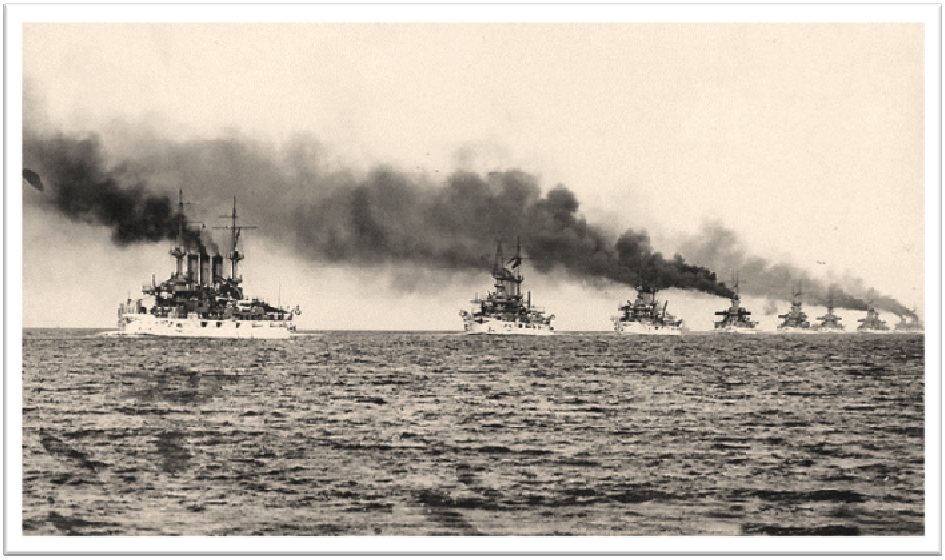
RULE THE WAVES

GAME PLAY MANUAL AND NOTES

VERSION 1.33



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FOR THOSE WHO HAVE NOT PLAYED OUR *'STEAM AND IRON'* GAME:

For players that have not previously played our *Steam and Iron* game we include an updated *Steam and Iron* manual with this game, as battles in RTW will use the same system. We highly recommend that all Players read that manual, skipping the sections about scenario selection etc. that are not applicable to RTW.

INTRODUCTION TO '*RULE THE WAVES*'

Rule the Waves places you in the role of 'Grand Admiral' during the early years of the 20th Century. The game mechanics are based upon our successful *Steam and Iron* (SAI) system for combat but politics, economic and foreign policy decisions will be necessary as the Player guides their navy's deployment, construction and operations during a period of great technological innovation and political tensions. Rule the Waves is modeled on the period of European global dominance but is not intended to precisely recreate history. Rather RTW gives the Player the tools to lead a navy during the era when 'steam and iron' dominated the high seas.

Game Play

This manual is organised in a section describing the mechanisms and 'rules' of the game, then a section describing the game interface.

Selecting a nation

When you start a new game, you will first select a nation for you to play. You can click the flags of the playable nations and see the main characteristics of the nation as well as their enemies. You can only play the AI, there is no human to human play.

You must also select a fleet size, which determines the size of your budget, and thus the size of your fleet. The size which most closely corresponds to real fleet sizes during WW1 is large or very large. Be aware however, that managing a big fleet with tens of battleships and several dozens of cruisers and destroyers will be a large administrative task. It is suggested that you play your first game with medium or even small fleet size.

The budgets given to the different nations are somewhat compressed in their variation and not totally historical, as that would leave some smaller nations unable to compete with for example Great Britain. The naval budgets in the game are different from each other, but not so much different as in the real world. If you want to play with more historical budgets, there is an option for that. Note however that when playing with historical budgets, some smaller nations may find themselves constantly short on money and at a decided disadvantage versus larger nations.

Playing minor naval nations like Austria-Hungary or Spain at small fleet setting is not really recommended, as that may result in very limited resources for the player.

In addition to the budgetary differences, there are other advantages and disadvantages to the different nations that reflect historical factors. The nations also have research advantages in different areas and some bonus technologies that they will research easily. Great Britain has some advantages and disadvantages from its status as a global naval power. See national characteristics below for details.

Options

There is an option for setting research speed. Setting research speed lower than 100 will slow down research.

There is an option for varied technologies. Varied technologies were introduced as a way to recreate historical uncertainty about which way technology development is moving. We as players have full hindsight and we know what naval developments were ultimately the most successful. Ship designers and admirals in the early 20th century had no idea. Is a big gun battleship really a good idea or not? Are torpedoes really the threat they are made out to be? Nobody knew! That is the situation that varied technologies is intended to recreate.

The effects of playing with varied technologies are varied and will change from game to game. Technologies might arrive later or be harder to invent. Some technologies may be easier to invent. Some technologies may not live up to their promises. Long range gunnery could suck, multiple gun mounts turn out to be a bad idea, torpedoes are not as good as expected etc.

So remember that when playing with varied technologies you are really in a parallel universe where things did not turn out the way they did in our regular naval history.

Historical budgets was explained above and manual build of legacy fleet is explained in the next section.

Your fleet

The game starts in 1900. When the game starts, there will be an existing legacy fleet. You will have the option to let the existing fleet of your nation be automatically built, or you may choose to design and build the ships of the legacy fleet yourself. It is recommended that you start with an existing legacy fleet the first time you play the game, as building the legacy fleet can involve a lot of ship design, and it might be better to learn the design process gradually.

If you elect to build the legacy fleet yourself, you will get an amount of money as your starting funds, to be used for buying the ships existing at the start of the game. This will be done in two steps. In step one you will design and build existing ships. Then, in step 2, you will order ships that are under construction when the game begins. You can only keep a proportion of your starting funds for buying ships under construction. The majority must be spent on ships already existing.

Ships under construction will be about 50% complete when the game starts, but you only pay 5% of their cost. This will in effect give you a 45% discount on these ships, which is potentially a big advantage. The downside is that completing these ships may tie up resources better used in research and building more modern ships.

The Budget

You will have a yearly naval budget at your disposition. The budget is a function of the base resources of the nation and the proportion of expenditures devoted to the navy. Both of these can vary as an effect of various events in the game.

The base resources will increase as a result of wars won, and decrease when wars are lost. Loss or gain of possessions will also affect the base resources available. The base resources will also increase steadily at about 3-5% a year as a result of economic growth.

The naval budget percentage will vary with various events and your response to them (see Events). In general it will tend to rise in times of high tension and be low in periods of low tension.

Your yearly budget will be divided into monthly payments to the navy. Running out of funds is not a good idea, and will tend to upset the finance ministry and lower your prestige. You can run up a surplus and save money for future expenses or for building that super battleship. Be aware however that if you have substantial funds in your coffers, the Kaiser, Prime Minister or the finance ministry might find a use for some of those funds.

Areas and possessions

The world is divided into eleven areas. In each area there are a number of possessions that can be controlled by one of the player nations. In some cases they can also be neutral. The possessions have naval bases and can have coastal artillery or other defences. The base values and fortifications of possessions can be improved by the player.

Possessions can change hands, most often as a result of peace treaties. In some cases possessions can be sold or transferred in other ways as a result of events. This represents for example the seizure of Ottoman territory by

Italy in 1912 or the sale of the Danish West Indies to the USA. If a player nation acquires new possessions in an area where other nations are preeminent this will probably increase tension.

The possession value is used when calculating the budget effect of acquiring or losing possessions. The budget effect of possessions is relatively limited compared to the rest of income. Income from colonies will slowly decline over time.

Some possessions have oil, and access to oil fuel is necessary to build oil fuelled ships before 1920. After that, oil extraction and trade is assumed to have spread so that all nations can gain access to oil. Before 1920, oil might be randomly discovered in new places.

Strategic deployment of ships

Ships are deployed in an area, either a home area or on a foreign station. The number of ships that can be deployed in an area is dependent on the base value of the area. The number can be exceeded, but this may cause ships to suffer from maintenance problems and reduced crew quality. If a nation has no bases in an area, only a very limited number of ships can be deployed, representing single cruisers and the like that coal at bases of friendly or neutral nations.

Base limits are checked at the end of the turn. That means that you can move a fleet into an area where you have insufficient bases and fight a battle before the ships start to suffer from lack of bases.

Nations are required to have a minimum naval presence in each area where they have possessions. This is expressed as a tonnage required in each area, and is dependent on the number and value of the possessions owned by the nation. Only active ships count for the purpose of calculating the naval presence in an area. If the required number is not met, player prestige may suffer and it might even lead to revolts in the affected areas.

Ships equipped for colonial service count as 1.5 times their tonnage on foreign stations.

Ships with cramped accommodation and ships with short range are less useful on foreign stations and will count as 70% of their actual displacement for the purpose of fulfilling this requirement.

Note that you may want to keep more ships than required on foreign stations to be sure of having an adequate force if war should come.

During wartime, the deployment requirements are not enforced if you are under blockade.

Fulfilling the requirements for ships at foreign stations can be done either by moving ships to the relevant areas, or by simply assigning them to Foreign Service, whereupon the AI will move the ship to a suitable area. The latter way is quicker if you for some reason need to fulfil sudden foreign service requirements quickly, for example after acquiring territory in a war.

Movement

Ships can move to adjacent areas in one strategic turn (one month). You can give orders for ships to move to an area farther away, but the ships will then plot their own course to the destination.

Only ships present in an area can take part in battles there. Ships that are moving count as present in the destination area for battle purposes. Short range ships cannot move

strategically during wartime.

Blockade and movement

If a nation is blockaded, ships are not allowed to move out of the home port unless as raiders, and these may be intercepted by the blockading nation.

Maintenance and readiness

Ships in commission can be put in varying states of readiness, which will affect their maintenance costs, but also their readiness for war.

Ships can be in the active fleet, which have the best trained crews and are immediately available for service.

Ships in the reserve fleet are manned by reservists and take one month to mobilize and additional time to get to full effectiveness.

Ships that are mothballed also take one month to mobilize. Their crews will be poorly trained and take substantial time to get to full effectiveness.

New ships will be placed in "Working up" status until they have decent crew quality. They can be changed to another status by the player (but not back). Ships in working up status will not take part in battles.

Ships under repair will always cost 1½ times the active maintenance cost, regardless of their status. This is to reflect the cost of making the repairs. In some situations it might not be worth the cost to repair an old ship, and it might be an attractive option to scrap it instead.

In wartime, maintenance costs will rise sharply.

Training

You have the option of setting special training for your crews. Each special training subject selected will increase maintenance cost for your ships. It takes 12 months to achieve proficiency in an area. You have to keep on spending on training to keep the benefits. The benefits disappear immediately upon stopping spending on that type of training. The different kinds of training are:

Gunnery: Gunnery training will give your ships 10% better accuracy when firing guns. 30% increase in maintenance.

Night fighting: This will give your ships a bonus when spotting enemy ships at night, and less chance of hesitating before opening fire at night. It also gives a 10% accuracy bonus at night. 20% increase in maintenance.

Torpedo tactics: This will make your light forces more alert when carrying out torpedo attacks, quicker to react on flotilla attack orders and give better hit chances when firing torpedoes. 20% increase in maintenance.

You can select a maximum of two special training subjects.

Mine warfare

Mines are represented in three ways in RTW

There will be a defensive minefield around all bases. You will see those of the enemy but not your own. The purpose of these is to prevent enemy ships from operating unrealistically close to enemy bases.

There will also be small minefields present in scenarios near enemy bases and coastal artillery positions. They will be more common the longer a war progresses. These minefields will be

invisible until one of your ships hits a mine. Screening light ships will protect your heavy ships from these to an extent.

There is also operational mining carried out in the monthly turns. Ships equipped for mine laying will be assumed to carry out mining in the area they are deployed. Minelaying submarines will also contribute to operational mining. This mining is abstracted and will not show on the map, but will increase the risk of enemy ships falling victims to mines. Friendly minesweepers (MS) will help mitigate the risk of striking mines.

Canals and other choke points

There are two canals in the game, the Suez canal and the Panama canal. The Suez canal is operational at the start of the game, and is controlled by the nation owning Egypt (Britain at the start of the game). The Panama canal will become operational in 1914, and is controlled by the player owning Panama (the USA at the start of the game).

Movement through canals is normally possible for other nations than the owning nation. During wartime, canals will be blocked for players at war with the owner or if the tension level with the owner is 7 or higher.

Research

You define a portion of your budget up to a maximum of 10% as spent on research. There are a number of different research areas, from battleship projectiles to submarine technology and a lot in between. In the research menu, you can shift priorities between different research areas. Note that these priorities are relative, so setting all research areas to high will not increase research, it will just men that all are equally prioritized. To prioritize everything is to prioritize nothing, to paraphrase Frederick the Great.

Spending on research will lead to research advances, which will have varying effects depending on the area. Advances in Armour development, Hull construction and Machinery development will reduce the weights of those components in new ship designs. Other research areas will unlock various technologies to be used in ship designs.

If there are no technologies to discover in a research field, research points spent there will be reallocated to other areas and not wasted.

***Designers Note**: Research in RTW differs from many other games where you can specify a tech before it is invented and tell your scientists to invent that. RTW has what I feel to be a more realistic model where you can tell your scientists to focus on particular areas, but you cannot be sure what they will come up with. In other words, there is no "Hey guys, let's invent the Bronze Age" in RTW.*

***Note**: Most development in RTW represents technical progress, but there are also a number of developments that reflect the conservatism of naval establishments or simply the time needed to grasp the utility of new concepts before they are commonly adopted. They are also in the game to prevent the player from using too much hindsight in ship designs. For example, there was no technical reason that battleships with three or more main turrets couldn't be built before 1904, indeed some such ships were built. But if the game had allowed the building of such ships from start, players would in all likelihood start building dreadnought- like ships immediately.*

Designing ships

The first step in building a ship is designing the ship. In the design window you can design any ship you need in your navy, from destroyers to super dreadnoughts.

You can get to the design window either by clicking the design ship button or by selecting an existing ship, right clicking and selecting 'open design'.

In the design window you determine the characteristics of the ship you want to design. Note that a number of the available technologies and features might need to be researched before they can be used in a ship.

Ships designed will have their ship type determined automatically by the program. This is to prevent unrealistic ship designs and also because the ship types are used by the tactical AI, and a 30000 ton destroyer with 15 in guns will tend to confuse the AI. Very unusual designs will be disallowed by the program as illegal ship types.

The easiest way to design a ship is to select an existing class and open the design. You can then alter or modify the existing design and save as a new class. This saves work because most ships tend to be developments from existing classes, and you don't have to enter all the values from scratch.

Alternatively, you could just select the ship type and let the computer auto design the ship for you. You can then alter any details you might want fixed.

After you have designed your ship you will get a report on the design and any problems it might have.

Items labelled 'Error' in the report must be fixed, otherwise the design is not legal.

Items labelled 'Note' in the report are just reminders or hints that can be disregarded.

Ship designs should have their weights kept within the displacement limit. You are allowed to build ships that are slightly overweight, but that will carry a penalty in stability and flotation, and is usually not cost effective compared to increasing the size of the ship. Its main use is if you have a displacement limitation, for example by a treaty or in dock size.

Normally, the first ship in a class will cost 10% extra to simulate the costs of developing the design. A ship developed from an earlier design will get a discount on the development cost. To develop from an existing design, right click on an existing ship in service or in construction and select "open design". When changing the design, you can see the percentage of the development cost you will pay in the top left corner in the "Developed from" box. The more changes you make the smaller the discount, and if you make big enough changes you will have to pay the full development cost.

Generally the following are the limits for change before it becomes an entirely new design with no discount.

* Displacement can increase by a maximum of 10% or 1000 tons.
* Main guns over 6 in cannot be changed.
* Secondary guns over 6 in can be changed to a limited extent.
* Speed can be changed by one knot.
* Vertical armor can be changed by one in and horizontal armor by half an in.

See appendix 2 for a fuller explanation of the various values used in designing a ship.

***Tip**: It can be a good idea to leave a few tons unused on your ships so that there is space for a minor rebuild of for example the fire control system without making the ship overweight.*

Building ships

Once you have the design ready, you can lay down ships to that design. The first ship built to a design will carry a 10% extra cost, to cover the costs of developing the design. It is usually rational to build several ships of the same class.

The time to complete a ship is dependent on the ship type and can be modified by having an efficient or undeveloped shipbuilding industry.

The cost of building a ship is paid in monthly instalments during the build time. If you run into budget problems, it is possible to temporarily halt the construction of one or more ships.

You can also accelerate the construction of a limited number of ships. This will build them 10% faster, but with a 5% increase in cost. Having ships in accelerated construction risks causing delays in the construction of other ships.

In the build dialog, you can select to have up to 12 ships of the same class laid down. The names will be assigned automatically. This might be very handy when building large numbers of destroyers for example. Note however that you will have to consider if your monthly budget is enough to build that many ships.

AMC:s may not be built in peacetime. After a war, they will be automatically sold off to civilian shipping companies.

Rebuilding ships

You can rebuild existing ships, but there are limitations on what can be rebuilt. The following actions can be taken while rebuilding ships:

You can change the main armament according to certain conditions. Guns can be changed to more modern versions of the same calibre. Triple turrets can be changed to double turrets with larger guns or vice versa if the calibres are compatible. Double turrets can be changed to single turrets or vice versa if the calibres are compatible. For example, a double 8 in turret can be exchanged for a single 10 in turret or a triple 12 in turret can be exchanged for a double 16 in turret. To see the combinations available during a rebuild, select the turret and press the 'Rebuild?' button under the turret list.

You can change the secondary battery if the existing guns are in casemates or in turrets of 6 inches calibre or less. It can be changed to any arrangement of 6 in guns or less. The same with tertiary guns.

You can swap out the machinery for more modern machinery, increasing speed or using the weight gained for other purposes.

Fire control can be improved

You can add bulges, which will increase torpedo protection but will also reduce speed.

Docks

In the game, dock size is used as a limit to the largest ship your nation can build and operate. You cannot build ships larger than your current dock size. Occasionally it is necessary to

increase your maximum dock size. Docks take one year to build. Each building step will increase your dock size by 2000 tons. Try to plan ahead. Waiting an extra year to lay down your new battleship can be very frustrating. Dock size may occasionally increase by itself as a result of development in private shipbuilding.

If you cannot build ships at home, you can contract them to foreign yards. You will then be limited by the building nation's dock size. This can have a further advantage if your own nation has an undeveloped shipbuilding industry, as the construction time will be determined by the characteristics of the building nation.

The drawback to building ships abroad is that you risk that your ships will be impounded and not delivered if a war breaks out. The risk of this happening depends on the tension level with the building nation. If you have a treaty with the building nation, they will always be delivered.

Submarines

Submarines are built much like normal ships, but you cannot design them, they are selected from standardised types. The different types of submarine will be available as a result of your submarine research.

The different submarine types are: Coastal submarines, Medium range submarines and mine laying submarines.

Coastal submarines have shorter operational radius, so will only occur closer to your bases. They also have limited torpedo capacity.

Medium range submarines are the general run of the mill submarine.

Minelaying submarines are much like medium range submarines, but can also lay mines. On the other hand, they have a reduced torpedo load.

Advances in submarine technology will increase the serviceability and the attack effectiveness of your submarines.

Submarines will participate randomly in battles, in proportion to the number of submarines available to either side.

Submarines will also force the enemy to assign ships to anti-submarine patrols.

During wars you have three policy options for your submarines:

Fleet support means that submarines will primarily operate against enemy warships and only attack enemy merchant shipping in very clear cut cases.

Prize rules means that your submarines will attack shipping, attempting to follow prize rules. The occasional incident that will upset neutral nations cannot be avoided.

Unrestricted means your submarines will carry out unrestricted submarine warfare against enemy merchant shipping at the expense of operations in support of the fleet. This will increase sinkings of enemy merchant shipping and may cause starvation and higher unrest level for the enemy. However, it will also anger neutral nations and risk bringing in additional enemies against you.

Submarines will have a sharply reduced effect on enemy merchant shipping if you are blockading the enemy (enemy merchant shipping is assumed to have been reduced to a minimum by the blockade).

Coastal artillery

You can build coastal artillery batteries in the same way you build ships, except that you do not design them and can only chose between predefined types. Coastal artillery must be built in a specific possession.

Coastal artillery will be assigned randomly in proportion to their numbers to positions on the coast of the possession where they are located, and will be available in battles at that location.

Coastal artillery positions will also increase the number of local minefields in the vicinity of the battery.

Intelligence

You can set a level of intelligence collection for each other nation. Intelligence activities might give information on research in other nations, boosting your own research, or it might yield information about the capabilities of enemy ships.

Intelligence activities carry a risk of detection. If your agents are discovered, it will increase the tension level with the nation in question.

Enemy ships

The information you can see about ships belonging to other nations is restricted. For ships under construction, you will only be able to see the ship type and displacement. For completed ships you can see the ship type, displacement, number and calibre of guns and speed, although the official numbers may be misleading.

By performing intelligence you might glean additional details, like armament, armour thickness, torpedo protection etc.

Tension levels

The player nation has a tension level with every other nation. When the tension level rises, there will eventually be a risk of war.

Normally, the tension levels will rise slowly over time and there will usually be several years before a war breaks out. However, you should be aware that there are some events that can cause a war to break out rather quickly and unexpectedly. Thus, you cannot let your guard down and think that any war is in the future. You should keep your navy in shape to fight a war at any time. If you scrap too many old ships and count on having new ones ready in a year or so, you might find yourself in an awkward situation if the international situation takes a turn for the worse. Also, the press and the navy league might come down hard on you if they think the navy is too weak.

Events

There will be random events and crises from time to time, and you will have to respond to them, mostly by giving advice to the government. "Hawkish" answers will tend to raise the budget and your prestige, but they will also tend to raise tension levels. "Dovish" answers will tend to lower the tension levels, but risks lowering your prestige and/or the naval budget.

In the event dialog, hover the mouse over the event answers and you will get a hint on the effects of the different answers.

Designers note: *Most events are geared towards European politics around 1900. While the events that can occur and their likelihood are different depending on government type etc, there are still some events that may feel more appropriate to Europe than USA or Japan.*

Prestige

Prestige in the game represents your general reputation, based mostly on your standing with the Monarch/President and the politicians, the officer corps, the middle class and other 'pillars of society'. Your prestige will be enhanced by generally 'tough' responses to events and success in battle. You prestige will be lowered by 'soft' responses, defeats and mismanagement.

If your prestige goes too low, you will get sacked, thus losing the game.

Unrest level

The unrest level represents the feeling among the workers and lower classes. A high unrest level will lead to strikes and demands for lowered military budget, and in wartime can lead to revolution and defeat. Revolution is less likely in liberal democracies.

The unrest level is raised by:
High military spending
Long wars
Being under blockade
Cramped accommodation in ships
Defeats

The unrest level is lowered by:
War breaking out (initially, but longer wars will have the opposite effect)
Social programmes (event answers)
Victories
Low military spending

The amount of money spent for naval and military purposes is the most important factor in affecting the unrest level in the nation. Possible unrest in effect acts as a brake on the naval budget in the game. If you relentlessly press for higher naval expenditures, you will find that the unrest level will be going up. Entering a war with a high unrest level might leave you vulnerable when blockade or trade disruptions caused by war increase unrest further.

Arms limitation treaties

Treaties will result from disarmament conferences, and these are an effect of event responses. You can affect the chances of a treaty by your answers, but 'tough' answers disdaining treaties will tend to raise tensions.

A treaty will set a limit in displacement and main armament calibre for new ships laid down, and will run for a number of years, usually 4 to 12. All ships under construction at the time of signing the treaty that do not fulfil the terms of the treaty will be scrapped. Existing ships may be kept, and may be rebuilt and modernized, even if they exceed the treaty limits.

Liberal democracies must adhere strictly to the treaty. Other nations may 'cheat' by up to 10% of the displacement. No cheating is possible on the main calibre.

Allies

There are several advantages to having an alliance with another nation. An alliance will keep down tension with that nation, and the ally will support you in a war (this will mostly be represented by a VP addition each turn). An ally is also more prone to sell you technology, and will do so at lower prices.

There are also some potential disadvantages. You might be embroiled in conflicts that are caused by the foreign policy of your ally, and the existence of the alliance might raise

tensions with other nations.

Peace

During a war there will be events relating to possible peace negotiations. Your answers to these will decide the chance for a peace and also the nature of that peace. In a victory, you may gain increased base resources, possessions or even ships from the enemy's fleet, depending on the magnitude of your victory. Conversely, if you lose a war, you may yourself lose some of the above.

When you win possessions, you will be presented with a list of enemy possessions to choose from, and the number of value points you can select. Unused points will gain a small increase in your base resources instead. You can even decline to take any possessions and be satisfied with the base resource gain.

Surprise attacks

A surprise attack may occur on the first turn of war, if one of the nations has the national characteristic "Surprise attack". A surprise attack will take place at night and involve a group of destroyers making a torpedo attack on the enemy fleet at anchor, with a heavier group of ships following up. The defending ships will be initially surprised.

To make the most of a possible surprise attack, you should have a decent force of destroyers in the same area as an enemy base. Having well developed torpedoes and destroyers also helps of course.

Surprise attacks in the game are arranged so that they can succeed brilliantly, but be prepared that surprise attacks can occasionally end in relative failure.

***Note**: Ships in reserve or mothballed status might be included as defending ships in a surprise attack, even though they will otherwise not take part in battles. This is to make them vulnerable, and make it impossible for the player to 'hide' ships from surprise attacks by putting them in reserve.*

National characteristics

Efficient shipbuilding industry: Ships will take 10% shorter time to complete.

Undeveloped shipbuilding industry: Ships will take 10% longer to complete and are more prone to have unexpected faults, like not reaching their design speed.

Global naval power: Nation must keep at least 10% of tonnage on foreign stations, cannot have cramped crew quarters. May get automatic budget raise if any other nation has a similar budget.

Cautious: AI controlled forces will be cautious in battles. Player risks extra prestige loss on losing battles or losing capital ships.

Poor education level: Affects the crew quality and build times of ships, and has a slight negative effect on research.

Liberal Democracy: Lowers the risk of revolution and will affect some events.

Autocracy, Bombastic head of state: Will affect

the likelihood of certain events.

Surprise attack: The nation has a penchant for starting wars with a surprise attack on the enemy fleet. There will be an 80% chance of a surprise attack on the enemy fleet at the start of a war.

Inconsistent naval policy: The politicians are more likely to interfere in ship building design and priorities.

Attention to detail: Ships are less likely to have hidden defects or vulnerabilities.

Technology Leader: The nation has an advantage in research, and if AI controlled will spend on research to stay among the top nations in technical development.

Hidden faults: Ships may have unexpected faults, like a tendency to explode on turret hits or similar.

Blockade

To blockade a nation, you must have 110% of the enemy's naval strength in the build area of the enemy nation. Naval strength for this purpose is computed as a sum of all ships in the area, weighted by type. Some nations have their blockade strengths modified. For example, Britain has its blockade strength multiplied by 1.2 to account for its geographic position and its dominance in trade and finance. Russia has its blockade strength multiplied by 0.7 to reflect its geographic position.

If you are a blockading nation in a war, you will earn a number of extra VP per month as long as the blockade is kept up. A blockaded nation will also suffer a higher risk of the unrest level going up, which can ultimately lead to revolution and defeat.

A blockaded nation will not be able to move ships out of its build area, except as raiders, which are subject to possible interception as they break through the blockade.

***Tip**: If you hover the mouse pointer over an area on the strategic map, you will see a summary of naval forces in the hint box. After the list of ship types for each nation is the total strength value in the area in parentheses. These are the values used to determine if a blockade exists. Note that to preserve fog of war, the values you see are before movement, ships might move during the turn and blockade is resolved after the move and any battles, but it should still be a pretty good indication*

Battles

When a war breaks out, there will be a chance of some kind of naval action every turn. The missions might be:

Fleet battle: A decisive battle with the entire fleet of both involved nations.

Cruiser battle: A battle between cruiser forces.

Coastal raid: Various kinds of bombardments, attacks on merchant shipping or other offensive activities near the enemy coast. The forces involved can vary but are usually based on faster ships up to battle cruisers in strength. In these battles coastal artillery and patrol craft will help the defending player.

Convoy attack/defence: Attack or defence of a convoy, usually with cruiser forces.

You will be presented with a screen with a force estimate of enemy strength, where you have the option to accept or decline battle. Declining a battle will cost victory points, and may cost

prestige after several declined battles. There is a chance that the enemy will decline battle if they are feeling that they cannot send out a force with reasonable chances of victory.

If you accept a battle, you will be brought to the tactical resolution screen, which is similar to a SAI scenario. The ships at your disposal will be randomly selected from the ships in the area according to the size and type of battle.

Sometimes there will be an additional friendly AI controlled support force present. This can both be a blessing and a source of problems. Sometimes the support force will save your skin, sometimes it can charge ahead and be involved in battles you would want to avoid.

The majority of battles will start with manoeuvre controls locked and the fleets meeting shortly. In very rare cases, mostly if visibility drops sharply, the fleets may miss each other and the battle will be without contact between the fleets.

In coastal raids, there will be a large element of manoeuvre and finding (or avoiding) the enemy fleet.

After a battle, when you have finished studying the result, just close the battle screen to return to the main RTW screen.

***Note**: For veterans of SAI Campaigns, the battles in RtW will be simplified compared to those in the SAI campaigns, and will be more like a SAI scenario.*

Patrols

When war breaks out each nation will be required to keep a number of ships on Coastal/ASW patrol. The number of ships required will be proportional to the fleet size and modified by the strength of the enemy submarine force. Ships on Coastal/ASW patrol are counted in one global pool, and their exact location is not important for fulfilling the requirement.

The most cost effective ships for coastal/ASW patrols are destroyers, minesweepers and small armed merchant cruisers, but cruisers can do in a pinch. Older destroyers no longer fit for fleet duty are an ideal candidate.

If you do not satisfy the Coastal/ASW patrol requirement, there will be a larger chance of enemy submarines sinking merchant ships and your prestige may suffer. Stronger patrols than required will hamper the operations of enemy submarines and increase the chance of sinking them. Also, the crew quality of patrolling ships will have an effect, so putting your worst crews on ASW patrol might not be profitable.

Ships on coastal/ASW patrol may be present in defensive costal battles in the area where they are deployed.

AMC:s can be used as ASW patrols and if you have invented Q-ships, they can surprise and sink enemy submarines.

Raiders

During war, you can send out ships as raiders to prey on enemy shipping. Raiders cannot be short range ships and are more effective if they have long range and relatively high speed. Generally, cruisers are ideal for this mission.

Raiders run a risk of being intercepted by enemy trade route patrols and brought to battle. Note that a raider winning a battle but suffering significant damage might be forced to scuttle itself or seek internment in a neutral port.

There is a slight risk that raiders run out of fuel, especially if not long range or of large size, or suffer a mechanical breakdown. This can force them to be interned in neutral countries until the war is over.

AMC:s can be effective as raiders, despite relatively low speed, due to their ability to disguise themselves as normal merchantmen. A speed of at least 8 knots is required. Large fast AMC:s (fuel hungry liners) are however prone to running out of fuel. An AMC raider has a chance of deceiving and surprising an enemy intercepting ship, with the interception battle starting at short range and the intercepting ship surprised.

If you are blockaded, ships deployed as raiders may be engaged by enemy ships while breaking out to the trade routes.

Raiders have no effect if you are blockading the enemy (enemy merchant shipping is assumed to have been reduced to a minimum by the blockade).

Motor torpedo boats (MTB)

MTBs can be built once the technology is developed. MTBs will appear in coastal areas at night. They are always AI controlled, but will move around and attack enemy ships that they find.

Winning or losing a war

Battles and other events will gain victory points. When one side has a substantial advantage, there will be chance for some kind of peace agreement. Peace agreements might entail the loss or gain of territory, simulated in the game by gaining or losing possessions, which will in turn affect your base national economy. They might also involve handing over ships to the victor or restrictions on the shipbuilding of the losing nation.

Wars might be lost by revolution if the unrest level goes too high. Wars lost in this way will lead to unusually harsh conditions. Thus, if you notice that your unrest level is going up, you are well advised to consider reining in military expenditure and consider some kind of social reforms. If that doesn't help, a negotiated peace is a lot better than revolution.

Construction Choices

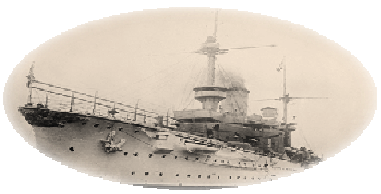
This is a summary of the construction choices available when designing ships and their effects in the game.

Low Freeboard

Ships with low freeboard will save weight but are more affected by the sea state, with ROF reduced or sometimes turrets being out of action due to being swamped. Ships with a speed higher than 21 knots cannot have low freeboard.

Cramped accommodation

Ships with cramped accommodation save weight, but it may have adverse effects effect on the crew. Cramped accommodation might increase the risk of mutinies during wars, especially if the nation is under blockade. Ships are less useful in the colonies if they have cramped accommodation and crew performance may suffer if away from home waters.



Armour schemes

Protected Cruisers

Protected cruisers will be more vulnerable to hull and superstructure hits, as well as splinter damage from near misses. Before you research light cruiser configuration, all CL:s built must be protected cruisers.

Belt and sloping deck

This is the standard WW1 era armour configuration. These ships will have extra protection against shells penetrating the belt damaging their vitals.

Flat deck on top of belt

These ships will have a larger volume protected by the belt and deck, but lack the extra protection offered by the sloping deck behind the belt. Note: An "all or nothing" ship (once you have researched it) should have this kind or armour layout and no BE or DE armour.

Narrow belt

This saves weight but means that shells that would have hit the belt instead might hit BE or no armour at all.

Triple and quadruple turrets.

Early triple and quadruple turrets will have slightly lower ROF and a higher chance of turret jams. Improved triple and quadruple turrets will rectify these defects.

Casemates

Secondary guns in casemates are somewhat more vulnerable than secondaries in turrets, but casemate armour will absorb some hits that would otherwise hit un-armoured hull or superstructure. Casemate guns are more sensitive to weather interference and will get higher ROF penalty in heavy seas.

Turreted guns of smaller calibres

Until accurate training and elevation motors are developed, there is a ROF and accuracy penalty for secondary guns of 6 inches and below in double and triple turrets.

This also affects main guns of 9 inches calibre and less in double and triple turrets.

Note that smaller guns will still have a higher ROF than larger guns, this is only a relative effect. Do not let this stop you from designing for example armoured cruisers with double 7 or 8 inch turrets as main armament. It is just that single gun turrets have some relative ROF advantages in the early parts of the game.

Turret top armour

The program assumes that turret top armor is slightly sloped, at least for part of the turret, so shell penetration is somewhat better against turret tops that against decks. For heavy guns it is recommended to have slightly thicker armour for TT than D, just as was common in historical ships.

Coal or Oil fuel

Oil fuelled ships have slightly more expensive engines but get a smaller weight penalty for long range and more weight effective and manpower efficient engines. However, only those nations with access to oilfields can use oil firing before 1920. Coal fuelled ships get some extra hull protection from the coal bunkers.

Oil fuelled ships produce less smoke, so are less sensitive to own smoke interfering with spotting.

Engine priority

Engines optimised for speed are 8% lighter, but increase the risk of breakdowns. Ships optimised for reliability decrease the risk of breakdowns, but weigh 8% more.

Armour and splinter damage

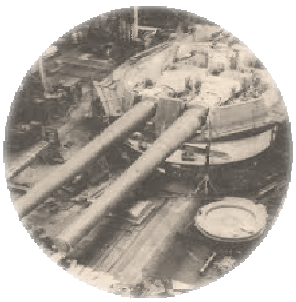
Splinter damage can occur to hull, machinery, funnel uptakes, main guns and secondary/tertiary guns from near misses or superstructure hits. Armour of 2 inches and above will protect from splinter damage. If armour is less than 2 inches, there will be a risk of splinter damage proportional to the armour thickness. Note that tertiary guns are always considered to be un-armoured.

Gun shields

Main guns of 6 inches calibre and below in single turrets with 2 inches or less of armour will be considered as shielded mounts. These are lighter than normal turrets, but are vulnerable to splinters (though not nearly as vulnerable as un-armoured mounts).

Colonial Service

Ships fitted for colonial service are more useful on foreign stations. This costs 60 tons displacement, which simulates increased marine contingent, storage spaces and other facilities useful for extended service on foreign stations.



Interface

Loading and saving a game

Games can be saved at anytime from the main screen by pressing save game. The game will automatically be saved in the slot you selected for your game.

To load a game, go to the load game when starting RTW and select the slot you want to load.

You can also press continue in the start screen, which will load your last saved game.

Auto save

RTW will auto save after every month and at intervals according to preferences during battles. Thus, if something happens that causes you to exit without saving, game crash, power failure, whatever, you can always reload the latest auto save by selecting the game slot and pressing "Load auto save".

Sending a saved game

If you would want to send a saved game for some reason, just zip up the entire folder of your game in the RTW\Save directory, for example RTW\Save\Save1 if you are using game slot 1. All the ship design files are needed to reload a saved game, that is why it is not enough just with the save file. A save if often useful if you encounter a specific serious bug and want to make a bug report.

The Ship list

Most commands affecting your ships can be made by right clicking a ship in the ship list. Here you can put ships in the reserve fleet or mothball them. You can also open the ship design or define its mission as a raider, and you can order ships to move to other areas.

Many commands work for a number of ships if you multi select ships in the ship list. For example, you can put multiple ships in reserve, or give movement orders to multiple ships at the same time. When multi selecting, use the normal windows actions like holding down shift or control to select in the list.

In the construction tab you can see your ships under construction. Right clicking ships here will give you choices for halting or speeding up construction.

Explanations for the ship list:

Speed: After the speed in knots there will sometimes be letters denoting:
L = Long range
S = Short range
c = Equipped for colonial service
a = Cramped accommodation

Status: The abbreviations means:
AF = Active fleet
RF = Reserve Fleet
MB = Mothballed
R = Raider
FS = On foreign station
A number means the ship is in repair for that number of months
* after the status means the ship needs maintenance and should return to an area with sufficient base capacity.

The strategic map

Left click in any area or on a possession when the map is zoomed in a bit to get details.

Right drag to move the map.

Mouse wheel to zoom in.

Right click in the tree to the left for more map options.

Hovering the mouse over an area will give you a tool tip window with information about ships of all nations deployed in that area. Note that ships will move before combat, thus forces may have changed when a battle occurs. This is to preserve some fog of war.

An area where ground combat is in progress will be marked with a red border on the strategic map.

The map tree

The numbers after each area is:

Total player nation tonnage in area, adjusted for colonial service capability

Base points of player ships in area / Total player nation base capacity in area

Giving movement orders to your ships

From an area details dialog. Click on the 'Move ships' button to go to the move ships screen.

or

From the main window, right click a ship in the ship list and select 'Move ship' to go to the move ship screen with that ship selected

or

On the strategic map hold down the mouse button and drag from one map area to another and release.

Note that you give movement orders to your ships that are actually executed when you press 'Turn'.

Also, if giving orders to move to an area two or more areas away, the ships will pick their own

route there, and the destination shown for them will be the next area on their route.

Ship pictures

You can optionally designate a picture for your ship designs. Pictures to be used should be placed in the save directory for the game (Save1, Save2 etc) under the 'RTW\Save' directory. Pictures for ships should be 640 x 160 pixels and in jpg or bmp format.

You can change the picture for an existing ship class by using the change picture function on the popup in the main ship list.

There is also an option to automatically generate a ship picture and add detail. To do this, use the generate picture function on the popup in the main ship list. First generate the hull. Select options and click "Generate". Change options and redo if you don't like the result. Then go to the superstructure and details tab. There you can select various types of equipment and superstructure. Click in the picture to select, move over the ship and click again to apply them to the ship.

Questions and Answers (Q&A)

How do I select torpedo type for my ships?

Torpedo quality is dependent on research. Your ships will always have the latest torpedoes that you have developed, and old ships will be automatically upgraded.

Why is there no oil in Borneo/Libya wherever?

The oil fields in the game are those that were in or came into production in the early years of the 20th century. Many well-known oilfields today were not discovered at the time of the game.

Why is not Grenada/Easter Island/Bali a possession in the game?

The possessions in the game are there to represent important pieces of territory for naval purposes or colonies that needed some form of naval presence. However, there is no attempt to include every island or minor colony in the game, that would just clutter up the map to no purpose, so a selection has been made where those that figured prominently one way or another has been included.

How do I break a blockade?

Blockade status depends on the force ratio in a nations build area. You must whittle down enemy strength or add more forces in your home area until the force ratio has changed enough.

Why is my force structure so idiotic? Why can't I select the ships I want for the battles?

The battle generator is made to put the player in various situations that can arise in real life. Real admirals seldom had the luxury of fighting with the ideal forces they would like to have. Some of the best ships might be in dockyard, off refueling or have suffered a mechanical breakdown. Somebody might have issued stupid orders or misleading intelligence might have sent ships off to where they are not available. There are lots of examples of the least modern ships in a navy having to fight battles, and that is what the game seeks to simulate.

Player Notes and Tips

One of the first things you must be aware of is that technical development in this era is fast. As the build times of ships are several years, this means that many ships will be obsolete by the time they are in service. This might be

frustrating at first, but it affects your opponents as well. You will have to learn to live with it.

Once you have realized this, the temptation is to put off building new ships until you have researched better technology. The problem with that is that the Navy League or Kaiser will demand ships for national prestige, and a foreign policy crisis might arise much faster than ships are built, leaving you with insufficient forces. You must try to find a balance.

You should try to think of the role and context in your navy when designing a ship. Take cruisers for example. If you have a nation with widespread colonies and interests around the world, you might consider a colonial cruiser. This would be equipped for colonial service, it would probably be best to optimize engines for reliability, and you would want it to have long range. That will cost weight, so it probably won't be very fast, but, we'll get a sturdy workhorse that can show the flag in the colonies and still be useful when war comes to chase down raiders.

On the other hand, there might be a need for dedicated fleet cruiser as a scout for the battle fleet. High speed is desirable, of course, but we can live with cramped accommodation and short range, as it will only be operating in home waters. We can even be bold and optimise engines for performance, accepting the risk of the occasional breakdown. This is the opposite of the workhorse above. Here we have the temperamental racehorse, optimised for one mission, but sensitive and picky.

Yet another cruiser type might be the raider. We would want reliable engines to be able to operate for long time away from friendly bases, and long range is desirable. Speed should be enough to avoid heavy enemy patrolling ships, but we could build her strong enough to defeat what she cannot run from.

These considerations are similar for larger ships. If you are playing Austria-Hungary for example, you have no colonies and no interests outside the Mediterranean. You can go for smallish battleships with low range, cramped accommodation and low freeboard, thus saving weight to make them compact but capable. Keeping down the displacement keeps down costs, so you can build more of them, and you will hopefully be able to fight an opponent with far larger resources but with worldwide obligations that requires him to equip ships for service anywhere in the world.

There are some specialist ships that you should not neglect. The lowly 200 ton minesweeper is actually an essential unit in any navy. It can patrol the coasts against submarines and its presence in an area will reduce the risks of mine strikes for larger ships. Having a decent number of small MS avoids having to use destroyers as ASW patrols, which could denude the battle fleet of destroyers.

Another ship to consider for nations with large colonial interests is the colonial gunboat. This will be a MS with 1500 tons displacement or so, equipped for colonial service. This makes it good for fulfilling obligations to have tonnage on foreign stations, freeing up cruisers. If equipped with a couple of 5 or 6 inch guns, it can even be a deterrent to enemy raiding light cruisers.

Changes to battle mode from SAI

* Right clicking the Flotilla attack flag in the main map window will give an opportunity to recall all flotilla attack orders.

* Added more FOW about enemy ships firing. The player now only gets to know that the enemy ship fired # light/medium/heavy guns, and this can be wrong, especially at night.

* Grates fouled now escalate to 'Stokers exhausted' after 300 minutes in coal fired ships, with 2 knot speed loss.

* Torpedo tubes are now displayed on the ship graphics, and share the same "hard points" as the gun armament. This will make design of ships like destroyers more realistic and add to the visual appeal.

* Changed the logic for divisions in core so that if the lead division turns together, the following divisions will follow suit. This makes it easier to withdraw or avoid torpedo attacks with a multi division battle line.

* Change in battle behaviour: If divisions with heavy ships have turn together set, ships ahead of the flagship run a risk of missing commands.

* Destroyer divisions will now keep turn together orders.

* TR will now have a Cargo explodes message instead of Magazine explodes.

* Ships in line abreast or other spread out formations have somewhat larger chance of losing contact than previously.

Appendix 1: Ship type definitions used by the game

These are the definitions used by the game for defining ship types. Anything falling outside these parameters is considered an illegal ship type. The reason these type definitions must be enforced by the program is that the AI relies heavily on ship type for decision making. It also prevents players from building unrealistic ship designs.

These are the main definitions, but there are some exceptions in special cases.

Destroyer (DD)

Displacement less than 2000 and speed more than 19 knots. Must have torpedoes. It cannot be armoured.

Light Cruiser (CL)

Displacement larger than 2000 and less than 8000. Speed must be more than 16 knots and main gun calibre cannot be larger than 6 inches, unless it is a protected cruiser in which case it can have guns in single mountings up to 8 inches.

Predreadnought Battleship (B)

Displacement must be at least 5000 and it must have belt armour at least 6 inches. Main gun calibre must be larger than 6 inches and speed less than 20 knots. It cannot have more than 2 main turrets.

Armoured Cruiser (CA)

Displacement must be more than 4000 and speed greater than 19 knots. It must have more than 2 inches of belt armour but no more than 12 inches. Main guns must be at least 6 inches calibre and cannot be more than 11 inches.

Battlecruiser (BC)

Must have main gun calibre larger than 10 inches and speed more than 23 knots, or three main gun turrets and speed more than 21 knots. In some borderline cases armour thickness can be the difference between a BC and a BB. Speed requirement rises with time, as fast battleships develop.

Dreadnought battleship (BB)

Must have at least 3 main gun turrets, displacement over 8000 and belt armour of more than 6 inches. Main guns must be more than 10 inches.

Minesweeper (MS)

(this definition actually includes all kinds of minor combatants without torpedoes).

Displacement less than 1800 and belt armour 2 inches or less. Gun calibre can be maximum of 6 inches. Cannot have torpedoes.

Armed Merchant Cruiser (AMC)

Displacement more than 1700, no armour and gun calibre no more than 6 inches.

Appendix 2: Explanation of values used in ship Design

Below is a fuller explanation of how to use the ship designer and the meaning of the different data fields. Note that some features can only be used when researched.

Class name: A unique name that distinguishes the class. This is used as filename when saving the class.

Enemy class name: This is the name that the enemy will be told in scenarios. Generated by the program.

Misidentified class name: This is the name the enemy will be told if they have misidentified the ship. Generated by the program.

Displacement: Standard displacement of the ship in tons.

Belt: Belt armor in inches. Note. The program assumes that the belt is thickest in the center of the ship and at the magazines, and thinner at the ends.

BE: Belt extended: Upper strakes of belt armour or armour protecting the ends of the ship.

D : Deck: The main armour deck of the ship.

DE Deck extended: Corresponds to BE above.

T: Main gun turret and barbette armour.

TT**:** Turret top: Roof of main gun turret.

SEC: Secondary gun armour.

CT**:** Conning tower armour.

Belt coverage: Can be used to denote narrow belt in classes with narrow belt coverage.

Speed: is the maximum designed speed of the ship.

Torpedo defence: The level of torpedo protection the ship has.

Fire control: The fire control equipment. This is important for the gunnery accuracy of the ship, especially at long range.

Fire control positions: This is the number of fire control positions on the ship. The reason to have more is redundancy. Fire control positions are fragile and can be shot away.

Main gun calibre: Rounded to inches.

Increased elevation: Will give extra range to the main guns.

Gun quality: This is the gun quality of that calibre. It is given by your research and cannot be changed. A value of 5 means that you have not researched that calibre.

Cross deck fire: Check this if the guns of the wing turrets in positions F, G, K, or L should be capable of cross deck fire, like in for example the historical Indefatigable or Kaiser classes.

Main turrets: Main turrets are recorded

individually. To add turrets, press 'add' and select position and number of guns in the turret. The positions available is determined by your research.

Secondary guns: are only recorded as to the total number. Note that they have a quality value, just like main guns. Secondary guns are assumed to be placed half on each side of the ship. Note that the graphic representation of the secondary guns is generalized. You can have an odd number of secondary guns. The graphics logic can't really handle odd numbers of secondaries, but any odd guns left over are assumed to be on the centerline by the gunnery logic.

Tertiary guns: As secondary guns above.

Torpedo tubes: This works much as the main turrets. You select the position and the number of tubes for the mount.

The ship graphic: Here you have a possibility of entering the looks of the ship. This is not necessary, the ship will work fine anyway, but it will look a lot better.

Funnels: Select if you want an oval funnel or round, then click on the button and on the ship. You do not have to worry about clicking on the middle of the ship; the program assumes all funnels are on the centerline, so it only takes account of where you click relative to the length of the ship.

Superstructure: Select if you want a line or a filled polygon. Then click on the button and then add points by left clicking on the ship. Right click when finished. You can only click on the left side of the ship, but the graphic will be mirrored so that it appears on the right side as well when you are finished. There can be a maximum of 10 points for each superstructure item.

When you are satisfied with your ship you should press the check design button to see if there are any issues that needs to be resolved with the ship.

Appendix 3: Instructions for using the ship picture generator

Select the set of ship elements you want to use. Originally there will be only one set, but players may make their own and add for example lighter or darker versions or even camouflaged sets.

First select the background you want and then the type of bow and stern etc and press "Generate". You can change your settings and redo the generation any number of times. When you are satisfied, go to the next tab to place superstructure and details. Note, you should not redo the hull generation once you have started placing details.

To place a ship element on the ship, click on the element and then move the mouse over the ship. Click again where you want to put the element. Ship elements should be placed in the order from left to right, that is start with masts, then decks, then superstructure and last accessories.

To fine tune placement, after moving it to the right area but before clicking on the ship picture, use arrow keys to move the element one pixel at a time, finish by pressing return.

Masts, decks and superstructure will be shown behind hull and turrets. That means that you can regulate the height of masts or superstructure by sinking them into the hull. Accessories will be shown in front of everything else. Use the deck panels under accessories to connect raised decks to barbettes, to make them show in front of the barbettes.

When you are finished, select use and exit and your picture will automatically be assigned to the selected ship class. You can check it by double clicking on the ship in the ship list.

The output is a bitmap that will be stored under the save directory of the current game. It will be named Classname + NationNumber + .bmp. If you want to make some adjustments or improvements to the finished picture, you can do so in any picture editor.