

# BEAT TO QUARTERS

Age of Sail Naval Warfare  
1/1200 & 1/700 Scale Miniatures Rules  
Detailed simulation of naval combat during  
the Revolutionary and Napoleonic Wars



2025 Edition

Designer **Barry J. Fox**

Companion app, editing and house rules **Linus Spjutsberg**

# FOREWORD ON THIS VERSION OF THE RULES

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In March 2025, I posted a video about Beat to Quarters on my YouTube channel, Linus Napoleonic Shipyard. A few days later, I received an email from Barry J. Fox—the designer of the game. After 44 years out of print, someone was making videos about his rules, and he wanted to talk.

That conversation continued for nine months of correspondence. Barry explained the origins of Beat to Quarters and how his research had evolved over the decades. In 1981, his sources were limited—William James's Naval History borrowed from a college library, Theodore Roosevelt's *The Naval War of 1812*, and whatever else he could find in an era before the internet. He created a gunnery system and nationality modifiers with the best information available at the time, though he candidly admitted he was less satisfied with those early calculations given what he learned later.

What had captivated me about Beat to Quarters was how it made me feel like a ship's captain on the game table in a way no other system had. Every ship is unique, just as they were in reality—number of guns, calibers, crew experience and numbers, sail plan, tonnage, rate, nationality, and even the specific year within the era all matter. When I move my frigate across the sea mat, I'm not just pushing a gaming piece; I'm commanding a vessel with its own character and limitations. The system's planning mechanism—writing orders in advance, then executing them simultaneously—captures that snapshot moment when a captain gives his commands, then watches events unfold in real time as both fleets move together. It's this level of detail and immersion that drew me to the rules.

After 1981, Barry continued his research. When the Documentary History of the Naval War of 1812 was published in volumes (1985, 1992), it opened new possibilities. He began work on a new ruleset, "Yardarm to Yardarm," around 1998 or after. For that project, he developed the rigorous methodology he described to me: analysing documented single-broadside actions, calculating casualty rates, determining gunnery effectiveness by nationality and era through statistical analysis of actual battles. That work—identifying precise battles, constructing probability tables, establishing the 1.0 rating system—represented decades of additional research beyond the original Beat to Quarters.

For this 2025 edition, Barry provided updated nationality modifiers based on sources published after 1981, along with refined Danish and Swedish statistics. While he had continued to perfect his craft over forty-four years, he wanted the 1981 rules preserved largely as they were—a snapshot of what naval wargaming looked like in that era. When I proposed creating this free edition, Barry explained the copyright situation. He holds the copyright to the rules text; Command Perspectives copyrighted their layout and production. He gave me full authorization to retype the text, create new artwork and diagrams, and add house rules that I had developed through playtesting. His only request was that his name appear on the cover as designer—something Command Perspectives had failed to do in 1981, relegating his credit to the final pages.

My part of the project evolved significantly. I redesigned the play aids and gauges, and built a companion app that handles ship statistics, gunnery calculations, damage tracking, and fire progression. I had started working on gaming tools before contacting Barry, but his explanations of the formulas—Hull Value Numbers, Gunnery Destruction Numbers, Sail Value Numbers—made the app properly functional.

The house rules I developed through playtesting are simply my additions—another way to play that adds depth in some areas, though they may not suit everyone's taste. The fire system in particular adds dramatic tension, but these are optional variations, not improvements on Barry's original design. The companion app preserves all of Barry's detailed mechanics—the depth is unchanged, just hidden from view. It handles the arithmetic automatically for players like me who want to focus on the table rather than calculations. This was crucial to me: I wanted to maintain that feeling of commanding a unique vessel with all its specific characteristics. The app lets you experience the full depth—every gun Caliber, every crew quality modifier, every aspect of your ship's individual nature—without the mathematics. Both approaches, with dice and tables or with the app, deliver the same depth of Barry's work. It's simply a choice of whether you want to see the numbers or let them work in the background.

For the cover, I tried several approaches before settling on a photograph of my 1/700 scale models: HMS Speedy and El Gamo at close quarters. Barry had specifically asked for "that wargame feel through the use of models," and this captured what earlier watercolour attempts had not.

Throughout our correspondence, Barry shared more than just game mechanics. He told me about his time in the U.S. Army in the late 1960s, stationed sixteen miles from Liverpool (much to his delight as a Beatles fan). He recommended C. Northcote Parkinson's Richard Delancey novels and Rif Winfield's ship data compilations—I in turn recommended the John Pearce series by David Donachie, which he enjoyed. When I was building my HMS Speedy diorama, he pointed out that William James's account of El Gamo's armament was likely inflated, and provided the correct data from more recent sources. This attention to historical accuracy, even when it deflated a legendary story, characterized Barry's entire approach.

Barry reviewed my transcription and approved the project. He trusted me to complete the work, using a soccer analogy: he had passed me the ball, and I should run with it to the goal.

This edition includes:

**Barry's 1981 Rules** - The core game with minor corrections and removal of publisher additions made without his input.

**Barry's 2025 Updates** - Revised nationality modifiers and corrections based on sources published after 1981.

**House Rules** - Optional rules I developed through playtesting, clearly marked as such.

**Modern Presentation** - New artwork, 1/1200 scale ship cutouts, photographs, gauges, and the companion app. All game design credit belongs to Barry J. Fox. The research, the two-step gunnery system, the nationality modifiers grounded in historical analysis, the surrender point system—that's his work from 1981, refined over decades. My contribution has been the modern packaging: visual design, digital tools, and presentation that makes these rules accessible again.

Beat to Quarters has been out of print since 1981. Now it's available for free, with Barry's full support and collaboration. If you've been searching for Age of Sail rules grounded in historical research rather than Hollywood naval combat, you've found them.

Thank you, Barry, for trusting me with this project, for the patient explanations, and for creating a game that deserves to be played far into the future.

**Linus Spjutsberg**

Forestad, Sweden

December 2025

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*Beat to Quarters was designed by Barry J. Fox and published in 1981. This 2025 edition is released as a free resource with the designer's permission. Game mechanics and historical research: Barry J. Fox. Visual presentation, companion app, and house rules compilation: Linus Spjutsberg.*



# A.0 GENERAL INFORMATION

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## A.1 Game Equipment

The equipment necessary for playing Beat to Quarters is one pair of percentage dice (01 = one and 00 = one hundred), one six-sided die, a metric rule and tape measure, 1/1200 or 1/700 scale sailing ships, and a large table. 240x120 cm has worked well for us. But of course, you can also use a smaller map and just center all ships when the edge of the map gets too close. We also use other dice in our house rules like D8 and D3. If you are using the companion app no dice are needed. In addition, we have enclosed die-cut ship bases with ship symbols imprinted on them so you may begin play immediately.

### A.1.1 Game set includes:

- One Rules Document
- Printable sheets of Gauges and Ship Counters
- Quick reference sheets
- Printable Fleet Engagement and Ship Battle Logs
- Link to use the companion app, this includes the house rules

## A.2 Scale

A constant scale of 1/1200 or 1/700 (1mm equals 1.33 yds. at 1/1200 scale) is maintained for all movement and firing ranges. Each game turn represents 4½ (four and one half) minutes of actual time. We have run this game with stats made for the 1/1200 scale using 1/700 scale models, and to us it plays nicely. But if you would like to scale distances, to convert a measurement from 1/1200 scale to 1/700 scale, you must multiply the original 1/1200 scale measurement by the factor 1200/700 (or approximately 1.714). This will give you the corresponding, larger measurement in 1/700 scale. But as mentioned, at least for us during testing this was not necessary. We actually preferred the unaltered stats.

## A.3 Preparing for Play

**A.3.1** Before the play begins, players should fill out a Battle Log for each of the ships to be used in the scenario being played.

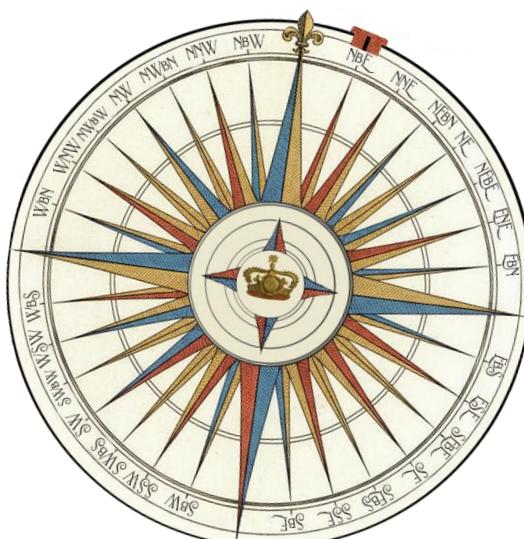
**A.3.2** The Mariner's Compass (on die-cut sheet) is positioned so as to establish North.

**A.3.3** Place all ships (or ship counters) on playing surface in accordance with specific scenario instructions, or by placing belligerent forces so that the distance between them is within 1 cm beyond Long Range of the longest ranged gun on either ship.

**A.3.4** Roll for Wind direction and force.

**A.3.5** Place the Wind Indicator at the edge of the table corresponding with the direction rolled. Take note that the wind is coming from the direction rolled. Thus, an easterly wind blows west.

**A.3.6** Look up the maximum speeds (under fighting sail) for each ship according to the wind force rolled (A.3.4) and mark them on the Battle Log in pencil.



## A.4 Game Turn Sequence

- A.** Every ten turns check to see if the wind has changed force or direction.
- B.** Each side writes orders for their ships, secretly, on the back of that ship's Battle Log. This includes proposed movement and turns as well as orders for freeing grounded ships, orders to rig or cast off tows, weigh anchor, jury rig, cut cables, launch fireships, fight fires, transfer crews, cast the lead, and begin the change to full sail or vice-versa. Players are allowed 1½ minutes to write their orders.
- C.** Movement. All ships are moved according to their orders. Movement is simultaneous. If collisions occur, refer to the collision rules.
- D.** Attempts to grapple, cut grapples, and clear wreckage are made.
- E.** Both players may fire eligible guns.
- F.** If any hits are made, a damage check is made. Add up damage points to determine percentage losses to the hull, and check for sail, mast, rudder, wheel, or gun losses. Roll to see which of each were knocked out if applicable. At this time check the number of surrender points each ship has lost to determine if it surrenders or strikes its colors.
- G.** Boarding. After one game turn of contact, boarding may take place. Only one round of melee may be fought each game turn during this phase.
- H.** Losses accrued during a melee are recorded on the Battle Log.

**A.4.2** One game turn completed.

**A.4.3** Repeat steps A–H until scenario concluded.



BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

## B.0 THE BATTLE LOG

### B.1 The Hull Value Number (H.V.N.) is the ship's tonnage doubled.

### B.2 Long guns and carronades are counted on a one-to-one scale.

**B.2.1** The Gunnery Damage Number (G.D.N.) is determined by dividing the total amount of long guns and carronades carried on a ship into its H.V.N. and the result is the G.D.N. Every time that amount of hull points is reached, through damage, one gun (or carronade) is knocked out. The gun will be lost on the side, including bow or stern, where the damage points were accumulated.

**EXAMPLE:**

A frigate carrying 26–12#, 8–8#, and 4–36#c, with a H.V.N. of 1900, would have its 38 guns divided into 1900 to arrive at a G.D.N. of 50. Every time it accumulated 50 points of hull damage it would lose one gun. 68% of the guns are 12#, 21% are 8#, and 11% are 36#c. The table would look like this:

1–68 lose one 12#  
69–89 lose one 8#  
90–100 lose one 36#c

\*A small 'c' next to a gun's poundage means it is a carronade.

**NOTE:**

*In a campaign situation only about 25% of those guns knocked out would be permanently destroyed. The remainder would be dismounted, but repairable. After a battle, if the scenario is part of a campaign, roll for each gun destroyed:*

*1–25 gun permanently destroyed  
26–100 gun repaired by next battle*

**B.2.2** Players losing guns during a battle should note this so they may deduct them from future broadside rolls. All losses take effect on the gameturn after the damage occurs, except in phased movement, in which case damage is effective immediately.

#### B.2.2.1 Gun Crew Casualties (House Rule - Detailed G.D.N.)



**HOUSE RULE: Gun Crew Casualties from G.D.N.**

When a gun is knocked out due to reaching the G.D.N. threshold, some or all of the gun crew may also become casualties. This represents the devastating effect of enemy fire on gun positions.

**Procedure:** When a gun is destroyed through G.D.N. damage, roll dice to determine crew casualties based on the gun's crew requirement (see M.3.1).

**Crew Loss by Gun Type:**

**Long Guns (10+ crew):**

- 48#, 42# (14 crew): Roll 2d8 - Result 2 = 0 crew, 3 = 1 crew, 4 = 2 crew... 16 = 14 crew
- 36#–29# (12 crew): Roll 2d7 or 2d6+d4 - Result 2 = 0 crew, 3 = 1 crew... 14 = 12 crew
- 24# (10 crew): Roll 2d6 - Result 2 = 0 crew, 3 = 1 crew, 4 = 2 crew... 12 = 10 crew

**Medium Long Guns (8 crew):**

- 18#, 12# (8 crew): Roll 1d10 - Result 1 = 0 crew, 2 = 1 crew... 9 = 8 crew, 10 = reroll

#### **Light Long Guns (4-6 crew):**

- 9#, 8# (6 crew): Roll 1d8 - Result 1 = 0 crew, 2 = 1 crew... 7 = 6 crew, 8 = reroll
- 6#, 4# (4 crew): Roll 1d6 - Result 1 = 0 crew, 2 = 1 crew... 5 = 4 crew, 6 = reroll

#### **Very Light Guns (3 crew):**

- 3#, 2#, 1# (3 crew): Roll 1d4 - Result 1 = 0 crew, 2 = 1 crew, 3 = 2 crew, 4 = 3 crew

#### **Carronades (2-4 crew):**

- 68#c, 42#c, 36#c, 32#c (4 crew): Roll 1d6 - Result 1 = 0 crew, 2 = 1 crew... 5 = 4 crew, 6 = reroll
- 24#c, 18#c (3 crew): Roll 1d4 - Result 1 = 0 crew, 2 = 1 crew, 3 = 2 crew, 4 = 3 crew
- 12#c (2 crew): Roll 1d4 - Result 1-2 = 0 crew, 3 = 1 crew, 4 = 2 crew

#### **EXAMPLE 1: 24# Long Gun**

A Spanish ship of the line reaches another G.D.N. threshold and loses a 24# long gun. The Spanish player rolls 2d6 for crew casualties: rolls 3 and 4 = 7 total.

Using the 2d6 table: 2 = 0 crew, 3 = 1 crew, 4 = 2 crew, 5 = 3 crew, 6 = 4 crew, 7 = 5 crew...

**Result:** Gun destroyed + 5 crew casualties (out of 10 possible). Record 5 casualties in Crew Damage column.

#### **EXAMPLE 2: 18# Carronade**

A British frigate loses an 18# carronade (18#c) when reaching G.D.N. threshold. The player rolls 1d4 for crew casualties: rolls 1.

Using the 1d4 table for 3 crew: 1 = 0 crew, 2 = 1 crew, 3 = 2 crew, 4 = 3 crew.

**Result:** Gun destroyed + 0 crew casualties. The gun crew survived and can be reassigned to other duties.

#### **EXAMPLE 3: 12# Long Gun Using Only d6**

A player has only d6 available and loses a 12# long gun (8 crew). They improvise using 1d6 where 1 = 0 crew, 2 = 1 crew, 3 = 2 crew, 4 = 3 crew, 5 = 4 crew, 6 = reroll.

First roll: 6 (reroll). Second roll: 4.

**Result:** Gun destroyed + 3 crew casualties (out of 8 possible).

*Note: This house rule makes G.D.N. losses significantly more costly in crew terms, potentially affecting boarding actions, sail handling, and other crew-intensive tasks. Record all crew casualties in the Crew Damage column and adjust your available crew accordingly.*

#### **B.2.3 Bow and Stern Chasers**

Generally, sloops (corvettes) and larger ships carried a few guns (one or two) on their bow and stern. Generally, long 6#, 8#, 9#, 12#, and 18# were used in this capacity, although there were exceptions. Carronades (c), being short-ranged weapons, were seldom if ever used in this capacity.

### **B.3 Crew**

The crew is on a one-to-one scale.

#### **HOUSE RULE: Crew damage is calculated on a 1/3 scale.**

When damage points are specifically aimed at crew (such as when using Grape Shot or Canister Shot), every 3 points of damage inflicted equals 1 crew casualty. This is default in the companion app.

#### **EXAMPLE:**

A broadside using Grape Shot inflicts 45 damage points aimed at crew.  $45 \div 3 = 15$  crew casualties.

*Note: This crew damage scale is separate from the G.D.N. gun crew casualties house rule found in section B.2.2.1, which represents casualties from guns being knocked out by hull damage.*

## B.4 Sail Value Number (S.V.N.)

To find the Sail Value Number (S.V.N.) of a vessel you must first know how many sails are carried on the ship. Use the following as a guide:

10 – 1st, 2nd, 3rd, 4th, 5th, 6th rates, sloops (corvettes), hemenas, and turumas.

8 – Snows, udemas.

7 – Brigs, luggers.

6 – Bomb ketches, pojamas.

5 – Double topsail schooners.

4 – Single topsail schooners, xebecs, cutters.

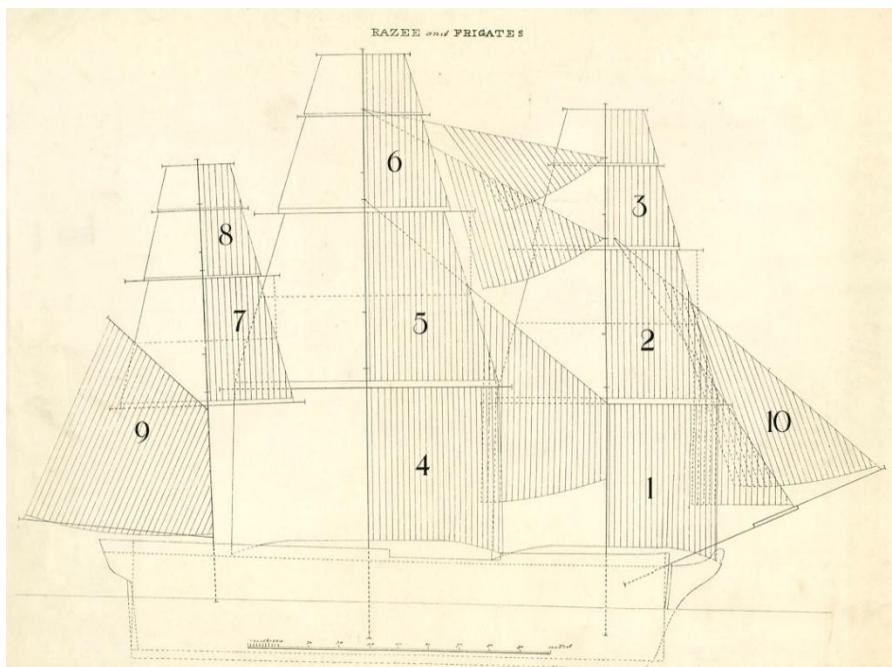
3 – American colonial trading sloops, polaccas, trabacolos.

2 – Galleys, gondolas, Swedish gunboats, baghalahs, proas, batils, pattamars.

1 – Gunboats, gunyawls, dhows, galivats.

The number of sails a vessel carries, if not on the table, may be figured by counting the sails (from a picture or model of the vessel) while counting only one jib sail, regardless of their number. Royal sails and masts don't count towards the number of sails as in the example

**B.4.1** Once the total has been figured, multiply it by 1.3, then divide the result into the ship's Hull Value Number. The result of this will be the ship's S.V.N. This number is entered in the S.V.N. box on the Battle Log. Every time a ship suffers damage to its sails equalling its S.V.N. it will lose one sail.



### EXAMPLE:

A brig with a Hull Value Number of 637 has seven sails. One jib-sail, a fore course, a fore topsail, a fore topgallant, a driver, a main topsail, and a main topgallant.  $7 \times 1.3 = 9.1$ . 637 divided by 9.1 is 70. Thus, the Sail Value Number is 70.

## B.5 Point Value Number (P.V.N.)

### B.5.1 Warships (including privateers)

If players are using the sample ships listed in the rules the P.V.N. is already listed. If, however, other ships are to be used this is the formula for determining the P.V.N. of warships and privateers:

Add up the broadside value of the ship, multiply it by the appropriate nationality gunnery modifier, then multiply that result by the ship's tonnage.

**NOTE:**

When adding up the broadside value, count each carronade as half its value. This is done to compensate for the short range of carronades compared to long guns. Naturally, when carronades are fired they will fire at their full value.

**EXAMPLE:**

The French 36 gun frigate Gloire carries 26–12#, 10–6#, and 4–36#c, thus it has a broadside of 13–12#, 5–6#, and 2–36#c. It is 951 tons.  $13 \times 12 = 156$ ,  $5 \times 6 = 30$ ,  $2 \times 18$  (carronade) equals 36. Total is  $122 \times 0.55$  (French Nationality Gunnery Modifier) equals 122.1 (round off to 122).  $122 \times 951 = 116,022$ . Thus the Point Value Number of this frigate is 116,022.

\*Carronades count half value when figuring the P.V.N.

**B.5.2**

Because of the extremely small crews carried on merchant ships and letters of marque, the P.V.N. is figured differently than warships.

To find the P.V.N. of a merchant ship or letter of marque, divide the Hull Value Number of the ship by 12. The result will tell how many men must work the ship. Subtract that number from the crew total. Then, from the result of this, figure how many guns on one broadside can be fully manned. This may be found in the gun crew section of the Crew Task Section. Once this is determined, look up the Nationality Gunnery Modifier. Next, total up the broadside value using only those guns and or carronades which are fully-manned. Multiply this total by the Nationality Gunnery Modifier, round off, then multiply the result times the tonnage of the ship.

**EXAMPLE:**

The British merchant schooner Alder carries 6–9#, and has a tonnage of 105, with a crew of 21 men. 105 divided by 12 equals 8.75 (round off to 9). 21 minus 9 equals 12. The broadside is 3–9# guns. 9# guns must be crewed by 6 men, so two guns are fully-manned. The British Nationality Gunnery Modifier is 1.0, so  $2 \times 1.0 \times 9 = 18$ .  $18 \times 105 = 1,890$  Point Value Number.

**NOTE:**

This computation is used only to find the P.V.N. of a merchant vessel or letter of marque. Proper crew allocation for sailing and firing is found in the Crew Task Section, so once you have figured the P.V.N., forget what you saw here!

BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

## C.0 WIND STRENGTH AND DIRECTION

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### C.1 Wind Strength

Dice Roll	Wind Strength
1–20	Slight air
21–40	Light breeze
41–60	Gentle breeze
61–80	Moderate breeze
81–100	Fresh breeze

C.1.2 Every ten game turns roll again on the following chart:

Dice Roll	Effect
1–25	Wind drops one level*
26–75	Wind doesn't change
76–100	Wind increases one level**

\* One level below Slight air is Calm. No movement under sail.

\*\* One level above Fresh breeze is Gale.

## C.2 Wind Direction

**C.2.1** At the beginning of the game roll for wind direction.

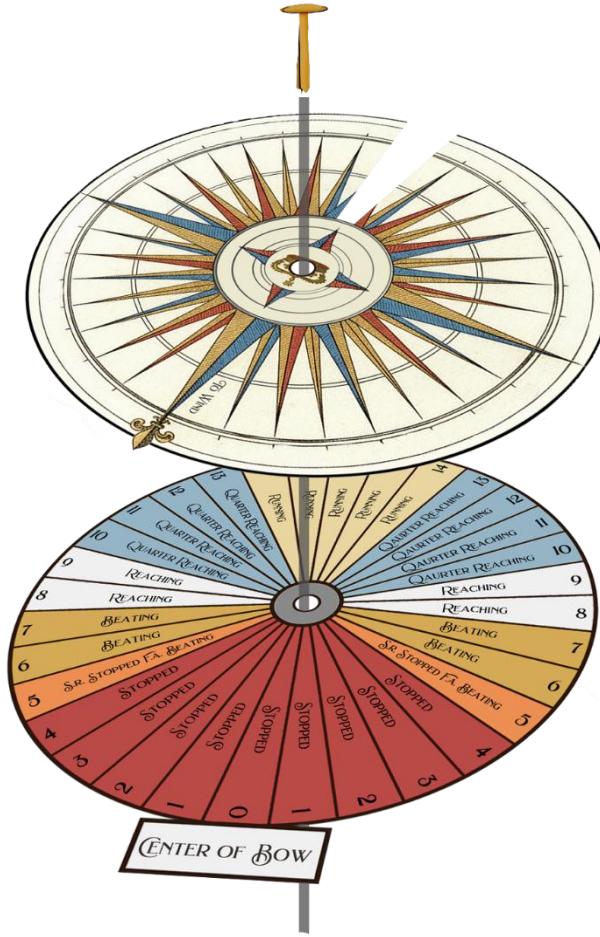
Dice Roll	Direction	Dice Roll	Direction	Dice Roll	Direction
1–3	North	34–36	SE by E	67–69	SW by W
4–6	N by E	37–39	SE	70–72	WSW
7–9	NNE	40–42	SE by S	73–75	W by S
10–12	NE by N	43–45	SSE	76–78	West
13–15	NE	46–48	S by E	79–81	W by N
16–18	NE by E	49–51	South	82–84	WNW
19–21	ENE	52–54	S by W	85–87	NW by W
22–24	E by N	55–57	SSW	88–90	NW
25–27	East	58–60	SW by S	91–93	NW by N
28–30	E by S	61–63	SW by S	94–96	NNW
31–33	ESE	64–66	SSW	97–100	N by W

**C.2.2** Every ten game turns, after checking wind strength (C.1.2), roll for wind direction change:

Dice Roll	Effect
1–40	Wind shifts one point to the left
41–60	No change
61–100	Wind shifts one point to the right

### C.3 Using the Wind Wheel

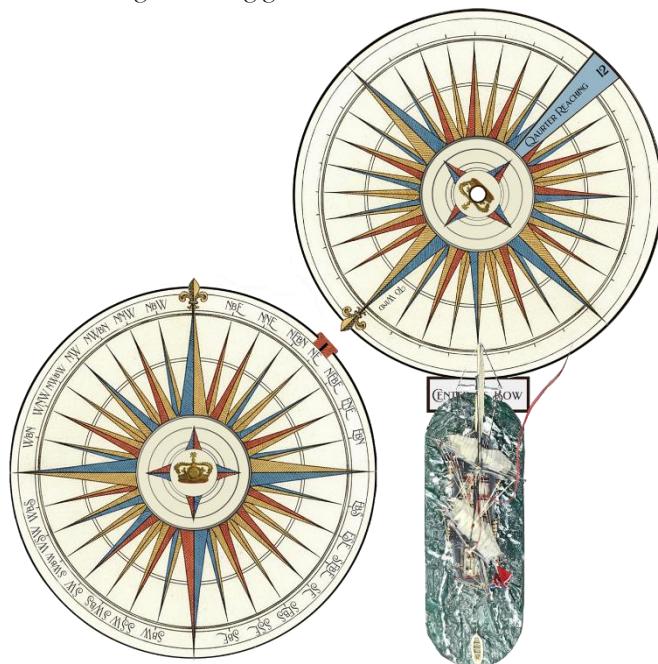
Using the Wind Wheel The Wind Wheel is used to determine a ship's position to the wind, thus informing the controlling player of the ship's speed limitations. The amount of points the ship is away from the wind is also shown in the window as reference for order writing in the immediate future.



**C.3.1** To use the wheel simply place it in front of the ship to be checked so that the centre line of the extended tab on the wheel is centered on the bow of the ship. Be careful not to move the ship! Once the tab is centered, the moving portion of the wheel until the arrow is pointing in the direction the wind is coming from. The most accurate way of doing this is to line up the arrow on the Wind Wheel with the arrow on the Wind Indicator, so that they are pointing directly towards one another. Next, look at the window to read whether your ship is reaching, beating, etc.

**C.3.2** Weather and effects Unless players are engaged in a campaign situation, detailed weather rules should not be needed. Let it suffice to say that if a gale arises, by the wind increasing one level from Fresh Breeze, then unrated ships may not fire at all, while ships with more than one gun deck, such as old 44th raters and up, may not fire the guns on their lower gun decks.

**C.3.3** Two deck ships of fourth rate or above, may not use their largest calibre guns during gale force winds



# D.0 MOVEMENT

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## D.1 Ship Movement

**D.1.1** Ships move according to their rate, their wind conditions, and how much sail they have set. The **Sailing Speed Chart** shows the maximum speed that ships of each rate may move, in millimeters, under fighting sail in relation to their position to the wind. The first box indicates the speed of a vessel with the wind coming on its quarter: 10-13 points off the wind. This is known as "quarter reaching." The second box indicates the speed of a vessel with the wind coming from astern; 14-16 points off the wind. This is called "running." The third box shows a vessel's speed when it is 8-9 points off the wind. This is called "reaching." The fourth box represents the speed of a vessel if the wind is blowing between 6 (5 for fore and aft rigged ships) and 7 points off the bow. This is known as "beating." The fifth box represents the drifting speed of the vessel if it is dismasted or stopped.

**D.1.2** Ships may travel at any speed desired by the controlling player providing they do not exceed the limitations placed on them by wind and damage. Ships may accelerate up to 100% faster than their speed in the previous turn. Ships may decrease their speed at a rate down to 50% of their speed in the previous game turn.

**EXAMPLE:**

A 3rd rate (ship), which is running in a Slight breeze, moves 40 mm in game turn 15. Its previous turn's speed was 20mm. It may now move a maximum of 80mm or a minimum of 20 mm. If the player has planned turns this is deducted from these values.

## D.2 Turning

During the period of time simulated in BEAT TO QUARTERS, compasses were not graduated in degrees. They were divided into 32 points. Turning orders were given to the helmsmen in points; each point being 11.25 degrees.

**D.2.1 Turning Points Per Game turn**

1st rates (100–136 guns): **3 points**

2nd rates (90–98 guns): **4 points**

3rd rates (60–84 guns): **5 points**

4th rates (50–58 guns and razees): **6 points**

4th rates (42–48 guns): **7 points**

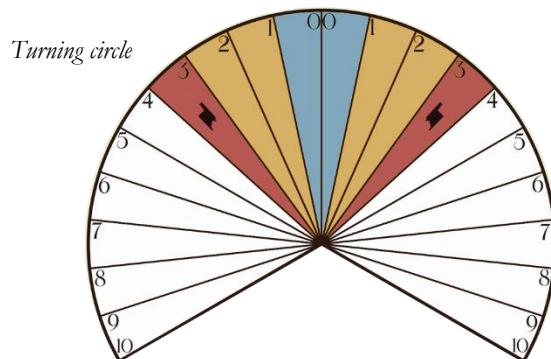
5th rates & Hemenas (28–42 guns): **8 points**

6th rates, sloops, Xebecs, Turumas: **9 points**

Udemas, Brigs and Snows: **9 points**

All others: **10 points**

**Speed Penalty:** Deduct 15mm per point turned, OR 5% of speed per point (optional).



**D.2.2 Executing a Turn.** When turning, center the line at the bottom of the Turning Gauge on the bow of the ship to be turned. Next, place a ruler at the edge of the line for the number of points you wish to turn the ship, then pivot the base of the ship, at the stern, in line with the ruler.



**D.2.3** Turning more than once per game turn. Ships may make two turns during any portion of a movement game turn up to the maximum turning points allowed for the ship in a game turn.

**EXAMPLE:**

A Spanish 5<sup>th</sup> rate frigate may turn 8 points per game turn. The player can use 0 to all 8. And he can turn 2 times. Say he is quarter running in a gentle breeze 389 mm of total movement. Last turn he moves 200. This gives him a range of between 100-389mm for the current turn's movement. He decides to use 6 points of his total 8. His new range for the turn is now 100-299mm. He has deducted  $6 \times 15\text{mm} = 90\text{mm}$ . This can then be executed in 1 or 2 turns. The player decides to make 2 turns. He moves 100mm turns starboard 4 points then moves another 150mm and turns another 2 points to starboard. This is perfectly acceptable. He has moved a total of 250mm which is within the range allowed.

## D.3 Tacking and Wearing

**Tacking** is the act of turning a ship's bows into the wind.

**A.** Ships may not tack if they have suffered any mast section losses; or are in Calm, Slight breeze, or Light breeze wind conditions.

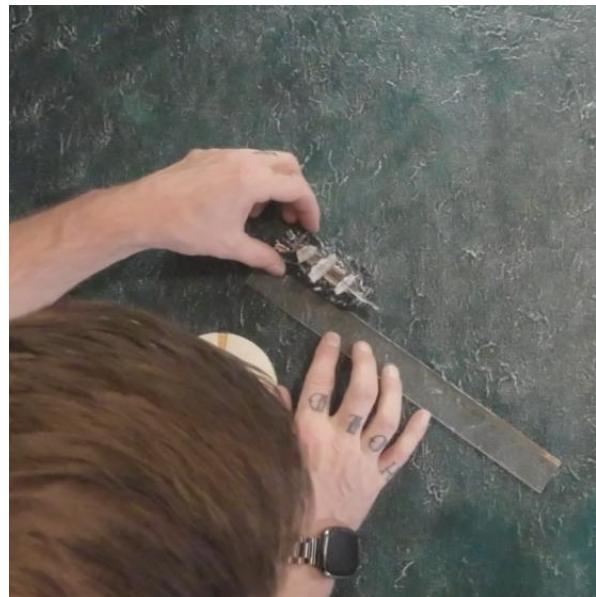
**B.** A ship preparing to tack should have spent its previous game turn beating, that is to say sailing with the wind no more than 7 points and no less than 6 points, for square riggers, or 5 points for fore and aft rigged vessels, on one side.

**C.** On the turn after beating, the tacking vessel should turn its maximum amount of turning points, for one game turn, into the wind. As soon as the ship is off the wind on the opposite tack, it may travel ahead up to one half of its beating speed. This can in some conditions, like if the ship's large and cumbersome, take several turns.

**D.** Once a vessel begins to tack it may not discontinue the tack and fall back on its old tack. It must complete the tack to the new direction.

**Wearing** is simply the act of changing tacks on the wind by moving the wind to the stern. It requires no special moves beyond normal movement.

**D.4** When moving straight ahead move the ship's base along the side of the rule until the front reaches the desired amount of millimetres.



## C.5 Movement Under Full Sail

**C.5.1** All ships begin the game under fighting sail. Players may declare that they are changing to full sail. It takes an experienced crew two game turns to go to full sail from fighting sail, or vice-versa. It takes an inexperienced crew four game turns. When under full sail ships increase their maximum possible speed by 2.5 times the speed listed on the Sailing Speed Charts.

**C.5.2** When a ship loses one full mast (all mast sections constitutes the mast) the ship must put up fighting sails and may not use full sails for the duration of the game. The rigging will not take the strain.

**NOTE:**

*While a ship is under full sail, any hits scored against its sails, are doubled. This is to simulate the added strain on the rigging.*

## C.6 Phased Movement

**C.6.1** During certain wind strengths, and at fairly short range, a 4½ minute time scale movement per turn can actually force two ships to pass each other without being able to fire. For that reason, it is suggested that players move in phases when it seems likely that the ships will be at medium or close range during a game turn.

**C.6.2** Either player can call for Phased Movement, or either may call it off; however, as long as one player wants Phased Movement, it must be used until it is unanimous to return to un-phased movement.

**C.6.3** Phased Movement, once requested, simply divides a ship's movement for the turn into five segments. The back side of the Battle Log is conveniently divided into five segments for this purpose.

**C.6.4** If you are not turning during the game turn, divide your whole movement by five and write the result into each segment's box.

**C.6.5** If your ship is turning, decide which segment you wish to turn in, then place a "T" in that segment and divide the remaining movement by four (remember the turning penalty before dividing).

**C.6.6** When turning in two separate segments, put the letter "T" in two boxes and divide the remaining movement by three.

**C.6.7** Players may not turn in more than two segments of a Phased Move.

**NOTE:**

*Phased Movement a player may distribute any or all of his turning points to any segment in which he is turning.*

70	T2P	70 F	T3P	70
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**EXAMPLE:**

HMS Shannon is running before the wind; the Chesapeake is close enough for the players to decide on phased action. The total movement while running before the wind for the Shannon in a gentle breeze is 308mm (5<sup>th</sup> rate). The Shannon will make 2 turns. 1 in phase 2 (2 points port) and one in phase 3 (3 points port). In the last turn the ship moved 208mm. This gives a movement span after deducting turns ( $5 \times 1.5 = 75$ ) at 104-233mm. The player decides to use 210mm of these. Since there are 3 phases left for movement  $210 / 3 = 70$  mm. That makes 70mm for each of the 3 remaining phases. The player also decides to fire during phase 3. This means that if still under phased action in the next turn the ship can't fire before phase 3 as the ship needs 1 full turn to reload its guns.

**HOUSE RULE: C.6.8 Spilling the wind and heaving to**

A player can decide to spill the wind from his sails during one of the phases, this means that the ship can move a shorter distance than the full allotment for that phase. This new distance will then affect all the following phases in that turn, if the ship does not move shorter than its minimum distance allowed for the turn (last turn movement/2)

## C.7 Phased Turn Sequence

**C.7.1** Once you have written your orders, each side moves simultaneously segment by segment. At the end of each segment the players should write on their logs their intentions to fire. Once this is done, players should declare whether they are firing. If they are, they will be able to show proof of their intentions. This is done to simulate ships taking damage before they are ready to fire; it may not be able to return an effective fire due to loss of guns. Damage received during a segment takes effect at the end of the segment, thus if side “A” withholds fire until a later segment, and side “B” fires during an earlier segment, side “A” could lose guns normally usable if it had declared to fire when side “B” did. Following movement, during a segment, fire takes place and upon completion of all fire, any damage inflicted is immediately effective.

**C.7.2** Players should record which segments they fired their broadsides or chasers, since they may not fire those guns for another five segments.

**C.7.3** All movement and declared fire occurring in each segment must be completed before proceeding to the next segment. A segment is only part of a game turn, and players may only use their given turning points every five segments.

## C.8 Movement Under Oars

**C.8.1** During a calm, certain small craft may use oars or sweeps to row the ship. It will take an experienced crew two turns to prepare their oars. Movement may occur on the third game turn. It will take an inexperienced crew four game turns to prepare their oars. Movement may occur on the fifth game turn. Turning point allotments are the same as when under sail.

**C.8.2** It will take two crewmen to work each oar. If sufficient manpower is not available, speed will be reduced considerably. Once the wind comes up again it will take two game turns and four game turns, respectively, for experienced and inexperienced crews to put the oars back and proceed under sail.

**C.8.3** When under oars, ships may row directly into the wind, since it is calm, without any speed loss, or tacking manoeuvres. Vessels will, however, must deduct 15mm from their possible speed for each point they turn in a game turn.

**C.8.4** Typical ship types with oars could be Xebec type ships, but also gunboats and some types of oared ships of the Baltic navies.

## C.9 Kedging

**C.9.1** In times of calm, or in the case of crippled ships, ships may be moved by kedging. This consists of using two boats, each with a kedge anchor, rowing ahead of the mother ship, dropping the anchor and having the men at the capstan haul it in.

**C.9.2** It takes 2 game turns to launch the boats, and 2 more game turns to prepare the tow. Each boat will have a full crew.

**C.9.3** Kedging may only be performed in less than 30 fathoms.

**C.9.4** Only 4th rates and under may kedge.

**C.9.5** 25% of the crew must man the capstan 28-50 gunners, 40% of the crew on smaller ships must man the capstan.

**C.9.6** Once the operation begins, the ship may move 114mm per game turn while kedging.



BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

## E.0 SAILS AND MASTS

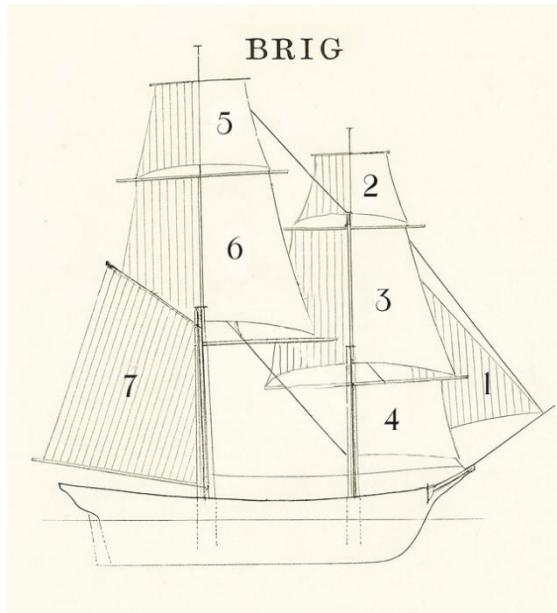
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### E.1 Sail/Mast Diagrams

**E.1.1** Before play begins, players should diagram their ship's sails on a separate sheet of paper or use the provided sail diagrams. Mark out the number of masts and sails. Each sail is attached to a section of the mast

**E.1.2** Each time a ship suffers cumulative damage (to the rigging and sails by aimed fire or by fire on the hull spilling to hit the rigging (see F.10 if using this optional rule) equal to its Sail Value Number (S.V.N.), one sail is lost. Roll a die to determine which sail. If you roll a sail already marked as lost reroll. You will always lose a sail when the (S.V.N.) threshold is reached. Look for the sail plan of historical examples. A brig has 7 sails in these rules see section B.4 for more examples. These are divided as follows 3 on the fore mast, 2 on the mizzen, it also has a jib and a spanker sail.

**E.1.3** Each sail is equal to a fraction of the entire amount of sails carried on a ship. This fraction can always be found by using the number "one" as the numerator, and the total number of sails carried on the ship as the denominator. Using the brig in the diagram example, each sail is worth  $1/7$  of the whole, because there are seven sails. Thus, for every sail which is lost on this ship, it loses  $1/7$  of its total speed capacity.



#### HOUSE RULE: D.1.4 Speed Reduction from Sail Loss

For every sail lost, reduce maximum speed by the formula  $\text{Sail Penalty} = \text{Base Speed} \times (\text{Sails Lost} \div \text{Total Sails})$ . Applied after calculating base speed from wind/point of sail and before turn penalties. This gives straight reduction in 10% sail lost = 10% maximum speed lost

### E.2 Mast Destruction

**E.2.1** Every time a sail is lost, due to the S.V.N. being reached, there is a 35% chance that the mast section which the sail was attached to will be lost as well.

**E.2.2** It should be noted that masts were stepped in sections on sailing vessels; they were not in one piece. For that reason there will be one mast section for each sail.

#### NOTE:

*If a sail which is not the uppermost one on the mast as a whole is lost and the controlling player rolls thirty-five or less for mast damage, not only will that sail and mast be destroyed but all sails and mast sections above it will be lost as well.*

### **HOUSE RULE: E.2.3 Crew loss due to mast damage**

After a mast section is destroyed, roll for crew casualties based on the ship's class:

**Procedure:** Roll randomly within the range for the ship's class. Apply casualties immediately to the crew total.

Ship classification	Crew loss
1st, 2nd, or 3rd Rates	0-24 Resolved by rolling a decimal dice (d100) each 4 increment =1 crew lost where 0-4=0
4th, 5th, or 6th Rates; Large Merchantmen; East Indiamen	0-10 Resolved by rolling 2 D6 where 2=0
All vessels below 6th Rate (Sloops, Brigs, Corvettes, etc.)	0-5 Resolved by rolling a D6 where a 1=0
Very small unrated vessels (Cutter and Schooners etc)	0-3 Resolved by rolling a D6 where 1=0 and rerolling 5-6

**E.2.4** In the event of the loss of all sections on a mast, such as the loss of the fore mainmast, fore topmast, and fore topgallant mast on the Foremast, the mast will fall to leeward (away from the wind.) If the wind is coming from astern, or the ship is heading into the wind, roll a six-sided die to determine where the mast will fall. 1-2 Port, 3-4 Starboard, 5-6 Leeward.

**E.2.5** Until cut free, speed will be reduced by 25% in addition to the loss of speed due to the loss of the mast. The ship's turning point allocation will be cut by  $\frac{1}{2}$  (round off to nearest whole number). If firing through the masts, check the fire rules to see if any fires are caused.

**E.2.6** On the game turn after a ship loses all of its standing masts, it will begin to turn its bow into the wind and move at drifting speed until jury rigged.

**E.2.7** Deduct 50% from all gunnery rolls for a totally dismasted ship even after it is jury rigged.

**E.2.8** When the lower portion of a full mast is hit and the mast is fouled, roll a six sided die to determine how many turns it will take the crew to cut the wreckage free. Add 2 to the die roll for an inexperienced crew. Add one to the die roll for a mast fouling along the centre line instead of port or starboard.

## **E.3 Jury Rigging**

**E.3.1** To make temporary repairs on a vessel which has been dismasted, the ship's boat's mast or a spare spar may be stepped onto the stub of the mast which has lost all of its sections. It will take 1/5 of the original amount of crew time (turns) to accomplish. Once done it will equal the value of one mast.

## F.0 GUNNERY

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### F.1 Firing Long Guns and Carronades

**F.1.1** When a ship is eligible to fire the controlling player may inform his opponent that he is firing. At this time he must state whether he is firing high (against the sails and mast) or low (against the hull or crew). He should also state which type of shot he will use in firing.

**F.1.2** After informing his opponent that he is going to fire, the range may be measured. This is done by placing a ruler to the bow or middle of the side of the firing ship to the closest portion of the target. Upon determining range, he checks the Range Chart for the spread of the calibers of guns on his ship. This will show which gunnery chart to use when firing.

 **HOUSE RULE: F.1.3 It takes 1 turn to change the type of shot**

Switching shot types is not instant you can not fire on the turn you are changing to a new type of shot

### F.2 Eligibility for Firing

**F.2.1** If manned, within range, and in the arc of fire, a ship's guns may be fired once every game turn.

**F.2.2** In Phased Movement, ships fire at a rate of once every five segments.

**F.2.3** Unless at anchor, ships may only fire broadsides from one side of the ship at a time. Stern chasers and bow chasers are exempted from this rule. If the Crew Task rule is in use, disregard this rule.

**F.2.4** Ships may not fire at a target outside of a six-point arc (3 points on either side of the perpendicular), measured from the mainmast of the firing ship when firing broadsides.

**F.2.5** If firing only bow or stern chasers, target ships must be within an eight-point arc (4 points to either side of the perpendicular), measured from the bow or stern of the firing ship's mainmast.

**NOTE: Use the Turning Point Gauge to measure the arcs in F.2.4 and F.2.5.**

**F.2.6** Guns knocked out due to battle damage may not be counted in a broadside, so players should keep a careful record of all guns still functioning on their Battle Logs.

### F.3 Initial Broadsides

**F.3.1** Ships with experienced crews add 50 to their firing dice rolls on their first broadside. This is done to simulate the advantage of a crew holding their fire until at a reasonable range.

**F.3.2** Ships with inexperienced crews do not receive this bonus.



## F.4 Shot Types and Modifiers

Each type of shot has a particular purpose depending on range and target.

Shot Type	Max Range	Modifier	Notes
Round Shot	Extreme	1.0	High or low
Double shot	Close	1.25	High or low Maximum 3 turns in a row.
Dismantling Shot	Medium	1.5	High only (bar shot, chain shot) Maximum 8 available
Grape Shot	Close	1.50	Low only, crew only. Maximum 4 available
Canister Shot	Point Blank	2.50	Low only, crew only. Maximum 4 available

## F.5 Range Charts (in centimeters)

### Long Guns

Guns	Point Blank	Close	Medium	Long*	Extreme*
48#, 42#, 36#	0–2	2.1–23	23.1–41	41.1–63	63.1–150
32#, 30#, 29#, 26#	0–2	2.1–23	23.1–43	43.1–66	66.1–158
24#	0–2	2.1–23	23.1–52	52.1–79	79.1–188
18#	0–2	2.1–25	25.1–54	54.1–82	82.1–195
12#	0–2	2.1–20	20.1–40	40.1–60	60.1–143
9#, 8#, 6#, 4#	0–2	2.1–19	19.1–37	37.1–57	57.1–135
3#	0–2	2.1–8	8.1–21	21.1–40	40.1–75

## Carronades

Guns	Point Blank	Close	Medium	Long*	Extreme*
68#	0–2	2.1–14	14.1–23	23.1–35	35.1–94
42#	0–2	2.1–14	14.1–21	21.1–32	32.1–86
36#, 32#	0–2	2.1–10	10.1–20	20.1–30	30.1–83
24#	0–2	2.1–13	13.1–19	19.1–29	29.1–79
18#	0–2	2.1–14	14.1–18	18.1–27	27.1–75
12#	0–2	2.1–10	10.1–17	17.1–26	26.1–68

\* When firing at long or extreme range all hits score sail damage.

## F.6 Range Modifiers

Range	Modifier
Point Blank	All hits automatic
Close Range	1.0 Plus 13 added to all dice rolls
Medium Range	.54
Long Range	.40
Extreme Range	.07

### F.6.1 Point Blank Range

All hits at Point Blank Range are automatic. This is the only range at which no dice roll is necessary.

however, each time a howitzer scores a hit it may cause a fire.

## F.6.2 Raking

Raking is the act of firing a broadside of ball shot, at a near right angle, into an enemy ship's bow or stern.

If the raking ship is within a six-point arc of the target's bow or stern and within at least Close Range, the rake bonus will be in effect.

Type of Rake	Modifier
Bow Rake (within 6-point arc, Close Range min)	1.25
Stern Rake (within 6-point arc, Close Range min)	1.5



## F.7 Anchored Ships and Land Guns

**F.7.1** Anchored ships receive a bonus of 25 added to all of their firing dice rolls. They fire at the same rate as under sail.

**F.7.2** Land guns, excluding mortars and howitzers, receive a bonus of 30 added to all of their firing dice rolls. They fire at a rate of twice per game turn. When in phases, they may fire every other phase up to two shots per game turn.

**F.7.3** The arc of fire for an anchored ships is the same as it is under sail.

**F.7.4** The arc of fire for all land guns is four points either side of the perpendicular.

**F.7.5** Mortars may only be fired from land emplacements or anchored bomb ketches. They take 5 game turns to reload on anchored ships, and 2 game turns to reload on shore. They have a minimum range 40cm., and a maximum range of 180cm. To fire, designate the target area (a rectangle 2 x 4cm. in area) then roll a pair of percentage dice. If a hit was scored, roll again. 41-100 means the shell explodes. Check the Exploding Damage Chart. If it didn't explode, check the Non-Exploding Damage Chart. If the shell does explode, check the Fire Rules for fires caused.

**F.7.6** Howitzers were shell firing guns. They may only be employed by anchored vessels or land emplacements. Howitzers fire at the same rate as cannons, and their shells do the same damage in points as long guns and caronades of their calibre;

## F.8 Howitzer Ranges

Range	Distance (cm)
Point Blank	0-2
Close Range	2.1-22
Medium Range	22.1-45
Long Range	45.1-68
Extreme Range	68.1-162

BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

## F.9 GUNNERY FIRING PROCEDURE

### Step 1: Finding Hits

Cannon Batteries are calculated independently, if you are using the companion app this is done automatically.

$$D \times R \times Q = \text{Number of hits}$$

D = Dice roll expressed in decimals

R = Range modifier

Q = Quantity of guns

#### EXAMPLE:

A ship fires 10 guns at Close Range. The player rolls 67 on percentage dice.

D = .67, R = 1.0, Q = 10

$$.67 \times 1.0 \times 10 = 6.7 \text{ hits}$$

Plus 13 for Close Range = 19.7 (round to 20 hits)

### Step 2: Finding Damage Points

#### NOTE:

*This is done at the end of the turn or if in phased action the end of the phase*

$$H \times P \times N \times S = \text{Damage Points}$$

H = Number of hits

P = Poundage of guns

N = Nationality Gunnery Factor

S = Shot modifier

#### EXAMPLE:

20 hits from 12-pound guns, British crew (N=1.0), using Round Shot (S=1.0):

$$20 \times 12 \times 1.0 \times 1.0 = 240 \text{ damage points}$$

Make sure to check against culminative Gun Damage Number (G.D.N) and/or Sail value number (S.V.N) for gun loss and sail loss respectively.



## F.9.1 Nationality Gunnery Modifiers

Nation	Period/Type	Modifier
Denmark	1801	0.65
Denmark	1807	0.76
France	Royal Navy 1778-91	0.91
France	Republican Navy 1792-1801	0.38
France	Imperial Navy 1803-1815	0.58
France	Privateers 1792-1801	0.34
France	Privateers 1803-1815	0.59
Great Britain	Royal Navy 1775-1815	1.0
Great Britain	Mail Packets 1812-15	0.44
Hapsburg Empire	All periods	0.42
Kingdom of Italy	1803-1815	0.45
Kingdom of Naples	1806-15	0.40
Kingdom of Sardinia	1792-1801	0.41
Kingdom of Sardinia	1803-1815	0.48
Kingdom of the Two Sicilies	1792-1801	0.40

Kingdom of the Two Sicilies	1803-1815	0.47
Ottoman Empire	1792-1815	0.15
Portugal	1775-1801	0.24
Portugal	1803-15	0.37
Republic of Batavia	1796-1801	0.43
Republic of Batavia	1803-1814	0.49
Republic of Liguria	All periods	0.27
Republic of Venice	1792-1797	0.45
Russia	1788-1801	0.44
Russia	1803-15	0.51
Spain	Navy 1775-83	0.36
Spain	Navy 1792-1801	0.41
Spain	Navy 1803-1815	0.48
Spain	Privateers 1792-1801	0.38
Spain	Privateers 1803-1815	0.44
Sweden	1788-1801	0.46
Sweden	1803-1815	0.54
United Provinces (NL)	1780-1795	1.0

United States	Continental Navy 1775-83	0.5
United States	Navy 1798-1811	0.9
United States	Navy 1812-15	1.0

*Note: Bombay Marine (Honorable East India Company) uses Great Britain Royal Navy modifier (1.0)*



## G.0 MAKING A DAMAGE CHECK

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Every time a ship is hit the controlling player must make a damage check on it. This is done after the friendly and enemy forces have both finished firing all eligible guns. If players are moving in phases it is done immediately after the segment in which one side fires and the other cannot or does not fire during that phase. It simply consists of the following steps:

### G.1 Damage Check Procedure

**G.1.1 Determine Hull Damage** - This is done by adding up all of the damage points in the Hull Damage column, then dividing the total by the Hull Value Number. This will give the percentage of damage the ship has. For every increment of 5% the ship has in hull damage cross out one Surrender Point at the bottom of the Battle Log.

**G.1.2 Determine Crew Damage** - (Only necessary if there is to be a boarding action, or the controlling player needs the information so that the crew can perform a task). This is done by adding up the total damage points of both the Hull Damage column and the Crew Damage column, then dividing this by the Hull Value Number. The result will be the percentage of crewmen who are casualties, and may not be counted as part of the crew for any further purposes. Note: No Surrender Points are lost due to this check. That is already covered by the Hull Damage check.

*Remember: When damage is specifically aimed at crew using Grape Shot or Canister Shot, apply the 1/3 crew damage scale (every 3 damage points = 1 crew casualty) as described in B.3.1.*

**G.1.3 Using the current amount of Hull Damage points, divide the total by the Gunnery Damage Number.** For every increment that comes up a gun is lost, thus players must roll to determine which are knocked out as was explained earlier in this book.

**G.1.4 Determine Sail/Mast Damage** - This is done by totaling the damage points in the Sail Damage column, then dividing them by the Sail Value Number of the ship. For every increment the ship loses a sail. Roll to see which, if any, sails are lost, then allow your opponent to roll to determine if the mast section attached to the sail(s) lost, if any, is also lost. See the Sails and Masts section for more details. If any mast sections are lost, determine the percentage of mast sections lost in relation to the type of vessel. Note: It should be noted that a vessel has one mast section for every sail it carries. The sail being attached to the mast section on a yard. Whenever in doubt over the quantity of mast sections a vessel begins the game with, look up the total sails it carries, in the Sail Value Number section of the rules, and the number will be the same.

**G.1.5 Check for Special Damage** - Roll percentage dice for each Surrender Point lost due to hull damage to determine if rudder or wheel was hit (see F.9.9).

**G.1.6 Check Surrender Status** - Count total Surrender Points lost. If ship reaches zero Surrender Points, it must strike its colors immediately.



# H.0 SURRENDER

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## H.1 Surrender Points

Surrender points are tallied on the Battle Log. They are deducted for losses to hull, sails, masts, wheel, rudder, grappling, and fire. All ships start with 10 Surrender points (SP) unless otherwise stated, see following sections

### H.1.2 Surrender Points and Scenarios

Scenarios may list specific starting Surrender Points for one or both sides.

### H.1.3 Scenario Suggestions for Surrender Points

Special scenario conditions may alter the way Surrender Points are tallied (e.g., privateers, Turkish fleets).

### H.1.4 Surrender Points and Multiple Ship Actions

In multiple ship actions, a ship with zero Surrender Points remaining must immediately strike.

### H.1.5 Single Ship Actions Surrender Chart (P.V.N ratio)

Ship with highest P.V.N / Ship with smallest P.V.N

Ratio (Larger to Smaller Ship)	Surrender Points Lost by Smaller Ship
1.0 to 1.0 or less	0
1.1 to 1.4	3
1.5 to 1.9	4
2.0 to 2.9	5
3.0 to 3.9	6
4.0 to 4.9	7
5.0 to 5.9	8
6.0 to 6.9	9
7.0 and over	10

#### H.1.6 Unsupported Ship Surrender Chart (Multiple Ship Actions)

Ratio (Enemy PVN to Unsupported Ship PVN)	Surrender Points Lost
0.1-1.9 to 1.0	0
2.0 to 2.9	2
3.0 to 6.9	5
7.0 and over	6

#### F.9.7 Turkish and Tripolitan Surrender Points

All Turkish and Tripolitan ships get a bonus of 5 Surrender Points.

#### H.1.8 Surrender Points Lost by Damage and Tactical Factors

Cause	Points Lost
Every 5% Hull Damage	1
Loss of entire mast (cascade or culminative)	1
Loss of wheel	1
Loss of rudder	2
Being grappled or boarded	2
Ship on fire	1

#### **NOTE:**

*Surrender points for mast damage are only lost when an entire mast is destroyed, or when the loss of a lower mast section causes upper sections to cascade and fall. Individual sail or mast section losses do not cause surrender point loss unless they result in complete mast loss.*

### H.1.9 Special Damage

Every time a surrender point is lost due to hull damage the opposing player should roll a pair of percentage dice to determine if the ship has special damage.

Dice Roll	Effect
01	A fire starts <b>HOUSE RULE: Ignore this result if not in use</b>
02–03	Rudder shot away
04–05	Wheel shot away
06–100	No special damage

#### Effects:

**A. Rudder shot away:** Turning points cut to 50% of normal. No tacking allowed. Can only be repaired at a friendly port.

**B. Wheel shot away:** Turning points cut by 25% of normal. No tacking allowed. Repairable at sea: Experienced crew 5 game turns, Inexperienced crew 10 game turns.

## H.2 (Optional) Low Gunfire Causing Sail Damage

- At extreme to medium range, when aiming at the enemy's hull, 5–20% of hits will be high and score against sails/masts. Roll 1d6: 1 = 5%, 2–3 = 10%, 4–5 = 15%, 6 = 20%.
- At close range, 5–10% of the hits will be high. Roll 1d6: 1–4 = 5%, 5–6 = 10%.
- At point-blank range, all hits are low.

#### **HOUSE RULE: H.2.1 Optional calculation for low gunfire hitting high**

When firing at the hull (aiming low), there is a chance that shots will hit the rigging instead due to inaccuracy at range.

At Point Blank range: 0% chance (all shots hit as intended)

At Close range: 0-5% shots hit rigging instead of hull

At Medium range: 0-15% shots hit rigging instead of hull

At Long range: 0-30% shots hit rigging instead of hull

At Extreme range: 0-50% shots hit rigging instead of hull

Procedure: Roll percentage dice once per broadside. The result determines what percentage of your damage goes to rigging instead of hull. If you are using the companion app it automatically does this procedure.



**EXAMPLE:**

HMS Victory fires 20 guns at Close range, scoring 150 damage points aimed at the hull.

Roll percentage dice: 04

Result: 4% of shots go high (within the 0-5% range)

Calculation:  $150 \times 0.04 = 6$  damage points

6 damage goes to rigging, 144 damage goes to hull

Example 2 - Medium Range

French frigate fires broadside at Medium range, scoring 80 damage points aimed at the hull.

Roll percentage dice: 12

Result: 12% of shots go high (within the 0-15% range)

Calculation:  $80 \times 0.12 = 9.6$  (round to 10)

10 damage goes to rigging, 70 damage goes to hull

Example 3 - Long Range

Spanish 74 fires at Long range, scoring 200 damage points aimed at the hull.

Roll percentage dice: 67

Result: 67 is higher than 30, so it's treated as 30% (the maximum for Long range)

Calculation:  $200 \times 0.30 = 60$  damage points

60 damage goes to rigging, 140 damage goes to hull

Example 4 - Extreme Range

British sloop fires at Extreme range, scoring 40 damage points aimed at the hull.

Roll percentage dice: 43

Result: 43% of shots go high (within the 0-50% range)

Calculation:  $40 \times 0.43 = 17.2$  (round to 17)

17 damage goes to rigging, 23 damage goes to hull

# I.0 BOARDING

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## I.1 Coming Into Contact

When ships are in physical contact with each other, or 20mm or less apart they may grapple. If the two ships are heading in the same direction the grapple is automatic just by one side announcing that they are grappling. If the ships are heading in opposite directions, a roll of 1–50 makes for a successful grapple.

**I.1.1** Once grappled, ships remain locked together until one side successfully cuts the grapples or one ship is captured.

## I.2 Boarding Procedure

**I.2.1** After one game turn of contact, boarding may take place. Only one round of melee may be fought each game turn during the boarding phase.

**I.2.2** To conduct a boarding action, both sides count their available crew (total crew minus casualties from damage checks).

**I.2.3** Each side rolls percentage dice and consults the Nationality Boarding Casualty Factor Table for their nation.

## I.3 Nationality Boarding Casualty Factor Table

Dice Roll	United States	Great Britain	France/Holland	Spain/Portugal
76–100	2	3	9	9
56–75	3	6	15	24
26–55	6	9	18	30
1–25	12	12	39	45



Dice Roll	Russia/Sweden/Denmark	Italian States/Islamic Powers/Austria
82–100	6	15
34–81	9	30
25–33	11	39
1–24	18	45

### I.3.1 Nationality Boarding Casualty Factor Modifiers

**British naval vessels under 12 guns:** Deduct 10 from all dice rolls for N.B.C.F. due to lack of marines.

**All nation's vessels:** Add 5 to all dice rolls for N.B.C.F. if the ship is carrying soldiers and they make up at least 10% of the total crew. Add 10 if soldiers make up at least 20% of the total crew.



## I.4 Contested Areas

Boarding actions are fought over contested areas of the ship:

- Bulwarks Starboard
- Bulwarks Port
- 1st ½ of Top Deck
- 2nd ½ of Top Deck

**I.4.1** The attacking side must win control of both bulwarks before they can contest the deck.

**I.4.2** Once both sections of the top deck are controlled by the attacking side, the defending ship has struck and is captured.

## I.5 Cutting Grapples and Clearing Wreckage

**I.5.1** A ship may attempt to cut grapples if it has not been boarded or if the attacker has not gained control of both bulwarks.

**I.5.2** To cut grapples, roll percentage dice:

- 1–30: Grapples cut, ships separate
- 31–100: Grapples remain

**I.5.3** Ships may attempt to cut grapples once per game turn during phase D of the turn sequence.

**NOTE:** The companion app uses the same logic and makes the rolls behind the scenes when you click the different sections that you are fighting over.

# J.0 SHALLOW WATER OPERATIONS

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## J.1 Water Depths

**J.1.1** Before the game begins lay sheets of paper cut in various forms on the playing table to represent shallow water found in coastline operations, if you wish your scenario to take place off of a coast. Some sort of letter or number code should be devised to represent various depths in fathoms. The umpire and the player(s) whose coast is being represented should have a copy of an accurate chart of the area. The enemy player must cast the lead to determine the depth of the water.

**J.1.2** The following chart shows the bare minimum of water which will float various ships.

Ship Type	Minimum Depth (Fathoms)
1st rates	5
2nd rates	4½
3rd rates	4
4th rates	3½
5th rates	3
6th rates	2½
Sloops/Brigs	2
Schooners/Cutters	1½
Gunboats	1

## J.2 Grounding

**J.2.1** If a ship enters water too shallow for its draft, it runs aground.

**J.2.2** A grounded ship may not move under sail. It must be kedged, towed, or wait for the tide to rise (if playing with tides).

**J.2.3** Grounded ships may fire their guns normally but suffer a -10 penalty to all gunnery dice rolls due to their immobile state.

### **J.3 Kedging**

**J.3.1** To kedge a grounded ship, 20% of the crew must be assigned to the task.

**J.3.2** It takes one game turn to launch a boat with the anchor, three game turns to row it out to the full extent of the cable (approximately 100 yards), and one game turn to drop it.

**J.3.3** Once the anchor is set, the ship may attempt to warp itself off the ground. This takes 5 game turns for experienced crews, 10 game turns for inexperienced crews.

**J.3.4** At the end of the kedging time, roll percentage dice: 1–60 the ship is freed, 61–100 the ship remains grounded and must try again.

### **J.4 Casting the Lead**

**J.4.1** Ships may cast the lead to determine water depth. This takes one game turn.

**J.4.2** The umpire or defending player informs the ship's captain of the depth at that location.

**J.4.3** Lead casting may be done once every three game turns while the ship is moving.



## J.5 ANCHORS AND MOORING

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### J.6 Dropping Anchor

J.6.1 A ship may drop anchor at any point during its movement by announcing it is doing so.

J.6.2 The ship comes to a complete stop at the point where anchor is dropped.

J.6.3 20% of the crew must be assigned to anchor operations.

### J.7 Weighing Anchor

J.7.1 To weigh anchor and get underway, orders must be written during the order phase.

J.7.2 It takes experienced crews 3 game turns to weigh anchor, inexperienced crews 5 game turns.

J.7.3 During this time, 20% of the crew must be assigned to the task.

J.7.4 Once anchor is weighed, the ship may move normally on the following turn.

### J.8 Cutting the Cable

J.8.1 In an emergency, a ship may cut its anchor cable to get underway immediately.

J.8.2 This takes one game turn and requires only 5% of the crew.

J.8.3 The anchor is lost and must be replaced at a port.

J.8.4 The ship may begin moving on the following turn.

### J.9 Springs on Cable

J.9.1 An anchored ship may rig springs on its anchor cable to change its facing.

J.9.2 Rigging springs takes 2 game turns for experienced crews, 4 game turns for inexperienced crews.

J.9.3 Once rigged, the ship may pivot up to 180° over the course of 3 game turns.

J.9.4 20% of the crew must be assigned to spring operations.

# K.0 COLLISIONS AND RUNNING AFOUL

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## K.1 Friendly Ships

**K.1.1** When friendly ships collide, both vessels suffer damage. Roll percentage dice for each ship:

- 1–25: Minor collision, 5% hull damage, no other effects
- 26–100: Ships become fouled (see K.1.2)

**K.1.2** Fouled friendly ships:

When ships become fouled, their rigging becomes entangled. The vessels will travel on a course which seems logical (umpire determines or average the two ships' headings). At the end of the next game turn, roll percentage dice:

Timing	Result
End of 1st Contact game turn	26–100 equals free of each other
End of 2nd Contact game turn	Automatically free – No roll needed

## K.2 Belligerent Ships

**K.2.1** Belligerent ships running afoul may only break free of each other by having one side board, gain control of both bulwarks, then use the table in the boarding section for cutting wreckage free.

## K.3 Speed When Afoul

**K.3.1** The speed of the ships when afoul is an average of both ships' speed, and is cut in half for each turn the ships are fouled. Once they are down to drifting speed they will drift downwind at that speed until unfouled. In any case, once ships are unfouled, they may continue on their own as normal.

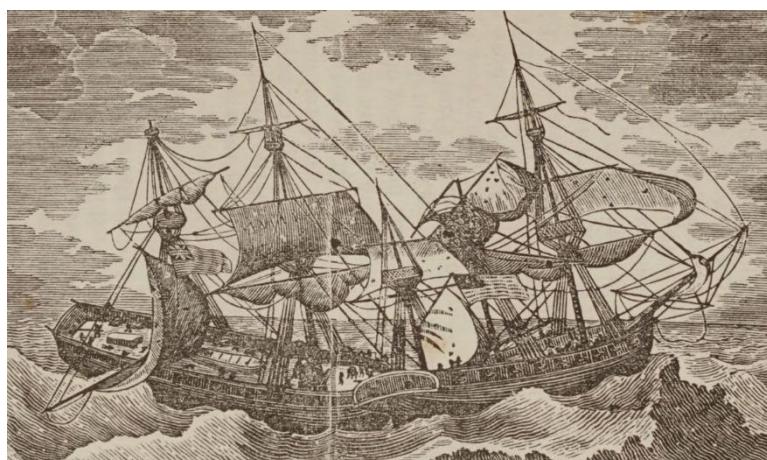
### **HOUSE RULE: K.4 Ramming**

**K.4.1** A ship deliberately ramming an enemy vessel causes damage to both ships.

**K.4.2** The ramming ship suffers 3% hull damage.

**K.4.3** The target ship suffers 8% hull damage.

**K.4.4** Both ships become fouled and must follow the rules for belligerent ships running afoul (K.2.1).



# L.0 FIRE RULES

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## L.1 Setting Fires

**L.1.1** If a controlling player desires to burn his own ship, he must first man the boats (2 game turns), then unload the wounded (one extra game turn for each 15% casualties.) Once this is done, one boat is left alongside for the fire party. The fire party should consist of 20 crewmen. It will take the fire party 2 game turns to place the combustibles, then they must abandon the ship. 4 game turns after they abandon ship the controlling player will roll a pair of percentage dice. 1–60 means the ship explodes. Roll each game turn until the ship blows up.

**L.1.2** For each hit with an exploding shell from a mortar or howitzer, roll to see if a fire starts.

Dice Roll	Result
1–35	Fire starts
36–100	No fire

## L.2 Fighting Fires

**L.2.1** Once a fire has been started, by any means, the crew must fight it.

**L.2.2** Assign 10% of the crew to fight each fire. At the end of each game turn roll percentage dice:

- Experienced crew: 1–50 fire extinguished
- Inexperienced crew: 1–40 fire extinguished

**L.2.3** Players should keep trying to roll every game turn till the beginning of game turn 7, then the crew must abandon ship.

**L.2.4** For each fire currently burning, the ship will be unable to fire one gun from each side of the ship.

*Note: Remember that ships on fire lose 1 Surrender Point as per F.9.8.*

## L.3 Fire Ships

**L.3.1** Due to the long preparation time, fireships must be ready to be employed before the game begins. Generally, small frigates (1440 H.V.N.) or lesser vessels were used as fireships. A minimal crew is needed to sail the vessel. Once the ship is within 50cm. of the target, the crew must abandon the fireship. The helm is tied so that the ship will continue on its last course. Should the wind shift, once the crew evacuates, the fireship will change course away from the wind by  $\frac{1}{2}$  of its full turning capacity. Naturally, if the wind shifts so that the ship would be travelling into the wind the fireship will stop immediately, then, on succeeding game turns, drift to leeward at its drifting speed.

**L.3.2** Should the fireship come into contact (bases touching) with a target, it will automatically be grappled to the vessel. The target ship will roll a six-sided die to see how many fires have started. The crew of the target ship may fight the fire on their own ship, but may not board the fireship. The player controlling the fireship will roll a pair of percentage dice on the 4th and succeeding game turns from the time the crew abandoned ship, to see if the ship explodes. A roll of 1–60 means the fireship explodes.

**L.3.3** When a ship explodes, any ships within 15cm. will catch fire. Roll one percentage die and divide the number by two (rounding down) to see how many fires have started. Add 2 to the die roll for every 25mm under 15cm. that the target was in relation to the exploding ship.

## L.4 HOUSE RULES: DETAILED FIRE MECHANICS

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### HOUSE RULE SECTION

The following rules are optional enhancements to make fire more dynamic and dangerous in gameplay. These house rules add additional depth and tension to the naval combat.

#### L.4.1 Fire Spreading (House Rule)

**L.4.1.1** At the end of each game turn where a fire is burning and has not been extinguished, roll percentage dice for each existing fire to see if it spreads:

Wind Condition	Spread Chance
Calm / Slight Air	1–15 fire spreads
Light Breeze	1–25 fire spreads
Gentle Breeze	1–35 fire spreads
Moderate Breeze	1–45 fire spreads
Fresh Breeze / Gale	1–60 fire spreads

**L.4.1.2** When a fire spreads, it creates a new, separate fire that must also be fought. Each fire must be tracked individually on the Battle Log.

**L.4.1.3** Modifiers to spread chance:

- Ship is grappled or afoul: +10 to spread roll
- Ship has lost 50% or more masts: +15 to spread roll (rigging debris)
- Ship has suffered 40% or more hull damage: +10 to spread roll
- Multiple fires already burning: +5 per additional fire

#### L.4.2 Fire Intensity (House Rule)

**L.4.2.1** Fires now have three intensity levels:

**Minor Fire (1-2 game turns old):** Ship suffers no additional penalties beyond normal fire rules. One gun per side cannot fire.

**Major Fire (3-5 game turns old):** Ship suffers 5% Hull Damage per game turn. Two guns per side cannot fire. All crew tasks take 50% longer. Ship speed reduced by 25%.

**Conflagration (6+ game turns old):** Ship suffers 10% Hull Damage per game turn. No guns may fire. All crew must focus on fighting fire or abandoning ship. Ship speed reduced by 50%.

**L.4.2.2** Track each fire's age separately. If a fire spreads, the new fire starts at age 1.

### **L.4.3 Magazine Explosion Risk (House Rule)**

**L.4.3.1** Each game turn a fire burns, there is a cumulative risk of magazine explosion:

Fire Age	Explosion Risk Per Turn
Game turns 1-3	None
Game turn 4	1–5
Game turn 5	1–10
Game turn 6	1–20
Game turn 7	1–35
Game turn 8+	1–50

**L.4.3.2** If a magazine explosion occurs, the ship is destroyed instantly. All crew aboard are casualties. Ships within 15cm suffer fire and damage as per fireship explosion rules (L.3.3).

**L.4.3.3** Ships may flood their magazines to prevent an explosion. This takes 1 game turn and requires 20% of crew. Once flooded, the ship cannot fire any guns for the remainder of the scenario, but magazine explosion risk is eliminated.

### **L.4.4 Smoke Effects (House Rule)**

**L.4.4.1** Ships with Major Fires or Conflagrations generate heavy smoke.

**L.4.4.2** Gunnery from a ship on fire with Major or Conflagration intensity:

- -20% to all gunnery dice rolls due to smoke interference
- Crew suffers -10% to all task completion rolls

**L.4.4.3** Ships firing through smoke from another ship suffer -10% to gunnery if the burning ship is directly between firer and target.

### **L.4.5 Fire Damage to Rigging (House Rule)**

**L.4.5.1** Each game turn a fire burns, roll 1d6:

- 6: One sail damaged (count as reaching S.V.N. and losing one sail)

**L.4.5.2** For Major Fires, roll 1d6:

- 4-6: One sail damaged (count as reaching S.V.N. and losing one sail)

**L.4.5.3** For Conflagrations, automatically lose one sail per turn, no roll needed.

## L.4.6 Organized Fire Parties (House Rule)

**L.4.6.1** Ships may designate organized fire parties before the game begins or during play (takes 1 game turn to organize). Organized fire parties consist of 15% of crew permanently assigned to fire-fighting duties. These parties receive +10 to fire-fighting rolls but cannot perform any other duties.

**L.4.6.2** Ships with fire pumps (most 3rd rates and above) receive an additional +5 to fire-fighting rolls when parties are assigned.

### NOTE

These house rules significantly increase the danger and complexity of fire in naval combat. They are recommended for experienced players who want added challenge. For introductory games, stick with the standard fire rules (L.1-L.3).



# M.0 CREW ASSIGNMENTS (OPTIONAL RULE)

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## M.1 Experienced vs. Inexperienced Crews

**M.1.1** For purposes of these rules there will only be two types of crews as far as sailing ability: experienced and inexperienced. The regular naval forces of the U.S.A., Great Britain, and the Honorable East India Company (Bombay Marine) are considered to be experienced. All other nationalities are inexperienced, unless they have gained experience in a campaign situation, or the scenario calls for them to be so.

## M.2 Number of Crew Members Required for Various Tasks

Making Full Sail from Battle Sail or Vice-Versa: 30% of crew – 74 gunners and above; 38% of crew – under 74 guns

Weighing Anchor, Kedging, or Using Springs: 20% of crew – all vessels

Prize Crew: Divide the H.V.N. of the prize by 12 and put that number of crewmen to work the vessel.

Fighting Fires: 10% of crew per fire

Clearing Wreckage: 20% of crew

Jury Rigging: 1/5 of original crew time in turns

## M.3 Gun Crews

### M.3.1 Gun Crews Required

Long Guns	Crew	Carronades	Crew
48#, 42#	14	68#c	4
36#–29#	12	42#c–32#c	4
24#	10	24#c	3
18#, 12#	8	18#c	3
9#, 8#	6	12#c	2
6#, 4#	4		
3#–1#	3		

**M.3.2** Players using the optional crew assignment rules must allocate crew to guns before the game begins and record this on their Battle Log.

**M.3.3** Undermanned guns may fire but suffer penalties:

- -25% to hit for guns with 75% crew
- -50% to hit for guns with 50% crew
- Cannot fire with less than 50% crew

## **M.4 Reassigning Crew**

**M.4.1** Crew may be reassigned during the order phase by writing orders to do so.

**M.4.2** It takes one game turn for crew to move from one station to another.

**M.4.3** Crew being reassigned cannot perform any duties during the turn they are moving.

## **M.5 Sailing Crew Requirements**

**M.5.1** To sail a ship at full speed, divide the H.V.N. by 12. This is the minimum crew needed to work the ship.

**M.5.2** Ships may sail with fewer crew but suffer speed penalties:

- 75% sailing crew = 75% speed
- 50% sailing crew = 50% speed
- Below 50% sailing crew = ship cannot make way



# N.0 SHIPS' BOATS

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## N.1 Capabilities of Ships' Boats

- N.1.1** All ships' boats will have a H.V.N. of 10.
- N.1.2** Ships' boats carry 8 oars and have a maximum speed of 153mm.
- N.1.3** The crew of each boat will consist of 10 men. In addition, either 10 passengers, or 5 passengers and one kedge anchor, or one 3# long gun, or one 12#c may also be carried.
- N.1.4** One ships' boat will be destroyed for every mast section that the ship loses.
- N.1.5** It will take 1 game turn to load or unload a kedge anchor or gun.
- N.1.6** It will take 2 game turns to put a boat in the water or hoist it back aboard.
- N.1.7** Enemy guns firing at ships' boats will deduct 25 from their dice rolls.

## N.2 Number of Boats Carried

Russia/Denmark/Sweden	Holland
1st rates — 14	3rd rates — 8
3rd rates — 11	4th rates — 5
4th rates — 7	5th rates — 4
5th rates — 5	6th rates — 3
6th rates — 3	Unrated — 2



United States	France/Venice/Islamic Powers
3rd rates — 13	1st rates — 17
4th rates — 8	3rd rates — 13
5th rates — 6	4th rates — 8
6th rates — 4	5th rates — 6
Unrated — 3	6th rates — 4

Great Britain/Bombay Marine	Spain/Portugal/Naples
1st rates — 15	1st rates — 17
2nd rates — 13	3rd rates — 13
3rd rates — 10	4th rates — 8
4th rates — 6	5th rates — 6
5th rates — 5	6th rates — 4

# O.0 TOWING

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## O.1 Towing Procedure

**O.1.1** In order for one vessel to tow another they must either be touching, or have a small boat pass the tow line.

**O.1.2** It takes 2 game turns to rig a tow, and this can only be done during wind strengths of less than Fresh breeze.

**O.1.3** The towropes will be not more than 50mm in length.

**O.1.4** When ready to tow, the two vessels will move according to the following formula:

X (x) Z equals the maximum  
X & Y movement of each ship.

X equals the H.V.N. of the towing vessel.

Y equals the H.V.N. of the vessel under tow.

Z equals the normal maximum speed of the towing vessel, when not towing.



### EXAMPLE:

H.M.S. Lightning (20), a sloop, is rigged up to tow H.M.S. Ceylon (36), a fifth rate. The wind strength is a Moderate breeze and the ships are running before it. Lightning's maximum (battle sail) speed is 462mm. Its H.V.N. is 862. Ceylon's H.V.N. is 1276. The maximum movement of both vessels would be

862 (x) 462 or, 186 mm (rounded off).

862 & 1276

## O.2 Ships' Boats Towing the Mother Ship

**O.2.1** During a Calm ships' boats may tow the mother ship, but it will take all of the boats on the ship, fully manned, to do so (see Boat Rules). It takes 2 game turns to launch the boats, and 2 game turns to rig the tow. The ship may then proceed at a speed of 90mm per game turn.

## P.0 MISCELLANEOUS RULES

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### P.1 Bow and Stern Chasers Raking

When the target of a bow or stern chaser is an enemy bow or stern, and the target is within at least Close Range, the rake bonus will be in effect. See raking rules for measuring the rake and how much bonus is gained.

### P.2 Russian Surrender

No Russian warship ever surrendered to the Turks during the Napoleonic Wars, or the Russo-Turkish Wars prior to them. To recreate this, when Russians are involved in combat with either Turks or forces of the Barbary States, they will not surrender. They will fight their vessels until they sink, in gunnery actions, and never stop fighting boarding actions till all are casualties. Naturally, this rule does not apply to Russians fighting Europeans. When fighting Europeans, they will surrender as any nationality would. When boarded by Turks or forces of the Barbary States, if Russian crews are forced to retreat to the 2nd half of the top deck, they will continue to fight until they are wiped out.

### P.3 Ships in Line Ahead Formation

Ships in line ahead formation may not travel less than 10cm. behind one another. If they do, the opposing player may challenge the distance between the ships. Upon measuring the distance between the front base of the ship alleged to be following too closely and the rear base of the ship directly in front of it, if it is determined that they are less than 10cm. apart the guilty party must roll a pair of percentage dice. A roll of 1-35 means that the bowsprit of the subject ship behind the subject leading ship will have its bowsprit broken off. In addition to this, the subject leading ship will receive damage equal to half its S.V.N. to simulate collision damage. This is in addition to the complete sail lost on the bowsprit. If 36-100 is rolled, no damage is caused, but said ships must separate to 10cm.

### P.4 Optional Crew Assignment (Optional Rule)

One man is required to work the sails for every 12 Hull Value Numbers a ship has. As long as that amount of men is left to work the ship, it may turn and accomplish crew tasks as per the rules. If there are less men assigned it will take longer to accomplish these tasks.

To find how many men must work the ship divide the Hull Value Number by 12. This is called the Crew Assignment Number (C.A.N.) If the crew you have allotted, from wherever you found data on the ship, is more than the result of your computation you may use the remainder for gun crews. If you don't have enough men to man one broadside, you'll have to take them from the sail force. This will effect the working of the ship. Of course you may man less guns in your broadside to enable you to sail better. You may thus opt to man the guns with  $\frac{1}{2}$ ,  $\frac{1}{3}$ , or  $\frac{1}{4}$  the crews normally needed and fire the guns every other game turn, every third game turn, or

every fourth game turn respectively. It will take one game turn longer for each increment over the C.A.N. you go to accomplish tasks.

#### EXAMPLE:

The British merchant schooner Adler, with a H.V.N. of 210, carries 6.9#s and a total crew of 21 men. Adler is fired by 12 equals 17.5 or 18 (rounded off) men to work the ship properly. That would leave only 3 men for gun crews, or small arms fire. Or, more likely, the controlling player would not work the ship properly. If the controlling player mans his whole broadside properly, he will need 18 men, which leaves 3 men for the ship. Because it takes 18 men to sail, and there are only 3, the Adler would not be able to gybe, or luff, or reef sails, she would only be able to do those tasks accomplished in 1. A British merchant schooner can normally turn 10 points per game turn. This would be reduced to 1.7 per game turn. One broadside would be properly manned, under this arrangement, and could fire their broadside every game turn. If the commander wanted to increase firepower, by firing both small arms, and both broadsides, he would have to do one of two things. In that case only guns properly crew can fire. If the gunnery crews are too small, then they will have to fire every second or third game turn, or, if there is only one man to a crew manned with 7 could fire every three game turns. Overall this rule is a pain, and is strictly optional. If one player wishes to enforce it, he must notify the other players before the game begins.

## P.5 Changing the Time Scale to 1½ Minutes (Optional Rule)

Self styled Hornblowers and Errol Flynn devotees who may want to add more realism to the game, may cut the time scale to 1½ minutes per game turn from the standard 4½ minutes per game turn. This is accomplished by doing the following:

- 1.) Multiply the Hull Value Number of each ship by 1.5.
- 2.) Change the American Nationality Gunnery Modifier to .575.
- 3.) Change the British and Bombay Marine Nationality Gunnery Modifier to .50.
- 4.) The Americans, British, and Bombay Marine may fire every game turn.
- 5.) The Nationality Gunnery Modifiers of all other nations remain the same. Ships of each nation may only fire every other game turn.
- 6.) All speeds are reduced to  $\frac{1}{3}$  of those listed.
- 7.) All turning point capabilities remain the same as in the standard game.
- 8.) All crew tasks take three times longer to perform.
- 9.) Multiply all Nationality Boarding Casualty Factors by three.
- 10.) Ships may not turn more than 50% of their maximum number of turning points in any one movement segment.

Warning: Use of this optional form of the game will make it drag quite a bit. It will also change tactics a bit, but it is close to the "real thing," if you can stand it!

## P.6 Privateers, Pirates, Letters of Marque, Armed & Unarmed Merchantmen

All of the above use the N.C.B.F. and Nationality Gunnery Modifiers of their respective nationalities.

### P.6.1 Restrictions:

- a. Armed and unarmed merchantmen cannot initiate boarding, and can only defend if boarded.
- b. Unarmed merchantman automatically surrender upon being fired upon, being grapple by, or run afoul of armed enemy vessels regardless of support.
- c. The Point Value Number of an unarmed merchantman is Hull Value Number divided by 5.

## P.7 Determining How Well Each Ship Fought (Optional Rule)

Perfectly even scenarios (one (1.0-1.0) single ship actions were extremely rare. If players wish to fight uneven scenarios, they may by using the following formula to determine how much each ship fought, regardless of who won. This formula is referred to as the "System."

1. Total all damage points from the Hull Damage and Sail Damage columns on the Battle Logs. Disregard Crew Damage column.
2. Add up each ship's total broadsides mutually by its respective Nationality Gunnery Modifier, then divide it by the number of guns and carronades it has. Divide the result of this ship by the result for two decimal places, instead of the usual whole number. This is called the Gunnery Factor.
3. Next, divide the Hull Value Number of the ship by the total amount of guns and carronades on the ship. This, rounded off to two decimal places, is the Gunnery Damage Number.
4. Draw two columns on a sheet of paper; one with the name of your ship, and one with the name of the enemy ship.
5. Multiply the Gunnery Factor of your ship times the amount of broadside gun it carries. Place the result in the column under the enemy ship's name. Divide this figure by the enemy's Gunnery Damage Number to determine how many guns he will lose next turn. Now, multiply the enemy's Gunnery Factor times his total amount of broadside guns. Write the result in the column under your ship's name. Next, divide this number by your Gunnery Damage Number to determine how many guns you will lose on the next round.
6. Continue the process until you arrive as near as possible, without going over, the damage points of the ship that surrendered first during the scenario you just fought. If you would go over the total damage of the ship in the 1st round, otherwise stop when under the figure closest to total damage.
7. Once the total damage points of the ship that surrendered are reached, use the same information, in the following formula: A divided by B times C divided by D equals % of how well the ship fought.  
A equals friendly's amount of damage points caused by the "System."  
B equals friendly's actual damage points from the scenario.  
C equals enemy's total damage caused by the "System."  
D equals enemy's amount of damage points caused by the "System."

## P.8 Hull Damage Causing Sinking

When a ship's Hull Damage reaches 80% of its H.V.N. the ship will begin to sink. Roll a pair of percentage dice, disregard reading them as a percentage add their quantity together. This will tell you how many gameturns the ship can stay afloat. Of all the ship place aboard. When the ship reaches 80% the crew must abandon ship, using boats, before the ship sinks.

## P.9 Fleet Engagement Rules

Owing to the fact that the standard rules are intended for ship to ship actions, players should use these rules when more than two or three ships per side are used.

Follow the standard ship to ship rules, while inserting Fleet Engagement Rules where applicable.

Use the Fleet Engagement Battle Log to record data on the ships.

Use the Fleet Engagement Gunnery Rules.

Bow and stern chasers are not used.

Appoint a flagship for each side. Flagships will begin the game with 11 Surrender Points.

Gunnery destruction is accounted for by deducting the Current Hull Loss Percentage from 100%, then using the result as a modifier.

(Example:

After a damage check it is determined that the French 3rd rate Poitiers (74) (H.V.N. 3110) has received 350 points of Hull Damage. The French player divides 350 by 3378 to get 10.34% (rounded off) of Current Hull Loss (from 100%). This is recorded in the fire% Percentage box on the F.E. Battle Log. When he wishes to fire, he will simply deduct the figure from (rounded off) 100%. That way that figure, in this case 21%, at one of the modifiers in his fire Columns)

## P.10 Fleet Engagement Gunnery Tables

### P.10.1 Range (All long guns)

Range	Classification
0 — 2cm.	Point Blank
2.1 — 19cm.	Close
19.1 — 37cm.	Medium
37.1 — 57cm.	Long*
57.1 — 135cm.	Extreme*

### P.10.2 Range (all carronades)

Range	Classification
0 — 2cm.	Point Blank
2.1 — 13cm.	Close
13.1 — 20cm.	Medium
21.1 — 30cm.	Long*
30.1 — 81cm.	Extreme*

### P.10.3 Range Modifiers

Range	Modifier	Notes
Point Blank	—	All hits automatic
Close	1.0	Plus 13 added to all dice rolls
Medium	.54	
Long	.46*	
Extreme	.07*	

### P.10.4 Shot Modifiers

Shot Type	Modifier	Range
Ball	1.0	(any cannon)
Double	1.0	(C. & P.B.)
Grape	1.25	(C. & P.B.)
Dismantling	1.5	(M., L. & E.B.)
Cannister	2.5	(M. & E.B.)
	2.5	(C. & P.B.)

#### P.10.5 Nationality Gunnery Modifiers

Nationality	Modifier
Americans	1.15
British/Bombay Marine	1.0
Dutch	1.0
French	.75
Danes/Swedes	.55
Russians	.50
Spanish/Portugese	.45
Italians/Austrians	.35
All Islamic Powers	.10

#### P.11 Gunnery Instructions

Prior to the scenario start, total up the full broadside weight of each ship's long guns. This is the Long Gun Broadside Weight Number, or LGBWN for short. Place this number in the LGBWN box on the F.E. Battle Log. Next, total up the broadside weight of each ship's carronades, if any. This is the Carronade Broadside Weight Number, or CBWN for short. Place this number in the CBWN box on the F.E. Battle Log.

When ready to fire, measure the range.

Once range is determined, roll a pair of percentage dice and express the result as a decimal. (e.g. 26 equals .26) Use the result of this roll for both the LGBWN HEAVY and CBWN.

Deduct the Current Hull Loss Percentage from 100%. The result is the Gunnery Effectiveness Number, or GEN for short, expressed in decimals.

Multiply the number rolled times the Range Modifier times the Shot Modifier times the Nationality Gunnery Modifier times the Gunnery Effectiveness Number times the Long Gun Broadside Weight Number. Repeat the process for the Carronade Broadside Weight Number. The result added together is the amount of damage points inflicted on the enemy target.



BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

# Q.0 MORTARS AND BOMB VESSELS

## (SEE ALSO F.7)

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### Q.1 Mortar Fire

**Q.1.1** Mortars fire in a high arc and can shoot over obstacles and friendly ships.

**Q.1.2** Mortars may only be fired from anchored or stationary ships.

**Q.1.3** It takes 3 game turns to reload and fire a mortar.

### Q.2 Mortar Range and Accuracy

D100	Effect	D100	Effect	D100	Effect
91-100	Direct hit on target center (t.c.)	61-70	20cm N.W. of t.c.	21-30	30cm East of t.c.
86-90	15cm North. of t.c.	51-60	20cm S.E. of t.c.	11-20	30cm West of t.c.
81-85	15cm South. of t.c.	41-50	20cm S.W. of t.c.	1-10	30cm South of t.c.
71-80	20cm N.E. of t.c.	31-40	30cm North of t.c.		

### Q.3 Mortar Damage

#### Q.3.1 Exploding Shells

Mortar Type	Damage to Hull	Damage to Sails/Masts
13"	300 points	150 points
10"	180 points	90 points
8"	108 points	54 points
5.8"	60 points	30 points
4.6"	30 points	15 points

### **Q.3.2 Non-Exploding Shells**

Mortar Type	Damage to Hull	Damage to Sails/Masts
13"	33 points	16 points
10"	16 points	8 points
8"	9 points	4 points
5.8"	5 points	2 points
4.6"	3 points	1 points

## **Q.4 Shell Explosion**

**Q.4.1** When a mortar shell hits a target, roll percentage dice:

- 1–70: Shell explodes, use exploding damage
- 71–100: Shell fails to explode, use non-exploding damage

**Q.4.2** For each exploding shell hit, also check for fire (see L.1.2).

## **Q.5 Bomb Vessel Limitations**

**Q.5.1** Bomb vessels must anchor to fire their mortars.

**Q.5.2** Bomb vessels carry limited ammunition. Each mortar has 20 rounds. Track expenditure carefully.

**Q.5.3** Bomb vessels are vulnerable while anchored. They typically require escort by conventional warships.

BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

# R.0 TYPICAL NAPOLEONIC ERA WARSHIPS

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## R.1 Great Britain

### R.1.1 Navy ships

Rate	Guns	H.V.N.	Crew	Class	P.V.N.
100	30-32#, 28-24#, 30-18#, 12-12#, 2-32#c, 6-24#c	4578	828	D	2,307,056
100	30-32#, 28-24#, 44-12#, 2-32#c, 6-24#c	4246	828	E	2,361,586
98	28-32#, 60-18#, 10-9#, 2-32#c, 6-18#c	4552	731	F	2,483,116
98	28-32#, 30-18#, 40-12#, 2-32#c, 6-18#c	4242	731	H	2,123,121
98	28-32#, 28-24#, 38-12#, 2-32#c, 6-18#c	3676	731	I	1,692,798
98	26-32#, 28-24#, 18-12#, 2-32#c, 6-18#c	4064	713	K	2,062,480
80	30-32#, 32-24#, 16-9#, 2-32#c, 6-18#c	3696	656	L	1,705,704
74	28-32#, 28-18#, 16-9#, 2-32#c, 6-18#c	3432	636	M	1,429,428
74	28-32#, 30-18#, 16-9#, 2-32#c, 6-18#c	3268	486	O	1,346,416
64	28-24#, 28-18#, 8-9#, 2-24#c	2750	586	P	993,450
64	26-24#, 26-18#, 12-9#, 8-24#c	2088	338	T	486,592
64	26-24#, 22-12#, 6-6#, 6-24#c, 6-12#c	1796	291	V	317,792
50	20-24#, 22-12#, 6-6#, 6-18#c (two decker 4th rate)	1930	271	A	351,260
44	20-18#, 22-12#, 2-6#, 8-9#, 8-32#c	1894	251	C	327,662
38	26-18#, 2-12#, 8-32#c	1778	251	D	222,250
36	26-18#, 10-6#, 8-32#c	1584	241	F	228,096
32	26-18#, 6-6#, 8-24#c	1562	241	G	195,114
32	26-12#, 6-6#, 6-24#c	1196	193	I	64,289
28	22-9#, 4-6#, 6-24#c	1054	172	K	37,487
28	22-9#, 2-6#, 8-18#c	962	132	O	49,134
24	20-9#, 8-12#c	860	120	T	24,750
20	16-6#, 6-12#c (Sloop)	642	120	U	21,186

16	16-6#, 6-12#c (Sloop)	606	120	W	18,180
14	14-6#, 6-12#c (Sloop)	738	120	Y	13,284
18	18-4# (Brig)	528	120	a	8,448
16	16-4# (Brig)	416	120	b	5,824
14	14-4# (Brig)	610	70	d	7,320
8	8-6#, 1-13" mortar, 1-10" mortar (Bomb Ketch)	298	60	i	2,682
12	12-3# (Cutter)	190	20	o	570
4	4-3# (Cutter)				

#### R.1.2 Named Ships

Ship	Guns	H.V.N.	Crew	P.V.N.
Streatham (Ship)	20-18#, 10-18#c	1640	137	
Europe (Ship)	20-18#, 10-18#c	1640	128	
Lord Nelson (Ship)	20-18#, 6-12#	1640	102	
Kent (Ship)	29-12#, 8-9#	1420	100	

#### R.1.3 (Other Armed Merchantmen)

Ship	Guns	H.V.N.	Crew	P.V.N.
Paladin (Ship)	20-12#	560	15	
Arethon (Ship)	8-12#	722	20	
Morgiana (Ship)	18-9#	800	22	
Express (Brig)	11-12#	600	38	
Alder (Schooner)	6-9#	210	21	
Pomona (Brig)	8-12#	600	25	
Acorn (Brig)	14-12#	650	45	
Apollo (Ship)	8-18#	800	25	

#### R.1.4 Privateers (Samples)

Ship	Guns	H.V.N.	Crew	P.V.N.
Thorn & John (Ship)	14-6#	600	100	12,600
Rover (Brig)	14-4#	600	60	8,400

#### R.1.5 Letters of Marque (Samples)

Ship	Guns	H.V.N.	Crew	P.V.N.
Rachel (Brig)	12-9#	600	60	
Boyd (Ship)	2-12#, 2-9#, 6-6#	1300	60	

#### R.1.6 Typical British Armed Merchantmen (East Indiamen)

Ship	Guns	H.V.N.	Crew	P.V.N.
Warren Hastings (Ship)	26-18#, 10-18#c, 4- 12#c	2712	138	
Windham (Ship)	20-18#, 6-9#	1640	110	
United Kingdom (Ship)	20-12#, 6-6#	1640	110	

## R.2 France C. 1793

### R.2.1 Navy ships

Rate	Guns	H.V.N.	Crew	P.V.N.
120	32-36#, 34-24#, 34-12#, 20-8#, 4-36#c	5494	1098	1,969,599
110	30-36#, 32-24#, 32-12#, 16-8#, 4-36#c	5000	1037	1,672,500
80	30-36#, 32-24#, 18-12#, 6-36#c	4446	840	1,284,894
74	28-36#, 30-24#, 16-8#, 4-36#c	3738	690	990,570
74	30-24#, 14-8#, 8-36#c	3278	400	332,052
44	28-18#, 12-8#, 4-36#c	2200	330	203,500
40	26-18#, 12-8#, 4-36#c	2020	320	176,750
38	26-12#, 10-6#, 4-36#c	1902	300	116,022
36	26-12#, 6-6#, 4-36#c	1766	275	103,588
32	24-8#, 2-6#, 6-36#c	1130	230	49,880
24	24-8#, 6-36#c	1110	230	45,650
24	20-8#, 2-6# (Corvette)	1022	200	24,017
20	18-6# (Brig)	664	160	9,960
18	16-6# (Brig)	600	140	7,800
16	16-6# (Lugger)	560	75	7,280
16	6-6# (Xebec)	400	70	1,400
6	3-24#, 2-18#, 1-10" mortar (Mortarboat)	460	50	6,900

### R.2.2 Privateers (Samples)

Ship	Guns	H.V.N.	Crew	P.V.N.
Papillon (Brig)	4-12#, 10-8#	720	160	12,600
Psyche (Ship)	26-12#, 6-6#, 4-36#c	1696	250	98,368
Buonaparte (Brig)	18-8#	584	146	11,680
Raymond (Brig)	18-9#	600	120	15,240
Hardy (Lugger)	18-8#	520	130	10,400
Duguay-Trouin (Ship)	26-12#, 2-9#	1612	403	78,183
Dame-Ambert (Snow)	16-6#	560	140	7,280
La Gloire (Ship)	22-9#	1600	400	43,200
Dame-Ernest (Brig)	16-6#	480	120	6,720
Bloque (Ship)	24-12#	1300	325	42,900
Sans Culotte (Schooner)	8-12#, 4-12#c	324	81	3,346
Confiance (Ship)	30-8#	1470	250	32,340
Aventurest (Brig)	2-12#, 14-4#	340	85	4,590
Heureux (Brig)	12-12#	880	220	32,120
Fleury (Lugger)	16-6#	472	118	6,491
Bellone (Ship)	24-8#, 6-36#c	1286	260	34,079
Betsey (Ship)	12-6#	348	87	3,132
Grand Decide (Ship)	22-8#	880	220	21,120
Renoumee (Schooner)	12-6#	348	87	3,132
Gen. Dupourtier (Ship)	22-6#	784	196	13,328
Furet (Lugger)	10-4#	320	80	1,760
Espiegle (Lugger)	10-4#	320	80	1,760
Republican (Schooner)	1-18#, 4-6#	320	80	1,920
Impreable (Cutter)	12-3#, 2-8#	240	60	1,680

Guerrier (Cutter)	14-4#	176	50	880
Napoleon (Schooner)	1-9#, 2-4#, 2-12#c	200	50	1,100
Ruse (Lugger)	4-8#	280	70	1,260
Atlante (Schooner)	8-3#	260	65	1,430
Revancha (Schooner)	10-4#	216	54	1,188
Vengeur (Lugger)	10-3#	180	45	990
Hirondell (Schooner)	10-4#	200	50	1,100
Desiree (Schooner)	6-4#	184	46	1,012
Epervier (Lugger)	2-2#	100	25	50

### R.3 Spain C. 1796

#### R.3.1 Navy ships

Rate	Guns	H.V.N.	Crew	P.V.N.
136	30-36#, 32-18#, 32-12#, 32-8#, 4-4#	5200	1100	1,053,000
112	30-36#, 32-18#, 32-12#, 18-8#	4914	1000	938,574
80	30-36#, 32-24#, 10-8#, 10-36#c, 6-24#c	4328	850	839,632
80	30-36#, 32-18#, 18-8#	4000	800	752,000
74	58-24#, 16-8#, 10-36#c, 6-24#c	3672	750	537,948
74	28-24#, 30-18#, 16-8#	3400	700	399,500
64	26-24#, 26-18#, 12-8#	2692	600	279,968
40	28-18#, 12-8#	2400	450	126,000
34	26-18#, 8-8#	1880	315	62,040
20	20-8#	1000	150	14,000
14	14-4# (Brig)	600	100	3,000
12	8-8#, 4-4# (Xebec)	400	100	3,000
5	1-36#, 4-4# (Gunboat/Galley)	100	50	450

#### R.3.2 Privateers (Samples)

Ship	Guns	H.V.N.	Crew	P.V.N.
Nueva Constitution (Brig)	6-24#, 2-12#	600	25	
Golden Glove (Schooner)	8-6#	400	50	
Santa Virgin Maria (Brig)	4-6#, 6-4#	600	42	
Nuestra Senora de Los Dolores (Felucca)	1-12#	100	15	
San Jose (Schooner)	1-18# pivot, 4-12#c, 2-4#	300	30	
Buena-Dicha (Lugger)	1-8#	100	26	

## R.4 Russia C. 1792

### R.4.1 Navy ships

Rate	Guns	H.V.N.	Crew	P.V.N.
110	30-42#, 32-36#, 30-24#, 18-12#	4400	850	1,656,600
100	30-42#, 32-36#, 24-18#, 14-12#	4000	800	1,356,000
80	30-42#, 32-24#, 18-12#	3600	750	909,000
74	28-36#, 30-24#, 16-12#	3400	700	734,400
66	26-36#, 28-24#, 12-12#	3000	600	591,000
44	26-24#, 14-8#	2300	350	207,900
40	26-18#, 12-6#	2000	300	166,000
38	24-18#, 12-6#	1900	325	115,900
36	24-12#, 8-6#	1800	300	101,700
32	22-12#, 6-6#	1400	250	53,200
26	22-12#, 4-6#	1200	200	40,800
24	18-12#, 6-6#	1200	200	40,800
22	6-6#, 10-4#, 6-3# (Brig)	1100	175	39,000
22	22-24#c (Brig)	900	162	31,350
20	4-6#, 4-4#, 12-3# (Brig)	600	160	9,450
14	8-4#, 6-3# (Brig)	800	150	17,700
		600	100	6,800

### R.4.2 The following are shallow draught vessels built for the Baltic:

Rate	Guns	H.V.N.	Crew	P.V.N.
38	24-36#, 14-12# (Hemena)	2726	340	3,375
4	2-24# (fore), 2-24# (aft) (Schooner)	1278	186	68,600
4	3-24# (fore), 1-24# (aft) (Galley)	700	108	13,134
2	1-24# (fore), 1-24# (aft)	398	100	11,655
		370	80	5,400

## R.5 Holland C. 1796

### R.5.1 Navy ships

Rate	Guns	H.V.N.	Crew	P.V.N.
74	y	3124	550	946,572
68	26-32#, 26-18#, 16-8#	2720	450	728,960
64	26-24#, 26-18#, 16-8#	2400	450	542,400
56	24-18#, 24-12#, 8-8#	2100	375	308,700
44	26-32#, 18-18# (Razee - 4th rate)	2100	400	588,938
44	28-18#, 16-8#	2714	375	308,700
40	28-12#, 12-8#	1788	300	211,878
36	24-12#, 12-6#	2000	275	174,000
32	24-12#, 6-6#	1480	250	99,900
26	18-8#, 8-6#	1362	220	83,082
24	24-8#, 2-6#	1100	180	39,600
18	18-4# (Brig)	1008	150	38,808
7	3-24#, 4-6# (Gunboat)	730	130	9,855

## R.6 Turkey C. 1792-1807

### R.6.1 Navy ships

Rate	Guns	H.V.N.	Crew	P.V.N.
110	30-36#, 32-24#, 32-12#, 16-8#	5000	1273	295,000
84	30-36#, 30-24#, 22-12#	4446	972	235,638
74	28-36#, 30-24#, 16-8#	3778	800	175,677
50	22-24#, 22-12#, 6-6#	2800	579	57,400
44	2-36#, 8-24#, 20-18#, 20-12#	2600	543	55,900
44	28-18#, 6-8#, 6-18#c	2200	494	33,000
40	26-12#, 8-6#	1400	310	13,140
32	2-18#, 14-6# (Corvette)	800	198	2,000
16				

## R.7 Denmark C. 1801-1808

Rate	Guns	H.V.N.	Crew	P.V.N.
80	30-36#, 32-24#, 22-12#	4642	670	1,125,168
80	30-36#, 30-18#, 16-8#	4020	650	821,240
74	24-24#, 24-12#, 12-8#	2400	400	186,000
64	28-18#, 16-8#	2000	300	99,000
40	26-12#, 10-6#	1400	226	65,100
32	16-12#, 10-6# howitzers (Schooner)	181	80	1,629
8	2-18#, 6-6# howitzers (Gunboat)	104	60	936
8	1-24#, 4-8# howitzers (Gunyawls)	37	40	167
3	1-36#			

## R.8 Sweden C. 1788-1808

Rate	Guns	H.V.N.	Crew	P.V.N.
80	30-42#, 32-36#, 30-24#, 18-12#	4400	850	1,540,400
110	30-42#, 32-30#, 32-18#	4000	800	1,398,000
80	30-36#, 32-24#, 16-12#	3800	750	1,054,500
80	28-36#, 30-24#, 16-12#	3400	680	816,000
58	26-36#, 28-24#, 12-12#	3000	600	657,000
88	26-30#, 18-12#	2400	450	283,500
44	28-24#, 14-8#	2000	300	184,000
38	24-18#, 12-6#	1800	275	115,400
36	24-18#, 12-6#	1400	250	58,200
32	24-12#, 8-6#	1200	200	42,000
28	22-12#, 6-4#			

The following are shallow draught vessels built for the Baltic:

<b>Rate</b>	<b>Type</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
	Hemena	300	50	4,800
	Turuma	320	50	4,800
	Udema	312	40	3,276
	Schooner			
	Pojama			
	Bomb ketch			

### R.9 Portugal C. 1793-1807

<b>Rate</b>	<b>Guns</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
84	30-36#, 32-24#, 18-12#, 10-36#c	4200	719	825,300
84	28-24#, 30-18#, 16-8#, 8-24#c	3400	590	426,700
74	26-24#, 26-18#, 12-8#, 8-24#c	2600	490	240,500
64	20-18#, 22-12#, 2-6#, 8-24#c	2200	150	140,800
36	26-18#, 10-6#	1600	264	92,000
32	26-12#, 6-6#, 8-24#c		215	62,400

### R.10 Venice C. 1792-1814

<b>Rate</b>	<b>Guns</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
76	28-36#, 30-24#, 16-8#	3738	690	173,443
64	26-24#, 26-18#, 12-8#	2682	600	79,952
40	28-18#, 12-8#	2200	330	33,000

### R.11 Naples C. 1792

<b>Rate</b>	<b>Guns</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
74	28-24#, 30-18#, 16-8#	3400	700	113,900
1	1-24#	97	50	109
1	1-13" mortar	97	50	49

### R.12 United States C. 1797-1815

<b>Rate</b>	<b>Guns</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
74	50-32#, 24-32#c (C. 1799-six were planned)	3718	680	2,121,119
74	63-32#, 24-32#c (C. 1814)	4500	800	3,105,000
74	30-24#, 22-32#c (C. 1797)	3132	470	700,816
44	30-24#, 20-42#c (C. 1797)	3066	430	1,005,648
44	28-18#, 20-32#c (C. 1797)	2556	340	305,772

38	26-18#, 20-32#c (C. 1797)	2260	340	511,890
36	40-32#, 6-18# (C. 1799)	1700	328	365,500
36	26-18#, 20-32#c (C. 1799)	1400	328	169,400
32	26-12#, 12-9# (C. 1799)	1000	220	94,870
28	24-12#, 4-6# (C. 1799)	1308	230	121,644
28	24-12#, 6-6# (C. 1799)	984	200	88,068
24	26-12# (C. 1799)	1120	200	103,040
22	20-32#c, 2-18# (C. 1813) (Sloop)	770	200	40,040
20	20-9# (C. 1799)	900	140	72,450
18	16-32#c, 2-12# (C. 1805) (Sloop)	596	125	36,952
18	16-24#c, 2-12# (C. 1803) (Brig)			
18	18-6# (C. 1798) (Brig)			
14	10-6#, 4-4# (C. 1798) (Brig)	400	104	
14	12-12#c, 3-9# (C. 1803) (Schooner)	350	104	12,400
12	12-18#c, 2-9# (C. 1803) (Schooner)	460	111	7,926
12	12-6# (C. 1799) (Schooner)	450	111	13,091
7	10-9#, 1-13" mortar, & 2-24#c or 2-8" mortars (Bomb)	370	105	19,320
1	1-24# (C. 1804 - Used at Tripoli)	278	80	5,535
1	1-13" mortar (C. 1804 - Used at Tripoli)	91	35	9,174
		97	40	1,274
				49

### R.13 Bombay Marine C. 1780-1809

Rate	Guns	H.V.N.	Crew	P.V.N.
56	?		7	7
38	?			
22	20-32#c, 4-18# (Sloop)	1278	340	68,600
14	12-18#c, 2-12# (Brig)	700	186	13,134
10	10-18#c, 4-9# (Brig)	398	108	11,655
10	10-6# (Snow)	370	100	5,400
10	10-12#c (Brig)	320	80	4,800
7	7-12#c (Pattamar)	300	50	3,276
		312	40	840

**(Prizes in Service)**

Ship	Guns	H.V.N.	Crew	P.V.N.
(Ship) Swift (20)				
(Brig) Les Freres Unis (16)				
(Brig) Star (?)				
(?) Assaye (?)				
(Schooner) Alert (14)				

Plus small craft and pattamars armed.

**R.14 Austria C. 1793**

Rate	Guns	H.V.N.	Crew	P.V.N.
14	14-4# (Brig)	600	100	

**R.15 Barbary States C. 1797-1816**

Rate	Guns	H.V.N.	Crew	P.V.N.
46	? (Algerine frigate C. 1816)	?	436	?
32	32-9# (U.S. built Algerine frigate C. 1797)	?	275	?
20	20-4# (U.S. built Algerine schooner C. 1797)	1078	155	7,546
18	18-6# (U.S. built Algerine brig C. 1797)	340	75	680
28	18-9#, 4-6#, 4-4# (Tripolitan flagship C. 1801)	574	125	1,681
14	14-4# (Tripolitan polacca C. 1801)	1100	260	1,435
18	18-4# (U.S. built Algerine schooner C. 1797)	360	100	5,565
10	10-4# (Swedish built Tripolitan brig C. 1801)	?	?	?
4	? (Tripolitan galley C. 1801)	?	100	?
4	4-4# (Tripolitan ketch)	?	100	?
		128	40	64

**R.16 Miscellaneous Powers C. 1775-1820**

**A. Joasmi Pirates (Oman Coast)**

Type	Guns	H.V.N.	Crew
Baghalah	(6-10)-9#	400-600	200-300
Dhow	(4-10)-9#	300-500	100-200
Batil	3-6#	110-170	100-130

**B. Persian Empire C. 1775**

Type	Guns	H.V.N.	Crew	P.V.N.
Galivat	10-6#	426	100	639

**C. Sangarian Pirates (N.W. Coast of India) C. 1797**

Type	Guns	H.V.N.	Crew	P.V.N.
Gulivat	1-9# (fore), 1-6# (aft)	140	67	74

**D. Magindanao Pirates (S. China Sea) C. 1806**

Type	Guns	H.V.N.	Crew
Proa	1-8# or 1-6# (fore)	70	60-80

**R.17 Vessels with Oars**

British\*

Type	Speed	# of Oars
Sloops	117mm	20
Brigs, Snows	90mm	20
Schooners	117mm	20
Bomb ketches	117mm	16
Cutters	171mm	16
Gunboats	225mm	12

\*Bomb ketches, cutters, gunboats, gunyaws, gunsloops, galleys, double oar.

**France/Turkey/Venice**

Type	Speed	# of Oars
Corvettes	117mm	20
Brigs	117mm	20
Schooners	90mm	16
Luggers	135mm	16
Xebecs	180mm	20
Bomb ketches	117mm	16
Cutters	171mm	12
Gunboats	225mm	16

**Spain/Naples**

Type	Speed	# of Oars
Corvettes	117mm	20
Brigs	117mm	20
Xebecs	180mm	20
Galleys	279mm	30
Gunboats	153mm	22
Bomb ketches	117mm	16

**U.S.A.**

Type	Speed	# of Oars
(16 gun) Sloop	117mm	20
Brig	117mm	20
Schooner	135mm	20
Bomb ketch	90mm	16
Gondola	225mm	16
Trig. sloop	135mm	20
Gunboat	153mm	22

**Holland**

Type	Speed	# of Oars
Brig	117mm	20
Gunboat	144mm	16

### **Sweden/Denmark**

Type	Speed	# of Oars
Brig	117mm	20
Gunsloop	279mm	30
Gunyawl	189mm	22
Kaik (Danish)	255mm	32
Turuma	231mm	38
Hemena	202mm	40
Udema	216mm	36
Schooner	117mm	16
Pojama	189mm	32
Bomb ketch	117mm	16

### **Russia**

Type	Speed	# of Oars
Brig	117mm	20
Gunsloop	279mm	30
Gunyawl	189mm	28
Galley	333mm	44
Kaik	153mm	22
Hemena	202mm	40
Xebec	90mm	20
Schooner	117mm	16
Doublesloop	180mm	20
Bomb ketch	117mm	16

### **Islamic Powers**

Type	Speed	# of Oars
Brig	117mm	20
Gunboat	189mm	28
Galley	225mm	28
Polacre	117mm	20
Schooner	117mm	16
Sangardo	117mm	20
Baghalah	225mm	20
Dhow	117mm	20
Galivat	225mm	16
Proa	225mm	16
Batil	225mm	16

BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

# S.O ORDERS OF BATTLE

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## S.1 Great Britain C. 1793

Rate	Class
100- 2	D
100- 3	E
98- 1	H
90- 3	I
80- 1	K
74- 3	M
74- 4	N
74-54	O
64-30	P
50-12	T
44-18	V
38- 7	A
36- 9	C
36- 4	D
32- 2	G
32-38	H
28-23	I
24- 6	K
20- 6	O
Sloops 16- 8	T
Sloops 16- 8	U
Sloops 14- 8	W
Brigs 18- 2	Y
Brigs 16- 5	a
Brigs 14- 9	b
Bombs 8- 2	d
12 gun cutters 12- 6	i
4 gun cutters 4- 1	o

## S.2 France C. 1792

Rate
120- 3
110- 5
80-10
74-67
64- 1
40-18
38- 2
36-56
32- 2
Unrated -47
Bombs - 7

17.21 France C. Jan., 1793

Rate
120- 3
110- 5
80-10
74-64
44- 1
40-14
38- 2
36-48
32- 3
28-11

Others not listed

## S.3 Spain C. 1702

Rate
112-12
96- 2
80- 6
74-42
64- 8
60- 3
54- 1
42- 1
40- 6
34-41
30- 1
28- 1
26- 2
22- 2
20- 6
Xebecs -12
18 gun Brigs -11
16 gun Brigs - 8
14 gun Brigs -10
6 gun Urea -13
16 gun Packet - 5
14 gun Lugger - 1
14 gun Galley - 1
10 gun Galley - 4
8 gun Galley - 2
3 gun Galley - 2
Bombs - 3
(1 mortar, 6 guns)

## S.4 Russia

### S.4.1 Black Sea Fleet C. 1792

Rate
84- 1
74- 1
66- 6
62- 1
50- 5
46- 1
46-12
34- 1
34- 2
32- 3
24- 1
Bombs - 3
(12 guns each)

Sloops - 7
Gunboats -42

### S.4.2 Circ. 1797

Baltic Fleet
Ships of the line -45

Other vessels- 345
Black Sea Fleet

Ships of the line -15
Other vessels- 100

### S.4.3 Circ. 1801

Total Fleet
Ships of the line -61
Frigates, sloops, and brigs -59

Smaller craft- 118
Baltic Fleet

1st rates - 4
74 gunners -16
Frigates & Sloops -14

**S.5 Holland C. 1796**

Rate  
74-10  
54-63-1  
Frigates & below -78

**S.6 Turkey C. 1787**

Rate  
Ships of the line -26  
Frigates -13  
Xebecs -34  
Galleys -19  
Bombs - 4

A. Circ. 1806

Rate  
Ships of the line -15  
Frigates -13  
Corvettes -18  
Smaller vessels -100

**S.7 Denmark C. 1801**

Rate  
Serviceable ships of the line -10  
Unserviceable ships of the line -13  
Frigates, sloops & brigs -17  
Smaller vessels -33

**S.8 Sweden****S.8.1 C. 1789**

Rate  
74- 1  
70- 7  
64-21  
40-12  
36- 2  
32- 1  
26- 1  
24- 7  
Galleys -28  
Gunboats -30

**S.8.2 C. 1801**

Rate  
Ships of the line -18  
Frigates, sloops, and brigs -13  
Small vessels -26

**S.8.3 C. 1808**

Rate  
Ships of the line -12  
Frigates - 8  
Small vessels -190

**S.9 Portugal C. 1807**

Rate  
84- 1  
74- 6  
64- 4  
44- 1  
36- 1  
32- 1  
Brigs-30  
Misc. frigates & corvettes - 5

**S.10 Venice C. 1792**

Rate  
74- 3  
70- 1  
64- 2  
40- 5  
6th rates - 3  
Cutters - 3  
Schooners - 3  
Xebecs - 2  
Galleys - 9  
Gunboats - 8  
Bombs - 2

**S.11 Naples C. 1796**

Rate  
74- 4  
Gunboats & Bombs -74  
(The entire Neopolitan Navy  
consisted of 102 vessels mounted  
with 1,818 guns with 8,000  
personnel.)

**S.12 United States****S.12.1 C. 1800**

Rate  
44- 3  
36- 5  
32- 1  
28- 4  
24- 5  
20- 6  
Sloop 18- 2  
Brigs 18- 2  
Schooners 14- 5  
Schooners 12- 6  
Cutter 10- 1

**S.12.2 C. 1803**

Rate  
44- 3  
36- 5  
32- 1  
28- 4  
20- 2  
Brig 18- 1  
Brig 16- 1

**S.12.3 C. 1813**

Rate  
44- 3  
38- 2  
36- 2  
32- 3  
28- 1  
24- 2  
20- 2  
Sloops 18- 4  
Brigs 14-16-14  
Schooners 1-12 35  
Bombs - 5

### S.13 Bombay Marine

#### S.13.1 C. 1782

Type	Rate	Qty.
Sloop	24	- 2
Sloop	14	- 3
Snow	8	- 1
Galivat	5-8	-12
Cutter	-	- 2
Schooner	-	- 2
Bomb	-	- 2
Personnel C. 1802		
Officers	- 69	
Midshipmen	- 37	
Men - (approx.)	- 1,000	

#### S.13.2 C. 1802

Type	Rate	Qty
4th rate	56	1
5th rate	38	1
Sloop	22	1
Snow	18	1
Sloop	16	2
Brig	14	2
Snow	14	4
Ketch	14	2
Brig	10	1
Snow	10	1
(Prizes in Service)		
(Ship) Swift (20)		
(Brig) Les Freres Unis (16)		
(Brig) Star (?)		
(?) Assaye (?)		
(Schooner) Alert (14)		

Plus small craft and pattamars armed.

### S.14 Austria C. 1792

A few 14 gun brigs, some gunboats, and bombs.  
Naval personnel - under 1,000

### S.15 Barbary States

#### S.15.1 Tripoli C. 1803

Rate	
Flagship	28- 1
Polaccas	14- 2
Brig	14- 1
Brig	10- 1
Galleys	2
Gunboats	9
Ketch	4- 1

Guns in the town and forts - 115

Total garrison - 25,000

#### S.15.2 Algerine Fleet C. 1786

9 Xebecs
10 Galleys (8-36 guns/largest - 400 men)
<b>C. 1816</b>
44- 4
24-30 - 5 (Corvettes)
Gunboats and Bombs -35

Guns in forts - 200 (32#, 24#, 18#)

Total garrison - 40,000

#### S.15.3 Moroccan Navy C. 1799

20 ships/none larger than 20 guns

#### S.15.4 Tunis C. 1799

94 vessels with 928 guns

Naval Personnel - 8,000

#### S.15.5 Joasmi Pirates C. 1809

63 - Large vessels (Bahalahs & Dhows)

813 - Smaller vessels (Batils, etc.)

19,000 men

#### S.15.6 Sangarian Pirates C. 1797

Composed of forces from four petty Indian states: Aramra, Pitfoota, Gomte, and Beyt.

30 - Baghalas, Galivats, and Batils

2,000 men.

#### S.15.7 Magindanao Pirates C. 1806

Attacked in groups up to 40 Proas.

#### NOTE

The following are considered to be Islamic Powers and will use the appropriate Nationality Gunnery Modifier and Nationality Boarding Casualty Factor: Turkey, Tripoli, Morocco, Tunis, Algiers, Joasmi Pirates, Sangarian Pirates, Magindanao Pirates, Persian Empire, and all Indian states whether Islamic or not.

BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

# T.0 SCENARIOS OF ACTUAL ENGAGEMENTS

## NOTE

Players should remember to deduct Surrender Points for ratio differences before the battles are fought.

### T.1 Scenario 1

H.M.S. Espoir (Brig) British, 14-6#/600 H.V.N./crew  
80/9,030 P.V.N.  
Vs.  
Ligorn (6th rate) (Spanish) pirate, 12-18#, 4-12#, 10-  
6#/1170  
H.V.N./crew 197/9,477 P.V.N.  
Ratio 1.0-1.0

### T.2 Scenario 2

Dame de Milan (4th (5th rate) French, 26-18#, 20-  
8#/2200 H.V.N./crew  
350/188,870 P.V.N.  
Vs.  
H.M.S. Cleopatra (32) (5th rate) British, 26-12#, 2-6#, 10-  
24#/c/1562  
H.V.N./crew 241/98,420 P.V.N.  
Ratio 1.1 (French) - 1.0 (British)

### T.3 Scenario 3

H.M.S. Alert (Brig) British, 16-32#c, 2-6#/770  
H.V.N./crew 113/49,280  
P.V.N.  
Vs.  
U.S.S. Argus (Brig) American, 18-24#c, 2-12#/632  
H.V.N./crew 125/  
43,608 P.V.N.  
Ratio 1.1 (British) - 1.0 (American)

### T.4 Scenario 4

U.S.S. Wasp (Sloop) American, 16-32#c, 2-12#/900  
H.V.N./crew 140/  
72,450 P.V.N.  
Vs.  
H.M.S. Frolic (Brig) British, 16-32#c, 2-6#, 1-12#c (pivot  
gun)/934  
H.V.N./crew 104/63,979 P.V.N.  
Ratio 1.1 (American) - 1.0 (British)

### T.5 Scenario 5

U.S. Constellation (36) (5th rate) American, 28-18#, 12-  
12#, 10-24#/c/ 2556  
H.V.N./crew 340/305,772 P.V.N.  
Vs.  
Vengeance (40) (5th rate) French, 28-18#, 16-12#, 8-  
42#/c/2360 H.V.N./  
crew 350/280,368 P.V.N.  
Ratio 2.0 (American) - 1.0 (French)

### T.6 Scenario 6 The Battle of Lake Champlain

American  
U.S.S. Saratoga (6th rate) 8-24#, 6-42#c, 12-32#c/1468  
H.V.N./crew 240/  
215,046 P.V.N.  
U.S.S. Eagle (Brig) 8-18#, 12-32#c/1000 H.V.N./crew  
150/96,600 P.V.N.  
U.S.S. Ticonderoga (Schooner) 8-12#, 4-18#, 5-32#c/700  
H.V.N./crew  
112/49,910 P.V.N.  
U.S.S. Preble (Sloop\*) 7-9#/160 H.V.N./crew 30/2,898  
P.V.N.  
Vs.  
British  
H.M.S. Confiance (5th rate) 30-24#, 6-32#c, 1-24#/2400  
H.V.N./crew 325/  
345,000 P.V.N.  
H.M.S. Linnet (Brig) 16-12#/700 H.V.N./crew  
125/33,600 P.V.N.  
H.M.S. Chub (Sloop\*) 10-18#c/270 H.V.N./crew  
24/3,376 P.V.N.  
H.M.S. Finch (Sloop\*) 7-18#c, 4-6#/220 H.V.N./crew 30  
4,785 P.V.N.  
\*Sloop here refers to Colonial Trading Sloops.  
Ratio 1.5 (British) - 1.0 (American)

Note: The Americans also had 10 gunboats, while the British had 12. Their inclusion would not change the ratio of the scenario.  
Special Instructions: The Americans have 60 minutes to meet the British in the open. Following the standard rules, or may elect to begin the game at anchor. If the latter is chosen the British player may construct shore batteries for the gunboats and decide where his forces will be anchored. The wind in the first blows caller from the North or South normally.

## T.7 "What If?" Scenarios

### "El Supremo Conquistadore' Scenario

H.M.S. Lydia (36) (5th rate) British, 26-18#, 2-12#, 8-9#, 8-32#c/1902

H.V.N./crew 251/97,046 P.V.N.

Vs.

Natividad (50) (4th rate) Spanish rebel, 24-24#, 24-12#, 4-18#/2320

H.V.N./crew 463/190,008 P.V.N.

Ratio 1.7 (British) - 1.0 (Rebels)

Special Instructions: Natividad will not strike its flag due to gunnery. She must be sunk or boarded, thus Surrender Points mean nothing to her.

### 18.72 What If No. 2

Commerca de Poitiers (74) (3rd rate) French, 28-36#, 30-24#, 16-8#, 4-36#c/

3738 H.V.N./crew 690/990,944 P.V.N.

Vs.

U.S.S. Constitution (44) (4th rate) American, 30-24#, 22-32#c/3152

H.V.N./crew 470/971,446 P.V.N.

Ratio 1.0 - 1.0

### Bonus Scenario No. 1: Privateer Hunting

French

Buonaparte (18) (Brig) 18-8#/584 H.V.N./crew 146/11,680 P.V.N.

Sans Culotte (12) (Schooner) 8-12#, 4#c/324

H.V.N./crew 81/3,346 P.V.M.

Vs.

Bombay Marine

Nutilus (16) (Brig) 10-18#, 4-9#/370 H.V.N./crew 100/11,655 P.V.N.

Fly (10) (Snow) 10-6#/360 H.V.N./crew 80/5,400 P.V.N.

### Bonus Scenario No. 2: Hypothetical

British

H.M.S. Ajax (74) 28-32#, 28-18#, 18-9#, 2-32#c, 6-18#c/3268 H.V.N./crew

586/1,346,416 P.V.N.

H.M.S. Telford (64) 26-24#, 26-18#, 12-9#, 8-24#c/2770

H.V.N./crew 485/

897,480 P.V.N.

H.M.S. Sloop (36) 26-18#, 2-12#, 8-9#, 8-32#c/1894

H.V.N./crew

251/327,662 P.V.N.

Vs.

Americans

U.S.S. United States (44) 30-24#, 20-42#c/3066

H.V.N./crew 470/

1,005,648 P.V.N.

U.S.S. Constitution (44) 30-24#, 22-32#c/3152

H.V.N./crew 470/970,816

P.V.N.

U.S.S. Chesapeake (36) 28-18#, 20-32#c/2488

H.V.N./crew 340/589,656

P.V.N.

## T.8 Creating Your Own Scenarios

Players may create their own scenarios by using the data from the lists of typical ships. By comparing Point Value Numbers of ships perfectly even gunnery actions may be planned. Players may also wish to create mini-campaigns by using the data from the Orders of Battle lists in conjunction with the typical ship lists. Ideas may also be sparked by reading some of the fine books available on the period, or by studying some of the references listed in the bibliography.

# U.0 AMERICAN REVOLUTION RULES

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Follow the standard game rules, which are for the Napoleonic period, but substitute the rules found in this section when fighting in the period of 1775-1783.

## U.1 Nationality Gunnery Modifiers

- 1.0 British/ Bombay Marine/Dutch
- .98 French/American
- .90 Danish/Swedish
- .45 Russian
- .35 Spanish
- .10 Italian/Islamic

## U.2 Nationality Casualty Boarding Factors

British (Napoleonic) — used by: British, Dutch, French, Americans. All others — Use their own as per their Napoleonic N.C.B.F.

## U.3 Experienced Crews

British, Bombay Marine, and Dutch. All others — Inexperienced.

## U.4 Typical American Revolutionary War Ships

### U.4.1 Great Britain

Rate	Guns	H.V.N.	Crew	P.V.N.
100	30-32#, 28-24 #, 42-12#, 10-12# <sup>c</sup>	4324	875	2,373,876
80	30-32#, 32-24#, 18-12#, 8-12# <sup>c</sup>	3952	719	1,968,096
74	28-32#, 28-18#, 18-9#, 8-12# <sup>c</sup>	3238	590	1,303,295
64	26-24#, 26-18#, 12-9#, 8-12# <sup>c</sup>	2762	490	861,744
60	26-24#, 26-12#, 8-6#, 8-12# <sup>c</sup>	2484	450	640,872
50	22-24#, 22-12#, 6-6#, 6-12# <sup>c</sup>	2106	343	454,896
44	20-18#, 20-12#, 4-6#, 10-18# <sup>c</sup>	1772	294	316,302
32	26-12#, 6-6#, 8-18# <sup>c</sup>	1358	215	142,403
28	24-9#, 4-3#, 6-18# <sup>c</sup>	1254	195	88,407
16	16-4#, 8-12# <sup>c</sup> (Sloop)	674	125	18,872
14	14-4#, 8-12# <sup>c</sup> (Sloop)	542	80	14,092
10	10-4# (Cutter)	410	60	4,100

### U.4.2 France

Rate	Guns	H.V.N.	Crew	P.V.N.
74	28-36#, 30-18#, 16-8#	3556	645	1,459,738
64	22-24#, 20-18#, 22-6#	2960	589	740,000
40	26-18#, 4-8#	2126	360	355,644
36	26-12#, 10-6#	1566	301	165,996
32	26-12#, 6-6#	1472	282	125,856
28	18-12#, 10-6#	1162	197	95,865

#### U.4.3 Spain

<b>Rate</b>	<b>Guns</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
34	26-12#, 8-6#	1904	295	99,975
28	28-12#	1484	271	43,778

#### U.4.4 America

<b>Rate</b>	<b>Guns</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
74	30-18#, 32-12#, 14-9#	3904	?	1,020,730
42	6-18#, 28-12#, 8-9# (Old East Indiaman)	1800	347	227,000
40	28-36#, 12-12# (S. Carolina Navy)	2372	450	668,904
36	28-12#, 8-9#	1660	300	166,000
32	24-12#, 10-6#	1524	235	130,302
28	26-12#, 2-6#	1362	200	108,279
24	24-9# (Old merchantman)	880	220	46,640
24	5-12#, 19-9#, 2-6#, 4-4#	1028	?	65,278
24	22-12#, 6-6#	1126	200	82,761
20		616	140	16,324
18	18-6# (Sloop)	456	84	7,524
16	14-4#, 2-6# (Brig)	378	80	5,103
14	14-4# (Brig)			

#### U.4.5 Holland

<b>Rate</b>	<b>Guns</b>	<b>H.V.N.</b>	<b>Crew</b>	<b>P.V.N.</b>
36	26-12#, 10-6#	1480	230	137,640

## U.5 Orders of Battle (American revolution)

### U.5.1 America

<b>1775</b>	<b>1776</b>	<b>1777</b>
24-1	32-5	32-4
20-1	28-5	28-4
16-1	24-4	24-2
14-2	20-1	20-1
12-1	18-1	18-2
10-3	16-2	14-1
8-2	14-3	12-1
4-1	12-2	10-4
	10-3	
	8-2	
	4-1	

<b>1778</b>	<b>1779</b>	<b>1780</b>
36-1	42-1	36-1
32-3	36-1	32-2
28-3	32-2	28-1
24-2	28-3	20-1
18-2	24-1	18-2
14-1	20-1	12-1
12-1	18-2	
10-2	12-1	

<b>1781</b>	<b>1782</b>	<b>1783</b>
36-1	74-1	36-1
32-2	36-1	32-2
18-1	32-2	20-1
12-1	20-2	18-1
	18-1	12-1
	12-1	

### U5.2 Miscellaneous

#### Britain C. 1775

<b>Rate</b>	<b>Count</b>
1st rate	3
2nd rate	13
86	1
80	3
74	57
70	2
64	34
60	5
50	17
44	4
36	3
32	35
28	24
24	7
22/20	12
18/8	38
Bombs	2
Fireship	1

**France C. 1778**

Rate	Count
104	6
84	2
80	7
74	48
64	27
50	10
Misc.	?

**Spain C. 1779**

Rate	Count
1st rate	2
86	2
80	7
74	1
70	48
64	11
60	4
50	2
Misc.	?

**Sweden C. 1778**

Rate	Count
94	1
90	1
70	6
66	1
60	5
40	2
36	6
32	4
28	2
Misc.	?

**Russia C. 1778**

Rate	Count
76	3
66	9
64	7
50	3
42	3
38	1
32	4
26	1
24	2
20	1
Misc.	?

**Denmark C. 1778**

Rate	Count
74	1
70	5
64	3
60	3
50	2
46	1
40	1
36	6
32	1
30	1
28	1
Misc.	?

**Holland C. 1779**

Rate	Count
76	1
74	4
68	5
64	9
60	5
56	6
50	6
Misc.	?

## U.6 Scenarios (American revolution)

### U.6.1 Number 1

H.M.S. Glasgow (28) British, 24-9#, 4-3#, 4-18#c/1206  
H.V.N./crew  
194/79,596 P.V.N.  
Vs.  
Lisorne (28) French, 18-12#, 10-6#/1162 H.V.N./crew  
197/78,435 P.V.N.  
Ratio 1.0-1.0

### U.6.2 Number 2

Ranger (Sloop) American, 18-6#/616 H.V.N./crew  
135/16,324 P.V.N.  
Vs.  
H.M.S. Drake (Sloop) British, 20-4#/770 H.V.N./crew  
154/15,400 P.V.N.  
Ratio 1.1 (American) - 1.0 (British)

### U.6.3 Number 3

Concorde (32) French, 26-12#, 6-6#/1472 H.V.N./crew  
200/125,856  
P.V.N.  
Vs.  
H.M.S. Minerve (32) British, 26-12#, 6-6#/1328  
H.V.N./crew 217/115,536  
P.V.N.  
Ratio 1.1 (French) - 1.0 (British)

### U.6.4 Number 3.1415

Bonhomme Richard (42) American, 6-18#, 28-12#, 8-9#/1800 H.V.N./crew  
380/227,000 P.V.N.  
Vs.  
H.M.S. Serapis (44) British, 20-18#, 20-12#, 8-6#/1772  
H.V.N./crew 264/  
287,064 P.V.N.  
Ratio 1.3 (British) - 1.0 (American)

Note: For this battle the Americans are experienced. The Bonhomme Richard is always to be considered "supported," even though no other friendly ship is in the scenario. The Serapis is Not supported. The Americans start one fire aboard their ship for every two 18# guns they fire; maximum fires possible — three.

### U.6.5 Number 4

Briel (36) Dutch, 26-12#, 10-6#/1480 H.V.N./crew  
230/137,640 P.V.N.  
Vs.  
H.M.S. Crescent (28) British, 24-9#, 4-3#, 4-18#c/1222  
H.V.N./crew 200/  
86,151 P.V.N.  
Ratio 1.6 (Dutch) - 1.0 (British)

### U.6.6 Number 5

Junon (32) French, 26-12#, 6-6#/1472 H.V.N./crew  
194/117,024 P.V.N.  
Vs.  
H.M.S. Fox (28) British, 24-9#, 4#/1190 H.V.N./crew  
198/67,830  
P.V.N.  
Ratio 1.7 (French) - 1.0 (British)

## V.0 TYPES OF SHIPS

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- Baghalah** — two masted lateen-rigged vessel with high poop deck and long pointed bow; usually of 200-300 tons. Found in the Persian Gulf area.
- Bark** — three masted square-rigged vessel with its foremast square-rigged, and its mizzen mast fore and aft-rigged.
- Batil** — two masted lateen-rigged vessel of 55-85 tons native to India and the Oman Coast.
- Bomb Ketch** — two masted ketch-rigged vessel with masts stepped well aft. Carried one or two mortars plus guns.
- Brig** — two masted square-rigged vessel.
- Colonial Trading Sloop** — one masted fore and aft-rigged vessel of about 80 tons used as a merchantman in colonial America.
- Corvette** — one masted square-rigged vessel just below a 6th rate in ranking. Corvette is French for sloop.
- Cutter** — one masted fore and aft-rigged vessel.
- Dhow** — two masted lateen-rigged vessel with a long overhang forward, an open waist, and a high poop deck. Arab or East Indian.
- Fourth Rate** — three masted square-rigged vessel carrying 44-58 guns. Between a frigate and a ship of the line in size.
- Frigate** — three masted square-rigged vessel carrying 28-42 guns rated as a 5th rate.
- Galley** — two masted lateen-rigged shallow draft vessel equipped with oars.
- Galivat** — two masted fore and aft-rigged large sailing rowboat of not more than 70 tons.
- Gondola** — one masted square-rigged, heavy flat-bottomed boat, with an open waist.
- Grab** — two or three-masted square-rigged vessel of shoal draft and considerable beam.
- Gunboat** — one masted fore and aft-rigged boat equipped with one or two guns for coastal defense.
- Gunyawls** — two masted lateen-rigged gunboat of Swedish design.
- Hemena** — shallow draft frigate of Swedish design.
- Lugger** — three masted fore and aft-rigged vessel of about 300 tons used for fishing and privateering.
- Pattamar** — two masted lateen-rigged vessel of 60-200 tons with a pointed bow and open waist. East Indian.
- Polacca** — three masted lateen rigged Mediterranean vessel comparable to a corvette or sloop.
- Proa** — two masted Indonesian boat propelled by sails or oars.
- Razée** — three masted square-rigged vessel converted from a ship of the line by cutting down one gun deck.
- Schooner** — two masted fore and aft-rigged vessel of 60-300 tons.
- Ship of the Line** — three masted square-rigged vessel. 1st rates had 100-138 guns. 2nd rates 90-98 guns, and 3rd rates 60-84 guns.
- Sixth Rate** — three masted square-rigged vessel of 20-28 guns.
- Sloop** — three masted square-rigged vessel of 14-18 guns.
- Snow** — A Brig with a try-sail mast attached to the forward side behind the mainmast.
- Trabacolo** — two masted fore and aft-rigged Adriatic lugger.
- Udema** — three masted bark-rigged shallow draft vessel, without top-gallant mast, of Swedish design.
- Xebec** — three masted lateen-rigged vessel, of Mediterranean extraction, having a long overhanging bow and stern.

BEAT TO QUARTERS (1/1200 & 1/700 SCALE)

# W.O SAILING SPEED CHARTS

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## 1st and 2nd Rates

Wind Strength	QR	Ru	RN	B	D
Slight breeze	90	73	68	46	18
Light breeze	181	145	135	90	36
Gentle breeze	247	200	186	124	50
Moderate breeze	318	253	240	158	64
Fresh breeze	453	363	340	228	90
Gale	272	218	206	136	55

## 3rd Rates

Wind Strength	QR	Ru	RN	B	D
Slight breeze	101	80	77	50	21
Light breeze	203	163	152	101	40
Gentle breeze	272	218	206	136	55
Moderate breeze	340	272	256	172	68
Fresh breeze	475	380	358	240	95
Gale	272	218	206	136	55

## 4th Rates

Wind Strength	QR	Ru	RN	B	D
Slight breeze	114	90	86	58	24
Light breeze	228	181	173	117	46
Gentle breeze	296	235	223	149	61
Moderate breeze	363	290	272	181	73
Fresh breeze	499	395	374	250	105
Gale	250	200	189	127	50

## American 4th Rates

Wind Strength	QR	Ru	RN	B	D
Slight breeze	136	108	104	70	28
Light breeze	274	218	206	139	56
Gentle breeze	354	283	266	179	71
Moderate breeze	434	346	326	218	87
Fresh breeze	599	474	450	299	126
Gale	299	238	226	152	61

QR = Quarter Reaching

Ru = Running

RN = Reaching

B = Beating

D = Drifting

## 5th and 6th Rates

Wind Strength	QR	Ru	RN	B	D
Slight breeze	225	178	172	114	47
Light breeze	268	212	201	136	56
Gentle breeze	389	308	295	198	81
Moderate breeze	485	383	367	247	102
Fresh breeze	586	462	443	299	124
Gale	268	212	201	136	56

## Sloops (Corvettes) and Xebecs

Wind Strength	QR	Ru	RN	B	D
Slight breeze	207	164	157	105	43
Light breeze	268	212	201	136	56
Gentle breeze	451	357	340	229	95
Moderate breeze	586	462	441	299	124
Fresh breeze	537	425	406	272	112
Gale	244	192	184	124	50

## Brigs, Snows, Pojamas, Gondolas, Ketches, Galleys, Polaccas

Wind Strength	QR	Ru	RN	B	D
Slight breeze	104	81	78	53	22
Light breeze	138	110	104	70	30
Gentle breeze	229	181	173	114	49
Moderate breeze	320	250	240	160	70
Fresh breeze	456	364	342	229	92
Gale	92	73	70	47	18

## Trabacolos, Baghalahs, Dhows, Schooners, Luggers, Cutters, Gunboats, Galivats, Proas, Batils, Colonial Trade Sloops

Wind Strength	QR	Ru	RN	B	D
Slight breeze	244	192	183	124	50
Light breeze	327	259	247	167	70
Gentle breeze	389	308	295	198	81
Moderate breeze	451	357	340	229	95
Fresh breeze	537	425	406	274	112
Gale	207	164	157	105	44

QR = Quarter Reaching

Ru = Running

RN = Reaching

B = Beating

D = Drifting

Note: All speeds are in millimeters per game turn for 1/1200 scale. For 1/700 scale, multiply all values by 1.714.

## X.0 ABBREVIATIONS AND FORMULAS

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### Abbreviations

**S.V.N.** = Sail Value Number  
**P.V.N.** = Point Value Number  
**Q** = Number of Guns  
**R** = Range Modifier  
**H** = Hits Scored  
**S** = Shot Modifier  
**N** = Nationality Gunnery Modifier  
**C** = Caliber  
**D.P.** = Damage Points  
**H.V.N.** = Hull Value Number  
**G.D.N.** = Gunnery Damage Number  
**c** = Carronades  
**#** = Pounds  
**D** = Dice (as decimal)  
**QR** = Quarter Reaching  
**Ru** = Running  
**RN** = Reaching  
**B** = Beating  
**t.c.** = Target Center

### Key Formulas

$$\begin{aligned} \text{H.V.N.} &= \text{Tonnage} \times 2 \\ \text{G.D.N.} &= \text{H.V.N.} \div \text{Total Guns} \\ \text{S.V.N.} &= \text{H.V.N.} \div (\text{Number of Sails} \times 1.3) \\ &\quad \text{Finding Hits:} \\ &\quad D \times R \times Q = \text{Number of hits} \\ &\quad \text{Finding Damage:} \\ &\quad H \times P \times N \times S = \text{Damage Points} \\ &\quad \text{Hull Damage \%:} \\ &\quad \text{Total Hull Damage} \div \text{H.V.N.} = \text{Percentage} \\ &\quad \text{Crew Damage \%:} \\ &\quad (\text{Hull Damage} + \text{Crew Damage}) \div \text{H.V.N.} = \text{Percentage} \\ &\quad \text{Crew Loss from Anti-Personnel Shot:} \\ &\quad \text{Damage Points} \div 3 = \text{Crew Casualties} \end{aligned}$$

# Y.0 THE COMPANION APP

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## Y.0 USING THE COMPANION APP

### Y.1 What the Companion App Does

The Beat to Quarters Companion App eliminates all dice rolling and table consultation during gameplay. Every calculation—from ship statistics to gunnery damage to crew management—is handled instantly. The app tracks everything: hull damage, sail loss, crew casualties, gun availability, fires, boarding actions, and surrender conditions. You make the tactical decisions; the app does the mathematics.

The app runs entirely in your web browser and works offline after initial load. All game data is stored locally on your device.

### Y.2 Accessing the Companion App

Visit: <https://linusnapoleonicshipyard.github.io/Btq-companion-v8/>

The app loads directly in your browser. Bookmark this page for quick access during gaming sessions. The app works on desktop computers, tablets, and mobile devices using any modern web browser (Chrome, Firefox, Safari, or Edge).

For offline play, open the app once while connected to the internet. Your browser will cache it, allowing you to use it without internet access afterward.

### Y.3 Quick Start Guide

1. Open the app and set wind conditions (strength and direction) at the top of the screen
2. Click the "Ships" tab and create your first ship using the form
3. Add guns to your ship (broadside batteries, bow chasers, stern chasers)
4. Click "Add Ship to Fleet" when complete
5. Repeat for all ships in the game
6. Use other tabs (Movement, Gunnery, Damage, etc.) during play
7. Click "Next Turn" to advance the turn counter

### Y.4 Top Navigation Controls

#### Y.4.1 Turn Counter

Displays the current turn number. Click "Next Turn" to advance. The turn counter helps track timed events like fire spread, wind changes, and boarding actions.

#### Y.4.2 Wind Controls

Set wind strength using the dropdown menu: Slight Breeze, Light Breeze, Gentle Breeze, Moderate Breeze, Fresh Breeze, or Gale. Select wind direction from the 32-point compass. Wind affects movement speed and available points of sail. Heavy weather (Fresh Breeze or Gale) closes lower deck gunports on two-decker ships (1st-4th Rates).

#### Y.4.3 Game Management Buttons

- New Game: Clears all ships and resets the game state. Use this to start a fresh scenario.
- Restart Turn: Returns the game to the previous turn state. Useful for correcting mistakes or trying different tactical options.
- Export: Downloads a JSON file containing the current game state. Save this file to continue the battle later or share with other players.
- Import: Loads a previously exported game file. All ships, damage, and settings are restored exactly as saved.

#### Y.4.4 Enhanced Fire System Toggle

Check this box to enable the Enhanced Fire system (v8 rule L.4). When enabled, fires have intensity levels, can spread between decks, and create magazine explosion risks after four turns. When disabled, fires use the standard rules from the base game.

## **Y.5 Ships Tab**

The Ships tab is where you create and manage your fleet.

### **Y.5.1 Creating a Ship**

Fill in the ship creation form:

- Ship Name: Enter any name (HMS Victory, L'Orient, USS Constitution, etc.)
- Ship Class: Select from eight classes: 1st/2nd Rates, 3rd Rates, 4th Rates, American 4th Rates, 5th/6th Rates, Frigates, Large Brigs/Sloops, Cutters/Brigs
- Tonnage: Ship displacement in tons (e.g., 2200 for a 1st Rate, 1000 for a 3rd Rate)
- Sails: Number of sails from 1-10. The app automatically arranges them by mast based on count.
- Crew: Total crew size (e.g., 850 for a 1st Rate, 200 for a frigate)
- Quality: Experienced or Inexperienced (affects gunnery performance)
- Nationality: Select from dozens of historical navies with era-specific modifiers

### **Y.5.2 Adding Guns**

Broadside Guns: Click "Add" to add gun groups. For each group, select gun type (32# Long, 24# Long, 18# Long, etc.) and count. The app automatically splits guns into Port and Starboard batteries. Add multiple gun groups for mixed-caliber armament.

Bow Chasers: Select gun type and count for forward-firing guns

Stern Chasers: Select gun type and count for aft-firing guns

Example: HMS Victory might have 30× 32# Long, 28× 24# Long, 30× 12# Long for broadside batteries, plus 2× 12# Long bow chasers and 2× 12# Long stern chasers.

When complete, click "Add Ship to Fleet". The app calculates all derived statistics automatically: HVN, SVN, GDN, LGBWN, CBWN, and PVN.

### **Y.5.3 Viewing Your Fleet**

All created ships appear below the creation form. Each ship displays:

- Ship name, class, and nationality
- Current hull points vs. total HVN
- Remaining crew
- Operational guns by arc (Port/Starboard/Bow/Stern)
- Active sails and lost sails
- Active fires (if any)
- Surrender points
- Current status (Active, Struck, Captured, or Sunk)

### **Y.5.4 Ship Actions**

Each ship card has action buttons:

- Grapple: Connect two ships for boarding actions. Select target ship and click "Grapple". Grappled ships cannot separate until one is captured or destroyed.
- Ungrapple: Separate grappled ships
- Strike Colors: Ship surrenders (SP reduced to zero, status becomes "Struck")
- Delete Ship: Remove ship from the game entirely

## **Y.6 Movement Tab**

The Movement tab calculates ship speed based on wind, point of sail, and damage.

### **Y.6.1 Using the Movement Calculator**

For each ship that moves:

1. Select the ship from the dropdown
2. Choose point of sail: Quarter Reach (QR), Running (Ru), Reaching (RN), Broad Reach (BR), or Close Hauled (CH)
3. The app displays Base Speed for that ship class, wind strength, and point of sail
4. If sails are lost, the app shows Max Speed After Damage (automatically reduced)

## 5. The Allowed Range shows your speed limits for this turn based on last turn's movement

The app enforces acceleration/deceleration limits automatically. You cannot move faster than 200% of your previous turn speed or slower than 50%.

### **Y.6.2 Sail Damage Impact**

When sails are lost to damage, movement speed reduces proportionally. The app shows exactly which sails are lost and the percentage penalty. For example, losing 3 of 10 sails reduces speed by 30%.

### **Y.6.3 Crew Assignment Penalties**

If using the optional Crew Management system (see Y.10), insufficient sailing crew reduces movement speed in 10% increments. If zero crew is assigned to sailing, the ship can only drift at reduced speed.

### **Y.6.4 Last Move Tracking**

The app tracks each ship's Last Move distance. This determines acceleration/deceleration limits for the next turn. Update this field manually if needed (though the app usually handles it automatically).

## **Y.7 Gunnery Tab**

The Gunnery tab resolves all firing actions.

### **Y.7.1 Firing Your Guns**

To fire a broadside:

1. Select Firing Ship from dropdown
2. Select Target Ship
3. Choose Firing Arc: Port, Starboard, Bow, or Stern
4. Measure distance between ships on your table and enter Distance (cm)
5. Select Shot Type:
  - Round Shot: Standard solid shot for hull damage
  - Chain Shot: Two balls connected by chain, destroys rigging
  - Grape Shot: Anti-personnel shot for crew casualties
6. Select Aim Point:
  - Hull: Target the ship's structure (standard aim)
  - Rigging: Target masts and sails
  - Crew: Target personnel on deck (only available at close range)
7. Check "Initial Broadside" if this is the ship's first shot of the game (+50 to roll)
8. Click "Fire"

### **Y.7.2 Reading Results**

After clicking Fire, a result panel displays:

- Total Hits: Number of shots that connected
- Total Damage: Hull damage inflicted
- Crew Casualties: If aiming at crew (1 casualty per 3 damage points - house rule)
- Gun Details: Breakdown by gun caliber showing how many hits each type scored

Damage is applied automatically to the target ship. Check the Damage tab to see updated hull points, gun losses, and surrender points.

### **Y.7.3 Heavy Weather Warning**

In Fresh Breeze or Gale conditions, two-decker ships (1st-4th Rates) cannot open lower deck gunports. The app displays a warning banner and shows which heavy guns are unavailable. Only upper deck guns can fire in heavy weather.

### **Y.7.4 Magazine Flooding Effect**

If a ship's magazine is flooded (see Y.8), ALL guns on that ship are disabled. The gunnery calculator will not allow a flooded ship to fire.

## **Y.8 Damage Tab**

The Damage tab shows overall ship condition and handles fire management.

### **Y.8.1 Damage Status Display**

Each ship shows:

- Hull: Remaining hull integrity as percentage (green > 50%, yellow 20-50%, red < 20%)
- Sails: Number of operational sails remaining
- Crew: Current crew count after casualties
- Surrender Points (SP): Current SP value (green  $\geq 7$ , yellow 4-6, red < 4, white flag = 0)
- Point Value Number (PVN): Shown if PVN Surrender Penalties are enabled

### **Y.8.2 Fire Management**

Ships with active fires show a fire panel displaying:

- Number of fires
- Age of each fire (turn counter)
- Intensity level (if Enhanced Fire system enabled)
- Explosion risk warning (fires aged 4+ turns)

Fire Management Buttons:

- Fire Party: Toggle organized fire fighting crew. When active, improves fire control chances but reduces available combat crew.
- Flood Magazine: Floods the ship's magazine to prevent explosion. This disables ALL guns permanently but eliminates explosion risk. Use this as a last resort when fires threaten the powder magazine.

### **Y.8.3 Critical Damage Indicators**

Ships with critical hits show warnings for:

- Rudder Lost: Ship cannot steer (movement penalties)
- Wheel Lost: Ship steering damaged (movement penalties)
- Magazine Flooded: All guns disabled (shown in blue)

### **Y.8.4 PVN Surrender Penalties**

Check the box at top of Damage tab to enable PVN-based surrender rules (6.95 & 6.96). When enabled, ships lose surrender points based on size ratios when fighting alone or unsupported. This makes single ships more likely to strike when heavily outnumbered.

## **Y.9 Boarding Tab**

The Boarding tab manages close combat between grappled ships.

### **Y.9.1 Starting Boarding Actions**

Before boarding can begin:

1. Ships must be grappled together (use Grapple button on Ships tab)
2. Wait one full turn after grappling
3. The Boarding tab will show available actions after the waiting period

### **Y.9.2 Four-Stage Boarding System**

Boarding occurs in four stages:

1. Port Bulwark: Fight for control of the enemy ship's port side
2. Starboard Bulwark: Fight for control of the enemy ship's starboard side
3. First Half Deck: Advance into enemy ship interior
4. Second Half Deck: Complete capture of enemy vessel

Click each stage button to resolve that boarding action. The app calculates crew strengths, applies modifiers, and determines the winner. Green buttons show attacker victory, red shows defender victory. Capturing the Second Half Deck wins the entire ship.

## **Y.10 Crew Tab (Optional)**

The Crew tab implements the optional crew assignment rules (M.0).

### **Y.10.1 Enabling Crew Assignment**

Each ship has a checkbox "Use Crew Assignment". When checked, you must manually assign crew to three duties:

- Gun Crews: Personnel manning the cannons. Required crew shown automatically based on gun count.
- Sailing Crew: Personnel handling sails and rigging. Required crew shown automatically based on sail count.
- Fire Fighting: Personnel dedicated to fighting fires. Recommended 10% per active fire.

### **Y.10.2 How Crew Assignments Affect Gameplay**

Insufficient gun crews: Gunnery effectiveness reduces (penalties shown in Gunnery tab)

Insufficient sailing crew: Movement speed reduces in 10% increments (see Movement tab). Zero sailing crew means ship can only drift.

Insufficient fire fighting: Fires spread faster and are harder to control

The app shows Total Assigned and Unassigned crew counts. If over-assigned (casualties reduced available crew), the app displays a warning in red.

### **Y.10.3 When to Use Crew Assignment**

Crew assignment adds complexity and is optional. Use it when:

- Playing campaign games where crew management matters
- Simulating ships at reduced manning
- Playing scenarios with fire as a major threat
- You want maximum historical realism

For casual games, leave crew assignment disabled. The app uses default assumptions and you can ignore this tab entirely.

## **Y.11 Log Tab**

The Log tab records every action during the battle.

### **Y.11.1 What Gets Logged**

Every significant event appears in the log:

- Turn advances
- Gunnery actions (who fired, target, hits, damage)
- Damage application (hull damage, gun losses, crew casualties)
- Fires started, spread, or extinguished
- Masts destroyed
- Critical hits (rudder, wheel, magazine)
- Boarding actions and results
- Ships striking colors or being captured
- Ships sinking

### **Y.11.2 Using the Log**

The log appears in reverse chronological order (newest first). Scroll through to review the entire battle. Color coding helps identify event types:

- Green: Successful actions
- Red: Critical damage or losses
- Orange: Warnings or fires
- Blue: Information or status changes

Use the log to:

- Verify actions if results seem unexpected
- Review the battle after completion
- Write battle reports or historical narratives
- Settle disputes about what happened when

## **Y.12 Tips for Effective Use**

### **Save Often**

Use Export after every few turns to save your game progress. Browser cache can clear unexpectedly. Saved files are small (typically under 100KB) and easy to organize by scenario name and date.

### **Measure Range Accurately**

Gunnery calculations depend on exact range measurements. Measure center-to-center between ship models. A few centimeters difference can shift guns from Close to Medium range, dramatically affecting damage output.

### **Track Fires Immediately**

When fires start, check the Damage tab and decide whether to organize a fire party. Fires aged 4+ turns risk magazine explosions. Don't wait too long to flood the magazine if fires are out of control.

### **Understand Surrender Points**

Ships don't automatically strike at zero SP. The app shows SP = 0 but you decide when a ship surrenders. Some captains fight to the last, others strike early to save crew. Historical accuracy varies by navy and captain personality.

### **Use Point Values for Scenarios**

The PVN (Point Value Number) helps balance forces. British ships might be worth much more points than for example French ships due to crew quality. Create scenarios by total points) rather than gun counts for balanced matchups.

### **Start Simple**

For your first game, ignore optional systems:

- Keep Enhanced Fire disabled
- Skip crew assignment
- Don't use PVN surrender penalties
- Avoid boarding actions

Play a simple ship-to-ship duel (one frigate vs one frigate). Once comfortable with basic gunnery and movement, add complexity gradually.

## **Y.13 Troubleshooting**

### **App Won't Load**

Clear your browser cache and reload the page. Try a different browser if problems persist. The app requires JavaScript enabled.

### **Calculations Seem Wrong**

Check the Log tab for detailed breakdown of all calculations. The app follows the rules but the results might differ from manual calculations due to rounding or modifier order. Trust the app unless you find a genuine bug.

### **Lost Ships After Browser Crash**

If you didn't export your game, the data is lost. The app stores everything in browser memory, not on a server. Export regularly to avoid losing progress.

### **Can't Fire Guns**

Check for: (1) Magazine flooded? (2) Heavy weather with two-decker ship? (3) All guns in that arc destroyed? (4) Insufficient gun crew if using crew assignment? The app disables firing when guns are unavailable.

## **Y.14 Getting Help**

For bug reports, questions, or feature requests:

- Visit the GitHub repository: [github.com/linusnapoleonicshipyard/Btq-companion-v8](https://github.com/linusnapoleonicshipyard/Btq-companion-v8)
- Contact via Linus Napoleonic Shipyard YouTube channel
- Check for updates regularly—the app is actively developed

Always use the latest version from the GitHub Pages link. Bug fixes and new features appear frequently during active development.

## **Y.15 Final Thoughts**

The companion app is a calculator, not a replacement for understanding the rules. Read this rulebook thoroughly before relying on the app. Know why ships move at different speeds in different winds, understand why crew quality matters, and grasp the danger of uncontrolled fires.

The app eliminates tedious arithmetic and lets you focus on tactics: positioning, gunnery timing, crew management, and decisive moments like boarding actions or striking colors. Use it to enhance gameplay, not to avoid learning how Age of Sail combat works.

Traditional dice-and-tables play remains fully supported. Some gamers prefer the tactile experience of rolling dice and consulting charts. The companion app is optional—use it if it improves your experience, ignore it if you prefer the classic approach.

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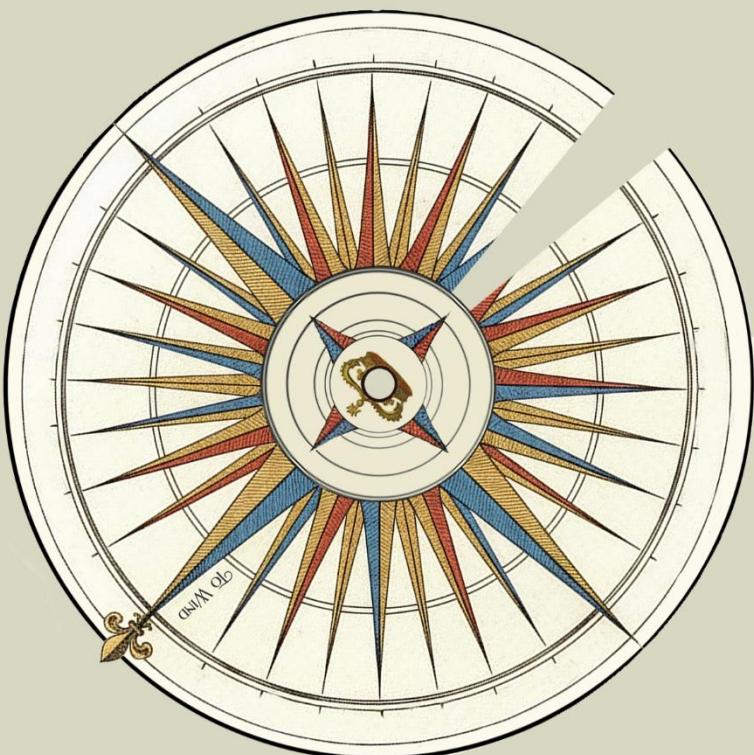
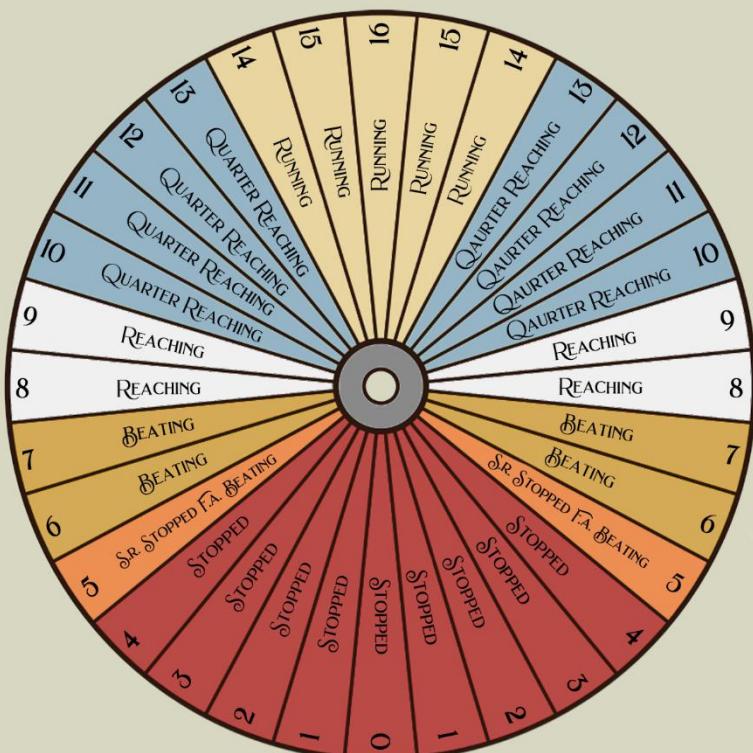
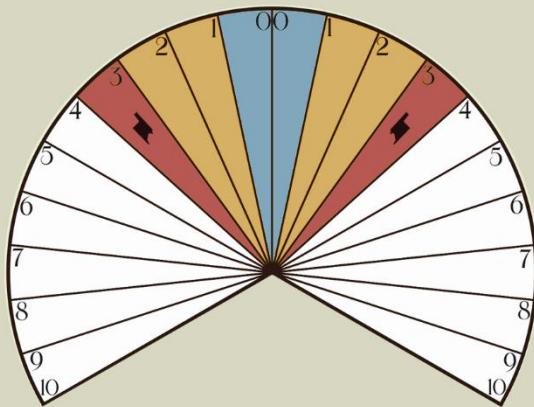
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I



# SINGLE SHIP ACTION LOG

NAME	RATE	H.V.N.	P.V.N.	CREW	S.V.N.	G.D.N.	TURNING POINTS	SPECIAL DAMAGE	NATIONAL GUNNERY MODIFIER								
SPEED	QR	RU	RN	B	D	PORT	CANNON LOSSES STARBOARD	BOW	STERN	RECORD OF FIRES	SAIL/MAST DAMAGE						
<b>CANNON</b> PORT BROADSIDE				BOW													
STARBOARD BROADSIDE				STERN													
SAIL DAMAGE							HULL DAMAGE				CREW DAMAGE						
											CREW ASSIGNMENTS (OPTIONAL)						
							SURRENDER POINTS	1	2	3	4	5	6	7	8	9	10

# SINGLE SHIP ACTION LOG

NAME	RATE	H.V.N.	P.V.N.	CREW	S.V.N.	G.D.N.	TURNING POINTS	SPECIAL DAMAGE	NATIONAL GUNNERY MODIFIER								
SPEED	QR	RU	RN	B	D	PORT	CANNON LOSSES STARBOARD	BOW	STERN	RECORD OF FIRES	SAIL/MAST DAMAGE						
<b>CANNON</b> PORT BROADSIDE				BOW													
STARBOARD BROADSIDE				STERN													
SAIL DAMAGE							HULL DAMAGE				CREW DAMAGE						
							SURRENDER POINTS	1	2	3	4	5	6	7	8	9	10
											CREW ASSIGNMENTS (OPTIONAL)						

## FLEET ACTION LOG

## FLEET ACTION LOG

**BEAT TO QUARTERS - QUICK REFERENCE SHEETS (1/1200 & 1/700 SCALE) 1**

**Game Turn Sequence (A.4)**

- A. Every ten turns check wind
- B. Write orders (1½ minutes)
- C. Movement (simultaneous)
- D. Grapple/cut grapples/clear wreckage
- E. Fire eligible guns
- F. Damage check
- G. Boarding (after 1 turn contact)
- H. Record losses

**Turning Points Per Gameturn (D.2.1)**

- 1st rates (100–136 guns): **3 points**
- 2nd rates (90–98 guns): **4 points**
- 3rd rates (60–84 guns): **5 points**
- 4th rates (50–58 guns and razees): **6 points**
- 4th rates (42–48 guns): **7 points**
- 5th rates & Hemenas (28–42 guns): **8 points**

**Range Modifiers (F.1.6)**

Range	Modifier
Point Blank	All hits automatic
Close Range	1.0 Plus 13 added to all dice rolls
Medium Range	.54
Long Range	.40
Extreme Range	.07

**Raking Modifiers (F.6.2)**

Type of Rake	Modifier
Bow Rake (within 6-point arc, Close Range min)	1.1
Stern Rake (within 6-point arc, Close Range min)	1.25

**Shot Modifiers (F.4)**

Shot Type	Max Range	Modifier	Notes
Ball Shot	Extreme	1.0	High or low
Double Shot	Close	1.25	High or low
Dismantling Shot	Medium	2.5	High only (8 shots max)
Grape Shot	Medium	1.5	Low only, crew only (4 shots max)
Canister Shot	Close	2.5	Low only, crew only (4 shots max)

### Surrender Points Lost by Damage and Tactical Factors (H.1.8)

Cause	Points Lost
Every 5% Hull Damage	1
Loss of entire mast (cascade or culminative)	1
Loss of wheel	1
Loss of rudder	2
Being grappled or boarded	2
Ship on fire	1

**NOTE:**

*Surrender points for mast damage are only lost when an entire mast is destroyed, or when the loss of a lower mast section causes upper sections to cascade and fall. Individual sail or mast section losses do not cause surrender point loss unless they result in complete mast loss.*

### Single Ship Actions Surrender (H.1.5)

Ratio (Larger to Smaller)	Points Lost
1.0 to 1.0 or less	0
1.1 to 1.4	3
1.5 to 1.9	4
2.0 to 2.9	5
3.0 to 3.9	6
4.0 to 4.9	7
5.0 to 5.9	8
6.0 to 6.9	9
7.0 and over	10

BEAT TO QUARTERS - **QUICK REFERENCE SHEETS** (1/1200 & 1/700 SCALE) 2

**Nationality Gunnery Modifiers (F.1.9)**

Nation / Force	Period / Specific	Modifier
Denmark	1801	0.65
Denmark	1807	0.76
France	Royal Navy 1778-91	0.91
France	Republican Navy 1792-1801	0.38
France	Imperial Navy 1803-1815	0.58
France	Privateers 1792-1801	0.34
France	Privateers 1803-1815	0.59
Great Britain	Royal Navy 1775-1815	1.0
Great Britain	Mail Packets 1812-15	0.44
Hapsburg Empire	1792-1815	0.42
Kingdom of Italy	1803-1815	0.45
Kingdom of Naples	1806-15	0.40
Kingdom of Sardinia	1792-1801	0.41
Kingdom of Sardinia	1803-1815	0.48
Kingdom Two Sicilies	1792-1801	0.40
Kingdom Two Sicilies	1803-1815	0.47

Nation / Force	Period / Specific	Modifier
Ottoman Empire	1792-1815	0.15
Portugal	1775-1801	0.24
Portugal	1803-15	0.37
Republic of Batavia	1796-1801	0.43
Republic of Batavia	1803-1814	0.49
Republic of Liguria	1797-1805	0.27
Republic of Venice	1792-1797	0.45
Russia	1788-1801	0.44
Russia	1803-15	0.51
Spain	Navy 1775-83	0.36
Spain	Navy 1792-1801	0.41
Spain	Navy 1803-1815	0.48
Spain	Privateers 1792-1801	0.38
Spain	Privateers 1803-1815	0.44
Sweden	1788-1801	0.46
Sweden	1803-1815	0.54
United Provinces (NL)	1780-1795	1.0
United States	Continental Navy 1775-83	0.5
United States	Navy 1798-1811	0.9
United States	Navy 1812-15	1.0

### Gunnery Firing Procedure (F.9)

Step 1:  $D \times R \times Q =$  Number of hits  
D = Dice roll (as decimal)  
R = Range modifier  
Q = Quantity of guns  
Step 2:  $H \times P \times N \times S =$  Damage Points  
H = Number of hits  
P = Poundage of guns  
N = Nationality Gunnery Factor  
S = Shot modifier

### Gun Crews Required (M.3.1)

Long Guns	Crew	Carronades	Crew
48#, 42#	14	68#c	4
36#-29#	12	42#c-32#c	4
24#	10	24#c	3
18#, 12#	8	18#c	3
9#, 8#	6	12#c	2
6#, 4#	4		
3#-1#	3		

**BEAT TO QUARTERS - QUICK REFERENCE SHEETS (1/1200 & 1/700 SCALE) 3**

**C.2.1** At the beginning of the game roll for wind direction.

Dice Roll	Direction	Dice Roll	Direction	Dice Roll	Direction
1–3	North	34–36	SE by E	67–69	SW by W
4–6	N by E	37–39	SE	70–72	WSW
7–9	NNE	40–42	SE by S	73–75	W by S
10–12	NE by N	43–45	SSE	76–78	West
13–15	NE	46–48	S by E	79–81	W by N
16–18	NE by E	49–51	South	82–84	WNW
19–21	ENE	52–54	S by W	85–87	NW by W
22–24	E by N	55–57	SSW	88–90	NW
25–27	East	58–60	SW by S	91–93	NW by N
28–30	E by S	61–63	SW by S	94–96	NNW
31–33	ESE	64–66	SSW	97–100	N by W

**Wind Strength (C.1)**

Dice Roll	Wind Strength
1–20	Slight air
21–40	Light breeze
41–60	Gentle breeze
61–80	Moderate breeze
81–100	Fresh breeze

**Wind Change Every 10 Turns (C.1.2)**

Dice Roll	Effect
1–25	Wind drops one level*
26–75	Wind doesn't change
76–100	Wind increases one level**

\* One level below Slight air is Calm. No movement under sail.

\*\* One level above Fresh breeze is Gale.

**Wind Direction Change Every 10 Turns (C.2.2)**

Dice Roll	Effect
1–5	Wind alters 8 points right
6–10	Wind alters 8 points left
11–30	Wind alters 4 points right
31–50	Wind alters 4 points left
51–100	Wind direction not to change

**BEAT TO QUARTERS - QUICK REFERENCE SHEETS (1/1200 & 1/700 SCALE) 4**

**Sailing Speed Charts (D.4)**

*All measurements in millimeters. QR = Quarter Reaching, Ru = Running, RN = Reaching, B = Beating, D = Drifting*

**1st and 2nd Rates**

Wind Strength	QR	Ru	RN	B	D
Slight breeze	90	73	68	46	18
Light breeze	181	145	135	90	36
Gentle breeze	247	200	186	124	50
Moderate breeze	318	253	240	158	64
Fresh breeze	453	363	340	228	90
Gale	272	218	206	136	55

**3rd Rates**

Wind Strength	QR	Ru	RN	B	D
Slight breeze	101	80	77	50	21
Light breeze	203	163	152	101	40
Gentle breeze	272	218	206	136	55
Moderate breeze	340	272	256	172	68
Fresh breeze	475	380	358	240	95
Gale	272	218	206	136	55

#### 4th Rates

Wind Strength	QR	Ru	RN	B	D
Slight breeze	114	90	86	58	24
Light breeze	228	181	173	117	46
Gentle breeze	296	235	223	149	61
Moderate breeze	363	290	272	181	73
Fresh breeze	499	395	374	250	105
Gale	250	200	189	127	50

#### American 4th Rates

Wind Strength	QR	Ru	RN	B	D
Slight breeze	136	108	104	70	28
Light breeze	274	218	206	139	56
Gentle breeze	354	283	266	179	71
Moderate breeze	434	346	326	218	87
Fresh breeze	599	474	450	299	126
Gale	299	238	226	152	61

**BEAT TO QUARTERS - QUICK REFERENCE SHEETS (1/1200 & 1/700 SCALE) 5**

**5th and 6th Rates**

Wind Strength	QR	Ru	RN	B	D
Slight breeze	225	178	172	114	47
Light breeze	268	212	201	136	56
Gentle breeze	389	308	295	198	81
Moderate breeze	485	383	367	247	102
Fresh breeze	586	462	443	299	124
Gale	268	212	201	136	56

**Sloops (Corvettes) and Xebecs**

Wind Strength	QR	Ru	RN	B	D
Slight breeze	207	164	157	105	43
Light breeze	268	212	201	136	56
Gentle breeze	451	357	340	229	95
Moderate breeze	586	462	441	299	124
Fresh breeze	537	425	406	272	112
Gale	244	192	184	124	50

**Brigs, Snows, Pojamas, Gondolas, Ketches, Galleys, Polaccas**

Wind Strength	QR	Ru	RN	B	D
Slight breeze	104	81	78	53	22
Light breeze	138	110	104	70	30
Gentle breeze	229	181	173	114	49
Moderate breeze	320	250	240	160	70
Fresh breeze	456	364	342	229	92
Gale	92	73	70	47	18

**Trabacolos, Baghalas, Dhows, Schooners, Luggers, Cutters, Gunboats, Galivats, Proas, Batils, Colonial Trade Sloops**

Wind Strength	QR	Ru	RN	B	D
Slight breeze	244	192	183	124	50
Light breeze	327	259	247	167	70
Gentle breeze	389	308	295	198	81
Moderate breeze	451	357	340	229	95
Fresh breeze	537	425	406	274	112
Gale	207	164	157	105	44

**BEAT TO QUARTERS - QUICK REFERENCE SHEETS (1/1200 & 1/700 SCALE) 6**

**Formulas (B.0)**

<b>H.V.N. = Ship Tonnage × 2</b>
<b>G.D.N. = H.V.N. ÷ Total Guns</b>
<b>S.V.N. = H.V.N. ÷ (Number of Sails × 1.3)</b>

**Abbreviations**

**S.V.N.** = Sail Value Number  
**P.V.N.** = Point Value Number  
**Q** = Number of Guns  
**R** = Range Modifier  
**H** = Hits Scored  
**S** = Shot Modifier  
**N** = Nationality Gunnery Modifier  
**C** = Caliber  
**D.P.** = Damage Points  
**H.V.N.** = Hull Value Number  
**G.D.N.** = Gunnery Damage Number  
**c** = Carronades  
**#** = Pounds  
**D** = Dice (as decimal)

**Important Modifiers Quick Reference**

Type	Modifier	Type	Modifier
Point Blank Range	Automatic hits	Dismantling Shot	1.5
Close Range	1.0 + 13 to roll	Grape Shot	1.51
Medium Range	0.54	Canister Shot	2.51
Long Range	0.40	Bow Rake	1.1
Extreme Range	0.07	Stern Rake	1.25
Round Shot	1.0	Initial Broadside (experienced)	+50 to roll
Double Shot	1.25	Anchored vs. Moving	+20 to roll