



NAVAL OPS

WARSHIP GUNNER™



WARNING: READ BEFORE USING YOUR PLAYSTATION®2 COMPUTER ENTERTAINMENT SYSTEM.

A very small percentage of individuals may experience epileptic seizures when exposed to certain light patterns or flashing lights. Exposure to certain patterns or backgrounds on a television screen or while playing video games, including games played on the PlayStation 2 console, may induce an epileptic seizure in these individuals. Certain conditions may induce previously undetected epileptic symptoms even in persons who have no history of prior seizures or epilepsy. If you, or anyone in your family, has an epileptic condition, consult your physician prior to playing. If you experience any of the following symptoms while playing a video game – dizziness, altered vision, eye or muscle twitches, loss of awareness, disorientation, any involuntary movement, or convulsions – IMMEDIATELY discontinue use and consult your physician before resuming play.

WARNING TO OWNERS OF PROJECTION TELEVISIONS:

Do not connect your PlayStation 2 console to a projection TV without first consulting the user manual for your projection TV, unless it is of the LCD type. Otherwise, it may permanently damage your TV screen.

USE OF UNAUTHORIZED PRODUCT:

The use of software or peripherals not authorized by Sony Computer Entertainment America may damage your console and/or invalidate your warranty. Only official or licensed peripherals should be used in the controller ports or memory card slots.

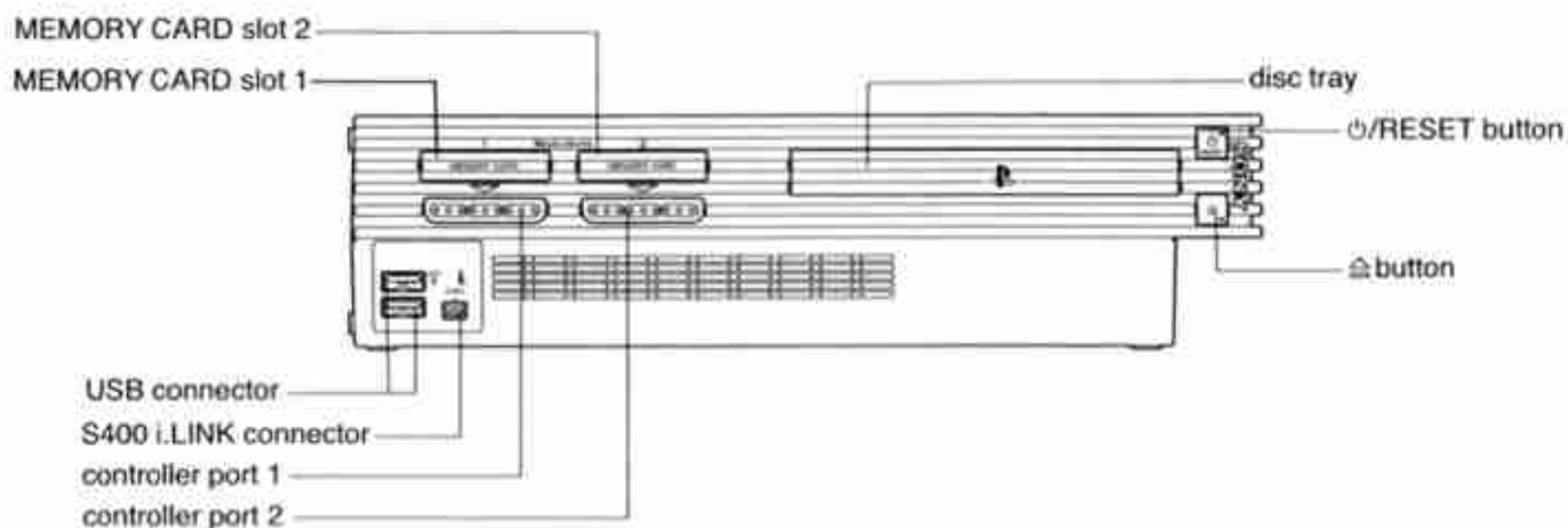
HANDLING YOUR PLAYSTATION 2 FORMAT DISC:

- This disc is intended for use only with PlayStation 2 consoles with the NTSC U/C designation.
 - Do not bend it, crush it or submerge it in liquids.
 - Do not leave it in direct sunlight or near a radiator or other source of heat.
 - Be sure to take an occasional rest break during extended play.
 - Keep this compact disc clean. Always hold the disc by the edges and keep it in its protective case when not in use. Clean the disc with a lint-free, soft, dry cloth, wiping in straight lines from center to outer edge.
- Never use solvents or abrasive cleaners.

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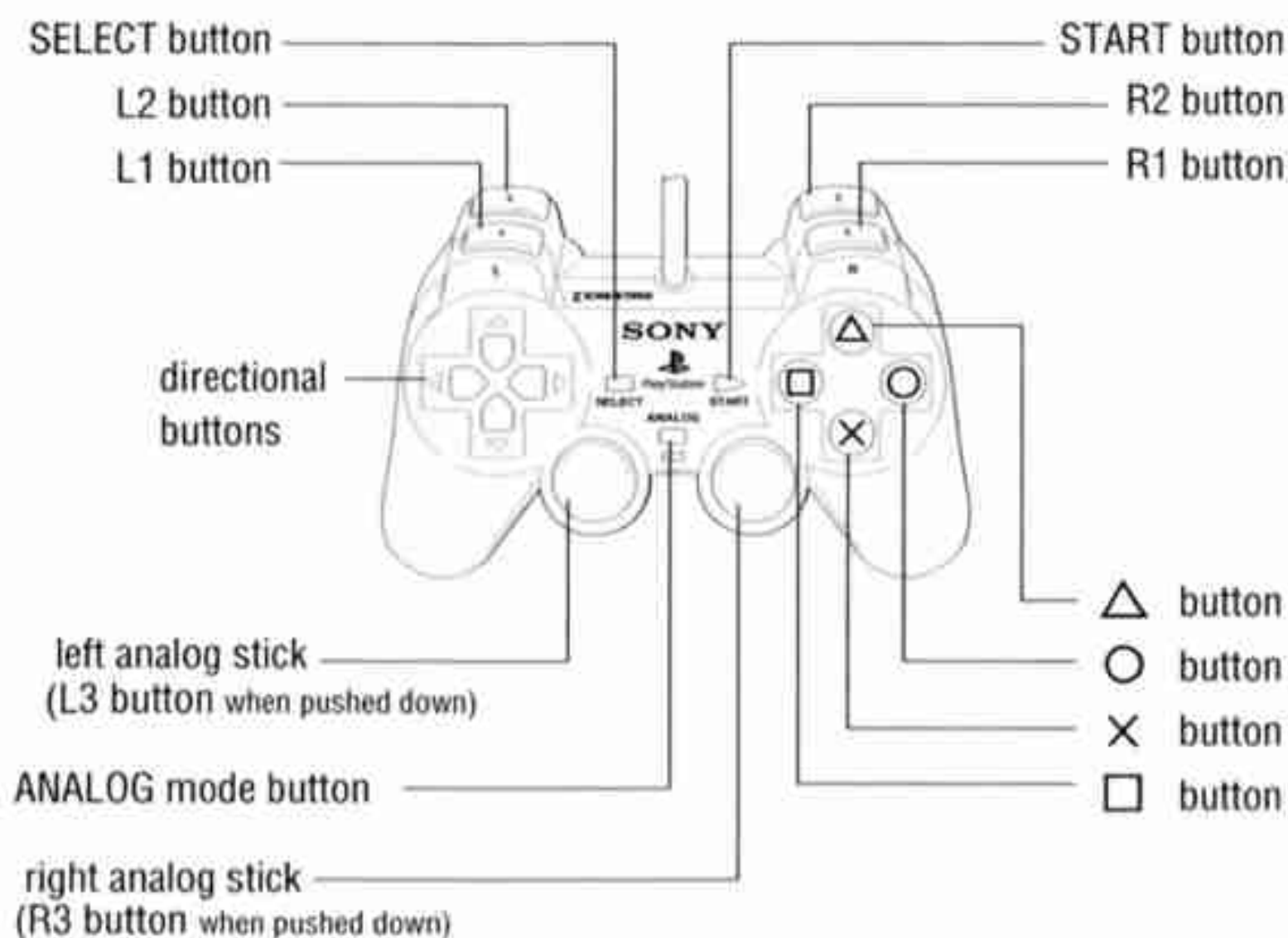
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STARTING UP



Set up your PlayStation®2 computer entertainment system according to the instructions in its Instruction Manual. Make sure the MAIN POWER switch (located on the back of the console) is turned on. Press the RESET button. When the power indicator lights up, press the open button and the disc tray will open. Place the *Naval Ops: Warship Gunner™* disc on the disc tray with the label side facing up. Press the open button again and the disc tray will close. Attach game controllers and other peripherals, as appropriate. Follow on-screen instructions and refer to this manual for information on using the software.

CONTROLS



STORY

After safely leaving the battle sector we hooked up with the crew that had helped us withdraw. They called themselves the Freedom Forces and they told us they fought an oppressive regime that controlled most of the world. In this world, a dictatorship calling itself the Empire has won control of large areas of the globe.

Our new comrades were a group of guerilla fighters determined to oppose this despotic rule. But this seems to be the only difference between our worlds. Countries, oceans, cities, all their names were exactly the same as our own world. Parallel world... A term I once read in a science fiction novel.

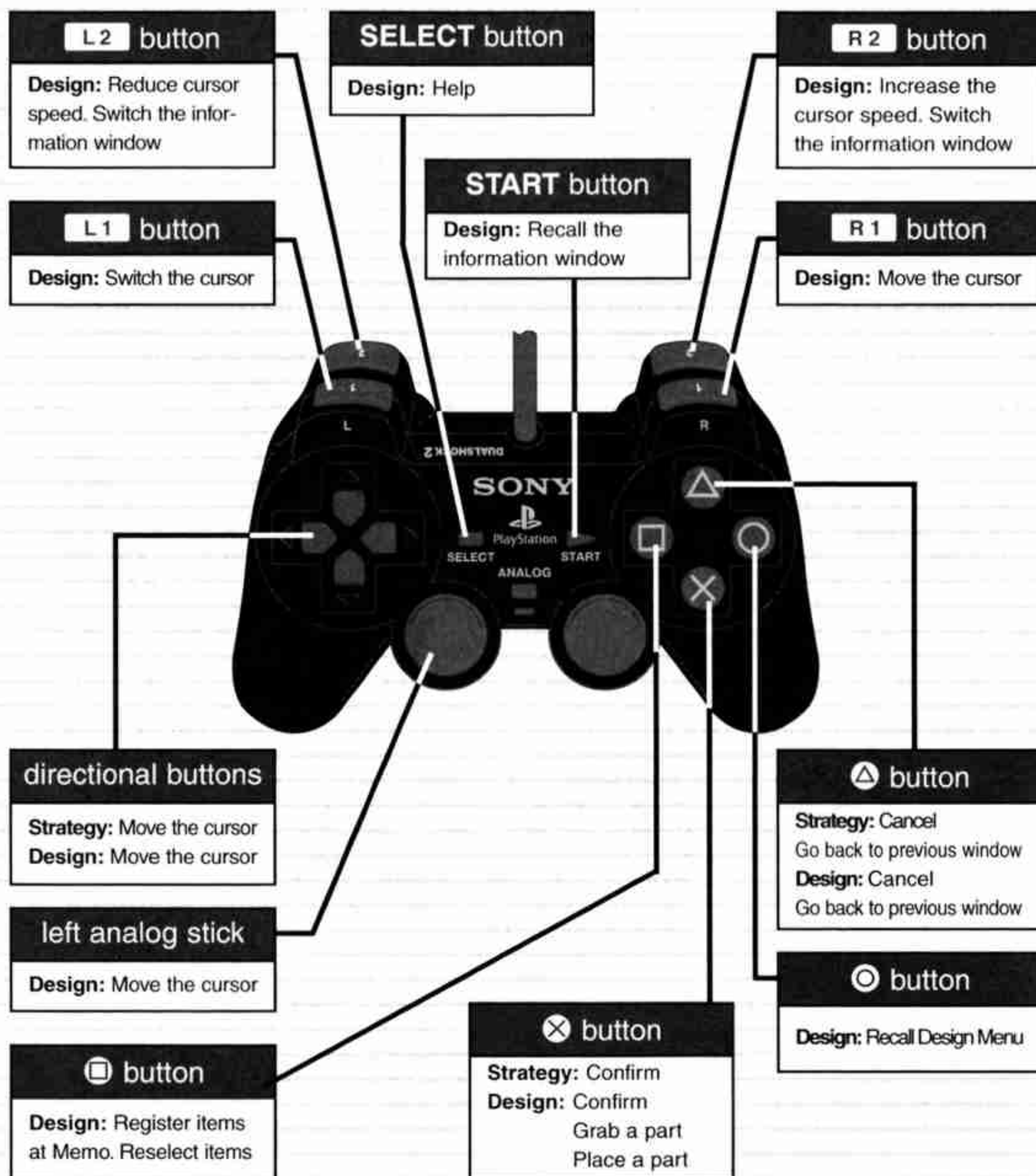
We had impressed them with our fighting ability. They asked that we join them. These rebels are desperate for any and all help against the might of the Empire. But, can we believe them? Is what they're saying true? We have no way to find out. Still, we have nowhere else to turn. That and we have already attacked by this Empire of theirs. Our sister ship has been sunk. We cannot survive here alone.

The crew met and talked it over and we decided to throw our fate in with these Freedom Forces. Evidently we are fated to do battle in this world as well.

Game Objectives and Getting Started

STRATEGY AND DESIGN MODE CONTROLS

DUALSHOCK®2 analog controller

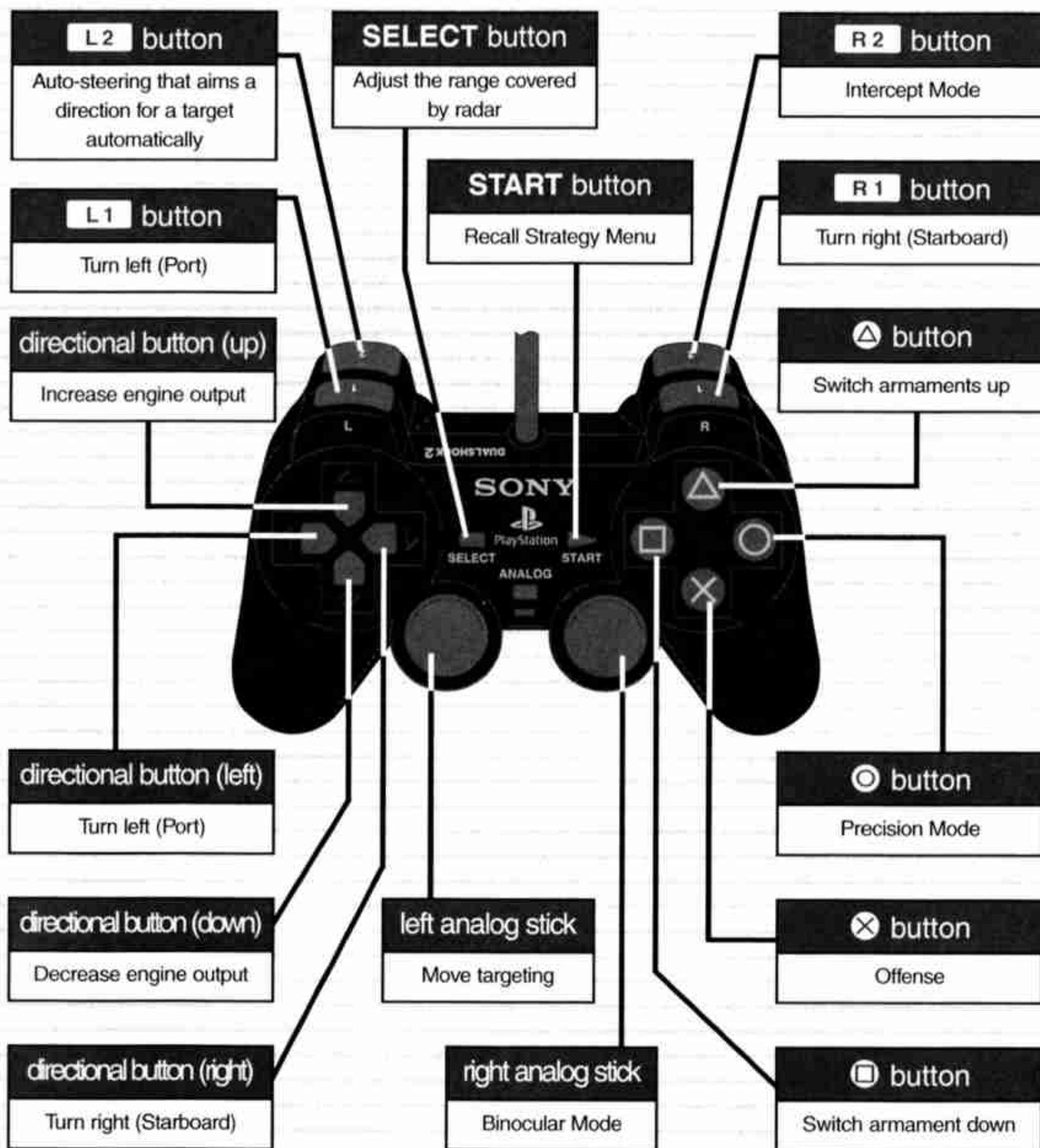


*Button controls for DUALSHOCK™ are the same. The digital controller is not supported.

"Naval Ops: Warship Gunner" is a naval action game. The action takes place across the open seas and coastlines of an alternate reality. You must design and control your own vessel and help the "Freedom Forces" win their freedom.

BATTLE MODE CONTROLS

DUALSHOCK®2 analog controller



*This game automatically enters analog mode when the game starts up. This cannot be changed using the analog mode button of the controller.

*You can turn the Vibration Function on/off in the Options Menu. • P.11 This is regardless of whether the Analog display is on or not.

GAME OBJECTIVES

You are trapped in a parallel universe and have become a member of the Freedom Forces.

Your ultimate objective is the destruction of the evil Empire that spans across the globe. With Freedom Force technology and support, you will design and command your own naval vessel.



Areas and Stages

- A signals operator will provide you with a mission briefing. Each area contains up to 10 stages.
- After achieving a strategic objective, you can go to the next stage.
- The Empire's gigantic weapons, or "superships," wait for you in the later stages.
- After completing one area, you can go on to the next. To complete the game, you must conquer all the areas.



A r e a A

Stage 1-10

A r e a B

Stage 1-10

A r e a C

Stage 1-10

Go to the ending!

GAME FLOW

One stage includes three steps: Strategy Phase
→ Battle Phase → Battle Report.

You will prepare for a battle at the Strategy Phase, and then engage the enemy during the Battle Phase.

The Flow of Stages

Strategy Phase

Battle Phase

Battle Report

Strategy Phase (Dock)

← P.12

During the Strategy Phase you will prepare your vessel based on mission objectives. You can purchase ship parts and designs, construct a new ship, or retrofit your current vessel. You can also purchase Prebuilt ships, which are ready for battle. During this phase, you can also purchase combat aircraft, invest in new technology, and develop parts and weapons.

Games can only be saved and loaded in the Strategy Phase.



Battle Phase

← P.30

Control ships and accomplish mission objectives. An operation is considered successful if you safely escape from a sea sector after accomplishing your mission. An operation is considered a failure if your ship sinks or you cannot accomplish your mission.



Battle Report

← P.39

Mission results are displayed onscreen. If an operation is successful, you can advance to the next stage. Otherwise, you can replay the stage starting at the Strategy Phase. The amount of funding you receive is based on your level of success. Funding can be used to power up your ships during the next Strategy Phase.



STARTING THE GAME

How to Start a Game

1. Place a Memory Card (8MB)(for PlayStation®2) into MEMORY CARD slot 1.

At least 1530KB is required to save a game.

*A memory card is required to save game data. For detailed instructions, refer to your PlayStation®2 user's manual.

2. Turn on the power of the PlayStation®2 Computer Entertainment System and insert the Naval Ops: Warship Gunner™ disc.

3. Pressing the START button during the opening sequence displays the title screen.

4. Pressing the START button on the title screen opens the Start Menu.

Start Menu

The Start Menu is as follows:

■ **Continue** ➡ P.10

Restart a game after loading saved data.

■ **New Game** ➡ P.09

Start a new game.

■ **WWII** ➡ P.10

You are limited to only weapons and technologies that were available during the WWII era.

■ **Survival** ➡ P.10

Try to defeat your enemies using a single battleship with set armaments. Complete the game once to unlock this mode.

■ **Tutorial** ➡ P.11

Learn how to control your ship.

■ **Options** ➡ P.11

Set game options.

Start a New Game

At the Start Menu, choose "New Game." You will immediately go into battle.

P.30

The scenario begins after your fleet travels through a space-time continuum. Your objective is to destroy the hostile vessels, then move your ship north to escape. If this is your first time playing, it is recommended that you go through the Tutorial P.11 and learn how to control your ship. After passing the first stage, the Register Screen will appear.

1. Choose a Vessel

Use the directional buttons to choose a nationality, and then press the **X** button to confirm. You may choose from Japanese, American, English and German ships. Each nation has different types of ships and aircraft, so choose the one best suited to your ability.



Vessel Types and Aircraft Functions

Weapon Types	Vessel Types						Aircraft Functions
	Destroyer	Cruiser	Battleship	Carrier	Battlecarrier	Aircraft	
Japanese	AVERAGE	GOOD	GOOD	AVERAGE	AVERAGE	AVERAGE	AVERAGE
American	AVERAGE	AVERAGE	AVERAGE	GOOD	POOR	GOOD	GOOD
English	GOOD	POOR	AVERAGE	AVERAGE	AVERAGE	AVERAGE	AVERAGE
German	AVERAGE	AVERAGE	POOR	POOR	POOR	POOR	POOR

2. Enter Your Unit Name

- Enter a name for your fleet of ships.
- Directional buttons:** Move the cursor.
- X button:** Enter characters.
- O button:** Erase characters.
- △ button:** Return to unit select screen.



After entering a name, choose "Finish," and press the **X** button, or press the START button.

Loading a Saved Game

To load saved data, choose "Continue" from the Start Menu and then press the  button.

Select the game you wish to load and press the  button.



WWII

In this mode, you are limited to World War II-era technologies and armaments and cannot use missiles, rockets, lasers or other modern weapons. If you are starting a new game, this mode begins at Stage A-01.

Survival

To unlock Survival Mode, you must complete all areas in the Normal Mode.

Use a single battleship without re-supplying fuel or modifying your ship during the Strategy Phase.

Choose unit data and select a ship to use, and then complete the strategic objectives for Stage A-01. In this mode, you will not have access to the Strategy Phase. After completing a stage, you will go directly to the Battle Phase of the next stage. Ammo and HP levels cannot be increased.

Items obtained during Survival Mode can be used during the game's Normal Mode. Try Survival Mode with your favorite ship!

PLAY THE GAME THROUGH A SECOND TIME FOR AN EVEN GREATER CHALLENGE!

Game data for fleets that have completed the first round are displayed in yellow. The second round begins at Stage A-01.

Sectors and the strategic objectives during the second round are identical to those of the first round, but enemies are much stronger. Additionally, items that can be won in the second round are more valuable than items in the first round.

Tutorial

In the Tutorial, you will learn how to use the battle system and how to control your ship during the game's Battle Phase. **P.30** You will also learn how to read game screens and displays. The Tutorial is comprised of 11 different lessons. At the end of each lesson, you have the option of advancing to the next one in the sequence.

Return to the Tutorial Menu

During a lesson, pushing the START button will display the following message, "Will you advance to the next step?" Selecting "Confirm" will take you to the next lesson, while selecting "Cancel" will take you back to the Tutorial Menu.

Exiting the Tutorial

Choose End from the Tutorial Menu and press the **X** button to exit the Tutorial.



Options

Set game options

Use the directional buttons to select an option and alter its settings. Press the **X** button to return to the Start Menu and save changes, or press the **△** button to exit without saving any changes.



Difficulty	Choose from EASY, NORMAL and HARD.
Music	Adjust Music volume.
SE	Adjust Sound Effect volume.
Stereo	Set up Stereo/Mono Sounds.
Vibration	Turn Vibration On or Off.
Default	Restore all options to their original settings.

Strategy Phase

Preparation for Battle

UNDERSTANDING THE STRATEGY PHASE (DOCK) SCREEN

This section will help you understand the Strategy Phase, and each of the commands available. Check the referenced pages for more detailed explanations.



1 Briefing

P.15

Confirm your attack objectives and head to battle. Your strategic objectives will be different each stage. Example objectives are: "Attack and sink the enemy ship." or "Escort the allied fleet."



Each stage begins with the Strategy Phase. During this phase, you will be given your strategic objectives. You will also prepare for battle. While your ship is docked, you can modify your ship based on assigned objectives. At the end of the Strategy Phase, you will depart for the target location.

2 Tech

☛ P.16

Invest in new technologies to increase your Technology Level. A high Technology Level will help you develop new armaments and defensive systems. When your Technology Level increases, your funding for investments also increases.

3 Depot

☛ P.18

Purchase and sell parts needed to construct your ship. You can also purchase and sell Prebuilt ships and aircraft.

4 Design

☛ P.20

Design and scrap ships. You can also confirm functions of previously designed vessels.

5 Other

☛ P.14

Save and Load game data. Set game options and check military gains (past scenarios and obtained parts).

6 Information Display

Confirm the present player's unit information such as unit name, ship name, current area and stage, rank, points and available budget.

7 Message Display

Gives a brief description of the item highlighted by the cursor.

OTHER

Save and load game data. You can also check your Log and set game options.

■ Load

Load saved data. Games in progress will be lost without saving the current game data. Save game data before loading.

■ Save

Save current game data. You can save up to 5 games using a memory card. At least 1530KB is required to save a game.

Data for Normal Mode is marked with a "C," while Data for WWII Mode is displayed with a "W".

■ Log

Here you can review the strategic objectives from previous scenarios and review your inventory of obtained parts.

The Log is comprised of three sections.

Military Gains: Record of enemy ships sunk.

Stage Log: A detailed record of stages cleared and superships defeated, along with your ranking for each stage.

Equipment Log: A complete inventory of parts you have obtained within the game.

■ Options

Set game options. Settings shown are the same as those displayed when selecting Options from the Start Menu. ➡ P.08

■ Quit

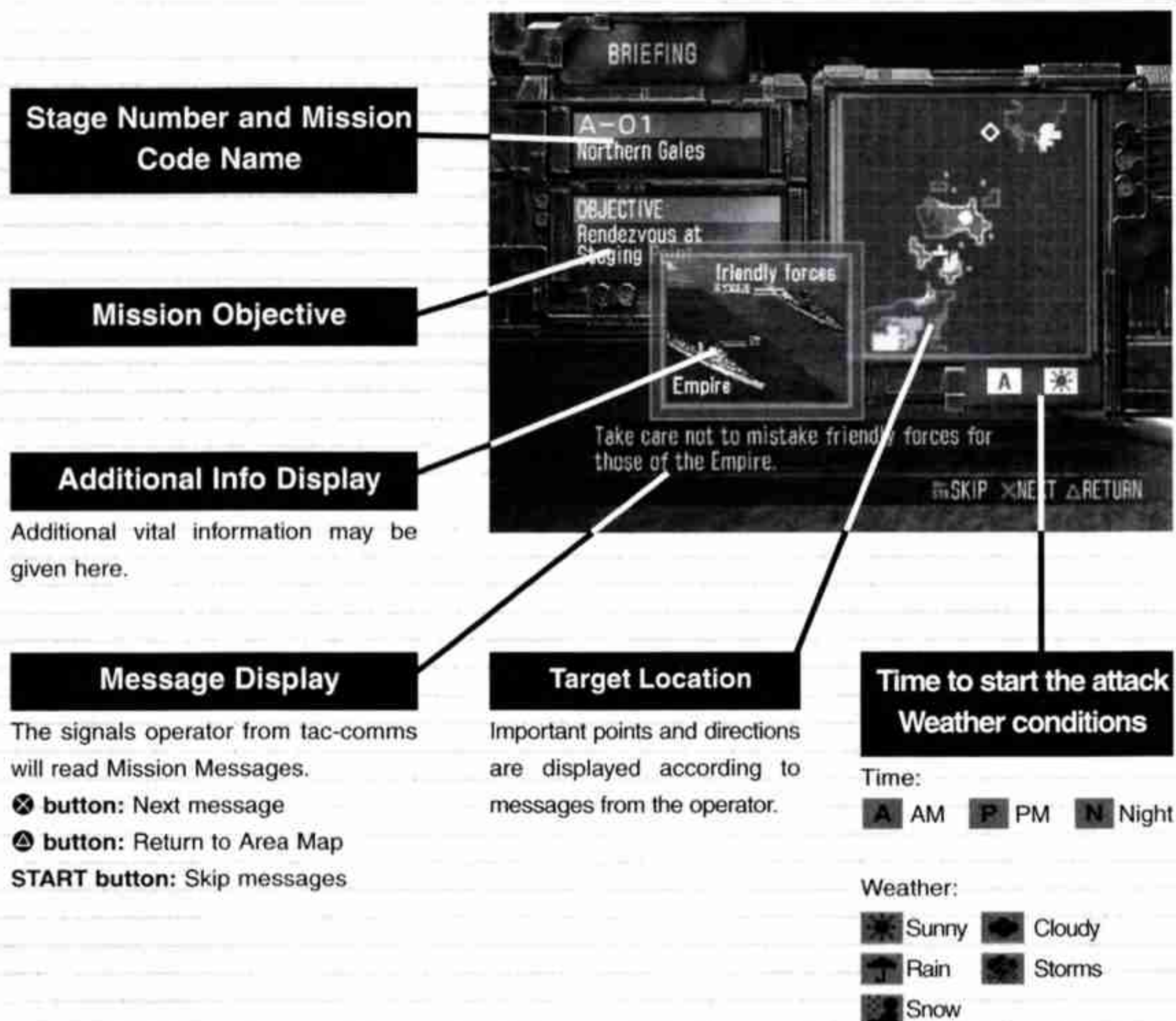
Return to Title Screen. Current game data will be lost without saving. Save current game data before going back to the Title Screen.



BRIEFING

Choose an area and a stage to attack. You can play the next stage in the area or go back and replay a stage and/or area that you have already cleared. The Briefing Screen displays a map of the target location, with time and weather information and Mission Objectives. A signals operator from tac-comms will transmit Mission Messages. Mission Messages explain important points on the map and give you advice. Make sure to review all Mission Messages before going into battle. After reviewing all Mission Messages, you will choose a ship and depart for the target location.

Briefing Screen



*Visibility may be limited during severe weather conditions.

TECH R&D

Invest in different technologies to increase each of your technology levels. When your Technology Levels increase, you will have an increased selection of higher-performance parts, weapons and Prebuilt ships.

As your Technology Level increases, the amount of money for investments will also increase.



Technology Levels

Your Technology Level (0-30) is comprised of 5 different categories. As each Technology Level increases, additional parts and items in that category can be produced.

► Air Tech

Aircraft Capabilities. As this level increases, you can purchase and load your ship with high-performance aircraft.

► Engine

Ship Engine Technology. As this level increases, you can produce more powerful boilers and turbines.

► Metallurgy

Ship Metallurgy. As this level increases, the selection of ships, hulls, and Prebuilt ships is increased. This category will give you access to stronger hulls and lighter, more protective armor.

► Weapons

Ship Weapons System Technology. As this level increases, you can produce better weapons systems and fund ordnance R&D.

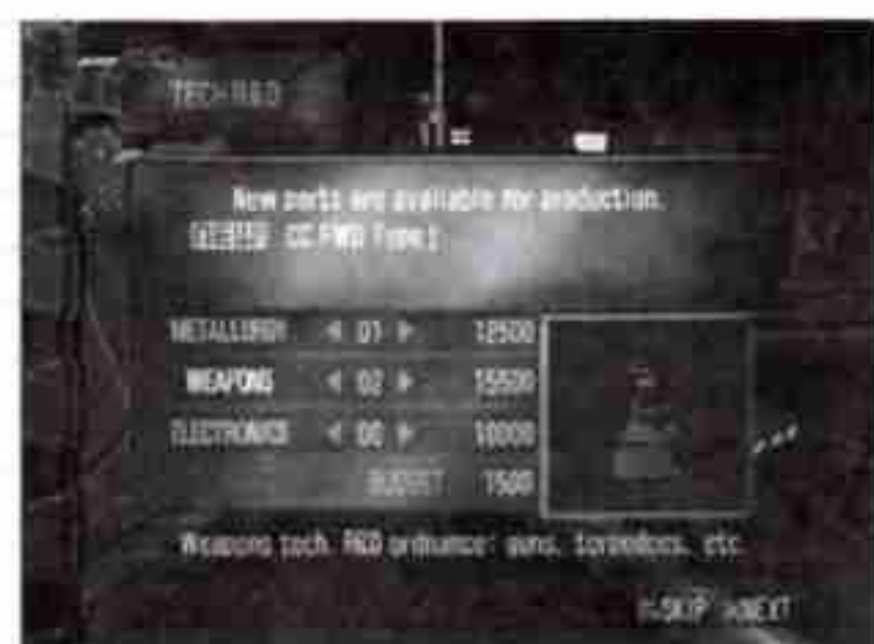
► Electronics

Electronics Technology. As this level increases, you can produce better auxiliary systems such as sonar and radar.

How to Invest in Technology

Use the up and down directional buttons to choose a technology you would like to develop. Use the left and right directional buttons to decide your level of investment. Press the **X** button to execute a technology development investment. You cannot invest more than what you currently have.

When new parts are able to be produced, a message will be displayed in the Additional Info Display.



EFFECTIVE TECHNOLOGY INVESTMENT

At the start of a game, your ship armaments may be insufficient. Once you complete the opening mission and are docked, go to the Tech Menu and invest. Apply funds toward your “Metallurgy Level.” As your Metallurgy Level increases, you will be able to view additional Prebuilt ships available for purchase. Most Prebuilt ships are already equipped with engines and armaments.

Electronics affect ship functions used to command your ship. If you feel that your ship’s functions have not improved, you may want to invest more heavily into Electronics and develop the parts needed to enhance your ship.

If you plan to use an aircraft carrier, apply your funds toward “Air Tech Level” Investments.

Special parts are items that cannot be purchased the Depot command, and may appear during battle. You can obtain these parts by collecting the parts box **P.37** that appears when you sink an enemy vessel. When you obtain unknown parts, check the Equipment Log for additional information.

DEPOT

At the Depot, you can buy and sell armament, ship bridges and equipment, auxiliary systems, engines, ship hulls, aircraft, or Prebuilt ships. The quantity of parts available for purchase will increase as your Technology Level increases ➡ **P.16**. Upon purchasing a part, you will have the option of installing the new part on your vessel. ➡ **P.20**

Purchasing Ships and Parts

1. Go to the Depot

At the Dock Screen, go to the Depot Menu, and then select one of the following: Armament, Equipment, Aux. Systems, Engine, Hull, Aircraft, or Prebuilt. Next, select Buy or Sell.



2. Choose a Ship Class

If you are selling a part, you may skip this step, and go to the next step. If you are buying parts, select the type of ship you want to buy parts for. You can only buy parts for ships you own.



3. Choose a Parts Category

Choose a parts category, and then press the ⊗ button to display a list of available items.



4. Review Part Specifications

You can review specifications of each part, prior to purchase. Place the cursor of the part you would like to review and then press the **[F1]** button. Some parts such as the "12.7cm Gun" have multiple options. To review the specs on parts with multiple items, select the part, then one of the options, and then press the **[F1]** button.



5. Decide Purchase Quantities

After reviewing part specifications, you can purchase the part by pressing the **[X]** button. Next, use the left and right directional buttons to select the purchase quantity. To purchase additional items, press the **[A]** button to return to the previous menus. Press the START button to go to the Requisition List screen. This is where you will complete all of your purchases.

To cancel a purchase at any time or to return to the previous screen, press the **[A]** button.



6. Requisition List and Additional Purchases

Press the START button to go to the Requisition List screen. To complete your purchases, place the cursor over "Purchase" and then press the **[X]** button.

To make additional purchases, select "Additional Requisition" or press the **[A]** button. To adjust purchase quantities or to cancel an item, move the cursor over the item, and then press the **[X]** button.



7. Complete Purchase

This is the final step to completing your transaction. Select confirm, and then press the **[X]** button.



DESIGN

There are four commands that you can use to design a ship.

■ Regular ➤ P.21

Design a new ship. Retrofit and remodel a ship you already own. You can own a maximum of 8 ships.

■ Automatic ➤ P.26

The CPU will design a ship based on your parameters. Automatic design will not let you retrofit or remodel your ship.

■ Ship Status ➤ P.27

Confirm functions for a designed ship.

■ Scrap ➤ P.27

Scrap a ship and use the parts for other ships.



Basic Rules for Designing a Ship

There are some rules to keep in mind when designing a ship.

■ Minimum Required Parts

Each ship requires a minimum number of parts. These parts are: Hull, Boiler, Turbine, Forward Bridge, Radar, and Sonar. A Battlecarrier requires an additional part, a Load Lift.

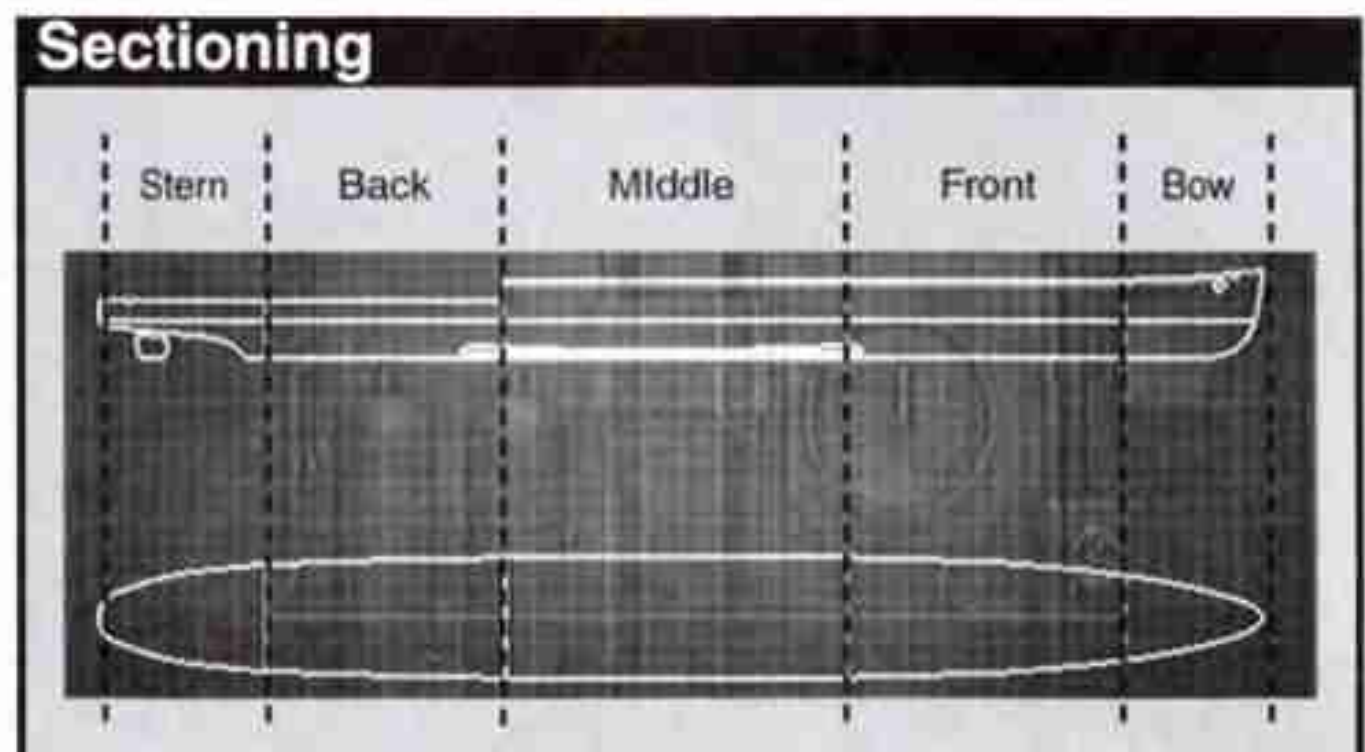
■ Total Weight of a Ship

Each ship has a maximum total weight. You cannot equip parts that will exceed your ship's maximum weight limit. Excessive weight reduces your ship's speed.

The maximum total weight may change, depending not only on the parts equipped, but also on the placement of engines ➤ P.23, and a Defense Evaluation ➤ P.24.

■ Sectioning for placement

Parts have specific locations where they can be placed, so be sure to arrange them effectively.



Equipment, Available Ships to Equip, and Available Sections to Equip

Equipment/ Armaments	Available ships to equip					Available sections to equip				
	Destroyer	Cruiser	Battleship	Carrier	Battlecarrier	Stern	Back	Middle	Front	Bow
Forward bridge	✓	✓	✓	✓	✓		✓	✓	✓	
Aft bridge	✓	✓	✓		✓		✓	✓		
Aircraft launcher		✓	✓				✓	✓		
Load lift				✓	✓		✓	✓	✓	
Smokestack	✓	✓	✓		✓		✓	✓		
Searchlight	✓	✓	✓	✓	✓	✓		✓	✓	
Auxiliary systems	✓	✓	✓	✓	✓	-	-	-	-	-
Guns	✓	✓	✓	✓	✓		✓	✓	✓	
Machine guns	✓	✓	✓	✓	✓		✓	✓	✓	
Torpedoes	✓	✓					✓	✓		
Depth charges	✓	✓				✓	✓	✓		

Regular Design

Design and remodel a ship. If you wish to design a new ship, make sure that you have already purchased the minimum required parts at the Depot. If you have the required parts, at the Ship Screen, choose "New Design." To remodel a ship, choose the Vessel Type.

► Normal Design Mode

The Cursor

Use the cursor to choose and move parts. Press the **L1** button for Eraser Mode. This allows you to remove parts from the design. Press the **R2** button for Pen Mode. This allows you to copy parts from the design.

Memo

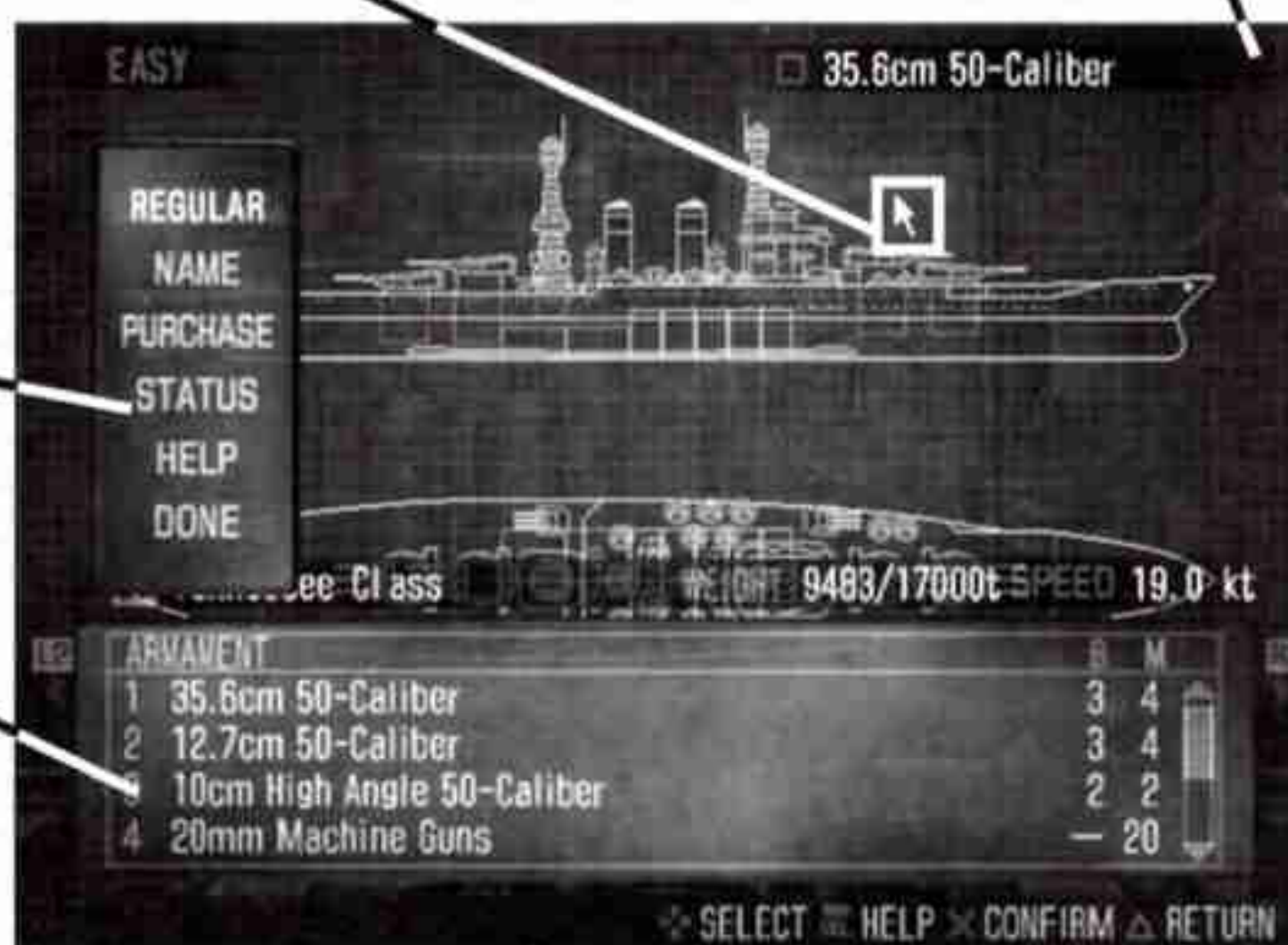
Press the **X** button after choosing a part. Information about parts is stored in the Memo section.

Design Menu

Use the directional buttons to select the menu item you wish to use.

Information Display

To display information about the current ship, press the START button to display the Information Display. Press the **L2** and **R2** buttons to view each of the Information Displays.



► Basic Operation at Normal Design Mode

⊗ button	Grab, place, remove and copy parts.
⊙ button	Open the design menu. On some parts, most notably with guns, you can modify the height and direction of the part. While holding a part, press the ⊙ button to change the direction and height of parts.
▣ button	Register and Reselect parts to Memo. Press the ▣ button over selected parts and they will be stored in the top right corner of the screen. Even after finishing other tasks, pressing the ▣ button again will recall stored parts.
L1 / R1 button	Change cursor functions. Normal Mode: Place and move parts. Eraser mode: Delete selected parts. Pen mode: Copy and add selected parts.
L2 / R2 button	Adjust the cursor speed.
directional buttons	Move the cursor.
left analog stick	Move the cursor.
SELECT button	Open Design Help Screen.
START button	Open the Information Display.

Normal Design Command

► Armaments

Choose armaments. You can equip 7 different types of armaments per ship. If you install many of the same type of weapon to an armament, it will increase the amount of ammo that may be fired at once. You can choose a number of barrels if weapons are able to barrel. Increasing the number of weapons and barrels will add weight, causing your ship to slow down.

■ Gun

A large battleship gun with high Range and Power abilities. Turret style Guns and Pedestal style High elevation guns are available. Both have similar capabilities.

■ Torpedo

An underwater missile effective for anti-ship battles. May not be installed on battleships, carriers, or battlecarriers.

■ Depth charge

An anti-submarine bomb. May not be installed on battleships, carriers, or battlecarriers.

■ Machine gun

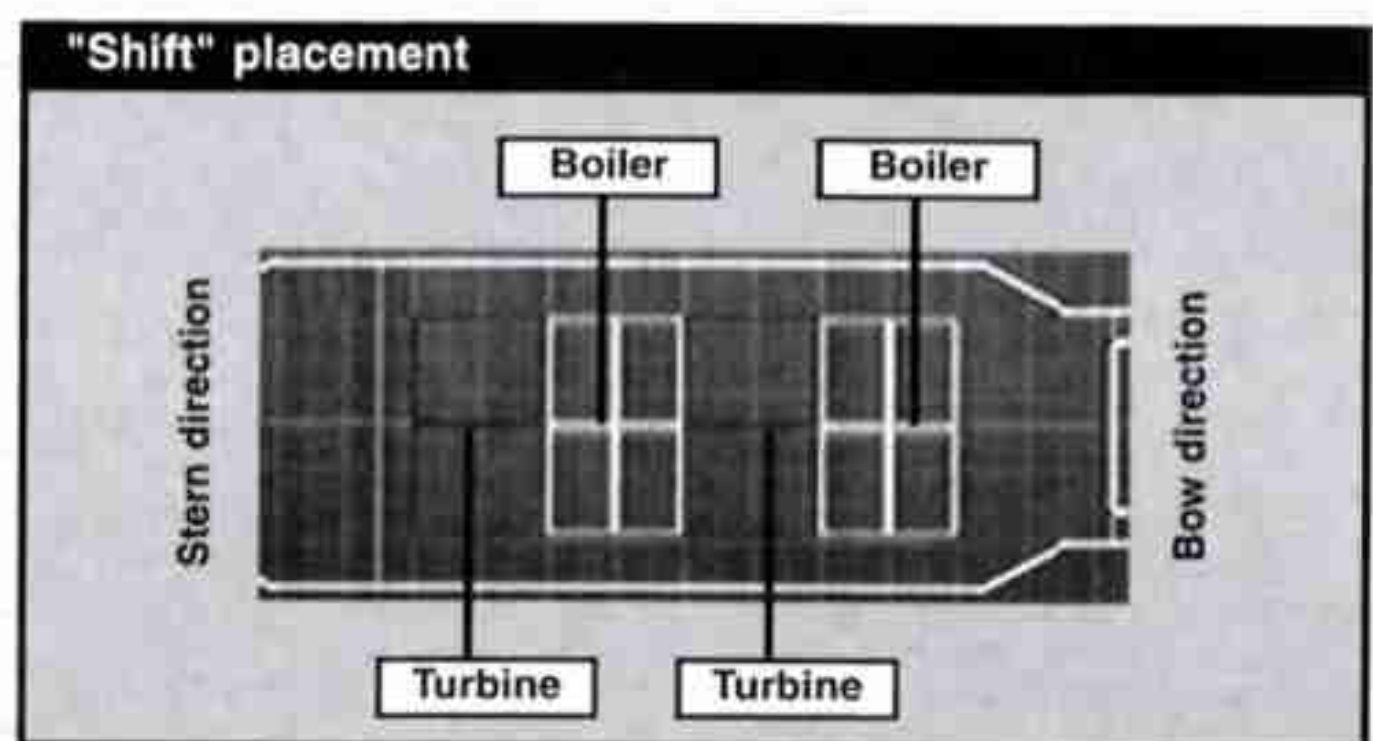
Useful for both anti-air and anti-land purposes. Not effective against watercraft, with the exception of torpedo boats. Loading time is short. Effective against torpedoes, depth charges, missiles and rockets.

► Engines

Choose the type of powerplant for your ship: boiler or turbine. Destroyers can install two turbines; others can install 4. There are no limitations for boilers. Engine capabilities vary according to the type and number of boilers and turbines. Boilers and Turbines require smokestacks to purge exhaust. Nuclear reactors and gas turbines do not require smokestacks.

■ Standard and Shift engine placement

"Shift" is a placement method where engines alternate in this order: boiler/turbine/boiler/turbine. Shift placement is slightly heavier than Standard but it prevents slowdowns due to damage sustained during battle.



► Equipment

Choose equipment that increases the capabilities of your ship. ➤ P.21

Forward bridge

Essential to the command of your ship.

Aft bridge

Supports the functions of the forward bridge. An aft bridge affects your ability to command the ship and to search for enemies.

Smokestack

Discharges heat from boilers. Automatically appears when engine is placed (if applicable). Set up your ship so that Smoke Purge Ability exceeds the number of installed boilers. Smokestacks are essential equipment, except for carriers and battlecarriers. If your ship's engine is a nuclear reactor or a gas turbine, or if your bridge can support a number of smokestacks greater than the number of boilers, then it is not necessary to equip your ship with additional smokestacks.

Searchlight

Lights the area around your ship. Affects capability of radar at night. Standard equipment: automatically equipped at placement. Destroyers may have a maximum of 4 searchlights; others may have a maximum of 8.

■ **Aircraft launcher**

Propels aircraft from the deck of a ship. Cruisers and battleships can carry aircraft if they are equipped with an aircraft launcher. Some ships are equipped with hangars. If your ship has a hangar, you do not need to install an aircraft launcher.

■ **Load lift**

Equipment that moves aircraft between the hangar and the deck. If a ship has multiple Load lifts, it reduces the time needed to launch aircraft. This is essential for carriers and battlecarriers.

► **Auxiliary**

Choose equipment that will increase the capabilities of your ship. It is not necessary to specify the position of Auxiliary equipment. "Sonar" and "Radar" are necessary items for all ships. You may equip each ship with up to 7 types of Auxiliary equipment.

► **Aircraft**

Choose the aircraft for your ship. There are 5 types of aircraft: "Interceptors" for air-to-air attacks, "Bombers" for destroying land based targets, "Fighters" for anti-ship use, "Scouts" for anti-submarine attacks, and "Water Fighters" that can be installed to cruisers and battleships. It is necessary to allocate specific parts to equip ships with aircraft.

Ship Type	Equipment necessary to carry aircraft	Maximum aircraft capacity
Destroyer	-	Cannot carry aircraft
Cruiser	Aircraft launcher	Depends on ship
Battleship	Aircraft launcher	Depends on ship
Carrier/Battlecarrier	Load lift	Depends on ship

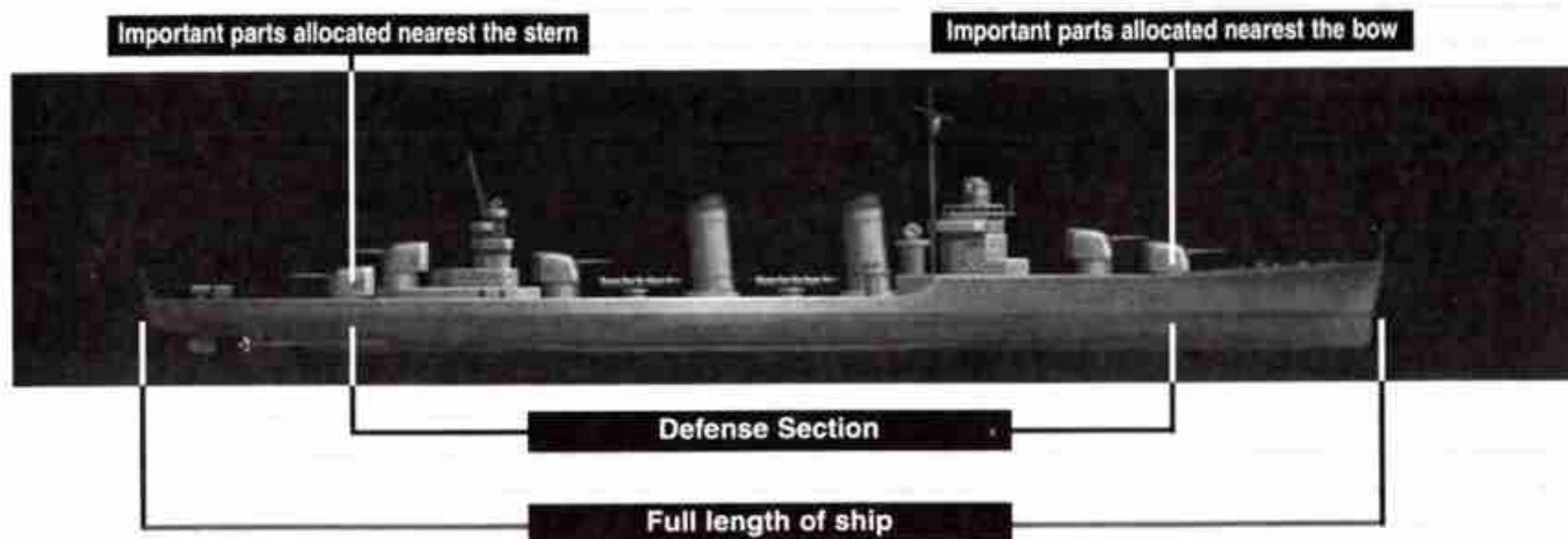
► **Defense**

Allows you to select the thickness of your hull's armor plating. The thicker the armor, the more protection you have against enemy attacks, but the heavier, and therefore slower, your ship becomes. Raising your Metallurgy Level allows for lighter armor, while offering the same level of protection.

■ **Defense Sectioning and Defense Evaluation**

Defense Sectioning covers important components, such as: engine, smokestacks, bridge, and armaments. Defense Evaluation is the ratio of the Defense Section compared to the full length of a ship. You can see current the defense evaluation at the "Defense" Information Display.

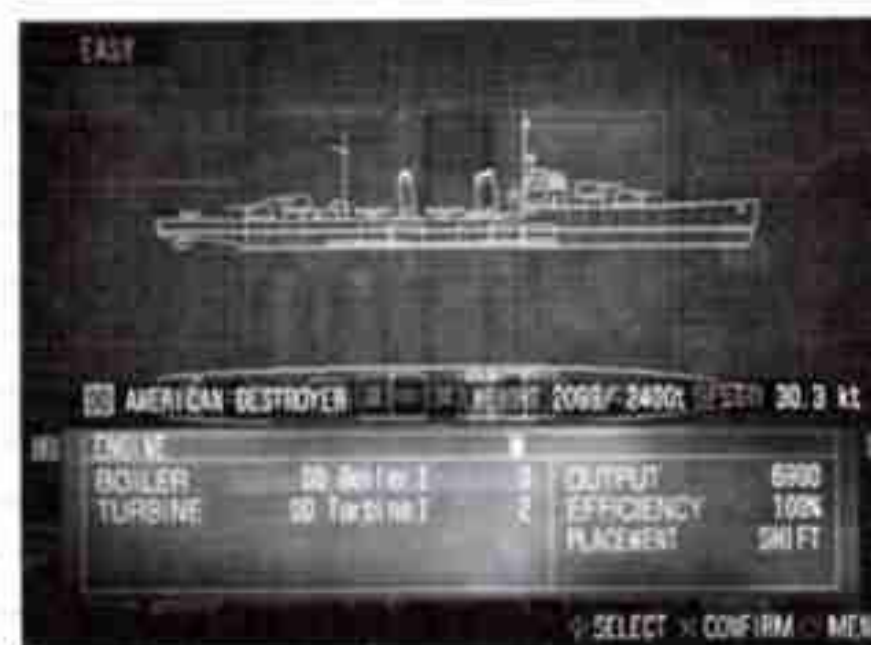
Defense Evaluation	Concentrated Defense	Full Defense
Defense Sectioning	Less than 54%	More than 54%
Plating	Port and Starboard sides and decks are thick; bow and stern are thin	Plating for all sections is thicker
Advantage	Controls the total weight of a ship	Improves defenses
Disadvantages	The bow and the stern have weak defenses	Speed suffers due to weight



► Easy Design

Easy to design. Strengthen ships easily by changing individual parts without changing entire sections.

Choose Easy Design and a display will open. Use the **L2** / **R2** buttons to switch displays.



At the display, choose the parts to replace and the capabilities of those parts will appear.

Choose replacement parts and press the **⊗** button. You may not change location or number of placements, but you may change the number of weapons in an armament. You may also replenish parts at the Easy Design display.



Press the **⊙** button to call up the Design Menu and choose "Regular" to go back to Regular Design mode.

► Name

Enter and change your ship's name. You may rename it as often as you like.

► Buy

Purchase parts **P.18** for ships without returning to the Depot at the Dock Menu.

► Status

Check the exterior appearance and performance of a ship during construction.

☛ P.27

► Help

Receive advice on the control and design of your ship.

Be sure to check out "Help" at least once because it contains fundamental information and effective setting methods.

► Done

Complete your ship design.

A ship cannot be completed if it is missing basic parts and functions.

Press the **⊗** button to confirm the design, or press the **⬆** button to cancel any changes. ("Purchase" and "Sell" data will also be erased.)

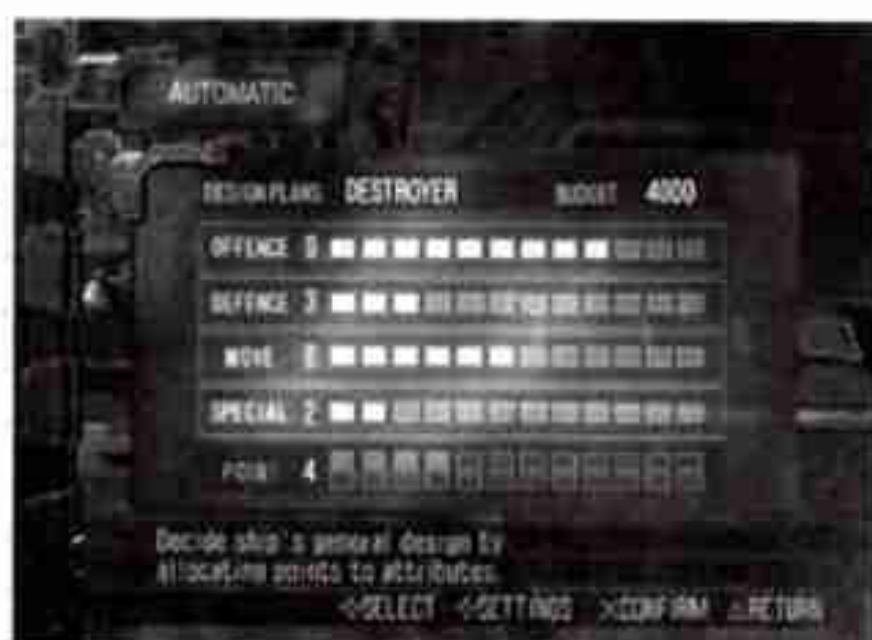
Automatic Design

Enter parameters to design a ship automatically.

Automatic design will not let you retrofit or remodel your ship.

First, choose a ship type to design and budget.

Divide your budget across the following categories: Offense, Defense, Move and Special. A ship will automatically be designed based on your parameters.



Ship Status

Ship Status allows you to view the ship's exterior and evaluate the ship's strengths and weaknesses.

Directional buttons: Control camera

□ button: Stop camera

⊗ button: Confirm ship data



Scrap

Take one of your ships and use it for parts.

Choose a ship to dismantle and press the **⊗** button. If you only own one ship, you will not be able to use it for scrap.



PROCEDURES FOR EFFECTIVE SHIP DESIGN

It is a good idea to power up your destroyer towards the beginning of a game. At the beginning, a ship is fitted only with basic equipment: a hull, bridge, auxiliary systems, and armaments. There are four kinds of armaments. Armament 1: 10 cm, 45 caliber (12.7 cm, 45 caliber for English ships); armament 2: 7.7 mm machine gun; armament 3: 45 cm torpedoes (48.3 cm for Japanese ships); armament 4: depth charges.

You may also want to invest in technologies immediately to create and access new parts.

As your Metallurgy Level increases you will be able to view more ships for purchase.

When in "Regular Design" mode, the "Help" command will take you through the process of designing a new ship.

You will learn how to design a ship step by step.

"Regular Design" will allow you to modify "Prebuilt" ships and vessels created using "Automatic Design."

VESSEL TYPES AND TIPS FOR SHIP DESIGN

You will have access to 5 different types of vessels: "destroyer," "cruiser," "battleship," "carrier" and "battlecarrier." This section explains the characteristics of each type of vessel.

■ Destroyer

Destroyers are smaller ships with a small turning radius. Destroyers are available at the beginning of a game.

Because of their size, destroyers are effective for invading small areas, but have limited durability and a low weight capacity.

Equip destroyers with weapons used to attack land-based targets, ships, and submarines. When using a destroyer, the most effective strategy is to approach targets, quickly launch a barrage of torpedoes and exit the target area.



■ Cruiser

Cruisers are mid-sized ships with a balance of offensive and defensive capabilities.

Cruisers can support larger and more powerful mid-range caliber guns and missile launchers that are too heavy for the smaller destroyers.

Because of their size, cruisers can address a broader range of missions than destroyers. Cruisers can be retrofitted with new armaments and steel plating. There are 2 categories of cruisers, light and heavy.



■ Battleship

This is the largest and most powerful of the non-carrier ships. These ships are also known as, "floating castles."

Because of their size, battleships can carry the most destructive power and the strongest steel. Unlike the smaller ships, battleships can carry large caliber guns.

These larger ships have a lower rudder



capacity, and as a result are not as maneuverable as the smaller vessels. Battleships also lack sufficient anti-sub weapons systems.

■ Carrier

Carriers, known as the powerhouses of the fleet, transport both fighter and bomber aircraft, and are used as bases across international waters.

These vessels must rely on fighter and bomber aircraft for protection.

Allocate most of your funds toward Air Technology to quickly develop high-performance fighters and bombers.



■ Battlecarrier

This vessel combines the front of a battleship and the back of a carrier.

The battlecarrier has the defensive firepower of a battleship coupled with the air assault capability of an aircraft carrier.

The basic structure of a battlecarrier is incomplete, so you will have to complete the design.

Out of all the vessel types, the battlecarrier has the potential to become the most powerful vessel in your fleet.

Designing a battlecarrier will require additional funding.

Although American, Japanese, English, and German fleets have the same types of vessels, each nation will possess unique ship classes. Aircraft capabilities will also vary by nation. ➤ P.09



The Battle Phase

Test your strategy and skill

HOW TO READ THE HEADS-UP DISPLAY

This section explains each of the items on your heads-up display. Consult the noted reference pages for additional details.



1 Radar

The circle displayed at the center of the screen is your ship's radar. Use the SELECT button to change the area covered by radar. There are three options: wide, medium, and narrow. The section of radar marked, "View" show the ship's current range of view.

2 Compass

The 'N' indicates north.

3 Engine Output Bar

This displays engine speed and output. The Engine Output Bar displays the current output setting: Full Ahead (3), Medium (2), Slow (1), Stop (N), or Reverse (R). Use the up and down directional buttons to adjust engine output.

• P.33

4 Battle Situation Message

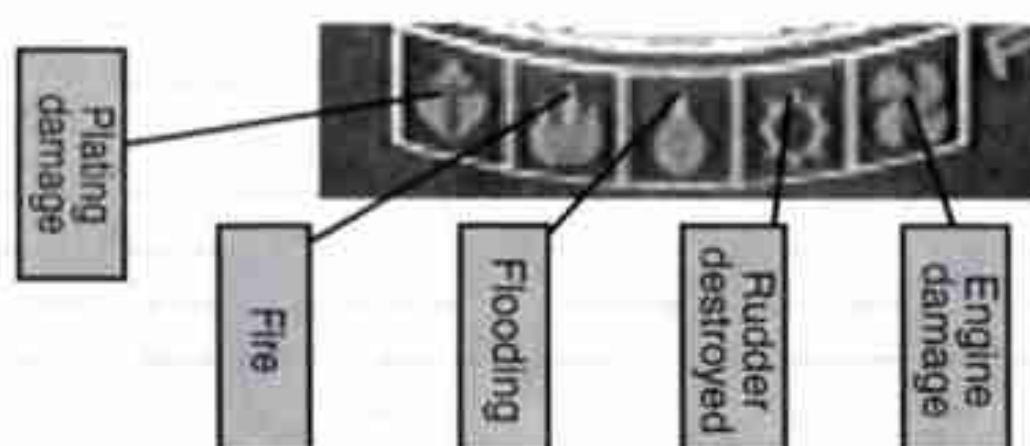
The Battle Situation Message displays your current ship status, as well as warnings of incoming torpedoes and missiles.

After you have designed your ship and chosen your weapons in the Strategy Phase, it's time to head out to sea and prepare for battle. In this section, we describe the flow of the game and the basics of effective ship control.

5 HP Bar, Secondary Effects Warnings

HP Bar displays the ship's integrity. Every time your ship receives damage, the HP Bar decreases. When your ship's HP Bar is fully depleted, your ship will sink. HP can be recovered using the "Repair" command. **P.38**

If any secondary effects of an enemy attack occur, a warning light will indicate the type of damage. **P.36**



6 Radar Display

Your ship appears as a white icon displayed at the center of the radar. Enemy vessels are depicted in red. Friendly fleets are depicted in green.



7 Target

The target arrow indicates the direction of the nearest targets.

8 Targeting

The crosshairs are used to aim at an enemy vessel or aircraft. Use the left analog stick to control the targeting crosshairs. The crosshairs will change color and shape depending on the target being tracked. The color and shape of your targeting system will also change depending on your ship's armaments. **P.34**

9 Enemy Ships

Enemy ship classes and their HP are displayed in red. Under the HP Bar of the strategic objective, a ○ will appear. Friendly ship classes and HP are displayed in blue.

10 The Mini Map

Use the Mini Map to confirm the location of your ship and the location of enemy vessels.

Mini Map Display.

- RED ● : Enemy ships, submarines, aircraft, equipment
- BLUE ● : Friendly ships, aircraft and equipment
- GREEN ● : Friendly aircraft
- : Indicates the location of enemy reinforcements and boss (enemy command) ships

11 Weapons System

Mounted weapons are listed in order and numbered 1 through 7. The number of the weapon currently activated is highlighted in blue. The name of the weapon currently activated is shown at the top of the Weapons System Display. The values displayed to the right of the weapon number indicate remaining ammo.

P.35

12 Repair

Rp shows the remaining number of repairs that you can execute. Each time you use the "Repair" command, the Rp value decreases.

P.38

Collect additional Repair Kits from Item Containers left behind by destroyed enemy vessels. **P.37**

13 Aircraft (A.F.)

A.F. is divided into two sections. The upper value indicates the total number of aircraft the ship has. The lower value indicates the number of aircraft currently airborne. **P.35**

14 Message Display

The Message Display provides instructions regarding your current strategic objectives.

FLOW OF BATTLE PHASE

This section explains the flow of the Battle Phase, and the actions you need to take to ensure a successful mission. Please check the reference pages for more detailed explanations.

Search for the enemy and move your ship

➡ P.33

Before moving your ship, use your maps and radar to help you search for enemies. Effective control of your ship is key to accomplishing your objective.

Launch aircraft sorties

➡ P.35

If there are aircraft on your ship, command the aircraft units to Depart. Aircraft can automatically search for and attack enemy targets. If you issue a Return command, all aircraft will return to the ship.

Attacking the enemy

➡ P.34

Once you have discovered enemies, start attacking them. Choose weapons that suit the attack target while taking into account your remaining ammunition.

Rescue enemy sailors and retrieve containers

➡ P.37

Sometimes, when an enemy ship is destroyed, enemy sailors are thrown overboard. Item containers and parts may also appear. Position your ship near the drifting sailors and containers to pick them up. If you collect these enemy sailors and containers, your post-battle evaluation will improve. The number of times you can repair your ship will increase, as will the parts in your inventory.

Accomplish your strategic objectives and escape

➡ P.38

Once you have accomplished your objectives and the message, "Objective Completed" appears at the top of the screen, move your ship to the exit point to exit the battle area. If your ship sinks before you are able to escape, or if you "Withdraw" without accomplishing your objective, then your mission is considered a failure.

SHIP CONTROLS

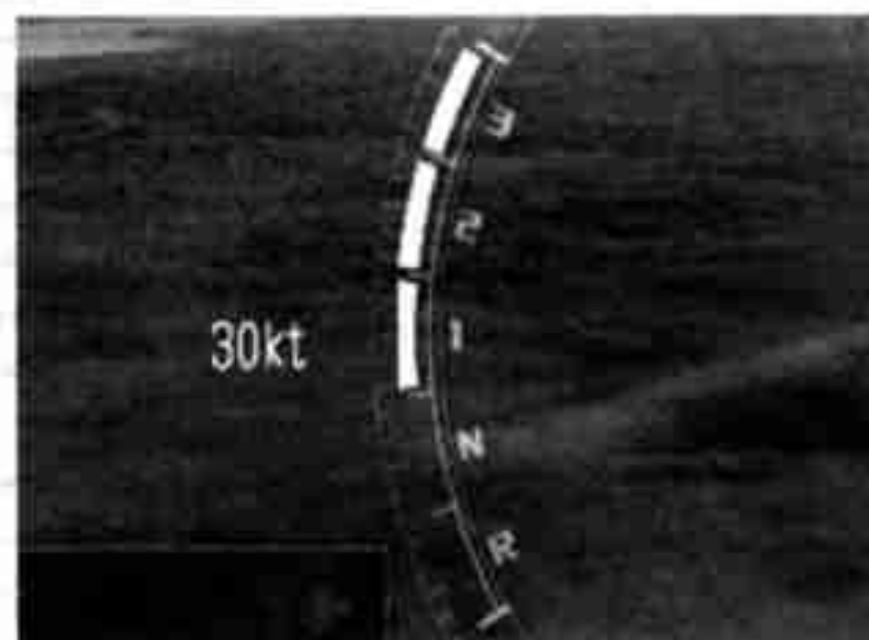
Speed Adjustment

Use Engine Output Bar to monitor your speed. Engine output has five speeds: "Full Ahead," "Medium," "Slow," "Stop," and "Reverse." Adjust your speed according to the situation.

Up directional button: Press once to increase speed by one level.

Down directional button: Press once to decrease speed by one level.

Press the up directional button repeatedly to increase speed rapidly.



The Rudder

The right and left directional buttons and the **L1** / **R1** buttons control the ship's rudder.

Left directional button (**L1** button): Turn left (Port)

Right directional button (**R1** button): Turn right (Starboard)

Press the left/right directional buttons (or the **L1** / **R1** buttons) repeatedly to turn quickly.

Ship's Field of Vision

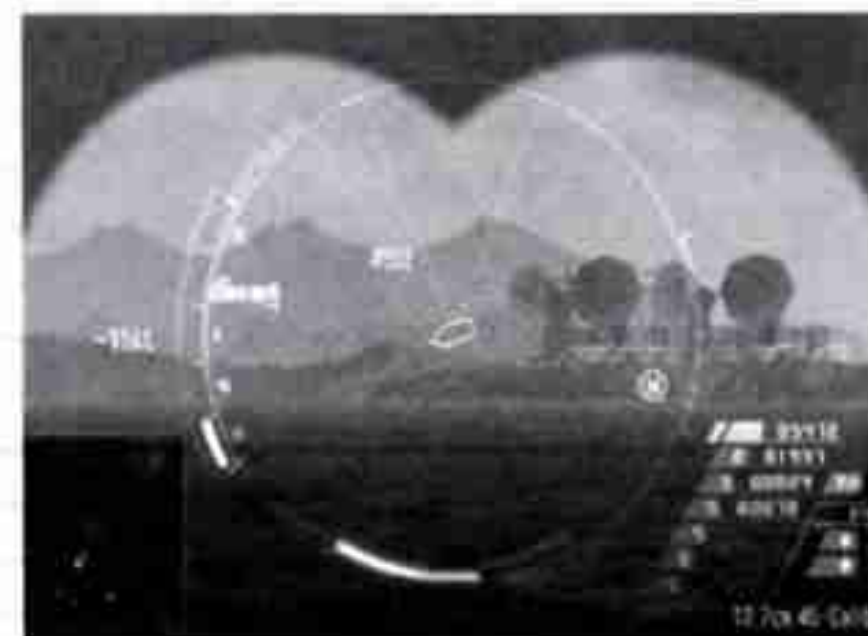
The Field of Vision faces the same direction as Targeting. Targeting is controlled by the left analog stick. **• P.34**

■ Auto-Steering Mode

Press the **Auto-Steering** button to orient the bow of the ship to Targeting. An indicator at the top of the weapons panel shows the status of Auto-Steering Mode. Press the **Auto-Steering** button once more to disable auto-steering.

■ Binocular Mode

Press the **Binocular** button to activate Binocular Mode. To check the long-range view, move the right analog stick up. Moving the analog stick down makes the camera zoom-out. Move the analog stick all the way down or press the **Binocular** button to disable.



OFFENSE AND DEFENSE

All ships can load a maximum of 7 different weapons.

Targeting

Use the left analog stick to adjust targeting and to lock-on to enemy targets; press the  button to fire.

Adjust Targeting to take aim at enemy ships and equipment. Because Targeting always moves with the ship, you are more likely to attack the enemy while stopped than while in motion. While aiming, always take the enemy's constant movement into consideration.

■ Precision Mode

Pressing the  button takes you to Precision Mode. Zoom-in targeting enables more precise shooting but makes it difficult to see what lies around the target. Watch out for short-range attacks.

■ Types of Crosshairs

Once you take aim at an object, the crosshairs will change. The color and shape of the crosshairs indicate which weapon is currently selected. Crosshairs will automatically switch to an Anti-Air Mode depending on the height of the target. This section shows the different types of crosshairs, and their meaning.



<Within range>

Green indicates that the targeted enemy is within range.



<Lock-on>

Able to lock-on to the target, depending on weapon type. Zoom-in until Targeting becomes green. It is easier to shoot within the range.



<Loading>

Unable to launch because weapon is being loaded.



<Out of range>

Red indicates that the targeted enemy is out of range.



<Normal Mode>

Normal Mode (Anti-Land) is indicated by [+] in the center of the target.



<Out of Ammo>

Unable to launch due to lack of ammo or impossible launch location.



<Anti-air Mode>

This crosshair indicates that you are switched to Anti-air mode.

Switching weapons and issuing commands to aircraft

Use the "Weapons Panel" in the lower right corner of the screen to switch weapons and issue commands to aircraft. Only one weapon can be used at any time. Switch weapons to suit the battle situation.

Switch weapons



Issuing Orders for Aircraft

You may give arrival and departure orders if your ship is equipped with aircraft. Only aircraft equipped to fly at night may depart at night and during bad weather. Aircraft cannot depart if the ship's deck is damaged. Once they have departed, aircraft function automatically: you may not alter their routes or targeting activities. Aircraft that have departed can be automatically resupplied with ammo and refueled again and again. Select if you want the aircraft to return to the ship. Aircraft that have been shot down cannot be recovered after the objective is completed. Replace aircraft at the Strategy Phase.

Intercept Mode

Intercept Mode is engaged when the **L2** button is held down. Ships equipped with machine guns or interceptive weapons can automatically defend against enemy torpedoes, missiles and aircraft. Precision of the Intercept Mode depends upon the ability of the commander.



CURRENT SHIP STATUS

Ships attacked by the enemy will sustain damage. Confirm current ship status on the HP Bar and the Secondary Effects Warning Light.

Damage can be fixed by doing "Repairs" ➔ P.38 and by finding Item Containers ➔ P.37

■ HP Bar

HP Bar indicates the condition of your ship. If a ship is damaged, the color will change from Blue to Orange to Red. If HP falls to 0, the mission will end.



■ Secondary Effects

If a ship sustains an attack, a "secondary effect" such as a fire or engine damage may occur. Certain auxiliary systems can protect the ship against this type of damage.

■ Secondary Effects

Deck damage	✚	Aircraft cannot take off or land.
Fire	🔥	Ammunition destroyed by fire; HP is decreased.
Flooding	💧	Ship speed markedly decreases over time.
Rudder destroyed	⚙️	Ship becomes difficult to maneuver.
Engine	⚙️	Engine output is decreased.

ESCAPE

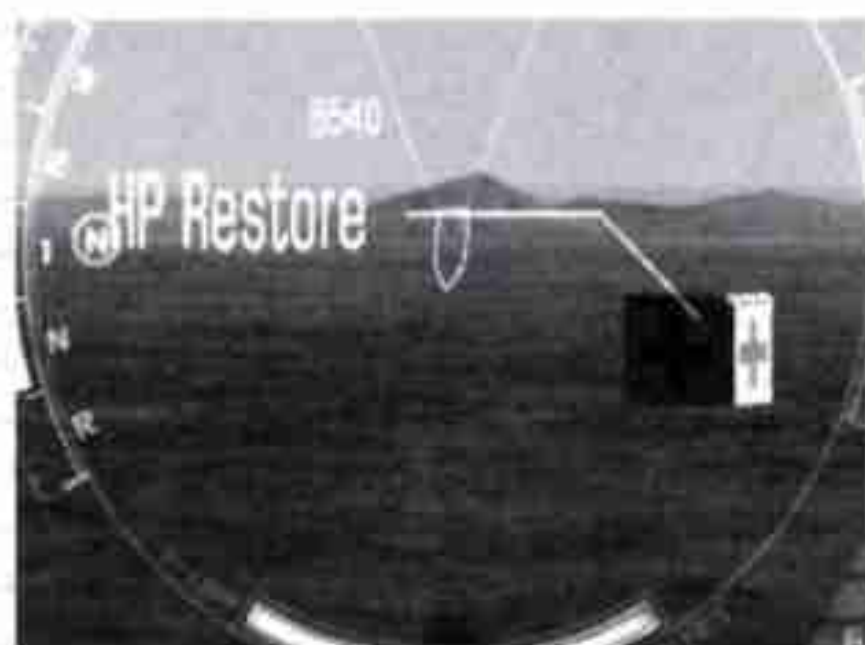
Complete your objective and the "Objective Achieved" movie is shown. To clear a stage complete your objective, and then escape from the sector. To escape, move your ship to an edge of the map. If you choose "Withdraw" from the Battle Menu before you have completed your objective, the mission will be considered a failure. ➔ P.38



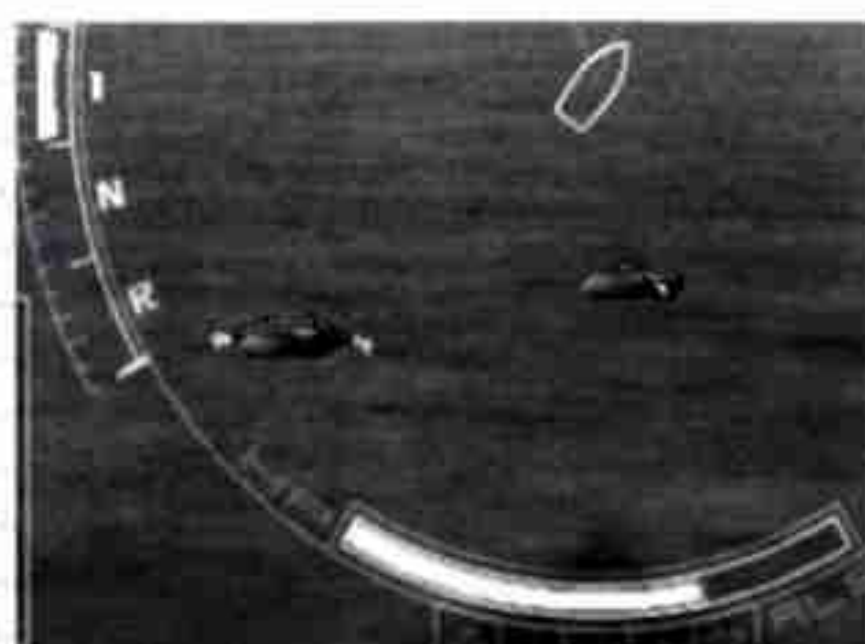
PICKING UP ITEMS AND ENEMY SAILORS

When you destroy an enemy ship, Item containers may appear.

There are different kinds of Item Containers, each with a different effect.



If you rescue enemy sailors thrown from an enemy ship, you will improve your battle evaluation score at the Battle Report screen. Maneuver close to Item Containers and enemy sailors to pick them up.



■ Item Containers



■ Recover HP

The condition of your ship improves.

There are 3 levels of recovery: 100% recovery, 50% recovery, and 25% recovery.



■ Funding

Additional funding.

The amount of funding depends on the number of points.



■ Supply Ammo

You are able to obtain ammo.

Ammunition for all weapon types will fill up completely.



■ Status Restore

Recover from all "Secondary Effects."

If there are no secondary effects, nothing happens.



■ Repair Kit

Gain one extra turn for repairs.



■ Parts

Obtain parts for use in a ship design.

Parts obtained are not known until the "Battle Report" is displayed.

BATTLE MENU

Press the START button during battle, to pause the game and view the Battle Menu. Use the Battle Menu to assess the battle situation and access ship repair commands.



Objective

An objective for the stage is displayed. A sector map and location of the objective are shown. Confirm the battle situation from time to time.

Event

Read messages for the many events that occur while you pursue the objective.

Aircraft

Confirm present number and types of aircraft.

Repair

Damage sustained during battle can be repaired. During repair, your ship's HP Bar appears in the center of the screen. It indicates the status of recovery. While the HP Bar is green, your ship and weapons may not be used. When the HP Bar turns blue, your ship may be used and weapons can be used gradually, beginning with "Armament 1." If a ship is attacked during repairs, the amount of damage will double. Check numbers of "RP" on the "Weapon Panel" to confirm the number of possible repairs. RP can be increased by collecting repair kits. ➡ P.37

Withdraw

Abandon the mission and withdraw. The mission will be considered a failure.

Display

Changes what is displayed on the screen.

■ Panel Display

Normal	Radar, Weapons Panel, and a small scale map are displayed.
Easy	Only Weapons Panel, HP Bar, and Secondary Effects Warning Light are displayed on the right side of the screen.
Large	Enlarged map appears instead of radar.

Options

Change settings of the play environment and controller configuration (Type I-VIII).

Help

Confirm the currently selected controller configuration and the number of enemies defeated.

BATTLE REPORT

After escaping from the battle sector or sinking a ship and the objective is completed, the "Battle Report" is displayed on the screen.

Points and funding depend on the results of your mission.



Points, Funding, and Items

"Points", "Funding" and "Items" are provided according to the results of the mission. "Points" are calculated by adding objective points, which depend on the difficulty of the objective, and attacking enemy points.

"Items" collected during a battle may be kept regardless of the results of the mission. Occasionally, items are provided as an award according to the total number of ships sunk. "Funding" is provided in addition to rewards for stage completion, rankings, and enemy ships sunk, based on your rank and ship type.

Ship type	Ship class pay
Destroyer	5000
Carrier	2500
Cruiser	2000
Battlecarrier	0500
Battleship	0500

Battle Evaluation

"Battle Evaluation," which contains 6 different ranks from Rank S (highest) to Rank E (lowest), is determined according to the results of the battle. If you attain the highest rank, Items, Funding and Points are provided as special rewards in addition to Items and Funding obtained during battle.

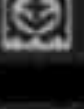
"Success/Failure of the mission," "Sunk-ship Score," "Numbers of Rescued sailors,"

"Accuracy," and "Enemy Accuracy" are the standards of judgment for the evaluation. Battle Evaluation is not related to difficulty level. Once you have passed a stage, you can play it repeatedly. Go for the highest rank!



Promotion

If Points reach a certain level after you complete your mission, you will be promoted in rank.

Insignia of rank	Rank	Points	Ship class pay
	Apprentice Seaman	-	500
	Seaman 2nd Class	10,000	750
	Seaman 1st Class	20,000	1,000
	Petty Officer 2nd Class	30,000	1,250
	Petty Officer 1st Class	40,000	1,500
	Chief Petty Officer	50,000	2,000
	Warrant Officer	70,000	2,500
	Chief Warrant Officer	100,000	3,000
	Lieutenant	150,000	5,000
	Lieutenant-Commander	200,000	6,500
	Commander	250,000	8,000
	Captain	300,000	10,000
	Commodore	500,000	12,500
	Rear-Admiral	700,000	15,000
	Vice-Admiral	1,000,000	20,000
	Admiral	1,500,000	30,000
	Grand Admiral	2,000,000	50,000

Ship/Item Data

PREBUILT

Nation	Ship Type	Class	Necessary Technology Level					Price	Speed	Endurance
			Air Tech	Engine	Metallurgy	Weapons	Electronics			
Japanese	Kagero Type	Destroyer	0	0	0	0	0	4000	36	400
	Shimakaze Type	Destroyer	0	0	2	0	0	6000	40	500
	Akizuki Type	Destroyer	0	0	3	0	0	7000	33	500
	Nagara Type	Cruiser	0	0	2	0	0	17000	36	570
	Yuubari Type	Cruiser	0	0	3	0	0	14000	35	525
	Agano Type	Cruiser	0	0	4	0	0	21000	33	600
	Fusou Type	Battleship	0	0	10	0	0	59000	21	1950
	Kongo Type	Battleship	0	0	10	0	0	65000	30	1950
	Ryuujou Type	Carrier	0	0	2	0	0	30000	31	420
	Unryuu Type	Carrier	0	0	6	0	0	40000	36	720
	Ise Type	Battlecarrier	0	0	11	0	0	86000	26	2100
American	Porter Class	Destroyer	0	0	0	0	0	4500	37	460
	Benson Class	Destroyer	0	0	2	0	0	6000	35	500
	Fletcher Class	Destroyer	0	0	3	0	0	6500	37	560
	Omaha Class	Cruiser	0	0	2	0	0	15000	33	450
	Atlanta Class	Cruiser	0	0	4	0	0	22000	32	600
	Cleveland Class	Cruiser	0	0	5	0	0	29000	32	750
	New York Class	Battleship	0	0	10	0	0	55000	17	1950
	Tennessee Class	Battleship	0	0	11	0	0	60000	19	2100
	Wasp Class	Carrier	0	0	4	0	0	35000	32	600
	Lexington Class	Carrier	0	0	8	0	0	67000	36	800
	Florida Class	Battlecarrier	0	0	12	0	0	60000	27	2250
English	A Class	Destroyer	0	0	0	0	0	3500	34	360
	G Class	Destroyer	0	0	2	0	0	5200	36	400
	Tribal Class	Destroyer	0	0	3	0	0	5500	36	440
	Leander Class	Cruiser	0	0	2	0	0	16000	31	450
	Southampton	Cruiser	0	0	5	0	0	26000	30	750
	Exeter Class	Cruiser	0	0	6	0	0	28000	30	900
	Royal Sovereign Class	Battleship	0	0	10	0	0	47000	20	1950
	Queen Elizabeth Class	Battleship	0	0	13	0	0	55000	21	2100
	Hermes Class	Carrier	0	0	4	0	0	28000	28	450
	Arc Royal Class	Carrier	0	0	8	0	0	46000	33	900
	Furious Class	Battlecarrier	0	0	12	0	0	60000	25	2100
German	Z1 Class	Destroyer	0	0	0	0	0	4000	37	440
	Z23 Class	Destroyer	0	0	2	0	0	6000	37	500
	Z52 Class	Destroyer	0	0	3	0	0	5800	37	540
	Emden Class	Cruiser	0	0	2	0	0	16000	28	450
	Leipzig Class	Cruiser	0	0	2	0	0	18000	30	600
	Nuremberg Class	Cruiser	0	0	4	0	0	23000	32	675
	Deutschland Class	Battleship	0	0	10	0	0	49000	27	1950
	Scharnhorst Class	Battleship	0	0	14	0	0	83000	29	2250
	Seidlitz Class	Carrier	0	0	5	0	0	25000	35	500
	Wesel Class	Carrier	0	0	11	0	0	33000	36	700
	Bayern Class	Battlecarrier	0	0	12	0	0	59000	28	2250

*Speed increases according to Engine Level. The numbers listed here correspond to Engine Level 1.

*Endurance increases according to Electronics Level. Numbers in the list correspond to Electronics Level 1.

HULL

Nation	Ship Type	Necessary Technology Level					Price	Weight	# of aircraft to load	Endurance
		Air Tech	Engine	Metallurgy	Weapons	Electronics				
Japanese	Destroyer I	0	0	0	0	0	250	700	-	300
	Destroyer II	0	0	1	0	0	500	800	-	400
	Destroyer III	0	0	2	0	0	750	900	-	500
	Cruiser I	0	0	2	0	0	2000	1200	-	570
	Cruiser II	0	0	3	0	0	3000	1000	-	525
	Cruiser III	0	0	4	0	0	4500	1350	-	600
	Battleship I	0	0	10	0	0	25000	2700	-	1950
	Battleship II	0	0	13	0	0	30000	2500	-	2100
	Battleship III	0	0	14	0	0	35000	2900	-	2250
	Carrier I	0	0	2	0	0	5000	1600	10	420
	Carrier II	0	0	6	0	0	10000	2200	13	720
	Battleship/carrier	0	0	11	0	0	35000	2800	5	2100
American	Destroyer I	0	0	0	0	0	250	700	-	410
	Destroyer II	0	0	1	0	0	500	800	-	460
	Destroyer III	0	0	2	0	0	750	900	-	500
	Cruiser I	0	0	2	0	0	2250	1100	-	450
	Cruiser II	0	0	4	0	0	4500	1300	-	600
	Cruiser III	0	0	5	0	0	7500	1500	-	750
	Battleship I	0	0	10	0	0	26000	2700	-	1950
	Battleship II	0	0	11	0	0	30000	2800	-	2100
	Battleship III	0	0	15	0	0	34000	3000	-	2250
	Carrier I	0	0	4	0	0	10000	2300	10	600
	Carrier II	0	0	8	0	0	25000	3000	13	800
	Battleship I	0	0	12	0	0	30000	2300	5	2250
English	Destroyer I	0	0	0	0	0	250	700	-	340
	Destroyer II	0	0	1	0	0	500	800	-	360
	Destroyer III	0	0	2	0	0	750	900	-	400
	Cruiser I	0	0	2	0	0	2250	1100	-	450
	Cruiser II	0	0	3	0	0	5250	1200	-	600
	Cruiser III	0	0	5	0	0	7500	1450	-	750
	Battleship I	0	0	10	0	0	20000	2800	-	1950
	Battleship II	0	0	13	0	0	24000	2700	-	2100
	Battleship III	0	0	14	0	0	30000	2750	-	2250
	Carrier I	0	0	4	0	0	4500	2500	9	450
	Carrier II	0	0	8	0	0	10000	2700	12	900
	Battleship I	0	0	12	0	0	30000	2400	5	2100
German	Destroyer I	0	0	0	0	0	250	700	-	380
	Destroyer II	0	0	1	0	0	500	800	-	440
	Destroyer III	0	0	2	0	0	750	900	-	500
	Cruiser I	0	0	2	0	0	2000	1100	-	450
	Cruiser II	0	0	3	0	0	3000	1200	-	600
	Cruiser III	0	0	4	0	0	4500	1400	-	675
	Battleship I	0	0	10	0	0	19000	2700	-	1950
	Battleship II	0	0	13	0	0	28000	2900	-	2100
	Battleship III	0	0	14	0	0	36000	3200	-	2250
	Carrier I	0	0	5	0	0	4000	1900	8	500
	Carrier II	0	0	11	0	0	7500	2000	11	700
	Battleship I	0	0	12	0	0	28000	2250	5	2250

*Endurance increases according to Electronics Level. Numbers in the list correspond to Electronics Level 1.

ENGINE/BOILER/TURBINE

Engine Name	Necessary Technology Level					Price	Weight	Output
	Air Tech	Engine	Metallurgy	Weapons	Electronics			
Destroyer boiler I	0	0	0	0	0	160	220	2300
Destroyer boiler II	0	1	0	0	0	180	240	2800
Destroyer boiler III	0	2	0	0	0	200	250	3300
Destroyer boiler IV	0	3	0	0	0	250	250	3700
Destroyer boiler V	0	4	0	0	0	300	270	4200
Cruiser boiler I	0	0	0	0	0	400	50	1200
Cruiser boiler II	0	2	0	0	0	500	50	1450
Cruiser boiler III	0	4	0	0	0	600	70	1700
Cruiser boiler IV	0	5	0	0	0	700	85	2000
Cruiser boiler V	0	8	0	0	0	800	100	2300
Carrier boiler I	0	0	0	0	0	600	100	1650
Carrier boiler II	0	3	0	0	0	750	100	1900
Carrier boiler III	0	6	0	0	0	1000	160	2200
Carrier boiler IV	0	9	0	0	0	1250	200	2500
Battleship boiler I	0	0	0	0	0	800	100	1800
Battleship boiler II	0	8	0	0	0	1000	100	2200
Battleship boiler III	0	9	0	0	0	1250	160	2600
Battleship boiler IV	0	10	0	0	0	1500	200	3200
Destroyer turbine I	0	0	0	0	0	100	150	-
Destroyer turbine II	0	1	0	0	0	200	170	-
Destroyer turbine III	0	2	0	0	0	300	190	-
Normal turbine I	0	0	0	0	0	500	100	-
Normal turbine II	0	2	0	0	0	1000	120	-
Normal turbine III	0	3	0	0	0	1500	140	-

CALIBER



Caliber is related to the length of a gun. If you have ammunition with a diameter of 10 cm and a 50 caliber gun, then the length of the gun is 5 meters (10 cm X 50 = 5 meters). Longer guns have higher muzzle speed, shooting accuracy, and penetration ability.

ARMAMENTS/GUNS

Weapon Name	Caliber	Necessary Technology Level					Price	Weight				Offensive Ability			
		Air Tech	Engine	Metallurgy	Weapons	Electronics		Single barrel	Multibarrel	3-barrel	4-barrel	Offense	Range	Field	Load
10cm Caliber	50	0	0	0	0	0	150	5	11	16	-	7	3050	280	59
	55	0	0	1	1	0	175	6	12	19	-	8	3100	360	57
	60	0	0	3	3	0	225	7	14	22	-	9	3150	440	57
	65	0	0	4	4	0	300	8	16	25	-	10	3200	520	57
12.7cm Caliber	50	0	0	0	0	0	175	6	13	19	-	8	3150	360	60
	55	0	0	1	1	0	225	7	14	22	-	9	3200	440	60
	60	0	0	3	3	0	250	8	16	25	-	10	3250	520	59
	65	0	0	5	5	0	325	9	18	28	-	11	3300	600	58
14cm Caliber	50	0	0	2	2	0	300	8	18	26	35	10	3350	440	54
	55	0	0	3	3	0	350	9	19	29	38	11	3400	520	54
	60	0	0	4	4	0	400	10	20	31	42	12	3450	600	53
	65	0	0	6	6	0	500	11	22	34	46	13	3500	690	51
15.5cm Caliber	50	0	0	2	2	0	350	11	25	37	49	13	3680	600	66
	55	0	0	4	4	0	425	12	26	40	53	14	3760	690	62
	60	0	0	6	6	0	550	13	28	42	56	15	3840	770	61
	65	0	0	8	8	0	650	14	29	44	60	16	3920	850	69
20.3cm Caliber	50	0	0	3	3	0	500	21	42	60	76	21	4080	690	76
	55	0	0	5	5	0	550	23	46	66	83	23	4160	770	73
	60	0	0	7	7	0	700	25	50	71	90	25	4240	850	69
	65	0	0	9	9	0	850	27	52	77	97	27	4320	930	66
25.4cm Caliber	50	0	0	4	4	0	600	41	82	117	148	41	4580	850	97
28cm Caliber	50	0	0	5	5	0	650	55	110	157	198	55	4780	1000	119
30.5cm Caliber	50	0	0	6	6	0	700	71	142	202	256	71	4980	1170	130
35.6cm Caliber	50	0	0	8	8	0	1000	113	226	322	407	113	5200	1300	136
38.1cm Caliber	50	0	0	9	9	0	1200	138	276	393	497	138	5400	1490	140

WEAPON/HIGH-ANGLE GUNS

Weapon Name	Caliber	Necessary Technology Level					Price	Weight				Offensive Ability			
		Air Tech	Engine	Metallurgy	Weapons	Electronics		Single barrel	Multibarrel	3-barrel	4-barrel	Offense	Range	Field	Load
10cm Caliber	50	0	0	1	1	1	150	-	11	-	-	14	3050	300	61
	55	0	0	2	2	2	175	-	12	-	-	16	3100	360	59
	60	0	0	3	2	2	225	-	14	-	-	18	3150	440	58
	65	0	0	3	3	2	300	-	16	-	-	20	3200	520	57
12.7 Caliber	50	0	0	1	1	1	175	-	13	-	-	16	3150	360	61
	55	0	0	2	2	1	225	-	14	-	-	18	3200	440	61
	60	0	0	3	3	2	250	-	16	-	-	20	3250	520	60
	65	0	0	5	5	2	325	-	18	-	-	22	3300	600	59

WEAPON/OTHERS

Weapon Name	Necessary Technology Level					Price	Weight	Offensive Ability			
	Air Tech	Engine	Metallurgy	Weapons	Electronics			Offense	Range	Field	Load
45cm Torpedoes	0	0	0	0	0	100	3	80	1700	320	78
48.3cm Torpedoes	0	0	0	1	0	125	3	120	1800	320	80
53.3cm Torpedoes	0	0	0	2	0	175	4	150	2100	320	82
61cm Torpedoes	0	0	0	3	0	250	5	200	2300	320	86
45cm Oxygen Torpedoes	0	3	0	3	0	120	5	120	1800	320	82
48.3cm Oxygen Torpedoes	0	3	0	4	0	150	6	140	2300	320	88
53.3cm Oxygen Torpedoes	0	3	0	6	0	200	7	170	2500	320	90
32.4cm Guided Torpedoes	0	5	0	11	5	500	7	100	2050	320	70
Depth Charge	0	0	0	0	0	50	20	25	1000	400	78
Anti-sub Missile	0	0	0	5	0	100	30	35	1200	400	56
20mm CIWS	0	0	0	10	10	40	6	3	2700	400	18
25mm CIWS	0	0	0	15	12	50	7	4	2500	400	38
7.7mm Machine Gun	0	0	0	0	0	5	1	1	1700	320	18
12.7mm Machine Gun	0	0	0	1	0	7	2	1	2000	320	18
20mm Machine Gun	0	0	0	2	0	12	2	2	2300	320	23
25mm Machine Gun	0	0	0	2	0	10	2	2	2300	320	23
28mm Machine Gun	0	0	0	4	0	12	3	3	2300	320	23
37mm Machine Gun	0	0	0	6	0	15	3	3	2500	320	30
40mm Machine Gun	0	0	0	8	0	20	4	4	2500	320	30
12cm 30 Barrel Rocket Launcher	0	0	0	7	0	1000	10	15	5000	256	24
20cm 12 Barrel Rocket Launcher	0	0	0	10	0	1500	20	22	4500	256	31

EFFECTIVE USE OF MACHINE GUNS



Machine guns are effective anti-aircraft weapons. They may also be used to intercept enemy torpedoes and missiles. An essential weapon for all ship classes, it is best to divide them among multiple armaments.

EQUIPMENT/FORWARD BRIDGE/AFT BRIDGE

Nation	Bridge Type	Necessary Technology Level					Price	Weight
		Air Tech	Engine	Metallurgy	Weapons	Electronics		
Japanese	Destroyer Forward Bridge I	0	0	0	0	0	200	20
	Destroyer Forward Bridge II	0	0	1	0	0	240	20
	Destroyer Aft Bridge I	0	0	0	0	0	200	5
	Destroyer Aft Bridge II	0	0	1	0	0	250	5
	Cruiser Forward Bridge I	0	0	1	0	0	1000	25
	Cruiser Forward Bridge II	0	0	2	0	0	1500	30
	Cruiser Aft Bridge I	0	0	1	0	0	1500	10
	Cruiser Aft Bridge II	0	0	2	0	0	2250	15
	Battleship Forward Bridge I	0	0	10	0	0	4000	30
	Battleship Forward Bridge II	0	0	11	0	0	5000	35
	Battleship Aft Bridge I	0	0	10	0	0	4000	10
	Battleship Aft Bridge II	0	0	11	0	0	7000	10
	Carrier Bridge I	0	0	2	0	0	3000	30
	Carrier Bridge II	0	0	4	0	0	2000	25
American	Destroyer Forward Bridge I	0	0	0	0	0	200	15
	Destroyer Forward Bridge II	0	0	1	0	0	250	25
	Destroyer Aft Bridge I	0	0	0	0	0	200	5
	Destroyer Aft Bridge II	0	0	1	0	0	260	10
	Cruiser Forward Bridge I	0	0	1	0	0	1500	35
	Cruiser Forward Bridge II	0	0	2	0	0	1750	30
	Cruiser Aft Bridge I	0	0	1	0	0	1500	15
	Cruiser Aft Bridge II	0	0	2	0	0	2000	25
	Battleship Forward Bridge I	0	0	10	0	0	4000	35
	Battleship Forward Bridge II	0	0	11	0	0	5000	40
	Battleship Aft Bridge I	0	0	10	0	0	4000	10
	Battleship Aft Bridge II	0	0	11	0	0	5000	15
	Carrier Bridge I	0	0	3	0	0	4000	35
	Carrier Bridge II	0	0	5	0	0	3500	45
English	Destroyer Forward Bridge I	0	0	0	0	0	200	15
	Destroyer Forward Bridge II	0	0	1	0	0	280	20
	Destroyer Aft Bridge I	0	0	0	0	0	200	10
	Destroyer Aft Bridge II	0	0	1	0	0	260	5
	Cruiser Forward Bridge I	0	0	1	0	0	1500	30
	Cruiser Forward Bridge II	0	0	2	0	0	1750	35
	Cruiser Aft Bridge I	0	0	1	0	0	1500	10
	Cruiser Aft Bridge II	0	0	2	0	0	2000	15
	Battleship Forward Bridge I	0	0	10	0	0	4000	35
	Battleship Forward Bridge II	0	0	11	0	0	5500	40
	Battleship Aft Bridge I	0	0	10	0	0	5000	15
	Battleship Aft Bridge II	0	0	11	0	0	4000	15
	Carrier Bridge I	0	0	2	0	0	3000	30
	Carrier Bridge II	0	0	5	0	0	4000	30
German	Destroyer Forward Bridge I	0	0	0	0	0	320	25
	Destroyer Forward Bridge II	0	0	1	0	0	200	20
	Destroyer Aft Bridge I	0	0	0	0	0	240	10
	Destroyer Aft Bridge II	0	0	1	0	0	200	8
	Cruiser Forward Bridge I	0	0	2	0	0	1500	25
	Cruiser Forward Bridge II	0	0	3	0	0	1750	30
	Cruiser Aft Bridge I	0	0	1	0	0	1750	12
	Cruiser Aft Bridge II	0	0	2	0	0	1500	15
	Battleship Forward Bridge I	0	0	10	0	0	6000	40
	Battleship Forward Bridge II	0	0	12	0	0	4000	45
	Battleship Aft Bridge I	0	0	10	0	0	4000	20
	Battleship Aft Bridge II	0	0	11	0	0	6000	15
	Carrier Bridge I	0	0	4	0	0	3600	30
	Carrier Bridge II	0	0	6	0	0	3000	25

EQUIPMENT/AUXILIARY SYSTEMS

Auxiliary System Name	Necessary Technology Level					Price	Weight	Effect
	Air Tech	Engine	Metallurgy	Weapons	Electronics			
Electronic Targeting System 1	0	0	0	0	7	5000	20	Improves accuracy of automatic weapons
Electronic Targeting System 2	0	0	0	0	12	10000	22	
Electronic Targeting System 3	0	0	0	0	16	15000	24	
Electronic Blocking System 1	0	0	0	0	8	3000	20	Weakens enemy radar
Electronic Blocking System 2	0	0	0	0	13	6000	22	
Electronic Blocking System 3	0	0	0	0	17	10000	24	
Sonar 1	0	0	0	0	0	500	20	Expands sonar range
Sonar 2	0	0	0	0	6	2500	22	
Sonar 3	0	0	0	0	12	5000	24	
Radar 1	0	0	0	0	0	1000	20	Expands radar range
Radar 2	0	0	0	0	5	3000	22	
Radar 3	0	0	0	0	15	5000	24	
Firing Delay System 1	0	0	0	0	2	2000	20	Increases salvo concentration
Firing Delay System 2	0	0	0	0	7	6000	22	
Firing Delay System 3	0	0	0	0	13	10000	24	
Auto-load System 1	0	0	0	0	3	4000	20	Reduces loading time
Auto-load System 2	0	0	0	0	9	8000	22	
Auto-load System 3	0	0	0	0	14	12000	24	
Auto Fire Extinguisher System 1	0	0	0	0	3	3000	20	Increases fire extinguishing ability
Auto Fire Extinguisher System 2	0	0	0	0	9	6500	22	
Auto Fire Extinguisher System 3	0	0	0	0	15	10000	24	
Emergency Hull Purge System 1	0	0	0	0	3	3000	20	Increases defense against hull breaches
Emergency Hull Purge System 2	0	0	0	0	9	6500	22	
Emergency Hull Purge System 3	0	0	0	0	15	10000	24	

THE ELECTRONIC TARGETING SYSTEM



The Electronic Targeting System is effective for automatic lock-on weapons. It enhances the lock-on area and therefore your accuracy. Many Auxiliary Systems contain a variety of effects.

AIRCRAFT

Weapon Type	Aircraft Name	Aircraft Type	Necessary Technology Level					Price	Night fight	Endurance
			Air Tech	Engine	Metallurgy	Weapons	Electronics			
Japanese	B5N Type 97	Fighter	0	0	0	0	0	40		6
	B6N Tenzan	Fighter	6	0	0	0	0	80		9
	A5M Type 96	Fighter	0	0	0	0	0	40		5
	A6M Model 21	Fighter	1	0	0	0	0	70		8
	A6M Model 32	Fighter	2	0	0	0	0	80		9
	Ship Scout, Type 97	Scout	0	0	0	0	0	40		5
	Ship Scout, Type 2	Scout	6	0	0	0	0	110		8
	D3A Type 99	Scout	0	0	0	0	0	40		5
	D4Y Suisel Model 12	Bomber	4	0	0	0	0	120		10
	A6M2-N Type 2	Water Fighter	2	0	0	0	0	40		9
American	TBD Devastator	Fighter	0	0	0	0	0	40		8
	TBF-1 Avenger	Fighter	4	0	0	0	1	80	✓	11
	F2A Buffalo	Fighter	0	0	0	0	0	40		7
	P38 Lightning	Fighter	1	0	0	0	1	70	✓	12
	F4F WildCat	Fighter	1	0	0	0	0	80		10
	F4F-7	Scout	0	0	0	0	0	90		10
	F6F-5P	Scout	7	0	0	0	2	160	✓	12
	SBD Dauntless	Bomber	0	0	0	0	0	40		9
	SB2U Vindicator	Bomber	2	0	0	0	1	80	✓	10
	OS2U KingFisher	Water Scout	0	0	0	0	0	40		5
English	Fi167	Fighter	0	0	0	0	0	40		5
	Ju87D Stuka	Fighter	2	0	0	0	0	80		6
	Bf109	Fighter	0	0	0	0	0	40		5
	Bf109F	Fighter	0	0	0	0	0	40		7
	Bf110	Fighter	1	0	0	0	0	60		8
	Ju88D	Scout	1	0	0	0	0	40		9
	Fledermaus	Scout	9	0	0	0	2	160	✓	17
	Ju87A	Bomber	0	0	0	0	0	80		8
	Ju87B Stuka	Bomber	4	0	0	0	0	120	✓	13
	He115	Water Fighter	0	0	0	0	0	40	✓	5
German	Fi167	Fighter	0	0	0	0	0	40		10
	Ju87D	Fighter	4	0	0	0	0	60		10
	Bf109	Fighter	0	0	0	0	0	60		10
	Bf109F	Fighter	2	0	0	0	0	70	✓	10
	Bf110	Fighter	3	0	0	0	1	80	✓	10
	Ju88D	Scout	1	0	0	0	0	90		11
	Fledermaus	Scout	9	0	0	0	2	200	✓	12
	Ju88A	Bomber	1	0	0	0	0	50		11
	Ju87A	Bomber	2	0	0	0	0	80		10
	He115	Water Fighter	0	0	0	0	0	40	✓	9

The ship and item data on these pages is only a partial list. There are more items that cannot be purchased in the Depot and must be found within the game.

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