

# *Supremacy at Sea* - WW2

A Functional Overview



An overview of functions and screens from the forthcoming game  
*NWS: Supremacy at Sea WW2* ©

The following pages summarise the main actions and decisions that you can make on your way to victory in the new NWS computer game *Supremacy at Sea WW2* ("SAS"). The key screens that you will use are also previewed.

A separate preview of *SAS* shows two months of action from a demonstration Mediterranean Campaign. You can download this preview from <http://www.navalwarfare.info/files/SAS/SAS-MEDIA-PACK.zip>

A more detailed player manual, with full instructions, will ship with the game.

For further details of the game, including expected release date, refer to the main web page for the game at <http://www.navalwarfare.net/>

We hope you enjoy this instructional tour.

The NWS Team  
February, 2008.

Disclaimer: Actual screenshots are from a beta version of *SAS* run on a Toshiba Satellite Pro laptop with a 19 inch screen, at a resolution of 1280 \* 800 pixels, in true colour mode, with a NVIDIA GeForce Go 7600 video card. The illustrations have used cropped and sometimes resized portions of these screenshots. The released version may have slightly different screens. The appearance of the game on your computer may vary depending on the configuration and capabilities of your computer.

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## Overview

SAS re-creates the drama of conflict between the Great Naval Powers of World War 2: the United States, Japan, Great Britain, Germany, Italy and France.

The theatres include the Pacific, Atlantic and Mediterranean, plus some hypothetical maps. By selecting from campaigns provided or creating your own – varying the countries, theatres and other parameters – you can play an endless variety of historical or hypothetical wars.

As your country's Supreme Naval Commander, and the Supreme Theatre Commander in the selected theatre, you have full control over naval resources and considerable control over aircraft and troops as well.

You play for nothing less than ultimate victory or defeat. And you also play for posterity, to be remembered as the greatest Admiral of all. Your chosen opponent – another player or the computer – is playing for the same goal.

This is a game that can be played at all levels: strategic, operational, *and* tactical.

You make the biggest decisions: what ships to build, infrastructure and technologies to develop, aircraft to construct and troops to raise. Then you plan the operations that determine their deployment and rules of engagement. And as if this were not enough, you can also decide fleet tactics in response to hourly reports on enemy forces.

When surface battles occur, re-playable footage shows your ships in action as they follow your rules of engagement and fight shell by shell, torpedo by torpedo. All targeting, damage effects, flooding and ship movement are re-calculated by the minute.

Naval missions include convoys, amphibious assaults, shore bombardments, offensive and defensive patrols, blockades and interdictions, mine-laying and sweeping, and reconnaissance.

Naval forces include battleships and battle cruisers, heavy and light cruisers, destroyers, destroyer escorts, corvettes, submarines, and fleet and escort carriers. The ships are historical but include some planned but never completed – like the USS *Montana*. Best of all, with just a few mouse clicks you can modify them or *create your own*, setting size, gun calibre and number, armour, speed, range and so on. There are over *two million design possibilities*. Build battleships up to 130,000 tonnes that dwarf the *Yamato* and equal the biggest battleship ever conceived (by Germany, in its 'Z' plan)! More modestly, why not remedy some deficiencies? E.g., as the British player, you could up-gun the *King George V* class. The choices are endless, but you are always in charge.

Troop units range in size from company to army group, and have varying levels of equipment, mechanization, training and morale, thus covering the range of possible fighting capabilities.

Nearly 400 actual classes of carrier and land-based aircraft are available, including the main jet aircraft from late war and up to the late 1940s. By developing aircraft technology aggressively you can take earlier advantage of these superior aircraft. Aircraft characteristics that are modeled include firepower, bomb load, ASW detection and attack capability, maximum speed and cruising speed, endurance, ruggedness and maneuverability, plus special abilities such as carrier, night fighting and dive-bomb capable.

Behind everything lies the grim reality of your war economy, which must be sustained through production and trade. Everything has a cost. SAS models real-world constraints on your ability to wage war and in the process simulates the need to run convoys to maintain your industry, or supply your naval bases and troops in the field.

Yet this rich game play never sacrifices playability. You are ably assisted by a 2-I-C of your choice, a legendary Admiral. For example, as the American player, you can choose a Spruance, King, Halsey or Mitscher, who range in approach from very cautious to very aggressive. With a click of the mouse he can make any decision for you – such as designing your whole navy, planning a whole turn's operations or managing your budget. This frees you to concentrate on handling just the areas you are interested in or want to manage.

## Simultaneous Turn-based Action

SAS is a turn-based simulation with a difference. The moves of both sides are calculated simultaneously, instead of one after the other as in most turn-based games. This allows for 'real-time' events and tactical responses on an hourly basis, giving SAS more realism and a genuine tactical dimension. In this way, SAS has elements of real-time strategy whilst remaining turn-based to properly allow for deep strategic play.

## The Strategies

As Supreme Naval Commander, you take the big decisions. What sort of navy do you want? Big-ship heavy, balanced, or centred on the small ships - fast torpedo armed ships and submarines?

What sort of ship characteristics do you want - raiders for fast, long range hit-and-run operations; or slower, well armoured ones that can defend as well as attack?

How large a merchant fleet do you need – for trade and for transport of troops and supplies?

How many and what kind of troops do you need to raise for defensive and offensive operations? How many and what types of aircraft?

How much do you spend on other assets - port infrastructure and industry, naval intelligence, fleet training or technology, and what research priorities do you set for technology R&D?

The options are endless but your resources are not, so trade-offs are necessary.

## The Operations

You also plan the big operations. What do you want to concentrate on? Protecting the precious convoys vital to your economy, or that transport troops or the supplies they need; running offensive sorties deep into enemy territory; bombarding enemy ports; mounting amphibious assaults; conducting offensive or defensive patrols by surface ships and submarines, or mine-laying and sweeping in home or enemy waters?

These operations should be in mind when you design your ships, so that you have the capability you need. Then you assemble the ships into fleets and give them their orders.

If all this sounds daunting, remember that you can delegate key decisions to your 2-I-C and keep just the areas you want to handle. Playing the game can be as simple as you want. You can grow your areas of command as you get more experience.

## The Tactics

SAS is predominantly a strategic and operational simulation. Nevertheless, important tactical play is also supported. You can:

1. Set rules of engagement for each fleet and for each ship in a fleet. These rules dictate how eager the fleet would be to seek and stay in battle, and how much risk each ship would accept.
2. As a turn is calculated, you may optionally:
  - a. Order your fleets to avoid, shadow, intercept or ignore enemy fleets in response to new enemy intelligence. The order overrides the computer's recommendations.
  - b. Amend or cancel recommended air strikes against targets of opportunity.
3. When surface battles occur, they are calculated according to sophisticated rules that track the movement, orders, and battle condition of each ship. Every shell and torpedo hit is calculated. Minute-by-minute records are kept of damage to main turrets, superstructure, fire control, bridge, fuel spaces, machinery

spaces, main magazines, and progressive flooding and leaking from underwater belt hits and torpedo hits. *All the action is re-playable.*

Even so, for those grognards who need to be ships' captains as well as 6 star Admirals, a future release of *SAS (toward the end of 2008)* will allow linking to *NWS's* existing *Warship Combat: Dreadnoughts and Battleships (WCDB)* or up-coming *Navies at War (NAW)* titles so that battles can also be fought out with full tactical control, with the action then returning to *SAS* on battle completion.

## The Game-play

You play by making key decisions for each game turn and then letting the computer calculate the result, taking into account the enemy decisions that are executing in parallel.

During calculation, all fleet movements and events of significance are shown on the map as they occur. You can respond to enemy fleet sightings by accepting or amending emergency fleet response orders. After the turn is calculated, you can replay the whole turn and watch it all again, including watching full action replays of all surface battles.

Your opponent can be the computer, or another player via "hot-seat" play or play by email.

## Timescales

### ***Strategic Time***

Strategic time is relevant to ship construction, technology R&D and infrastructure development. At the strategic level, a turn can be set to between two weeks and six months.

As an example – if strategic time is three months per turn, it would typically take twelve turns (or three years) for a new battleship to be constructed and launched. (Ships selected at the start of a game become available immediately. Construction rates only affect ships laid down afterwards).

### ***Operational Time***

Operational time sets the amount of time in a turn for fleet movements, sightings, battles and so on. Operational time can be set to one week, two weeks or one month.

Normally, it is best for operational time to be the same as the strategic time, so everything remains 'in synch'. However, operational time can not be longer than one month or greater than the strategic time.

When operational time is less than strategic time, we have time compression. In other words, strategic events are speeded up relative to the rate at which operations occur. Players can choose this when they want a 'quick and dirty' game, where new ships enter the game at a faster rate than is historically accurate. The operational turn then becomes a representational slice of time out of the longer strategic turn.

### ***Tactical Time***

Tactical time passes in hours and minutes: tactical fleet responses can be made at an hourly level, whilst surface battles are calculated minute-by-minute.

### **Map Scales**

A campaign theatre of action can be small scale – on a small Mediterranean-sized map, or it can be much larger – similar in size to the Atlantic or even Pacific theatres.

### **Campaign 'Size'**

A campaign may commence with navies of any size: from very small, through to enormously big navies of nearly 3 million tones - with 30 or more battleships and carriers, 50 or more cruisers, and hundreds of escorts and submarines. Then, growth during the war may multiply these numbers several fold again, so you can end up commanding *extremely large* navies indeed. The only artificial limit to the size of the navies you can have is your computer's memory.

### **Playability**

Irrespective of the theatre scale and number of ships, making your decisions for a single turn can take as little as a few minutes - if you let your 2-I-C help you as much as possible. Or you can choose at any time to exercise greater hands-on control.

SAS can therefore be either a 'beer and pretzels' game, playable easily in a single sitting, or a seriously challenging game played over a longer period. The time taken will reflect how much of the decision-making you are doing, how big the game is and how easy are the starting odds.



## Winning and Losing

The odds you face are set when a new campaign is created. Each country has historical strengths and weaknesses. But these characteristics can be varied to make a harder or easier game.

Though an easier game is recommended for beginners, a harder game is more rewarding and - just as importantly - if you do well, your place in history will shine even brighter.

The game calculates your performance annually based on your relative economic success and the starting odds. In a difficult game, your mistakes are more forgiven, your victories more praised.

A campaign can be played for as long as you want until a forced end occurs.

All campaigns must end when the year gets to 1950. (Beyond that, technology changes made WW2 style naval weapons and combat outmoded).

A forced end can also happen earlier, based on your performance. In January of every year (except the first) your performance vis-à-vis the enemy is reviewed. Your *Situation Report* includes extra information about the enemy economy. This data is evaluated by your country's leader. He assesses the growth you have achieved compared to the enemy, and also accounts for the odds you faced at the start of the war.

## Key Functions

This section summarises the main actions and decisions you can take. Screen shots are shown in the next section.

As will be seen, *SAS* presents players with a very rich array of choices, at the strategic, operational and tactical levels; yet it hides unnecessary complexity and offers to simplify all major decisions with the unique '2-I-C' feature.

Select or Create Campaigns	Strategic	Operational	Tactical
Select from three historical campaigns, in the Pacific, Atlantic or Mediterranean.	•	•	
Or create your own:			
▪ Select from these 3 historical maps or from various hypothetical maps.	•		
▪ Freely choose your own side and the enemy from any of the six naval powers.	•		
▪ Set the start date anywhere between 1935 and 1945.	•		
▪ Set start levels for the economy, infrastructure (such as ports and airfields), technology (in 10 key areas), intelligence and training, for both sides.	•		
▪ Enable or disable carriers and land-based airpower.	•	•	
▪ Set ship design options:	•	•	
- Have historical ships only.	•	•	
- Include ones planned or launched but not completed (like the USS <i>Montana</i> ).	•	•	
- Include 'might-have-beens', like a 16 inch gunned up-sized <i>Richlieu</i> .		•	

- Enable the design editor, so you can modify historical designs or build your own.		•	
▪ Set the strategic turn to between 2 weeks and 6 months – longer turns accelerate game play.	•		
▪ Set the operational turn to between 1 and 4 weeks – shorter turns allow more operational control but make for longer games.		•	
▪ Set the overriding strategy for both sides or let the computer randomly choose for your opponent. Strategies range from very cautious through to very aggressive and affect the default decisions your 2-I-C makes concerning the type of navy, air force and army units you build, the missions your fleets are sent on and priorities and levels of infrastructure expenditure. <i>(Remember, these are the defaults. You can change the strategy at any time during game play, or override any default decision of your 2-I-C).</i>	•		

Construct Ships	Strategic	Operational	Tactical
Grow the available resources you have, from which you can build ships. This is the fundamental objective of the game and you do this by running convoys, investing in industry, protecting your trade routes and ports and minimizing losses, and doing all this better than the enemy!	•	•	
Within the resources available at home port each turn, allocate a proportion to ship construction. This determines at a gross level how big a navy and merchant fleet you have.	•		
Improve infrastructure at your home port to accelerate ship construction.	•		
Give more resources and/or priority to R&D in ship construction techniques, enabling ships to be built at less overall cost.	•		
Give more resources and/or priority to R&D in any of 9 other key technologies – such as armour quality, ASW weaponry or radar - to allow your ships to have more fighting capability for their given design.	•		•
Accept advice from your 2-I-C (and Director of Naval Construction) each turn on what ships to build, according to your strategy and available resources. (E.g., a very cautious strategy favours ships suited to defensive ops in home waters; a very aggressive strategy favours powerful, bigger ships suited to offensive ops far from home).	•	•	

Change your strategy, to alter the recommended mix of ships.	•	•	
Or modify the recommended plan, to most effectively and efficiently handle intended missions:			
<ul style="list-style-type: none"> <li>Add or replace with ships you have selected personally – from over 160 historical ship classes of all types.</li> </ul>	•	•	•
<ul style="list-style-type: none"> <li>Or, if this option is enabled, add or replace with ships you have <i>designed</i> personally.  (Design parameters include size, main gun calibre and number, size of the secondary/tertiary batteries, thickness of armour, overall structural strength and watertight compartmentalization, maximum speed and cruising range. Escort ships can also be general purpose, or specialist torpedo-attack, ASW, anti-aircraft or mine-laying and sweeping vessels. Submarines also have variable underwater speed.)  <i>(The design engine produces realistic results: you can not get a quart out of a pint pot. Displacement rises rapidly as more is demanded of a design).</i></li> </ul>	•	•	•

Form Fleets and give Mission Orders	Strategic	Operational	Tactical
Accept operational plans from your 2-I-C each turn that put available, fit ships into fleets and give the fleets mission orders to fulfill your overall strategy	•	•	
Or take personal control in many different ways:			
<ul style="list-style-type: none"> <li>Change the strategy to alter the recommended operational plans.</li> </ul>	•	•	
<ul style="list-style-type: none"> <li>Change the default priority order for missions for a given strategy, or delete or add mission types to the approved list.</li> </ul>		•	
<ul style="list-style-type: none"> <li>Change the default constraints that apply to particular mission types, such as rules that set minimum and optimum numbers and ratios of ship types for given missions.</li> </ul>		•	
<ul style="list-style-type: none"> <li>Set standard routes between points on the map that replace the shortest route selection the computer normally applies. Use this, for example, to force convoys to stay well clear of enemy airfields or minefields.</li> </ul>		•	

<ul style="list-style-type: none"> <li>Modify the recommended plan by adding or replacing with custom built fleets and missions where you choose:</li> </ul>			
<ul style="list-style-type: none"> <li>The ships in the fleet.</li> </ul>		•	
<ul style="list-style-type: none"> <li>The objectives (such as hexes to patrol or to lay mines, or ports to bombard or assault, or the amounts of supplies or troops to load or unload), and the route paths and speeds.</li> </ul>		•	
<ul style="list-style-type: none"> <li>The odds the fleet will accept when encountering enemy fleets.  (E.g., classic raiding fleets might typically have this set low, so that only inferior enemy will be attacked. There are many levels of odds that can be selected).</li> </ul>		•	•
<ul style="list-style-type: none"> <li>The degree of aggressiveness each ship in the fleet will display when in battle. (The default behaviour for any and all ships in the fleet can be overridden).  (E.g., ships with very aggressive orders will always try to close as fast as possible to inflict maximum damage, with little regard for their own safety, and will accept huge damage before retiring. Ships with cautious orders will try to attack from 'safe' distances – such as their own immunity zone (if they are a cruiser or battleship and have one against their targets) – and will retire when moderately damaged. There are four types of orders to select that span the range of typical tactical behaviour).</li> </ul>			•

Change Orders in Real Time	Strategic	Operational	Tactical
If you are playing against the computer, and have this option enabled, you can respond to hourly messages of enemy fleet movements:			
<ul style="list-style-type: none"> <li>Change the automated orders for selected fleets so they will intercept, shadow, avoid or ignore designated enemy fleets.</li> </ul>		•	•
<ul style="list-style-type: none"> <li>Cancel or amend recommended air strikes against enemy targets of opportunity, varying the number and mix of aircraft in the strike as well as the torpedo/bomb loads carried, depending on aircraft capability and range to target..</li> </ul>		•	•

Repair Ships	Strategic	Operational	Tactical
Damaged ships automatically return to the nearest port capable of repairs. But you can influence the efficiency of repairs by:			
▪ Improving port infrastructure at selected ports, to enable repair work and to accelerate the rate of repairs.	•		
▪ Ensuring that ports that can repair have sufficient resources to carry them out. This can be achieved by:			
- Investing in the industrial base at the relevant port to improve resource production.	•		
- Transporting sufficient raw materials and finished supplies to increase resource stocks at the port.		•	
▪ Generally, protecting your ports from enemy attack.		•	

Produce Aircraft	Strategic	Operational	Tactical
Set the aircraft production budget that controls how big an air force you have.	•		
Improve infrastructure at your airfields and/or build more carriers, allowing more aircraft to be operated.	•	•	
Give more priority and/or resources to aircraft technology R&D, allowing more advanced aircraft to become available earlier than historically true.	•		•

Accept advice from your 2-I-C (and Air Chief Marshall) each turn on what aircraft to build, according to your strategy and available resources. (E.g., a very cautious strategy favours a high proportion of fighters; a very aggressive strategy favours a preponderance of bombers of varying kinds.  (The aircraft types chosen will be those assessed as best for the role from among those available. But production constraints mean that older or less suited types will remain in production for some time).	•	•	
Or, modify the recommended plan:			
▪ Change the strategy to alter the recommended mix of aircraft.	•	•	
▪ Designate preferred aircraft types as priorities. This overrides the normal process by which 'best aircraft' are selected.	•		•

Deploy Aircraft	Strategic	Operational	Tactical
Accept advice each turn from your 2-I-C about the deployment of aircraft to carriers and airfields.  (The recommended plan tries to bring your air groups to full strength, with the best available aircraft that the airfield or carrier can support, subject to the availability of aircraft and your overall strategy - which dictates the fundamental proportions of fighters, bombers and reconnaissance aircraft).	•	•	
Change the plan in any respect by shuffling selected aircraft around, subject only to the maximum number and type of aircraft a carrier or airfield can support.	•	•	
Improve infrastructure at selected airfields to allow more aircraft, and a greater variety of aircraft types, to be operated there.	•	•	

Raise and Deploy Troops	Strategic	Operational	Tactical
Spend resources on raising troops, setting their ratings for mechanization, equipment and so on.	•		
Ship them in troop convoys to where they are needed for garrison duty or for staging as part of planned assaults against enemy bases. Follow your 2-I-Cs plans for combined operations or manually create your own combined ops missions.		•	

Build Infrastructure	Strategic	Operational	Tactical
Accept advice each turn from your 2-I-C about infrastructure investment – on fleet training, intelligence, technology, and infrastructure at each of your ports – docks, industry, port defences and surrounding airfields.  (The recommended plan reflects your strategy: more cautious strategies spend more on infrastructure, aiming for a longer war.)	•		
Modify the plan in any respect, altering the expenditure on each area and on priorities for R&D in specific technologies.	•		
▪ The infrastructure level at airfields affects the number and type of aircraft that can be operated.		•	
▪ The infrastructure level of your docks affects how effectively your docks can repair and construct ships.	•	•	
▪ The level of port defences helps defend against enemy bombardment and provides a higher entrenchment level for defending troops.	•		
▪ The level of fleet training affects:			
▪ The fighting efficiency of your ships – their gunnery accuracy (including Ack Ack), damage control and maneuver against air attack.			•
▪ The efficiency of their visual and radar enemy search operations.		•	



<ul style="list-style-type: none"> <li>Technology levels in 10 key areas affect armour quality, the quality of guns and shells, machinery efficiency, fire control, radar, ASW weapons and doctrine, submarine attack doctrine, submarine propulsion technologies, and the quality of torpedoes. Improved aircraft technologies allow access to more advanced aircraft earlier than historically true. These all affect the operational and tactical effectiveness of your forces.</li> </ul>		•	•
<ul style="list-style-type: none"> <li>Higher naval intelligence allows more frequent and more accurate reports of enemy dispositions and forces generally, allowing for more accurate planning, and for more fine-tuned operational responses.</li> </ul>		•	

View Turn Briefings	Strategic	Operational	Tactical
A detailed textual report, hyperlinked to key sections, summarises the overall strategic and operational context for you at the beginning of each turn.	•	•	

View Action Replays	Strategic	Operational	Tactical
The movement of your own and known enemy forces, hour by hour, and all relevant events such as battles, air strikes and so on, are fully re-playable at variable speed. This helps you understand what has happened, so you can better plan for the next turn.		•	
Surface battles are fully re-playable, minute by minute, helping you to understand the relative effectiveness of your designs and tactical rules of engagement.			•

## Key Screens

Shown next are many of the key screens.

Additional screens not shown here include:

- Selecting a pre-created campaign.
- Loading and saving a game.
- Exporting a game for play-by-email.
- Changing permissible player options.
- Miscellaneous dialogs.
- Game credits.

**Please continue, to see the featured screens...**

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# Create Campaigns

1. Select Create Campaign from the start menu.

Welcome aboard, Admiral!

Create Campaign  
Select Campaign  
Credits  
Quit

New Campaign Step 1:  
Choose your Navy  
(Click to view before selecting)

United States Navy

Man the GUNS  
Join the NAVY

THE BRITISH NAVY  
guards the freedom of us all

TOUS ENSEMBLE  
Fighting with  
Courage!

EINSATZ  
DER DEUTSCHEN KRIEGSMARINE

Choose another Navy

Accept command of the United States Navy

Back to Main Menu

**United States**

Playing the US is equivalent to an easy difficulty setting.  
The US has many strengths as a naval power and few weaknesses.  
Its main strengths are:

- Her Battleships generally are very powerful. The 16 inch guns on the *South Dakota's* and *Washington's* are powerful enough but those on the *Iowa's* are truly outstanding and almost as powerful as the 18 inch guns on the Japanese *Yamato's*
- The Battleships also have outstanding cruising radius, designed for long range operations in the Pacific.
- A relatively high level of technology, including in radar.
- A high level of naval intelligence. (In the war, the US was able to read the Japanese code for the main fleet's communications)

3. View strengths and weaknesses on selected countries.

2. Select two countries – your side and the enemy – from the 6 available: US, UK, Japan, Germany, France and Italy.

4. Accept defaults or set start levels of resources, industrial development, raw materials & infrastructure at ports & airfields, plus levels of naval intelligence and fleet training.

5. Select the map, & enable or disable carriers, land-based air and access to non-historical ships including design-your-own.

9. Finally, name the campaign and select start month and year.

6. Accept historical defaults, or set start levels of critical technologies.



1.0 / 0.5

## Create an Army Unit:

supply - 90 days (normal) 11000 tons / 11.0 RPs

7. At specified locations raise troops of the required number, type and level of equipment and training.

8. Set strategy for you and the enemy (or leave the enemy choice random). Also set the length of the strategic and operational turns.

# Construct Ships

## 1. Get your 2-I-C's recommendations.

**Ship Construction Plan**



In accordance with our cautious strategy, The Chief Naval Constructor, Vice Admiral Ellery Johnson, and I are ready to draw up a proposed ship construction list.

You can of course amend the plan in any respect.

Do you wish me to draft a ship construction plan for your approval?

If you click 'No', you will see the editor where you can personally select or design ships to build.

Admiral of the Fleet Ernest J. King

No Change Strategy Yes

## 2. Change your strategy to get a different recommended mix of ship types.

Your strategy now will be:

Very cautious  
Cautious  
**Aggressive**  
Very aggressive

OK

**BUILD Ships**

**1. Select type**

Battle  
Cruiser  
Escort  
Merchant  
Submarine

**2. Select class**

Montana  
Nevada  
New Mexico  
North Carolina  
Pennsylvania  
South Dakota

**Ship Data:**

Class **South Dakota**  
Name **South Dakota** Get Name

medium Battleship  
44819 tonnes (full load)  
9 \* 16.0 in. guns  
13.5 in. side belt  
2778 pts strength  
27 kts. max speed  
15676/14002/6223 nms @ 12/16/24 kts

**3. Or set these values...**

Size	Guns	Calibre	Sec	Armour	Strength	Speed	Range
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5

**Navy List**

Ship	Class	Speed	Range	Tonnes	Build
Alaska	Alaska Class	very fast	small	32686	
Baich	Porter Class	very fast	large	2874	

3. Or select your own ships, or even design your own! The simple-to-use editor gives over 2 million possible designs!

## 4. Review the ships to be constructed.

**Ship Roster** ☐ see Undamaged ☐ see Damaged ☐ see Lost ☒ see Build


BATTLESHIPS			
Washington	North Carolina class	43916	
North Carolina	North Carolina class	43916	
Tennessee	Tennessee class	38201	
Lexington	Lexington class	37900	
Colorado	Maryland class	37289	
Maryland	Maryland class	37289	
Alaska	Alaska class	32686	
CRUISERS			
Astoria	New Orleans class	13803	
Tuscaloosa	New Orleans class	13803	
San Francisco	New Orleans class	13803	
New Orleans	New Orleans class	13803	
Minneapolis	New Orleans class	13803	
Brooklyn	Brooklyn class	13035	
Savannah	Brooklyn class	13035	
Philadelphia	Brooklyn class	13035	
Nashville	Brooklyn class	13035	
Denver	Cleveland class	12908	
Columbia	Cleveland class	12908	
Pensacola	Pensacola class	12212	
Juneau	Atlanta class	7068	
Atlanta	Atlanta class	7068	



## Build Infrastructure

1. Get your 2-I-C's recommendations.

**Infrastructure Plan**



In accordance with our cautious strategy, The Budget Director, Admiral Arthur Kimmel, and I have drawn up a proposed infrastructure plan.

It involves investing approximately 30 % of our available funds, leaving the balance for construction of ships, aircraft and troop units.

Do you wish to start with my infrastructure plan? You may of course amend it as you deem necessary.

Admiral of the Fleet Ernest J. King

3. Or decide your own expenditure on fleet training, naval intelligence, technology, and for each port, on industry, docks, nearby airfields and port defences.

**BUILD Infrastructure**

Remaining RPs: 7270

Investments	RPs to Spend	Current Level	New Level
Training	480	6.0	6.96
Intelligence	330	6.0	6.33
Technology	330 <input type="button" value="Priorities"/>	5.0	5.33
Port Infrastructure	1590 (Max RPs spendable = 5054)		

Select a Port:

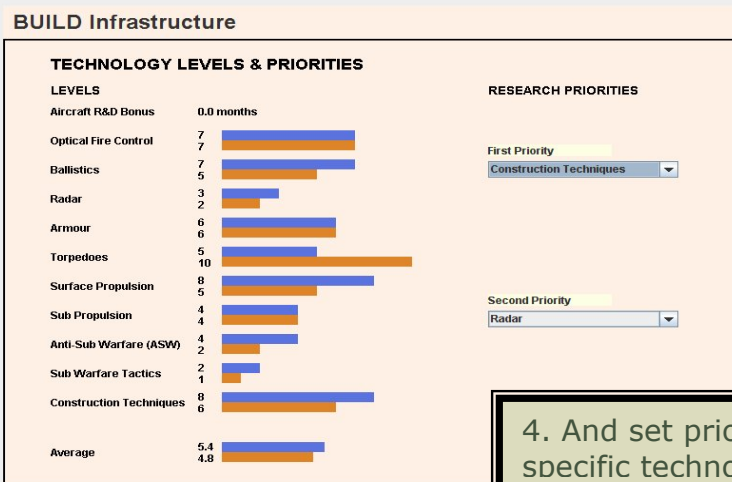
Resource priority:

	Current Level	Target Level
Industry	7.0	7 <input type="button" value="Dropdown"/>
Docks	9.0	10 <input type="button" value="Dropdown"/>
Airfields	9.0	9 <input type="button" value="Dropdown"/>
Defences	9.0	10 <input type="button" value="Dropdown"/>

2. Change your strategy to get a different recommended mix of expenditure.

Your strategy now will be:

Very cautious  
Cautious  
**Aggressive**  
Very aggressive



4. And set priorities for R&D in specific technologies.

# Produce and Deploy Aircraft

## 1. Get your 2-I-C's recommendations.



### Aircraft Construction Plan

In accordance with our cautious strategy, the Theatre Commander, Air Forces, Air Chief Marshall Karl Turner, and I have drawn up a proposed aircraft construction list.

Our strategy is to favour fighters for defense: 30% interceptors, 20% escort fighters, 30% bombers of all types and 20% reconnaissance aircraft.

You can of course amend the plan by varying the resources available for production, and also by designating certain aircraft as having production priority.

Admiral of the Fleet Ernest J. King

Change Strategy

Your strategy now will be:

Very cautious  
Cautious  
**Aggressive**  
Very aggressive

### BUILD Aircraft

(Maximum number that can now be operated = 1242 ac of all types).

Type	Number Ordered
Hudson I	39
Maryland Mk II	39
A-20A Havoc	39
A-20C Havoc	39
B-17C Flying Fortress	257
B-18A Bolo	39
B-18B Bolo	39
B-25B Mitchell	39
B-26 (Pac) Marauder	39
B-26A Marauder	39
B-26B Marauder	150
F2A-1 Buffalo	39
F2A-2 Buffalo	39
F2A-3 Buffalo	170
F4F-3 Wildcat	39
F4F-4 Wildcat	619
F4F-7 Wildcat	199
Long Range Recce/Light Bomber	
Medium Bomber	
Medium Bomber/Torpedo Bomber	
Heavy Bomber	
Long Range Recce/Heavy Bomber	
Medium Bomber	
Medium Bomber/Torpedo Bomber	
Medium Bomber	
Fighter	
Fighter/Light Bomber	
Fighter/Light Bomber	
Fighter/Light Bomber	
Fighter/Light Bomber	
Long Range Recce	



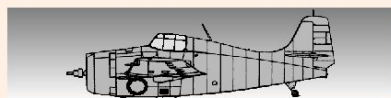
Total AC: 3508

Total RPs: 999.97

## 2. Change strategy to change the mix. Or increase or reduce resources for aircraft (within limits).

RESTRICTED  
Division of Air Intelligence - Aircraft Recognition and Characteristics

### F4F-7 WILDCAT Long Range Recce



Max Speed: 300 mph.  
Cr. Speed: 170 mph.  
Endurance: 20/-/- hrs.

Firepower: 5      Ruggedness: 5      Manuever: 6

#### Production Notes:

Introduced: March 1942  
Production this turn:

Production cost: 0.33 RPs  
Quota: 39      Ordered: 0

☐ Prioritize

#### Historical Notes:

Recon version of Wildcat with armor and guns removed, no wing-folding mechanism; could carry 1760 Kg fuel; first used on Guadalcanal

### DEPLOY Aircraft

#### Aircraft at Airfields

Airfield at 68/12 - 270 total a/c  
32 \* B-17C Flying Fortress  
33 \* B-26A Marauder  
59 \* F2A-3 Buffalo  
27 \* F4F-7 Wildcat  
27 \* OS2U-3 Kingfisher  
17 \* P-38F-1 Lightning  
59 \* P-40B Warhawk  
16 \* TBF/TBM-1 Avenger  
Airfield at 51/19 - 180 total a/c  
32 \* B-26A Marauder  
44 \* F2A-3 Buffalo  
8 \* Hudson I  
14 \* OS2U-3 Kingfisher  
3 \* P-38F-1 Lightning  
43 \* P-40B Warhawk  
22 \* TBF/TBM-1 Avenger  
Airfield at 19/38 - 90 total a/c  
15 \* F2A-3 Buffalo  
15 \* OS2U-3 Kingfisher  
6 \* P-38F-1 Lightning  
2 \* P-39K Airacobra  
15 \* P-40B Warhawk

#### Aircraft in Reserve

AC in Reserve - 2269 total a/c  
39 \* A-20A Havoc  
39 \* A-20C Havoc  
225 \* B-17C Flying Fortress  
39 \* B-18A Bolo  
39 \* B-18B Bolo  
39 \* B-25B Mitchell  
39 \* B-26 (Pac) Marauder  
39 \* B-26 Marauder  
85 \* B-26A Marauder  
39 \* B-26B Marauder  
39 \* F2A-1 Buffalo  
39 \* F2A-2 Buffalo  
4 \* F2A-3 Buffalo  
22 \* F4F-7 Wildcat

☐ Show Selected AC Details

Transfer 14 F4F-7 Wildcat  
to reserve from selected airfield

#### Aircraft on Carriers

2 \* SBD-1 Dauntless  
3 \* SBD-3 Dauntless  
4 \* TBF/TBM-1 Avenger  
Escort Carrier-8 - 23 total a/c  
14 \* F4F-4 Wildcat  
2 \* SBD-1 Dauntless  
3 \* SBD-3 Dauntless  
4 \* TBF/TBM-1 Avenger  
Escort Carrier-9 - 23 total a/c  
14 \* F4F-4 Wildcat  
2 \* SBD-1 Dauntless  
3 \* SBD-3 Dauntless  
4 \* TBF/TBM-1 Avenger  
Fleet Carrier-1 - 71 total a/c  
43 \* F4F-4 Wildcat  
1 \* SBD-3 Dauntless  
13 \* SBD-5 Dauntless  
14 \* TBF/TBM-1 Avenger  
Fleet Carrier-2 - 71 total a/c  
43 \* F4F-4 Wildcat  
2 \* SBD-3 Dauntless  
12 \* SBD-5 Dauntless  
14 \* TBF/TBM-1 Avenger  
Fleet Carrier-3 - 71 total a/c

## 3. View details of aircraft types. Prioritise the production of ones you most want.

## 4. Modify the default deployment of aircraft, swapping them between reserve and active duty at airfields and carriers, subject to the constraints on numbers and types that the airfields and carriers can operate.

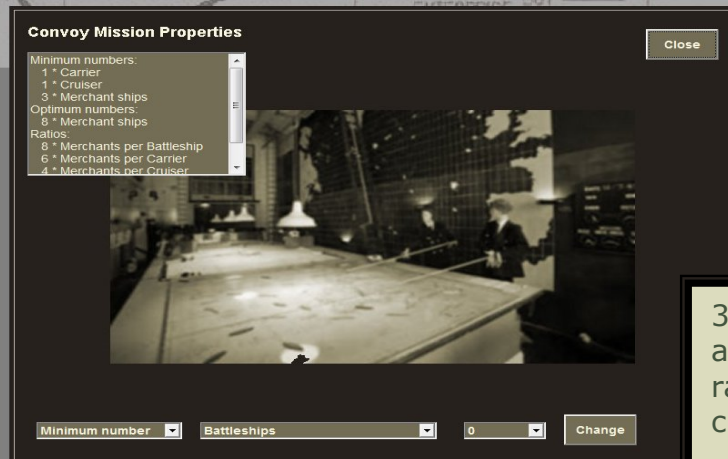
# Form Fleets and Give Mission Orders

## 2-I-C Recommendations

1. Get your 2-I-C's recommendations.



2. Change your strategy to reset the default missions; OR just add to or remove to the list of approved missions; OR change their priority



3. Or edit individual parameters for any mission, such as the minimum and optimum numbers of ships, the ratios of different types of ship, or values such as the closest distance to enemy ports to lay mines.



Sub Defensive Patrol ("SF1")  
4 subs Leaving from Home Port

Defensive Patrol ("TF2")  
9 ships Leaving from Home Port

Defensive Minelaying ("TF3")  
5 ships Leaving from Home Port

Reconnaissance ("TF4")  
4 ships Leaving from Home Port

Sub Offensive Patrol ("SF2")  
6 subs Leaving from Home Port

Offensive Minelaying ("TF5")  
5 ships Leaving from Home Port

Offensive Patrol ("TF6")  
9 ships Leaving from Home Port

Ready Reaction ("TF7")  
76 ships Leaving from Home Port

Ready Reaction ("TF8")  
1 ships Leaving from Advanced Port

**Offensive Patrol "TF6"** Lock In Cancel

1 Battleship  
2 Cruisers  
Philadelphia  
Salt Lake City  
6 Escorts  
Phelps  
Moffett  
McDougal  
Livermore  
Lansdale  
Lamson

Leaves port Thursday, 2nd. of April, 1942, 1 AM

Sailing from Home Port

Patrolling hexes:  
24/24  
24/23  
24/22  
24/21  
24/20  
24/19  
See Map  
Total time on p  
Best fleet spee  
Average fleet  
Mission compl

1. Review the list of recommended missions;

See details of any selected one: the ships, departure dates, cargo carried, target hexes etc.

'LOCK' in any that you approve of or cancel them if you don't.

2. Click on 'See Map' to see the recommended route, with the target hexes for the mission highlighted in red.

## Manually Give or Edit Orders

Zoom in or out and drag the map to focus on any area. See all relevant info in one view.

Set rules of engagement for selected fleets and ships in them – what odds the fleet will accept and how aggressive each ship should be in battle.

Create new fleets from scratch or edit recommended missions.

**Fleet TF 72**  
Cautious Attack orders  
BERTHED at Home Port.  
Cruising Range: 93/83/0 hexes @ 12/16/24 kts

	Fuel	Damage	Ammo	Ship Order
BB Colorado	100%	0%	100%	Cautious
CA Salt Lake City	100%	0%	100%	Aggressive
CL Philadelphia	100%	0%	100%	Aggressive
DD Lamson	100%	0%	100%	Ex. Aggressive

### Own Ships

Ship Details	Fuel	Damage	Fleet
BB Alaska	100%	0%	TF7
BB Colorado	100%	0%	TF 72
BB Maryland	100%	0%	TF2
BB North Carolina	100%	0%	TF7
CA New Orleans	100%	0%	TF2
CA Northampton	100%	0%	TF7
CA Pensacola	100%	0%	TF7
CA Salt Lake City	100%	0%	TF 72

### Enemy Ships

Find your own ships or enemy ships in the map by clicking on them in the lists; bring up ship details; turn on or off map views of your resources, or your own or known enemy mines.

Set the route and fleet speed for individual legs; set waypoints or target hexes for patrolling, bombarding, mine laying etc; view the estimated time of day for the fleet as it passes through hexes, enabling night approaches; set your own standard routes to replace the computer's 'shortest path' calculation between points.



## Change Orders in Real Time

When playing against the computer, you can elect to override automated tactical responses for your fleets during turn calculation. You can order them to intercept, shadow, avoid or ignore specified enemy fleets, in response to new intelligence. Review the status of your own and the enemy fleets.

Calculating Sunday, 12th. of April, 1942, Midda

**Ship Repairing**

From: CIC, Advanced Base

Ships under repair:

Escort Carrier-2

Escort Carrier-6

**Enemy Sightings**

Serial report

From: Commander, Fleet CF1

Enemy sighting:

location 55/22

**Fleet TF5**

Offensive Patrol orders RoE: Cautious Attack

Steaming @ 24 kts.

	Fuel	Damage	Ammo	Ship Order
CL Cleveland	88%	16%	100%	Aggressive
DD Gwin	84%	0%	100%	Ex. Aggressive
DD Kearny	84%	0%	100%	Ex. Aggressive
DD Monson	84%	0%	100%	Ex. Aggressive
DD Mustin	84%	0%	100%	Ex. Aggressive
DD Niblack	84%	0%	100%	Ex. Aggressive

**Tactical Fleet Response Orders**

Own Fleets

CF1

TF5

Ignore

Avoid

Shadow

Intercept

☒ Fleet details

OK

Enemy Fleets

SF1

TF1

TF2

☒ Fleet details

**Enemy Fleet TF2**

Steaming @ 16 kts. Heading: S

Target value: 141 (Report reliability: 68%. Age: this hour)

30 \* Large Escort class

1 \* fast large Battleship class

2 \* fast large heavy Cruiser class

1 \* fast large light Cruiser class

1 \* fast medium Battlecruiser class

1 \* giant Battleship class

You can also elect to cancel or modify proposed air strikes from airfields and carriers. The recommended air strike composition is shown, based on aircraft capability and strength and value of the target. Override this by swapping aircraft in or out from those available, as well as selecting torpedo or varying levels of bomb load, depending on aircraft capability and range to target.

Calculating Wednesday, 15th. of April, 1942, 5 AM (Hour 341)

**Ship Repairing**

From: CIC, Advanced Base

Ships under repair:

Fleet Carrier-2

Fleet Carrier-4

**Tactical Air Strike Orders**

Strike from airfield at Advanced Port on enemy fleet EF5.

Aircraft Available	Aircraft in the Strike
24 * B-26A Marauder	23 * F2A-3 Buffalo
20 * F2A-3 Buffalo	8 * B-26A Marauder
14 * F4F-7 Wildcat	
7 * Hudson I	
15 * OS2U-3 Kingfisher	
4 * P-38F-1 Lightning	
43 * P-40B Warhawk	
22 * TRF/TRM-1 Avenger	

Medium Bombload

Abort OK

## Replay the Turn

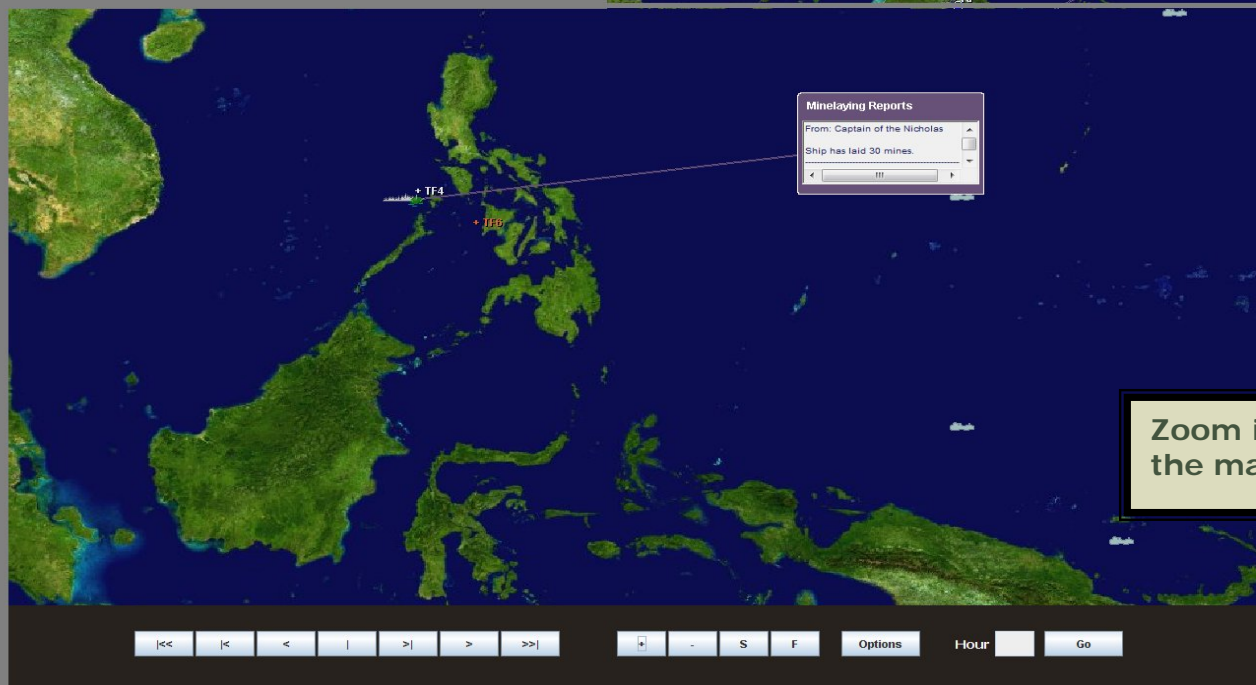
Get a full screen replay of all the action.

Replay forwards or backwards at variable speed, or hour by hour, or jump to anywhere you want.

See all key events reported as they happened, in moveable panels. Filter out the events you are not interested in.



Zoom in or out without limit and drag the map to focus on any area.





**Battle Results** Battle of United States, 18 April, 1942  
 Started Midday in Hex 48/28 Lasted 9 hours, 14 minutes  
 Slight ripples, light air (1-3 knots), dry, occasional high level cloud. Perfect visibility  
 Opening range: 32780 m.

Own ships: non struc. damage (\* 10%) struc. damage (\* 10%) flooding (\* 10%) speed lost (\* 3 kts) Turret hits (\* 10%) Ammo lost (\* 10%) repair cost (\* 10%)

Enemy ships: flooding (\* 33%) speed lost (\* 6 kts) Turret hits

Ship Name	Status	Damage	Speed	Turret	Ammo	Repair
Bebas	SUNK					
Escort Carrier-1	Undamaged					
Escort Carrier-11	Undamaged					
Griswold	SUNK					
Juneau	SUNK					
Manlove	SUNK					
Martin	SUNK					
Maryland	Extensive damage					
North Carolina	Largely wrecked					
Oakland	Largely wrecked					
San Diego	SUNK					
San Juan	Largely wrecked					
Sederstrom	SUNK					
Small Merchant-1	Undamaged					
Small Merchant-10	Undamaged					
Small Merchant-11	Undamaged					
Small Merchant-12	Undamaged					
Small Merchant-13	Undamaged					
Small Merchant-14	Undamaged					
Small Merchant-15	Undamaged					

Click Down for More...

Enemy ships: Akatsuki, Amatsukaze, Asagiri, Fleet Carrier-5, Hibiki, Mikuma

Replay battle

In the turn replay, a pop up panel alerts you to every new battle. Just click on the panel to see a summary of the battle results.

Replay all action from the battle, minute by minute, just by clicking on "Replay Battle".

Go forward or back at variable speed or jump.

See every shell and torpedo hit. View in wide screen mode or enable info panels - showing targeting, movement orders and battle damage for every ship - that are updated every minute.

28000 yds

by 1 torpedo from Nunaki.  
 17300 yds.  
 damage inflicted

Minute: 13 Go

stop on torpedo hits  
 stop on main gun hits

orders damage  
 targets wide

## View Turn Briefings

View a hyperlinked report each turn that summarises key economic and operational information, as background for your operational planning.

**TOP SECRET**

beginning to show real capability. But we can never have enough good quality intelligence.

By comparison, Japan has a lower capability, including in counter-intelligence activities.

Shown below in graph form is our capability compared to the estimated enemy level:

(The blue bar is our level; the orange, the enemy's.)

Intelligence	<div><div></div></div>	6.0
	<div><div></div></div>	4.0

**Enemy Ship Order of Battle**

Ship	Class	
Akagi	<a href="#">Amagi</a>	Involved in the Battle of United States, 10 April, 1942.
Amagi	<a href="#">Amagi</a>	At Home Port.
Owari	<a href="#">Amagi</a>	Involved in the Battle of United States, 18 April, 1942.
Satsuma	<a href="#">Super Tosa</a>	Sunk in action in the Battle of United States, 26 April, 1942.
Settsu	<a href="#">B 64</a>	At Home Port.
		Involved in the Battle of

## Conclusion

NWS trusts that you have enjoyed this promotional overview of *SAS*. For further details of the game, including expected release date, refer to the main web page for the game at <http://www.navalwarfare.net/>

## Credits

*SAS* concept, design, programming, graphics, manual, this .PDF – Tony Glazebrook.

*SAS* extended game concepts and NWS Director of Projects – Christopher Dean.

*SAS* game production – Christopher Dean, William Miller.

*SAS* beta testing – the NWS team, especially Kurt Schofield, Robert Schoneman.

*SAS* research assistance – the NWS team, especially Kyle Holgate, William Miller, Edwin Rotondaro.

*SAS* maps – base graphics – Richard Beaudin.

*SAS* manual proofing – the NWS team, especially Scott Chisholm.