

P.T.O. FAQ/Walkthrough

by War Doc

Updated to v1.0 on Aug 8, 2005

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| P A C I F I C   T H E A T E R   O F   O P E R A T I O N S |
+-----+
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GAME: PACIFIC THEATER OF OPERATIONS
PLATFORM: SEGA GENESIS
GENRE: STRATEGY/WAR
CREATOR: KOEI Copyright 1993
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FAQ VERSION: 1.0

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To find a particular chapter or subchapter do the following:

1. Highlight the chapter or subchapter name you wish to find.
2. Press CTRL-C
3. Press CTRL-F
4. Press CTRL-V
5. Press CTRL-F
5. You will arrive at the desired chapter or subchapter.

 ***** UNIT I *****

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+=====+
| 1. LEGAL STUFF |=====
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If you see this guide on any other site then the one listed above, please e-mail me. If you wish to ask questions or give input to this guide, please e-mail me. Just have PTO as the subject so I know it isn't another kooky vendor trying to sell me hair gel or another XXX site telling me I have new friends.

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| 2. VERSION INFORMATION |=====+
+=====+

Version 1.0 8/ 9/05: A guide is born.

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| 3. ACKNOWLEDGEMENTS |=====+
+=====+

The following are a list of people, organizations, or references that have made this FAQ possible:

My wonderful family (who has had to put up with the tapping on the keyboard)
KOEI for making a great game
GameFAQ's for putting up this FAQ
Conway's All the Worlds Fighting Ships 1906-1921
Conway's All the Worlds Fighting Ships 1922-1946
Various internet sources for plane and ship data
Various sources for battle histories

+=====+
| 4. WELCOME |=====+
+=====+

Welcome to my FAQ for Pacific Theater of Operations or PTO for short. Since this is a war and strategy game, there is no walkthrough per say. Instead, this FAQ is broken up into parts. First the you will be given an explanation of choices you have for playing the game. These choices are either scenario or campaign mode. Next, you will be given all the possible commands you can give with a brief description of what those commands are. The next part is dedicated to strategy. This strategy will give you an idea on how to win your strategic battles or campaigns. The last part is the Appendix. This will give detailed information on many facets of the game. Input is appreciated along with constructive criticism. If you wish to e-mail me thoughts on this FAQ, better ways of doing things, other strategies, etc., feel free. Make sure you

put PTO FAQ in the subject. If you don't, I'm liable to discard the e-mail as spam.

+=====+
| 5. OVERVIEW |=====+
+=====+

Pacific Theater of Operations (PTO) takes place in the Pacific basin. You will be able to do a full scenario starting in 1941 and eight other scenarios starting at their historic time periods. After going through the preliminary screen, you can then decide whether you will be the United States or Japan. Once you have chosen sides, you can let the battles begin.

There are 50 territories that you can acquire to further supply your war machine. There are 270 different ships you can use to achieve your goals. In addition, as you develop your technology you can build bigger and better weapons. Of course, all of this stuff just doesn't happen. You must also develop your technological and industrial levels to be able to accommodate the above. In addition, you must have the resources in order to do the research and build the things necessary to ensure victory. Good luck and may victory be yours.

***** UNIT II *****

+=====+
| 6. THE SCENARIOS |=====+
+=====+

There are nine scenarios you can play in PTO. The first scenario, Negotiations Breakdown, can be played as if you are playing a campaign.

The other eight scenarios have specific objectives you must accomplish in order to beat them. These scenarios are described in more detail in Chapter 13. Listed below are the scenarios from number two onward:

DATE OF BATTLE	SCENARIO NAME
NOVEMBER 1, 1941	NEGOTIATIONS BREAKDOWN
DECEMBER 7, 1941	ATTACK ON PEARL HARBOR
MAY 5, 1942	BATTLE OF THE CORAL SEA
JUNE 4, 1942	BATTLE AT MIDWAY
NOVEMBER 1, 1941	NEGOTIATIONS BREAKDOWN
NOVEMBER 1, 1942	BATTLE OF THE SOLOMON ISLANDS
OCTOBER 25, 1942	BATTLE IN THE SOUTH PACIFIC
JUNE 19, 1944	ASSAULT ON THE MARIANAS
OCTOBER 23, 1944	BATTLE FOR THE PHILIPPINES
APRIL 7, 1945	OKINAWA OFFENSIVE

+-----+-----+

In the above scenario modes, you will be given the naval force that fought in that specific battle. You must satisfy the conditions for winning to achieve victory. You will also be given the option of continuing on with your game from the date of the scenario mode above.

+=====+

| 7. ABBREVIATIONS |=====

+=====+

In this game, there are a few abbreviations that are used. Knowing these abbreviations will go a long way in being able to quickly assess a fleet to know its composition.

NOTE: These are general characteristics of the types of ships involved. As with all other things, there are exceptions to the rules.

DBB: Dreadnaught Battleship - This is reserved for battleships along the line of the "superbattleships" Yamato and Musashi of the Japanese fleet. They usually displace around 60,000 tons. Their main gun batteries are 18.1 inch guns and they contain a host of secondary and tertiary batteries.

BB: Battleship - Generally go from 25,000 to 40,000 tons. Their maximum gun size for their primary batteries is 16 inches and they contain a host of secondary and tertiary batteries.

CV: Fleet Carrier - Displaced anywhere from 17,000 tons and greater. Usually lightly armored, the fleet carrier's main offensive weapon is its airplanes. Most fleet carriers could carry 80 or more planes.

CVL: Light Carrier - Smaller and more lightly armored than a fleet carrier. These were usually built on the hulls of CA's. They usually carried up to 45 planes.

C: This covers both heavy and light cruisers in this game. These are broken down (for informational purposes) below:

CA: Heavy Cruiser - Generally from 7,500 to 10,000 tons. These ships carried conventional or dual-purpose guns up to eight inches in diameter. They had no secondary batteries but they could be outfitted for torpedo use.

CL: Light Cruiser - Smaller and more lightly armed than the CA, CL's ranged anywhere from 3,000 to 7,500 tons. These ships carried conventional or dual-purpose guns up to six inches in diameter. In addition, they had no secondary batteries but they were outfitted for both torpedoes and depth charges.

DD: Destroyer - Also known as "Tin Cans". Destroyers represent some of the smallest surface ships. They displaced anywhere from 1,000 to 3,000 tons. Their main batteries usually would hold conventional or dual-purpose guns up to 5.5 inches in diameter. They also had no secondary batteries but they were outfitted with torpedoes and depth charges.

SUB: Submarines - These vessels ranged anywhere from a few tons to almost 2,000 tons in weight. These ships carried torpedoes which could be fired from the bow, the after portion, or both. In addition, these ships usually carried three or four inch deck guns.

+=====+
| 8. GETTING STARTED |=====+
+=====+

Once the game has loaded, you will be able to:

Start new game : Start a new game.

Play saved game: Play one of your two games that you may have saved.

/ 8.1 Setting Up /

If you choose "Start new game", you will be presented with a screen with the nine scenarios from Chapter 6.

After you choose a scenario, you will be asked as to how many players will be participating. If you choose "0", then you can watch the game play against itself.

The next screen deals with game display and difficulty. You will get the following choices:

Wait time (1-10) : The smaller the number, the quicker messages are displayed.

View battle animation (Y/N)? : Allows you to watch all battles.

View HEX fleet battles (Y/N)? : Allows you to watch all fleet battles.

View base HEX battles (Y/N)? : Allows you to watch all base battles.

Select level of difficulty (0-10)? This is a two-fold selection. First, the higher the number, the more aggressive the computer player. Second, it determines your starting funds.

The next screen(s) will show you the Allied and Japanese situations and give a brief overview of each.

/ 8.2 Funds distribution /

The difficulty level you chose will determine your starting funds. Below is a chart of difficulty versus starting funds:

LEGEND: DIFF = DIFFICULTY LEVEL; FUNDS = STARTING FUNDS

DIFF	FUNDS
0	1,000

1 100
+-----+-----+
2 90
+-----+-----+
3 80
+-----+-----+
4 70
+-----+-----+
5 60
+-----+-----+
6 50
+-----+-----+
7 40
+-----+-----+
8 30
+-----+-----+
9 20
+-----+-----+
10 10
+-----+-----+

You will now be able to distribute funds amongst fuel, materials, industry, and/or, technological advances. Fuel, materials, and industry have multipliers attached to them. This means for every one unit of funds you spend, you will get that multiplied by the multiplier and added to the previous value for these areas. The multipliers are:

Fuel: One unit of funds x 10,000 = Added fuel

Materials and industry: One unit of funds x 50 = Added Materials or industry

For example, if you expend five units of funds on fuel, you will get 50,000 units of fuel. For the same five units of funds, you will get 250 units of materials or industry.

All technology is on a one unit of funds per one unit of technology basis.

/ 8.3 Rolling Up Commanders /

Each side starts with 20 commanders. Each commander has four traits. These traits are:

- Sea: Ability to command non-carrier warships.
- Air: Ability to command carriers.
- War: Ability to be effective at the conference table.
- Brv: Ability of a commander to fight versus run away from a battle.

Values for these four areas will come up randomly. There are 102 points spread out amongst these traits so if you have a high value in one trait, then the other three will be significantly lowered. Try to balance the traits out. Make some commanders strong in Sea while making others strong in Air just to name a couple.

Once you have rolled up your commanders, you are ready to start. Each side will have to go to the conference table to determine objectives. Once this is accomplished, you are ready to start the game.

+=====+

| 9. TAKING CONTROL |=====+
+=====+

The controls for this game are pretty simple. It is just a matter of being able to use them for split-second decisions.

BUTTON INVOLVED	RESULT
DIRECTIONAL BUTTONS	SELECTS/MOVES CURSOR
	MARKS POSITIONS
	SETS NUMBERS
LEFT	FOR YES ANSWER
RIGHT	FOR NO ANSWER
A	SHOWS LARGE MAP
	ACCESS TO ADDITIONAL
	SCREENS
B	CANCEL COMMAND/SELECTION
	ESCAPES FROM MAPS,
	WINDOWS, OR INPUT
	ANSWERS NO ON Y/N
C	INPUT COMMANDS
	FINALIZE SELECTIONS
	ANSWERS YES ON Y/N

NOTE: To enter numbers, use the UP and DOWN on the directional pad to increase or decrease the number. Pressing LEFT inputs the maximum value while pressing RIGHT inputs the minimum value.

***** UNIT IV *****

There are two types of screens in PTO: Strategic and Tactical. The Strategic screen is where you make all of your decisions concerning strategy, research, ship and plane building, and fleet movements to name a few. The Tactical Screen is where you actually conduct the battle, whether you are the attacker or defender. It is here that you make split-second decisions that could affect the outcome of the battle.

+=====+
| 10. STRATEGIC SCREEN |=====+
+=====+

The Strategic Screen is the main screen you will constantly see when you gain control each day. It is from this screen that you can make all the different strategic decisions. The main screen is broken up into the eight main level menus that let you control various aspects of the game. The eight main levels are further broken up into sub and sub-sub menus (if applicable).

NOTE: Items in capital letters either represent icons or variable factors.

/ 10.1 Ship Strategic Screen Features When a Ship is in Port / _____

When the #1 Fleet is in port, the Strategic Screen also looks like this except Mil is replaced by Conf:

```

+-----+
| + \                               MAIN MENU BAR                               / + |
| | \ +-----+-----+-----+-----+-----+-----+-----+ / | | | | | | | | | |
| |   | Port | Rest | Fix | Ord | Info | Data | Conf or Mil |   | |
| | / +-----+-----+-----+-----+-----+-----+ \ | |
| + /   DATE                               TIME           [ WC ]           \ + |
+-----+
|   +-----+                               |
|   |                               | Japan or Allies | | | | |
|   |                               |                 |
|   | FLEET PICTURE | FLEET NUMBER |
|   |               | +----+   +----+ |
|   |               | | M | ## | F | ## |
|   +-----+ +----+   +----+ |
+-----+-----+-----+-----+-----+-----+-----+-----+
| | | Flag | | Type | Ship Name | | | | | |
| | +-----+ +-----+           +-----+ | | |
| | | Pos | Port or Coordinates | FU | ##% | | |
| | +-----+           +-----+ | | |
| | | Spd | ## knots (max)      (Fuel Units) | | |
| | +---+---+           +----+   +----+ | | |
| | | | F | ##### | B | ##### | S | ##### | | |
| | | +---+           +----+   +----+ | | |
| | | | M | ##### | T | ##### | C | ##### | | |
| | | +---+           +----+   +----+ | | |
+-----+-----+-----+-----+-----+-----+

```

+-----+
| 10.1.1 Main Menu Bar |-----+
+-----+

Use the D-pad to highlight an option and use the "C" button to select it. The menu bar options for when the #1 Fleet is in port is discussed in more detail in Chapter 10.3.

NOTE: When the #1 Fleet is not inport, the last option on the menu bar changes from Conf to Mil.

+-----+
| 10.1.2 DATE, TIME, WC |-----+
+-----+

This refers to temporal data and weather conditions. The date is expressed in MMM. DD, YYYY format and time is in HH:MM 24 hour format.

Weather conditions refer to whether it is sunny, rainy, or foggy to name a few. Weather conditions can have a direct impact on both surface and air battles.

+-----+
| 10.1.3 Fleet Picture, Japan or Allies, Fleet Number, M, F |-----+
+-----+

The fleet picture is just a picture of whatever type of flagship is in port.

NOTE: This picture will disappear when a fleet or fleets is/are resupplying.
In place of the picture will be this message: "Wait for resupplying:
day(s)"

Japan or Allies refers to whether you are at the Japanese or Allied Strategic Screen.

Fleet Number is lowest number fleet that is in port. Only that fleet's information is displayed on the main screen. If there are other fleets in port, explanations for accessing their information is covered in Chapter 10.2.

M and F refers to Morale and Fatigue. These numbers range from 0 to 99. A high Morale number is a good thing while a high Fatigue number is bad.

```
+-----+
| 10.1.4  Flag, Type, Ship Name |-----+
+-----+
```

Flag refers to which ship in the above Fleet Number is the flagship.

Type refers to what kind of ship the flagship is. The 12 choices are:

DBB: Super battleship	NC: Nuclear Cruiser
NBB: Nuclear Battleship	C: Cruiser
BB: Battleship	NDD: Nuclear Destroyer
NCV: Nuclear Carrier	DD: Destroyer
CV: Carrier	NSUB: Nuclear Submarine
CVL: Light Carrier	SUB: Submarine

The name of the ship will be listed after the above information.

```
+-----+
| 10.1.5  Pos, FU, Spd |-----+
+-----+
```

Pos indicate the position of a specific ship or fleet. If said ship or fleet is in port, then that port will be displayed. If not, then the fleet's X,Y coordinates will be given. The game map is a grid 3839 x 1919 units in size.

FU indicates the icon for fuel. Fuel is displayed in two ways: The first way is a percentage from 0 to 100% indicating how much fuel your fleet has left. The second way is by how many gallons of fuel your fleet has.

Spd indicates the maximum speed that the fleet can attain. A fleet's speed is only as fast as the slowest ship. This means if you have five, 37 knot destroyers with transports and freighters attached, you cannot move faster than 20 knots (the top speeds of the freighters and transports).

```
+-----+
| 10.1.6  F, B, S, M, T, C |-----+
+-----+
```

These letters represent the icons for Fighters, Bombers, Scouts, Soldiers (in units of battalions), Transports, and Freighters. The numbers following these icons represent the total numbers of these items in that particular fleet.

/ 10.2 Base Strategic Screen Features When a Ship is in Port / _____

Pressing the "B" button brings up the base information screen. It looks like this:

```
+-----+
| + \                               / + |
| | \ +-----+-----+-----+-----+ / | | | | | | | | | |
| | | Port | Rest | Fix | Ord | Info | Data | Conf or Mil | | |
| | / +-----+-----+-----+-----+ \ | |
| + /   DATE                TIME          [ WC ]       \ + |
+-----+
|      BASE NAME
+-----+-----+-----+-----+-----+-----+-----+
| | | Frnd | ##      RE/RP | TR | ##      | FR | ##      | | | |
| | +-----+ +-----+ +---+-----+ +-----+ | | |
| | | Iron | ##      | Pop | ##      | Endu | ##      (##) | | |
| | +-----+ +-----+ +-----+ | | |
| | | Oil | ##      | Ind | ##      | Arms | ##      (##) | | |
| | +-----+ +-----+ +-----+ | | |
| | | +---+ +---+ +---+ | | |
| | | | F | ##### | B | ##### | S | ##### | | |
| | | +---+ +---+ +---+ | | |
| | | | J | ##### | R | ##### | L | ##### | | |
| | +---+---+ +---+---+ +---+---+ | | |
| | | E | ##### | M | ##### | P | ##### | | |
| | +---+ +---+ +---+ | | |
| | | Enemy
| | | troops      ##### | | |
+-----+-----+-----+-----+-----+-----+-----+
```

```
+-----+
| 10.2.1 Base Name |-----+
+-----+
```

Name of the base you are currently looking at.

```
+-----+
| 10.2.2 Frnd, RE/RP, TR, FR |-----+
+-----+
```

Frnd represents a base populations friendliness to either the Allies or Japan. The higher the number, the more cooperative they will be. If base friendliness is 15% or lower, then guerilla attacks may occur. These cause almost everything on the base to be halved.

RE/RP is/are the icons representing whether this base is just for refueling or whether it can both refuel and repair ships.

TR and FR are the number of transports and freighters at said base. It is important to keep an adequate number of transports and freighters at your base so that you can restock large enough quantities of supplies and garrison your base with adequate troops. The numbers break down as follows:

Each freighter carries 7,000 gallons of fuel, 10 units of materials, and 10 rockets.

Each transport carries 10 battalions of troops.

NOTE: Rockets that are in a place other than the Home Port cannot be loaded onto ships. These are for base use only.

+-----+
| 10.2.3 Iron, Pop, Endu, Oil, Ind, Arms |-----
+-----+

These headings represent a bases resources and defensive ability. The resources that a base produces will shipped to the Home Port monthly. Base characteristics are discussed in more detail in Chapter 18.

+-----+
| 10.2.4 F, B, S, J, R, L, E, M, P |-----
+-----+

These letters represent the icons for Fighters, Bombers, Scouts, Jets, Rockets, Long-range Bombers, Material, Soldiers, and Fuel

+-----+
| 10.2.5 Enemy troops |-----
+-----+

This number represents the number of invading troops are currently attacking a base if an invasion has occurred.

/ 10.3 Specific Strategic Menu Items /-----

This Chapter will discuss each menu item in detail. You may be referred to other chapters for detailed discussions such as ship building and technological advancements. Also, you may be referred back to pictures of screens already shown within this chapter or other chapters.

Some pages are in multiple screens. This means you have to press the D pad left or right to see these screens. For the purposes of this FAQ, if you have multiple screens, then a vertical row of "S"'s will indicate the screen breaks so that all screens can be shown at once.

+-----+
| 10.3.1 Port |-----
+-----+

These commands generally deal with moving your ships around. In addition, you can use the Port commands to lay mines.

/=====\
| 10.3.1.1 Supply |-----
\=====/

This command allows you to supply your fleet(s) with fuel, planes, troops, etc. Each ship has a maximum amount of supplies, equipment, troops, etc it can take on. When this command is chosen, you get the following screen:

Page #/Total	Flagship				S			
	Commander	P	M	F	S	Mission		Position
> 1:Flagship Name		20	35	0	S	> 1:Flagship Name		Loc or
Commander Name					S	Mission Name		Coord
					S			
2:Flagship Name					S	2:Flagship Name		Loc or
Commander Name					S	Mission Name		Coord

```

| -----S -----|
| Select fleet      S Select fleet |
+-----+

```

Use the D pad to move the cursor up and down. Use the "A" button to go to the next page. Use the D pad and move it right to get the next screen of information. The P, M, and F represent the fuel, morale, and Fatigue icons. Fuel will be expressed as a number from 0 to 100 to indicate the percentage level that said fleet is refueled.

Page two information is just the location of the fleet either by base name or by coordinates if away from a base.

When you select the fleet to be resupplied, you get this screen:

```

+-----+
|                                     S |
|                                     L F B c S A |
| Resupply will                       o g m o l r |
| will take                            a t b u d m |
| ## days          Page #/Total       d r r t r s |
| -----|
| Ship Name                ##  ##  ##  ##  ##  ## |
|                               |
| Ship Name                [##] ##  ##  ##  ##  ## |
|                               |
|                               |
| +-----+ |
| | +---+   +---+   +---+ | | | | | | |
| | | F | ##### | B | ##### | S | ##### |
| | +---+   +---+   +---+ |
| | | J | ##### | R | ##### | T | ##### |
| | +---+   +---+   +---+ |
| +-----+ |
| Select item to resupply |
+-----+

```

A blinking red cursor will appear over the number under one of the headings. When you press "C", it will ask you to put in how much of that item you want. Continue to do this for the other ships. Use the "A" button to switch between pages. When you are finished, press the "B" button. The box below indicates what you have left in the national stock system to supply your fleets. This is represented by the letters F, B, S, J, R, and T which represent the icons for these goods.

If you have troops transports, you will get this screen:

```

+-----+
|                                     P S F |
| Resupply will                       o l u |
| will take                            s d e |
| ## days                               t r l |
| -----|
| Troop                ##  ##  ##  ## |
| transport |
| Troop                [##] ##  ##  ## |
| transport |
|                               |
| +-----+

```

```

| | +---+          +---+          +---+          | | | | | | |
| | | F | #####   | B | #####   | S | #####   |
| | +---+          +---+          +---+          |
| | | J | #####   | R | #####   | T | #####   |
| | +---+          +---+          +---+          |
| +-----+-----+-----+-----+-----+-----+
| Select item to resupply                               |
+-----+-----+-----+-----+-----+-----+

```

As with the previous page, load up your troops transports. Once you have finished, press the "B" button and you will make it to the refueling screen. Choose how much, from 0-100, you want to fill up the selected fleet. Once you have chosen how much fuel to use, hit the "B" button and choose "Y" to refuel the fleet. Below is a chart of how much fuel (in gallons) each ship requires to be at 100%:

LEGEND: TRAN = TRANSPORT; FREI = FREIGHTER

SHIP	100% FUEL	SHIP	100% FUEL
CV	6,000	NCV	6,000
CVL	4,500	NBB	6,000
DBB	10,000	NC	4,500
BB	6,000	NDD	1,000
C	4,500	NSUB	1,000
DD	1,000	TRAN	1,000
SUB	1,000	FREI	6,000

If you have a fleet of 2 CV's, 1 BB, 1 C, 3 DD's, 4 TRAN, and 4 FREI, then the amount of fuel you need to "top off" their tanks is figured as follows:

```

2   CV's x 6,000 = 12,000
1   BB   x 6,000 = 12,000
1   C    x 4,500 =  4,500
3   DD's x 1,000 =  3,000
4   TRAN's x 1,000 =  4,000
4   FREI's x 6,000 = 24,000
-----

```

TOTAL FUEL = 59,000

```

/=====\  

| 10.3.1.2 Shore Leave |-----  

\=====/  


```

This allows you to raise the morale of your troops by giving leave time. You can choose from 3 to 20 days to allow your men to rest. For each day of rest, you gain two morale points and lose two fatigue points.

```

/=====\  


```

```
| 10.3.1.3 Depart -> #1 fleet |-----  
\=====/  
/=====\  
| 10.3.1.4 Depart -> Other |-----  
\=====/  
When you have fueled up your ships, you can now send them out into the Pacific.  
You will have four choices as to what to do with your fleet. If your fleet is  
headed to a base, remember that Japanese bases are in red while Allied are  
blue:  
Attack enemy base : Attacks an enemy base. If you have troop transports,  
allows you to land troops as well.  
Attack fleet : Attack an enemy fleet.  
Gather intelligence: Allows you to locate the whereabouts of enemy fleets  
and/or base information.  
Port call : Allows you to dock in a friendly port.  
/=====\  
| 10.3.1.5 Red alert |-----  
\=====/  
If you need to recall a fleet that has been put on shore leave, then this is  
the command you use. Use Red alert only when you desperately need it since  
utilizing it causes you to lose 20 Morale points and gain 18 Fatigue points.  
/=====\  
| 10.3.1.6 Lay mines |-----  
\=====/  
Allows you to lay one mine per day. Mines require two units of material.  
/=====\  
| 10.3.1.7 Remove mines |-----  
\=====/  
Allows you to remove one of your mines per day.  
/=====\  
| 10.3.1.8 Show mines |-----  
\=====/  
Displays all mines laid at a base.  
+-----+  
| 10.3.2 Rest |-----  
+-----+  
These commands generally deal with accelerating time. Unless you have some-  
thing going on, these commands allow you to skip days for events such as re-  
supply, repair, or if you want to keep a fleet in port for some days. If  
things are quiet at the base, it might be better to put them on shore leave  
then to just rest them. Your choices are:
```

More details regarding the #1 Fleet are found in Chapter 10.4.

```
| 10.3.1.3 Depart -> #1 fleet |-----  
\=====/  
/=====\  
| 10.3.1.4 Depart -> Other |-----  
\=====/  
When you have fueled up your ships, you can now send them out into the Pacific.  
You will have four choices as to what to do with your fleet. If your fleet is  
headed to a base, remember that Japanese bases are in red while Allied are  
blue:
```

Attack enemy base : Attacks an enemy base. If you have troop transports,
allows you to land troops as well.

Attack fleet : Attack an enemy fleet.

Gather intelligence: Allows you to locate the whereabouts of enemy fleets
and/or base information.

Port call : Allows you to dock in a friendly port.

```
/=====\  
| 10.3.1.5 Red alert |-----  
\=====/  
If you need to recall a fleet that has been put on shore leave, then this is  
the command you use. Use Red alert only when you desperately need it since  
utilizing it causes you to lose 20 Morale points and gain 18 Fatigue points.
```

Lay mines : Allows you to lay one mine per day. Mines require two units of material.

```
/=====\  
| 10.3.1.6 Lay mines |-----  
\=====/  
Allows you to lay one mine per day. Mines require two units of material.
```

Remove mines : Allows you to remove one of your mines per day.

```
/=====\  
| 10.3.1.7 Remove mines |-----  
\=====/  
Allows you to remove one of your mines per day.
```

Show mines : Displays all mines laid at a base.

```
/=====\  
| 10.3.1.8 Show mines |-----  
\=====/  
Displays all mines laid at a base.
```

Rest : These commands generally deal with accelerating time. Unless you have some-
thing going on, these commands allow you to skip days for events such as re-
supply, repair, or if you want to keep a fleet in port for some days. If
things are quiet at the base, it might be better to put them on shore leave
then to just rest them. Your choices are:

```
+-----+  
| 10.3.2 Rest |-----  
+-----+
```

These commands generally deal with accelerating time. Unless you have some-
thing going on, these commands allow you to skip days for events such as re-
supply, repair, or if you want to keep a fleet in port for some days. If
things are quiet at the base, it might be better to put them on shore leave
then to just rest them. Your choices are:

One Day : Allows you to select one day to pass.

Resupply: Allows you to rest until all resupply is done.

Repair : Allows you to rest until all repairs are done.

Set Days: Allows you to set from 1 to 30 days to rest.

End : Cancels all rest orders at a base. This does not have a detrimental effect on Morale or Fatigue.

```
+-----+
| 10.3.3 Fix |-----
+-----+
```

This command either allows you to fix your ships, convert or modify ships, or to build new ships.

```
/=====\  
| 10.3.3.1 Urgent repair |-----  
\=====/
```

This command allows you to do a "quick fix" on a ship so that you can take it in for more extensive repairs. If a base has a repair facility, then you can do an Urgent Repair on your ship(s). Material is consumed from the base you are at. The exception is if the fleet is at the Home Port. Material is then consumed from the National Reserve.

In order to an urgent repair(s), you first identify the ships you want to fix. You can only fix one attribute at a time. These attributes are anti-ship, anti-air, armor, or speed. When you select one of these attributes, you can increase it a maximum of five points. You, though, will consume seven units of materials and it can take from one to a few days to fix your ship.

You can repair as many ships as you want. The only limiting factors will be the amount of material available and whether the ship can be repaired any more.

For more extensive repairs, it is better to get the ship to Home Port for a Total Repair.

```
/=====\  
| 10.3.3.2 Total repair |-----  
\=====/
```

Allows you to modify all attributes of a ship. It takes one unit of material to raise anti-ship, anti-air, armor, or speed by one. It takes 15 units of material to install search radar and another 15 to install gunnery radar. You cannot exceed the maximums as per Chapter 17 when you modify a warship. You must use this command when you want to install search and/or gunnery radar. It will usually take a month or two to do a total repair.

```
/=====\  
| 10.3.3.3 Modify warship |-----  
\=====/
```

This command allows you to convert a warship to another type. The conversions allowed are:

CV -> BB; CVL -> C; DBB -> CV; BB -> CV; and C -> CVL

All modifications require adequate materials, fuel, and industry. The time it takes to do a modification will depend on your industry level. The faster you want it done, the more industry that is consumed.

More information regarding modifying warships is in Chapter 17.

```
/=====\  
| 10.3.3.4 Build warship |-----  
\=====/
```

See Chapter 17 for more details on building warships.

```
/=====\  
| 10.3.3.5 Modify fighter |-----  
\=====/
```

This allows you to modify your carriers so that they can use jets. It takes one unit of materials to modify the ship for one jet. So a ship that has a capacity of 80 planes would take 80 units of materials.

```
/=====\  
| 10.3.3.6 Modify rocket |-----  
\=====/
```

Allows you to modify any ship that can carry planes. It replaces the plane launches with rocket launches. Good for ships, other than carriers, so that they can launch rockets. You can even use it on carriers for the ultimate rocket-launcher.

```
+-----+  
| 10.3.4 Ord |-----  
+-----+
```

This command enables you to give commands to your fleets that are not at bases. In addition, it also allows you to

```
/=====\  
| 10.3.4.1 Fleet |-----  
\=====/
```

This command allows you to command a fleet that is out to sea. The only stipulations on this command are:

1. You cannot command the #1 Fleet regardless of location and
2. You cannot command Fleets #2-#16 when they are at a base.

When you use this menu option, you will get a screen like that displayed in Chapter 10.1. This time, though, you will have a different menu bar across the top. The choices are:

Place: Shows you where the fleet is located on the big map.

Rept: For Fleets #2-#16, this will show where a contact was made with coordinates. For the #1 Fleet, you can also call up the map to show exact location, verify the report, or mark said point to determine a pattern.

Ships: Shows data for each ship in a fleet.

Trans: Shows data for transports (if any) that are with the fleet.

Duty: Allows you to give orders as per Chapter 10.3.1.4.

Mark: Allows you to put a mark on the big map.

```
/=====\
| 10.3.4.2 Base |-----
\=====/
```

This command allows you to supply a base, get information, or get a location. When selected, the following screen comes up for quick information:

```
+-----+
|                                     S |
|                                     S |
|                                     S |
|           I O I R F E N S P E A M S |
|           r i n & r n o S o n r t l |
|           o l d S n M t S p d m r d |
| Page #/Total n           d n e S   u s l r |
| -----S ----- |
| >Base Name      ## ## ##      ## ## S ## ## ## #### #### |
| Base Name      ## ## ##      ## ## S ## ## ## #### #### |
| -----S ----- |
| Select base           S Select base |
+-----+
```

```
+-----+
|                                     S |
|                                     S |
|                                     S           S |
|           F T F D S   F   B   c |
|           u n r a S   g   m   o |
|           e p g y S   t   b   u |
| Page #/Total    l t t s S   r   r   t |
| -----S ----- |
| >Base Name      ##### ## ## ## S ##### #### #### |
| Base Name      ## ## ## ## ## S ##### #### #### |
| -----S ----- |
| Select base           S Select base |
+-----+
```

Selecting the base will give you the base information screen from Chapter 10.2. Across the top will be the following commands:

Place : Shows you the location of the base on the big map.

Rept : Shows you any reports of enemy fleet activity as per Chapter 10.3.4.1.

Supply: Allows you to supply your base. Keep in mind that each base is a different distance from the Home Port. The farther away it is, the longer you have to wait before you can resupply them again.

Mark : Allows you to mark a location on the big map.

```
/=====\
| 10.3.4.3 Arrange |-----
\=====/
```

This command allows you to do the following (NOTE: The last three must be done

at a Home Port):

Join : Allows you to exchange ships between two fleets or allows you to merge two fleets together.

Split : Allows you to split a fleet into multiple fleets. You must have empty fleets in order to execute this command.

New : Only useable at your Home Port. Allows you to create a new fleet from your ship reserve. You must have empty fleets in order to execute this command.

Discharge: Only useable at your Home Port. Allows you to return ships to your ship reserve. You must use this command if you want to a Total Repair or Modify Warship command on a ship that's in a fleet.

Transport: Only useable at your Home Port. Allows you to attach transports and/or freighters to an existing fleet.

```
/=====\  
| 10.3.4.4 Scuttle |-----  
\=====/  
-----
```

This allows you to basically destroy one of your own ships. This is a very useful command when new technology is out but you can't build new ships due to having the maximum allowed. It also is useful when a ship is so damaged that it is combat unworthy.

Ships must be part of a fleet before you can scuttle them and you cannot scuttle the last ship in a fleet. Unfortunately, scuttling ships counts toward your Friendly ships destroyed total.

```
+-----+  
| 10.3.5 Info |-----  
+-----+
```

This option not only allows you to gather information, but also to perform clandestine operations.

Radio ban : Cuts all radio traffic. Helps to prevent enemy units from finding you, but it also isolates you from the rest of your fleets. If the #1 Fleet is attacked during a radio ban, it will automatically fight (you have no control over it).

Enemy info : High intelligence will allow you to gain insight on the enemies plans.

Special forces: Allows you to not only gather intelligence, but also to cause hate and discontent in the form of destroying planes, base defenses, and fuel. You can also agitate the people by decreasing their friendliness toward their "home" country.

Results : Shows how many ships each side has and how many have been sunk since the last time the #1 Fleet returned to port.

Report : Allows you to decide which fleets don't have to report enemy submarine activity.

Show fleet : Allows you to display your fleets so that you know where they are.

```

+-----+
| 10.3.6 Data |-----+
+-----+

```

This is nation specific information. It gives you all the information regarding your status and what your country has in the way of resources to back your war effort.

```

/=====\
| 10.3.6.1 Nation |-----+
\=====/

```

This is the screen you get when you display the National Data:

```

+-----+
| + \                               MAIN MENU BAR                               /+ |
| | \ +-----+-----+-----+-----+-----+-----+-----+ / | | | | | | | | | |
| |   | Port | Rest | Fix | Ord | Info | Data | Conf or Mil |   | |
| | / +-----+-----+-----+-----+-----+-----+ \ | |
| + /   DATE                TIME                [ WC ]                \ + |
|   +-+                               +-+ |
|   | |                               | | | | | | | | |
|   | |+-----+      +-----+      +-----+ | | |
|   | || Int | ## | Art | ## | Mor | ## | | |
|   | |+-----+      +-----+      +-----+ | | |
|   | || Stel | ## | Eng | ## | Ind | ##### | | |
|   | |+-----+      +-----+      +-----+ | | |
|   | || Air | ## | Elct | ## | Budget | ##### | | |
|   | |+-----+-----+ +-----+ +-----+ | | |
|   | |   | E | ##### | P | ##### | | |
|   | | +---+---+      +---+ +---+ +---+ | | |
|   | | | F | ##### | B | ##### | S | ##### | | |
|   | | +---+      +---+      +---+ | | |
|   | | | J | ##### | R | ##### | L | ##### | | |
|   | | +---+      +---+      +---+ | | |
|   | | | M | ##### | T | ##### | C | ##### | | |
|   | | +---+      +---+      +---+ | | |
+-----+-----+-----+-----+-----+-----+-----+-----+

```

The letters E, P, F, B, S, J, R, L, M, T, and C represent the icons for Material, Fuel, Fighters, Bombers, Scouts, Jets, Rockets, Long-range Bombers, Soldiers, Transports, and Freighters

Every month, you will get a report as to how much stuff made it into your country. This stuff goes into the National Reserve. Material, Fuel, Budget, and Soldiers are determined as follows:

$$\text{Material shipped back monthly} = \# \text{ of Iron on bases} * 20$$

$$\text{Fuel shipped back monthly} = \# \text{ of Oil on bases} * 300$$

$$\text{Money made for Japan} = (3 * \# \text{ of Ind on bases}) + (10 * \text{Morale})$$

$$\text{Money made for Allies} = (3 * \# \text{ of Ind on bases}) + (25 * \text{Morale})$$

$$\text{Soldiers Recruited} = 10 + (\text{Morale} * 1/3 \text{ (all fractions rounded down)})$$

Other items such as planes, transports, etc. you must produce through the Conf menu option.

```

/=====\
| 10.3.6.2 Officers |-----
\=====/

```

Displays all information on officers that are still alive.

```

/=====\
| 10.3.6.3 Allies |-----
\=====/

```

When this is selected, you get the following screen:

```

+-----+
|                                     L S                                     |
|           A F  FA JF  R  B S           A S  E  A  E |
|           l oJ ol eg  c  o S           r t n i l |
|           l rp rl tt  k  m S           t e g r c |
|           1/2           y n s r t b S           l           t |
| -----S----- |
| Germany           ## ## ##           S           ## ## ## ## ## |
| Italy             ## ## ##           S           ## ## ## ## ## |
| England           ## ## ##           S           ## ## ## ## ## |
| France            ## ## ##           S           ## ## ## ## ## |
| Holland           ## ## ##           S           ## ## ## ## ## |
| China             ## ## ##           S           ## ## ## ## ## |
| Australia         ## ## ##           S           ## ## ## ## ## |
+-----+

```

```

+-----+
|                                     L S                                     |
|           A F  FA JF  R  B S           A S  E  A  E |
|           l oJ ol eg  c  o S           r t n i l |
|           l rp rl tt  k  m S           t e g r c |
|           2/2           y n s r t b S           l           t |
| -----S----- |
| Thailand          ## ## ##           S           ## ## ## ## ## |
| India             ## ## ##           S           ## ## ## ## ## |
| Sweden            ## ## ##           S           ## ## ## ## ## |
| Switzerland      ## ## ##           S           ## ## ## ## ## |
| USSR              ## ## ##           S           ## ## ## ## ## |
| Brazil            ## ## ##           S           ## ## ## ## ## |
+-----+

```

You can determine from these screens whether the above country is for or against you, what technologies they possess, and what their technological levels are. If a country is allied with you, you can exchange technologies, equipment, etc.

Losing an allied country can sometimes be extremely devastating. For Japan, they lose a lot of Intelligence plus technological gains. The Allies can lose allied fleets such as England's or Australia's. This is why it is good to keep friendly with all countries.

```

/=====\
| 10.3.6.4 Ships |-----
\=====/

```

A quick display to show what ships are still around and which ships were sunk

for both the Allies and Japan. The running total is only kept until the #1 Fleet heads out and goes back into the Home Port again.

```
/=====\  
| 10.3.6.5 Base |-----  
\=====/
```

This gives you the basic base information for all 50 bases.

```
/=====\  
| 10.3.6.6 Key battle |-----  
\=====/
```

Shows you what your objectives are from the conference.

```
/=====\  
| 10.3.6.7 Victory Goal |-----  
\=====/
```

Repeats what your overall victory goal is from when you started the scenario.

```
+-----+  
| 10.3.7 Conf |-----  
+-----+
```

This is where you can build up your infrastructure, determine base policy, and set war goals to name a few. This option is only available when the #1 Fleet is at the Home Port. The rest of the generals, though, may reject requests for things involving the spending of money or the deployment of Special Forces. An officer with high War ability can help out greatly.

```
/=====\  
| 10.3.7.1 Set goals |-----  
\=====/
```

Allows you to either set goals or allow the other members set goals for you. These goals either involve attacking an enemy base or defending a friendly base.

```
/=====\  
| 10.3.7.2 Produce arms |-----  
\=====/
```

Allows you to produce all the materials required for waging war. You must have enough money in your budget to produce these items. Items produced go into the national reserve.

```
/=====\  
| 10.3.7.3 Internal |-----  
\=====/
```

This command allows you to raise one of two things:

Industry : Allows you to raise your industry one point/one unit of money.

Propaganda: Allows you to raise national morale one point/50 units of money.

```
/=====\  
| 10.3.7.4 Diplomacy |-----  
\=====/
```

Allows you to set up relations with, or repair relations with another country.

```
/=====\  
| 10.3.7.5 Base policy |-----  
\=====/
```

This command allows you to dictate Military Policy to most any base you possess. The following bases cannot be controlled this way:

Allied: Hawaii, San Francisco, Los Angeles, and Attu

Japan : Tokyo, Yokosuka, Kure, Sasebo

```
/=====\  
| 10.3.7.6 Raise skill |-----  
\=====/
```

Allows you to invest your budget to raise your skill in the following areas: Intelligence, Artillery, Steel, Engines, Planes, or Electronics. For every 50 units of money, you can raise a skill level by one point.

```
/=====\  
| 10.3.7.7 Special forces |-----  
\=====/
```

Allows you to deploy Special Forces to enemy bases.

```
+-----+  
| 10.3.8 Mil |-----  
+-----+
```

The same as Chapter 10.3.7.4 except you dictate Military Policy to the base you currently have a fleet at. If the #1 Fleet is not at Home Port, you can only dictate policy to that individual base.

/ 10.4 #1 Fleet Specifics /

The #1 Fleet is the only fleet you fully control. Once you deploy it, you can control all matters involving battle, resupply, etc. Of course, with this much importance attached to the #1 Fleet, it also determines a couple of things:

- If you ever lose the #1 Fleet, your game will end. This means that you need to make sure it is kept in good repair and you don't put it into some impossible situation.
- Once out of port, you have no control on the direction of the war since you will not be able to participate in any conferences. This means get all your business taken care of before you deploy.
- The #1 Fleet determines the National Morale. If the #1 Fleet is successful, then morale goes up, if not, morale goes down. If morale goes too low or you don't accomplish any goals, you can be replaced which will end your game.

You get the following screen when you sortie out the #1 Fleet:

```
+-----+
```

```

| + \                               MAIN MENU BAR                               / + |
| | \ +-----+-----+-----+-----+-----+-----+-----+ / | | | | | | | |
| |   | Tact | Rest | Int | Ord | Info | Data | Misc |
| | / +-----+-----+-----+-----+-----+-----+ \ | |
| + /   DATE                               TIME           [ WC ]   \ + |
+-----+-----+-----+-----+-----+-----+-----+
|   +-----+-----+ |
|   |                               | Japan or Allies | | | | |
|   |                               |                   |
|   |   FLEET PICTURE | #1 fleet |
|   |               | +----+ +----+ |
|   |               | | M | ## | F | ## |
|   +-----+-----+ +----+ +----+ |
+-----+-----+-----+-----+-----+-----+-----+
|   | | Flag | | Type | Ship Name | | | | | |
|   | +-----+ +-----+ +-----+ | | |
|   | | Pos | Port or Coordinates | FU | ##% | | |
|   | +-----+ +-----+ +-----+ | | |
|   | | Spd | ## knots (max) | (Fuel Units) | | |
|   | +---+---+ +---+ +---+ +---+ | | |
|   | | | F | #### | B | #### | S | #### | | |
|   | | +---+ +---+ +---+ +---+ | | |
|   | | | M | #### | T | #### | C | #### | | |
|   | | +---+ +---+ +---+ +---+ | | |
+-----+-----+-----+-----+-----+-----+

```

NOTE: Menu items Ord, Info, and Data have already been discussed in Chapter 10.3.

```

+-----+
| 10.4.1 Tact |-----+
+-----+

```

With the #1 Fleet, you are allowed to make command decisions six times a day (every four hours). This means you can keep the fleet moving or order multiple airstrikes to name a few things that can be done over this period of time.

```

/=====\
| 10.4.1.1 Move |-----+
\=====/

```

Allows you to move the #1 Fleet anywhere within the small window. You get to determine fleet speed and destination. Keep in mind the faster you move, the more fuel that gets burned. Conversely, the faster you move, the quicker you make it to your destination.

After you determine where you are going, the game will display the time it will take to get to said destination.

You can continue the above pattern until you get to your destination.

```

/=====\
| 10.4.1.2 Air attack |-----+
\=====/

```

This allows you to select what carriers you will launch planes from. It also gives you the option of loading planes with torpedoes. If you are going after ships, then this is the route to go, if not, bombs are a better and more versatile choice. Time to prepare is determined by the number of planes you will use for the strike and how you will be arming them.

NOTE: Planes chosen for an air attack cannot be used as cover planes for the fleet.

```
/=====\  
| 10.4.1.3 Gun attack |-----  
\=====/
```

Allows you to choose whether you want to bombard an enemy base or take on an enemy fleet.

```
/=====\  
| 10.4.1.4 Landing |-----  
\=====/
```

Gets your troop transports ready to unload their troops upon enemy bases. Time taken is determined by how many transports you will be unloading.

```
/=====\  
| 10.4.1.5 Rocket attack |-----  
\=====/
```

Allows you to launch rockets at an enemy base. Once used, you must return to your Home Port to replenish your rockets.

```
+-----+  
| 10.4.2 Rest |-----  
+-----+
```

This command allows you to rest the fleet for four hours, until you arrive at a destination, or for 24 hours.

```
+-----+  
| 10.4.3 Int |-----  
+-----+
```

This command will allow you to:

Scout : Launch a scout from one of your ships to cover one of nine grids in an area.

Escort: Launch fighters to form a "protective" umbrella over the fleet.

Report: Shows reports on enemy fleets.

```
+-----+  
| 10.4.4 Misc |-----  
+-----+
```

The commands from Misc are just that, anything not covered by the other menu items. These items are:

Set up : Allows you to configure your fleet in a Anti-air Attack, Bombardment, Chase, or Torpedo formation. Each has its advantages and disadvantages.

Training: Allows you to train your crews in seamanship or aircraft. Either the Ship or Fly stats will go up and it takes two days to train. This is in addition to fuel being used and Fatigue going up.

Banquet: A nice way to reward your fleet. It raises Morale by five and decreases Fatigue by 11. You get ten of these between resupplies.

Port : If you are at a port, you can use this command to tie up to the base's dock.

```
+=====+
| 11. TACTICAL SCREEN |=====
+=====+
```

This is where you make your battle decisions. You will get this screen whenever you attack an enemies fleet or base or when an enemy attacks your fleet.

Once battle is initiated, it will go on for a number of rounds. This number is determined by how close a fleet is to another fleet or base. The maximum number of rounds is 12 for each side.

```
-----
/ 11.1 Main Tactical Screen /-----
-----
```

You will get the following screen when battle begins:

```
+-----+
|                                             |
|                                             |
|               MAIN BATTLE SCREEN          |
|                                             |
|                                             |
|                                             |
| +-----+ +-----+ +-----+ +-----+ |
| | +----+ ++-----+ +-----+ +-----+ | | | | | | |
| || TU | || SHIP NAME                      || |
| ||   | || [Mov][Att][Inf][Lnd][Ext][Snr][Fle][Del] || |
| | +----+ ++-----+ +-----+ +-----+ | |
| +-----+ +-----+ +-----+ +-----+ |
+-----+
```

```
+-----+
| 11.1.1 MAIN BATTLE SCREEN |-----
+-----+
```

This displays all ships, planes, and/or bases participating in a battle. Each space is a hex so one could surround an enemy unit with six of their own. Two units cannot occupy the same hex. The exception to this rule are submarines.

```
+-----+
| 11.1.2 TU, SHIP NAME |-----
+-----+
```

TU represents the number of turns left for battle and the SHIP NAME is self-explanatory.

```
+-----+
| 11.1.3 Combat Menu Bar |-----
+-----+
```

Mov: Allows you to move your unit (if possible).

Att: Allows you to attack an enemy unit. Pressing the "A" button gives you options of what to attack with (i.e. guns, torpedoes, depth charges, etc.).

Inf: Gives you information on the specific unit.

Lnd: Allows you to prepare transports to land troops.

Ext: Extinguish a fire on a ship. If you fail, then the fire continues to blaze and cause damage.

Snr: Allows any ship, so equipped, to detect enemy submarines.

Fle: Allows you to withdraw ships from a battle. Ships cannot be withdrawn if: An enemy ship is adjacent to the one that is trying to escape, enemy planes are anywhere in the battle area, or if there are submarines in the battle area.

Del: Allows you to delegate command to an individual ship or the fleet. Once command is delegated, you cannot regain control until the end of the battle.

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***** UNIT      V *****
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You will be able to play in nine selected battles. The first scenario would qualify as a campaign.

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+=====+
| 12. GENERAL STRATEGIES |=====+
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These are general strategies to make your journey through the different areas more enjoyable (or tolerable at least). These also can be used when you don't want to look at the specific strategies and want to solve things on your own. Again, these are not all-encompassing and I know there are other general strategies to use. These are, though, the best I have found to work for me.

These are a list of general strategies for all the campaigns that I have found to be effective. I know that there are many more different strategies out there. Your input on this would be greatly appreciated and your reward would be to see it added to this guide and credited appropriately. These are not in any particular order of importance but some or all may apply to whatever campaign you are engaged in.

/ 12. 1 Saving is a Good Thing / _____

This really goes without saying. Every time you have a significant accomplishment or plan to go into uncharted territory, it's a good idea to save your game. This also applies to designing new weapons or exploring new areas of research. Again, if you feel really brave, I recommend saving before you do something you may regret later.

/ 12. 2 Resources Aren't Just for Breakfast Anymore / _____

You can have the best plan but without the resources to carry it out, that's all it will be: A plan. You need (better read require) resources to keep your "war machine" going. You need money to buy those new toys or to modify the toys you already have. You need oil to move your fleet. You need iron for the material so you can build ships. In addition, you will also need resources if you want to trade technologies, equipment, and/or industries with other allied countries.

/ 12. 3 Getting From There to Here /

Transports are the lifeline from far away territories to your home territory. It's all well and good to have a load of resources being produced weekly. Those resources, though, are worthless unless you can get them to your home port and utilize them. The opposite is also true. If you want to cripple the enemy, cut off their lifeline to their remote resources. The Americans proved this in World War 2 by basically isolating Japan from the resources of conquered territory.

/ 12. 4 The Technological Edge /

It's all well and good to have the biggest ships or the sleekest planes if the other side has the same thing. Of course, they want to win so technology becomes a major factor. With technological advances, you can use radar to control your ship's gunfire, design new engines for your ships, create jet aircraft, improve anti-submarine methods, etc. The possibilities are endless. Of course, it takes money and time to develop these technologies so it is a good idea for one to decide which way they want to go on the technological path. Chapter 16 explains in much more detail the technologies and any prerequisite technologies that may be required.

/ 12. 5 My Gun is Bigger Than Your Gun /

In the early part of the century, a countries power was based on dreadnoughts and battleships. This translated to the size of guns they carried. Of course, the thinking shifted with the advent of carriers. Still, with the right mix of carriers and other warships, you can create a formidable fleet. Those big guns can do quite a number on the airfields while carrier aircraft can soften up or finish the job. Again, it is a matter of balance since the Japanese had ships that possessed the largest guns during the war but those ships never saw any real action.

/ 12. 6 Haze Gray and Under Way /

Fleet balance can make the difference between success and failure. Go into a territory without any air cover and be prepared to take a pounding from the airfields. Go in without any ships that have anti-submarine capabilities and you will quickly find that even the most powerful fleet can fall prey to submarines.

In addition to fleet balance, make sure you deploy your fleets in locations that makes them readily accessible. Sometimes you will want to mount offensive

or defensive operations at a moments notice. If your fleet is scattered all over the place, you may lose a valuable opportunity to inflict some serious damage on the enemy.

/ 12. 7 Beans, Bullets, and Bandages /

A stable supply line is a must in order to not only keep the fleet going, but also your bases. You should make sure each of your bases is well equipped with fuel, materials, troops, and planes in order to fend off any attacks the enemy might make. Each base has a certain time limit as to when it can be supplied again. The time to find this information out is not when a base is under attack and the next supply run won't happen for another 30 days. By that time, you may lose the base. In addition, keep track of other incidents at your bases that may cause problems in the future. One big incident may be that enemy special forces units are operating to undo what you are trying to keep up. Again, it is better to be proactive then reactive.

NOTE: You can only load planes and rockets from the home base. The only things you can do at other bases are emergency repairs and refuel.

/ 12. 8 Run Silent, Run Deep /

Submarines, in my opinion, can be one of your greatest offensive and defensive tools. They can be used for recon work, taking on enemy fleets, and sinking transports. When you look at the exchange, submarines can be built cheaply both in terms of money and material. Sinking major enemy warships such as carriers and battleships can be well worth the exchange of losing a few submarines. In addition to warships, you can isolate enemy territories by sinking their transports and preventing them from delivering their goods to the home base.

Of course, if you find yourself on the receiving end of things, you will have to act quickly to prevent enemy submarines from taking the upper hand. This means you will probably have to form "hunter-killer" groups of CL's and DD's to take out those pesky enemy subs. This is especially true if they are busy sinking your transports.

/ 12. 9 Pick your Battles /

You do not have to fight everything that comes along. Keep in mind that you can only have 16 fleets at one time in the game. This means you will have to plan a battle strategy that maximizes the use of your resources without making you so weak that the enemy can take advantage of you. In addition, build your fleets for the threats they may encounter. If you are going to tangle with heavy enemy warships, you may want to build a fleet that is biased toward heavy warships. This is not to say that you can't use other fleets to weaken the enemy, however, you don't want to lose a lot of ships needlessly since it does take money, time, and other resources to rebuild your fleet. Your goal is to cripple the enemy to such a degree as to prevent them from being able to wage war.

/ 12.10 Divide and Conquer /

When faced with a superior fleet, sometimes the best strategy is to either break them up into more manageable pieces or to isolate them. Granted, you will take a beating for the first couple of battles, but if you have the enemy fleet divided, you can still do more damage over the long run. This is especially true if you isolate the enemy fleet and surround them to prevent them from being reinforced or their ability to retreat to friendly waters. Make sure, though, you have the strength to conduct such an operation and don't let yourself become the hunted instead of the hunter.

To add to this, if you isolate enemy territories, you also get the added benefit of denying them the ability to gain a lot of that territory's resources. Of course, you could also be put into that position. If you see unclaimed resources, look around on the map to see where your isolated territory is.

/ 12.11 Run Away, Run Away /

When you face a superior foe or your fleet is too damaged to sustain an offensive/defensive posture, your next best bet is to run away. There is no shame in saving your "skin" until you have more of an advantage. The only time you cannot run away, usually, is when the territory you are defending is totally surrounded by the enemy. You don't get penalized for running away.

/ 12.12 Keeping Up With the Jones' /

This kind of goes hand-in-hand with Chapter 12.4. You may find yourself at the receiving end of a technologically superior opponent. Your only choices are to keep them subdued enough to let your own technology catch up or take them totally out of the game as quickly as possible. In addition, allies can prove to be very useful in helping your technology along. Take this into account when you are busy calculating resources since giving an ally some of these resources will pay handsome dividends later on.

/ 12.13 Know What Your Goals Are /

Strategy meetings occur at different times. You can either make a proposal or have the other conferees make one. The bottom line is that you need to do your best to achieve the goals that have been set. This doesn't mean, though, that you need to get reckless. Plus, time is on your side to ensure that you are victorious.

/ 12.14 Know the Big Picture /

Too many times, one will get tunnel vision and only concentrate on one little aspect of the battlefield. This can result in significant problems since you may be winning one particular battle while the enemy is busy overrunning you on all other parts of the battlefield. This means you need to be aware of everything that is going on at all times. Spies are one of the best methods to get continuous data from an enemy territory. Also, be aware of targets of opportunity. These kinds of targets may present themselves briefly and give you a very small window of opportunity to take advantage of them. Again, don't

only look at where you are positioned at, but also look at where everybody else is at. If you have allies, try to use them to further your own goals.

/ 12.15 Damage and Repair /

After you have fought a battle (whether you won or lost) you need to take stock of what damage you have taken. On the Tactical Screen, you will see damage represented a couple of ways. During the tactical battle, the ship icon will flash. During the after-action report, different colors will indicate the degree of damage a ship has sustained. If you have any ships that are damaged, they you will need to take them into a Base to get repaired. The base level is indicative of how long it will take to repair a ship. So a Level eight Base will repair a ship much quicker then a Level two Base.

/ 12.16 Airpower /

Along with seapower, airpower plays a crucial role in this game. Since the carrier became the "queen of the seas", countries have pushed hard to make air-superior carrier aircraft. It also has been proven that ships without air cover will not last long in a hostile environment that does have airpower. This means that you must ensure that your fleet has an "umbrella" of air cover when you enter hostile waters. This way you can deal with enemy threats not only from the sea, but also from their bases. Airpower is very versatile in that you can attack both land and sea targets. In addition, airpower can be used to "siphon" off enemy airpower further creating a dominant position for yourself.

/ 12.17 Special Forces /

Special forces play a vital role in PTO. With special forces, you can spy, cause insurrections, or sabotage enemy bases to name a few things. Sometimes the worst mistake anyone can make is to blindly attack an enemy base without first finding out what it has. Special forces serve as a valuable tool to do that and much more. Why waste troops needlessly when you can cripple the enemies ability to fight by destroying fuel supplies, armaments, and even planes. In addition, you can get the base's friendliness down to such a point as to cause the "natives" to launch guerilla strikes, which can further reduce a base's effectiveness thus making it easier for you to "walk" in.

/ 12.18 No good plan survives contact with the enemy /

This is the rule you should have in mind when making your plans to seize objectives and tangle with enemy units. If you go too much by the plan instead of improvising for when unexpected situations arise, you will have a good chance at losing the battle or that specific goal. Always expect the unexpected and have ready another plan in case your first fails.

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| 13. SCENARIO STRATEGIES |=====

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As mentioned in the introduction, you get the chance to fight in eight selected

naval battles from World War Two. Your goal is to fulfill the objective to win that particular battle. These battles represent some of the key battles that were turning points in World War Two.

Also, territories are what the countries had during a given period of time. For example, the Japanese had much of the Pacific Basin from 1942-1944 and that is reflected on the map and also territories owned.

The first scenario, Negotiations Breakdown, plays out like a campaign. Therefore, use the General Strategies to play this one. The other scenarios give you a much more limited set of objectives such as sinking a number of specific ships or occupying specific bases. If you want to play the game in a campaign mode, I suggest playing the first scenario.

For all scenarios, use the General Strategies in Chapter 12 plus the specific strategies in this chapter to assist you in achieving total victory. Once you have either succeeded or failed to fulfill the objectives, you will be given the choice of continuing onward with the game in scenario one.

The Scenarios will be set up like this:

/ Scenario Name /

Japanese Objective : What is the overall objective to win the scenario?
United States Objective: As above.

Japanese Fleets : What ships fleets are currently operating and what ships are in each fleet. In addition, it also lists what ships are in reserve (if any).

United States Fleets: As above

Japanese Commanders : How many commanders you get when you start this scenario.

United States Commanders: As above

Brief overview of scenario

+-----+
| Japanese Strategies |
+-----+

+-----+
| United States Strategies |
+-----+

+-----+
| What Really Happened |
+-----+

+-----+
| Game Started in Month and Year of Scenario |
+-----+

If you continue playing the game, the following is what you will start with:

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|

| Starting Resources and Technology |
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This lists your resources and technology before you have applied any money to upgrading them.

LEGEND FOR ALL CHARTS UNDER THIS HEADING: IT = INTELLIGENCE; AR = ARTILLERY; ST = STEEL; EN = ENGINES; AV = AVIATION; EL = ELECTRONICS; INDUST = INDUSTRY; MAT = MATERIAL; FIG = FIGHTERS; BOM = BOMBERS; SCO = SCOUTS; BN = SOLDIERS; TR = TRANSPORTS; FR = FREIGHTERS; MO = MORALE;

/=====\
| Bases Each Country Currently Possesses |
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Number in parenthesis after the list indicates the total number of bases.

/=====\
| Ships Currently Possessed by Each Country |
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List of ships available at the beginning of the scenario. Numbers in parenthesis indicates the number of each type of ship.

/ 13.1 Scenario 1: Negotiations Breakdown: November 1, 1941 / _____

Japan's Objective : 1. Occupy all 45 seaside bases or
2. Sink all enemy ships

America's Objective: 1. Occupy all 45 seaside bases or
2. Sink all enemy ships

Japan's Fleets : Varies according to mission

America's Fleets: Varies according to mission

Japanese Commanders : 20
United States Commanders: 20

Negotiations have broken down and now the United States and Japan are on a collision course for war.

+-----+
| 13.1.1 Japanese Strategies |-----
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- Although you have the advantage in ships and troops, your industrial base and oil reserves are seriously lacking.
- Your first order of business is to attack south and gain the oil producing bases. In addition, gaining the iron producing bases will give you what you need to produce materials.
- After you secure the southern areas, draw out the American fleet(s). Although they will have ships constantly coming out of the shipyards, if you can keep knocking these ships back, you should have a good shot of subduing the Allied fleets.

- Keep in mind that you have most of your ships now and there are very few in new construction. This means you will have to use your ships wisely.

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| 13.1.2 American Strategies |-----
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- You start at a disadvantageous position in regard to ships and troops. Fortunately, you have the oil and iron resources for the fleet that will be arriving.
- Make defending bases with oil and iron resources your number one priority. Since you will be lacking in ships, produce a lot of planes to ship to these bases for defense. In addition, send a lot of troops.
- You will need to hold out on a "shoestring" until mid to late 1943. This is when new construction will be constantly supplying the fleet with ships. In the meantime, be conservative with your fleets and only attack when you have an advantage.
- Don't be concerned with losing a few bases at the beginning since you will soon be able to regain them when your industrial resources are able to produce a fleet with a significant striking power.

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| 13.1.3 What Really Happened |-----
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As the United States and its allies dug their heels in, the Japanese felt they had no other recourse but go to war. Plans were made for not only the attack on Pearl Harbor, but also the entire southern region which was rich with oil and other raw materials. The Japanese felt that if they could make a huge enough impact, they could basically force a negotiated peace out of the United States.

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| 13.1.4 Starting Game on November 1, 1941 |-----
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This is what you will be starting with after negotiations break down.

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| 13.1.4.1 Starting Resources and Technology |-----
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
JAPAN	20	65	60	60	45	28	4,000	500	180	450,000
AMERICA	30	60	60	40	20	42	10,000	1,000	300	1,500,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	610	400	102	88	20	60	50

+-----+-----+-----+-----+-----+-----+-----+-----+
| AMERICA | 180 | 180 | 50 | 60 | 25 | 75 | 40 |
+-----+-----+-----+-----+-----+-----+-----+-----+

/=====\
| 13.1.4.2 Bases Each Country Currently Possesses |-----
\=====/

JAPAN : DARIEN, ETOROFU, IWO JIMA, KURE, MARCUS, MARSHALL, NAHA, NANKING,
PALAU, PEKING, SAIGON, SAIPAN, SASEBO, SEOUL, SHANGHAI, TAINAN,
TAIPEI, TINIAN, TOKYO, TRUK, WUHAN, YAP, YOKOSUKA (23)

AMERICA: ATTU, BANDJARMASIN, BANGKOK, BIAK, CHUNGKING, DAVAO, GUADALCANAL,
GUAM, HANOI, HAWAII, HONG KONG, JAKARTA, KUALA LUMPUR, LAE, LOS
ANGELAS, MAKASSAR, MANILA, MIDWAY, NOMONHAN, PORT MORESBY, RABAU,
SAN FRANCISCO, SANDAKAN, SINGAPORE, SORONG, VLADIVOSTOK, WAKE (27)

/=====\
| 13.1.4.3 Ships Currently Possessed by Each Country |-----
\=====/

ALLIES: These lists also include Australian, British, and Dutch warships.

CV: ENTERPRISE, LEXINGTON, SARATOGA (3)

BB: ARIZONA, CALIFORNIA, MARYLAND, NEVADA, OKLAHOMA, PR OF WALES,
PENNSYLVANIA, REPULSE, TENNESSEE, W. VIRGINIA (10)

C: ASTORIA, AUSTRALIA, CANBERRA, CHESTER, CHICAGO, DE RUYTER, HELENA, NEW
ORLEANS, NORTHAMPTON, PENSACOLA, PORTLAND, SALT LK CITY, SN FRANCISCO
(13)

DD: CASSIN, ELECTRA, EXPRESS, HAMMANN, MONSSEN, TENEDOS, VAMPIRE (7)

JAPAN:

CV: AKAGI, HIRYU, KAGA, SHOKAKU, SORYU, ZUIKAKU (6)

CVL: HOSHO, RYUJO, ZUIHO (3)

BB: FUSO, HARUNA, HIEI, HYUGA, ISE, KIRISHIMA, KONGO, MUTSU, NAGATO,
YAMASHIRO (10)

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, FURUTAKA, HAGURO, KAKO,
KINU, KINUGASA, KITAKAMI, KUMANO, MAYA, MIKUMA, MOGAMI, MYOKO, NACHI,
NAGARA, NATORI, OOI, SENDAI, SUZUYA, TAKAO, TAMA, TATSUTA, TENRYU, TONE,
YUBARI, YURA (30)

DD: AKATSUKI, AKIGUMO, ARASHI, ARASHIO, ASAGUMO, ASASHIO, AYANAMI, FUBUKI,
HAMAKAZE, HARUSAME, HATSUSHIMO, HATSUYUKI, HAYATE, INAZUMA, ISOKAZE,
KAGERO, KASUMI, MICHISHIO, NAGATSUKI, NOWAKI, SAMIDARE, SHIGURE,
SHIKINAMI, SHIRANUI, SHIRAYUKI, TANIKAZE, URAKAZE, WAKABA, YAMAGUMO,
YUDACHI, YUKIKAZE, YUNAGI (32)

SUB: I-1, I-8, I-9, I-19, I-21, I-23, I-25, I-168 (8)

/ 13.2 Scenario 2: Attack on Pearl Harbor: December 7, 1941 /

Japan's Objective : 1. Sink at least 4 CV or
2. Sink at least 3 BB and 4 C or
3. Occupy Hawaii

America's Objective: 1. Sink at least 4 CV or
2. Sink at least 3 BB and 4 C or

Japan's Fleets : 1st - 6 CV's, 2 BB's, 2 C's, 5th - 1 SS
5 DD's

2nd - 3 DD's 6th - 1 SS

3rd - 3 SS's 7th - 1 SS

4th - 2 SS's 8th - 2 BB's, 2 C's, 1 DD

America's Fleets: 1st - 8 BB's, 3 C's, 1 DD 5th - 2 BB's, 4 DD's

2nd - 1 CV, 4 C's, 1 DD 6th - 1 C

3rd - 1 CV, 3 C's, 1 DD 7th - 2 C's

4th - 1 CV Hawaii

Japanese Commanders : 20

United States Commanders: 20

The Japanese launch a "surprise" raid on Pearl Harbor.

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| 13.2.1 Japanese Strategies |-----
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- You should be able to launch two to three airstrikes during the game. Either at Hawaii or at any American carriers that may be milling about.
- Break radio silence to order your other fleets to quit attacking and use them instead for recon work to locate the American carrier fleets. Get your destroyers away also.
- Keep in mind that although the American carriers don't pose much of a threat, the land based air units on Hawaii do so keep vigilant.
- If you weaken the American fleet enough, you can go in to finish them off at night. Just be sure to get away before daybreak. Also, keep your first fleet moving around.

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| 13.2.2 American Strategies |-----
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- The Japanese have superior number of carriers and aircraft. Don't try to fight it out with them with your carriers or you will lose. Instead, retreat your carriers "behind" Hawaii and use your scouts.
- Hopefully, once you have identified the Japanese main fleet, the airpower on Hawaii will go in for an attack. You should, though, be able to handle the other Japanese fleets that are around Hawaii.
- If night presents an opportunity, sortie your number one fleet and attempt

to do a surface battle with the Japanese number one fleet. If planned right, you can inflict some heavy damage on them.

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 | 13.2.3 What Really Happened |-----
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Getting the idea from the British raid on Taranto, Admiral Yamamoto felt that he could do the same against Pearl Harbor. His plan was to catch the entire American fleet "flatfooted". Unfortunately, when the raid commenced, the American carriers were not in port. In addition, he failed to destroy the fuel farms and repair facilities. These errors would dearly cost him later on. The Japanese only lost five midget submarines and a handful of planes in this action while the American had 5 BB's sunk and another 5 BB's, 2 CL's, and 3 DD's damaged. All but two of the BB's were raised from the mud at Pearl Harbor, refurbished, and returned to the fleet. So in essence, the raid only served to drag American into the war without doing any real damage.

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 | 13.2.4 Starting Game on December 7, 1941 |-----
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This is what you will be starting with after the Japanese attack on Pearl Harbor.

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 | 13.2.4.1 Starting Resources and Technology |-----
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
JAPAN	20	65	60	60	45	28	4,000	500	180	450,000
AMERICA	30	60	60	40	20	42	10,000	1,000	300	1,500,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR
JAPAN	610	400	102	88	20	60
AMERICA	180	180	50	60	25	75

/=====\
 | 13.2.4.2 Bases Each Country Currently Possesses |-----
 \=====/

JAPAN : DARIEN, ETOROFU, IWO JIMA, KURE, MARCUS, MARSHALL, NAHA, NANKING, PALAU, PEKING, SAIGON, SAIPAN, SASEBO, SEOUL, SHANGHAI, TAINAN, TAIPEI, TINIAN, TOKYO, TRUK, WUHAN, YAP, YOKOSUKA (23)

AMERICA: ATTU, BANDJARMASIN, BANGKOK, BIAK, CHUNGKING, DAVAO, GUADALCANAL, GUAM, HANOI, HAWAII, HONG KONG, JAKARTA, KUALA LUMPUR, LAE, LOS ANGELAS, MAKASSAR, MANILA, MIDWAY, NOMONHAN, PORT MORESBY, RABAU, SAN FRANCISCO, SANDAKAN, SINGAPORE, SORONG, VLADIVOSTOK, WAKE (27)

/=====\
| 13.2.4.3 Ships Currently Possessed by Each Country |-----
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ALLIES: These lists also include Australian, British, and Dutch warships.

CV: ENTERPRISE, LEXINGTON, SARATOGA (3)

BB: ARIZONA, CALIFORNIA, MARYLAND, NEVADA, OKLAHOMA, PR OF WALES,
PENNSYLVANIA, REPULSE, TENNESSEE, W. VIRGINIA (10)

C: ASTORIA, AUSTRALIA, CANBERRA, CHESTER, CHICAGO, DE RUYTER, HELENA, NEW
ORLEANS, NORTHAMPTON, PENSACOLA, PORTLAND, SALT LK CITY, SN FRANCISCO
(13)

DD: CASSIN, ELECTRA, EXPRESS, HAMMANN, MONSSEN, TENEDOS, VAMPIRE (7)

JAPAN:

CV: AKAGI, HIRYU, KAGA, SHOKAKU, SORYU, ZUIKAKU (6)

CVL: HOSHO, RYUJO, ZUIHO (3)

BB: FUSO, HARUNA, HIEI, HYUGA, ISE, KIRISHIMA, KONGO, MUTSU, NAGATO,
YAMASHIRO (10)

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, FURUTAKA, HAGURO, KAKO,
KINU, KINUGASA, KITAKAMI, KUMANO, MAYA, MIKUMA, MOGAMI, MYOKO, NACHI,
NAGARA, NATORI, OOI, SENDAI, SUZUYA, TAKAO, TAMA, TATSUTA, TENRYU, TONE,
YUBARI, YURA (30)

DD: AKATSUKI, AKIGUMO, ARASHI, ARASHIO, ASAGUMO, ASASHIO, AYANAMI, FUBUKI,
HAMAKAZE, HARUSAME, HATSUSHIMO, HATSUYUKI, HAYATE, INAZUMA, ISOKAZE,
KAGERO, KASUMI, MICHISHIO, NAGATSUKI, NOWAKI, SAMIDARE, SHIGURE,
SHIKINAMI, SHIRANUI, SHIRAYUKI, TANIKAZE, URAKAZE, WAKABA, YAMAGUMO,
YUGOMO, YUDACHI, YUKIKAZE, YUNAGI (33)

SUB: I-1, I-8, I-9, I-19, I-21, I-23, I-25, I-168 (8)

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/ 13.3 Scenario 3: Battle of the Coral Sea: May 5, 1942 /

Japan's Objective : 1. Sink at least 2 CV

America's Objective: 1. Sink at least 2 CV

Japan's Fleets : 1st - 2 CV's, 2 C'S, 1 DD 4th - 2 C's
 2nd - 1 CVL, 4 C's 5th - 2 SS's
 3rd - 1 C 6th - 2 SS's

America's Fleets: 1st - 2 CV's, 1 DD 4th - 1 DD
 2nd - 5 C's 5th - 3 SS's
 3rd - 2 C's, 1 DD 6th - 2 SS's

Japanese Commanders : 20
United States Commanders: 18

The first major sea battle between the United States and Japan. It was also the first all carrier battle.

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| 13.3.1 Japanese Strategies |-----
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- Use your submarines and scout planes to locate the American fleet. Once located, launch airstrikes at their carriers.
- Be aware that the Americans will also be launching scouts and using submarines for recon. This means you will need to keep moving around to avoid getting caught "flatfooted".
- During daylight hours, make sure you keep an escort over your fleet to prevent any nasty surprises. You can also lure the American fleet up around Truk, Rabaul, and Lae and use the planes there to also conduct airstrikes.
- If you weaken the American fleet enough, you can go in to finish them off at night. Just be sure to get away before daybreak.

+-----+
| 13.3.2 American Strategies |-----
+-----+

- Use your submarines and scout planes to locate the American fleet. Once located, launch airstrikes at their carriers.
- Be aware that the Japanese will also be launching scouts and using submarines for recon. This means you will need to keep moving around to avoid getting caught "flatfooted".
- During daylight hours, make sure you keep an escort over your fleet to prevent any nasty surprises. You can also lure the Japanese fleet around Guadalcanal use the planes there to also conduct airstrikes.
- If you manage to weaken the Japanese fleet, you may be able to go in for a night action to take out any stragglers.

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| 13.3.3 What Really Happened |-----
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The first naval battle fought "beyond the horizon". This meant that neither fleet saw each other during the entire engagement and only carrier power was used to do battle. The Japanese planned to invade Port Moresby to isolate Australia. The Americans responded by sending in two carrier task forces. In the ensuing battle, 1 CL was sunk and 1 CV was badly damaged. In addition, they lost a significant amount of planes which effectively "crippled" another carrier. This would have far reaching effects for the battle of Midway later on. The Americans lost a CV and a DD while sustaining damage to a CV and DD. Although it wasn't a tactical victory, the Americans did win a strategic victory by turning the Japanese away from their plans.

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| 13.3.4 Starting Game on May 5, 1942 |-----
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This is what you will be starting with after the Coral Sea battle.

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| 13.3.4.1 Starting Resources and Technology |-----  
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
JAPAN	20	82	60	56	45	35	5,160	500	137	337,500
AMERICA	36	74	65	47	26	70	10,800	1,000	387	1,850,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	878	580	107	110	26	77	98
AMERICA	185	193	49	82	32	97	32

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/=====\  
| 13.3.4.2 Bases Each Country Currently Possesses |-----  
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JAPAN : ATTU, BANDJARMASIN, BANGKOK, BIAK, DARIEN, DAVAO, ETOROFU, GUAM, HANOI, HONG KONG, IWO JIMA, JAKARTA, KUALA LUMPUR, KURE, LAE, MAKASSAR, MANILA, MARCUS, MARSHALL, NAHA, NANKING, PALAU, PEKING, RABAU, SAIGON, SAIPAN, SANDAKAN, SASEBO, SEOUL, SHANGHAI, SINGAPORE, SORONG, TAINAN, TAIPEI, TINIAN, TOKYO, TRUK, WAKE, WUHAN, YAP, YOKOSUKA (41)

AMERICA: CHUNGKING, GUADALCANAL, HAWAII, LOS ANGELAS, MIDWAY, NOMONHAN, PORT MORESBY, SAN FRANCISCO, VLADIVOSTOK (9)

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/=====\  
| 13.3.4.3 Ships Currently Possessed by Each Country |-----  
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ALLIES: These lists also include Australian, British, and Dutch warships.

CV: ENTERPRISE, FORMIDABLE, HORNET, INDOMITABLE, LEXINGTON, SARATOGA, VICTORIOUS, WASP, YORKTOWN (9)

BB: CALIFORNIA, COLORADO, IDAHO, INDIANA, MARYLAND, MASSACHUSETTS, MISSISSIPPI, N.CAROLINA, NEVADA, NEW MEXICO, NEW YORK, PENNSYLVANIA, R. SOVEREIGN, RAMILLES, RESOLUTION, REVENGE, TENNESSEE, TEXAS, W. VIRGINA, WARSPITE, WASHINGTON (21)

C: ASTORIA, ATLANTA, AUSTRALIA, BOISE, CANBERRA, CHESTER, CHICAGO, HELENA, INDIANAPOLIS, JUNEAU, LOUISVILLE, MINNEAPOLIS, NEW ORLEANS, NORTHAMPTON, PENSACOLA, PORTLAND, QUINCY, SALT LK CITY, SAN JUAN, SN FRANCISCO, VINCENNES, WICHITA (22)

DD: BENHAM, CASSIN, DUNCAN, EXPRESS, FARENHOLT, GWIN, HAMMANN, HUGHES,

LAFFEY, LEYTE, MONSSEN, PATTERSON, PORTER, PRESTON, RALPH TALBOT, SIMS,
SMITH, WALKE (18)

SUB: ARGONAUT, CACHALOT, DOLPHIN, GATO, GROUPE, GROWLER, NAUTILIS, PICKEREL,
S-20, S-28, SALMON, TARPON, TRITON, WAHOO (14)

JAPAN:

CV: AKAGI, HIRYU, JUNYO, KAGA, SHOKAKU, SORYU, ZUIKAKU (7)

CVL: HOSHO, RYUJO, SHOHO, ZUIHO (4)

DBB: YAMATO (1)

BB: FUSO, HARUNA, HIEI, HYUGA, ISE, KIRISHIMA, KONGO, MUTSU, NAGATO,
YAMASHIRO (10)

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, FURUTAKA, HAGURO, KAKO,
KINU, KINUGASA, KITAKAMI, KUMANO, MAYA, MIKUMA, MOGAMI, MYOKO, NACHI,
NAGARA, NATORI, OOI, SENDAI, SUZUYA, TAKAO, TAMA, TATSUTA, TENRYU, TONE,
YUBARI, YURA (30)

DD: AKATSUKI, AKIGUMO, ARASHI, ARASHIO, ASAGUMO, ASASHIO, AYANAMI, FUBUKI,
HAMAKAZE, HARUSAME, HATSUSHIMO, HATSUYUKI, INAZUMA, ISOKAZE, KAGERO,
KASUMI, MAKIGUMO, MICHISHIO, NAGATSUKI, NOWAKI, SAMIDARE, SHIGURE,
SHIKINAMI, SHIRANUI, SHIRAYUKI, TANIKAZE, URAKAZE, WAKABA, YAMAGUMO,
YUDACHI, YUGUMO, YUKIKAZE, YUNAGI (33)

SUB: I-1, I-8, I-9, I-19, I-21, I-23, I-25, I-168 (8)

/ 13.4 Scenario 4: Battle at Midway: June 4, 1942 /

Japan's Objective: 1. Sink at least 2 CV or
2. Sink at least 1 CV and 4 C or
3. Occupy Midway

America's Objective: 1. Sink at least 3 CV or
2. Sink at least 1 CV and 3 BB or
3. Sink at least 3 BB and 4 C

Japan's Fleets: 1st - 4 CV's, 2 BB's, 3 C's, 6th - 1 CV, 1 CVL, 5 C's,
7 DD's 4 DD's

2nd - 1 CVL, 1 DBB, 6 BB's, 7th - 3 SS's
3 C's, 5 DD's

3rd - 1 CVL, 2 BB's, 5 C's, 8th - 2 DD's
4 DD's

4th - 4 C's, 2 DD's 9th - 1 DD

5th - 4 DD's

America's Fleets: 1st - 2 CV's, 6 C's, 1 DD

2nd - 1 CV, 2 C's, 2 DD's

3rd - 5 SS's

Japanese Commanders : 20
United States Commanders: 18

The Japanese are attempting to take Midway from the Americans and force a decisive battle.

+-----+
| 13.4.1 Japanese Strategies |-----
+-----+

- Scout out for the American carriers. Use your air superiority to go after the carriers. You should be able to launch a couple of strikes.
- Make sure you use escort to keep from being "jumped" by American carrier planes in addition to anything Midway sends after your fleet.
- Also knock out the Midway airfield to keep from being harassed by those planes.
- Continue until you destroy the American fleets or all of their CV's.

+-----+
| 13.4.2 American Strategies |-----
+-----+

- This will be a slugging match between you and the enemy fleet. If you play it smart, you can inflict maximum damage to them while minimizing the damage to yourself.
- Scout out the area and launch your strikes as soon as they make contact. You can be sure that the enemy is doing the same thing. Concentrate your airstrikes on one enemy fleet at a time to ensure you severely cripple it.
- Use air strength on Midway to help even the odds a bit. Although the Japanese may have more carriers, you can equalize this by using planes from the "unsinkable" carrier at Midway.
- When night falls, detach your cruisers and destroyers to pick up any carriers that may straggle. Be careful, though, of the Japanese battleships.
- Continue the above pattern until you destroy the enemy fleets or if you clean out their carriers.

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| 13.4.3 What Really Happened |-----
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The major turning point in the Pacific. American codebreakers learned of the Japanese plan to invade Midway and to draw the U.S. fleet out for a final showdown. To accomplish this, Japan sent out a force of 4 CV's, 2 BB's, 2 CA's, 1 CL, and 12 DD's. To counter this, the Americans sent out 3 CV's, 7 CA's, 1 CL, and 17 DD's. The Americans got the jump on the Japanese and sank 3 CV's at practically the same time. The fourth CV was sunk later that day. The Americans lost a CV and DD to a Japanese submarine. In addition, the Japanese also lost a CA and the other one was severely damaged.

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| 13.4.4 Starting Game on June 4, 1942 |-----
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This is what you will be starting with after the Battle of Midway.

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| 13.4.4.1 Starting Resources and Technology |-----  
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
JAPAN	20	88	60	61	45	50	5,240	500	128	315,000
AMERICA	25	80	66	49	28	70	12,533	1,000	426	2,040,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	890	624	127	120	26	79	99
AMERICA	225	229	61	82	30	90	30

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/=====\  
| 13.4.4.2 Territories Each Country Currently Possesses |-----  
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JAPAN : BANDJARMASIN, BANGKOK, BIAK, CHUNGKING, DARIEN, DAVAO, ETOROFU, GUAM, HANOI, HONG KONG, IWO JIMA, JAKARTA, KUALA LUMPUR, KURE, LAE, MAKASSAR, MANILA, MARCUS, MARSHALL, NAHA, NANKING, PALAU, PEKING, RABAU, SAIGON, SAIPAN, SANDAKAN, SASEBO, SEOUL, SHANGHAI, SINGAPORE, SORONG, TAINAN, TAIPEI, TINIAN, TOKYO, TRUK, WAKE, WUHAN, YAP, YOKOSUKA (41)

AMERICA: ATTU, CHUNGKING, GUADALCANAL, HAWAII, LOS ANGELAS, MIDWAY, NOMONHAN, PORT MORESBY, SAN FRANCISCO, VLADIVOSTOK (9)

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/=====\  
| 13.4.4.3 Ships Currently Possessed by Each Country |-----  
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CV: ENTERPRISE, FORMIDABLE, HORNET, INDOMITABLE, SARATOGA, VICTORIOUS, WASP, YORKTOWN (8)

BB: CALIFORNIA, COLORADO, IDAHO, INDIANA, MARYLAND, MASSACHUSETTS, MISSISSIPPI, N.CAROLINA, NEVADA, NEW MEXICO, NEW YORK, PENNSYLVANIA, R. SOVEREIGN, RAMILLES, RESOLUTION, REVENGE, SOUTH DAKOTA, TENNESSEE, TEXAS, W. VIRGINA, WARSPITE, WASHINGTON (22)

C: ASTORIA, ATLANTA, AUSTRALIA, BOISE, CANBERRA, CHESTER, CHICAGO, HELENA, INDIANAPOLIS, JUNEAU, LOUISVILLE, MINNEAPOLIS, NEW ORLEANS, NORTHAMPTON, PENSACOLA, PORTLAND, QUINCY, SALT LK CITY, SAN JUAN, SN FRANCISCO, VINCENNES, WICHITA (22)

DD: BARTON, BENHAM, CASSIN, DUNCAN, EXPRESS, FARENHOLT, GWIN, HAMMANN, HUGHES, LAFFEY, LEYTE, MONSSEN, PATTERSON, PORTER, PRESTON, RALPH TALBOT, SMITH, WALKE (18)

SUB: ARGONAUT, CACHALOT, DOLPHIN, GATO, GROUPER, GROWLER, NAUTILIS, PICKEREL,
S-20, S-28, SALMON, TARPON, TRITON, WAHOO (14)

JAPAN:

CV: AKAGI, HIRYU, JUNYO, KAGA, SHOKAKU, SORYU, ZUIKAKU (7)

CVL: HOSHO, RYUJO, ZUIHO (3)

DBB: YAMATO (1)

BB: FUSO, HARUNA, HIEI, HYUGA, ISE, KIRISHIMA, KONGO, MUTSU, NAGATO,
YAMASHIRO (10)

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, FURUTAKA, HAGURO, KAKO,
KINU, KINUGASA, KITAKAMI, KUMANO, MAYA, MIKUMA, MOGAMI, MYOKO, NACHI,
NAGARA, NATORI, OOI, SENDAI, SUZUYA, TAKAO, TAMA, TATSUTA, TENRYU, TONE,
YUBARI, YUGUMO, YURA (31)

DD: AKATSUKI, AKIGUMO, AKIZUKI, ARASHI, ARASHIO, ASAGUMO, ASASHIO, AYANAMI,
FUBUKI, HAMAKAZE, HARUSAME, HATSUSHIMO, HATSUYUKI, INAZUMA, ISOKAZE,
KAGERO, KASUMI, MAKIGUMO, MICHISHIO, NAGATSUKI, NOWAKI, SAMIDARE,
SHIGURE, SHIKINAMI, SHIRANUI, SHIRAYUKI, TANIKAZE, URAKAZE, WAKABA,
YAMAGUMO, YUDACHI, YUKIKAZE, YUNAGI (33)

SUB: I-1, I-8, I-9, I-19, I-21, I-25, I-168 (7)

/ 13.5 Scenario 5: Battle of the Solomon Islands: August 8, 1942 /

Japan's Objective: 1. Sink at least 3 CV or
2. Sink at least 1 CV and 6 C or
3. Occupy Guadalcanal

America's Objective: 1. Sink at least 3 CV or
2. Sink at least 1 CV or CVL and 6 C

Japan's Fleets: 1st - 2 CV's, 1 CVL, 2 BB's, 5th - 2 SS's

2nd - 1 BB, 6 C's, 3 DD's 6th - 1 SS

3rd - 7 C's, 1 DD 7th - 5 DD's

4th - 2 SS's 8th - 2 CV's, 2 C's, 3 DD's

America's Fleets: 1st - 1 CV, 1 BB, 2 C's, 4th - 5 C's, 2 DD's
3 DD's

2nd - 1 CV, 3 C's 5th - 3 SS's

3rd - 1 CV, 3 C's, 1 DD

Japanese Commanders : 19

United States Commanders: 18

The Japanese are attempting to prevent the Americans from reinforcing
Guadalcanal.

+-----+
| 13.5.1 Japanese Strategies |-----
+-----+

- Send out scouts as soon as day breaks. This may give you the advantage of discovering the American fleet first.
- Keep in mind that although you have the advantage of a CV and CVL, Guadalcanal equalizes the odds. You may want to assign the CV and CVL the duty of subduing Guadalcanal's air arm.
- Once night falls and if you are close enough, you may be able to engage in a night battle to further weaken the American fleet.

+-----+
| 13.5.2 American Strategies |-----
+-----+

- Send out scouts and keep your fleet back away from Guadalcanal. You can take advantage of the base by using it to launch strikes against the Japanese fleet.
- If you can work your way around, you may be able to catch the Japanese between your carriers and Guadalcanal. If this occurs, you can do a lot of damage.
- With the advent of gunnery radar, you should be able to engage in a night action with the Japanese fleet and actually give a good accounting of yourself.

+-----+
| 13.5.3 What Really Happened |-----
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The second major battle that raged in the Solomons. The Americans learned of an attempt by the Japanese navy to reinforce Guadalcanal. The Americans assembled 2 CV's, 1 BB, 3 CA's, 1 CL, and 11 DD's to counter this threat. In addition, Henderson airfield on Guadalcanal would also be offering support. The Japanese sent in 2 CV's, 2 CVL's, 2 BB's, 13 CA's, 28 DD's, and 13 SS's to mount the reinforcement operation. In the struggle, the Americans managed to sink a CVL and DD while seriously damaging a CVL, DD, and 2 SS's while sustaining serious damage to one CV. It was a victory for the Americans because they turned the reinforcement away and prevented them from landing.

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| 13.5.4 Starting Game on August 8, 1942 |-----
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This is what you will be starting with after this battle.

/=====\
| 13.5.4.1 Starting Resources and Technology |-----
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
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JAPAN	20	89	60	61	45	50	5,160	500	108	230,000
AMERICA	28	87	84	67	45	70	14,700	1,000	459	2,175,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	671	464	102	122	26	77	69
AMERICA	459	466	116	85	37	110	63

/=====\
| 13.5.4.2 Territories Each Country Currently Possesses |-----
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JAPAN : BANDJARMASIN, BANGKOK, BIAK, CHUNGKING, DARIEN, DAVAO, ETOROFU, GUAM, HANOI, HONG KONG, IWO JIMA, JAKARTA, KUALA LUMPUR, KURE, LAE, MAKASSAR, MANILA, MARCUS, MARSHALL, NAHA, NANKING, PALAU, PEKING, RABAU, SAIGON, SAIPAN, SANDAKAN, SASEBO, SEOUL, SHANGHAI, SINGAPORE, SORONG, TAINAN, TAIPEI, TINIAN, TOKYO, TRUK, WAKE, WUHAN, YAP, YOKOSUKA (41)

AMERICA: ATTU, CHUNGKING, GUADALCANAL, HAWAII, LOS ANGELAS, MIDWAY, NOMONHAN, PORT MORESBY, SAN FRANCISCO, VLADIVOSTOK (9)

/=====\
| 13.5.4.3 Ships Currently Possessed by Each Country |-----
\=====/

CV: ENTERPRISE, FORMIDABLE, HORNET, INDOMITABLE, SARATOGA, VICTORIOUS, WASP (7)

BB: CALIFORNIA, COLORADO, IDAHO, INDIANA, MARYLAND, MASSACHUSETTS, MISSISSIPPI, N.CAROLINA, NEVADA, NEW MEXICO, NEW YORK, PENNSYLVANIA, R. SOVEREIGN, RAMILLES, RESOLUTION, REVENGE, SOUTH DAKOTA, TENNESSEE, TEXAS, W. VIRGINIA, WARSPITE, WASHINGTON (22)

C: ASTORIA, ATLANTA, AUSTRALIA, BOISE, CANBERRA, CHESTER, CHICAGO, HELENA, INDIANAPOLIS, JUNEAU, LOUISVILLE, MINNEAPOLIS, NEW ORLEANS, NORTHAMPTON, PENSACOLA, PORTLAND, QUINCY, SALT LK CITY, SAN JUAN, SN FRANCISCO, VINCENNES, WICHITA (22)

DD: BARTON, BENHAM, CASSIN, DUNCAN, EXPRESS, FARENHOLT, FLETCHER, GWIN, HUGHES, LAFFEY, LEYTE, MONSSEN, PATTERSON, PORTER, PRESTON, RALPH TALBOT, SAUFLEY, SMITH, WALKE (20)

SUB: ARGONAUT, CACHALOT, DOLPHIN, GATO, GROUPER, GROWLER, NAUTILIS, PICKEREL, S-20, S-28, SALMON, TARPON, TRITON, WAHOO (14)

JAPAN:

CV: HIYO, JUNYO, SHOKAKU, ZUIKAKU (4)

CVL: HOSHO, RYUJO, ZUIHO (3)

DBB: MUSASHI, YAMATO (2)

BB: FUSO, HARUNA, HIEI, HYUGA, ISE, KIRISHIMA, KONGO, MUTSU, NAGATO,
YAMASHIRO (10)

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, FURUTAKA, HAGURO, KAKO,
KINU, KINUGASA, KITAKAMI, KUMANO, MAYA, MOGAMI, MYOKO, NACHI, NAGARA,
NATORI, OOI, SENDAI, SUZUYA, TAKAO, TAMA, TATSUTA, TENRYU, TONE, YUBARI,
YURA (29)

DD: AKATSUKI, AKIGUMO, AKIZUKI, ARASHI, ARASHIO, ASAGUMO, ASASHIO, AYANAMI,
FUBUKI, HAMAKAZE, HARUSAME, HATSUSHIMO, HATSUYUKI, INAZUMA, ISOKAZE,
KAGERO, KASUMI, MAKIGUMO, MICHISHIO, NAGATSUKI, NOWAKI, SAMIDARE,
SHIGURE, SHIKINAMI, SHIRANUI, SHIRAYUKI, TAKANAMI, TANIKAZE, TERUZUKI,
URAKAZE, WAKABA, YAMAGUMO, YUDACHI, YUGUMO, YUKIKAZE, YUNAGI (36)

SUB: I-1, I-8, I-9, I-19, I-21, I-25, I-168 (7)

/ 13.6 Scenario 6: Battle in the South Pacific: October 26, 1942 /

Japan's Objective: 1. Sink at least 2 CV or
2. Sink at least 1 BB and 4 C or
3. Occupy Guadalcanal

America's Objective: 1. Sink at least 2 CV or
2. Sink at least 1 CV or CVL and 2 BB

Japan's Fleets: 1st - 2 CV's, 1 CVL, 1 C, 4th - 3 DD's
4 DD's

2nd - 1 CV, 2 BB's, 4 C's, 5th - 1 SS
1 DD

3rd - 2 BB's, 4 C's, 6 DD's 6th - 4 SS's

America's Fleets: 1st - 1 CV, 1 BB, 2 C's, 4th - 3 SS's
4 DD's

2nd - 1 CV, 3 C's, 1 DD

3rd - 3 SS's

Japanese Commanders : 18

United States Commanders: 18

The Americans are attempting to prevent the Japanese from reinforcing
Guadalcanal.

+-----+
| 13.6.1 Japanese Strategies |-----+
+-----+

- Although you have more carriers than the Americans, the odds are evened by the fact that the Americans can use Guadalcanal as a base. This means you will have to split your efforts.
- Be wary not only of the American carriers prowling around, but also of the submarines. These can cause some serious damage to your units if you're not careful.

- Send out scouts to find the American carriers. Once you find them, use one fleet to launch airstrikes on the carriers while you use the single carrier fleet to hit Guadalcanal.
- If you believe a night action necessary, detach your warships from your carriers. Be aware that America possesses gunnery radar so you probably won't be able to "sneak" up on them.

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| 13.6.2 American Strategies |-----
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- Search radar may already pick up the Japanese fleet. If this is the case, get the airstrike set up so that it can be launched at first light. You may be able to catch the Japanese fleet "flatfooted".
- Remember that you have Guadalcanal to also use as a base. If the Japanese fleet has already been identified, then additional airstrikes may also be launched from Guadalcanal.
- During nighttime, use technology to your advantage. Since your warships have gunnery radar, this will enable you to get in the first shots plus add to their accuracy. This will go a long way to causing serious damage to the Japanese fleet.
- Use your submarine fleets to get around the Japanese fleets. Try to "pin" them in between your submarine fleets.

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| 13.6.3 What Really Happened |-----
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Also known as the battle of Santa Cruz.

The Japanese made another attempt to reinforce their troops on Guadalcanal. To accomplish this, they sent in 3 CV's, 1 CVL, 4 BB's, 8 CA's, 3 CL's, 33 DD's, and 12 SS's. To counter this threat, the Americans beefed up the aircraft at Henderson Airfield. In addition, they sent in 2 CV's, 1 BB, 3 CA's, 3 CL's, and 14 DD's. The battle raged for two days. When the smoke cleared, the Americans lost 1 CV and 1 DD while heavy damage was incurred on 1 CV, 1 BB, and 3 DD's. The Japanese lost 1 CL and 2 DD's with heavy damage to 1 CV, 1 CVL, 1 CA, and 1 DD. Although the Americans came up on the short end of this exchange, the Japanese lost more than just ships: They also lost many trained pilots. Instead of exploiting their success, the Japanese withdrew without reinforcing Guadalcanal.

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| 13.6.4 Starting Game on October 26, 1942 |-----
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This is what you will be starting with after this battle.

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| 13.6.4.1 Starting Resources and Technology |-----  

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| COUNTRY | IT | AR | ST | EN | AV | EL | INDUST | BUDGET | MAT | OIL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

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JAPAN	20	88	60	61	45	50	5,120	500	106	225,000
AMERICA	41	88	85	69	52	70	14,800	1,000	450	2,190,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	647	452	101	120	26	77	65
AMERICA	540	548	127	86	37	111	70

/=====\
 | 13.6.4.2 Territories Each Country Currently Possesses |-----
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JAPAN : BANDJARMASIN, BANGKOK, BIAK, CHUNGKING, DARIEN, DAVAO, ETOROFU, GUAM, HANOI, HONG KONG, IWO JIMA, JAKARTA, KUALA LUMPUR, KURE, LAE, MAKASSAR, MANILA, MARCUS, MARSHALL, NAHA, NANKING, PALAU, PEKING, RABAU, SAIGON, SAIPAN, SANDAKAN, SASEBO, SEOUL, SHANGHAI, SINGAPORE, SORONG, TAINAN, TAIPEI, TINIAN, TOKYO, TRUK, WAKE, WUHAN, YAP, YOKOSUKA (41)

AMERICA: ATTU, CHUNGKING, GUADALCANAL, HAWAII, LOS ANGELAS, MIDWAY, NOMONHAN, PORT MORESBY, SAN FRANCISCO, VLADIVOSTOK (9)

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 | 13.6.4.3 Ships Currently Possessed by Each Country |-----
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CV: ENTERPRISE, FORMIDABLE, HORNET, INDOMITABLE, SARATOGA, VICTORIOUS (6)

BB: ALABAMA, CALIFORNIA, COLORADO, IDAHO, INDIANA, MARYLAND, MASSACHUSETTS, MISSISSIPPI, N. CAROLINA, NEVADA, NEW MEXICO, NEW YORK, PENNSYLVANIA, R. SOVEREIGN, RAMILLES, RESOLUTION, REVENGE, SOUTH DAKOTA, TENNESSEE, TEXAS, W. VIRGINA, WARSPITE, WASHINGTON (23)

C: ATLANTA, AUSTRALIA, BOISE, CHESTER, CHICAGO, HELENA, INDIANAPOLIS, JUNEAU, LOUISVILLE, MINNEAPOLIS, NEW ORLEANS, NORTHAMPTON, PENSACOLA, PORTLAND, SALT LK CITY, SAN JUAN, SN FRANCISCO, WICHITA (18)

DD: BARTON, BENHAM, CASSIN, DE HAVEN, EXPRESS, FARENHOLT, FLETCHER, GWIN, HUGHES, LAFFEY, LEYTE, MONSSEN, PATTERSON, PORTER, PRESTON, PRINGLE, RALPH TALBOT, SAUFLEY, SMITH (19)

SUB: ARGONAUT, CACHALOT, DOLPHIN, GATO, GROUPER, GROWLER, NAUTILIS, PICKEREL, S-20, S-28, SALMON, TARPON, TRITON, WAHOO (14)

JAPAN:

CV: HIYO, JUNYO, SHOKAKU, ZUIKAKU (4)

CVL: HOSHO, ZUIHO (2)

DBB: MUSASHI, YAMATO (2)

BB: FUSO, HARUNA, HIEI, HYUGA, ISE, KIRISHIMA, KONGO, MUTSU, NAGATO,

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, HAGURO, KINU, KINUGASA, KITAKAMI, KUMANO, MAYA, MOGAMI, MYOKO, NACHI, NAGARA, NATORI, OOI, SENDAI, SUZUYA, TAKAO, TAMA, TATSUTA, TENRYU, TONE, YUBARI (26)

DD: AKATSUKI, AKIGUMO, AKIZUKI, ARASHI, ARASHIO, ASAGUMO, ASASHIO, AYANAMI, HAMAKAZE, HARUSAME, HATSUSHIMO, HATSUYUKI, INAZUMA, ISOKAZE, KAGERO, KASUMI, MAKIGUMO, MICHISHIO, NAGATSUKI, NOWAKI, SAMIDARE, SHIGURE, SHIKINAMI, SHIRANUI, SHIRAYUKI, TANIKAZE, URAKAZE, WAKABA, YAMAGUMO, YUDACHI, YUKIKAZE, YUNAGI (32)

SUB: I-1, I-8, I-9, I-19, I-21, I-25, I-168 (7)

/ 13.7 Scenario 7: Assault on the Marianas: June 19, 1944 / _____

Japan's Objective: 1. Sink at least 6 CV or CVL or
2. Sink at least 3 BB and 6 C

America's Objective: 1. Sink at least 6 CV or CVL or
2. Sink at least 3 BB and 6 C or
3. Occupy two of these bases: Saipan, Tinian, or Guam

Japan's Fleets: 1st - 3 CV's, 3 C's, 6 DD's 4th - 1 C, 2 DD's

2nd - 3 CVL's, 2 DBB's, 5th - 3 DD's
2 BB's, 8 C's

3rd - 2 CV's, 1 CVL, 1 BB, 6th - 1 SS
1 C, 5 DD's

America's Fleets: 1st - 2 CV's, 2 CVL's, 1 C, 6th - 7 BB's, 3 C's
5 DD's

2nd - 2 CV's, 2 CVL's, 3 C's, 7th - 3 CVL's, 4 DD's
3 DD's

3rd - 2 CV's, 2 CVL's, 4 DD's 8th - 4 SS's

4th - 1 CV, 2 CVL's, 3 DD's 9th - 4 SS's

5th - 7 BB's, 4 C's

Japanese Commanders : 16

United States Commanders: 17

The Americans are attempting to invade Saipan and the Japanese are going for a showdown.

+-----+
| 13.7.1 Japanese Strategies |-----+
+-----+

- The Americans possess a significant amount of firepower. Even with your islands, you will have to find a way to take them piecemeal or they can launch concentrated strikes and wipe out your fleet.
- Use your submarines to track where the Americans are. Don't use them for

offensive operations since you need intel more desperately. Once you locate the American carriers, concentrate on one fleet at a time.

- You may get assistance from the islands but only if the Americans are within range.
- Keep moving around and strike quickly, then move again. With these hit and run tactics, you may stand a good chance of putting a serious "ding" in the American fleet.

+-----+
| 13.7.2 American Strategies |-----
+-----+

- Use your two submarine fleets as both an early warning system plus also to harass the enemy fleet. Set them up so that the Japanese fleet must pass through both fleets of subs.
- Get away from the islands and launch scouts to find the Japanese fleet. Go after the carrier fleets (once they are identified) and worry about the surface fleets later.
- You may have to dedicate a carrier fleet to the islands to assist in the "softening" up process. Once the islands defenses have been pretty much nullified, you can send in the invasion force.
- Move up your heavy warships under the cover of night and start blasting the islands. Go after airfields first, then find other targets of opportunity.
- Concentrate all your fleet airpower and go after the Japanese ships. You should be able to do significant amounts of damage. Use your submarine fleets to pick off stragglers.

+-----+
| 13.7.3 What Really Happened |-----
+-----+

This was the Japanese plan "A-Go" where they would have a decisive battle with the American fleet. To achieve this, the Japanese planned to use planes not only from their carriers, but also from Guam to "shuttle" back-and-forth to attack the American fleet. Unfortunately, due to poorly trained pilots, the Japanese lost a significant amount of planes that day and it was referred to as the "Marianas Turkey Shoot". The Japanese assembled 3 CV's, 6 CVL's, 5 BB's, 11 CA's, 2 CL's, and 28 DD's for the operation. The Americans, due to the fact they were invading the Marianas, had assembled 7 CV's, 8 CVL's, 7 BB's, 8 CA's, 9 CL's, and 67 DD's. After the smoke cleared, the Japanese had lost 2 CV's, 1 CVL while sustaining heavy damage to 1 CV, 2 CVL's, 1 BB, and 1 CA. The Americans only sustained minor damage to 2 CV's and 2 BB's.

+-----+
| 13.7.4 Starting Game on June 19, 1944 |-----
+-----+

This is what you will be starting with after this battle.

/=====\
| 13.7.4.1 Starting Resources and Technology |-----
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
JAPAN	14	44	18	50	45	70	2,880	500	52	139,500
AMERICA	44	89	88	75	80	77	16,200	1,000	504	2,480,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	424	328	64	80	14	43	31
AMERICA	630	651	133	133	40	122	78

/=====\
 | 13.7.4.2 Territories Each Country Currently Possesses |-----
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JAPAN : BANDJARMASIN, BANGKOK, BIAK, CHUNGKING, DARIEN, DAVAO, ETOROFU, GUAM, HANOI, HONG KONG, IWO JIMA, JAKARTA, KURE, MAKASSAR, MANILA, MARCUS, NAHA, NANKING, PALAU, PEKING, SAIGON, SAIPAN, SANDAKAN, SASEBO, SEOUL, SHANGHAI, SINGAPORE, SORONG, TAINAN, TAIPEI, TINIAN, TOKYO, TRUK, WAKE, WUHAN, YAP, YOKOSUKA (36)

AMERICA: ATTU, CHUNGKING, GUADALCANAL, KUALA LUMPUR, HAWAII, LAE, LOS ANGELAS, MARSHALL, MIDWAY, NOMONHAN, PORT MORESBY, RABAU, SAN FRANCISCO, VLADIVOSTOK (14)

/=====\
 | 13.7.4.3 Ships Currently Possessed by Each Country |-----
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CV: BUNKER HILL, CV10, CV12, CV16, CV18, ENTERPRISE, ESSEX, FORMIDABLE, FRANKLIN, INDOMITABLE, INTREPID, SARATOGA, TICONDEROGA, VICTORIOUS (14)

CVL: BATAAN, BELLEAU WOOD, BISMARCK SEA, CABOT, COWPENS, GAMBIA BAY, INDEPENDENCE, LANGLEY II, MONTEREY, OMANI BAY, PRINCETON, SAN JACINTO, ST. LOUIS (13)

BB: ALABAMA, CALIFORNIA, COLORADO, IDAHO, INDIANA, IOWA, MARYLAND, MASSACHUSETTS, MISSISSIPPI, MISSOURI, N.CAROLINA, NEVADA, NEW MEXICO, NEW JERSEY, NEW YORK, PENNSYLVANIA, R. SOVEREIGN, RAMILLES, RESOLUTION, REVENGE, SOUTH DAKOTA, TENNESSEE, TEXAS, W. VIRGINA, WARSPITE, WASHINGTON, WISCONSIN (27)

C: AUSTRALIA, BALTIMORE, BOISE, BOSTON, CHESTER, INDIANAPOLIS, LOUISVILLE, MINNEAPOLIS, NEW ORLEANS, PENSACOLA, PORTLAND, QUINCY II, SALT LK CITY, SAN JUAN, SN FRANCISCO, WICHITA (16)

DD: ABUNAU REED, BARTON, BUSH, CASSIN, EXPRESS, FARENHOLT, FLETCHER, HUGHES, HULL, HYMAN, JOHNSTON, KARAGAN, LEWIS, LEYTE, MORISON, PATTERSON, PRINGLE, RALPH TALBOT, S.B. ROBERTS, SMITH (20)

SUB: CACHALOT, DOLPHIN, GATO, GROUPER, GROWLER, NAUTILIS, S-20, S-28, SALMON, TARPON (10)

JAPAN:

CV: HIYO, JUNYO, SHOKAKU, TAIHO, ZUIKAKU (5)

CVL: CHITOSE, CHIYODA, HOSHO, RYUHO, SHINYO, ZUIHO (6)

DBB: MUSASHI, YAMATO (2)

BB: FUSO, HARUNA, HYUGA, ISE, KONGO, NAGATO, YAMASHIRO (7)

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, HAGURO, KINU, KITAKAMI, KUMANO, MAYA, MOGAMI, MYOKO, NACHI, NAGARA, NATORI, NOSHIRO, OOI, OYODO, SUZUYA, TAKAO, TAMA, TONE, YAHAGI (24)

DD: AKISHIMO, AKIZUKI, ASAGUMO, ASASHIMO, FUJINAMI, FUYUZUKI, HAMAKAZE, HATSUSHIMO, HATSUZUKI, HAYASHIMO, ISOKAZE, KASUMI, MICHISHIO, NOWAKI, SAMIDARE, SHIGURE, SHIKINAMI, SHIRANUI, SUZUTSUKI, URAKAZE, WAKABA, YAMAGUMO, YUKIKAZE, YUNAGI (24)

SUB: I-8 (1)

/ 13.8 Scenario 8: Battle for the Philippines: October 23, 1944 /

Japan's Objective: 1. Sink at least 8 CV or CVL

America's Objective: 1. Sink at least 4 CV or CVL or
2. Sink at least 5 BB and 8 C

Japan's Fleets: 1st - 2 DBB's, 1 BB, 7 C's, 4th - 2 BB's, 1 C, 4 DD's
4 DD's

2nd - 2 BB's, 5 C's, 5 DD's 5th - 3 C's, 2 DD's

3rd - 1 CV, 3 CVL's, 2 BB's, 6th - 2 SS's
2 C's, 2 DD's

America's Fleets: 1st - 1 CV, 2 CVL's, 2 BB's, 6th - 6 BB's, 4 C's, 1 DD
4 DD's

2nd - 2 CV's, 2 CVL's, 7th - 4 SS's
2 BB's, 4 DD's

3rd - 2 CV's, 2 CVL's, 8th - 3 SS's

4th - 2 CV's, 1 CVL, 4 C's, 9th - 3 SS's

5th - 2 CVL's, 4 DD's

Japanese Commanders : 14

United States Commanders: 17

The Americans are attempting to invade Leyte and the Japanese are going for a showdown.

+-----+

| 13.8.1 Japanese Strategies |-----

+-----+

- Although you have several fleets, only one of them possesses any semblance of air power. Be wary of American air power since Manila won't be able to supply a whole lot of planes for action.
- Use scouts from your carriers and heavy surface ships to find the American fleet. If you discover their carriers, launch strikes to even the odds a little.
- If you must engage in surface battle, nighttime is the best time to do it due to the overwhelming odds of air support the Americans have.
- Keep in mind that your fleet is spread out. If you work the parts right, you may be able to divide up the American forces and destroy them piecemeal.

+-----+
 | 13.8.2 American Strategies |-----
 +-----+

- You have enough carrier fleets to do some major damage. Use scouts to locate the Japanese carriers since these pose the greatest threat.
- Once they are identified, launch strikes against them with two carrier fleets. Use the other fleets as both back up and for short notice if you discover the rest of the Japanese fleet.
- Use the fleet with your BB's to engage in a surface action against the Japanese fleet. You should be able to "plaster" them with a huge volume of firepower.
- Your submarines can serve as both lookouts and also to strike at a Japanese fleet if the opportunity presents itself. The best place to hunt is where there are narrow passages or "choke points" the Japanese must pass through.

+-----+
 | 13.8.3 What Really Happened |-----
 +-----+

The return of the Americans to the Philippines. The Japanese realized that with the loss of the Philippines, they would be cut off from their resources to the south. They implemented "Sho-1" which would be the big showdown with the Americans. They split their fleet up into three parts. The first part would come in from the south and it would consist of 2 BB's, 3 CA's, 1 CL, and 11 DD's. The second part which would go through the center consisted of 5 BB's, 10 CA's, 2 CL's, and 16 DD's. The third part was a diversionary force and it was up to the north. It was composed of 1 CV, 3 CVL's, 2 BB's, 3 CL's, and 5 DD's. The Americans came at Leyte with everything they had. This consisted of 8 CV's, 8 CVL's, 18 CVE's, 12 BB's, 10 CA's, 13 CL's, 117 DD's, and 29 SS's. The battle raged from October 25 to the 28th. When the smoke cleared, the Japanese fleet was practically annihilated. The first part lost 2 BB's, 1 CA, and 3 DD's while 1 CA, 1 CL, and 1 DD sustained heavy damage. The second part lost 1 BB, 5 CA's, and 1 DD while 2 BB's, 3 CA's, and 3 DD's took heavy damage. The third part of the Japanese force lost 1 CV, 3 CVL's, 1 CL, and 2 DD's.

The Americans, in contrast, lost 1 CVL, 2 CVE's, 3 DD's, and 3 SS's while heavy damage was done to 5 CVE's, 2 CL's, and 5 DD's. For all practical intents and purposes, the Japanese were never able to launch another naval operation as this would go down in history as one of the biggest naval battles in the world.

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| 13.8.4 Starting Game on October 23, 1944 |-----
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This is what you will be starting with after this battle.

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| 13.8.4.1 Starting Resources and Technology |-----
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
JAPAN	12	42	17	50	45	70	2,820	500	66	125,000
AMERICA	49	91	89	77	80	80	15,600	1,000	554	2,590,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	224	168	52	62	13	38	21
AMERICA	722	682	154	141	49	152	81

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/=====\
| 13.8.4.2 Territories Each Country Currently Possesses |-----
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JAPAN : BANDJARMASIN, BANGKOK, BIAK, CHUNGKING, DARIEN, DAVAO, ETOROFU, HANOI, HONG KONG, IWO JIMA, JAKARTA, KUALA LUMPUR, KURE, LAE, MAKASSAR, MANILA, MARCUS, MARSHALL, NAHA, NANKING, PEKING, RABAU, SAIGON, SANDAKAN, SASEBO, SEOUL, SHANGHAI, SINGAPORE, SORONG, TAINAN, TAIPEI, TOKYO, TRUK, WAKE, WUHAN, YOKOSUKA (36)

AMERICA: ATTU, CHUNGKING, GUADALCANAL, GUAM, HAWAII, LOS ANGELES, MIDWAY, NOMONHAN, PALAU, PORT MORESBY, SAIPAN, SAN FRANCISCO, TINIAN, VLADIVOSTOK, YAP (14)

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/=====\
| 13.8.4.3 Ships Currently Possessed by Each Country |-----
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CV: BUNKER HILL, CV10, CV12, CV16, CV18, ENTERPRISE, ESSEX, FORMIDABLE, FRANKLIN, INDOMITABLE, INTREPID, SARATOGA, SHANGRI-LA, TICONDEROGA, VICTORIOUS (15)

CVL: BATAAN, BELLEAU WOOD, BISMARCK SEA, CABOT, COWPENS, GAMBIA BAY, INDEPENDENCE, LANGLEY II, MONTEREY, OMANI BAY, PRINCETON, SAN JACINTO, ST. LOUIS (13)

BB: ALABAMA, CALIFORNIA, COLORADO, IDAHO, INDIANA, IOWA, MARYLAND, MASSACHUSETTS, MISSISSIPPI, MISSOURI, N. CAROLINA, NEVADA, NEW MEXICO, NEW JERSEY, NEW YORK, PENNSYLVANIA, R. SOVEREIGN, RAMILLES, RESOLUTION, REVENGE, SOUTH DAKOTA, TENNESSEE, TEXAS, W. VIRGINIA, WARSPITE, WASHINGTON, WISCONSIN (27)

C: AUSTRALIA, BALTIMORE, BOISE, BOSTON, CHESTER, INDIANAPOLIS, LOUISVILLE,
MINNEAPOLIS, NEW ORLEANS, PENSACOLA, PITTSBURGH, PORTLAND, QUINCY II,
SALT LK CITY, SAN JUAN, SN FRANCISCO, WICHITA (17)

DD: ABUNAU REED, BARTON, BUSH, CASSIN, COLAHAN, EXPRESS, FARENHOLT, FLETCHER,
HUGHES, HULL, HYMAN, JOHNSTON, KARAGAN, LEWIS, LEYTE, LITTLE, MORISON,
PATTERSON, PRINGLE, RALPH TALBOT, S.B. ROBERTS, SMITH (22)

SUB: CACHALOT, DOLPHIN, GATO, GROUPER, GROWLER, NAUTILIS, S-20, S-28, SALMON,
TARPON (10)

JAPAN:

CV: AMAGI, JUNYO, KATSURAGI, UNRYU, ZUIKAKU (5)

CVL: CHITOSE, CHIYODA, HOSHO, RYUHO, SHINYO, ZUIHO (6)

DBB: MUSASHI, YAMATO (2)

BB: FUSO, HARUNA, HYUGA, ISE, KONGO, NAGATO, YAMASHIRO (7)

C: ABUKUMA, AOBA, ASHIGARA, ATAGO, CHIKUMA, CHOKAI, HAGURO, KINU, KITAKAMI,
KUMANO, MAYA, MOGAMI, MYOKO, NACHI, NOSHIRO, OYODO, SUZUYA, TAKAO, TAMA,
TONE, YAHAGI (21)

DD: AKISHIMO, AKIZUKI, ASAGUMO, ASASHIMO, FUJINAMI, FUYUZUKI, HAMAKAZE,
HATSUSHIMO, HATSUZUKI, HAYASHIMO, ISOKAZE, KASUMI, MICHISHIO, NOWAKI,
SHIGURE, SHIRANUI, SUZUTSUKI, URAKAZE, WAKABA, YAMAGUMO, YUKIKAZE (21)

SUB: I-8, I-58 (2)

/ 13.9 Scenario 9: Okinawa Offensive: April 7, 1945 /

Japan's Objective: 1. Sink at least 4 CV or
2. Sink at least 6 BB

America's Objective: 1. Sink the Yamato DBB

Japan's Fleets: 1st - 1 DBB, 1 C, 8 DD's

2nd - 1 SS

America's Fleets: 1st - 2 CV's, 2 CVL's, 1 BB, 5th - 2 CV's, 3 DD's
4 DD's

2nd - 1 CV, 2 CVL's, 1 BB, 6th - 4 BB's, 2 DD's
4 DD's

3rd - 2 CV's, 2 CVL's, 1 BB, 7th - 4 SS's
4 DD's

4th - 9 BB's, 7 C's 8th - 3 SS's

Japanese Commanders : 14

United States Commanders: 16

The Americans are attempting to invade Okinawa and the Japanese are making a

last effort to defend the island.

+-----+
| 13.9.1 Japanese Strategies |-----
+-----+

- This will truly be a suicidal mission. With only a DBB to take on the American fleet, you will need a lot of luck and a whole lot of bravery.
- Use your submarine to scout out the American fleet. Do not use it to attack since it is more valuable as a recon tool.
- Once the American fleet is identified, wait for night then attempt to do a night action against the carriers. Be aware that they are guarded by BB's and C's so it won't be easy.
- You may be able to do this a couple more times and hopefully you can snatch victory from the jaws of defeat.

+-----+
| 13.9.2 American Strategies |-----
+-----+

- This one is pretty simple as compared to the other battles. Assemble your carrier force so that you can use one to subdue Naha while the others go after Kure.
- You should be able to catch the Yamato either in Kure or just leaving. If not, use scouts and subs to find the Japanese fleet.
- Be aware that the Japanese still have Naha so expect air attacks from the island. You should be able to sink the Yamato and its escorts without too much difficulty.

+-----+
| 13.9.3 What Really Happened |-----
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By this time, the Japanese fleet was basically wiped out. To attack the American forces, the Japanese resorted to using kamikaze attacks. They also devised a plan to launch the fleet one more time. They were going to use the Yamato as a permanent gun position on Okinawa. To achieve this, they loaded only enough fuel for a one-way trip. They then sent the Yamato out with a CL and 8 DD's. The Americans discovered the Yamato a couple of hundred miles away from Okinawa and commenced to launching airstrikes against the Japanese ships. The Japanese ships never stood a chance and only a couple of DD's survived their last sortie.

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| 13.9.4 Starting Game on April 7, 1945 |-----
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This is what you will be starting with after this battle.

/=====\
| 13.9.4.1 Starting Resources and Technology |-----
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COUNTRY	IT	AR	ST	EN	AV	EL	INDUST	BUDGET	MAT	OIL
JAPAN	10	19	13	15	43	70	841	500	5	45,500
AMERICA	51	91	90	78	80	80	17,400	1,000	697	2,710,000

COUNTRY	FIG	BOM	SCO	BN	TR	FR	MO
JAPAN	185	108	32	47	4	13	17
AMERICA	852	754	187	157	63	198	86

/=====\
| 13.9.4.2 Territories Each Country Currently Possesses |-----
\=====/

JAPAN : BANDJARMASIN, BANGKOK, CHUNGKING, DARIEN, ETOROFU, HANOI, HONG KONG, JAKARTA, KUALA LUMPUR, KURE, LAE, MAKASSAR, MARCUS, MARSHALL, NAHA, NANKING, PEKING, RABAU, SAIGON, SANDAKAN, SASEBO, SEOUL, SHANGHAI, SINGAPORE, TAINAN, TAIPEI, TOKYO, TRUK, WAKE, WUHAN, YOKOSUKA (31)

AMERICA: ATTU, BIAK, CHUNGKING, DAVAO, GUADALCANAL, GUAM, HAWAII, IWO JIMA, LOS ANGELES, MANILA, MIDWAY, NOMONHAN, PALAU, PORT MORESBY, SAIPAN, SAN FRANCISCO, SORONG, TINIAN, VLADIVOSTOK, YAP (19)

/=====\
| 13.9.4.3 Ships Currently Possessed by Each Country |-----
\=====/

CV: BUNKER HILL, CV10, CV12, CV16, CV18, ENTERPRISE, ESSEX, FORMIDABLE, FRANKLIN, INDOMITABLE, INTREPID, SARATOGA, SHANGRI-LA, TICONDEROGA, VICTORIOUS (15)

CVL: BATAAN, BELLEAU WOOD, CABOT, COWPENS, INDEPENDENCE, LANGLEY II, MONTEREY, SAN JACINTO (8)

BB: ALABAMA, CALIFORNIA, COLORADO, IDAHO, INDIANA, IOWA, MARYLAND, MASSACHUSETTS, MISSISSIPPI, MISSOURI, N. CAROLINA, NEVADA, NEW MEXICO, NEW JERSEY, NEW YORK, PENNSYLVANIA, R. SOVEREIGN, RAMILLES, RESOLUTION, REVENGE, SOUTH DAKOTA, TENNESSEE, TEXAS, W. VIRGINIA, WARSPITE, WASHINGTON, WISCONSIN (27)

C: AUSTRALIA, BALTIMORE, BOISE, BOSTON, CHESTER, INDIANAPOLIS, LOUISVILLE, MINNEAPOLIS, NEW ORLEANS, PENSACOLA, PITTSBURGH, PORTLAND, QUINCY II, SALT LK CITY, SAN JUAN, SN FRANCISCO, WICHITA (17)

DD: BARTON, BUSH, CASSIN, DREXLER, EXPRESS, FARENHOLT, FLETCHER, HUGHES, HULL, HYMAN, KARAGAN, LEWIS, LITTLE, MORISON, PATTERSON, PRINGLE, RALPH TALBOT, SMITH (18)

SUB: CACHALOT, DOLPHIN, GATO, GROUPE, NAUTILIS, S-20, S-28, SALMON, TARPON (9)

JAPAN:

CV: AMAGI, JUNYO, KATSURAGI (3)

CVL: HOSHO, RYUHO (2)

DBB: YAMATO (1)

BB: HARUNA, HYUGA, ISE, NAGATO (4)

C: AOBA, ASHIGARA, HAGURO, KITAKAMI, MYOKO, OYODO, TONE, YAHAGI (8)

DD: ASASHIMO, FUYUZUKI, HAMAKAZE, HATSUSHIMO, ISOKAZE, KASUMI, SUZUTSUKI, YUKIKAZE (8)

SUB: I-58 (1)

***** UNIT VI *****

+=====+
| 14. SHIPS IN PTO |=====

The next charts will detail every ship that is in PTO. Although the charts are designed with Scenario one in mind, they will work equally well with the other scenarios as a reference as to when ships will be entering service.

Ships will be broken down according to what type of ship they are such as CV, BB, C, etc. For each entry, ship details will be given as the game initially sets them up or adds them (in other words, before you may modify or do a total repair on them).

The overall LEGEND for all charts in this Chapter is:

AS = ANTI-SHIP; AA = ANTI-AIR; FO = FORTITUDE; SP = SPEED; CA = HANGER CAPACITY; DATE = DATE SHIP BECOMES AVAILABLE*; CLASS = CLASS SPECIFIC SHIP BELONGS TO**

NOTE: If the ship's name has another name after it in parenthesis, then that other name is the actual name of the ship.

* "START" will be put into the DATE column if you initially start with that ship.

** CLASS information can be found in Chapter 15. In addition, if a ship doesn't exist or the game spelled it in such a way as to make the ship impossible to find, then a "???" will be in the space for CLASS.

/ 14.1 Allied Ships / _____

These are the ships the Allies have. You will have a total of 150 ships if none are sunk.

+-----+
| 14.1.1 CV's |-----

There are 19 CV's total.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
BUNKER HILL	8	8	12	33	75	JUN 1943	ESSEX
CV10	8	8	12	33	80	APR 1943	ESSEX (NEW YORKTOWN)
CV12	8	8	12	33	70	DEC 1943	ESSEX (NEW HORNET)
CV16	8	8	12	33	80	MAR 1943	ESSEX (NEW LEXINGTON)
CV18	8	8	12	33	75	DEC 1943	ESSEX (NEW WASP)
ENTERPRISE	8	8	12	30	80	START	YORKTOWN
ESSEX	8	8	12	33	75	JAN 1943	ESSEX
FORMIDABLE	8	8	12	32	70	MAY 1942	ILLUSTRIOUS
FRANKLIN	8	8	12	33	70	FEB 1944	ESSEX
HORNET	8	8	12	27	75	JAN 1942	YORKTOWN
INDOMITABLE	8	8	12	32	70	MAY 1942	INDOMITABLE
INTREPID	8	8	12	33	70	SEP 1943	ESSEX
LEXINGTON	8	8	12	30	80	START	LEXINGTON
SARATOGA	8	8	12	30	75	START	LEXINGTON
SHANGRI-LA	8	8	12	33	75	OCT 1944	ESSEX
TICONDEROGA	8	8	12	33	70	MAY 1944	ESSEX
VICTORIOUS	8	8	12	32	70	MAY 1942	ILLUSTRIOUS
WASP	8	8	11	31	80	MAR 1942	WASP
YORKTOWN	8	8	12	28	80	FEB 1942	YORKTOWN

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| 14.1.2 CVL's |-----
-----+

There are 14 CVL's total.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
BATAAN	5	7	10	30	50	DEC 1943	INDEPENDENCE
BELLEAU WOOD	5	7	10	30	40	APR 1943	INDEPENDENCE
BISMARCK SEA	5	7	6	25	40	JUN 1944	CASABLANCA

CABOT	5	7	10	30	40	AUG 1943	INDEPENDENCE
COWPENS	5	7	10	30	40	DEC 1943	INDEPENDENCE
GAMBIA BAY	5	7	6	25	50	JAN 1944	CASABLANCA (GAMBIER BAY)
HERMES	5	7	9	28	40	MAY 1942	HERMES
INDEPENDENCE	5	7	10	30	50	JAN 1943	INDEPENDENCE
LANGLEY II	5	7	10	30	45	SEP 1943	INDEPENDENCE
MONTEREY	5	7	10	30	40	JUL 1943	INDEPENDENCE
OMANI BAY	5	7	6	25	50	FEB 1944	CASABLANCA (OMMANEY BAY)
PRINCETON	5	7	10	30	50	MAR 1943	INDEPENDENCE
SAN JACINTO	5	7	10	30	40	JAN 1944	INDEPENDENCE
ST. LOUIS	5	7	6	25	45	NOV 1943	CASABLANCA (ST LO)

14.1.3 DBB's and BB's

There are 32 DBB's and BB's total.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
ALABAMA	38	22	36	29	3	SEP 1942	SOUTH DAKOTA
ALASKA	38	22	36	29	2	JUL 1944	ALASKA
ARIZONA	37	22	36	28	3	START	PENNSYLVANIA
CALIFORNIA	37	22	36	24	3	START	TENNESSEE
COLORADO	38	22	36	27	3	FEB 1942	COLORADO
IDAHO	38	22	36	29	3	JAN 1942	NEW MEXICO
INDIANA	38	22	36	27	3	MAY 1942	SOUTH DAKOTA
IOWA	38	34	36	29	3	MAR 1943	IOWA
MARYLAND	38	22	35	26	3	START	COLORADO
MASSACHUSETTS	38	22	36	28	3	MAY 1942	SOUTH DAKOTA
MISSISSIPPI	38	22	36	27	3	JAN 1942	NEW MEXICO
MISSOURI	38	22	36	29	3	JUL 1944	IOWA
N. CAROLINA	38	22	36	28	3	FEB 1942	N. CAROLINA
NEVADA	38	22	36	24	3	START	NEVADA

NEW JERSEY	38	22	36	29	3	JUN 1943	IOWA
NEW MEXICO	38	22	36	29	3	JAN 1942	NEW MEXICO
NEW YORK	38	22	36	29	3	MAR 1942	NEW YORK
OKLAHOMA	36	22	36	24	3	START	NEVADA
PENNSYLVANIA	38	22	36	24	3	START	PENNSYLVANIA
PR OF WALES	37	7	32	28	4	START	KING GEORGE V
R.SOVEREIGN	37	22	36	23	1	MAY 1942	REVENGE
RAMILLES	38	22	35	23	1	MAY 1942	REVENGE
REPULSE	23	22	18	32	3	START	RENOWN
RESOLUTION	38	22	36	27	1	MAY 1942	REVENGE
REVENGE	38	7	32	26	1	MAY 1942	REVENGE
SOUTH DAKOTA	38	22	36	29	3	JUN 1942	SOUTH DAKOTA
TENNESSEE	38	21	35	25	3	START	TENNESSEE
TEXAS	38	22	36	29	3	MAR 1942	NEW YORK
W.VIRGINIA	38	22	34	24	3	START	COLORADO
WARSPITE	38	22	36	27	4	MAY 1942	QUEEN ELIZABETH
WASHINGTON	37	22	36	28	3	FEB 1942	N.CAROLINA
WISCONSIN	38	22	36	29	3	MAY 1944	IOWA

+-----+
| 14.1.4 C's |-----
+-----+

There are 32 total C's.

NAME	AS	AA	FO	SP	CA	DATE	CLASS*
ASTORIA	15	22	18	35	3	START	NEW ORLEANS
ATLANTA	11	22	12	34	0	MAR 1942	ATLANTA
AUSTRALIA	16	22	18	35	0	START	KENT
BALTIMORE	16	22	18	35	4	APR 1943	BALTIMORE
BOISE	16	22	18	35	4	JUN 1943	BROOKLYN
BOSTON	16	22	18	35	4	JUN 1943	BALTIMORE

CANBERRA	16	22	18	35	3	START	KENT
CHESTER	16	22	18	35	3	START	NORTHAMPTON
CHICAGO	16	22	18	35	3	START	NORTHAMPTON
CORNWALL	16	22	18	35	0	MAY 1942	KENT
DE RUYTER	16	22	18	35	0	START	DE RUYTER
DORSETSHIRE	16	22	18	34	0	MAY 1942	NORFOLK
EXETER	16	22	18	34	0	MAY 1942	EXETER
HECTOR	16	22	18	34	0	MAY 1942	ARMED MERCHANT CRUISER
HELENA	16	22	18	35	0	START	BROOKLYN
HOUSTON	16	22	18	35	3	FEB 1942	NORTHAMPTON
INDIANAPOLIS	15	22	18	35	3	JAN 1942	PORTLAND
JUNEAU	11	12	22	35	0	FEB 1942	ATLANTA
LOUISVILLE	16	22	17	36	3	JAN 1942	NORTHAMPTON
MINNEAPOLIS	16	22	18	35	3	JAN 1942	NEW ORLEANS
NEW ORLEANS	16	22	18	34	3	START	NEW ORLEANS
NORTHAMPTON	16	22	18	33	3	START	NORTHAMPTON
PENSACOLA	16	21	18	35	3	START	PENSACOLA
PITTSBURGH	16	22	18	35	4	OCT 1944	BALTIMORE
PORTLAND	16	22	18	35	3	START	PORTLAND
QUINCY	15	22	18	35	3	FEB 1942	NEW ORLEANS
QUINCY II	16	22	18	35	4	DEC 1943	BALTIMORE
SALT LK CITY	16	22	18	34	2	START	PENSACOLA
SAN JUAN	11	12	22	33	0	FEB 1942	ATLANTA
SN FRANCISCO	15	22	18	34	3	START	NEW ORLEANS
VINCENNES	16	22	18	35	3	FEB 1942	NEW ORLEANS
WICHITA	5	7	12	35	4	APR 1942	WICHITA

* This class list also includes CL's. These are broken out in Chapter 15.

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| 14.1.5 DD's |-----
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There are 39 total DD's.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
ABUNAU REED	5	6	6	35	0	FEB 1943	FLETCHER (ABNER READ)
BARTON	5	6	6	33	0	JUN 1942	BENSON/GLEAVES
BENHAM	5	6	6	36	0	MAR 1942	BENHAM
BUSH	5	6	6	36	0	MAY 1943	FLETCHER
CASSIN	5	6	6	36	0	START	MAHAN
COLAHAN	5	6	6	34	0	JUL 1944	FLETCHER
DE HAVEN	5	6	6	35	0	OCT 1942	FLETCHER
DREXLER	5	6	6	36	0	NOV 1944	ALLEN M SUMNER
DUNCAN	5	6	6	35	0	MAY 1942	BENSON/GLEAVES
ELECTRA	5	6	6	35	0	START	E CLASS
EXPRESS	5	6	6	36	0	START	E CLASS
FARENHOLT	5	6	6	35	0	APR 1942	BENSON/GLEAVES
FLETCHER	5	6	6	35	0	JUL 1942	FLETCHER
GWIN	5	6	6	35	0	MAR 1942	BENSON/GLEAVES
HAMMANN	5	6	6	33	0	START	SIMS
HOPE	5	6	6	36	0	JAN 1942	FLETCHER (HOPEWELL)
HUGHES	5	6	6	33	0	FEB 1942	SIMS
HULL	5	6	6	36	0	JUL 1943	FARRAGUT
HYMAN	5	6	6	36	0	JUL 1943	ALLEN M SUMNER
JOHNSTON	5	6	6	36	0	NOV 1943	FLETCHER
KARAGAN	5	6	6	36	0	DEC 1943	FLETCHER (CALLAGHAN)
COLAHAN	5	6	6	34	0	JUL 1944	FLETCHER
DE HAVEN	5	6	6	35	0	OCT 1942	FLETCHER
DREXLER	5	6	6	36	0	NOV 1944	ALLEN M SUMNER
DUNCAN	5	6	6	35	0	MAY 1942	BENSON/GLEAVES
ELECTRA	5	6	6	35	0	START	E CLASS
EXPRESS	5	6	6	36	0	START	E CLASS
FARENHOLT	5	6	6	35	0	APR 1942	BENSON/GLEAVES

FLETCHER	5	6	6	35	0	JUL 1942	FLETCHER
GWIN	5	6	6	35	0	MAR 1942	BENSON/GLEAVES
HAMMANN	5	6	6	33	0	START	SIMS
HOPE	5	6	6	36	0	JAN 1942	FLETCHER (HOPEWELL)
HUGHES	5	6	6	33	0	FEB 1942	SIMS
HULL	5	6	6	36	0	JUL 1943	FARRAGUT
HYMAN	5	6	6	36	0	JUL 1943	ALLEN M SUMNER
JOHNSTON	5	6	6	36	0	NOV 1943	FLETCHER
KARAGAN	5	6	6	36	0	DEC 1943	FLETCHER (CALLAGHAN)
LAFFEY	5	6	6	35	0	APR 1942	BENSON/GLEAVES
LEWIS	5	6	6	36	0	MAR 1943	WGT
LEYTE	5	6	6	36	0	APR 1942	??
LITTLE	5	6	6	36	0	SEP 1944	ALLEN M SUMNER
MONSSEN	5	6	6	36	0	START	BENSON/GLEAVES
MORISON	5	6	6	35	0	JAN 1944	FLETCHER (MORRISON)
PATTERSON	5	6	6	36	0	FEB 1942	BAGLEY
PORTER	5	6	6	36	0	FEB 1942	PORTER
PRESTON	5	6	6	36	0	MAR 1942	MAHAN
PRINGLE	5	6	6	36	0	SEP 1942	FLETCHER
RALPH TALBOT	5	6	6	36	0	JAN 1942	BAGLEY
S.B. ROBERTS	5	6	6	36	0	MAY 1944	WGT
SAUFLEY	5	6	6	34	0	AUG 1942	FLETCHER
SIMS	5	6	6	34	0	JAN 1942	SIMS
SMITH	5	6	6	34	0	FEB 1942	MAHAN
TENEDOS	5	6	6	33	0	START	OLD S
VAMPIRE	5	6	6	33	0	START	OLD V
WALKE	5	6	6	34	0	MAR 1942	SIMS

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| 14.1.6 SUBs |-----+
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There are 14 total SUBs.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
ARGONAUT	5	0	6	6	0	JAN 1942	ARGONAUT
CACHALOT	5	0	6	5	0	MAR 1942	CACHALOT
DOLPHIN	5	0	6	7	0	JAN 1942	DOLPHIN
GATO	5	0	6	8	0	JAN 1942	GATO
GROUPEE	5	0	6	5	0	MAR 1942	GATO
GROWLER	5	0	6	7	0	APR 1942	GATO
NAUTILUS	5	0	6	5	0	MAR 1942	NARWHAL
PICKEREL	5	0	6	8	0	APR 1942	TENCH
S-20	5	0	6	6	0	JAN 1942	OLD S
S28	5	0	6	7	0	APR 1942	OLD S
SALMON	5	0	6	6	0	FEB 1942	SALMON
TARPON	5	0	6	6	0	FEB 1942	SHARK
TRITON	5	0	6	5	0	FEB 1942	TAMBOR
WAHOO	5	0	6	7	0	MAY 1942	GATO

/ 14.2 Japanese Ships /

These are the ships the Japanese have. You will have a total of 120 ships if none are sunk.

14.2.1 CV's

There are 13 CV's total.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
AKAGI	9	6	12	31	63	START	AKAGI
AMAGI	4	9	10	34	57	AUG 1944	UNRYU
HIRYU	2	8	10	34	63	START	HIRYU
HIYO	2	8	10	25	48	AUG 1942	JUNYO

JUNYO	2	8	10	25	48	MAY 1942	JUNYO
KAGA	9	9	12	28	72	START	KAGA
KATSURAGI	4	9	10	34	57	OCT 1944	UNRYU
SHINANO	9	10	18	27	42	DEC 1944	SHINANO
SHOKAKU	4	9	11	34	72	START	SHOKAKU
SORYU	2	6	10	34	63	START	SORYU
TAIHO	4	10	12	33	52	MAR 1944	TAIHO
UNRYU	4	9	10	34	57	AUG 1944	UNRYU
ZUIKAKU	4	9	11	34	72	START	SHOKAKU

+-----+
| 14.2.2 CVL's |-----
+-----+

There are 8 CVL's total.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
CHITOSE	2	7	9	29	30	AUG 1943	CHITOSE
CHIYODA	2	4	6	29	45	JAN 1944	CHITOSE
HOSHO	5	2	9	25	21	START	HOSHO
RYUHO	2	7	9	26	30	DEC 1942	RYUHO
RYUJO	2	8	12	29	36	START	RYUJO
SHINYO	2	7	11	21	27	JAN 1943	SHINYO
SHOHO	2	7	9	28	27	JAN 1942	ZUIHO
ZUIHO	2	8	10	28	27	START	ZUIHO

+-----+
| 14.2.3 DBB's and BB's |-----
+-----+

There are 12 DBB's and BB's total.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
FUSO	40	24	35	24	3	START	FUSO
HARUNA	32	24	36	30	3	START	KONGO

HIEI	32	24	36	30	3	START	KONGO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
HYUGA	36	34	36	25	2	START	ISE	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
ISE	36	34	36	25	2	START	ISE	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
KIRISHIMA	32	24	36	30	3	START	KONGO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
KONGO	32	24	36	30	3	START	KONGO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
MUSASHI	65	33	60	27	6	AUG 1942	YAMATO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
MUTSU	43	25	36	25	3	START	NAGATO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
NAGATO	43	25	36	25	3	START	NAGATO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
YAMASHIRO	40	24	35	24	3	START	FUSO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
YAMATO	65	33	60	27	6	JAN 1942	YAMATO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+

+-----+

| 14.2.4 C's |-----

+-----+

There are 33 total C's.

+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
NAME	AS	AA	FO	SP	CA	DATE	CLASS	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
ABUKUMA	12	13	12	36	1	START	NAGARA	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
AOBA	19	26	17	34	2	START	AOBA	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
ASHIGARA	17	24	17	35	3	START	NACHI	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
ATAGO	19	26	17	35	3	START	TAKAO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
CHIKUMA	10	20	18	35	6	START	TONE	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
CHOKAI	19	26	18	35	3	START	TAKAO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
FURUTAKA	19	24	18	34	2	START	FURUTAKA	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
HAGURO	17	24	17	35	3	START	NACHI	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
KAKO	19	24	18	34	2	START	FURUTAKA	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
KINU	12	13	12	36	1	START	NAGARA	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
KINUGASA	19	26	17	34	2	START	AOBA	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
KITAKAMI	12	13	12	36	1	START	KUMA	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
KUMANO	17	24	17	36	3	START	MOGAMI	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
MAYA	18	25	18	34	3	START	TAKAO	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
MIKUMA	17	24	17	37	3	START	MOGAMI	

MOGAMI	9	12	17	37	11	START	MOGAMI
MYOKO	17	24	17	35	3	START	NACHI
NACHI	17	24	17	35	3	START	NACHI
NAGARA	12	13	12	36	1	START	NAGARA
NATORI	17	23	17	36	1	START	NAGARA
NOSHIRO	11	22	12	35	2	JUL 1943	AGANO
OOI	12	13	12	36	1	START	KUMA (OI)
OYODO	10	20	18	35	6	MAR 1943	OYODO
SENDAI	12	13	12	35	1	START	SENDAI
SUZUYA	17	24	17	36	3	START	MOGAMI
TAKAO	19	26	18	34	3	START	TAKAO
TAMA	12	13	12	36	1	START	KUMA
TATSUTA	9	10	9	33	0	START	TENRYU
TENRYU	9	10	9	33	0	START	TENRYU
STONE	10	20	18	35	6	START	STONE
YAHAGI	11	22	12	35	2	JAN 1944	AGANO
YUBARI	11	10	10	35	0	START	YUBARI
YURA	12	13	12	36	1	START	NAGARA

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| 14.2.5 DD's |-----
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There are 45 total DD's.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
AKATSUKI	6	7	6	38	0	START	AKATSUKI (AKATSUKI)
AKIGUMO	7	7	6	35	0	START	YUGUMO
AKISHIMO	6	7	6	35	0	MAR 1944	YUGUMO
AKIZUKI	4	14	10	33	0	JUN 1942	AKIZUKI
ARASHI	6	7	6	35	0	START	KAGERO
ARASHIO	6	7	6	35	0	START	ASASHIO

TANIKAZE	6	7	6	35	0	START	KAGERO
TERUZUKI	4	14	10	33	0	SEP 1942	AKITSUKI
URAKAZE	6	7	6	35	0	START	KAGERO
WAKABA	6	7	6	33	0	START	HATSU HARU
YAMAGUMO	7	7	6	35	0	START	ASASHIO
YUDACHI	6	7	6	34	0	START	SHIRATSUYU
YUGUMO	8	7	6	35	0	DEC 1941	YUGUMO
YUKIKAZE	6	7	6	35	0	START	KAGERO
YUNAGI	6	7	6	37	0	START	KAMIKAZE

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| 14.2.6 SUBs |-----
+-----+

There are 9 total SUBs.

NAME	AS	AA	FO	SP	CA	DATE	CLASS
I-1	6	0	6	8	0	START	J1
I-8	6	0	6	8	0	START	J3
I-9	6	0	6	8	0	START	A1
I-19	6	0	5	6	0	START	B1
I-21	7	0	6	8	0	START	KRS
I-23	7	0	6	8	0	START	KRS
I-25	6	0	6	8	0	START	KD3A
I-58	7	0	6	7	0	SEP 1944	B3
I-168	6	0	6	8	0	START	KD6A

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| 15. SHIP CLASSES |=====
+=====

Ship Classes can be thought more of a standardized blueprint for a specific type of ship. Usually these classes adopted the name of the first ship whose keel was laid down. For example, the Iowa Class of battleships for the United States or the Tone Class of cruisers for Japan.

Although specific ships within a class may have had some variation as to secondary armaments or crew complements, they were still a member of whatever

Class they were launched with.

In addition to Ship Classes, different countries adopted a somewhat standardized way they named their ships. This will be further expanded upon for each individual country.

As you are playing PTO, you will get whatever ships that were in existence before the war starts and also ships developed after the outbreak of war.

The data will be arranged in alphabetical order. This data is to be used in conjunction with the ships you use in PTO and it provides a historical reference to said ships.

This is how the data will be arranged:

/ Country Name /

Brief information on that countries ships and also naming conventions.

+-----+
| Ship Type |
+-----+

Brief information on the type of ship.

/=====\
| Ship Class |
\=====/

Date First Ship Commissioned:

Length : In feet
Beam : Distance from main deck to water in feet
Draft : Amount of ship below waterline in feet
Displacement : Weight of empty ship in tons
Speed : Ship's top speed in knots
Primary Guns : Same setup as game data
Secondary Guns: Same setup as game data
Armor : Armor thicknesses on ship in inches
Hanger : For carriers, the number of planes that could be carried.
Complement : Normal number of crew

/ 15.1 Allies /

From the earliest of times, the British have always prided themselves on being a powerful, seafaring nation. Until the Revolutionary War, the British had pretty much remained undefeated. From that point on, they watched the United States, then Japan start taking the lead.

Naming conventions for British ships aren't too standardized, per se. They only named their capital warships while "lesser" ships such as some light cruisers, destroyers, and submarines usually ended up with a letter designation. The naming conventions were:

Battleships and Battlecruisers: Usually named after royalty or famous

admirals.

Carriers : Tended to be regal or exotic names.
Heavy and Light Cruisers : Named after cities in England.
Destroyers and Submarines : Usually used a letter as the class.

The United States navy "came of age" after the War of 1812. From that point on, America had a fleet that rivaled Great Britain's. The Spanish-American War of 1897 saw the American fleet destroy the Spanish fleet and acquire their overseas lands. After a massive ship building program, America took their fleet around the world in 1907 to show off to the world. World War 1 saw some ship building but nothing significant. America experimented with aircraft carriers but never put much into them since the fleet was still run by "Battleship Admirals". This mindset changed as World War 2 started. The United States started a massive ship building program that not only made up for their losses, but put them ahead, permanently, of Japan.

The United States built the most massive fleet in the world and once they were off the defensive, proceeded to decimate the Japanese fleet and retake the islands in the Pacific.

Naming conventions for American ships are pretty strict (although there were some exceptions). Most of the frontline ships had a naming convention assigned to them. The naming conventions were:

Battleships and Battlecruisers: States and possessions
Fleet and Light Carriers : Famous ships or battles
Escort Carriers : Sounds, bays, and famous battles
Heavy and Light Cruisers : Cities
Destroyers : People in the navy or marines who distinguished themselves
Submarines : Marine creatures such as fish and sea-type mammals

+-----+
| 15.1.1 Fleet Carriers |-----
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The biggest carriers that could carry the largest amount of planes. Fleet carriers could sustain operations for long periods of time serving as "floating" runways. Fleet carriers proved to be extremely versatile for any role they were assigned to.

/=====\
| 15.1.1.1 Essex Class |-----
\=====/

Date First Ship Commissioned: July 1942

Length : 888 or 872
Beam : 148
Draft : 28
Displacement : 27,208
Speed : 32.7
Primary Guns : 12 x 5 inch 38 cal guns. Four guns in two turrets (two guns per turret) and four guns in four turret (one gun per turret).
Secondary Guns: NONE
Armor : 4-2.5 inch belt and 2.5 inch decks.
Hanger : 91
Complement : 2682

```
/=====\  
| 15.1.1.2 Illustrious Class |-----  
\=====/
```

Date First Ship Commissioned: May 1940

Length : 750
Beam : 96
Draft : 29
Displacement : 23,000
Speed : 30.5
Primary Guns : NONE
Secondary Guns: 16 x 4.5 inch AA guns located in eight turrets (two guns per turret).
Armor : 4.5 inch belt, 3 inch decks.
Hanger : 33
Complement : 1,229

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/=====\  
| 15.1.1.3 Indomitable Class |-----  
\=====/
```

Date First Ship Commissioned: March 1940

Length : 754
Beam : 96
Draft : 29
Displacement : 23,000
Speed : 30.5
Primary Guns : NONE
Secondary Guns: 16 x 4.5 inch AA guns located in eight turrets (two guns per turret).
Armor : 4.5 inch belt, 3 inch decks.
Hanger : 45
Complement : 2,100

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/=====\  
| 15.1.1.4 Lexington Class |-----  
\=====/
```

Date First Ship Commissioned: October 1925

Length : 888
Beam : 105
Draft : 33
Displacement : 37,681
Speed : 33
Primary Guns : 8 x 8 inch 55 cal in four turrets (one pair per turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 12 x 5 inch guns located in 12 turrets around the ship. One gun per turret.
Armor : 7-5 inch belt, 13 inch turret faces, 1.25 inch decks.
Hanger : 63
Complement : 2327

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/=====\  
| 15.1.1.5 Wasp Class |-----  
\=====/
```

Date First Ship Commissioned: April 1939

Length : 720
Beam : 100
Draft : 23
Displacement : 14,700
Speed : 29.5
Primary Guns : 8 x 5 inch 38 cal guns in eight turrets (one gun per turret).
Secondary Guns: NONE
Armor : .625 inch belt and 1.25 inch decks.
Hanger : 76
Complement : 2167

```
/=====\  
| 15.1.1.6 Yorktown Class |-----  
\=====/
```

Date First Ship Commissioned: April 1936

Length : 824
Beam : 110
Draft : 26
Displacement : 19,875
Speed : 32.5
Primary Guns : 8 x 5 inch 38 cal guns in eight turrets (one gun per turret).
Secondary Guns: NONE
Armor : 4-2.5 inch belt and 1.5 inch decks.
Hanger : 96
Complement : 2175

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+-----+  
| 15.1.2 Light Carriers |-----  
+-----+
```

These were some of the first carriers built. As the war progressed, these carriers were relegated to secondary duties such as ferrying planes to other locations and being used for anti-submarine squadrons.

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/=====\  
| 15.1.2.1 Hermes Class |-----  
\=====/
```

Date First Ship Commissioned: July 1923

Length : 598
Beam : 70
Draft : 21
Displacement : 11,000
Speed : 25
Primary Guns : NONE
Secondary Guns: 6 x 5.5 inch AA guns, 3 x 4 inch AA guns.
Armor : 3 inch belt, 1 inch decks.
Hanger : 20
Complement : 664

```
/=====\  
| 15.1.2.2 Independence Class |-----  
\=====/
```

Date First Ship Commissioned: August 1942

Length : 623
Beam : 109
Draft : 24
Displacement : 10,662
Speed : 32
Primary Guns : NONE
Secondary Guns: NONE
Armor : 5 inch belt and 2 inch decks.
Hanger : 30
Complement : 1569

+-----+
| 15.1.3 Escort Carriers |-----
+-----+

Used as support ships, these carriers gained wide fame when they were built into the "hunter-killer" groups patrolling for U-Boats in the Atlantic. Anti-submarine planes would be launched and recovered on their decks. This in turn allowed the "air umbrella" to be extended across the whole Atlantic and make it very risky for U-Boats to operate. In the Pacific, they were used to shuttle aircraft and also to provide the platform for air strikes during invasions. The carriers themselves were lightly armed and armored and were not designed for any real contact with the enemy.

/=====\
| 15.1.3.1 Casablanca Class |-----
\=====/

Date First Ship Commissioned: April 1943

Length : 512
Beam : 108
Draft : 21
Displacement : 8,188
Speed : 19
Primary Guns : 1 x 5 inch 38 cal guns in one turret.
Secondary Guns: NONE
Armor :
Hanger : 27
Complement : 860

+-----+
| 15.1.4 Battleships |-----
+-----+

Battleships enjoyed a prominent role before World War 2. In World War 2, though, they got relegated to the "back burner" as carriers became the kings of the sea. From that point on, battleships were mainly used to protect the carriers and provide fire support for invasions.

/=====\
| 15.1.4. 1 Colorado Class |-----
\=====/

Date First Ship Commissioned: March 1920

Length : 624
Beam : 97
Draft : 30
Displacement : 32,600

Speed : 21
Primary Guns : 8 x 16 inch, 45 cal in four turrets (one pair per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 14 x 6 inch guns located in 14 turrets around the ship. One
gun per turret.
Armor : 13.5-8 inch belt, 18 inch turret faces, 3.5 inch decks.
Complement : 1080

/=====\
| 15.1.4. 2 Iowa Class |-----
\=====/

Date First Ship Commissioned: August 1942

Length : 887
Beam : 108
Draft : 36
Displacement : 48,110
Speed : 32.5
Primary Guns : 9 x 16 inch 50 cal guns in three turrets (three guns per
turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 20 x 5 inch guns located in ten turrets around the ship (two
guns per turret).
Armor : 12.1 inch belt, 19.7 inch turret faces, 6 inch decks.
Complement : 1921

/=====\
| 15.1.4. 3 King George V Class |-----
\=====/

Date First Ship Commissioned: November 1940

Length : 745
Beam : 103
Draft : 29
Displacement : 36,720
Speed : 28
Primary Guns : 10 x 14 inch, Mk VII in three turrets. Two turrets with four
guns apiece are located in the bow and stern. One more turret
with two guns is located in the bow.
Secondary Guns: 16 x 5.25 inch guns located in 8 turrets around the ship.
Two guns per turret.
Armor : 15-14 inch belt, 13 inch turret faces, 5-6 inch decks.
Complement : 1,422

/=====\
| 15.1.4. 4 Nevada Class |-----
\=====/

Date First Ship Commissioned: March 1914

Length : 583
Beam : 96
Draft : 29
Displacement : 27,500
Speed : 20.5
Primary Guns : 10 x 145 inch, 45 cal arranged as so: Six guns arranged in
two turrets (three guns per turret) and four guns arranged in
two turrets (one pair of guns per turret). One three-gun and
one two-gun turret in the bow while the stern has one three-

gun and one two-gun turret. Two turrets in the bow and two turrets in the stern.

Secondary Guns: Secondary Guns: 21 x 5 inch guns and two 21 inch torpedo tubes.

Armor : 13.5-8 inch belt, 18 inch turret faces, 3 inch decks.

Complement : 864

/=====\
| 15.1.4. 5 New Mexico Class |-----
\=====/

Date First Ship Commissioned: April 1917

Length : 624
Beam : 98
Draft : 30
Displacement : 32,000
Speed : 21
Primary Guns : 12 x 14 inch, 45 cal in four turrets (three guns per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 14 x 5 inch guns and two 21 inch torpedo tubes.
Armor : 13.5-8 inch belt, 18 inch turret faces, 3.5 inch decks.
Complement : 1084

/=====\
| 15.1.4. 6 New York Class |-----
\=====/

Date First Ship Commissioned: May 1912

Length : 573
Beam : 96
Draft : 29
Displacement : 27,000
Speed : 21
Primary Guns : 10 x 14 inch, 45 cal in five turrets (one pair per turret).
Two turrets in the bow and three turrets in the stern.
Secondary Guns: Secondary Guns: 21 x 5 inch guns and four 21 inch torpedo tubes.
Armor : 12-10 inch belt, 14 inch turret faces, 2 inch decks.
Complement : 1042

/=====\
| 15.1.4. 7 North Carolina Class |-----
\=====/

Date First Ship Commissioned: June 1940

Length : 728
Beam : 104
Draft : 33
Displacement : 37,484
Speed : 28
Primary Guns : 9 x 16 inch 45 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 20 x 5 inch guns located in ten turrets around the ship (two guns per turret).
Armor : 12-6.6 inch belt, 16 inch turret faces, 5.5-5 inch decks.
Complement : 1880

```
/=====\  
| 15.1.4. 8  Pennsylvania Class |-----  
\=====/
```

Date First Ship Commissioned: March 1915

Length : 608
Beam : 97
Draft : 29
Displacement : 31,400
Speed : 21
Primary Guns : 12 x 14 inch, 45 cal in four turrets (three guns per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 22 x 5 inch guns and two 21 inch torpedo tubes.
Armor : 13.5-8 inch belt, 18 inch turret faces, 3 inch decks.
Complement : 915

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/=====\  
| 15.1.4. 9  Queen Elizabeth Class |-----  
\=====/
```

Date First Ship Commissioned: January 1915

Length : 634
Width :
Beam : 90
Draft : 33
Displacement : 27,470
Speed : 23
Primary Guns : 8 x 15 inch, 45 cal Mk I in four turrets (one pair of guns per
turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 14 x 6 inch guns located in 14 turrets around the ship. One
gun per turret.
Armor : 13-6 inch belt, 13 inch turret faces, 3-2 inch decks.
Complement : 923

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/=====\  
| 15.1.4.10  Revenge Class |-----  
\=====/
```

Date First Ship Commissioned: May 1915

Length : 614
Beam : 88
Draft : 33
Displacement : 29,590
Speed : 23
Primary Guns : 8 x 15 inch, 45 cal Mk I in four turrets (one pair of guns per
turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 14 x 6 inch guns located in 14 turrets around the ship. One
gun per turret.
Armor : 13-1 inch belt, 13 inch turret faces, 4-1 inch decks.
Complement : 936

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/=====\  
| 15.1.4.11  South Dakota Class |-----  
\=====/
```

Date First Ship Commissioned: June 1941

Length : 680
Beam : 108
Draft : 35
Displacement : 37,970
Speed : 27.5
Primary Guns : 9 x 16 inch 45 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 20 x 5 inch guns located in ten turrets around the ship (two guns per turret).
Armor : 12.2 inch belt, 18 inch turret faces, 5.75-6 inch decks.
Complement : 1793

/=====\
| 15.1.4.12 Tennessee Class |-----
\=====/

Date First Ship Commissioned: November 1919

Length : 624
Beam : 97
Draft : 30
Displacement : 32,300
Speed : 21
Primary Guns : 12 x 14 inch, 45 cal in four turrets (three guns per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 14 x 5 inch guns and two 21 inch torpedo tubes.
Armor : 13.5-8 inch belt, 18 inch turret faces, 3.5 inch decks.
Complement : 1083

+-----+
| 15.1.5 Battlecruisers |-----
+-----+

Although they could be as heavily armed as battleships, battlecruisers tended to be more lightly armored. Because of this, they were used more in a support role although they could hold their own against the less heavily armed enemy ships.

/=====\
| 15.1.5.1 Alaska Class |-----
\=====/

Date First Ship Commissioned: August 1943

Length : 809
Beam : 91
Draft : 32
Displacement : 29,779
Speed : 33
Primary Guns : 9 x 12 inch 50 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 12 x 5 inch guns located in six turrets (two guns per turret).
Armor : 9-5 inch belt, 12.8 inch turret faces, 4-3.8 inch decks.
Complement : 1517

/=====\
| 15.1.5.2 Renown Class |-----
\=====/

Date First Ship Commissioned: September 1916

Length : 794
Beam : 90
Draft : 30
Displacement : 27,320
Speed : 30
Primary Guns : 6 x 15 inch, 42 cal Mk I in three turrets (one pair of guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 17 x 4 inch guns located in five turrets around the ship with three guns per turret and two turrets with one gun per turret. 2 x 3 inch guns located in two turrets with one gun per turret.
Armor : 6-3 inch belt, 9 inch turret faces, 3-1 inch decks.
Complement : 953

+-----+
| 15.1.6 Heavy Cruisers |-----
+-----+

Designed to accompany the battleships and carriers, heavy cruisers were usually in a support role of providing extra firepower (especially anti-aircraft) to protect the fleet. They also provided the firepower for shore bombardments.

/=====\
| 15.1.6.1 Baltimore Class |-----
\=====/

Date First Ship Commissioned: July 1942

Length : 673
Beam : 71
Draft : 24
Displacement : 14,472
Speed : 33
Primary Guns : 9 x 8 inch 55 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 12 x 5 inch guns located in six turrets (two guns per turret).
Armor : 6-4 inch belt, 8 inch turret faces, 2.5 inch decks.
Complement : 2039

/=====\
| 15.1.6.2 Exeter Class |-----
\=====/

Date First Ship Commissioned: February 1928

Length : 575
Beam : 58
Draft : 21
Displacement : 10,490
Speed : 32
Primary Guns : 6 x 8 inch, 50 cal, Mk VII in three turrets (one pair of guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 4 x 4 inch guns located in four turrets around the ship. One gun per turret. Two triple 21 inch torpedo tubes.
Armor : 3 inch belt, 3 inch on main guns, 1 inch decks.

Complement : 630

/=====\
| 15.1.6.3 Kent Class |-----
\=====/
|-----

Date First Ship Commissioned: February 1928

Length : 590
Beam : 68
Draft : 16
Displacement : 9,750
Speed : 31.5
Primary Guns : 8 x 8 inch, 50 cal, Mk VII in four turrets (one pair of guns per turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 8 x 4 inch guns located in four turrets around the ship. Two guns per turret. Two quad 21 inch torpedo tubes.
Armor : 4.5 inch belt, 1 inch on main guns, 1.5 inch decks.
Complement : 700

/=====\
| 15.1.6.4 New Orleans Class |-----
\=====/
|-----

Date First Ship Commissioned: April 1933

Length : 588
Beam : 62
Draft : 23
Displacement : 10,136
Speed : 33
Primary Guns : 9 x 8 inch 55 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 8 x 5 inch guns located in eight turrets around the ship (one gun per turret).
Armor : 5-3.25 inch belt and 2.25 inch decks.
Complement : 868

/=====\
| 15.1.6.5 Norfolk Class |-----
\=====/
|-----

Date First Ship Commissioned: January 1929

Length : 633
Beam : 66
Draft : 20
Displacement : 9,900
Speed : 31.5
Primary Guns : 8 x 8 inch, 50 cal, Mk VII in four turrets (one pair of guns per turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 8 x 4 inch guns located in four turrets around the ship. Two guns per turret. Two quad 21 inch torpedo tubes.
Armor : 4.5 inch belt, 1 inch on main guns, 1.5 inch decks.
Complement : 710

/=====\
| 15.1.6.6 Northhampton Class |-----
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Date First Ship Commissioned: July 1929

Length : 600
Beam : 66
Draft : 19
Displacement : 9,006
Speed : 32.5
Primary Guns : 9 x 8 inch 55 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 4 x 5 inch guns located in four turrets (one gun per turret).
Armor : 3 inch belt and 1 inch decks.
Complement : 748

/=====

| 15.1.6.7 Pensacola Class |-----

\=====

Date First Ship Commissioned: January 1929

Length : 586
Beam : 65
Draft : 20
Displacement : 9,097
Speed : 32.5
Primary Guns : 10 x 8 inch 55 cal guns. Two turrets have three guns and two turrets have two guns. One three-gun turret and one two-gun turret are located in the bow and one three-gun turret and one two-gun turret are located in the stern.
Secondary Guns: 4 x 5 inch guns located in four turrets (one gun per turret).
Armor : 2.5 inch belt and 1 inch decks.
Complement : 631

/=====

| 15.1.6.8 Portland Class |-----

\=====

Date First Ship Commissioned: November 1931

Length : 610
Beam : 66
Draft : 21
Displacement : 10,258
Speed : 32.5
Primary Guns : 9 x 8 inch 55 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 8 x 5 inch guns located in eight turrets around the ship (one gun per turret).
Armor : 2.25 inch belt and 2.5 inch decks.
Complement : 917

/=====

| 15.1.6.9 Wichita Class |-----

\=====

Date First Ship Commissioned: November 1937

Length : 608
Beam : 62

Draft : 24
Displacement : 10,589
Speed : 33
Primary Guns : 9 x 8 inch 55 cal guns in three turrets (three guns per turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 8 x 5 inch guns located in eight turrets around the ship (one gun per turret).
Armor : 6-4 inch belt and 2.25 inch decks.
Complement : 929

+-----+
| 15.1.6 Light Cruisers |-----
+-----+

Designed for a auxiliary role. Light cruisers usually led destroyer divisions in anti-submarine warfare. The also supported fleets and provided firepower for shore bombardments.

/=====\
| 15.1.6.1 Atlanta Class |-----
\=====/

Date First Ship Commissioned: July 1941

Length : 542
Beam : 53
Draft : 21
Displacement : 6,718
Speed : 32.5
Primary Guns : 16 x 5 inch 38 cal guns in eight turrets (one pair per turret). Three turrets are in the bow while five turrets are in the stern.
Secondary Guns: 16 x 1.1 inch guns in eight turrets (one pair per turret) and 2 x 4 21 inch torpedo tubes.
Armor : 3.75 inch belt and 1.25 inch decks.
Complement : 623

/=====\
| 15.1.6.2 Brooklyn Class |-----
\=====/

Date First Ship Commissioned: July 1942

Length : 608
Beam : 62
Draft : 23
Displacement : 12,207
Speed : 32.5
Primary Guns : 15 x 6 inch 47 cal guns in five turrets (three guns per turret). Three turrets in the bow and two turrets in the stern.
Secondary Guns: 8 x 5 inch guns located in eight turrets (one gun per turret).
Armor : 5 inch belt, 6.5 inch turret faces, 2 inch decks.
Complement : 868

/=====\
| 15.1.6.3 De Ruyter Class |-----
\=====/

Date First Ship Commissioned: March 1935

Length : 560
Beam : 52
Draft : 17
Displacement : 6,000
Speed : 32
Primary Guns : 7 x 6 inch guns. Three turrets with two guns apiece and one turret with one gun. Two turrets (one single and one twin) are in the bow and one turret is in the stern.
Secondary Guns: NONE
Armor : 2-1.1 inch belt, 1.1 inch on main guns, 1.15 inch decks.
Complement : 435

+-----+
| 15.1.7 Destroyers |-----
+-----+

The workhorses of the fleet. In addition to their guns, destroyers were also equipped with torpedoes to cause serious damage to an enemy. Their best role is doing anti-submarine duty and being the outside "pickets" for the fleet.

/=====\
| 15.1.7. 1 Allen M. Sumner Class |-----
\=====/

Date First Ship Commissioned: December 1943

Length : 377
Beam : 41
Draft : 14
Displacement : 2,610
Speed : 36.5
Primary Guns : 6 x 5 inch 38 cal guns in three turrets (one pair per turret). Two turrets are in the bow and one turret is in the stern.
Secondary Guns: Ten 21 inch torpedo tubes and depth charges.
Armor :
Complement : 336

/=====\
| 15.1.7. 2 Bagley Class |-----
\=====/

Date First Ship Commissioned: September 1936

Length : 341
Beam : 36
Draft : 13
Displacement : 1,646
Speed : 38.5
Primary Guns : 4 x 5 inch 38 cal guns in four turrets (one gun per turret). Two turrets are in the bow and two turrets are in the stern.
Secondary Guns: 4 x 4 21 inch torpedo tubes and depth charges.
Armor :
Complement : 158

/=====\
| 15.1.7. 3 Benham Class |-----
\=====/

Date First Ship Commissioned: April 1938

Length : 341
Beam : 36
Draft : 13
Displacement : 1,657
Speed : 38.5
Primary Guns : 4 x 5 inch 38 cal guns in four turrets (one gun per turret).
Two turrets are in the bow and two turrets are in the stern.
Secondary Guns: 4 x 4 21 inch torpedo tubes and depth charges.
Armor :
Complement : 184

/=====\
| 15.1.7. 4 Benson/Gleaves Class |-----
\=====/

Date First Ship Commissioned: October 1939

Length : 348
Beam : 36
Draft : 13
Displacement : 1,839
Speed : 35
Primary Guns : 5 x 5 inch 38 cal guns in five turrets (one gun per turret).
Two turrets are in the bow and three turrets are in the stern.
Secondary Guns: 2 x 5 21 inch torpedo tubes and depth charges.
Armor :
Complement : 923

/=====\
| 15.1.7. 5 E Class |-----
\=====/

Date First Ship Commissioned: September 1931

Length : 329
Beam : 33
Draft : 13
Displacement : 1,405
Speed : 36
Primary Guns : 4 x 4.7 inch Mk IX in four turrets (one gun per turret). Two
turrets are in the bow and two turrets are in the stern.
Secondary Guns: 2 x 4 21 inch torpedo tubes, depth charges.
Armor :
Complement : 145

/=====\
| 15.1.7. 6 Farragut Class |-----
\=====/

Date First Ship Commissioned: January 1934

Length : 341
Beam : 34
Draft : 12
Displacement : 1,358
Speed : 36.5
Primary Guns : 5 x 5 inch 38 cal guns in five turrets (one gun per turret).
Three turrets are in the bow and two turrets are in the stern.

Secondary Guns: 4 x 2 21 inch torpedo tubes and depth charges.
Armor :
Complement : 160

/=====\
| 15.1.7. 7 Fletcher Class |-----
\=====/

Date First Ship Commissioned: February 1942

Length : 376
Beam : 40
Draft : 14
Displacement : 2,325
Speed : 38
Primary Guns : 5 x 5 inch 38 cal guns in five turrets (one gun per turret).
Two turrets are in the bow and three turrets are in the stern.
Secondary Guns: Ten 21 inch torpedo tubes and depth charges.
Armor :
Complement : 273

/=====\
| 15.1.7. 8 Mahan Class |-----
\=====/

Date First Ship Commissioned: September 1935

Length : 341
Beam : 35
Draft : 12
Displacement : 1,488
Speed : 36.5
Primary Guns : 5 x 5 inch 38 cal guns in five turrets (one gun per turret).
Two turrets in the bow and three turrets in the stern.
Secondary Guns: 3 x 4 21 inch torpedo tubes and depth charges.
Armor :
Complement : 158

/=====\
| 15.1.7. 9 Old S Class |-----
\=====/

Date First Ship Commissioned: April 1916

Length : 276
Beam : 27
Draft : 9
Displacement : 1,075
Speed : 36
Primary Guns : 3 x 4 inch, 45 cal, Mk IV in three turrets (one gun per turret). Two turrets are in the bow and one turret is in the stern.
Secondary Guns: 2 x 1 18 inch torpedo tubes, depth charges.
Armor :
Complement : 90

/=====\
| 15.1.7.10 Old V Class |-----
\=====/

Date First Ship Commissioned: May 1917

Length : 312
Beam : 30
Draft : 11
Displacement : 1,400
Speed : 34
Primary Guns : 4 x 4/45 QF Mk V in four turrets (one gun per turret). Two
turrets are in the bow and two turrets are in the stern.
Secondary Guns: 2 x 2 21 inch torpedo tubes, depth charges.
Armor :
Complement : 115

/=====
| 15.1.7.11 Porter Class |-----
\=====

Date First Ship Commissioned: July 1935

Length : 381
Beam : 37
Draft : 13
Displacement : 1,834
Speed : 37
Primary Guns : 8 x 5 inch 38 cal guns in four turrets (one pair per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 2 x 4 21 inch torpedo tubes and depth charges.
Armor :
Complement : 194

/=====
| 15.1.7.12 Sims Class |-----
\=====

Date First Ship Commissioned: April 1938

Length : 348
Beam : 36
Draft : 13
Displacement : 1,764
Speed : 35
Primary Guns : 5 x 5 inch 38 cal guns in five turrets (one gun per turret).
Two turrets are in the bow and three turrets are in the stern.
Secondary Guns: 2 x 4 21 inch torpedo tubes and depth charges.
Armor :
Complement : 192

/=====
| 15.1.7.13 WGT Class |-----
\=====

Date First Ship Commissioned: December 1943

Length : 306
Beam : 38
Draft : 11
Displacement : 1,430
Speed : 23
Primary Guns : 2 x 1 inch 38 cal guns in two turrets (one gun per turret).

One turret is in the bow and one turret is in the stern.

Secondary Guns: 1 x 3 21 inch torpedo tubes and depth charges.

Armor :

Complement : 156

+-----+

| 15.1.8 Submarines |-----

+-----+

The Americans, as the Germans, put some time and resources into their submarine program. When World War 2 broke out, the United States already had fleet submarines in the Pacific and they are credited with claiming the first Japanese ship. When the problems with the torpedoes were solved, American submarines were able to effectively blockade Japan from its resources. By wars end, American submarines had accounted for a large percentage of Japanese shipping.

/=====\
| 15.1.8. 1 Argonaut Class |-----
\=====/
Date First Ship Commissioned: November 1927

Length : 381
Beam : 34
Draft : 15
Displacement : 2,878
Speed : 14 surface/7 underwater
Primary Guns : Four 21 inch torpedo tubes.
Secondary Guns: 2 x 6 inch deck guns.
Armor :
Complement : 86

/=====\
| 15.1.8. 2 Cachalot Class |-----
\=====/
Date First Ship Commissioned: October 1933

Length : 271
Beam : 25
Draft : 14
Displacement : 1,120
Speed : 17 surface/8 underwater
Primary Guns : Six 21 inch torpedo tubes.
Secondary Guns: 1 x 3 inch deck gun.
Armor :
Complement : 51

/=====\
| 15.1.8. 3 Dolphin Class |-----
\=====/
Date First Ship Commissioned: March 1932

Length : 319
Beam : 28
Draft : 13
Displacement : 1,688
Speed : 17 surface/8 underwater

/=====\
| 15.1.8. 3 Dolphin Class |-----
\=====/
Date First Ship Commissioned: March 1932

Length : 319
Beam : 28
Draft : 13
Displacement : 1,688
Speed : 17 surface/8 underwater

Primary Guns : Six 21 inch torpedo tubes.
Secondary Guns: 1 x 4 inch deck gun.
Armor :
Complement : 63

/=====
| 15.1.8. 4 Gato Class |-----
\=====

Date First Ship Commissioned: August 1941

Length : 312
Beam : 27
Draft : 15
Displacement : 1,526
Speed : 20 surface/9 underwater
Primary Guns : Ten 21 inch torpedo tubes.
Secondary Guns: 1 x 3 inch deck gun.
Armor :
Complement : 80

/=====
| 15.1.8. 5 Narwhal Class |-----
\=====

Date First Ship Commissioned: December 1927

Length : 371
Beam : 33
Draft : 16
Displacement : 2,987
Speed : 17 surface/8 underwater
Primary Guns : Six 21 inch torpedo tubes.
Secondary Guns: 2 x 6 inch deck guns.
Armor :
Complement : 89

/=====
| 15.1.8. 6 Old S Class |-----
\=====

Date First Ship Commissioned: October 1918

Length : 219
Beam : 21
Draft : 16
Displacement : 854
Speed : 14 surface/11 underwater
Primary Guns : Four 21 inch torpedo tubes.
Secondary Guns: 1 x 4 inch deck gun.
Armor :
Complement : 38

/=====
| 15.1.8. 7 Salmon Class |-----
\=====

Date First Ship Commissioned: June 1937

Length : 308

Beam : 26
Draft : 16
Displacement : 1,449
Speed : 21 surface/9 underwater
Primary Guns : Eight 21 inch torpedo tubes.
Secondary Guns: 1 x 3 inch deck gun.
Armor :
Complement : 59

/=====\
| 15.1.8. 8 Shark Class |-----
\=====/

Date First Ship Commissioned: May 1935

Length : 298
Beam : 25
Draft : 15
Displacement : 1,315
Speed : 19.5 surface/8 underwater
Primary Guns : Six 21 inch torpedo tubes.
Secondary Guns: 1 x 3 inch deck gun.
Armor :
Complement : 54

/=====\
| 15.1.8. 9 Tambor Class |-----
\=====/

Date First Ship Commissioned: December 1939

Length : 307
Beam : 27
Draft : 15
Displacement : 1,475
Speed : 20 surface/9 underwater
Primary Guns : Ten 21 inch torpedo tubes.
Secondary Guns: 1 x 3 inch deck gun.
Armor :
Complement : 60

/=====\
| 15.1.8.10 Tench Class |-----
\=====/

Date First Ship Commissioned: July 1944

Length : 312
Beam : 27
Draft : 15
Displacement : 1,570
Speed : 20 surface/9 underwater
Primary Guns : Ten 21 inch torpedo tubes.
Secondary Guns: 1 x 3 inch deck gun.
Armor :
Complement : 80

Unlike the other major powers, Japan was thrown on a steep learning curve. Since the time Perry "forced" open Japan in the mid-nineteenth century, Japan has strived to keep up with the Western world. After World War 1, Japan emerged as one of the victorious nations. Unfortunately, the Washington Treaty made it seem like they were one of the losers. Their shipbuilding was restricted to a fraction of Great Britain and the United States. To keep peace, they signed this treaty. They learned, though, all about the different facets of naval warfare. Although the United States and Britain started to toy around with carrier warfare, it was Japan that perfected it and forced the other nations to "catch-up".

The first two years were successful for the Japanese, but it also put a strain on their resources. Since they were an island nation, they required most things to be imported. By the end of the war, the Japanese navy was just a slim shadow of its former self.

Naming conventions for Japanese ships are actually rather strict. Most of the frontline ships had a naming convention assigned to them. The naming conventions were:

Battleships and Battlecruisers: Ancient provinces.
Carriers : Dragons and birds.
Heavy Cruisers : Mountains
Light Cruisers : Rivers.
Destroyers : Meteorological names, trees, flowers, or fruits.
Submarines : Usually used a letter(s) as the class.

+-----+
| 15.2.1 Fleet Carriers |-----
+-----+

Japan's first carriers were built on the hulls of heavy cruisers. Since the treaty limit only was strict concerning warships such as battleships and cruisers, the Japanese were able to build carriers at will. By the time World War 2 started, the Japanese were masters of carrier warfare and dispelled most myths of other warship superiority.

/=====\
| 15.2.1.1 Akagi Class |-----
\=====/

Date First Ship Commissioned: April 1925

Length : 855
Beam : 102
Draft : 29
Displacement : 36,500
Speed : 31
Primary Guns : 6 x 8 inch 50 cal guns in six turrets (one gun per turret).
Secondary Guns: 12 x 4.7 inch guns in six turrets (one pair per turret).
Armor : 10 inch belt and 1 inch decks.
Hanger : 90
Complement : 2000

/=====\
| 15.2.1.2 Hiryu Class |-----
\=====/

Date First Ship Commissioned: November 1937

Length : 746
Beam : 73
Draft : 26
Displacement : 17,300
Speed : 34.3
Primary Guns : 12 x 5 inch guns in six turrets (one pair per turret).
Secondary Guns: NONE
Armor : 3.5 inch belt and 1 inch decks.
Hanger : 73
Complement : 1101

/=====
| 15.2.1.3 Junyo Class |-----
\=====

Date First Ship Commissioned: June 1941

Length : 719
Beam : 88
Draft : 27
Displacement : 24,140
Speed : 25.5
Primary Guns : 12 x 5 inch guns in six turrets (one pair per turret).
Secondary Guns: NONE
Armor :
Hanger : 53
Complement : 1224

/=====
| 15.2.1.4 Kaga Class |-----
\=====

Date First Ship Commissioned: March 1928

Length : 812
Beam : 106
Draft : 31
Displacement : 27,470
Speed : 27.5
Primary Guns : 10 x 8 inch 50 cal guns in ten turrets (one gun per turret).
Secondary Guns: 16 x 5 inch guns located in eight turrets (one pair per turret).
Armor : 11 inch belt and 1 inch decks.
Hanger : 90
Complement : 2016

/=====
| 15.2.1.5 Shinano Class |-----
\=====

Date First Ship Commissioned: Converted October 1944

Length : 872
Beam : 119
Draft : 34
Displacement : 62,000
Speed : 27

Primary Guns : 16 x 5 inch guns in eight turrets (one pair per turret).
Secondary Guns: NONE
Armor : 8.1 inch belt and 3.1 inch decks.
Hanger : 47
Complement : 2400

/=====
| 15.2.1.6 Shokaku Class |-----
\=====

Date First Ship Commissioned: June 1939

Length : 844
Beam : 85
Draft : 29
Displacement : 25,675
Speed : 34.2
Primary Guns : 16 x 5 inch guns in eight turrets (one pair per turret).
Secondary Guns: NONE
Armor : 1.8 inch belt and 3.9 inch decks.
Hanger : 84
Complement : 1660

/=====
| 15.2.1.7 Soryu Class |-----
\=====

Date First Ship Commissioned: December 1935

Length : 747
Beam : 69
Draft : 25
Displacement : 15,900
Speed : 34.5
Primary Guns : 12 x 5 inch guns in six turrets (one pair per turret).
Secondary Guns: NONE
Armor : 1.8 inch belt and 1 inch decks.
Hanger : 71
Complement : 1100

/=====
| 15.2.1.8 Taiho Class |-----
\=====

Date First Ship Commissioned: April 1943

Length : 855
Beam : 91
Draft : 32
Displacement : 29,300
Speed : 33.3
Primary Guns : 12 x 3.9 inch guns in six turrets (one pair per turret).
Secondary Guns: NONE
Armor : 2.2 inch belt and 3.1 inch decks.
Hanger : 84
Complement : 1751

/=====
| 15.2.1.9 Unryu Class |-----
\=====

Date First Ship Commissioned: September 1943

Length : 746
Beam : 72
Draft : 26
Displacement : 22,800
Speed : 34
Primary Guns : 12 x 5 inch guns in six turrets (one pair per turret).
Secondary Guns: NONE
Armor : 1.8 inch belt and 1 inch decks.
Hanger : 65
Complement : 1595

+-----+
| 15.2.2 Light Carriers |-----
+-----+

To stretch their meager resources even further, the Japanese also designed and launched light carriers to supplement the fleet carriers. It was a Japanese light carrier that became the first "carrier" kill for the Americans.

/=====\
| 15.2.2.1 Chitose Class |-----
\=====/

Date First Ship Commissioned: November 1936

Length : 631
Beam : 68
Draft : 25
Displacement : 11,190
Speed : 28.9
Primary Guns : 8 x 5 inch guns in four turrets (one pair per turret).
Secondary Guns: NONE
Armor :
Hanger : 30
Complement : 800

/=====\
| 15.2.2.2 Hosho Class |-----
\=====/

Date First Ship Commissioned: November 1921

Length : 541
Beam : 59
Draft : 20
Displacement : 27,470
Speed : 25
Primary Guns : 4 x 5.5 inch, 55 cal in four turrets (one pair per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 2 x 3.1 inch guns.
Armor :
Hanger : 26
Complement : 550

/=====\
| 15.2.2.3 Ryuho Class |-----
\=====/

Date First Ship Commissioned: November 1933

Length : 707
Beam : 64
Draft : 22
Displacement : 13,360
Speed : 26.5
Primary Guns : 8 x 5 inch guns in four turrets (one pair per turret).
Secondary Guns: NONE
Armor : 0.4 inch decks
Hanger : 31
Complement : 989

/=====
| 15.2.2.4 Ryujo Class |-----
\=====

Date First Ship Commissioned: April 1931

Length : 590
Beam : 68
Draft : 23
Displacement : 10,600
Speed : 29
Primary Guns : 12 x 5 inch guns in six turrets (one pair per turret).
Secondary Guns: NONE
Armor :
Hanger : 48
Complement : 924

/=====
| 15.2.2.5 Shinyo Class |-----
\=====

Date First Ship Commissioned: December 1934

Length : 621
Beam : 84
Draft : 27
Displacement : 17,500
Speed : 22
Primary Guns : 8 x 5 inch guns in four turrets (one pair per turret).
Secondary Guns: NONE
Armor :
Hanger : 33
Complement : 942

/=====
| 15.2.2.6 Zuiho Class |-----
\=====

Date First Ship Commissioned: June 1936

Length : 671
Beam : 60
Draft : 22
Displacement : 11,262
Speed : 28
Primary Guns : 8 x 5 inch guns in four turrets (one pair per turret).

Secondary Guns: NONE
Armor :
Hanger : 30
Complement : 785

+-----+
| 15.2.3 Battleships |-----
+-----+

Japan caught up fast with the world in the realm of battleships. Many Japanese admirals still believed the battleship to be the king of the sea. After Pearl Harbor, many of these admirals were replaced by the carrier admirals. Japan is also noted as being the only nation to construct two battleships that incorporated the 18-inch gun. Unfortunately, they never really got to test these ships in combat since carrier aircraft sank them both.

/=====\
| 15.2.3.1 Fuso Class |-----
\=====/

Date First Ship Commissioned: March 1914

Length : 665
Beam : 94
Draft : 29
Displacement : 30,600
Speed : 22.5
Primary Guns : 12 x 14 inch, 45 cal in six turrets (one pair per turret).
Three turrets in the bow and three turrets in the stern.
Secondary Guns: 16 x 6 inch guns and six 21 inch torpedo tubes.
Armor : 12-4 inch belt, 12-8 inch turrets, 3-1.2 inch decks.
Complement : 1193

/=====\
| 15.2.3.2 Ise Class |-----
\=====/

Date First Ship Commissioned: November 1916

Length : 675
Beam : 94
Draft : 29
Displacement : 31,260
Speed : 23
Primary Guns : 12 x 15 inch, 45 cal in six turrets (one pair per turret).
Two turrets in the bow, two turrets in the stern, and two turrets amidships.
Secondary Guns: 20 x 5.5 inch guns and six 21 inch torpedo tubes.
Armor : 12-4 inch belt, 12-8 inch turret, 2.2-1.3 inch decks.
Complement : 1360

/=====\
| 15.2.3.3 Kongo Class |-----
\=====/

Date First Ship Commissioned: May 1912

Length : 704
Beam : 92
Draft : 28

Displacement : 27,500
Speed : 27.5
Primary Guns : 8 x 14 inch, 45 cal in four turrets (one pair per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 16 x 6 inch guns and eight 21 inch torpedoes.
Armor : 8-3 inch belt, 9 inch turret, 2.3-1.6 inch decks.
Complement : 1201

/=====\
| 15.2.3.4 Nagato Class |-----
\=====/

Date First Ship Commissioned: November 1919

Length : 700
Beam : 95
Draft : 30
Displacement : 33,800
Speed : 26.5
Primary Guns : 8 x 16 inch, 45 cal in four turrets (one pair per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 20 x 5.5 inch guns and eight 21 inch torpedo tubes.
Armor : 12-4 inch belt, 12 inch turret faces, 3-1.5 inch decks.
Complement : 1333

/=====\
| 15.2.3.5 Yamato Class |-----
\=====/

Date First Ship Commissioned: August 1940

Length : 839
Beam : 121
Draft : 34
Displacement : 62,315
Speed : 27
Primary Guns : 9 x 18.1 inch 45 cal guns in three turrets (three guns per
turret). Two turrets in the bow and one turret in the stern.
Secondary Guns: 12 x 6.1 inch guns located in four turrets around the ship
(three guns per turret).
Armor : 16.1 inch belt, 25.6-7.6 inch turrets, 9.1 inch decks.
Complement : 2500

+-----+
| 15.2.4 Heavy Cruisers |-----
+-----+

Japanese heavy cruisers were mainly used with the battleships to provide support to the carriers. In addition, they were used for surface battles.

/=====\
| 15.2.4.1 Aoba Class |-----
\=====/

Date First Ship Commissioned: September 1926

Length : 607
Beam : 52
Draft : 19
Displacement : 7,100

Speed : 34.5
Primary Guns : 6 x 8 inch 50 cal guns in three turrets (one pair per turret).
Two turrets in the bow and one turret is in the stern.
Secondary Guns: 4 x 4.7 inch guns located in four turrets around the ship
(one gun per turret).
Armor : 3 inch belt and 1.4 inch decks.
Complement : 625

/=====\
| 15.2.4.2 Furutaka Class |-----
\=====/

Date First Ship Commissioned: February 1925

Length : 607
Beam : 52
Draft : 18
Displacement : 7,100
Speed : 34.5
Primary Guns : 6 x 8 inch 50 cal guns in six turrets (one gun per turret).
Three turrets in the bow and three turrets in the stern.
Secondary Guns: 4 x 3 inch guns located in four turrets around the ship (one
gun per turret).
Armor : 3 inch belt and 1.4 inch decks.
Complement : 625

/=====\
| 15.2.4.3 Mogami Class |-----
\=====/

Date First Ship Commissioned: March 1934

Length : 661
Beam : 59
Draft : 18
Displacement : 8,500
Speed : 37
Primary Guns : 15 x 6.1 inch 60 cal guns in five turrets (three guns per
turret). Three turrets are in the bow and two turrets are in
the stern.
Secondary Guns: 8 x 5 inch guns located in four turrets around the ship (one
pair per turret).
Armor : 3.9 inch belt, 1 inch turrets, 2.4-1.4 inch decks.
Complement : 850

/=====\
| 15.2.4.4 Nachi Class |-----
\=====/

Date First Ship Commissioned: July 1929

Length : 668
Beam : 57
Draft : 19
Displacement : 10,000
Speed : 35.5
Primary Guns : 10 x 8 50 cal guns in five turrets (two guns per
turret). Three turrets are in the bow and two turrets are in
the stern.
Secondary Guns: 6 x 4.7 inch guns located in six turrets around the ship

(one gun per turret).

Armor : 3.9 inch belt, 1 inch turrets, 1.4 inch decks.
Complement : 773

/=====\
| 15.2.4.5 Takao Class |-----
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/=====\
| 15.2.4.6 Tone Class |-----
\=====/
Date First Ship Commissioned: May 1930

Length : 668
Beam : 59
Draft : 20
Displacement : 9,850
Speed : 35.5
Primary Guns : 10 x 8 inch 50 cal guns in five turrets (one pair per turret).
Three turrets are in the bow and two turrets are in the stern.
Secondary Guns: 4 x 4.7 inch guns located in four turrets around the ship (one gun per turret).
Armor : 3.9 inch belt, 1 inch turrets, 1.4 inch decks.
Complement : 773

/=====\
| 15.2.4.6 Tone Class |-----
\=====/
Date First Ship Commissioned: November 1937

Length : 661
Beam : 61
Draft : 21
Displacement : 11,215
Speed : 35
Primary Guns : 8 x 8 inch 50 cal guns in four turrets (one pair per turret).
Four turrets are in the bow.
Secondary Guns: 8 x 5 inch guns located in four turrets (one pair per turret).
Armor : 3.9 inch belt, 1 inch turrets, 2.5-1.2 inch decks.
Complement : 850

+-----+
| 15.2.5 Light Cruisers |-----
+-----+

The Japanese used these as "first strike" ships. Due to superior night fighting skills at the beginning of the war, the Japanese enjoyed a great advantage in using light cruisers and destroyers to ambush enemy ships. Later in the war, light cruisers were used as the command ship for squadrons of destroyers: Usually on anti-submarine missions.

/=====\
| 15.2.5.1 Agano Class |-----
\=====/
Date First Ship Commissioned: October 1941

Length : 571
Beam : 50
Draft : 19
Displacement : 6,652
Speed : 35

Primary Guns : 6 x 6 inch 50 cal guns in three turrets (one pair per turret).
Two turrets in the bow and one turret in the stern.
Secondary Guns: 4 x 3 inch guns and 2 x 4 24 inch torpedo tubes.
Armor : 2.2 inch belt, 1 inch turrets, .7 inch decks.
Complement : 730

/=====
| 15.2.5.2 Kuma Class |-----
\=====

Date First Ship Commissioned: July 1919

Length : 532
Beam : 47
Draft : 16
Displacement : 5,500
Speed : 36
Primary Guns : 7 x 5.5 inch, 50 cal in five turrets (one gun per turret).
Four turrets are in the bow and three turrets are in the stern.
Secondary Guns: 2 x 3.1 inch guns and 4 x 2 21 inch torpedoes.
Armor : 2.5 inch belt, 1.3 inch decks.
Complement : 450

/=====
| 15.2.5.3 Nagara Class |-----
\=====

Date First Ship Commissioned: April 1921

Length : 532
Beam : 47
Draft : 16
Displacement : 5,570
Speed : 36
Primary Guns : 7 x 5.5 inch, 50 cal in five turrets (one gun per turret).
Four turrets are in the bow and three turrets are in the stern.
Secondary Guns: 2 x 3.1 inch guns and 4 x 2 24 inch torpedoes.
Armor : 2.5 inch belt, 1.3 inch decks.
Complement : 450

/=====
| 15.2.5.4 Oyodo Class |-----
\=====

Date First Ship Commissioned: April 1942

Length : 630
Beam : 55
Draft : 20
Displacement : 8,164
Speed : 35
Primary Guns : 6 x 6 inch 60 cal guns in two turrets (three guns per turret).
Three turrets are in the bow.
Secondary Guns: 8 x 3.9 inch guns located in four turrets (two guns per turret).
Armor : 2 inch belt, 1 inch turrets, 1.4 inch decks.
Complement :

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/=====\  
| 15.2.5.5 Sendai Class |-----  
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Date First Ship Commissioned: March 1924

Length : 534
Beam : 48
Draft : 16
Displacement : 5,195
Speed : 35.2
Primary Guns : 7 x 5.5 inch 50 cal guns in seven turrets (one gun per turret). Four turrets are in the bow and three turrets are in the stern.
Secondary Guns: 2 x 3 inch guns located in two turrets (one gun per turret) and 4 x 2 24 inch torpedo tubes.
Armor : 2.5 inch belt and 1.1 inch decks.
Complement : 450

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/=====\  
| 15.2.5.6 Tenryu Class |-----  
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Date First Ship Commissioned: March 1918

Length : 468
Beam : 41
Draft : 13
Displacement : 3,498
Speed : 33
Primary Guns : 4 x 5.5 inch, 50 cal in four turrets (one gun per turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 3 x 3.1 inch guns and 2 x 3 21 inch torpedoes.
Armor : 2 inch belt, 1 inch decks.
Complement : 327

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/=====\  
| 15.2.5.7 Yubari Class |-----  
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Date First Ship Commissioned: March 1923

Length : 455
Beam : 40
Draft : 12
Displacement : 2,890
Speed : 35.5
Primary Guns : 6 x 5.5 inch 50 cal guns. Four guns arranged in two turrets (two guns per turret) and two guns arranged in two turrets (one gun per turret). Two double-gun turrets are in the bow and two single-gun turrets are in the stern.
Secondary Guns: 1 x 3 inch gun and 2 x 2 24 inch torpedo tubes.
Armor : 2.3 inch belt and 1 inch decks.
Complement : 328

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+-----+  
| 15.2.6 Destroyers |-----  
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Heavily used at the beginning of the war for recon and for disrupting enemy

fleets. Utilizing the "Long Lance" torpedo, destroyers proved to be extremely deadly. As the war progressed, destroyers were pressed more into becoming escorts and also "supply" ships to the outer parts of the Japanese empire.

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/=====\  
| 15.2.6. 1 Akatsuki Class |-----  
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Date First Ship Commissioned: May 1932

Length : 371
Beam : 34
Draft : 11
Displacement : 1,680
Speed : 38
Primary Guns : 6 x 5 inch, 50 cal in three turrets (two guns per turret).
Two turrets in the bow and two turrets in the stern.
Secondary Guns: 3 x 3 24 inch torpedoes, depth charges.
Armor :
Complement : 197

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/=====\  
| 15.2.6. 2 Akitsuki Class |-----  
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Date First Ship Commissioned: July 1941

Length : 440
Beam : 38
Draft : 14
Displacement : 2,701
Speed : 33
Primary Guns : 8 x 3.9 inch 65 cal guns in four turrets (one pair per
turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 1 x 4 24 inch torpedo tubes, depth charges.
Armor :
Complement : 300

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/=====\  
| 15.2.6. 3 Akizuki Class |-----  
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Date First Ship Commissioned: 1942

Length : 440
Beam : 38
Draft : 14
Displacement : 2,700
Speed : 33
Primary Guns : 8 x 3.9 inch 65 cal guns in four turrets (one pair per
turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 1 x 4 24 inch torpedo tubes, depth charges.
Armor :
Complement : 263

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/=====\  
| 15.2.6. 4 Asashio Class |-----  
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Date First Ship Commissioned: December 1936

Length : 388
Beam : 34
Draft : 12
Displacement : 1,961
Speed : 35
Primary Guns : 6 x 5 inch 50 cal in three turrets (one pair per turret). One turret in the bow and two turrets in the stern.
Secondary Guns: 2 x 4 24 inch torpedo tubes, depth charges.
Armor :
Complement : 200

/=====\
| 15.2.6. 5 Fubuki Class |-----
\=====/

Date First Ship Commissioned: September 1927

Length : 389
Beam : 34
Draft : 11
Displacement : 1,750
Speed : 38
Primary Guns : 6 x 5 inch 50 cal in three turrets (one pair per turret). One turret in the bow and two turrets in the stern.
Secondary Guns: 3 x 3 24 inch torpedo tubes, depth charges.
Armor :
Complement : 197

/=====\
| 15.2.6. 6 Hatsuharu Class |-----
\=====/

Date First Ship Commissioned: December 1932

Length : 359
Beam : 33
Draft : 10
Displacement : 1,490
Speed : 36.5
Primary Guns : 5 x 5 inch 50 cal guns. Four guns arranged in two turrets (two guns per turret) and one gun arranged in one turret (one gun per turret). One double-gun turret is in the bow and one double-gun turret is in the stern along with a single-gun turret.
Secondary Guns: 3 x 3 24 inch torpedo tubes, depth charges.
Armor :
Complement : 200

/=====\
| 15.2.6. 7 Kagero Class |-----
\=====/

Date First Ship Commissioned: June 1938

Length : 389
Beam : 35
Draft : 12
Displacement : 2,033

Speed : 35
Primary Guns : 6 x 5 inch 50 cal in three turrets (one pair per turret). One turret in the bow and two turrets in the stern.
Secondary Guns: 2 x 4 24 inch torpedo tubes, depth charges.
Armor :
Complement : 240

/=====\
| 15.2.6. 8 Kamikaze Class |-----
\=====/

Date First Ship Commissioned: September 1922

Length : 320
Beam : 30
Draft : 10
Displacement : 1,400
Speed : 35
Primary Guns : 4 x 4.7 inch, 45 cal four turrets (one gun per turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 3 x 2 21 inch torpedoes, depth charges.
Armor :
Complement : 148

/=====\
| 15.2.6. 9 Mutsuki Class |-----
\=====/

Date First Ship Commissioned: June 1925

Length : 328
Beam : 20
Draft : 10
Displacement : 1,315
Speed : 37.2
Primary Guns : 4 x 4.7 inch 50 cal in four turrets (one gun per turret). Two turrets in the bow and two turrets in the stern.
Secondary Guns: 2 x 3 24 inch torpedo tubes, depth charges.
Armor :
Complement : 150

/=====\
| 15.2.6.10 Shiratsuyu Class |-----
\=====/

Date First Ship Commissioned: April 1935

Length : 352
Beam : 33
Draft : 12
Displacement : 1,685
Speed : 34
Primary Guns : 5 x 5 inch 50 cal guns. Four guns arranged in two turrets (two guns per turret) and one gun arranged in one turret (one gun per turret). One double-gun turret is in the bow and one double-gun turret is in the stern along with a single-gun turret.
Secondary Guns: 2 x 4 24 inch torpedo tubes, depth charges.
Armor :
Complement : 180

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/=====\  
| 15.2.6.11  Yugumo Class |-----  
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Date First Ship Commissioned: March 1941

Length : 391
Beam : 35
Draft : 12
Displacement : 2,077
Speed : 35
Primary Guns : 6 x 5 inch 50 cal in three turrets (one pair per turret). One turret in the bow and two turrets in the stern.
Secondary Guns: 2 x 4 24 inch torpedo tubes, depth charges.
Armor :
Complement : 228

```
+-----+  
| 15.2.7  Submarines |-----  
+-----+
```

The Japanese never invested heavily into their submarine fleet. What they did have, they used more as support ships such as recon and to do supply runs. Some of the Japanese submarines that were put out for battle didn't do too bad. They managed to sink a few ships and cause America to take notice. Overall, though, the Japanese squandered their submarine fleet and didn't use it to its fullest extent.

```
/=====\  
| 15.2.7.1  A1 Class |-----  
\=====/
```

Date First Ship Commissioned: May 1939

Length : 373
Beam : 31
Draft : 18
Displacement : 2,434
Speed : 23.5 surface/8 underwater
Primary Guns : Primary Guns : Six 21 inch torpedo tubes.
Secondary Guns: 1 x 5.5 inch deck gun.
Armor :
Complement : 114

```
/=====\  
| 15.2.7.2  B1 and B3 Class |-----  
\=====/
```

Date First Ship Commissioned: March 1939

Length : 357
Beam : 31
Draft : 7
Displacement : 2,140
Speed : 23.6 surface/8 underwater
Primary Guns : 6 x 21 inch torpedo tubes.
Secondary Guns: 1 x 1.5 inch deck gun.
Armor :
Complement : 101

/=====\
| 15.2.7.3 J1 Class |-----
\=====/
Date First Ship Commissioned: October 1924

Length : 312
Beam : 30
Draft : 16
Displacement : 1,970
Speed : 18 surface/8 underwater
Primary Guns : Six 21 inch torpedo tubes.
Secondary Guns: 2 x 5.5 inch deck guns.
Armor :
Complement : 92

/=====\
| 15.2.7.4 J3 Class |-----
\=====/
Date First Ship Commissioned: July 1935

Length : 359
Beam : 30
Draft : 17
Displacement : 2,231
Speed : 23 surface/8 underwater
Primary Guns : Six 21 inch torpedo tubes.
Secondary Guns: 1 x 5.5 inch deck gun.
Armor :
Complement : 100

/=====\
| 15.2.7.5 KD3A Class |-----
\=====/
Date First Ship Commissioned: March 1928

Length : 330
Beam : 26
Draft : 16
Displacement : 1,635
Speed : 20 surface/8 underwater
Primary Guns : Eight 21 inch torpedo tubes.
Secondary Guns: 1 x 4.7 inch deck gun.
Armor :
Complement : 64

/=====\
| 15.2.7.6 KD6A Class |-----
\=====/
Date First Ship Commissioned: March 1937

Length : 345
Beam : 27
Draft : 15
Displacement : 1,420
Speed : 23 surface/8.2 underwater

Primary Guns : Six 21 inch torpedo tubes.
 Secondary Guns: 1 x 4.7 inch deck gun.
 Armor :
 Complement : 84

```

/=====\  

| 15.2.7.7 KRS Class |-----  

\=====/  


```

Date First Ship Commissioned: March 1926

Length : 279
 Beam : 25
 Draft : 15
 Displacement : 1,768
 Speed : 14.5 surface/7 underwater
 Primary Guns : Four 21 inch torpedo tubes.
 Secondary Guns: 1 x 4.7 inch deck gun.
 Armor :
 Complement : 70

```

+=====+  

| 16. RESEARCH AND DEVELOPMENT |=====+  

+=====+  


```

Bravery and guts aren't always enough when you are at war. Technology plays a big part in who will get the edge. This was proven time and time again during World War 2 when the Allies or Japanese would surprise each other with some "wonder" weapon that was previously unknown. Of course, you must pay a price to move along the "technological ladder" if you want to either keep up or move ahead of the other countries.

Technology in PTO is pretty straightforward. Certain abilities must be above a specific number in order for you to gain a specific technology. Sometimes these technologies require you to have more than one ability above a specific number.

Below are the technologies in alphabetical order and the ability requirements for each:

TECHNOLOGY	REQUIREMENTS
ADVANCED WARSHIPS	ART > 79, STEL > 79, ENG > 79, ELCT > 79
JETS	AIR > 94
LONG-RANGE BOMBERS	AIR > 79
RADAR, GUNNERY	ELCT > 79 OR AV > 79
RADAR, SEARCH	ELCT > 79 OR AV > 79
ROCKETS	AIR > 80, ELCT > 80

```

+=====+  

| 17. DESIGNING AND REMODELING SHIPS 101 |=====+  

+=====+  


```

One of the more fun aspects of PTO is being able to remodel or design your ships. There are pros and cons to doing either.

Modifying usually takes less money, resources, and time but you are restricted to the base type of ship you are modifying or you are limited to what you can convert a ship to. This also applies to doing a total repair on a ship.

Designing usually takes more money, resources, and time but you can choose any type of ship to build.

Whichever way you go, there are some things that you must know before creating new classes of ships. These things involve weaponry, armor protection, aircraft, anti-air ability, etc. The ship you create probably has come about due to a need requiring fulfillment or for a ship that seems fit in with the scheme of your fleet.

The next few chapters will be divided up according to each part of the ship you will be building or modifying. Before you dive headlong into this process, you should go through these simple steps to make sure you aren't creating something that already exists or something that will strain your time, resources, or money to the breaking point.

- Determine exactly what the purpose of the ship is. Remember, you can only have 150 ships if you are the Allies or 120 ships if you are the Japanese. a ship.
- Once you have determined the purpose, next you need to decide what has to be put into the ship class to enable it to fulfill that purpose.
- Determine your resources, money, and time. If any of these is in short supply, I would recommend waiting for another ship type to show up.
- Make sure you fully understand what you are creating from all aspects. It is great to have ship with massive anti-ship or anti-air capability. If, though, you traded that kind of power for speed or defense, you may want to rethink the reason you want a new type of ship.

/ 17.1 Weapons /

All ships have weapons of some sort to provide both offensive and defensive capabilities. The type of ship will determine what kinds of weapon systems can be installed. Some of the different weapon systems include guns, anti-aircraft guns, and planes).

Each of the weapon systems contribute in some way to the overall characteristics of the type of ship. Research contributes in improving either the weapon itself or the effectiveness of said weapon. The higher your Artillery ability, the more guns you can put on your ship.

In addition to Artillery ability, the type of ship also determines the number of guns you can have. Below is a chart showing the range for the number of guns you can have on each ship type. This is based on an Artillery ability of 99. In addition, you will see a column for TOTAL ALLOWED number. This means that you cannot exceed the total allowed number of guns when you add your AA gun number to your AS gun number:

LEGEND: SHIP = SHIP TYPE; AS = # OF ANTI-SHIP GUNS; AA = # OF ANTI-AIR GUNS;

TA = TOTAL GUNS ALLOWED

SHIP	AS	AA	TA	SHIP	AS	AA	TA
CV	0 - 14	0 - 29	34	SUB	0 - 11	0 - 0	11
CVL	0 - 11	0 - 24	28	NCV	0 - 14	0 - 66	66
DBB	0 - 99	0 - 99	198	NBB	0 - 99	0 - 99	158
BB	0 - 69	0 - 79	118	NC	0 - 69	0 - 99	134
C	0 - 39	0 - 79	94	NDD	0 - 39	0 - 99	110
DD	0 - 14	0 - 21	28	NSUB	0 - 11	0 - 99	11

/ 17.2 Armor and Speed /

If your ships are going to survive the war, they will need to have adequate armor to protect them. Of course, you must make the trade-off between Armor and Speed. The Steel ability enables you to increase your armored protection while your Engineering ability allows you to make better engines.

In addition to Steel and Engineering ability, the type of ship also determines the amount of Armor and maximum Speed your engines can provide. Below is a chart showing the range for the amount of Armor you can have and the maximum speed your engines will provide. This is based on Steel and Engineering abilities of 99. In addition, you will see a column for TOTAL ALLOWED number. This means that you cannot exceed the total amount of Armor and Speed when you add your Armor number to your Speed number:

LEGEND: SHIP = SHIP TYPE; AR = AMOUNT OF ARMOR; SP = SPEED OF SHIP;
TA = TOTAL ARMOR & SPEED ALLOWED

SHIP	AR	SP	TA	SHIP	AR	SP	TA
CV	1 - 29	5 - 56	68	SUB	1 - 9	5 - 25	27
CVL	1 - 19	5 - 56	60	NCV	1 - 69	5 - 63	105
DBB	1 - 99	5 - 40	139	NBB	1 - 99	5 - 63	129
BB	1 - 83	5 - 47	104	NC	1 - 69	5 - 63	105
C	1 - 46	5 - 56	81	NDD	1 - 39	5 - 63	81
DD	1 - 16	5 - 62	63	NSUB	0 - 39	5 - 63	81

/ 17.3 Aircraft /

Most every ship in PTO can carry aircraft. Only CV's and CVL's can carry fighters and bombers (in addition to scouts). All other ships can only carry scouts. If you choose to convert a ship to fire rockets, then the numbers reflect the maximum amount of rockets you could equip your ship with. Below is a chart outlining how many aircraft or rockets (maximum) each ship can possibly carry:

LEGEND: SHIP = SHIP TYPE; HS = HANGER SPACE

```

+-----+-----+-----+-----+
| SHIP | HS || SHIP | HS |
+-----+-----+-----+-----+
|  CV  | 80 || SUB  |  0 |
+-----+-----+-----+-----+
|  CVL | 50 || NCV  | 99 |
+-----+-----+-----+-----+
|  DBB |  6 || NBB  | 16 |
+-----+-----+-----+-----+
|   BB |  4 ||  NC  | 11 |
+-----+-----+-----+-----+
|    C | 11 || NDD  |  0 |
+-----+-----+-----+-----+
|   DD |  0 || NSUB |  3 |
+-----+-----+-----+-----+

```

/ 17.4 Putting It All Together /

Once you have decided on the type of ship you are going to build, it is now time to determine the characteristics of said ship. Each ship has a base material cost. Adding an AA gun, AS gun, Armor, Speed, and/or hanger space for one plane costs you one unit of material.

Adding Gunnery or Search Radar will cost you 15 units of material per radar type.

In addition to material, each ship has a cost in Fuel and Industry. The faster you want you ship built means more Industry gets expended. These numbers change depending on whether you are building a new ship or whether you are modifying an existing ship. Thesethings are discussed in the next two sub-chapters.

```

+-----+
| 17.4.1 Building a New Ship |-----+
+-----+

```

Below is a chart showing the cost to build each type of ship. This chart refers to a basic ship that only has minimal things such as AA and AS guns = 0, Armor = 1, Speed = 5, and Hanger Space = 0. Also, the ship doesn't have Jets, Rockets, Gunnery Radar, or Search Radar selected. In addition, the chart shows the various industry consumption rates depending on how fast you want the ship built.

LEGEND: M = BASE MATERIAL REQUIRED; F = BASE FUEL REQUIRED

```

+-----+-----+-----+-----+-----+-----+-----+-----+
|          | INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS) |
| BUILD   | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

```

CV	800	685	600	533	480	436	400	369	342	320
M:	18	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)								
F:	20,000	16	17	18	19	20	21	22	23	24
		300	282	266	252	240	228	218	208	200

BUILD	6	7	8	9	10	11	12	13	14	15
M:	16	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)								
F:	8,000	16	17	18	19	20	21	22	23	24
		120	112	106	101	96	91	87	83	80

BUILD	6	7	8	9	10	11	12	13	14	15
M:	14	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)								
F:	32,000	16	17	18	19	20	21	22	23	24
		480	451	426	404	384	365	349	333	320

BUILD	6	7	8	9	10	11	12	13	14	15
M:	12	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)								
F:	20,000	16	17	18	19	20	21	22	23	24
		300	282	266	252	240	228	218	208	200

BUILD	6	7	8	9	10	11	12	13	14	15
M:	10	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)								
F:	7,000	16	17	18	19	20	21	22	23	24
		105	98	93	88	84	80	76	73	70

INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)											
BUILD	6	7	8	9	10	11	12	13	14	15	
DD	120	102	90	80	72	65	60	55	51	48	
M: 8	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)										
F: 3,000	16	17	18	19	20	21	22	23	24		
	45	42	40	37	36	34	32	31	30		

INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)											
BUILD	6	7	8	9	10	11	12	13	14	15	
SUB	120	102	90	80	72	65	60	55	51	48	
M: 6	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)										
F: 3,000	16	17	18	19	20	21	22	23	24		
	45	42	40	37	36	34	32	31	30		

INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)											
BUILD	6	7	8	9	10	11	12	13	14	15	
NCV	400	342	300	266	240	218	200	184	171	160	
M: 19	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)										
F: 10,000	16	17	18	19	20	21	22	23	24		
	150	141	133	126	120	114	109	104	100		

INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)											
BUILD	6	7	8	9	10	11	12	13	14	15	
NBB	400	342	300	266	240	218	200	184	171	160	
M: 15	INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)										
F: 10,000	16	17	18	19	20	21	22	23	24		
	150	141	133	126	120	114	109	104	100		

INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)											
BUILD	6	7	8	9	10	11	12	13	14	15	
NC	140	120	105	93	84	76	70	64	60	56	

		INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)									
M:	11										
F:	3,500	16	17	18	19	20	21	22	23	24	
		52	49	46	44	42	40	38	36	35	

		INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)									
BUILD		6	7	8	9	10	11	12	13	14	15
NDD		60	51	45	40	36	32	30	27	25	24

		INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)									
M:	9										
F:	1,500	16	17	18	19	20	21	22	23	24	
		22	21	20	18	18	17	16	15	15	

		INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)									
BUILD		6	7	8	9	10	11	12	13	14	15
NSUB		60	51	45	40	36	32	30	27	25	24

		INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)									
M:	7										
F:	1,500	16	17	18	19	20	21	22	23	24	
		22	21	20	18	18	17	16	15	15	

17.4.2 Modifying an Existing Ship

Below is a chart showing the cost to modify some types of ships. In addition, it also shows the various industry consumption rates depending on how fast you want the conversion done.

LEGEND: M = MATERIAL REQUIRED; F = FUEL REQUIRED

		INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)									
CONVERSION		3	4	5	6	7	8	9	10	11	12
CV -> BB		280	210	168	140	120	105	93	84	76	70
M:	120										
F:	7,000										

		INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS)									
CONVERSION		3	4	5	6	7	8	9	10	11	12
CVL -> C		120	90	72	60	51	45	40	36	32	30

```

| M:    60 |
|        |
| F:  3,000 |
+-----+

```

```

+-----+-----+
|          | INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS) |
| CONVERSION | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
+-----+-----+
| DBB -> CV | 280 | 210 | 168 | 140 | 120 | 105 | 93 | 84 | 76 | 70 |
|          | +-----+-----+-----+-----+-----+-----+-----+
| M:    120 |
|        |
| F:  7,000 |
+-----+

```

```

+-----+-----+
|          | INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS) |
| CONVERSION | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
+-----+-----+
| BB -> CV | 280 | 210 | 168 | 140 | 120 | 105 | 93 | 84 | 76 | 70 |
|          | +-----+-----+-----+-----+-----+-----+-----+
| M:    120 |
|        |
| F:  7,000 |
+-----+

```

```

+-----+-----+
|          | INDUSTRY REQUIRED FOR TIME TO BE COMPLETED (IN MONTHS) |
| CONVERSION | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
+-----+-----+
| C -> CVL | 120 | 90 | 72 | 60 | 51 | 45 | 40 | 36 | 32 | 30 |
|          | +-----+-----+-----+-----+-----+-----+-----+
| M:    60 |
|        |
| F:  3,000 |
+-----+

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+=====+
| 18. BASES |-----+
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In order to cripple the enemy, you must eliminate their ability to wage war. The most effective way is to cut them off from their resources. You can do this by taking their bases. By doing this, you will eventually "choke" off all resources and eliminate an enemies ability to conduct operations.

Each base has come kind of resource whether it is funds, oil, or iron. It is by a combination of the territories and the resources that a country can effectively conduct defensive or offensive operations.

Below is the data for all 50 bases in PTO:

LEGEND: FE = IRON ORE; POP = POPULATION; IND = INDUSTRY; R/S = REPAIR OR RESUPPLY**; END/ARM = ENDURANCE AND ARMS LEVEL OF THE BASE;
COORD = LOCATION OF THE BASE IN (X,Y) COORDINATES

* Bases that are homeports will have a HP after the R/S letter.
** All bases with Repair facilities can resupply.

NAME	FE	OIL	POP	IND	R/S	END/ARM	COORD
ATTU	0	0	0	0	S	10/10	1935, 153
BANDJARMASIN	7	10	2	1	S	20/20	513, 1563
BANGKOK	1	0	4	2	S	10/10	120, 1143
BIAK	0	0	0	0	S	10/10	1050, 1515
CHUNGKING	1	0	4	2	N/A	10/10	348, 768
DAIREN	0	1	3	1	S	30/10	765, 498
DAVAO	7	0	3	1	S	20/20	806, 1323
ETOROFU	0	0	1	1	S	30/30	1391, 348
GUADALCANAL	0	0	0	0	S	30/30	1683, 1713
GUAM	0	0	1	1	S	10/10	1278, 1170
HANOI	7	1	3	1	R	10/10	315, 982
HAWAII	0	0	10	12	R HP	99/99	2790, 952
HONG KONG	0	0	4	4	R	10/20	525, 911
IWO JIMA	0	0	0	0	S	20/10	1218, 828
JAKARTA	0	5	4	2	S	20/20	277, 1653
KUALA LUMPUR	5	1	4	2	S	20/20	157, 1432
KURE	0	0	8	11	R HP	99/99	1016, 618
LAE	0	1	4	12	S	20/20	1353, 1657
LOS ANGELES	15	15	10	15	R	99/99	3633, 540
MAKASSAR	0	0	1	1	S	10/10	626, 1638
MANILA	4	1	6	12	R	30/40	682, 1117
MARCUS	0	0	0	0	S	10/10	1455, 866
MARSHALL	0	0	1	1	S	30/20	1946, 1271
MIDWAY	0	0	0	0	S	20/20	2265, 761
NAHA	0	0	2	1	S	30/20	866, 840
NANKING	1	1	10	4	N/A	10/10	678, 701
NOMONHAN	1	1	3	1	N/A	10/10	720, 240
PALAU	0	0	1	1	S	10/10	1020, 1305

PEKING	3	0	10	4	N/A	20/10	641, 461
PORT MORESBY	0	1	5	12	R	20/20	1353, 1713
RABAUL	0	0	0	0	S	20/20	1492, 1605
SAIGON	1	0	5	3	R	10/10	300, 1233
SAIPAN	0	0	0	0	S	20/10	1323, 1046
SAN FRANCISCO	15	15	10	15	R	99/99	3495, 468
SANDAKAN	0	10	2	1	S	20/20	607, 1357
SASEBO	0	0	7	10	R	99/99	926, 648
SEOUL	0	0	4	2	S	30/10	855, 540
SHANGHAI	1	1	10	5	R	20/10	742, 727
SINGAPORE	6	0	3	6	S	20/20	228, 1473
SORONG	0	7	2	1	S	10/10	945, 1511
TAINAN	0	0	3	1	S	30/30	686, 933
TAIPEI	0	0	3	1	S	20/20	708, 851
TINIAN	0	0	0	0	S	10/10	1323, 1117
TOKYO	0	0	10	14	R	99/99	1200, 588
TRUK	0	0	1	1	R	40/40	1477, 1327
VLADIVOSTOK	1	1	7	3	S	30/30	1008, 405
WAKE	0	0	0	0	S	10/10	1895, 537
WUHAN	10	0	4	2	N/A	10/10	491, 727
YAP	0	0	2	1	S	10/10	1128, 1245
YOKOSUKA	0	0	5	11	R	99/99	1200, 600

***** UNIT VII *****

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| 19. CONCLUSION |=====

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PTO was one of the first war games I bought for the Sega Genesis. I was immediately impressed with the level of detail and the overall comprehensiveness of the game. Although the graphics weren't fancy, it was the gameplay that was the real joy. The game created a "fog of war" by enabling free movement across the Pacific and Indian Ocean basins. This meant you had to actively search out your opponent in order to engage them. Another

great this was being able to design and build your own ships. This added a degree of personalization to this game. In addition, no two games end up going the same way regardless of the consistent things you try to do. Conducting battles could sometimes be a real "nail-biter" even if you were fully prepared. PTO can be both a challenging and frustrating game. This is especially true if you aren't too tactically minded since this game requires one to think many moves ahead. This guide, though, was a lot of fun to write and I hope you get as much enjoyment out of reading it as I did writing it. If you do have other ideas or thoughts, please e-mail me and share them. Who knows, maybe I'll start a Q&A chapter in this guide if enough people ask the same questions. Anyway, thank you again for reading this guide.

To see other FAQ's I have written please go to:

<http://www.gamefaqs.com/features/recognition/32691.html>

~~~ No trees were harmed in the making of this FAQ ~~~

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