



Ship of the Line

*Battleship warfare
on the high seas*

Rules of Play

A Little History

From the 1600's to the early 1800's, sea warfare was conducted with the ship-of-the-line. These were two or three decks of armaments, with between 50 to 110 cannons per ship, but commonly 74. The cannons were classified by the weight of ball they shot, usually between 9 and 32 pounds. 9 to 12 pounders were on the highest deck, and 32 pounders were on the lowest deck. The middle deck usually housed 18's and 24's.

The ship's company could number 600 to 800 men, which included around 80 to 100 marines. The crew consisted of midshipmen, lieutenants and the captain, warrant officers, masters, gunners, navigators, sail-makers, coopers, the surgeon and his mates, the purser and clerks, and the hundreds of men needed to work the sails and guns. The sailors were housed on the lower gun deck. A system of "watches" was used so those not on duty could sleep.

The ships were "square-rigged," and usually had three-masts: a fore mast, a main mast and a mizzen mast. The sails on the masts were (from bottom up) the main sails, top sails, top gallants, royals and skyscrapers. A complicated mass of ropes and tackle controlled the sails and yard arms. "Stays" held the masts upright from front to back, and "shrouds" held them from side to side. Some ships had spanker sails off the mizzen mast, and all ships had various jibs on the front bowsprit.

The ships relied on the wind for propulsion. A ship could sail with the wind, or abeam of the wind, but NEVER directly into the wind. So, if the ship had to get somewhere upwind, it had to zig-zag its way there. Each ship had a point of sailing as close to the eye of the wind as possible to do this zig-zagging. This was

termed being "close hauled." If the wind was hitting the right side of the ship, you were on the "starboard tack." If the wind was on the left, it was the "larboard tack." No matter what tack the ship was on, the side to the wind was called the "weather" side and away from the wind was the "lee" side. To zig-zag, or change tacks, the ship would have to pass through the eye of the wind. There are two ways to change tacks: "Coming-about" and "Wearing ship."

Coming-about, or tacking, consists of reducing the fore sails and jib sails, and turning the ship into the wind called "putting the helm alee." Once past the eye of the wind, the sails were restored, and were "braced" to catch the wind on the opposite tack, thus completing the manoeuvre. However, if the timing was off, the ship wasn't going fast enough, or the wind was too strong, the ship could get stuck in the middle where the sails wouldn't fill, and it would stall, said to be "in irons" or "taken aback." The advantage of coming-about was that the ship did not lose forward momentum when the manoeuvre was done correctly.

Wearing ship, or jibing, means putting the ship's stern through the wind, where the wind would come from behind, or astern, as it made its turn. Wearing the ship is easier than tacking with a square-rigged ship, but the forward momentum actually makes the ship move downwind.

The rudder was used to steer the ship. On a ship-of-the-line, the rudder is connected to the "wheel," a large double spoked steering wheel, via ropes and pulleys. In high winds and heavy seas, it might require four or more men to control the wheel. A ship can manoeuvre while moving, but without sails or a rudder,

the ship is adrift.

War at sea was an iffy proposition. Wind and waves could throw the aim off wildly. Plus, the cannon bores were purposely made bigger than the cannon balls to prevent them from getting jammed when the bronze guns heated up. This reduced the risk of bursting a gun. But the wider bore also increased the unpredictability of the cannon.

The stern of the ship was the most vulnerable. The rudder was exposed, the masts were aligned, and a big part of the stern was windows, not hull. During battle, when the decks were "cleared for action," a cannon ball could travel far and do great damage.

Gunpowder for the cannons was kept in the "magazine" which was below the water line. Runners, called "powder boys" got the powder cartridges from the gunner and delivered them to each cannon crew. A hit to the magazine could spark an explosion that would destroy the ship.

Cannon balls could knock out guns, masts, etc., but most men were killed or injured by flying splinters of wood from the masts and hull. Some hulls were at least two feet thick, and usually made from oak, so the splinters would be huge, jagged and very sharp. Hull damage, therefore, also represents crew losses.

The best way to disable a ship was to use "chain or bar shot," two small balls held together with either a chain or bar. It would tumble and spin when fired, destroying sails and rigging. These were usually only fired from the upper deck guns, the lower guns firing the more common "round shot."

The main objective of a sea battle was not necessarily destroying the enemy. Rather, it was hoped that the opponent's ships would be crippled enough to board and take them, or they would surrender. Boarding involved grappling hooks lashing the ships together then leaping across with pistols and swords. Small swivel cannons loaded with grape shot were often used by both sides to reduce the enemies numbers before the boarding attempt. Marines were placed in the "tops" and would pick off the enemy with rifle fire.

Capturing a ship was termed "taking a prize." The captured ship would be taken by a small prize crew with the enemy crew locked below decks, held at bay with grapeshot. Prize crews were small with enough men to sail the ship but not enough to engage in battle. Eventually the ship would be repaired in port and become part of the victor's fleet. This humiliated the enemy, thus hurting their morale. Not only did the admiralty gain another ship to use in future battles, but the captain and crew shared in prize money.

Simplifying for the Game

Instead of accounting for all 74± cannons, the ships armaments are represented by 10 "batteries," five per side. The small caliber cannons called "bow & stern

chasers" did little damage and are not represented.

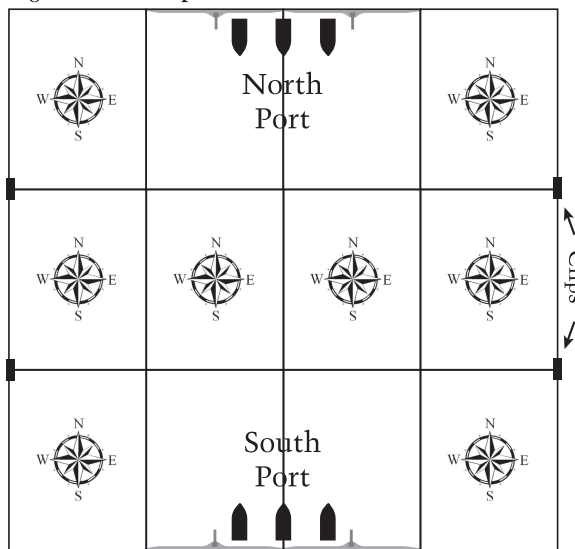
While a cannon could conceivably shoot a ball over a mile, it would most likely skip off the water surface several times, reducing any potential for damage. So, the firing range will be limited to three "cables," a cable being 100 fathoms, or 600 feet. The space between dots on the game board is one cable.

The game uses 45° on both sides of the wind, forming a 90° area between tacks called the "no-sail zone." Finally, other sails such as jibs, royals, skysails, moonrakers, staysails, spankers, etc. are excluded.

Set Up

To start, assemble the board as shown in figure 1, with the ports in the middle and the compasses all pointing in the same direction. Each player chooses a nationality and places the flags on the mizzen masts of their ships. Place the ships in the ports as shown. The ship's number does not affect its placement in port. (See page 8 for parts and ship assembly.) Both players get a damage chart, a hull damage counter with three "cannon balls" placed across the starting row, and five Officer Skill Cards, choosing one from each officer.

Fig. 1 Board set-up



Wind Direction

Roll two dice to determine the wind direction as shown in figure 2. Set the wind gauge arrow to the wind direction and place it on the board with North aligned with the compasses.

Fig. 2 Wind direction chart

Die Roll	Wind Direction
2	North
3	Southeast
4	Northeast
5 or 9	West
6, 7 or 8	East
10	Southwest
11	Northwest
12	South

Order of Play

Roll a die to see who goes first, highest number wins (to be called Player A). Ship 1 takes a turn, then Player B's ship 1 takes a turn, then A2, B2, A3, and B3. A "turn" consists of up to three "moves," each move being an optional 45° turn, a move of one cable, and an optional attack at any time. Officer skill cards can be played during the turn as defined on the card.

Movement

A ship's movement per turn is dependent on how many masts with at least one sail it has, equal to one cable per mast. For example, a ship with sails on all three masts gets three moves per turn, a ship with one bare mast gets two moves, etc. A captain can reduce sail at any time, so a ship is not required to move the maximum allowed, but **MUST** move at least one cable per turn (unless restricted by a sea anchor.)

Figure 3 shows a single move, with the black dot as the starting point and the white dots as the possibilities: one dot horizontal, vertical or diagonal. At the end of each move a ship must be on a dot.

A ship must move in the direction it is pointing after an optional 45° turn. A ship **CANNOT** move directly into the wind, the "no-sail zone." It may **pass through** the eye of the wind, changing tacks by **coming-about** or **wearing**.

Coming-About

Figure 4 shows a ship close-hauled on the starboard tack (black), coming-about on the larboard tack (white).

Coming-about **ADVANCES** a ship one cable **INTO** the wind.

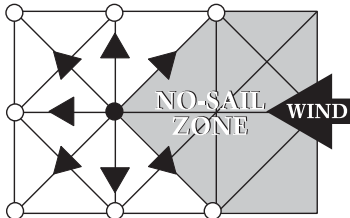
A ship can also come-about from 90° off the wind, and end up 90° off the wind shown by the dashed lines, possibly doing a 180° turn.

Coming-about CANNOT be performed by a ship without foresails. A ship CANNOT come-about twice consecutively. A move is needed to build back the speed required.

Wearing Ship

A ship can wear around to the other tack even if it

Fig. 3 Possible moves



has lost its foresails and cannot come-about. Figure 5 shows a ship close-hauled on the starboard tack (black) wearing to the larboard tack (white).

Wearing causes the ship to **LOSE** one cable **WITH** the wind.

A ship may wear from 90° to the wind and end up 90° off the wind, as shown by the dashed lines, possibly doing a 180° turn.

A ship may wear consecutively during its turn.

Officer Skill Cards

Skill cards contain basic and tricky manoeuvres, useful repairs and specialized abilities. There are two for each "officer," which includes Warrant Officers, the Master and the Captain. One card per officer is chosen before the game starts. Of the five cards, any or all may be used during a turn as described on the card. Cards can only be used once. After one is played, turn it over to show it is no longer usable.

Battle

A ship may fire at any time if it is in range of an enemy ship.

Range is determined to the center of the ships. Figure 6 shows the area of attack opportunity in gray. Diagonal range is limited to two cables.

Bearing

The position of the two ships determines which cannons "bear" and thus what type of attack it is: Broadside, Bow or Stern. The type of attack indicates what damage chart is referenced and if there is any retaliation.

Batteries include multiple cannons, which gun crews can shift left or right up to 45°, increasing the

Fig. 5 Wearing ship

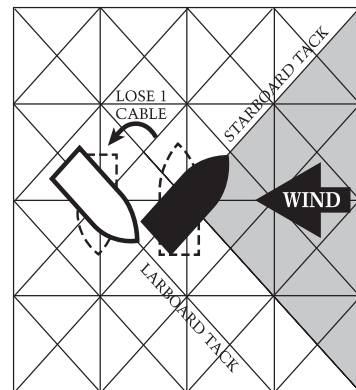


Fig. 6 Attack range

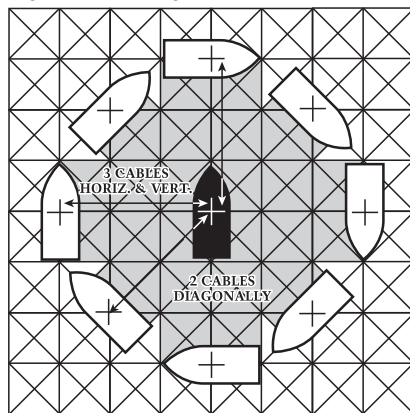
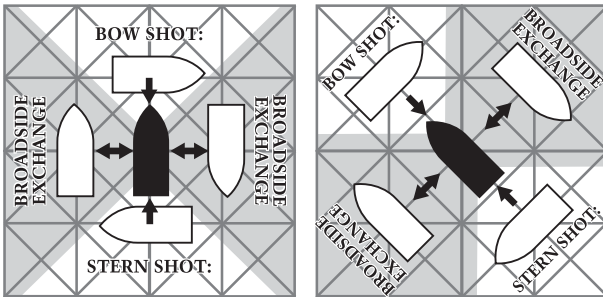


Fig. 7 Gun bearing



target area for broadsides, as shown in gray in figure 7.

Broadsides

When two ships are next to each other, it is considered a "broadside." They may fire any and all guns that bear. If the ships are opposite each other, or at a slight angle, all batteries bear as shown in fig. 8.

The attacker fires each working battery bow to stern. Any hit applies to the target nearest to that battery. If there is no target to hit, the next closest target applies.

Occasionally, a ship's position will cause some of its five batteries to be split between a broadside and a bow or stern shot.

Three would fire as a broadside and the other two fire as a stern or bow shot, as shown in fig. 9.

Retaliation

A broadside allows the opponent an opportunity to fire back in retaliation, firing any batteries that bear, after the enemy has completed its broadside. Damage is applied immediately, before the initial attacker can continue. Batteries that were destroyed cannot fire.

Note that retaliatory shots do not prohibit the opponent from using those same batteries during its next turn or from retaliating after another broadside attack.

Stern Shots

If a ship is behind another ship as shown in figure 7, it can fire a stern shot. Stern shots can do the most damage and can take out the enemy's rudder, or even blow up the entire ship by hitting the magazine. The opposing ship cannot retaliate.

Bow Shots

If a ship is in front of another ship as shown in figure 7, it can fire a bow shot. Bow shots can do a lot of damage to the enemy's sails. The opposing ship cannot retaliate.

Multiple Shots

A ship may fire each battery just once per turn. Since a turn may consist of more than one move, a ship may fire unused batteries during each move, from both sides of the ship. This makes it possible to attack multiple targets in a single turn.

Damage

Damage is determined by three factors: bearing, range and chance. Bearing (figure 7) determines which chart is used: Broadside, Stern or Bow. Range (figure 6) determines which row is used: 1, 2 or 3 cables. Chance is determined by rolling two dice and using the appropriate column. The intersection of the range row and chance column on the appropriate bearing chart indicates the damage done. The least severe damages are the most likely and are the more common dice rolls. Less common rolls yield harsher damage accordingly.

Damage per battery is carried out immediately.

The possible damage targets are:

Hull - Advance the appropriate ship's cannon ball marker on the hull damage counter. If a ship reaches 20 hull hits, it is so damaged that it sinks, and is removed from the board.

Sail - Sail, yardarm or rigging hit - Remove the topmost sail from the nearest mast.

Battery - Remove the corresponding battery.

Mast - Remove the targeted mast and place as a sea anchor (see next). Move flag to another mast as necessary.

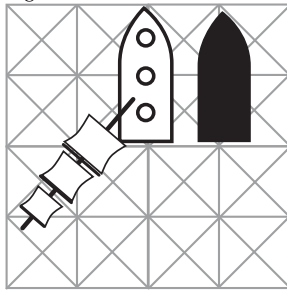
Rudder - Remove the rudder, the ship is adrift.

Magazine - The ship is destroyed and removed from the board.

Sea Anchors

When a mast is hit, it will fall into the sea with all its the rigging and remaining sails still attached to the ship. This creates a “sea anchor” and limits the ship from moving its entire next turn while the crew frees the ship from the wreckage. Place the fallen mast as shown in figure 10 and remove it after the damaged ship’s next turn is over. The ship may fire during its turn or in retaliation if an enemy is within one cable.

Fig. 10 Sea Anchor



Boarding

If a move can intersect the enemy ship, a boarding attempt may be declared. A boarding attempt counts as a move, but brings the ship to a halt, so no more moves are available that turn.

Figure 11 shows various positions where a boarding of white by black could be attempted. The boarding move would “lay it alongside” as shown in figure 12, thus avoiding collision.

Determining if a boarding is successful depends on how damaged the hull of the attacker is compared to the defender. More damage means less crew members to repel boarders.

If the difference between hull damage counters is 15 or greater, the boarding is **automatically successful**.

If the difference is between 10 and 14, the boarding is 67% probable. A roll of 3 or higher on a single die means it was a success.

If the difference is between 5 and 9, then it has a 33% chance of success. A roll of 5 or 6 on a single die wins.

If the difference in damage between the two ships is less than 5, each ship rolls a die and the highest number wins. This means that the boarding attempt could fail and be reversed, with the defender capturing the attacker’s ship!

If the attacker has more hull hits than the defender, a boarding cannot be attempted.

Before the boarding attempt, the defender may fire up to three of any bearing batteries. Any hit scores **ONLY**

Fig. 11 Boarding positions

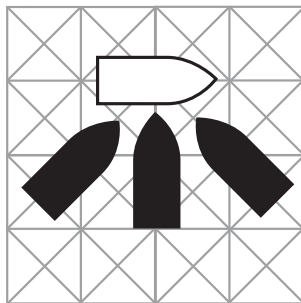
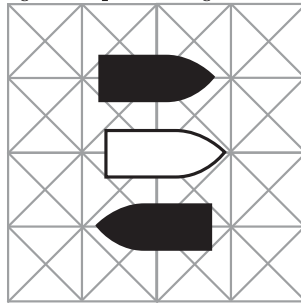


Fig. 12 Ship laid alongside



AS A HULL HIT representing grape shot. If the ship attempting the boarding suffers more hull damage, it may change the odds or ability for the attacker’s attempt to board. If the boarding attempt is unsuccessful, the defender may fire **ANOTHER** volley of grape-shot from any three guns that bear, every hit counting as a HULL HIT.

If the boarding attempt is successful, replace the flag with a blank. The ship can move, but cannot fight. A prize crew, being so small, is easily overwhelmed by another boarding attempt (automatically successful), so they would try to distance themselves quickly. Prizes move after all other turns are completed.

If the ship is retaken, it regains its flag and resumes play in its previous turn order.

Collisions

It is possible that a collision may occur when ships are subject to wind and tide. If this happens, the moving ship comes to an immediate stop, takes three hull hits, loses its entire foremast, and the rest of its turn. The fallen mast becomes a sea anchor and the ship cannot move its next turn. If the ship had no foremast, it still suffers the hull damage and stops. The ship **MUST** always be angled to starboard or larboard, to lay alongside (figure 12), and its turn is over.

The impacted ship receives five hull damage points and loses a battery.

Disengagement

A ship may sail off the edge of the board by accident or by design. When this happens, the ship’s turn is immediately ended and the ship is considered “disengaged” for the **ENTIRE NEXT TURN**. The ship can then be placed where it left the board pointing any direction (except into the wind) and resumes play. While disengaged some repairs can be carried out: either one sail repaired, two guns replaced or three hull hits patched.

Capitulation

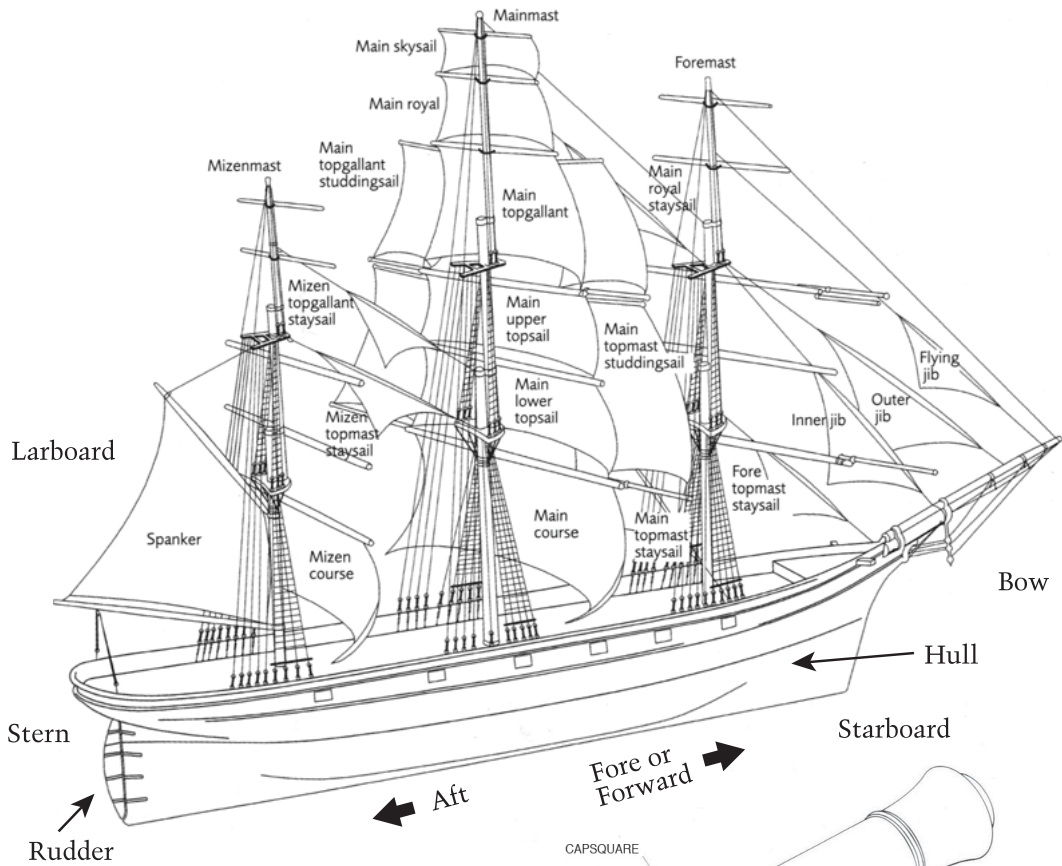
A ship **MUST** be surrendered as soon as it is adrift and cannot be repaired. Once surrendered, the flag is removed and the ship cannot move or fire, remaining on the board as an obstacle to movement.

A ship **MAY** be surrendered when odds are that it will be destroyed or adrift within a few turns. A Captain would do this to save the lives of his crew.

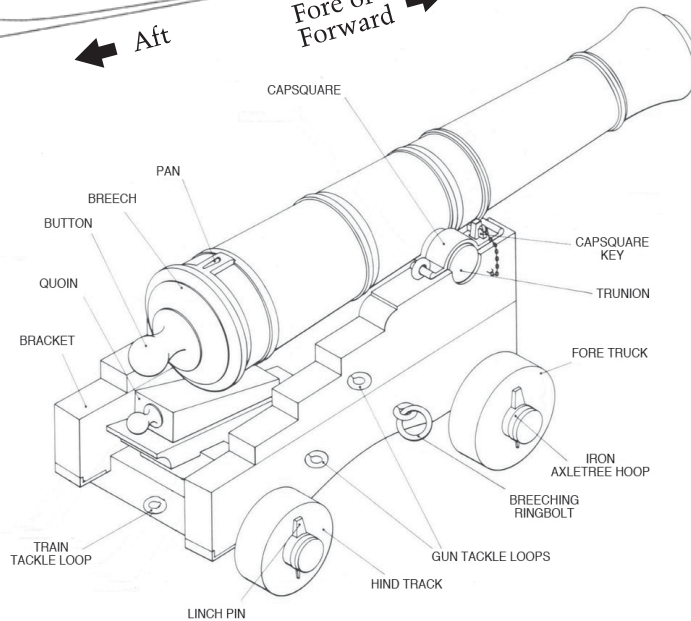
Victory

A player is declared the victor and the game is over when his opponent has lost all his ships, whether by surrender, sinking or destruction.

Square-Rigged Ship Sail Plan



Typical Ship's Cannon



Old Sailing Terms Still in Use in Modern Language

Batten down the hatches: Open hatches were covered with tarps in stormy weather and wooden battens held the tarp in place.

We'd better batten down the hatches... a storm is brewing in the boss's office.

Bitter end: The inboard end of the mooring cable was called the bitter because it was secured to the bitt, one of two strong posts, or to the capstan.

They kept on going to the bitter end.

By and large: Sailing "by" was close-hauled to the wind, and "large" was sailing downwind, thus the whole gamut of sail settings.

She was, by and large, the best choice for the job.

Cut and run: A ship needing to quickly escape would cut the anchor cable instead of taking the time to hoist and stow it.

To prevent further losses, he decided to cut and run.

Cut of the jib: The jib was a prominent triangular sail at the bow of a ship. Its shape could be used to identify a ship.

I'm not sure I like the cut of his jib!

Dead in the water: No wind to make the ship move.

Without his consent, they were dead in the water.

Hand over fist: A method of quickly hauling ropes, keeping a firm grip while reaching for the next pull.

He was making money hand over fist.

Keel over: If a ship capsized, the keel would be out of the water.

He just suddenly keeled over and died.

Learn the ropes: A ship had a slew of ropes that had various functions. The first thing a sailor had to do was learn which ropes did what.

He was new to the job and had to learn the ropes.

Loose cannon: If a cannon was no longer secured in its place, it could roll wildly about the deck, causing injury, mayhem and destruction.

His unchecked behavior made him a loose cannon around the office.

Main stay: A stay was a supportive rope for a mast and was never touched. The main stay held the main mast in place from front to back.

He was the main stay of the community.

On an even keel: The keel was as beam running from bow to stern that held the ribs of the ship, helped steady the boat, reduced leeward drift and lessened listing (leaning).

His fortitude kept them on an even keel.

Over a barrel: Ship's boys were punished by making them lean over a cannon barrel to be whipped or caned.

There was nothing I could do... he had me over a barrel!

Pipe down: The bosun used various notes on a pipe to instruct the crew, including "piping down the hammocks" at night. This signalled the men to retire below decks and be quiet.

Pipe down! I can't hear myself think.

Show one's true colors: Sometimes a captain would run up a different national flag (colors) as a ruse to the enemy. According to the accepted rules of war, though, he must display his real flag before attacking.

He showed his true colors when it came time to participate.

Slush fund: Slush was the leftover fat and grease from the galley (ship's kitchen). The cook sometimes saved it and sold it to the highest bidder.

She had a slush fund for unexpected expenses.

Tack: The direction of the ship in relation to the wind, starboard and larboard (now known as port).

She thought they might be on the wrong tack.

Take the wind out of one's sails: If a ship passed in front of another, it could leave them without enough wind for steerageway.

When she was passed over for promotion, it took the wind out her sails.

Taken Aback: When the sails are pressed against the masts, the ship loses headway and/or steerageway.

She was taken aback by the rudeness of the question.

Three sheets to the wind: A sheet is a rope that held the corner of a sail down. If one was loose, it could be negligence. But if three were loose, it meant something was very wrong and the ship was in peril.

He drank so much, he was 3 sheets to the wind.

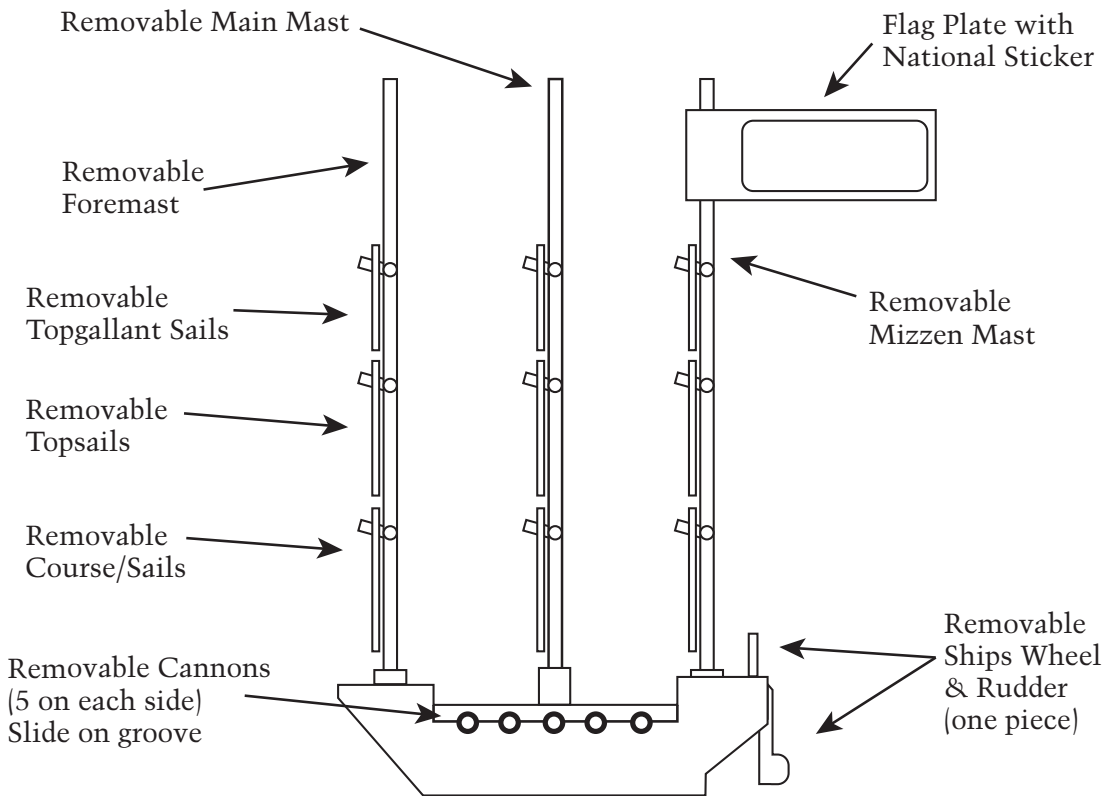
Toe the line: Sailors would gather for inspection with their toes touching a seam in the deck planks.

You'd better shape up and toe the line!

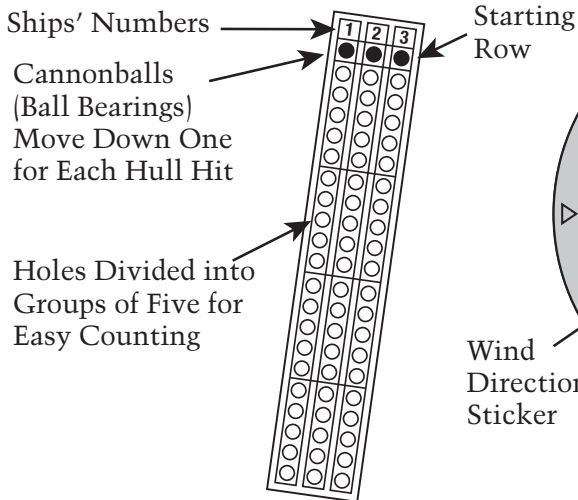
Turning in: Sailors slept in hammocks on the lower gun deck. If weather was bad, they would give a rope a few turns around their hammocks to hold them in.

I'm tired... I think I'll turn in.

Ship Assembly



Hull Damage Counter



Wind Indicator

