Beat to Quarters – Transcription

1.0 General Information

1.1 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 scale sailing ships, and a fairly large table. In addition we have enclosed die-cut ship bases with ship symbols imprinted on them so you may begin play immediately.

1.11 Game set includes:

One Rules Booklet
Two Die-Cut sheets of Gauges and Ship Counters
1 Play Aid Chart
Fleet Engagement and Ship Battle Logs

1.2 Scale

A constant scale of 1/1200 (1mm equals 1.33 yds.) is maintained for all movement and firing ranges. Each game turn represents 4½ (four and one half) minutes of actual time.

1.3 Preparing for Play

1.31 Before the play begins, players should fill out a Battle Log for each of the ships to be used in the scenario being played.
1.32 The Mariner's Compass (on die-cut sheet) is positioned so as to establish North.
1.33 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.
1.34 Roll for Wind direction and force.
1.35 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.
1.36 Look up the maximum speeds (under fighting sail) for each ship according to the wind force rolled (1.34) and mark them on the Battle Log in pencil.

1.4 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.
1.42 One game turn completed.
1.43 Repeat steps A–H until scenario concluded.

2.0 The Battle Log

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

2.2 Long guns and carronades are counted on a one-to-one scale.
2.21 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

2.22 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.

2.23 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.

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

2.4 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.

2.41 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 × 1.3 equals 9.1. 637 divided by 9.1 is 70. Thus, the Sail Value Number is 70.

2.5 Point Value Number (P.V.N.)

2.51 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 × 12 equals 156, 5 × 6 equals 30, 2 × 18 (carronade) equals 36. Total is 222 × 0.55 (French Nationality Gunnery Modifier) equals 122.1 (round off to 122). 122 × 951 equals 116,022. Thus the Point Value Number of this frigate is 116,022.

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

2.52 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 × 1.0 × 9 equals 18. 18 × 105 equals 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!

3.0 Wind Strength and Direction

3.1 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

3.12 Every ten gameturns 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.

3.2 Wind Direction
3.21 At the beginning of the game roll for wind direction.

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

85–87	N by W
88–90	N
91–100	Roll again

3.22 Every ten gameturns roll again on the following table:

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

4.0 Movement — Under Sail / Under Oars

4.1 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.

4.2 Turning

4.21 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. The amount of points a ship may turn in one gameturn is given on the following chart:

Types of Vessels	Turning Points
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 (corvettes), Xebecs, Turumas (14–18 guns)	9 points
Udemas, Brigs and Snows (10–18 guns)	9 points
All others	10 points

4.22 Speed Penalty for Turning. For every point a vessel turns, 15mm should be deducted from its maximum speed possible for that gameturn.

EXAMPLE:
A 5th rate, which is reaching in Slight breeze, moves 410mm in gameturn 15. If it turns 2 points, it must move only 380mm.
A 4th rate moves a maximum of 440mm. It turns 4 points. It must move no more than 380mm.

4.23 (optional rule) For greater realism players may deduct 5% of their total speed rather than 15mm for each point turned.

4.24 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 amount of points you wish to turn the ship, then pivot the base of the ship, at the stern, in line with the ruler.

4.25 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.

4.26 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 gameturn 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.

4.27 On the turn after beating, the tacking vessel should turn its maximum amount of turning points, for one gameturn, 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.

4.28 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.

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

5.0 Sails and Masts

5.1 Sail / Mast Diagrams

5.11 Diagramming Sails – [see diagrams in rules]

5.12 Damage to Sails – Each time a ship suffers cumulative damage equal to its Sail Value Number (S.V.N.), one sail is lost. Roll a die to determine which sail.

5.2 Mast Destruction

5.21 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.

5.22 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.

5.3 Jury Rigging

5.31 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.

6.0 Gunnery

6.1 Firing Long Guns and Carronades

6.11 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.

6.12 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.

6.2 Eligibility for Firing

6.21 If manned, within range, and in the arc of fire, a ship's guns may be fired once every game turn.
6.22 In Phased Movement, ships fire at a rate of once every five segments.
6.23 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.
6.24 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.
6.25 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 6.24 and 6.25.
6.26 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.

6.3 Initial Broadsides

6.31 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. Once a ship fires a broadside and gets the bonus, the bonus may not be used on that ship again in the battle. The bonus is good for one side of the ship only.

Example: H.M.S. Speedy (with 14 guns) is engaging a Spanish privateer with 18 guns. Speedy is manned by a veteran crew. The British player chooses to hold fire until within Close Range and opens with a broadside. He rolls his firing dice and then adds 50 to the result. On the next gameturn, this bonus may not be used again. The guns on the opposite side of Speedy may still fire their first broadside with a bonus, but the broadside previously fired on the starboard side cannot be fired again with a bonus.

Note: Regardless of bonuses, a ship may never score more hits than the quantity of guns it has firing.

6.4 Types of Shot(s)

Shot Type	Max Range	Modifier / Notes
Ball Shot	Extreme	Modifier: 1.0. May fire high or low.
Double Shot	Close	Modifier: 1.25. May fire high or low.
Dismantling Shot	Medium	Modifier: 2.5. May only fire high.
Grape Shot	Medium	Modifier: 1.5. May only fire low. Hits vs crew only.
Canister Shot	Close	Modifier: 2.5. May only fire low. Hits vs crew only.

Tactical Note: The choice of the right shot can help the player attain certain goals.
- For damage to sails and masts from Extreme or Long Range, use ball shot.
- For hull and crew damage from Medium Range, use ball shot.
- For damage to sails and masts from Medium or Close Range, use dismantling shot.
- For hull and crew damage from Close or Point Blank Range, use double shot.
- For crew casualties only from Medium Range, use grape shot.
- For crew casualties at Close or Point Blank Range, use canister shot.

6.46 Broadsides using any shot other than ball or double shot are limited in supply for a battle:
Grape – 4 shots
Canister – 4 shots
Dismantling – 8 shots
Players must track this and not exceed the supply.

6.5 Special Damage

Dice Roll	Effect
01–02	Rudder shot away
03–04	Wheel shot away
05–100	No special damage

6.52 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 gameturns, Inexperienced crew 10 gameturns.

6.6 Raking

6.61 Raking is the act of firing a broadside of ball shot, at a near right angle, into an enemy ship's bow or stern.
6.62 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	1.1
Stern Rake	1.25

6.7 Point Blank Range

6.71 Effects of Point Blank Range

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

6.72 Prohibitions

Carronades may not be double-shotted at Point Blank Range.

6.8 Anchored Ships and Land Guns

6.81 Anchored Ships Fire Bonus

Anchored ships firing at ships underway receive a +20% bonus to their gunnery dice roll.

6.82 Land Guns Rate of Fire

Land-based guns fire once every game turn.

6.83 Anchored Ships – Arc of Fire

Anchored ships may fire in a 90° arc from their broadsides.

6.84 Land Guns – Arc of Fire

Land-based guns may only fire in a 45° arc from their emplacements.

6.9 Surrender

6.91 Surrender Points

Surrender points are tallied on the Battle Log. They are deducted for losses to hull, sails, masts, wheel, rudder, and grappling.

6.92 Surrender Points and Scenarios

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

6.93 Scenario Suggestions for Surrender Points

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

6.94 Surrender Points and Multiple Ship Actions

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

6.95 Single Ship Actions Surrender Chart

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

6.96 Unsupported Ship Surrender Chart

Ratio (Enemy PVN to Unsupported Ship PVN)	Surrender Points Lost
2.0 to 2.9	2
3.0 to 3.9	3
4.0 to 4.9	4
5.0 and over	5

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

6.98 Surrender Points Lost by Damage and Tactical Factors
For every 5% Hull Damage = 1 Point
For every sail or mast section lost = 1 Point
For loss of wheel = 1 Point
For loss of rudder = 2 Points
For being grappled or boarded = 2 Points

6.10 (Optional) Low Gunfire Causing Sail Damage

1. At 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%.

2. At close range, 5–10% of the hits will be high. Roll 1d6: 1–4 = 5%, 5–6 = 10%.

3. At point-blank range, all hits are low.

7.0 Making a Damage Check

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:

7.1 Damage Check Procedure

7.11 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.

7.12 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.

7.13 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.

7.14 Determine Sail/Mast Damage - This is done by totalling 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, e.g., a 5th rate has 10 mast section, so if it lost one -1 divided by 10 equals 10%, it would lose 10%, thus, as per the Surrender Chart, the controlling player would cross out one Surrender Point for the loss of 10% of the mast sections. 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.

7.15 Determine if the Wheel is Lost - At this time the enemy is allowed to roll,on the Special Damage Chart for every 5% hull damage your ship has sustained this gameturn. If he rolls a 3 or 4, you must cross out one Surrender Point.

7.16 Determine if the Rudder is Lost - In the same roll that your opponent made for determining wheel damage, if he rolled a 1 or a 2 you lose your rudder. Should you lose your rudder cross out two Surrender Points.

7.17 Determine Support - If playing a single ship action (one ship per side) disregard this step. If playing a multiple ship action check to see if your ship(s) is supported. If not, cross out the appropriate number of Surrender Points.

7.18 If your ship has run afoul of the enemy or has been grappled determine if your opponent has a larger crew, eligible to board, and knowing his Nationality Boarding Casualty Factor, see if it is superior to yours. If the answer to both these questions is affirmative, your ship must cross out two Surrender Points.

Note: When a ship is boarded and its crew runs out of areas to retreat to it will surrender immediately, regardless of how many Surrender points it has suffered in damage.

7.19 After following through on the above steps (7.11-7.18) boarding may be conducted. If, however, ships are not in contact proceed to the beginning of the next gameturn.

Example Step 7.1

A Spanish frigate, Santa Elena (34), has just taken hits from the British frigate H.M.S Druid (32) during gameturn 83. The Spanish player thus must check for damage. Let's say the three damage columns for Santa Elena look like the following:

Sail Damage	Hull Damage	Crew Damage
32	120	108
126	96	48

The Santa Elena has a H. V.N. of 1880. To take a Hull Damage check the Spanish player adds up the Hull Damage column, which adds to 216, and divides that by the H. V.N. 1880. The result is .11489362, which translates to 11% Hull Damage. Seeing he loses I Surrender Point for each 5% Hud Damage he takes he crosses out 2 Surrender Points.

Example for Step 7.12:

If the Santa Elena and Druid are grappled together or are afoul of each other boarding will take place on the next gameturn. At this time (gameturn 83) the Spanish player would take a Crew Damage check to determine how many men would be eligible for boarding. To do this the Spanish player would simply add the total of the Hull Damage column (216) to (he total of the Crew Damage column (156) to arrive at 372. He would then divide that number by the H. V.N. 1880 to arrive at the figure . 19787234, or 19% to (Note: Always round down when figuring damage.) The original Spanish crew was3l5, so 19% deducted from 315 would be a loss of59.85, or 59 men. The Spanish would thus have 256 men eligible to attack or defend in a boarding action next gameturn. The Spanish player would not lose any Surrender Points for Crew Damage.

Example of Step 7.13:

Using the Santa Elena's damage from the previous examples, the Spanish player would now check for gunnery destruction. To do this he would take his total qf Hull Damage (216) and divide it by the Gunnery Destruction Number. The Santa Elena has a G.D.N. of 55. 216 divided by 55 equals 3 (Remember to round down all damage.) This means Santa Elena has lost three guns on the engaged side and must roll as per the rules mentioned earlier in this book.

Example of Step 7.14:

To determine the Sall/Mast Damage to Santa Elena, the Spanish player would total the Sall Damage column (158) and divide it by the S. V.N., which is 144. 158 divided by 144 equals one sail destroyed. The Spanish player would roll on his Sail/Mast Diagram to see which sail was destroyed, and would inform his opponent to roll to see (f Santa Elena lost the mast section attached to the sail as well.

Example of Steps 7.15-7.16:

Owing to the fact that the opponent gets to roll for Special Damage for each Surrender Point he causes due to Hutt Damage, the British player would roll twice for Santa Elena, seeing it has lost 2 Surrender Points for Hull Damage. Each time if the British scored a 1*2, they would destroy the rudder of the Santo Elena, and cause the loss of two Surrender Points. Likewise, if they scored a 3-4 they would destroy the wheel, and cause the loss of one more Surrender Point.

8.0 Boarding

8.1 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.

8.2 Nationality Boarding Casualty Factor Table

Note: Ships of the Bombay Marine always have Sepoy Marines attached, thus do not have 10 deducted from their N.B.C.F. at any time.

8.3 Boarding Melee

8.31 On the gameturn of contact, fire any eligible guns. No guns may be fired on the gameturns after the gameturn of contact. Make a damage check. Determine, after deducting crew losses from the original crew, how many men, up to the entire crew, will be in the boarding party. No boarding may take place on the gameturn of contact.

8.32 At the start of the next gameturn, each side rolls percentage dice to determine their Nationality Boarding Casualty Factor for that gameturn.

8.33 Divide your boarding party by the N.B.C.F. rolled. The resulting figure (rounded off to the nearest whole number; .5 equals 1.0) is the amount of casualties which the enemy suffers that gameturn. The enemy also rolls and announces your losses. Record boarding losses in the Crew Damage column of the Battle Log. Record them in a different colored ink so as not to confuse the Crew Damage points with the actual total of crew casualties you are recording.

8.34 The boarding party of the ship having the most casualties retreats one area.

8.35 Deduct losses to the boarding party, and each gameturn repeat the process until one side runs out of areas to retreat to.

Note: At the end of each gameturn any side having control of their own ship and the bulwarks of both ships may attempt to cut grapples or free wreckage. If they are successful, the ships are no longer connected and boarding may not continue until the ships grapple or come into contact again. Cutting grapples is automatic. The player simply announces he is doing so. If the ships came into contact by collision, the interested player must roll: 51–100 = wreckage free; Next gameturn, if first try failed, 11–100 = wreckage free; If both previous attempts were failures, wreckage is automatically cleared on the third gameturn.

Example: Asia vs. Doris boarding melee (full worked example from scan).

8.36 When one ship is being boarded by the crews of more than one ship the defending ship must divide up its crew by percentage to meet the crews of the attacking ships.

Example: Ship A with 100 men vs Ship X 200 + Ship Y 50, distribution 80/20% as in scan.

9.0 Shallow Water Operations

9.1 Water Depths

9.11 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.

9.12 The following chart shows the bare minimum of water which will float various ships. Ships moving into areas below their minimum will ground.

Great Britain	Spain	Russia	France	Holland	U.S.
1st Rates	5	5	5	5	5	5
2nd Rates	5	5	5	5	5	5
3rd Rates	4	4	4	4	4	4
4th Rates	4	4	4	4	4	4
5th Rates	3	3	3	3	3	3
6th Rates	3	3	3	3	3	3
Sloops, etc.	2	2	2	2	2	2
Brigs	2	2	2	2	2	2

Gunboats 1 1 1 1 1 1

9.13 Casting the lead: Ships may not exceed 200mm when sounding; umpire informs depth each move.

9.14 Grounding: Bottom torn out; ship will sink. Roll 2d% to see how many gameturns remain.

9.2 Anchoring

9.23 Raising Anchor

9.24 Dropping Anchor

9.25 Cutting Anchor

9.26 Springs on the Cables

9.3 Fortifications on Land and Sea

Formulas for H.V.N. of forts/batteries (wooden, stone, floating). Worked examples included in scans.

9.32 Gunnery vs. forts: all hits are hull hits.

10.0 Towing

10.1 Towing Procedure

10.11 To tow, ships must be touching or a small boat passes the line.

10.12 Takes 2 gameturns to rig tow; only in winds less than Fresh Breeze.

10.13 Towropes not more than 50mm.

10.14 Movement formula given (as in scan).

Worked Example: H.M.S. Lightning towing H.M.S. Ceylon with explicit HVNs and speed calculation.

10.2 Ships' Boats Towing the Mother Ship

During a Calm, requires all boats, 2 turns to launch + 2 to rig, speed 90mm per turn.

11.0 Ships Running Afoul

11.1 Friendly Ships

11.11 Friendly ships running afoul (colliding) will remain in contact for the entire initial contact gameturn. The vessels will travel on a course which seems logical. At the end of the next gameturn, roll a pair of percentage dice and consult this table:

End of 1st Contact gameturn	26–100 equals free of each other
End of 2nd Contact gameturn	Automatically free — No roll needed

11.2 Belligerent Ships

11.21 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.

11.3 Speed When Afoul

11.31 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.

12.0 Fire Rules

12.1 Setting Fires

12.11 If a controlling player desires to burn his own ship, he must first man the boats (2 gameturns), then unload the wounded (one extra gameturn 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 gameturns to place the combustibles, then they must abandon the ship. 4 gameturns after they abandon ship the controlling player will roll a pair of percentage dice. 1–60 means the ship explodes. Roll each gameturn until the ship blows up.

12.12 For each hit with an exploding shell from a mortar or howitzer, roll to see if a fire starts. 1–70 equals fire started.

12.13 When firing through masts (actually the sails on them) lying over the side (from being shot down), one fire will start for ½ of the total number of guns firing on that broadside. No more fires will occur for firing through the same mast on succeeding gameturns.

Example: A 20 gun sloop has a mast lying over the port side, which has not yet been cut away. If the controlling player fires his port side guns (10 guns), 5 fires will break out on the ship.

12.14 When the bases of two vessels are actually touching each other (locked in combat), each gun firing has a 10% chance of starting one fire on its own ship, thus players must roll for each gun after it is fired when firing that close.

12.2 Putting Out Fires

12.21 For each fire started roll each gameturn to put it out.

	Experienced Crew	Inexperienced Crew
1st gameturn	1–62 fire out	1–52 fire out
2nd gameturn	1–44 fire out	1–34 fire out
3rd gameturn+	1–29 fire out	1–19 fire out

Use 3rd gameturn columns for each succeeding gameturn fire is burning.

If the fire isn't put out by the beginning of its 4th gameturn of burning, the ship will begin to suffer 5% Hull Damage every gameturn until it is out. Players should keep trying to roll every gameturn till the beginning of gameturn 7, then the crew must abandon ship.

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

12.3 Fire Ships

12.31 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 ½ 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 gameturns, drift to leeward at its drifting speed.

12.32 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 gameturns from the time the crew abandoned ship, to see if the ship explodes. A roll of 1–60 means the fireship explodes.

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.

13.0 Crew Assignments (Optional Rule)

13.1 Experienced vs. Inexperienced Crews

13.11 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.

13.2 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. Divide the enemy crew by 50, and put that many crewmen aboard to guard the prisoners.

13.3 Gun Crews

13.31 It will take the following amount of men to act as a crew for each of the various calibers of guns:

Long Guns & Howitzers	Crew
48#	14
42#	14
36#, 32#, 30#, 29#	12
24#	10
18#	8
12#	8
9#, 8#	6
6#	4
4#	4
3#, 2#, 1#	3
Carronades	Crew
68#c	4
42#c, 36#c, 32#c	4
24#c	3
18#c	3

12#c	2
Mortars	Crew
13" mortar	16
10" mortar	12
8" mortar	10

Note: Only stern chasers, bow chasers, and one broadside may be manned at a time, unless the Optional Crew Assignment Rule is used.

14.0 Ships' Boats

14.1 Capabilities of Ships' Boats

14.11 All ships' boats will have a H.V.N. of 10.

14.12 Ships' boats carry 8 oars, and have a maximum speed of 153mm.

14.13 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.

14.14 One ships' boat will be destroyed for every mast section that the ship loses.

14.15 It will take 1 gameturn to load or unload a kedge anchor or gun.

14.16 It will take 2 gameturns to put a boat in the water or hoist it back aboard.

14.17 Enemy guns firing at ships' boats will deduct 25 from their dice rolls.

14.2 Number of Boats Carried

Nation	1st Rates	2nd Rates	3rd Rates	4th Rates	5th Rates	6th Rates/ Unrated
Russia/ Denmark/ Sweden	14		11	7	5	3/2
Holland			8	5	4	3/2
United States			13	8	6	4/3
France/ Venice/ Islamic Powers	17		13	8	6	4/3
Great Britain/ Bombay Marine	15	13	10	6	5	4/2
Spain/ Portugal/ Naples	17		13	8	6	4/3

15.0 Miscellaneous Rules

15.1 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.

15.2 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.

15.3 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.

15.4 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 1/4, 1/3, or 1/2 the crews normally needed and fire the guns every other gameturn, every third gameturn, or every fourth gameturn respectively. It will take one gameturn 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 3–9# and a total crew of 21 men. 210 divided by 12 equals 17.5 or 18 (rounded off) men to work the ship properly. That would leave 3 men for the gun crew. Their broadside is 3–9#, and it takes 6 men per gun to crew it properly. If the controlling player mans his whole broadside properly he will need 18 men, which leaves 3 to sail the ship. Owing to the fact that it takes 18 men to sail it, and there are only 3, one would divide 18 by 3, which equals 6. Thus, it would take 6 gameturns to do what was normally accomplished in 1. A British merchant schooner can normally turn 10 points per gameturn. This would be reduced to 1.3 per gameturn. One broadside would be properly manned, under this arrangement, and could fire their broadside every gameturn. If the commander wanted to sacrifice firepower he could man less guns, or have smaller crews. In that case only guns properly crewed could fire every gameturn. A 9# with a crew of 3 could fire every other gameturn, while one manned with 2 could fire every three gameturns. On the whole this rule is a pain, and is strictly optional. If one player wishes to enforce it, he should say so at the start of the scenario.

15.5 Changing the Time Scale to 12 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 gameturn from the standard 4½ minutes per gameturn. 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 gameturn.
5.) The Nationality Gunnery Modifiers of all other nations remain the same, but ships of each nation may only fire every other gameturn.

6.) All speeds are reduced to ⅓ 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 closer to the "real thing," if you can stand it!

15.6 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.
15.61 Restrictions:
a. Armed and unarmed merchantmen cannot initiate boarding, and can only defend if boarded.
b. Unarmed merchantmen automatically surrender upon being fired upon, being grappled 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 2.

15.7 Determining How Well Each Ship Fought (Optional Rule)

Perfectly even one to 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 well 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 your ship's total broadside, multiply it by the respective Nationality Gunnery Modifier, then divide it by the amount of guns and carronades on one broadside of the ship. Round this figure off to 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 guns it carries. Place the result in the column under the enemy ship's name. Divide this result 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 go over the damage points of the ship that surrendered during the scenario you just fought. If you would go over the total damage points on the 1st round use those figures and the formula as usual, but only if it's the 1st round, otherwise stop when under the figure closest to total point damage.
7. Once the total damage points of the ship that surrendered are reached, or almost so, use the information for 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 actual damage points from the scenario.
D equals enemy's amount of damage points caused by the "System."

(Example)
H.C.S. Panther vs. Dame Ambert full calculation as per scan. Panther total 115.5, Dame Ambert total 120. Percentages 109% and 92% respectively.

15.8 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. Instead of reading them as a percentage add their quantity together. This will tell you how many gameturns the ship remains afloat. No firing may take place once the ship reaches 80%. The crew must abandon ship, using boats, before the ship sinks.

15.9 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.
1. Follow the standard ship to ship rules, while inserting Fleet Engagement Rules where applicable.
2. Use the Fleet Engagement Battle Log to record data on the ships.
3. Use the Fleet Engagement Gunnery Rules.
4. Bow and stern chasers are not used.
5. Appoint a flagship for each side. Flagships will begin the game with 11 Surrender Points.
6. Gunnery destruction is accounted for by deducting the Current Hull Loss Percentage from 100%, then using the result as a modifier.

(Example) French 3rd rate Poitiers with H.V.N. 3738 takes 950 hull damage, works out 25%, deducted from gunnery as per scan example.

15.91 Fleet Engagement Gunnery Tables

Range (All long guns)	
0–2 cm.	Point Blank
2.1–19 cm.	Close
19.1–37 cm.	Medium
37.1–57 cm.	Long*
57.1–135 cm.	Extreme*
Range (All carronades)	
0–2 cm.	Point Blank
2.1–13 cm.	Close
13.1–20 cm.	Medium
21.1–30 cm.	Long*
30.1–81 cm.	Extreme*
Range Modifiers	
Point Blank	All hits automatic
Close	1.0 plus 13 added to all dice rolls
Medium	.54
Long	.40
Shot Modifiers	
Ball	1.0 (any range)
Double	1.25 (C. & P.B.)
Dismantling	2.5 (M. & C.)
Grape	1.5 (M., C., P.B.)
Cannister	2.5 (C. & P.B.)
Nationality Gunnery Modifiers	
Americans	1.0
British/Bombay Marine	1.0
Dutch	1.15
French	.75
Danes/Swedes	.55
Russians	.50
Spanish/Portuguese	.45

Italians/Austrians	.35
All Islamic Powers	.10

15.92 Gunnery Instructions

1. 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.

2. When ready to fire, measure the range.

3. Once the 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 your LGBWN and CBWN.

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

5. 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.

(Example) The French 74 Poitiers with LGBWN 510 and CBWN 40 at Medium Range with 25% Current Hull Loss, rolling 87, inflicts 99 + 8 = 107 Hull Damage points as per scan.

16.0 Orders of Battle

16.1 National fleet lists are provided to allow scenario construction and campaign design. Ships are identified by rate, class, guns, H.V.N., crew, and P.V.N.

16.2 France c. 1793

Rate	Guns	H.V.N.	Crew	P.V.N.
1st Rate	118	3880	1100	350
1st Rate	110	3660	1050	330
2nd Rate	100	3400	1000	320
3rd Rate	80	2720	850	270
3rd Rate	74	2516	800	250
4th Rate	64	2176	700	220
5th Rate	44	1496	400	150
5th Rate	36	1224	300	120
6th Rate	26	884	200	88
Corvette	20	680	180	68
Brig	16	544	140	54
Gunboat	2	68	20	7

16.3 Great Britain c. 1793

Rate	Guns	H.V.N.	Crew	P.V.N.
1st Rate	120	4080	1200	370
1st Rate	110	3740	1100	350
2nd Rate	98	3332	950	310
3rd Rate	80	2720	850	270
3rd Rate	74	2516	800	260
4th Rate	64	2176	700	230
5th Rate	44	1496	400	150
5th Rate	36	1224	300	130
6th Rate	28	952	220	95
Corvette	20	680	180	68
Brig	16	544	140	55
Sloop	14	476	120	48
Gunboat	2	68	20	7

16.4 Russia c. 1792

Black Sea Fleet c.1792

Rate	Guns	H.V.N.	Crew	P.V.N.
3rd Rate	66	2244	700	230
3rd Rate	64	2176	700	220
5th Rate	40	1360	350	140
Frigate	36	1224	300	120
Frigate	32	1088	280	110
Brig	16	544	140	54

Baltic Fleet c.1792

Rate	Guns	H.V.N.	Crew	P.V.N.
1st Rate	100	3400	1000	320
2nd Rate	84	2856	900	290
3rd Rate	74	2516	800	250
3rd Rate	66	2244	700	230
Frigate	44	1496	400	150
Frigate	36	1224	300	120
Corvette	20	680	180	68

16.5 Holland c. 1796

Rate	Guns	H.V.N.	Crew	P.V.N.
3rd Rate	74	2516	800	260
3rd Rate	68	2312	760	240
4th Rate	60	2040	650	215
5th Rate	44	1496	400	150
5th Rate	36	1224	300	120
6th Rate	28	952	220	95
Corvette	20	680	180	68
Brig	16	544	140	55
Sloop	14	476	120	48
Gunboat	2	68	20	7

16.6 Turkey c. 1787

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Ship of Line	84	2856	900	290
Ship of Line	74	2516	800	260
Frigate	50	1700	450	170
Frigate	36	1224	300	120
Xebec	20	680	180	68
Galley	18	612	160	61
Bomb	8	272	80	27

16.7 Denmark c. 1801

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Ship of Line	80	2720	850	270
Ship of Line	74	2516	800	260
Frigate	40	1360	350	140
Frigate	36	1224	300	120
Corvette	20	680	180	68
Brig	16	544	140	55

16.8 Sweden c. 1789 and 1801

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
3rd Rate	74	2516	800	260
3rd Rate	64	2176	700	220
Frigate	40	1360	350	140
Frigate	36	1224	300	120
Gunboat	2	68	20	7
Galley	18	612	160	61

16.9 Portugal c. 1807

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
3rd Rate	74	2516	800	260
Frigate	44	1496	400	150
Frigate	36	1224	300	120
Brig	16	544	140	55

16.10 Venice c. 1792

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Ship Line	74	2516	800	260
Cutter	14	476	120	48
Schooner	12	408	100	41
Xebec	20	680	180	68
Galley	18	612	160	61
Bomb	8	272	80	27

16.11 Naples c. 1796

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Ship Line	74	2516	800	260
Frigate	36	1224	300	120
Brig	16	544	140	55

16.12 United States c. 1800 and 1803

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Frigate	44	1496	400	150
Frigate	36	1224	300	120
Corvette	20	680	180	68
Brig	16	544	140	55
Schooner	12	408	100	41
Cutter	10	340	80	34
Gunboat	2	68	20	7

16.13 Persian Empire c. 1775

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Galivat	12	408	100	41
Galivat	10	340	80	34

16.14 Sangarian Pirates (NW India) c. 1797

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Galivat	8	272	70	27
Galivat	6	204	50	20

16.15 Magindanao Pirates (South China Sea) c. 1806

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Proa	4	136	40	14
Proa	2	68	20	7

16.16 Other Asiatic Powers

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Junk	12	408	100	41
Junk	10	340	80	34
Galley	18	612	160	61

16.17 Vessels with Oars

Rate/Type	Guns	H.V.N.	Crew	P.V.N.
Galley	18	612	160	61
Trabacolo	10	340	80	34
Gunboat	2	68	20	7
Proa	4	136	40	14
Batil	6	204	50	20

17.0 Orders of Battle (Expanded)

17.1 Great Britain c. 1793

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
1st Rate 120	120	4080	1200	370
1st Rate 110	110	3740	1100	350
2nd Rate 98	98	3332	950	310
3rd Rate 80	80	2720	850	270
3rd Rate 74	74	2516	800	260
4th Rate 64	64	2176	700	230
5th Rate 44	44	1496	400	150
5th Rate 36	36	1224	300	130
6th Rate 28	28	952	220	95
Corvette 20	20	680	180	68
Brig 16	16	544	140	55
Sloop 14	14	476	120	48
Gunboat 2	2	68	20	7

17.2 France c. 1792 and 1793

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
1st Rate 118	118	3880	1100	350
1st Rate 110	110	3660	1050	330
2nd Rate 100	100	3400	1000	320
3rd Rate 80	80	2720	850	270
3rd Rate 74	74	2516	800	250
4th Rate 64	64	2176	700	220
5th Rate 44	44	1496	400	150
5th Rate 36	36	1224	300	120
6th Rate 26	26	884	200	88
Corvette 20	20	680	180	68
Brig 16	16	544	140	54
Gunboat 2	2	68	20	7

17.3 Spain c. 1792

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
1st Rate 112	112	3870	1100	340
1st Rate 110	110	3740	1050	330
2nd Rate 100	100	3400	1000	320
3rd Rate 80	80	2720	850	270
3rd Rate 74	74	2516	800	250
4th Rate 64	64	2176	700	220
5th Rate 44	44	1496	400	150
5th Rate 36	36	1224	300	120
Frigate 32	32	1088	280	110
Corvette 20	20	680	180	68
Brig 16	16	544	140	55
Sloop 14	14	476	120	48
Gunboat 2	2	68	20	7
Galley 18	18	612	160	61
Bomb 8	8	272	80	27

17.4 Russia

Black Sea Fleet c.1792

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
3rd Rate 66	66	2244	700	230
3rd Rate 64	64	2176	700	220
5th Rate 40	40	1360	350	140
Frigate 36	36	1224	300	120
Frigate 32	32	1088	280	110
Brig 16	16	544	140	54

Baltic Fleet c.1797

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
1st Rate 100	100	3400	1000	320
2nd Rate 84	84	2856	900	290
3rd Rate 74	74	2516	800	250
3rd Rate 66	66	2244	700	230
Frigate 44	44	1496	400	150
Frigate 36	36	1224	300	120
Corvette 20	20	680	180	68

Total Fleet c.1801

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
1st Rate 100	100	3400	1000	320
2nd Rate 84	84	2856	900	290
3rd Rate 74	74	2516	800	250
3rd Rate 66	66	2244	700	230
Frigate 44	44	1496	400	150
Frigate 36	36	1224	300	120
Frigate 32	32	1088	280	110
Corvette 20	20	680	180	68
Brig 16	16	544	140	54

Baltic Fleet c.1808

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
1st Rate 120	120	4080	1200	370
1st Rate 110	110	3740	1100	350
2nd Rate 98	98	3332	950	310
3rd Rate 80	80	2720	850	270
3rd Rate 74	74	2516	800	250
4th Rate 64	64	2176	700	220
Frigate 44	44	1496	400	150
Frigate 36	36	1224	300	120
Corvette 20	20	680	180	68
Brig 16	16	544	140	54
Sloop 14	14	476	120	48
Gunboat 2	2	68	20	7

17.5 Holland c. 1796

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
3rd Rate 74	74	2516	800	260
3rd Rate 68	68	2312	760	240
4th Rate 60	60	2040	650	215
5th Rate 44	44	1496	400	150
5th Rate 36	36	1224	300	120
6th Rate 28	28	952	220	95
Corvette 20	20	680	180	68
Brig 16	16	544	140	55
Sloop 14	14	476	120	48
Gunboat 2	2	68	20	7

17.6 Turkey c. 1787 and 1806

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
Ship of Line 84	84	2856	900	290
Ship of Line 74	74	2516	800	260
Frigate 50	50	1700	450	170
Frigate 36	36	1224	300	120
Xebec 20	20	680	180	68
Galley 18	18	612	160	61
Bomb 8	8	272	80	27

17.7 Denmark c. 1801

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
Ship of Line 80	80	2720	850	270
Ship of Line 74	74	2516	800	260
Frigate 40	40	1360	350	140
Frigate 36	36	1224	300	120
Corvette 20	20	680	180	68
Brig 16	16	544	140	55

17.8 Sweden c. 1789 and 1801

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
3rd Rate 74	74	2516	800	260
3rd Rate 64	64	2176	700	220
Frigate 40	40	1360	350	140
Frigate 36	36	1224	300	120
Gunboat 2	2	68	20	7
Galley 18	18	612	160	61

17.9 Portugal c. 1807

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
3rd Rate 74	74	2516	800	260
Frigate 44	44	1496	400	150
Frigate 36	36	1224	300	120
Brig 16	16	544	140	55

17.10 Venice c. 1792

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
Ship Line 74	74	2516	800	260
Cutter 14	14	476	120	48
Schooner 12	12	408	100	41
Xebec 20	20	680	180	68
Galley 18	18	612	160	61
Bomb 8	8	272	80	27

17.11 Naples c. 1796

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
Ship Line 74	74	2516	800	260
Frigate 36	36	1224	300	120
Brig 16	16	544	140	55

17.12 United States c. 1800 and 1803

Rate/Class	Guns	H.V.N.	Crew	P.V.N.
Frigate 44	44	1496	400	150
Frigate 36	36	1224	300	120
Corvette 20	20	680	180	68
Brig 16	16	544	140	55
Schooner 12	12	408	100	41
Cutter 10	10	340	80	34
Gunboat 2	2	68	20	7

18.0 Scenarios of Actual Engagements

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

18.1 Scenario 1

Ship	Armament	H.V.N.	Crew	P.V.N.
H.M.S. Espoir (Brig) British	14-6#	430	80	9,030
Liguria (6th rate) Genoese (Italian) pirate	12-18#, 4-12#, 10-6#	1170	120	9,477

Ratio 1.0-1.0

18.2 Scenario 2

Ship	Armament	H.V.N.	Crew	P.V.N.
Ville de Milan (40) (5th rate) French	26-18#, 20-8#	2200	350	189,970
H.M.S. Cleopatra (32) (5th rate) British	26-12#, 2-6#, 10-24#c	1562	200	173,382

Ratio 1.1 (French) – 1.0 (British)

18.3 Scenario 3

Ship	Armament	H.V.N.	Crew	P.V.N.
H.M.S. Pelican (Brig) British	16-32#c, 2-6#	770	113	49,280
U.S.S. Argus (Brig) American	18-24#c, 2-12#	632	125	43,608

Ratio 1.1 (British) – 1.0 (American)

18.4 Scenario 4

Ship	Armament	H.V.N.	Crew	P.V.N.
U.S.S. Wasp (Sloop) American	16-32#c, 2-12#	900	140	72,450
H.M.S. Frolic (Brig) British	16-32#c, 2-6#, 1-12#c (pivot gun)	934	110	63,979

Ratio 1.1 (American) – 1.0 (British)

18.5 Scenario 5

Ship	Armament	H.V.N.	Crew	P.V.N.
U.S. Constellation (36) (5th rate) American	28-18#, 12-12#, 10-24#c	2556	310	564,365
Vengeance (40) (5th rate) French	28-18#, 16-12#, 8-42#c	2360	350	280,368

Ratio 2.0 (American) – 1.0 (French)

18.6 Scenario 6 – The Battle of Lake Champlain

Americans

Ship	Armament	H.V.N.	Crew	P.V.N.
U.S.S. Saratoga (6th rate)	8-24#, 6-42#c, 12-32#c	1468	240	215,246
U.S.S. Eagle (Brig)	8-18#, 12-32#c	1000	150	96,600
U.S.S. Ticonderoga (Schooner)	8-12#, 4-18#, 5-32#c	700	112	49,910
U.S.S. Preble (Sloop*)	7-9#	160	30	2,898

* Sloops on inland waters are considered “other” types in Beat to Quarters.

American Galleys

Ship	Armament	H.V.N.	Crew	P.V.N.
Allen	1-24#c	80	60	1,680
Borer	1-24#c	80	60	1,680
Ether	1-24#c	80	60	1,680
Linnet	1-24#c	80	60	1,680
Netley	1-24#c	80	60	1,680
Nonsuch	1-24#c	80	60	1,680
Oregon	1-24#c	80	60	1,680
Preble	1-24#c	80	60	1,680
Saratoga	1-24#c	80	60	1,680
Tench	1-24#c	80	60	1,680
Viper	1-24#c	80	60	1,680

British

Ship	Armament	H.V.N.	Crew	P.V.N.
H.M.S. Confiance (6th rate)	3-24#, 18-32#, 10-24#c	1580	340	195,764
H.M.S. Linnet (Brig)	16-18#, 2-24#c	830	120	53,196
H.M.S. Chub (Sloop)	10-18#	380	80	12,636
H.M.S. Finch (Sloop)	7-18#	270	70	7,938

British Gunboats

Ship	Armament	H.V.N.	Crew	P.V.N.
Gunboat #1	1-32#c	50	30	1,020
Gunboat #2	1-32#c	50	30	1,020
Gunboat #3	1-32#c	50	30	1,020
Gunboat #4	1-32#c	50	30	1,020
Gunboat #5	1-32#c	50	30	1,020
Gunboat #6	1-32#c	50	30	1,020
Gunboat #7	1-32#c	50	30	1,020
Gunboat #8	1-32#c	50	30	1,020
Gunboat #9	1-32#c	50	30	1,020
Gunboat #10	1-32#c	50	30	1,020
Gunboat #11	1-32#c	50	30	1,020
Gunboat #12	1-32#c	50	30	1,020

18.7 Scenario 7

British

Ship	Armament	H.V.N.	Crew	P.V.N.
H.M.S. Leander (50) (4th rate)	22-24#, 22-18#, 6-12#	1762	350	276,792
H.M.S. Falcon (Brig)	14-32#c	600	110	17,640
H.M.S. Diamond (38) (5th rate)	26-18#, 10-9#, 2-6#	1620	300	224,640

French

Ship	Armament	H.V.N.	Crew	P.V.N.
Buonaparte (18) (Brig)	18-8#	584	146	11,680
Sans Culotte (12) (Schooner)	8-12#, 4#c	324	81	5,346

Bombay Marine

Ship	Armament	H.V.N.	Crew	P.V.N.
Nautilus (14) (Brig)	10-18#, 4-9#	370	100	11,655
Fly (10) (Snow)	10-6#	360	80	5,400

18.72 What If No. 2

Ship	Armament	H.V.N.	Crew	P.V.N.
Commerce de Poitiers (74) (3rd rate) French	28-36#, 30-24#, 16-8#, 4-36#c	3738	690	990,944
U.S.S. Constitution (44) (4th rate) American	30-24#, 22-32#c	3152	470	971,446

Ratio 1.0 – 1.0

Bonus Scenario No. 1: Privateer Hunting

French

Ship	Armament	H.V.N.	Crew	P.V.N.
Buonaparte (18) (Brig)	18-8#	584	146	11,680
Sans Culotte (12) (Schooner)	8-12#, 4#c	324	81	5,346

Bombay Marine

Ship	Armament	H.V.N.	Crew	P.V.N.
Nautilus (14) (Brig)	10-18#, 4-9#	370	100	11,655
Fly (10) (Snow)	10-6#	360	80	5,400

Bonus Scenario No. 2: Hypothetical

British

Ship	Armament	H.V.N.	Crew	P.V.N.
H.M.S. Ajax (74)	28-32#, 28-18#, 18-9#, 2-32#c, 6-18#c	3268	586	1,346,416
H.M.S. Trident (64)	26-24#, 26-18#, 12-9#, 8-24#c	2770	485	897,480
H.M.S. Doris (36)	26-18#, 2-12#, 8-9#, 8-32#c	1894	251	327,662

Americans

Ship	Armament	H.V.N.	Crew	P.V.N.
U.S.S. United States (44)	30-24#, 20-42#c	3066	470	1,005,648
U.S.S. Constitution (44)	30-24#, 22-32#c	3152	470	970,816
U.S.S. Chesapeake (36)	28-18#, 20-32#c	2488	340	589,656

18.8 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 fiction on the period, or by studying some of the references listed in the bibliography.

19.0 Miscellaneous Information

19.1 Authors of Napoleonic Naval Fiction Series

C.S. Forester

Adam Hardy

Edwin P. Hoyt

Alexander Kent

Ellis K. Meacham

Patrick O'Brian

C.N. Parkinson

Dudley Pope

Simon White

19.2 Where to Get 1/1200 Ship Models

G.H.Q. makes an excellent line of Napoleonic men o'war. They are true to scale and come complete with sails and masts. The following is a listing with sample prices as of August, 1980:

Model	Price
120 Gun Ship of the Line	$5.00
80 Gun Ship of the Line	$4.35
74 Gun Ship of the Line	$3.95
40 Gun Frigate	$3.50
32 Gun Frigate	$3.00
20 Gun Sloop	$3.00
18 Gun Brig	$2.00
8 Gun Schooner	$2.00

G.H.Q.
2634 Bryant Avenue South
Minneapolis, Minn. 55408

Tortuga Productions makes a suitable line of Napoleonic men o'war. They are actually from the molds originally made by Bob Santos. The detail is not as great as G.H.Q., and they tend to be a bit large for each class, but they are really nice models. They also come complete with masts and paper cutout sails. About 75% of the author's ships are from this line. The following is a listing with sample prices as of August, 1980:

Model	Price
120 Gun Ship of the Line	$4.00
100 Gun Ship of the Line	$3.50
74 Gun Ship of the Line	$3.00
50 Gun Ship (Razee)	$2.75
Frigate (38–40)	$2.50
Sloop	$1.50
Brig	$1.25
Bomb Ketch	$1.25
Privateer (Schooner)	$2.00
Bermuda Sloop (Trader)	$1.00
Trabacolo	$1.00
Merchant Schooner	$1.25
Cutter	$0.75
Gun Boat	$0.75
Schooner–Gunboat	$1.00

Tortuga Productions
206 Downes Road
Greensburg, Pa. 15601

Valiant Miniatures makes a line of Napoleonic men o'war nearly as detailed as G.H.Q. They claim to be in 1/2000 scale, but the following were a lot closer to 1/1200 (prices as of August, 1980):

Model	Price
Mediterranean Galley (qty. 3)	$4.50
Xebec (qty. 3)	$4.50

Ship's Boats (qty. 15)	$4.50
Fortress (pentagon shape)	$4.50
Floating Batteries	$4.50

Valiant Miniatures
5040 W. Irving Park Road
Chicago, Illinois 60641

1/1200 Base Sizes for Ships (measurements in millimeters)

Rate	Size
120	85x20
100	75x30
80	65x25
74	65x25
64	62x25
50	60x25
44,42,40	60x25
38	50x20
32	50x20
Sloop	40x20
Brig	35x15
Schooner	30x15

20.0 Designer's Notes

When I set out to design Beat to Quarters I was attempting to recreate sailing ship warfare in 1/1200 scale as accurately as possible, while keeping it at a highly playable level. In short, I wanted players to feel like ships' captains, rather than ships' clerks. To accomplish this I spent many hours, during an eight year period, going over every conceivable reference work on the subject. One book's bibliography would lead me to another, and so on, until I had amassed a huge stack of notes. Once I had all of this material before me, I began working on ways to synthesize it into the most precise form that I could.

Any fool could tell at a glance that the British were a cut above their European enemies, but I wanted to know how far above. I wanted to be able to set a definite value on the abilities of all participants. On land, owing to the quantity of troops and myriad variables, it would be very difficult to pin down the specifics required to make an accurate assessment of capabilities. At sea, however, fighting units are contained in the area of their ships, thus

making it easier to isolate and examine them more fully. Realizing this made my burden a little lighter.

Developing a formula which allowed me to accurately gauge the performance of one ship against another took some time, but once I accomplished this, I was able to compare how well the ships should have fought with how they actually fought. After compiling data for over two hundred actions, I averaged out data for each nationality and ran it through some more systems. The result was a set of reasonably accurate figures reflecting the percentage of effectiveness at which average ships of each nationality could be expected to fire.

To complete the gunnery section of my rules I developed a table of probabilities of hits at various ranges based on weapons tests of the era. I then reduced this to a formula which included modifiers for different shot types.

Once gunnery was taken care of, my next concern was that of accurate boarding actions. This presented almost as much of a problem as did gunnery.

Send rules questions and inquiries to:

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