese |
| | SS 80 | Uarsciek |
| | SS 81 | Uebi Scebeli |
| | SS 82 | Velella |
| | SS 83 | Volframio |
| | SS 84 | Zaffiro |
| SS 1931A | SS 85 | Archimede |
| | SS 86 | Evangelista Torricelli |
| | SS 87 | Galileo Ferraris |
| | SS 88 | Galileo Galilei |
| | SS 89 | Glauco |
| | SS 90 | Otarìa |
| SS 1931B | SS 91 | Pietro Micca |
| SS 1932 | SS 92 | Enrico Tazzoli |
| | SS 93 | Giuseppe Finzi |
| | SS 94 | Pietro Calvi |
| SS 1936A | SS 95 | Atropo |
| | SS 96 | Foca |
| | SS 97 | Zoea |
| SS 1936B | SS 98 | Alpino Bagnolini |
| | SS 99 | Archimede |
| | SS 100 | Brin |
| | SS 101 | Console Generale Liuzzi |
| | SS 102 | Capitano Tarantini |
| | SS 103 | Galvani |
| | SS 104 | Guglielmotti |
| | SS 105 | Reginaldo Giuliani |
| | SS 106 | Torricelli |
| SS 1937 | SS 107 | Alessandro Malaspina |
| | SS 108 | Barbarigo |
| | SS 109 | Comandante Cappellini |
| | SS 110 | Comandante Faa di Bruno |
| | SS 111 | Dandolo |
| | SS 112 | Emo |
| | SS 113 | Guglielmo Marconi |
| | SS 114 | Leonardo da Vinci |
| | SS 115 | Luigi Torelli |
| | SS 116 | Maggiore Barraca |
| | SS 117 | Marcello |
| | SS 118 | Michele Bianchi |
| | SS 119 | Mocenigo |
| | SS 120 | Morosini |
| | SS 121 | Nani |
| | SS 122 | Provana |
| | SS 123 | Veniero |
| SS 1939 | SS 124 | Ammiraglio Cagni |
| | SS 125 | Ammiraglio Caracciolo |
| | SS 126 | Ammiraglio Millo |
| | SS 127 | Ammiraglio Saint-Bon |
| SS 1941 | SS 128 | Flutto |
| | SS 129 | Gorgo |
| | SS 130 | Grongo |
| | SS 131 | Marea |
| | SS 132 | Murena |
| | SS 133 | Nautilo |
| | SS 134 | Sparide |
| | SS 135 | Tritone |
| | SS 136 | Vortice |

RUSSIAN WARSHIPS

| | | |
|----------|-------|-----------------------|
| BB 1909 | BB 1' | Marat |
| | BB 2' | Parizskaya Kommuna |
| CL 1903 | CL 1 | Pamiat Merkuriya |
| CL 1913A | CL 2 | Chervona Ukraina |
| | CL 3 | Profintern |
| CL 1913B | CL 4 | Krasnyi Kavkaz |
| CL 1935 | CL 5 | Kirov |
| | CL 6 | Voroshilov |
| CL 1936 | CL 7 | Maxim Gorkiy |
| | CL 8 | Molotov |
| | CL 9 | Kaganovich |
| | CL 10 | Kalinin |
| CL 1938 | CL 11 | Chapayev |
| | CL 12 | Chkalov |
| | CL 13 | Zhelezniakov |
| | CL 14 | Frunze |
| | CL 15 | Kuibyshev |
| DD 1915 | DD 1 | Bystryi |
| | DD 2 | Desna |
| | DD 3 | Garibaldi |
| | DD 4 | Iziaslav |
| | DD 5 | Kapitan Belli |
| | DD 6 | Kapitan Kern |
| | DD 7 | Lenin |
| | DD 8 | Novik |
| | DD 9 | Priamyslav |
| | DD 10 | Staljn |
| | DD 11 | Volodarskiy |
| | DD 12 | Zabiyaka |
| | DD 13 | Zinoviev |
| DD 1932A | DD 14 | Baku |
| | DD 15 | Kharkov |
| | DD 16 | Leningrad |
| | DD 17 | Minsk |
| | DD 18 | Moskva |
| | DD 19 | Tbilisi |
| DD 1932B | DD 20 | Bditelnyi |
| | DD 21 | Besposhadnyi |
| | DD 22 | Bezuprechnyi |
| | DD 23 | Bodryi |
| | DD 24 | Boikiy |
| | DD 25 | Bystryi |
| | DD 26 | Gnevnyi |
| | DD 27 | Gordyi |
| | DD 28 | Gremyashchiy |
| | DD 29 | Gromkiy |
| | DD 30 | Groznyi |
| | DD 31 | Grozyashchiy |
| | DD 32 | Prytkiy |
| | DD 33 | Rastropnyi |
| | DD 34 | Raziashchiy |
| | DD 35 | Razumnyi |
| | DD 36 | Razyaryonnyi |
| | DD 37 | Redkiy |
| | DD 38 | Rekordnyi |
| | DD 39 | Reshitelnyi |
| | DD 40 | Retivyi |
| | DD 41 | Revnostnyi |
| | DD 42 | Ryaniy |
| | DD 43 | Rezkiiy |
| | DD 44 | Rezviy |
| | DD 45 | Serdityi |
| | DD 46 | Silnyi |
| | DD 47 | Skoryi |
| | DD 48 | Slavnyi |
| | DD 49 | Smelyi |
| | DD 50 | Smetilviy |
| | DD 51 | Smyshlonnyi |
| | DD 52 | Sokrushitelnyi |
| | DD 53 | Soobrazitelnyi |

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|---------|---------------|-----------------|
| | DD 54 | Sovershennyi |
| | DD 55 | Spokoinyi |
| | DD 56 | Sposobnyi |
| | DD 57 | Statnyi |
| | DD 58 | Steregushchiy |
| | DD 59 | Stoikiy |
| | DD 60 | Storozhevoi |
| | DD 61 | Strashnyi |
| | DD 62 | Stremitelnyi |
| | DD 63 | Strogiy |
| | DD 64 | Stroinyi |
| | DD 65 | Surovyi |
| | DD 66 | Svirepyi |
| | DD 67 | Svobodnyi |
| DD 1934 | DD 68 | Opytnyi |
| DD 1937 | DD 69 | Tashkent |
| DD 1938 | DD 70 | Ognevoi |
| | DD 71 | Vnushitelnyi |
| DD 1939 | DD 72 | Kiev |
| | DD 73 | Yerevan |
| ML 1932 | ML 1 | Marti |
| SS 1916 | AG 23 | Trockiy |
| | AG 24 | Lunakharskiy |
| | AG 25 | (-) |
| | AG 26 | Kamenev |
| SS 1926 | D 1 | Dekabrist |
| | D 2 | Narodovolec |
| | D 3 | Krasnogvardeyec |
| | D 4 | Revolyucioner |
| | D 5 | Spartakovec |
| | D 6 | Yakobinec |
| SS 1929 | SH101 | Losos |
| | SH102 | Leshch |
| | SH103 | Karp |
| | SH104 - SH110 | |
| | SH111 | Karas |
| | SH112 | (-) |
| | SH113 | Strelad |
| | SH114 - SH116 | |
| | SH117 | Makrel |
| | SH118 | Kefal |
| | SH119 | Bieluga |
| | SH120 | (-) |
| | SH121 | Zubatka |
| | SH122 | Sayda |
| | SH123 | Ugor |
| | SH124 - SH141 | |
| | SH201 | Sazan |
| | SH202 | Seld |
| | SH203 | Kambala |
| | SH204 | (-) |
| | SH205 | Nerpa |
| | SH206 - SH216 | |
| | SH301 | Shchuka |
| | SH302 | Okun |
| | SH303 | Yorsh |
| | SH304 | Komsomolec |
| | SH305 | Lin |
| | SH306 | Piksha |
| | SH307 | Treska |
| | SH308 | Syomga |
| | SH309 | Delfin |
| | SH310 | Bielukha |
| | SH311 | Kumzha |
| | SH317 - SH320 | |
| | SH322 - SH324 | |
| | SH401 - SH412 | |
| SS 1930 | L 1 | Leninec |
| | L 2 | Stallnec |
| | L 3 | Frunzovec |
| | L 4 | Garibaldyec |
| | L 5 | Charlst |
| | L 6 | Karbonariy |
| | L 7 | Voroshilovec |
| | L 8 | Dzherzhinec |
| | L 9 | Kirovec |

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|---------|-------------|
| | L 10 - L 12 |
| SS 1934 | L 13 - L 25 |
| SS 1935 | S 1 - S 22 |
| | S 31 - S 35 |
| | S 51 - S 57 |
| | S101 - S104 |
| SS 1937 | K 1 - K 3 |
| | K 21 - K 23 |
| | K 51 - K 56 |

MINOR NAVIES

NORWAY

| | | |
|---------|-------|------------------|
| CB 1900 | CB 1 | Eidsvold |
| | CB 2 | Harald Haarfagre |
| | CB 3 | Norge |
| | CB 4 | Tordenskjold |
| DD 1908 | DD 1 | Draug |
| | DD 2 | Garm |
| | DD 3 | Troll |
| TB 1934 | TB 1 | Aeger |
| | TB 2 | Gyller |
| | TB 3 | Sieipner |
| SS 1922 | B 1 - | B 6 |

SWEDEN

| | | |
|---------|-------|-----------------------|
| CB 1912 | CB 1 | Drottning Victoria |
| | CB 2 | Gustaf V |
| | CB 3 | Sverige |
| AC 1905 | AC 1 | Fylgia |
| CL 1929 | CL 1 | Gotland |
| CL 1943 | CL 2 | Gota Lejon |
| | CL 3 | Tre Kronor |
| DD 1907 | DD 1 | Hugin |
| | DD 2 | Munin |
| | DD 3 | Ragnar |
| | DD 4 | Sigurd |
| | DD 5 | Vidar |
| | DD 6 | Wachtmeister(a) |
| | DD 7 | Wrangel(a) |
| DD 1924 | DD 8 | Ehrenskjold |
| | DD 9 | Nordenskjold |
| DD 1925 | DD 10 | Psilander |
| | DD 11 | Puke |
| DD 1929 | DD 12 | Klas Horn |
| | DD 13 | Klas Uggla |
| DD 1932 | DD 14 | Remus |
| | DD 15 | Romulus |
| DD 1934 | DD 16 | Gavle |
| | DD 17 | Goteborg |
| | DD 18 | Karlskrona |
| | DD 19 | Malmo |
| | DD 20 | Norrkoping |
| | DD 21 | Stockholm |
| DD 1940 | DD 22 | Magne |
| | DD 23 | Mjolner |
| | DD 24 | Mode |
| | DD 25 | Munin |
| DD 1942 | DD 26 | Halsingborg |
| | DD 27 | Kalmar |
| | DD 28 | Sundsvall |
| | DD 29 | Visby |
| SS 1921 | SS 1 | Bavern |
| | SS 2 | Draken |
| | SS 3 | Gripen |
| | SS 4 | Illern |
| | SS 5 | Ulven |
| | SS 6 | Uttern |
| SS 1933 | SS 7 | Delfinen |

| | | |
|----------------|---------|--------------------------|
| SS 1935 | SS 8 | Nordkaparen |
| | SS 9 | Springaren |
| | SS 10 | Dykaren |
| | SS 11 | Sjobjornen |
| | SS 12 | Sjorborren |
| | SS 13 | Sjohasten |
| | SS 14 | Sjohunden |
| | SS 15 | Sjolejonet |
| TB 1915 | SS 16 | Sjoormen |
| | SS 17 | Svardfisken |
| | SS 18 | Tumlaren |
| SS 1940 | U 1 | U 9 |
| HOLLAND | | |
| CL 1916 | CL 1 | Java |
| | CL 2 | Sumatra |
| CL 1930 | CL 3 | De Ruyter |
| CL 1935 | CL 4 | Jacob van Heemskerck |
| | CL 5 | Tromp |
| DD 1925 | DD 1 | Evertsen |
| | DD 2 | Kortenaer |
| | DD 3 | Piet Hein |
| | DD 4 | Van Ghent |
| DD 1927 | DD 5 | Banckert |
| | DD 6 | Van Galen |
| | DD 7 | Van Nes |
| | DD 8 | Witte de With |
| DE 1939 | DE 1 | Van Kinsbergen |
| PG 1925 | PG 1 | Flores |
| | PG 2 | Johan Maurits |
| | PG 3 | Soemba |
| SS 1915 | O 8 | |
| SS 1916 | KVII | |
| SS 1917 | KVIII | - KX |
| SS 1922 | KXI | - KXIII |
| | O 9 | - O 11 |
| SS 1928 | O 12 | - O 15 |
| SS 1930 | KXIV | - KXVIII |
| | O 16 | |
| | O 19(a) | |
| | O 20(a) | |
| SS 1937 | O 21 | - O 24 |
| SPAIN | | |
| CA 1928 | CA 1 | Baleares |
| | CA 2 | Canarias |
| CL 1915 | CL 1 | Reina Victoria Eugenia |
| CL 1917 | CL 2 | Blas de Lezo |
| | CL 3 | Mendez Nunez |
| CL 1921 | CL 4 | Almirante Cervera |
| | CL 5 | Miguel de Cervantes |
| | CL 6 | Principe Alfonso |
| DD 1920 | DD 1 | Alsedo |
| | DD 2 | Juan Lazaga |
| | DD 3 | Velasco |
| DD 1925 | DD 4 | Alcala Galiano |
| | DD 5 | Almirante Antequera |
| | DD 6 | Almirante Juan Ferrandiz |
| | DD 7 | Almirante Miranda |
| | DD 8 | Almirante Valdes |
| | DD 9 | Ciscar |
| | DD 10 | Churruca |
| | DD 11 | Escano |
| | DD 12 | Gravina |
| | DD 13 | Jorge Juan |
| | DD 14 | Jose Luis Diez |
| | DD 15 | Lepanto |
| | DD 16 | Sanchez Barcaiztegui |

| | | |
|---------------|-------|------------------|
| DE 1934 | DD 17 | Ulloa |
| | DE 1 | Jupiter |
| | DE 2 | Marte |
| | DE 3 | Neptuno |
| | DE 4 | Vulcano |
| DE 1938 | DE 5 | Eolo |
| | DE 6 | Triton |
| SS 1927 | C 1 | C 6 |
| GREECE | | |
| AC 1907 | AC 1 | Giorgios Averoff |
| CL 1910 | CL 1 | Helle |
| DD 1930 | DD 1 | Condouriotis |
| | DD 2 | Psara |
| | DD 3 | Spetsai |
| | DD 4 | Ydra |
| SS 1925 | SS 1 | Glavkos(a) |
| | SS 2 | Katsonis |
| | SS 3 | Nereus(a) |
| | SS 4 | Papamicolis |
| | SS 5 | Proteus |
| | SS 6 | Triton |
| TURKEY | | |
| BC 1911 | BC 1 | Yavuz |
| CL 1901 | CL 1 | Hamidieh |
| | CL 2 | Medjidieh |
| DD 1930 | DD 1 | Adatepe |
| | DD 2 | Kocatepe |
| DD 1931 | DD 3 | Tinaztepe |
| | DD 4 | Zafer |
| DD 1939 | DD 5 | Demirhisar |
| | DD 6 | Gayret |
| | DD 7 | Muavenet |
| | DD 8 | Sultanhisar |
| SS 1926 | SS 1 | Birindci Inonu |
| | SS 2 | Ikindci Inonu |
| SS 1930 | SS 3 | Atilay |
| | SS 4 | Dumlupynar |
| | SS 5 | Gur |
| | SS 6 | Sakarya |
| | SS 7 | Saldiray |
| | SS 8 | Yildiray |
| SS 1939 | SS 9 | Burac Reis |
| | SS 10 | Murat Reis |
| | SS 11 | Oruc Reis |
| | SS 12 | Ulac Ali Reis |

the frequent changes of government this brought about), the world depression of the early 1930s and the restraints imposed by the several Naval Treaties.

It was not until 1937 that adequate funds were allotted for warship construction. Though there was insufficient time to complete the pre-war estimates, for the most part, the French Navy was satisfactorily equipped on the outbreak of war. She was certainly in no worse a state than her immediate Mediterranean adversary, Italy.

The most pressing problems of the French Navy were the lack of a modern anti-aircraft weapon and the virtual absence of asdic in any of their anti-submarine vessels.

The armistice of June 1940 found most of the French fleet dispersed in French colonial possessions or British ports. Those in British ports were seized while pre-emptive strikes were carried out

against Mers-el-Kebir and Dakar. These actions soured Anglo-French relations (never very good at the best of times) for the rest of the war.

In the aftermath of the North African landings and the German occupation of Vichy France, many French warships were sent for refit to the USA; most notably the *Richelieu*. Other French vessels, operated by the small Free French Navy, saw action (occasionally) from British ports.

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On 21st June, 1919, Vice-Admiral Ludwig von Reuter upheld the honour of his service and scuttled every German warship interned at Scapa Flow. The immediate consequence of this action was the confiscation of most of Germany's remaining naval vessels.

The post WWI German Navy began with nothing other than a few aged pre-dreadnoughts, some antiquated light cruisers, a handful of coastal vessels and a restricting naval personnel limit of 15,000 officers and men.

During the twenties and early thirties, various ruses camouflaged the secret development of submarine and naval aviation design and doctrine. The *Reichsmarine*, under the able direction of Admiral Raeder, gradually rebuilt its technical expertise, if not its strength.

With the rise to power of Hitler, all spheres of German militarism, openly or otherwise, ignored the limitations of the Versailles Agreement. For the Navy, this meant a huge expansion in materiel and manpower.

Hitler's preferred naval policy envisaged the use of a powerful main battle fleet, though how this force was to be sustained on the high seas was never addressed. To this end, Phase II (1936-1943) of the naval building plan included the construction of 4 aircraft carriers and 8 battleships.

This policy clashed with the naval staff's prediction that a vigorous anti-commerce campaign, both by surface raiders and submarines, offered the best chance in a war with France and/or England.

Fortunately for the Allies, it was not until mid-1940 that the decision to accord top priority to U-boat construction was made.

Subsequent to the severe losses sustained in April 1940 in the invasion of Norway, German capital ships took little part in the war.

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FRENCH SHIP CLASSES

| NUMBER IN CLASS | # | 1(40,3) | 1(40,5) | 1(26,1) | 3 | 3 | 2 | 2 | 2 | 4 | 1 | 3 |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CV 1914 | CV 1938 | AV 1927 | BB 1910 | BB 1912 | BB 1932 | BB 1935 | CA 1924 | CA 1926 | CA 1931 | CL 1922 |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| SEAPLANE | Y/N | N | N | Y | N | N(Ya) | Y | Y(Na) | Y | Y | Y | Y |
| SHIP TYPE | 0-4 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| MAXIMUM SPEED | 0-45 | 22 | 33 | 21 | 20 | 19 | 30 | 32(33a) | 34 | 31 | 31 | 33 |
| DISPLACEMENT | 0-31 | 11 | 9 | 5 | 11 | 12 | 14 | 20(22a) | 5 | 5 | 6 | 4 |
| HEAVY AA | 0-31 | 3 | 8 | 12 | 4 | 6 | 16 | 15 | 4 | 4 | 12 | 2 |
| LIGHT AA | 0-31 | 4 | 5 | 4 | 1 | 3 | 6 | 4(20a) | 4 | 4 | 4 | 1 |
| ARMOUR | 0-15 | 3 | 4 | 2 | 10 | 11 | 10 | 14 | 1 | 2 | 5 | 1 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 12 | 10 | 8 | 8 | 8 | 8 | 8 | 0 |
| SECONDARY GUNS | 0-15 | 8 | 4 | 0 | 11 | 14 | 8 | 9 | 0 | 0 | 0 | 8 |
| TORPEDO TUBES | 0-15 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 6 | 0(12a) | 6 | 12 |
| VULNERABILITY | 0-7 | 1 | 3 | 2 | 3 | 4 | 5 | 5(6a) | 3 | 4 | 5 | 3 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0(3a) | 3 | 2 |

| NUMBER IN CLASS | # | 1 | 1 | 6 | 6 | 12 | 14 | 6 | 6 | 6 | 6 | 2 |
|-----------------|------|---------|----------|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CL 1928 | CL 1931A | CL 1931B | DD 1922 | DD 1923 | DD 1925 | DD 1927 | DD 1928 | DD 1929 | DD 1931 | DD 1936 |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| SEAPLANE | Y/N | Y | Y | Y | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| MAXIMUM SPEED | 0-45 | 25 | 34 | 31 | 35 | 33 | 33 | 36 | 36 | 36 | 37 | 39 |
| DISPLACEMENT | 0-31 | 4 | 3 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| HEAVY AA | 0-31 | 2 | 4 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LIGHT AA | 0-31 | 3 | 3 | 4 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| ARMOUR | 0-15 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 8 | 9 | 9 | 2 | 2 | 2 | 5 | 5 | 5 | 5 | 8 |
| TORPEDO TUBES | 0-15 | 2 | 6 | 4 | 6 | 6 | 6 | 6 | 6(7a) | 7 | 9 | 10 |
| VULNERABILITY | 0-7 | 3 | 4 | 4 | 3 | 2 | 3 | 4 | 4 | 4 | 4 | 5 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 3 | 1 | 2 | 3 | 4 | 1 | 3 | 1 |
| TORPEDO LOADS | 0-3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

| NUMBER IN CLASS | # | 8 | 8 | 12 | 9(3,4) | 12(3,3) | 29(3,5) | 6(3,4) | 1(3,5) | 16(3,4) | 6(3,4) | 2(5,4) |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|---------|
| SHIP CLASS NAME | [8] | DD 1937 | DE 1930 | TB 1934 | SS 1923 | SS 1924 | SS 1926 | SS 1927 | SS 1928A | SS 1928B | SS 1933 | SS 1938 |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| SEAPLANE | Y/N | N | Y | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| MAXIMUM SPEED | 0-45 | 37(35a) | 16 | 35 | 15 | 14 | 17 | 12 | 19 | 14 | 15 | 15 |
| DISPLACEMENT | 0-31 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1 |
| HEAVY AA | 0-31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LIGHT AA | 0-31 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 1 | 1 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 |
| TORPEDO TUBES | 0-15 | 7 | 0 | 2 | 10 | 7 | 11 | 5 | 12 | 8 | 9 | 9 |
| VULNERABILITY | 0-7 | 5 | 2 | 2 | 1 | 1 | 3 | 3 | 4 | 4 | 4 | 5 |
| ANTI-SUBMARINE | 0-7 | 5 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 1 | 0 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 |

GERMAN SHIP CLASSES

| NUMBER IN CLASS | # | 1(42,5) | 1(18,2) | 2 | 2 | 3 | 3 | 1 | 3 | 1 | 1 | 22 |
|-----------------|------|----------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CV 1936A | CV 1936B | BB 1935 | BB 1936 | CA 1929 | CA 1935 | CL 1921 | CL 1926 | CL 1928 | CL 1934 | DD 1934 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SEAPLANE | Y/N | N | N | Y | Y | Y | Y | N | Y | N | Y | N |
| SHIP TYPE | 0-4 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
| MAXIMUM SPEED | 0-45 | 35 | 32 | 32 | 29 | 28 | 33 | 29 | 32 | 32 | 32 | 38 |
| DISPLACEMENT | 0-31 | 13 | 8 | 16 | 21 | 7 | 8 | 3 | 3 | 3 | 3 | 1 |
| HEAVY AA | 0-31 | 12 | 10 | 14 | 16 | 6 | 12 | 3 | 2(4a) | 2 | 8 | 0 |
| LIGHT AA | 0-31 | 10 | 5 | 5 | 6 | 3 | 4 | 1 | 3 | 2 | 3 | 2 |
| ARMOUR | 0-15 | 4 | 1 | 14 | 13 | 3 | 3 | 2 | 3 | 2 | 6 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 9 | 8 | 6 | 8 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 15 | 0 | 12 | 12 | 8 | 0 | 8 | 9 | 9 | 9 | 3 |
| TORPEDO TUBES | 0-15 | 0 | 0 | 0 | 0 | 8 | 12 | 4 | 12 | 12 | 12 | 8 |
| VULNERABILITY | 0-7 | 3 | 4 | 5 | 6 | 4 | 5 | 3 | 4 | 4 | 5 | 4 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TORPEDO LOADS | 0-3 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 2 | 2 | 2 | 1 |

GERMAN SHIP CLASSES (CONT.)

| NUMBER IN CLASS | # | 8 | 7 | 4 | 10 | 12 | 21 | 15 | 50(4,2) | 2(4,3) | 707(5,3) | 210(5,2) |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|
| SHIP CLASS NAME | [8] | DD 1938 | DD 1939 | DD 1940 | DE 1934 | TB 1924 | TB 1937 | TB 1940 | SS 1935 | SS 1936A | SS 1936B | SS 1938 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| MAXIMUM SPEED | 0-45 | 39 | 39 | 38 | 28 | 34 | 36 | 33 | 13 | 18 | 17 | 18 |
| DISPLACEMENT | 0-31 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| HEAVY AA | 0-31 | 0 | 0 | 0 | 2 | 3 | 1 | 4 | 0 | 1 | 0 | 0 |
| LIGHT AA | 0-31 | 2 | 3 | 4 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 2 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 4 | 5 | 3 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 1 |
| TORPEDO TUBES | 0-15 | 8 | 8 | 8 | 0 | 6 | 6 | 6 | 3 | 6 | 5 | 6 |
| VULNERABILITY | 0-7 | 4 | 5 | 5 | 2 | 3 | 4 | 5 | 4 | 4 | 6 | 5 |
| ANTI-SUBMARINE | 0-7 | 2 | 2 | 3 | 3 | 1 | 1 | 2 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |

| NUMBER IN CLASS | # | 8(5,2) | 5(5,7) | 121(5,7) | 63(4,7) |
|-----------------|------|---------|----------|----------|----------|
| SHIP CLASS NAME | [8] | SS 1941 | SS 1944A | SS 1944B | SS 1944C |
| ALLIED | Y/N | N | N | N | N |
| SEAPLANE | Y/N | N | N | N | N |
| SHIP TYPE | 0-4 | 3 | 3 | 3 | 3 |
| MAXIMUM SPEED | 0-45 | 16 | 9 | 16 | 15 |
| DISPLACEMENT | 0-31 | 1 | 0 | 1 | 0 |
| HEAVY AA | 0-31 | 1 | 0 | 0 | 0 |
| LIGHT AA | 0-31 | 1 | 0 | 1 | 0 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 1 | 0 | 0 | 0 |
| TORPEDO TUBES | 0-15 | 2 | 2 | 6 | 2 |
| VULNERABILITY | 0-7 | 5 | 4 | 6 | 5 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 2 | 2 | 3 | 1 |

A NOTE ON GERMAN SUBMARINE CLASSES

German U-Boat classes were better known by their type number. The following list should be of help in identifying the right class.

TYPE I - SS 1936A TYPE X - SS 1941
 TYPE II - SS 1935 TYPE XVII - SS 1944A
 TYPE VII - SS 1936B TYPE XXI - SS 1944B
 TYPE IX - SS 1938 TYPE XXIII - SS 1944C

ITALIAN SHIP CLASSES

| NUMBER IN CLASS | # | 1(51,4) | 2 | 2 | 3 | 2 | 4 | 1 | 1 | 1 | 4 | 2 |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CV 1925 | BB 1910 | BB 1912 | BB 1934 | CA 1925 | CA 1929 | CA 1930 | CL 1910 | CL 1913 | CL 1928 | CL 1930 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SEAPLANE | Y/N | N | Y | Y | N | N | N | N | N | N | N | Y |
| SHIP TYPE | 0-4 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| MAXIMUM SPEED | 0-45 | 30 | 27 | 26 | 30 | 36 | 32 | 36 | 28 | 25 | 37 | 37 |
| DISPLACEMENT | 0-31 | 11 | 11 | 12 | 18 | 5 | 6 | 5 | 2 | 2 | 3 | 3 |
| HEAVY AA | 0-31 | 6 | 8 | 10 | 12 | 16 | 16 | 16 | 2 | 2 | 6 | 6 |
| LIGHT AA | 0-31 | 17 | 5 | 6 | 7 | 2 | 3 | 2 | 1 | 1 | 3 | 2 |
| ARMOUR | 0-15 | 1 | 10 | 10 | 13 | 3 | 6 | 3 | 2 | 1 | 1 | 1 |
| PRIMARY GUNS | 0-15 | 0 | 10 | 10 | 9 | 8 | 8 | 8 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 4 | 6 | 6 | 12 | 0 | 0 | 0 | 7 | 8 | 8 | 8 |
| TORPEDO TUBES | 0-15 | 0 | 3 | 3 | 0 | 8 | 0 | 8 | 4 | 0 | 4 | 4 |
| VULNERABILITY | 0-7 | 1 | 4 | 4 | 5 | 3 | 4 | 4 | 2 | 3 | 2 | 4 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 0 | 3 | 3 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 1 |

| NUMBER IN CLASS | # | 2 | 2 | 2 | 3 | 2 | 3 | 2 | 12 | 12 | 16 | 17 |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CL 1931 | CL 1932 | CL 1933 | CL 1939 | DD 1914 | DD 1921 | DD 1923 | DD 1924 | DD 1927 | DD 1929 | DD 1937 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SEAPLANE | Y/N | Y | Y | Y | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| MAXIMUM SPEED | 0-45 | 37 | 37 | 34 | 40 | 35 | 34 | 35 | 35(36a) | 38 | 38 | 38 |
| DISPLACEMENT | 0-31 | 4 | 4 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| HEAVY AA | 0-31 | 6 | 6 | 8 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| LIGHT AA | 0-31 | 3 | 4 | 3 | 3 | 1 | 3 | 2 | 2 | 2 | 2 | 2 |
| ARMOUR | 0-15 | 2 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 8 | 8 | 10 | 4 | 4(5a) | 4 | 2 | 2 | 3 | 2 | 3 |
| TORPEDO TUBES | 0-15 | 4 | 6 | 6 | 8 | 4 | 4 | 4 | 6 | 6 | 6 | 6 |
| VULNERABILITY | 0-7 | 4 | 4 | 5 | 4 | 3 | 4 | 3 | 3 | 3 | 2 | 5 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 3 |
| TORPEDO LOADS | 0-3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

ITALIAN SHIP CLASSES (CONT.)

| NUMBER IN CLASS | # | 4 | 16 | 1 | 7 | 1 | 11 | 4 | 6 | 4 | 32 | 4(6,2) |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|
| SHIP CLASS NAME | [8] | DE 1935 | DE 1941 | TB 1911 | TB 1913 | TB 1915 | TB 1916 | TB 1917 | TB 1919 | TB 1920 | TB 1933 | SS 1925A |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| MAXIMUM SPEED | 0-45 | 28 | 26 | 36 | 33 | 34 | 34 | 32 | 33 | 33 | 34 | 16 |
| DISPLACEMENT | 0-31 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| HEAVY AA | 0-31 | 2 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 |
| LIGHT AA | 0-31 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 1 | 1 | 1 | 3 | 4 | 3 | 2 | 2 | 2 | 0 | 1 |
| TORPEDO TUBES | 0-15 | 6 | 4 | 2 | 4 | 4 | 4 | 4 | 4 | 6 | 4 | 6 |
| VULNERABILITY | 0-7 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 4 | 4 | 5 | 5 |
| ANTI-SUBMARINE | 0-7 | 5 | 4 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 4 | 0 |
| TORPEDO LOADS | 0-3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |

| NUMBER IN CLASS | # | 18(6,3) | 1(4,3) | 61(4,3) | 6(4,3) | 1(5,4) | 3(5,3) | 3(5,3) | 9(6,3) | 17(5,3) | 4(5,4) | 9(5,3) |
|-----------------|------|----------|---------|---------|----------|----------|---------|----------|----------|---------|---------|---------|
| SHIP CLASS NAME | [8] | SS 1925B | SS 1926 | SS 1929 | SS 1931A | SS 1931B | SS 1932 | SS 1936A | SS 1936B | SS 1937 | SS 1939 | SS 1941 |
| ALLIED | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| MAXIMUM SPEED | 0-45 | 15 | 15 | 14 | 17 | 16 | 17 | 16 | 18 | 18 | 17 | 16 |
| DISPLACEMENT | 0-31 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| HEAVY AA | 0-31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 |
| LIGHT AA | 0-31 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| TORPEDO TUBES | 0-15 | 6 | 8 | 6 | 8 | 6 | 8 | 6 | 8 | 8 | 14 | 6 |
| VULNERABILITY | 0-7 | 5 | 2 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 4 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 3 | 2 |

RUSSIAN SHIP CLASSES

| NUMBER IN CLASS | # | 2 | 1 | 2 | 1 | 2 | 4 | 5 | 13 | 6 | 48 | 1 |
|-----------------|------|---------|---------|----------|----------|---------|---------|---------|---------|----------|----------|---------|
| SHIP CLASS NAME | [8] | BB 1909 | CL 1903 | CL 1913A | CL 1913B | CL 1935 | CL 1936 | CL 1938 | DD 1915 | DD 1932A | DD 1932B | DD 1934 |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| MAXIMUM SPEED | 0-45 | 22 | 19 | 22 | 29 | 36 | 35 | 34 | 33 | 36 | 36 | 42 |
| DISPLACEMENT | 0-31 | 10 | 3 | 3 | 4 | 4 | 4 | 6 | 1 | 1 | 1 | 1 |
| HEAVY AA | 0-31 | 3 | 1 | 2 | 6 | 6 | 6 | 8 | 0 | 1 | 1 | 0 |
| LIGHT AA | 0-31 | 2 | 1 | 1 | 4 | 3 | 4 | 6 | 1 | 1 | 2 | 2 |
| ARMOUR | 0-15 | 9 | 1 | 3 | 3 | 2 | 2 | 3 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 8 | 5 | 8 | 4 | 9 | 9 | 6 | 2 | 3 | 2 | 2 |
| TORPEDO TUBES | 0-15 | 4 | 0 | 6 | 12 | 6 | 6 | 6 | 9 | 8 | 6 | 8 |
| VULNERABILITY | 0-7 | 2 | 1 | 1 | 2 | 3 | 4 | 5 | 3 | 2 | 2 | 3 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| TORPEDO LOADS | 0-3 | 2 | 0 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |

| NUMBER IN CLASS | # | 1 | 2 | 2 | 1 | 4(3,3) | 6(4,4) | 87(3,3) | 12(4,4) | 13(4,5) | 37(4,4) | 12(3,5) |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | DD 1937 | DD 1938 | DD 1939 | ML 1932 | SS 1916 | SS 1926 | SS 1929 | SS 1930 | SS 1934 | SS 1935 | SS 1937 |
| ALLIED | Y/N | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| MAXIMUM SPEED | 0-45 | 39 | 37 | 38 | 14 | 15 | 14 | 13 | 14 | 18 | 19 | 21 |
| DISPLACEMENT | 0-31 | 1 | 1 | 1 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| HEAVY AA | 0-31 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LIGHT AA | 0-31 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 3 | 2 | 3 | 2 | 0 | 1 | 0 | 1 | 1 | 1 | 0 |
| TORPEDO TUBES | 0-15 | 9 | 6 | 10 | 0 | 4 | 8 | 6 | 6 | 8 | 6 | 10 |
| VULNERABILITY | 0-7 | 6 | 4 | 4 | 2 | 2 | 1 | 3 | 2 | 3 | 4 | 5 |
| ANTI-SUBMARINE | 0-7 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 1 | 1 | 1 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

MINOR NAVIES (Norway, Sweden, Holland, Spain, Greece [pt])

| NUMBER IN CLASS | # | 4 | 3 | 3 | 6(2,6) | 3 | 1 | 1 | 2 | 7 | 2 | 2 |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CB 1900 | DD 1908 | TB 1934 | SS 1922 | CB 1912 | AC 1905 | CL 1929 | CL 1943 | DD 1907 | DD 1924 | DD 1925 |
| ALLIED | Y/N | NOR | NOR | NOR | NOR | SWE | SWE | SWE | SWE | SWE | SWE | SWE |
| SEAPLANE | Y/N | N | N | N | N | N | N | Y | N | N | N | N |
| SHIP TYPE | 0-4 | 1 | 2 | 2 | 3 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| MAXIMUM SPEED | 0-45 | 17 | 27 | 30 | 14 | 23 | 22 | 28 | 33 | 30(34a) | 36 | 35 |
| DISPLACEMENT | 0-31 | 2 | 0 | 0 | 0 | 3 | 2 | 2 | 4 | 0 | 0 | 1 |
| HEAVY AA | 0-31 | 1 | 0 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 0 |
| LIGHT AA | 0-31 | 1 | 1 | 1 | 0 | 3 | 1 | 2 | 7 | 1 | 1 | 2 |
| ARMOUR | 0-15 | 6 | 0 | 0 | 0 | 8 | 4 | 1 | 1 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 3 | 2 | 2 | 0 | 6 | 8 | 6 | 7 | 1 | 2 | 2 |
| TORPEDO TUBES | 0-15 | 2 | 3 | 2 | 4 | 0 | 2 | 6 | 6 | 2(4a) | 6 | 4 |
| VULNERABILITY | 0-7 | 0 | 1 | 4 | 4 | 2 | 0 | 3 | 5 | 2 | 3 | 3 |
| ANTI-SUBMARINE | 0-7 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 |
| TORPEDO LOADS | 0-3 | 1 | 2 | 1 | 2 | 0 | 2 | 2 | 2 | 1 | 1 | 1 |

| NUMBER IN CLASS | # | 2 | 2 | 6 | 4 | 4 | 6(3,3) | 3(4,4) | 9(4,5) | 9(5,3) | 2 | 1 |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | DD 1929 | DD 1932 | DD 1934 | DD 1940 | DD 1942 | SS 1921 | SS 1933 | SS 1935 | SS 1940 | CL 1916 | CL 1930 |
| ALLIED | Y/N | SWE | SWE | SWE | SWE | SWE | SWE | SWE | SWE | SWE | HOL | HOL |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | Y | Y |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 |
| MAXIMUM SPEED | 0-45 | 36 | 34 | 39 | 30 | 39 | 15 | 15 | 16 | 14 | 31 | 32 |
| DISPLACEMENT | 0-31 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 3 |
| HEAVY AA | 0-31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LIGHT AA | 0-31 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 4 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 0 | 0 | 10 | 7 |
| TORPEDO TUBES | 0-15 | 6 | 4 | 6 | 3 | 6 | 4 | 4 | 6 | 4 | 0 | 0 |
| VULNERABILITY | 0-7 | 4 | 3 | 4 | 4 | 5 | 2 | 4 | 4 | 3 | 2 | 4 |
| ANTI-SUBMARINE | 0-7 | 3 | 3 | 4 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 0 | 0 |

| NUMBER IN CLASS | # | 2 | 4 | 4 | 1 | 3 | 1(2,6) | 1(2,3) | 3(3,3) | 6(2,3) | 4(4,3) | 8(4,4) |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CL 1935 | DD 1925 | DD 1927 | DE 1939 | PG 1925 | SS 1915 | SS 1916 | SS 1917 | SS 1922 | SS 1928 | SS 1930 |
| ALLIED | Y/N | HOL | HOL | HOL | HOL | HOL | HOL | HOL | HOL | HOL | HOL | HOL |
| SEAPLANE | Y/N | N | N | N | N | Y | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| MAXIMUM SPEED | 0-45 | 34 | 36 | 36 | 26 | 15 | 13 | 15 | 15 | 15(12a) | 15 | 18(19a) |
| DISPLACEMENT | 0-31 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0(1a) |
| HEAVY AA | 0-31 | 0 | 1 | 1 | 0 | 1(0a) | 0 | 1 | 1 | 1 | 0 | 1 |
| LIGHT AA | 0-31 | 3 | 1 | 2 | 1 | 1(2a) | 0 | 0 | 1 | 1 | 1 | 1 |
| ARMOUR | 0-15 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 6 | 2 | 2 | 2 | 3 | 0 | 2 | 0 | 0 | 0 | 0 |
| TORPEDO TUBES | 0-15 | 6 | 6 | 6 | 0 | 0 | 4 | 6 | 4 | 5 | 5 | 8 |
| VULNERABILITY | 0-7 | 5 | 4 | 5 | 4 | 3 | 1 | 2 | 3 | 3 | 4 | 5 |
| ANTI-SUBMARINE | 0-7 | 0 | 2 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 2 | 1 | 1 | 0 | 0 | 2 | 1 | 2 | 2 | 2 | 2 |

| NUMBER IN CLASS | # | 4(5,4) | 2 | 1 | 2 | 3 | 3 | 14 | 4 | 2 | 6(4,4) | 1 |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | SS 1937 | CA 1928 | CL 1915 | CL 1917 | CL 1921 | DD 1920 | DD 1925 | DE 1934 | DE 1938 | SS 1927 | AC 1907 |
| ALLIED | Y/N | HOL | SPA | SPA | SPA | SPA | SPA | SPA | SPA | SPA | SPA | GRE |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 3 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 |
| MAXIMUM SPEED | 0-45 | 20 | 33 | 26 | 29 | 33 | 34 | 36 | 19 | 20 | 16 | 23 |
| DISPLACEMENT | 0-31 | 1 | 5 | 2 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 4 |
| HEAVY AA | 0-31 | 1 | 8 | 2 | 2 | 4 | 0 | 1 | 1 | 0 | 1 | 3 |
| LIGHT AA | 0-31 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 2 |
| ARMOUR | 0-15 | 0 | 2 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| PRIMARY GUNS | 0-15 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| SECONDARY GUNS | 0-15 | 0 | 4 | 9 | 6 | 8 | 2 | 3 | 2 | 2 | 0 | 8 |
| TORPEDO TUBES | 0-15 | 8 | 12 | 4 | 12 | 12 | 4 | 6 | 0 | 0 | 6 | 0 |
| VULNERABILITY | 0-7 | 5 | 4 | 0 | 1 | 3 | 2 | 4 | 3 | 4 | 3 | 1 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 4 | 4 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 0 | 0 | 2 | 0 |

MINOR NAVIES (Greece, Turkey)

| NUMBER IN CLASS | # | 1 | 4 | 6(4,5) | 1 | 2 | 2 | 2 | 4 | 2(2,4) | 6(4,4) | 4(5,5) |
|-----------------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| SHIP CLASS NAME | [8] | CL 1910 | DD 1930 | SS 1925 | BC 1911 | CL 1901 | DD 1930 | DD 1931 | DD 1939 | SS 1926 | SS 1930 | SS 1939 |
| ALLIED | Y/N | GRE | GRE | GRE | TUR | TUR | TUR | TUR | TUR | TUR | TUR | TUR |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 2 | 2 | 3 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| MAXIMUM SPEED | 0-45 | 18 | 38 | 14 | 27 | 22 | 36 | 36 | 35 | 14 | 17 | 14 |
| DISPLACEMENT | 0-31 | 1 | 1 | 0 | 9 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| HEAVY AA | 0-31 | 1 | 1 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| LIGHT AA | 0-31 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 |
| ARMOUR | 0-15 | 1 | 0 | 0 | 11 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 3 | 2 | 1 | 10 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| TORPEDO TUBES | 0-15 | 2 | 6 | 6(8a) | 2 | 2 | 6 | 6 | 8 | 6 | 6 | 5 |
| VULNERABILITY | 0-7 | 0 | 3 | 3 | 3 | 1 | 3 | 4 | 5 | 2 | 3 | 4 |
| ANTI-SUBMARINE | 0-7 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 1 | 1 | 2 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 3 |

AUXILLIARY VESSELS (All Nationalities)

| NUMBER IN CLASS | # | Sml Trans | Med Trans | Lge Trans | Oilers | Oilers | Oilers | Oilers | Atk Trans | Tenders | Veh Land. | Tk Land. |
|-----------------|------|-----------|-----------|-----------|----------|----------|----------|----------|-----------|---------|-----------|----------|
| SHIP CLASS NAME | [8] | TR SMALL | TR MED | TR LARGE | AO FLEET | AO FLEET | AO FLEET | AO OTHER | APA ATK | AD MISC | LSV MISC | LST MISC |
| ALLIED | Y/N | ANY | ANY | ANY | US | COM | JAP | ANY | US | ANY | US | US |
| SEAPLANE | Y/N | N | N | N | N | N | N | N | N | N | N | N |
| SHIP TYPE | 0-4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| MAXIMUM SPEED | 0-45 | 9-15 | 8-15 | 8-15 | 14-22 | 14-18 | 11-18 | 8-14 | 16-20 | 14-18 | 20 | 12 |
| DISPLACEMENT | 0-31 | 0-1 | 2-4 | 5-10 | 1-4 | 1-3 | 1-3 | 0-3 | 2-5 | 1-6 | 2 | 1 |
| HEAVY AA | 0-31 | 0-1 | 0-2 | 0-5 | 2-8 | 0-2 | 0-2 | 0 | 4-8 | 0-8 | 2 | 0 |
| LIGHT AA | 0-31 | 0-2 | 0-4 | 0-8 | 1-8 | 1-3 | 1-4 | 0-1 | 2-6 | 0-4 | 2 | 2 |
| ARMOUR | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRIMARY GUNS | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SECONDARY GUNS | 0-15 | 0 | 0-2 | 0-2 | 1-4 | 0-2 | 0-1 | 0 | 2-4 | 0-6 | 1 | 0 |
| TORPEDO TUBES | 0-15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VULNERABILITY | 0-7 | 0-3 | 0-3 | 0-3 | 0-2 | 1-3 | 0-1 | 0-2 | 3-4 | 1-4 | 3 | 3 |
| ANTI-SUBMARINE | 0-7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TORPEDO LOADS | 0-3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

The dismemberment of the Austro-Hungarian Empire in the aftermath of the First World War left Italy without a serious rival in the Mediterranean. This, added to the political unrest and economic instability of the post war years, led to a virtual halt in new naval construction until the mid 20s.

By 1928, Mussolini had consolidated his power in Italy with the elimination of every political rival. His ambition included a substantial expansion in Italy's colonial empire. This required a concomitant increase in naval strength.

Long standing grievances with France over the borders of their neighbouring North African possessions led to a limited arms race with that country in the early 30s. A temporary settlement was reached in January 1935 and then Mussolini turned his attention to the conquest of Abyssinia (nowadays Ethiopia).

The philosophy behind Italian warship design in the interwar years was to maximize speed and firepower at the expense of stability and endurance. The impressive speeds reached in trials were rarely attained in practice and as events

were to reveal, British warships could usually outrun their Italian counterparts.

The suborning of the Italian Naval High Command to Mussolini's political pressure resulted in irresolute and, for the most part, incompetent direction of the Italian Navy during the Second World War. By mid-1942, the growing Allied air and naval strength, together with a worsening fuel shortage, curtailed operations by the remaining Italian capital ships.

* * * * *

Russian naval construction prior to 1944 amounted to little more than a handful of surface ships and a larger, if poorly designed, number of submarines. Naval operations during the war were mainly in support of land forces, most notably the desperate and determined defense of Leningrad from 1941 through to 1943. Some amphibious operations were mounted in the Black Sea.

In the prewar years, design assistance was sought, and received, from Germany, Italy, France and England.

During the war, both ships and materiel were provided, mostly by the United States, and formed the basis for the subsequent blossoming of the Russian Navy.

* * * * *

The minor navies listed herein had varied experiences throughout the war. What most commonly characterized their naval development was a reliance on foreign purchase for most of their warships.

Sweden and Holland are the exceptions. Both of these countries have a long and proud naval tradition and, in general, designed, developed and built their own warships. For example, the Dutch destroyers of the *Piet Hein* class, laid down in 1925, were the most modern vessels of their type when designed.

The Dutch, Greek and Norwegian navies were more or less destroyed within weeks of being at war. A few vessels escaped to Allied ports and operated against the Axis forces for the rest of the war.

QUESTIONS AND ANSWERS

ORIGINS. '86

By the time you read these words, this convention will be either in progress or over. *Europe Ablaze* has received a nomination for the Charles Roberts Award in the category of *Best Adventure Game for the Home Computer*, the same award that we won with *Carriers at War* last year. This year, however, the competition is a lot stiffer.

It is interesting to note that of the six games nominated, four are either published or distributed by Electronic Arts. Microprose and SSI have one nomination each.

If I were a betting man (and I'd have to be to be in this business), I'd put my money on Sid Meier's *Silent Service*. It is by far the best game Microprose have ever released.

Whatever, we hope we had the chance to talk to you if you came along, especially if you bought our new game!

ON BOARD GAMES

Just as a matter of interest, if any of you are into multi-player board games, take a look at Panther Games' new title *Shanghai Trader*. It's tremendous entertainment. It will be released at Origins (or so Dave O'Connor hopes). As I write this, I have in front of me a set of the cardboard counters from the game. They have been back-printed with the artwork from Panther Games' supplement to *Trial of Strength*. It's not just the military who can cock things up! Mr O'Connor was not pleased.

WORK IN PROGRESS

There isn't any! Not quite. *Battlefront* is finished so now we can take up the epic *Road to Appomattox* again. The only work done since the last report has been to the supply mechanisms. That system is now more or less in place.

Our last issue estimate of an October or November release appears still on target. So you can start holding your breath!

Looking ahead to next year, we plan to release 3 (really?) games. The first will be a grand strategic simulation of the Napoleonic Wars (this Editor's very favourite period of history). The other titles will cover the war in Russia (1941-45) and a space extravaganza of truly spectacular proportion.

We seem to have run out of room this issue. The questions answered here are from the more recent queries we've received.

If there is anything you'd like to know about our games, write to us.

Q. In *Europe Ablaze*, does damage to industry affect production and hence replacements of aircraft?

A. No. The scenarios don't last long enough to really need to reflect such an influence. In any case, while bombing could make an impact at differing times, the truly limiting factor in air force performance is crew training and competence. It was ultimately an easier job to assemble airframes than to put highly trained crew in them. This is emphasized in *Europe Ablaze*, where crew ability is relatively more important than aircraft superiority.

Q. In *Europe Ablaze*, how do you know if your bombing has damaged a radar station?

A. You don't. It was a real problem for the Germans in the Battle of Britain and after a while they gave up bombing them.

Q. Why don't you publish the details of your combat mechanisms so that players can know the likelihood of success or failure of missions before they send them off?

A. SSG does not wish to produce games that must be played on a calculator. The whole idea of using the computer is to remove the burden of bookkeeping from the player. This also enables us to remove information that an equivalent boardgame would have to present.

We see this as a bonus. Players should have to make decisions based on the same sort of information as the commanders that they are emulating. Using the computer also allows the mechanisms to be quite complex and detailed. Since all combats are treated individually, working out the figures for even one mission would be quite a job, as well as a waste of time in terms of getting an advantage in the game. That sort of stuff is best left in the computer, where it belongs.

Q. What is the best way to assign things like the invasion multiple in *Carriers at War* or the thresholds in *Europe Ablaze*?

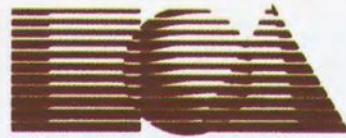
A. The most efficient way is to let the computer play itself a number of times. The average of such results gives you a reasonable basis for decision making. In *Europe Ablaze* remember to turn off all the combat reports and the sound. This makes the testing process much faster.

Q. There appear to be some anomalies in Scenario III of *Europe Ablaze*. Squadrons 122, 129 and 140 are all listed as unassigned in the database. Also the Me 410A is defined as a plane type but never used. What are the correct dispositions for these?

A. You're right, you know! We never noticed. I can't seem to find my notes for this scenario. I have to get back to you in the next issue!

THE
ROAD TO APPOMATTOX
WILL BE OPEN IN NOVEMBER

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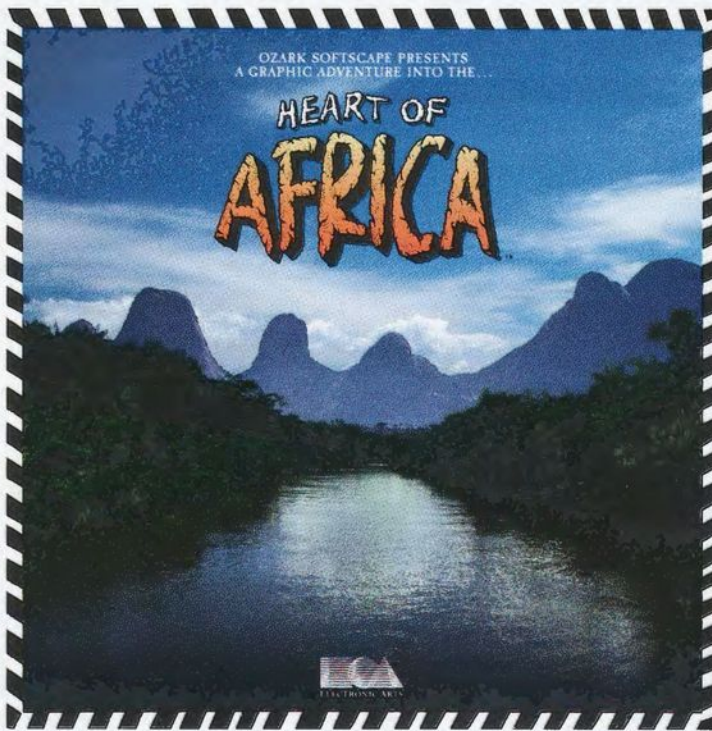
(Hi. I'm from Baltimore. Where's the pharaoh?)

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