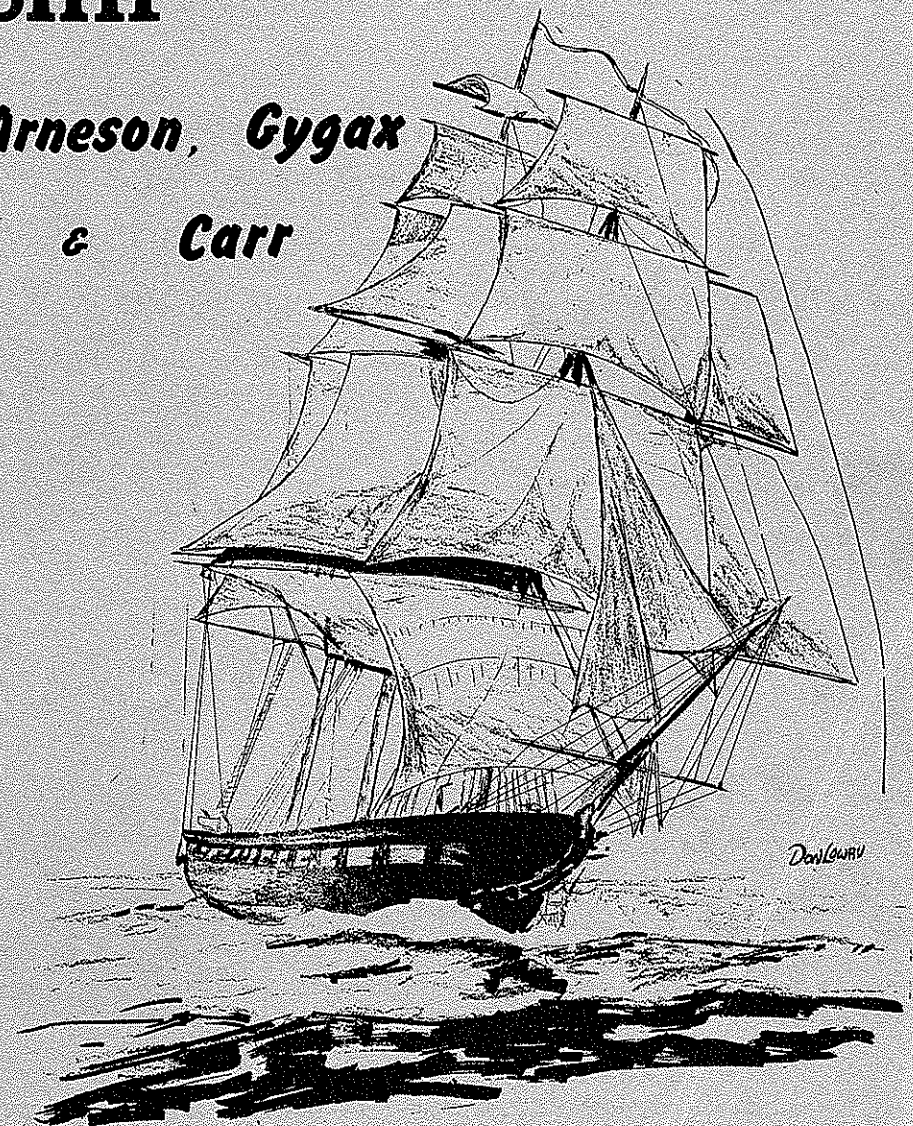


DON'T GIVE UP THE SHIP

RULES FOR THE GREAT AGE OF SAIL

*Arneson, Gygax
& Carr*



 **GUIDON GAMES**
"WARGAMING WITH MINIATURES"

Brian J. Blume



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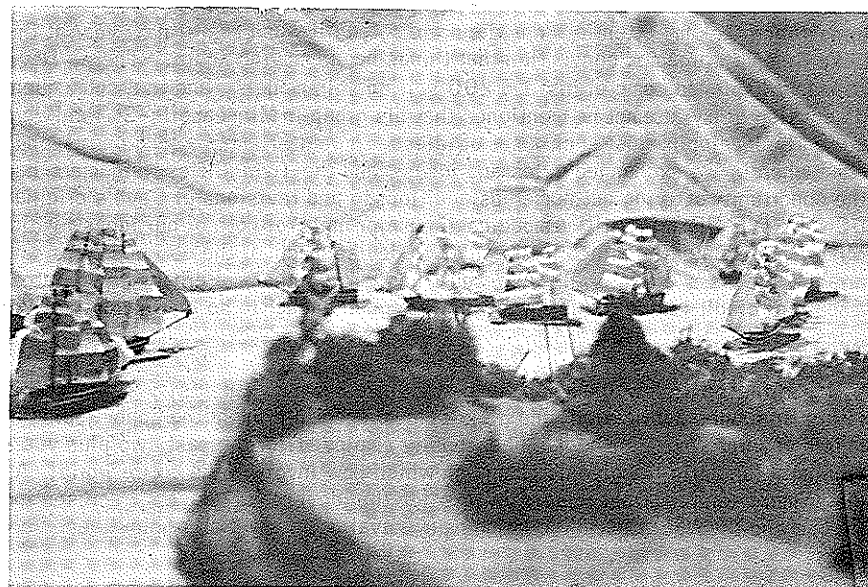
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These rules have been extensively researched and playtested in order to assure the reader a simulation which is worth his while. No matter how thorough the designers have been, however, it is likely that some readers will have questions regarding rule interpretation, feel that some important aspect of sailing ship actions has been omitted, or that an error has been committed in the mechanics of play. All such questions or comments are welcome. They should be addressed to either: Guidon Games, P. O. Box 1123, Evansville, Indiana 47713; or directly to David Arneson, 1496 Hartford Ave., St. Paul, Minnesota 55116. In order to assure a reply please state all questions clearly, leave plenty of room after each for a reply, and enclose a stamped return envelope.

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Foreword

In this modern age of rockets and atomic power we are still surrounded by the romance of sailing ships. Movies and TV bring piratical adventures into our living rooms. Countless novels depict the adventures of seagoing protagonists, such as C. S. Forrester's well-known Horatio Hornblower series. Our history books are packed with the exploits of such American folk heroes as Oliver Hazard Perry, Stephen Decatur, and John Paul Jones. Despite this, sailing ships have been overlooked in the wargaming hobby. With the publication of the DON'T GIVE UP THE SHIP, "Rules for the Great Age of Sail," this unfortunate neglect has at least partially come to an end.

The recreation of historic epochs' battles and campaigns through employment of miniature figures has recently gained some little popularity in this country, while in Great Britain the hobby has been enthusiastically followed for years. It appears to be gathering an ever increasing number of adherents both here and abroad, as evidenced by the new publications aimed at this segment of the wargaming public. However, while many sets of rules are available for most periods--Ancient, Medieval, Napoleonic, and so on--to my knowledge this is the first effort at formalizing a body of rules to aid the hobbyist to recreate battles at sea from the days of the American Revolution to the War of 1812.

During 1968 I began to gather material in an attempt to devise some sort of rules to encompass the single-ship actions of the War of 1812, but it soon became apparent that the task was going to require more than an offhand effort. Other

things soon took my attention from the project, and it wasn't until next year at the Lake Geneva wargames convention that things began moving again. There, Dave Arneson displayed some of his 1:1200 sailing ship models, and in a subsequent discussion of my attempt he mentioned that his group in Minneapolis-St. Paul were currently developing just such a set of rules. Thereafter began a long correspondence wherein we exchanged rules and ideas, and the Twin Cities wargamers had the opportunity of trying out numerous additions to and revisions of Dave's original. DON'T GIVE UP THE SHIP embodies the major parts of both of our ideas, while Mike Carr eventually joined us in order to devise much of the optional rules and arrange the mass of material Dave and I had put together. Perhaps the greatest amount of credit is due the fellows who were good enough to so thoroughly test the rules.

Mr. Arneson is a wargamer of long standing and many talents. Although this is his first rules publication, and he is seldom seen in print in the hobby journals, it is not surprising, for he has been busily employed for the past two plus years running a fantastic Napoleonic campaign which now involves the entire world! As the primary referee Dave orders events for the dozens of players representing Europe and the Near East, including many naval actions which employ these very rules.

Mr. Carr needs no introduction to most Guidon Games buyers, for his FIGHT IN THE SKIES WW I air wargame has been well received by all who have played it. Mike also is an old time wargamer who has contributed many articles to the hobby press. It is hoped that we will be seeing still more of him soon.

The DON'T GIVE UP THE SHIP rules are valuable to the lone enthusiast, for with them he will be able to enjoy solitaire battles. Besides this booklet only a few metal castings of sailing ships are needed. An opponent, or several other players forming teams, will usually develop more excitement and challenge, however, thus generating more satisfaction from the games. Even large multiple-ship actions will not require too much space--actually the players themselves will need more room than the ships do to maneuver and fight--so you will have few problems all around!

As far as material to select battles from, there are many possibilities. There are actions outlined within the rules themselves. The "Hornblower" series, already mentioned, provides wonderful scenarios. Any good book of American history should furnish enough information for the reader to recreate the battles on the Great Lakes, Lake Champlain, etc. The latter type of research may well inspire entire campaigns. The possibilities are boundless, as will be the enjoyment of exploring them.

Whatever form of wargaming you enjoy most, you will find that miniature sailing ship battles have brought diversion and new interest to your hobby, not to mention the new scope of action which will enter into military miniatures campaigns through the element of sea power.

Gary Gygax,
Guidon Games Miniature Rules Editor

1 June 1972
Lake Geneva, Wisconsin

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STANDARD GAME, Basic Rules

INTRODUCTION

"Don't Give Up The Ship!" is designed to allow players to recreate naval warfare of the French Revolutionary and Napoleonic eras. They are presented in hopes of encouraging the play of naval sailing ship miniatures, and these rules are designed to be realistic yet reasonably playable in attempting to simulate, ship-to-ship, such combat.

Those of you who have yet to fight your first naval engagement would be well advised to peruse the following, acquainting yourself with the terms, and obtaining a general knowledge of the rules. You can then proceed to the simplified training game immediately following these Basic Rules. The training game limits some of the complicating factors of the Basic Game, and will allow you to easily learn the mechanics of play.

A number of actual historical actions of the period are included so that players are assured of a variety of different battles to fight according to their choice. Although the rules are well suited to single-ship actions, they are just as easy to use in squadron actions, given more time and more players.

1. Equipment and Space Needed

Here is a rundown of equipment needed for play:

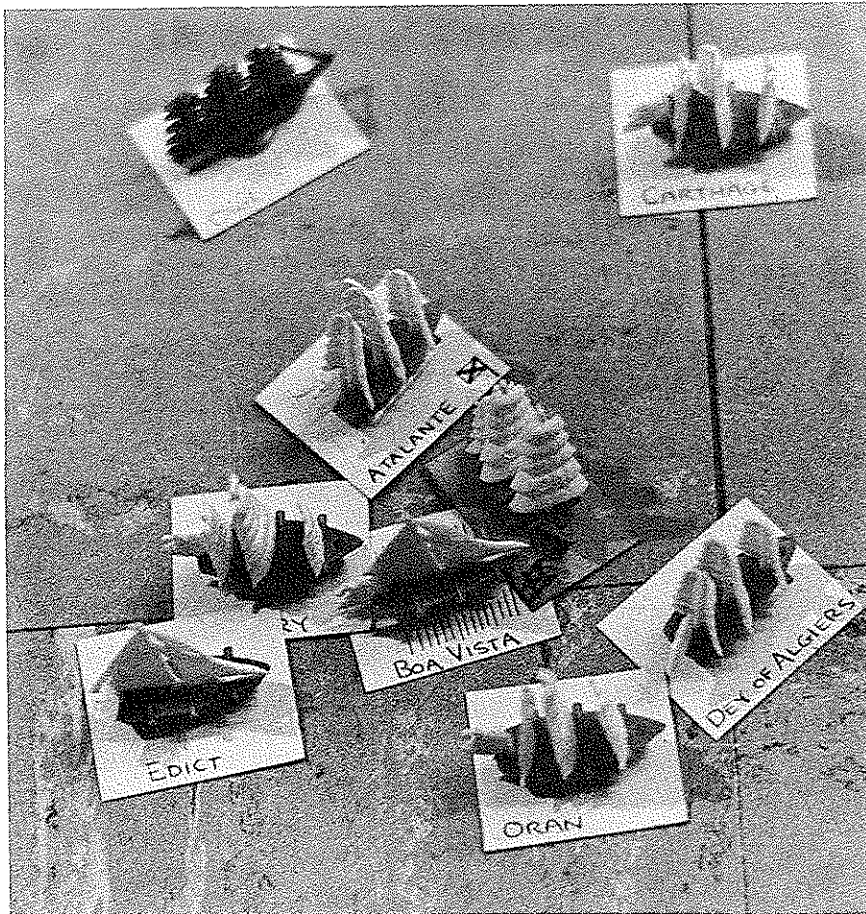
Pencils and paper (an ample supply will be helpful for recording ship specifications, battle damage, computations, etc.)

Dice (several different types, differentiated by size or color, will be most helpful)

Rulers (these serve as measuring sticks for moving and firing, and one should be provided for each player; 12 and 18 inch rulers are recommended, and tape measures are likewise useful)

Protractor (this will be very helpful in determining movement and firing angles. Clear plastic protractors are best, but any type will suffice)

Wind Direction and Force Indicator (this can be simply a piece of tape affixed to the playing surface for easy reference, or any other means you find most convenient)



Ship Models (these should be close to 1:1200 scale)

Space--Playing space may vary from a small tabletop (say 9 sq. ft.) for single-ship actions to a large area of floor space (100 or more sq. ft.) for fleet engagements

II. Turn Sequence, Playing Scale and Gun Range

Turn Sequence:

1. Players write orders showing direction and length of move, firing orders including target and aim (high or low).
2. Movement is simultaneous and at its end firing and damage are determined; morale is checked if losses warrant.
3. Boarding operations, if any, are conducted.
4. Steps 1 - 3 are repeated.

Scale and Ranges:

Each turn of play is considered to be approximately 5 minutes in scale time.

One inch is considered to represent approximately 100 yards, with the ranges of the various caliber guns as follows:

<u>Long guns</u>		<u>Carronades</u>	
42#	16"	68#C	6.4"
36#	15.5"	42#C	5.8"
32#	15"	36#C	5.5"
24#	14"	32#C	5.4"
18#	13"	24#C	5.2"
12#	12"	18#C	5.0"
9#	10"	12#C	4.3"
8#	10"		
6#	10"		
4#	10"		
3#	10"		

As explained later, firing is done at A, B, C, and D ranges. This listing merely shows maximum ranges for guns of each type.

III. The Ships

The different size ships are represented in the following five classes:

Class I	Brigs and Gunboats of up to approximately 300+ tons
Class II	Sloops and Corvettes of up to approximately 500 tons

Class III	Ship-sloops and Frigates of up to approximately 1000 tons
Class IV	Large Frigates, Razees (cut down ships of the line), and small Ships of the Line up to approximately 1500 tons
Class V	Ships of the Line greater than 1500 tons and merchant ships or transports of all sizes

IV. Sails and Masts

Class I vessels have two masts and set 6 sails when in combat, while all other ships of the other four Classes have three masts and set 10 sails in combat. Loss of sails and masts reduces a ship's speed accordingly: Class I vessels lose 16% (1/6) speed for every sail lost and 50% (1/2) speed for each mast lost, while all other ships lose 10% (1/10) speed for each sail lost and 33% (1/3) for each mast.

Sail repair replaces sails that are lost (as long as the mast is still standing, of course) and usually takes no more than one turn. Once sails are repaired, speed is regained once again.

Loss of a mast is serious damage, and reduces the ship's speed for the rest of the engagement. On ships above Class I this, of course, means that ships losing one mast are reduced in speed by 33%, those losing two masts by 66%, and those that are dismasted by 100%. Ships that are dismasted may rig temporary sails (jury rigging), and after 3 turns of doing so may move at 10% speed. Continued work may be done with another 10% gain after 3 more turns, up to 40% speed after an hour's (12 turns) work.

The "Crew Tasks" optional rule shows in more detail what it takes to sail and maneuver the ships of various types, and can be used by players once they have become familiar with the basic set of rules.

V. Wind Direction and Force

Before play begins it is necessary to determine the Force and Direction of the wind. You may wish to arbitrarily set compass directions, but it is usually advisable to set them according to actual direction to eliminate confusion. Once this is done the ships are placed on the playing surface, and then the wind conditions are determined.

Two dice are used to determine Wind Direction (for our purpose one is white and one is red), and they are rolled to obtain "even" or "odd" results, and then compared with this list of results:

Red "even" equals a wind from the North or South
Red "odd" equals a wind from the East or West
White "even" equals a wind from the North or East
White "odd" equals a wind from the South or West

These results are compared, and whatever Direction matches is the cardinal point, with one further roll of a single die necessary to determine final Wind Direction on this table:

- 1 Two points left of the cardinal point
- 2 One point left of the cardinal point
- 3 Cardinal point
- 4 Cardinal point
- 5 One point right of the cardinal point
- 6 Two points right of the cardinal point

Now that the Direction of the wind has been determined, two dice are thrown to determine the Force of the wind on this table:

2	Force 3	
3-5	Force 4	
6-8	Force 5	
9-11	Force 6	
12	Force 7	

Subtract one spot if the engagement is occurring within the Tropics of Cancer and Capricorn.

Further rolls are usually taken once every hour (12 turns) thereafter as follows for force and directional changes:

2-4	Wind drops one level
5-9	Wind does not change
10-12	Wind increases one level

1	Wind changes one point left
2-5	Wind does not change direction
6	Wind changes one point right

Once Wind Direction Force has been determined, the base speeds for the ships are indexed on this chart:

WIND FORCE		SHIP CLASS					DRIFT
		I	II	III	IV	V	
0	Calm	-	-	-	-	-	-
1	Slight air	6	4	5	2	-	.2
2	Light breeze	8	7	7	4	2	.4
3	Gentle breeze	9	10	9	7	4	.6
4	Moderate breeze	10	13	11	8	6	.8
5	Fresh breeze	12	12	13	10	8	1
6	Strong breeze	11	11	12	13	10	1.2
7	Moderate gale	9	10	11	9	9	1
8	Fresh gale	6	8	7	7	8	.8
9	Strong gale	3	5	6	5	7	.6
10	Full gale	2	2	4	3	5	.4
11	Storm	1	1	2	1	2	.2
12	Hurricane	$\frac{1}{2}$	$\frac{1}{2}$	1	$\frac{1}{2}$	1	-

VI. Movement

Movement is simultaneous and is preceded by secret order writing recorded by each commander of a ship or battle line. After all movement orders have been written the ships are moved as noted. The basic rules for movement are as follows: Ships move in any of the directions corresponding to the eight points of the compass (N, NE, E, SE, S, SW, W, NW), and turns of 45 degrees are the only variations of direction allowed. Sailing speeds vary according to the ship's course and the direction of the wind and the following guidelines are important in determining the maximum movement on any given turn--

Stopped ships may turn in place (45 degrees per turn), and may elect to either drift or maintain their position. If they drift, they do so at the rates indicated depending on the force of the wind.

Ships may never move directly into the wind, but they may tack (turn across the wind) by turning into the wind and stopping. Tacking takes one full turn of holding position, with only turns possible.

Ships moving across the wind (broad reaching) move at their base speed. Ships running before the wind (downwind) may move $1\frac{1}{2}$ times their base speed, as may those who are running with the wind behind them and off to either side at a 45 degree angle (quarter reaching). Ships proceeding with the wind coming toward them 45 degrees off the bow to either side (close hauling) move only half of their base speed.

Turns, permissible once during any portion of the movement, cause the ship to lose an additional 10% of its speed; one 45 degree turn per turn is maximum.

Gaining or losing speed by making or shortening sail is permitted each turn at the player's direction. Maximum gain or loss of headway per turn is limited to half of the ship's full speed. For instance, a ship just making sail from a stop could only get up to 4" the first turn if his top speed was 8", making the maximum on the second move. The only time a ship will lose its headway is by turning into the wind, at which time it must stop.

Battle damage to masts and sails may further reduce speed as explained previously.

Exactness in movement and maneuver is always important, and players should never become careless in moving. When making the 45 degree turns, orient your movement to the edges of the playing surface (walls of a room, edges of a table, or whatever). For those desiring more variation in movement, use of the optional rules is recommended.

VII. Determining Values for Guns, Crew, and Sails

Vessels with different specifications of guns, crew and tonnage possess different characteristics under the rules. These differences are reflected in the different values assigned to each individual ship.

A. Guns: For game purposes, the total number of guns of each caliber is

divided by 3 (except 42# guns, which are divided by 4) to determine how many "fire factors" of each caliber can be fired by the ship. Then, this total may be fired off each side of the ship. It will often occur that when using historical armaments of ships there will be odd numbers of guns left over after dividing by 3 to determine fire factors. Except for chase guns, which are explained below, fractional fire factors fire as if they were full fire factors; however, if they score a hit they do only a fraction of damage full fire factors score. Thus, if a single 18# fired and scored a hit it would cause only 6 points of damage, and if there were two a total of 12 points of damage would be scored by the hit. Taking an example to illustrate, a 36 gun Frigate mounting 36 individual cannons or carronades would be able to fire 6 fire factors off each side of the ship.

Since one fire factor means one die rolled when shooting is done, it is a simple conversion to determine how many dice are rolled for each gun caliber. If the Frigate mentioned above mounted a total of 30-18# long guns, and 6-8# long guns, a broadside from this ship would be represented by 5 dice for 18-pounders and a single die for 8-pounders. Details on shooting and damage are in Part VIII.

The ship's size as reflected by its listed tonnage is important in determining values for crew and sail losses. These are explained below.

- B. Crew: One Crew Factor (CF) is considered to be 21 men, and the number of crew factors on board a ship is easily determined by dividing its listed complement of men and boys by 21. The value of each Crew Factor is further determined by dividing the total number of Crew Factors carried on the ship into the ship's tonnage. The resultant Crew Factor Value reflects the number of points of Low Damage scored upon the ship which will kill 1 CF. Note that 1 Crew Factor does not necessarily represent 10% of the crew. To determine the amount of Low Damage necessary to kill 10% of the crew, simply divide the total CF's by 10, and multiply the CF Value by the result. Example: 15 CF's x .10 = 1.5 CF; 1.5 CF's x 63 (CF Value) = 94.5 (10% Crew Loss). This 10% factor becomes important when battle damage on the deck dictates consideration of the crew's efforts to maintain morale. Morale is further explained in Part IX.
- C. Sails: As already explained in Part IV, damage aloft affects speed. The Sail Factor Value (SF value) is important in determining this, and each ship's sail factor value is determined by dividing the ship's tonnage by 20. If the Frigate mentioned above was of 900 tons, its Sail Factor Value would be 45. Since this ship is ranked at Class III, it carries three masts and sets ten sails; therefore, damage of 45 points aloft would take down one of the sails, and damage of 135 points (3 x 45) aloft would take down one of the ship's three masts.

Class I vessels which have two masts and set ten sails in combat have an SF value that is determined by dividing the tonnage by 12 instead of 20. With Class I vessels it is important to remember that the loss of each mast results in a 50% loss of speed instead of the 33% loss for other ships of other sailing classes. Because of their diminutive size, you will find that Class I ships can take very little damage before suffering severe losses.

- D. Damage Causing Sinking: When low damage equals or exceeds 70% of the ship's tonnage (that is, when 70% crew loss causes a morale check) it is in danger of sinking. As more damage is inflicted the danger becomes worse, and at 100% the ship will automatically sink within two turns. However, prior to the 100% point, CF's can be assigned to repair and pumping duties to keep the ship afloat:

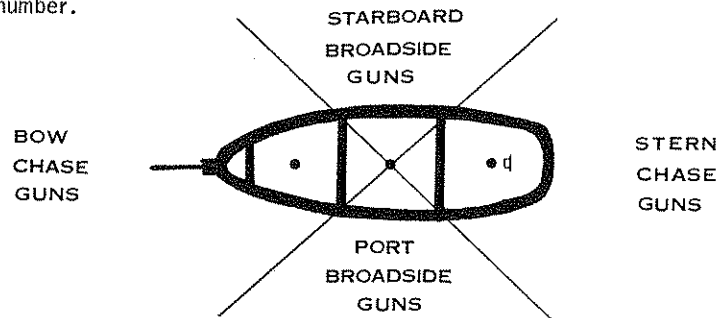
Damage	Number of CF's or--	Sink in # Turns
70-79%	3/4/ship class	16 turns
80-89%	1/2/ship class	8 turns
90-99%	1/ship class	4 turns

For example, a Frigate of Class III receives 74% low damage. It has up to seven turns to assign 3/4 CF to repair and pumping duty or it will sink in sixteen turns; as soon as low damage equals 80% it has up to seven turns to assign another 3/4 CF to these duties, etc.

VIII. Cannon Fire, Range and Damage

- A. Fire: You may fire one fire factor (any caliber) for each crew factor detailed to serve the guns, up to your maximum complement of guns aboard. The frigate used as an example above would require 6 CF to man the guns on one side of the ship, and a total of 12 CF to man all the guns aboard. In the event that battle damage or boarding parties has reduced the number of Crew Factors aboard a ship, the surviving Crew Factors may be detailed to perform specific duties (such as firing some or all of the guns). This is discussed more specifically in the "Crew Tasks" optional rule.

Besides possessing the ability to fire a full broadside off each side of the ship, all vessels possess the ability to fire a limited number of guns off both the bow and stern (always one fire factor, meaning one die). These guns are "chasers" and are usually of the largest caliber carried on the ship (long guns, not carronades). Bow and/or stern chasers are usually the best guns carried on the ship, and utilize special gun-laying arrangements for better accuracy. This is reflected by allowing chase guns to score normal damage, even though they may be slightly inferior in number.



The fields of fire of the various guns on board are divided into four quadrants, as the illustration (for a 74 gun ship of the line) shows. The field

of fire for chase guns is off the bow and stern, within 45 degrees left or right of the ship's course. Broadside guns may fire off the sides of the ship as shown. Chasers can usually be fired on any turn, unless all the guns are being used in broadsides off both sides of the ship. In all cases measurements are taken from the main mast, and this is also true when firing ranges are determined by the distance in inches from the firing ship's main mast to the target ship's main mast.

B. Range: Firing is done at either A, B, C, or D ranges, and the person firing must declare whether his shots will be directed high (to damage the enemy's sails or masts) or low (to incur crew losses); if he fails to declare where the shot is directed, it is assumed to be aimed low. Ships that take damage, then, must make separate notations for damage taken high and damage taken low. The fire table is as follows:

A RANGE (up to 4")	aiming high 1, 2, 3 hits high 4 hits low 5-6 misses aiming low 1, 2, 3 hits low 4 hits high 5-6 misses
B RANGE (up to 8")	aiming high 1, 2 hits high 3 hits low 4, 5, 6 misses aiming low 1, 2 hits low 3 hits high 4, 5, 6 misses
C RANGE (up to 12")	aiming high 1 hit high 2 hits low ($\frac{1}{2}$ value) 3-6 misses aiming low 1 hit low 2 hits high ($\frac{1}{2}$ value) 3-6 misses
D RANGE (up to 16")	aiming high 1 hit high ($\frac{1}{2}$ value) 2-6 misses

As you may note, firing at D Range is always aimed high.

C. Damage: One die is thrown for each Fire Factor as explained above. Damage is scored on hits equivalent to the poundage of the guns firing. For example, if one 18# fire factor is a hit, it scores 18 points damage. Simply, one point of damage is inflicted for every pound of shot weight in a fire factor.

D. Fire and Damage Multipliers: All ships receive an opening broadside multiplier of $\frac{3}{2}$ for the first time they fire their broadside guns in an engagement (they may fire chasers prior to the opening broadside and still maintain the capability), and this means that the damage scored on that broadside is multiplied by $\frac{3}{2}$ (for example, an 18# hit would score 27 points damage if it was part of an opening broadside). Of course, the opening broadside advantage is used on only one turn, and after that time all firing is normal.

Ships or floating batteries riding at anchor have an increased range that is $\frac{3}{2}$ their normal range (for instance, the maximum range of a 12# from an anchored vessel would be 18"). Likewise, the extent of A, B, C, and D ranges for these guns is also increased: A range is up to 6", B range is 6-12", C range is 12-18", and D range is over 18".

E. Land and Fixed Guns and Hot Shot: Land guns fire 3 times as fast as ship-mounted guns, and therefore one die is thrown for each gun firing. Like guns fired from an anchored position, the range of land guns is $\frac{3}{2}$ their normal range. And the A, B, C, and D ranges are increased in the same way. Of course, an anchored ship's mobility is seriously impaired, so this advantage is not all that it may seem to be.

Raking shots that give the firing ship a multiplier of 2 are possible at A range if the firing ship is off the target ship's stern or bow at a near 90 degree angle (for purposes of measurement, within 20 degrees left or right will also mean a raking shot is possible). With a multiplier of 2, raking shots score double damage. "Hot shot" (red hot cannonballs) may be fired from prepared fortifications if it is heated up several hours in advance. Hot shot has a chance to start a fire when it hits a ship low--for every 36 points scored low, there is a $\frac{1}{6}$ chance of fire starting. Fires are discussed in the appropriate optional rule.

Land batteries can be silenced by naval gunfire after a number of hits low (any hits high are disregarded). A gun battery (6 guns) on open ground, unprotected, is silenced by taking 36 pts. A battery that is dug in and somewhat protected is silenced by taking 180 pts. A fortified battery with maximum protection is silenced only after taking 900 pts. When a land battery under bombardment takes half the hits needed to silence it, its fire is reduced to half value.

IX. Boarding, Morale, and Melee

A. Boarding: When ships are within 1" of each other (measure between hulls) they have the option to attempt to grapple. If the two ships are touching or if the ship to be grappled is stopped, the grapple is automatic. Normally a roll of 1, 2, or 3 is necessary for a successful grapple, except when the two ships are heading in roughly opposite directions in which case a 1 must be rolled to grapple. Cutting a grapple is possible on any turn after it is first thrown across, but the grapple cannot be cut without the consent of the crew on the other vessel. Of course, this usually means after a spirited boarding battle, and it is not possible to cut a grapple while the crew is involved in a melee. Control of both upper decks is necessary to cut a grapple.

Boarding takes place after a ship has grappled another and the attacking ship details a boarding crew (in written orders) out of the total number of Crew Factors he has on his ship. He may send up to the full complement he has aboard (minus bettle losses, of course) or he may detail some to stay behind (perhaps to operate some of the guns not shielded by the enemy ship, or perhaps as a reserve). Then the defender declares how many of his Crew Factors are available to repel the boarders, and odds are figured.

Odds for boarding battles are dependent upon a number of factors, among them the Morale Multipliers of the crews of each ship and the Morale conditions that each crew is under according to battle losses they have suffered.

Morale: The Morale Multipliers for historical actions listed below reflect the fighting ability and general "staying power" of crews from each of the respective nations:

United States, Russia	4 point Morale	saving throws: 2-10
Great Britain, Netherlands	3 point Morale	saving throws: 2-9
Sweden, France, Denmark	2 point Morale	saving throws: 2-7
Spain and other countries	1 point Morale	saving throws: 2-6
Privateers or soldiers (any nation)	1 point Morale	saving throw: 1

The Morale point value of crews from a specific nation indicates their Multiplier in figuring odds for a boarding battle (for example, British boarders would get a Multiplier of 3 in boarding actions). The numbers indicated as saving throws are the two dice rolls needed to maintain Morale when Morale rolls are necessary (Morale rolls are taken on the turn a mast is lost, and are taken for every 10% of Crew Factors lost due to enemy fire; of course, this means a roll every time a mast falls and every time Crew Factor losses rise past another 10% mark). If a saving throw is not rolled, the crew's Morale drops one step and the following table is consulted:

Crew	Turns	Multiply fire by	Multiply melee value by
Flushed with victory	2	3/2	2
Normal	--	1	1
Shaken	2	1/3	1/2
In disorder	6	1/10	1/5
Routed	18	0	1/30
Surrenders	Until occupied	0	0

Crews that have just successfully completed a contested boarding action rise one step in Morale, and thus it is possible for crews to become flushed with victory for 2 turns. Crews that drop one or more steps below normal are affected for the number of turns indicated on the table, and crews coming up steps in Morale must rise through each step for the number of turns indicated. Thus, if a shaken crew's Morale drops to disorder, it will be in disorder for 6 turns, then will rise to shaken for 2 more turns, and then will finally return to normal (provided any more rolls taken during those turns do not mean another drop in Morale level). A ship whose crew has surrendered will either stop or continue straight on its last heading until occupied. Of course, another friendly vessel may occupy the ship, but the crew which surrendered is unable to resume fighting of any kind for the remainder of the engagement. If an enemy crew occupies the ship, it is considered a prize and reverts to enemy command. However, the prize crew will only attempt to sail the ship to safety, and in no way may it use the enemy's guns for the remainder of the action.

The various multipliers just discussed are all important when boarding odds are determined, and it is sometimes necessary to redetermine odds if various factors change during turns a boarding battle is in progress. This is especially necessary when new Crew Factors enter a melee in

progress, as they receive a multiplier of 2 for the first turn they enter for shock effect.

D. **Melee:** Odds are determined by taking the number of CF attacking x historical morale multiplier x morale condition multiplier vs the number of CF defending x historical morale multiplier x morale condition. These final values are compared, and the odds (1:1, 3:2, 2:1, 3:1, 4:1, etc., on up) are determined in favor of either the attacker or defender. Once the odds have been determined, the base chance of a melee resulting is determined, and one die is rolled according to the odds:

1:1	melee automatically results on 1, 2, 3
3:2	melee automatically results on 1, 2; roll over on 6
2:1	melee automatically results on 1, 2
3:1	melee automatically results on 1; roll over on 5, 6
4:1	melee automatically results on 1; roll over on 6
5:1	melee automatically results on 1

If a melee occurs automatically, the boarding has become a pitched battle for the first turn and further rolls are not taken until the next turn. If, however, a melee does not occur automatically (there is still a chance one may result, though) there is a chance for an immediate decision depending on further die rolls by each player.

The player with superior odds rolls first, and may roll up to the number of dice indicated by the odds in attempts to obtain the best results. In 1:1 battles, each player rolls one die and results are compared with the table on the following page. In 3:2 battles, the player with the edge may roll up to 3 dice, while the defender may roll up to 2 dice. In 2:1 battles the superior player may roll 2 dice while his opponent rolls once. In battles where the odds are 3:1, 4:1, or 5:1 the superior player may roll up to 3, 4, or 5 dice respectively. On odds of greater than 5:1 the same equivalent number of dice is used, but spots may be guaranteed the superior player due to his overwhelming advantage--on 5:1 to 9:1 he automatically adds one more spot on the die; at 10:1 to 14:1 he automatically adds two spots, and so on up, adding one more spot for each extra 6:1 edge.

As mentioned, players try to achieve the highest result on these die rolls. When only one die is rolled, this result must be kept by the player, but when more than one die is rolled, the player has the option to "keep" an early roll if he desires, and is not forced to take the full number of rolls allotted him, even though he has this option. For this reason, the player with superior odds always rolls first so he does not know what his opponent's roll will be. On odds of 3:2 both players roll secretly so that the opponent's roll is not known until results are compared (players should have some non-involved person witness the rolls, or should be of mutual trust). With more than one roll, a player may keep an early roll by indicating he will do so, or he may continue in hopes of getting a better result; however, if he does not take an early roll and continues trying for a better result, he must take his last roll no matter what the result. For example, let us take a player with 3:1 odds in his favor--on his first

roll a 3 comes up. He decides not to keep that result and wants to try for something better. Next he rolls another 3, and deciding to try once more (with the realization that the final roll will be the result kept) he rolls for the third time. If he rolls a 6 on the last roll, he has done as best as possible; if, however, he rolls a 1 on the last roll, he has done as poor as possible, but must stick with the result whatever it is.

After the player with superior odds has rolled (the player at the disadvantage may observe the rolls except in 3:2 situations) his opponent rolls. The results are compared with the following table:

A tie	If first turn, crews meet briefly and repulse each other back to their respective vessels. Either or both opponents may attempt to cut the grapple (needing a 1 or 2 to do so). If the grapple is not severed, the boarding action may resume the next turn. If not first turn, melee results (unless 3rd turn of a melee, in which case both players roll again until a decision occurs).
Difference of 1 spot	Melee results (unless 3rd turn), winner gains one area.
Difference of 2 spots	Loser drops one morale step, winner advances one area.
Difference of 3 spots	Loser drops two morale steps, winner advances two areas.
Difference of 4 spots	Loser drops three morale steps, winner advances three areas.
Difference of 5 spots	Loser surrenders, winner takes vessel.

- D. Ship Areas: Ship areas are foothold, top deck, second deck, third deck, etc. A Brig or Corvette has only one deck, Frigates and Razees two decks, 74 and 80 gun Ships of the Line three decks, 90 to 120 Ships of the Line four decks, and any vessel larger than that (indeed a rarity) has five decks. When all the decks have been taken, the ship has surrendered. Crews holding the upper deck that are attacked from below have a 2:1 multiplier in their favor on the first turn of attack only, but this advantage is lost in a melee. Crew losses in melees are considered to be negligible, and melees must always end on the third turn (players keep rolling until a result is obtained). Once committed to a melee, crew factors may never be withdrawn until the melee is resolved.

To illustrate how boarding odds are determined let us use an example of a Spanish ship with 24 CF (normal morale) attempting to board a British ship with 20 CF aboard that are in disorder. The value of the Spanish boarders would be 24 times 1 (for the Spanish historical morale multi-

plier) times 1 (for having normal morale conditions at the time of the boarding), or 24. The value of the 20 British CF would be 20 times 3 (for the British historical morale multiplier) times 1/5 (for being in disorder at the time of the boarding), or 12. Thus the odds would be 24 to 12, or 2:1 in favor of the Spanish. It is easy to see the importance crew quality has in regard to morale.

X. Victory

Victory is achieved by sinking, capturing, or causing the enemy to flee. In those games which are refights of historical actions, the criteria for victory should be based upon the events of the actual battle by comparison between them and the events of the miniature refight.



Training Game

This is not meant to be anything more than simple instructions as to how to play the very basic rules. As soon as you have familiarized yourself with these basics by going through the mechanics of the Training Game a few times, we recommend that you incorporate all of the rules given in the preceding section on Basic Rules.

Turn Sequence:

1. Players write orders showing direction and length of move, firing orders including target and aim (high or low).
2. Movement is simultaneous and at its end firing and damage are determined.
3. Boarding operations, if any, are conducted.
4. Steps 1-3 are repeated.

Prepare to Play:

Refer to Part I of the Basic Rules, Equipment Needed. Only a small playing area will be needed as only two ships will be used, Class III Ship-sloops or Frigates (see Part III of the Basic Rules). Indicate Wind Direction (Part IV, Basic Rules) as due South, at Force 6. This will not vary during play. Place one vessel in the NW corner of the playing area and the other in the NE corner. You are now ready to fill in your Ship Data Sheets and thereafter write orders for the first turn of play.

Ship Data Sheet:

RATE--The supposed number of guns carried, i.e., 74, 44, 36, etc.

TONNAGE--Ship A: 520; Ship B: 580.

CLASS--Type of vessel (Part II, Basic Rules).

SPEED (in inches)--Speed as indicated by Wind Force (Part V, Basic Rules) minus penalties for losses of sails or masts as explained in Part IV, Basic Rules. (In this case you will fill in 12" for both ships.)

ARMAMENT--Fill in the following guns (see Part VII, Basic Rules):

Ship A: 12-24#C, 15-12# (3 are stern chasers), 3-9# (bow chasers).

Ship B: 12-36#C, 12-12#, 3-6# (bow chasers), 3-18# (stern chasers).

CREW--Fill in the following information (see Part VII, Basic Rules):

Ship A: 230 men (11 CF) -- $(230 \div 21 = 11)$

Ship B: 254 men (12 CF) -- $(254 \div 21 = 12)$

MORALE VALUE--(see Part IX, Basic Rules):

Ship A: 3 point morale

Ship B: 2 point morale

SAIL FACTOR VALUE--(see Part VII, Basic Rules):

Ship A: 26 points $(520 \div 20)$

Ship B: 29 points $(580 \div 20)$

MASTS LOST AT (what number of) POINTS HIGH (damage)--(see Part VII, C, Basic Rules):

Ship A: 78 points, 156 points, 234 points (3, 6, and 9×26)

Ship B: 87 points, 174 points, 261 points (3, 6, and 9×29)

CREW FACTOR VALUE--(see Part VII, B, Basic Rules):

Ship A: 45.5 $(520 \div 11)$

Ship B: 48.3 $(580 \div 12)$

TEN PERCENT LOSS AT (what number of) POINTS LOW (damage)--(see Part VII, B, Basic Rules):

Ship A: 50.1 points (45.5×1.1)

Ship B: 58 points (48.3×1.2)

Orders, Movement and Speed:

Secret orders are now written for each ship showing direction and distance of movement. Part VI of the Basic Rules gives exact movement rules, but for purposes of this game there are only a limited number of moves possible:

1. Directly before the wind--due North: Speed 12".
2. 90 degrees off the wind--due East or West: Speed 9".
3. Stopped, may turn in place 90 degrees: 1.2" Drift due North.

The above speeds are maximum, and ships may move as little as one-third the stated distance. Drift is unchangeable. Write orders very carefully.

Turns, Gun Ranges, and Firing:

After orders have been written they are revealed and the moves carried out. This is one turn (5 minutes scale time).

As soon as ships come within range of each other they can fire. Ranges are:

Long Guns (No "C" after #)--12"
Carronades ("C" after #)--5"

You may fire one-half of your guns (except bow and stern chasers) at the enemy if he is broadside to your ship, and only bow or stern chasers if the enemy is on your bow or stern quarter. These facings are illustrated in Part VII, A, of the Basic Rules.

For every three guns firing you roll two dice, one colored, one white. If the red die shows one or two spots the guns have scored a hit. The white die indicates whether the hit is high (1, 2, or 3) or low (4, 5, or 6). The poundage of the guns firing gives the number of points of damage when a hit is scored.

Example: Ship A is firing broadside at Ship B which will return the fire with its stern chase guns only, for Ship A is in its stern quarter:

Ship A: $\frac{1}{2}$ of 18-24#C $\div 3 = 3$ -24#C factors.
 $\frac{1}{2}$ of 12-12# $\div 3 = 2$ -12# factors.

Ship B: 3-18# stern chasers $\div 3 = 1$ -18# factor.

Damage:

Now, assume that Ship A scores 1 hit high with the 24#C and 1 hit low with the 12#. Ship B fires and misses. Player B records 24 points of Damage High and 12 points of Damage Low inflicted on his ship. Ship B is very close to losing a Sail Factor, and another 11 points low damage will cause 10% losses in total crew.

High damage will not sink a ship, although it will eventually totally dismast it so that it can only drift. Low damage, however, will sink a ship. As soon as low damage equals or exceeds the tonnage of the ship it is in sinking condition. Two turns after this condition has been reached the ship sinks.

Morale Level:

You must check the Morale of your crew periodically by rolling two dice. These checks must be made every time 1 CF is lost and every time a mast is lost.

Ship A: 3 point Morale; saving throws--2-9.
Ship B: 2 point Morale; saving thows--2-7.

At any time a Morale check is made and the dice throw is above the "saving throws" totals shown above, the Morale level of the crew drops one level. If either crew reaches 0 points Morale they surrender. Morale does not go up in this

game, and it does not affect firing. (See Part IX of the Basic Rules for more complete Morale rules.) It is used to determine combat odds for boarding melees.

Boarding and Melee:

As soon as the two ships come within a distance of less than 1" of each other, boarding takes place if either (or both) players so desire. Orders are written detailing as many CF's as desired to board the enemy--some may be held as a reserve or for defense of the ship against boarding by the enemy. If both players order boarding, it makes no difference.

Melee is conducted as follows. The total number of CF's ordered to board are compared to the total number of enemy CF's ordered to defend or board. CF's are first multiplied by Morale level points, however. Thus, if Ship A boarded with 5 CF's at 3 point Morale, their factor is 15; Ship B, defending with 8 CF's at 2 point Morale equals 16. In this example the odds are 1:1. Both players roll a die up to the number of times their odds factor indicates, i.e., the player with 4:1 in his favor would be able to roll up to four times, while the player with but 1 could roll but once.

The object of this die rolling is to obtain the highest number of spots on the die possible. It is done in a manner so as not to reveal the result to your opponent. All permissible rolls need not be taken--if a six is rolled the first time no better result could be had, and further rolls are passed. Opponents now compare the number of spots on their dice:

MELEE RESULTS TABLE

<u>Difference in Spots on Dice</u>	<u>Effect</u>
None or 1	Melee continues next turn
2 spots	Winner aboard enemy, melee continues next turn
3 spots	Winner aboard enemy, melee continues next turn, loser down 1 Morale point
4 spots	Winner in control of entire top deck, loser down 1 Morale point
5 spots	Winner captures ship, loser surrenders

Victory

The sinking of the opponent's ship, or its capture, results in decisive victory. If one ship breaks off the action, and there is no way that its opponent can capture it, the fleeing ship has accepted a defeat, but the victor has gained only a partial victory.

STANDARD GAME, Optional Rules

Merchant Ships and Privateers:

Battles involving merchant ships or privateers are easy to set up and are not very complex. Use the following rules as guidelines:

Merchant ships are of many different sizes big and small, with some of the large vessels of the East India Companies running over 1200 tons. All merchant ships are considered Class V vessels, making them generally slower than warships of most types.

Crews of normal unarmed merchantmen are small, generally being only the size necessary to effectively sail the ship. Consult the "Additional Crew Tasks" optional rule to determine the exact crew needed to sail a ship of a certain size, and choose a crew size near to that figure.

Crews of armed merchantmen run slightly greater, since more men are needed to operate the ship's few guns in case of attack. Remember, it takes about 7 men per gun (21 or 1 CF per fire factor of 3 guns), so crews should include extra men to allow use of the ship's guns. The number of guns carried on an armed merchantman, of course, varies quite a bit, but in most cases 6 or 12 would be a reasonable number. When "inventing" ships add armaments for fictional battles, use reason to arrive at specifications that balance play to the desired degree.

Unarmed merchant ships are, of course, helpless against attack. For this reason (and since they cannot usually outrun a warship), unarmed merchant ships will always surrender after receiving a hit or a warning shot from a ship of war or a privateer. The merchant ships will stop and await boarding, offering no resistance to capture. Only if the enemy ignores the stopped ship and makes no attempt to capture it may the merchant ship again make sail and attempt to escape.

Armed merchantmen will defend themselves, even attempting to repulse enemy boarders should they try to capture the ship by force. Merchant sailors have the lowest morale (like privateers or ship-board soldiers) and are classed at one point morale, with a saving throw of a 1 necessary to retain morale when such rolls are necessary.

Privateers, common during the Napoleonic period, are merchantmen drafted into national service and given letters of marque to attack enemy shipping. Privateers are much like armed merchantmen in regard to the rules governing their use, only they more often act in an offensive nature! The privateer vessels vary greatly in size (usually 600 tons and less), with many being small vessels with an assortment of guns and/or carronades for armament. The privateer crews are, as mentioned, of the lowest morale value, holding on morale throws of 1 only. Crew numbers were high, to board and man prizes.

Privateer vessels usually possess different sailing capabilities, so you may want to roll for the sailing ability of each vessel, with Class I, II, and V types being the most prevalent.

Armed merchantmen and privateers never receive an opening broadside capability.

Additional Crew Tasks:

This optional rule reflects the amount of crew necessary to perform different tasks that are important in battle. When using this rule, it is important to keep track of losses to make sure that sufficient crew remains to do each of the tasks necessary (making and shortening sail, turning, firing the guns, etc.). If there is an insufficient number of crew available, guns firing can be reduced or sailing maneuvers can take proportionately longer to execute.

Approx. Tonnage	Make or Shorten Sail	Tack or Turn	Anchor the Ship	Take in All Sails	Normal Crew
2500	11 CF (235)	14 CF (288)	14 CF (290)	12½ CF (262)	(840)
2250	10 CF (209)	12 CF (255)	12½ CF (260)	11 CF (232)	(750)
2000	10 CF (203)	12 CF (244)	12 CF (250)	11 CF (224)	(650)
1800	9 CF (198)	12 CF (244)	12 CF (245)	10½ CF (220)	(600)
1400	8½ CF (180)	10½ CF (220)	10 CF (218)	9½ CF (199)	(500)
1200	6 CF (134)	9 CF (196)	9 CF (197)	8 CF (165)	(350)
1000	5 CF (105)	8½ CF (179)	8 CF (173)	8 CF (162)	(280)
700	4 CF (90)	7 CF (143)	7 CF (144)	6 CF (132)	(220)
400	3 CF (64)	5 CF (99)	4½ CF (94)	5 CF (96)	(160)
300	2½ CF (52)	4 CF (79)	4 CF (78)	4 CF (85)	(140)
200	2 CF (44)	3 CF (56)	3 CF (56)	4 CF (75)	(120)
100	1 CF (16)	1 CF (22)	1 CF (22)	1 CF (30)	(50)

This table, based primarily on a Royal Navy officer's manual from 1782, shows the number of CF needed to perform the basic sailing maneuvers. The exact number of men required is listed in parentheses. It is difficult to rely entirely on such a table due to differences in construction and other factors, but for gaming purposes such an approach is necessary.

All of the above crew assignments are for accomplishing the assigned task in one game turn. With proportionately fewer men working, the task will take proportionately longer to accomplish. If a ship has half the number of men aloft to

turn the ship than is necessary, such a turn would take two turns to accomplish, meaning each turn the ship would change course by $22\frac{1}{2}^{\circ}$ instead of the full 45° .

One CF can fire one fire factor of broadside guns (1 die), so keep this in mind when detailing crew. When losses due to low damage and prize crews deplete a ship's manpower, this rule becomes important.

Other naval tasks may be performed as follows:

Jettisoning boats and anchors: To lighten ship, 1 CF per boat or anchor, requires 1 turn. Speed gain is +5% total.

Dumping guns--For purposes of removing guns from a ship, one man can dump 1# of gun weight (weight of shot fired) per turn. This means that, for instance, 42 men (2 CF) could remove one 42# gun in a turn. Or, taking another example, the same number of men could remove seven 6# guns in one turn.

It is only possible to remove those guns on a ship's main deck--this means a maximum of 1/4 of all guns on a 90-120 gun ship, 1/3 on a 64-80 gun ship, 1/2 on a 28-50 gun ship, or all the guns on a smaller craft. Because powder and shot supplies remain, however, speed gain maximum is +10%.

Dumping stores and starting water--In a protracted chase situation, water and some accessible ship's stores may be dumped to lighten ship for increased speed. Removing all accessible stores requires the entire ship's crew working for 3 hours. If only part of the crew is working, figure proportionately longer for the task. Maximum speed gain after stores have been dumped is +10%, but the vessel must replenish its water supply within 3 days.

Rowing--During a calm, crews may row Class I vessels at a speed of 2" per turn. With wind, this may be done at 1" per turn. Three-fourths of the crew is used.

Rigging a tow--Ships may tow each other if the arrangement is announced beforehand. The amount of crew required to rig a tow is the same as that necessary to anchor the ship, but each vessel must detail crew to properly rig up the arrangement. If the required number of men are detailed to rig a tow, then the task is accomplished in one turn, after the ships are in proper position (less than 1" between the stern of the lead ship and the bow of the trailing vessel). Ships that are grappled together and later ungrappled may be considered to be rigged for towing if the commander stated the fact before the actual cutting of the grapples.

The maximum speed of the two ships when towing is derived by taking 1/3 of their combined speed. Ships that are doing the towing must be at least half the size of the ships they are towing. Multiple tows may not be rigged.

Using studding sails--In a chase situation, ships with trained crews (this excludes merchantmen, privateers and "green" crews) may use studding sails to get increased sailing speed. This bonus is +50% for movement when studding sails are set, but there is also a 50% increase in sails aloft, so each mast sets 4 SF with studding sails instead of 3. Therefore, hits taken high are scored at 3/4 value due to this extra increase in sails.

When studding sails are set, rigging hanging low near the deck presents a fire danger, and it is therefore not possible to fire either broadside or upper deck chase guns when studding sails are set. Studding sails take one full turn to furl or unfurl.

Kedging--Kedging may be done in fairly shallow water, and employs 60% of the ship's crew. Preparations, which include launching longboats, take up one turn.

Kedging involves hauling the anchor 1" ahead of the ship at which time the remaining crew hauls it in again, thereby moving the vessel ahead at 2" per turn. Of course, this is a tactic reserved mostly for crippled or becalmed vessels. Two kedges may be employed so continuous movement is possible.

Using springs and cables--The use of springs and cables allows a turn in place of up to 180° by an anchored ship which has prepared such an arrangement. To rig springs and cables, half the crew must work for 6 turns before the device is prepared. When used, the arrangement allows one turn of the ship, which pivots off either the bow or stern, depending upon which anchor is used. When lifting anchor after use of such a tactic, two turns instead of one are necessary to get the ship underway again.

Using longboats--For game purposes, each longboat has a maximum capacity of 2 CF (not historically exact, but close enough for our purposes) and possesses a hull value of 12 points. Guns firing at longboats fire low, disregarding hits high; with guns of 12# or larger, one hit will be sufficient to upset or destroy a longboat.

A longboat has the following movement profile (reduce speed proportionately if a longboat is carrying less than 2 CF) at the different wind speeds: Calm 5", 1 or 2 4", 3 3", 4 2 $\frac{1}{2}$ ", 5 2", 6 1", 7 $\frac{1}{2}$ ". At winds of force 8 or greater, longboats may not function at all. Boats may turn up to 180° in a single turn, and may even move into the wind at half their base speed.

Launching and recovering longboats takes one turn with the mother ship stopped or moving no more than 1". Longboats may be used to send prize crews to captured vessels, and boarding is also possible if the boats can get into good position. Players may use longboats as they desire, but may wish to discourage widespread use (especially in squadron actions) since they are more often than not just a nuisance.

At least one boat on a ship will mount a 12# boat carronade or a small long gun of 3# to 6# size. If you can get three of these armed boats together it is possible to receive one fire factor for gun-firing purposes.

Towing the mother ship by longboats is possible if the ship's entire complement of boats (considered as enough boats to accommodate 1/3 of the crew) is used. Maximum towing speed is 1" per turn. A towing arrangement of this type takes two turns to rig up (one turn to get the boats off and into position and another to rig the tow and get underway).

Special Movement Rules

For those patient, exacting, and trustworthy players who desire more accuracy and options in moving, use of this rule is recommended.

Squadron Data Sheet

Rate & Name:		Nationality:	
Tonnage:	Sail Class:	Speed:	Crew (and CF):
CF Value:	(roll at ___ pts. low)	SF Value:	(roll at ___ pts. high)
Armament:		Morale Value:	
HIGH DAMAGE:		LOW DAMAGE:	MORALE LEVEL:

Accuracy in movement is important in DON'T GIVE UP THE SHIP!, but is even more so when optional movement is employed. So players should be armed with protractors for this new type of movement.

The most important factor of this new freedom is that the 45° degree headings are abandoned in favor of the ability to move on any heading desired. Turns of less than 45° may be made, and even more than one turn per turn may be made, as long as the total change in direction is not more than 45°. As one can easily see, accurate use of the protractor and close adherence to written orders is important.

Collisions are handled in the same way as they would be in the basic game (basic game players have the option to include or disregard collision chances in their play). If the paths of two vessels intersect and it would appear that the ships would reach that point at the same time, then there is a chance for a collision to occur. In the absence of a neutral referee, players should use their best judgment in such cases.

In most cases where a collision is possible, one of the ships will veer to avoid the other. Roll one die on this table if a collision is possible, designating the ship considered before rolling:

- 1 First ship veers (movement continues)
- 2 First ship veers (movement continues)
- 3 Entangling collision (ships entangled; each may fire broadside once before boarding may be attempted)
- 4 Glancing collision (ships collide and lie side by side, but are not entangled by the collision; boarding may be attempted by grappling, but each ship may fire a broadside before fighting)
- 5 Other ship veers (movement continues)
- 6 Other ship veers (movement continues)

When ships veer, they turn just before reaching the intersection point and continue their turn's movement allowance. They turn in the most logical direction (usually away from the path of the other vessel, and of course never into the wind), but since veering is involuntary, the commander can expect to be out of position. If a turn is dictated by the die roll and is necessary, it may still be done even if another turn has already been done. When ships cross paths at a 90° angle you may wish to consider roll 1 as meaning the first ship crossed ahead of his opponent and continued on, and roll 6 meaning the second ship passed ahead of his opponent and continued on.

Sighting

Here are the general rules for sighting and observation:

At a range of 20,000 yards (200") a ship (type, rig, and size unspecified) would be visible in clear weather.

At a range of 10,000 yards (100") the general appearance and size of a ship (large, medium, or small) and its rig (ship, brig, or sloop rig) become discernible. Large ships would be classed as those larger than 1500 tons, medium ships those of 600-1500 tons, and small ships as those of 600 tons or less. Small boats

DON'T GIVE UP THE SHIP

RULES FOR THE GREAT AGE OF SAIL

Ship Data Sheet

Rate	Name of Ship			Nationality	Captain
Tonage	Class		Speed (in inches)	Armament (guns & carronades)	
Date of Combat	Player		Crew (CF)	Morale value	
	Sail Factor Value			Mast lost at Points low	Crew factor Value
Morale rolls taken	1mast	2mast	3mast	Damage Low	
Current Morale	10%	20%	30%	40%	50%
	60%	70%	80%	90%	100%
				Damage High	
Time Record					

Notes and Orders

also become visible.

At a range of 5,000 yards (50") the size of the ship can be determined (within 20% accuracy), and structural differences (if the ship were a bomb ketch or razeed, for instance) become apparent. The vessel's flag is also seen at this range. Ships may raise and lower flags of any nationality as a ruse, but when the vessel fires its first shot the national colors are raised and remain until the ship surrenders or is taken.

At 1,000 yards (10") a ship's exact name and appearance, including the number of gunports, are obvious. Merchant ships can be positively identified at this range (at longer range they may be confused with warships) as well.

Night battles require a referee, and are more difficult to fight than battles occurring in daylight. Confusion in night battles is rampant, since positive identification occurs only at 400 yards (4") or less. On moonlit nights with good visibility (you should roll for this on one die, with a 1 or 2 meaning that visibility is good) maximum sighting and firing range is 10". On nights with fair visibility (a roll of 3 or 4), maximum firing and sighting range is reduced to 8". And on nights with poor visibility (a roll of 5 or 6), maximum sighting and firing range is reduced to only 6". Ships that lose sight of each other keep moving until they either are clear of each other or meet again. The referee should use his best judgment in such cases.

The time of sundown varies significantly depending upon location and time of the year. The referee should set such a time if necessary (rolling dice on his own kind of table for impartiality). During the 15 minutes before and 15 minutes after sundown, you may wish to use decreasing visibility as the sun sets and sky darkens.

Burning Ships

It sometimes happens that a side will want to destroy a ship to avoid having it fall into enemy hands, and although this is not a commonplace occurrence, it is still possible occasionally. The following rules outline the procedures to follow when a ship is set afire or is burning:

Ships that contain either friendly crew or enemy prisoners may not be set afire unless they are first evacuated. Crew may be evacuated in one turn to any friendly vessel alongside, but wounded personnel require extra time to evacuate. If there have been losses onboard it takes one extra turn for every 10% casualties the ship has suffered to represent the time needed to evacuate these wounded and disabled persons. This time is reduced proportionately if more friendly CF's help out; otherwise, it is assumed that the remaining crew is doing the evacuation. Crews may not set fire to a ship unless they are certain of friendly rescue!

Once the ship is abandoned, up to two groups of 1 CF (21 men) each may set fires. The cutaway diagrams of the different size ships show the areas each vessel is divided into for fire purposes, and the two groups may each set fire to one area. A fire can be set automatically, and starts to do damage on the turn after it is set. And more importantly, fires may spread. (See page 50.)

To determine if a fire will spread to an adjoining area, a die must be rolled each

1M 2M 3M Rolls taken 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Rate & Name:

Nationality:

Tonnage:

Sail Class:

Speed:

Crew (and CF):

CF Value: (roll at ___ pts. Low)

SF Value: (roll at ___ pts. High)

Armament:

Morale Value:

HIGH DAMAGE:

LOW DAMAGE:

MORALE LEVEL:

1M 2M 3M Rolls Taken 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

turn it is burning. A roll of 1 or 2 means the fire spreads (roll over on 6's), and this must be chanced for each area adjoining the one that is afire. Newly burning areas start to do damage on the turn after they catch fire.

On the first turn that a fire is set, there is a chance that it will die in the next turn. If that next turn's first roll to spread is a 6, then the fire in that area dies out. Of course, it may then be reset. Crews in disorder have a reduced chance of starting a fire, and must roll to see if they can get each one started, with a roll of 1-4 meaning they are successful. Crews that are routed must roll a 1 or 2 for each fire attempted. This limitation reflects confusion and disorganization on the part of these crews.

A fire may burn for up to 4 turns in an area before it is burned out. Areas that are completely consumed that lie below the waterline cause the vessel to sink in from 1-6 turns (roll die) after the area burns out. Each area that burns for each turn causes 50 pts. damage to the ship's hull on ships over 2000 tons, 40 pts. damage on ships between 1200 and 2000 tons, and 30 pts. on ships less than 1200 tons. For example, if a 900 ton ship had 3 areas which had burned for a combined total of 7 turns, then the hull damage (low) would be an additional 210 pts. For repair purposes, fire damage is added to other low damage caused by gunfire, but of course crew losses are not additional.

Putting out fires is attempted by groups of 2 CF each that can attempt to extinguish burning areas that are readily accessible to them. Each group rolls a die for each attempt each turn, with rolls of 1 meaning that the fire in that area has been put out (roll over on 5 or 6). If unsuccessful the chance still remains that the fire will spread (as before, with the player who originally set the fire rolling in his turn). Fire fighting crews, however, will always retreat before the flames and under no circumstances will allow themselves to be trapped below deck should the flames on an upper level spread to cut them off.

When a ship (either friendly or unfriendly) is grappled to or immediately alongside another which is on fire, there is a chance that that ship might also catch fire from any fires that are going on the burning vessel's top deck. If a fire is burning on the top deck, then treat the enemy's adjacent top deck as an adjoining area. If the blaze is still confined below decks, the chance is reduced to 1 in 6 for areas of the second ship that are adjacent to burning areas. Should such a calamity occur, treat the new sections of fire as before. Of course, putting out the fires may be attempted also, as previously described.

Since most warships on fire tended to blow up before they burned up, there is a good chance of that happening if a fire reaches an area marked as the magazine. When a fire reaches a magazine area, a roll of 1 or 2 will mean that it is set off. This is rolled each turn the magazine area is on fire.

If a ship blows up, it has truly a disastrous effect upon any other vessels nearby. To compute the effect of this detonation, take the total weight of all the armament on the ship (in #) and divide by half. All vessels within 1" of the exploding ship receive this amount of damage low plus half as much high. All ships within 2" suffer 1/4 this amount (plus half of this 1/4 high). Other ships up to 4" away receive 1/8 the total amount suffered by those within 1" (plus half of this 1/8 high). Example: A ship with 2,590# of armament inflicts 1,295 pts. damage on ships within an inch, 647 pts. on those within two inches, and 323 pts. on

those within four inches. Plus each of these vessels would also receive high damage that is half of what they received low.

In some cases it is possible to flood the magazine to prevent its detonation. If 2 CF remain for one turn in the magazine section, it can be assumed flooded (if announced by the player responsible). However, should the fire spread to the area while this work is being done, there is still that chance that the area might explode. Any CF on a ship that explodes are assumed lost.

Special Vessels

Some of the unusual types of vessels employed during the Napoleonic time are worth including in these rules. Although not often used, they nonetheless made some appearances in actions of the era.

Fireships--Fireships are vessels that are prepared for burning in the hope that they might entangle with enemy ships and cause confusion and damage. Fireships are more often used in near-shore situations, and one good means of employment is to unleash them on an enemy that is bottled up in a confined area near shore. Fireships, of course, are better employed if wind conditions are favorable.

Fireships take two days to prepare with 10 CF working 8 hours each day. Sailing the ship requires 1 CF minimum; more may be added for effective maneuvering, but the fires only require 1 CF to start. The fireship's crew may be evacuated in longboats (up to 4), but the evacuation takes one turn. The ship need not stop, however.

Once a fireship starts burning, it will continue to burn for 6 turns. After abandonment, the vessel continues on its course until consumed. If a fireship is involved in a collision with another ship (the abandoned vessel can, of course, take no evasive action), then the rammed ship is considered to be an adjacent area as described in the burning ship rule. Burning a regular warship to prevent its capture can never be done unless the crew has a good chance to escape to safety, but fireships can be abandoned more readily because of their special tactical use.

Explosive ships--Explosive ships are vessels loaded with powder and inflammables designed to explode near enemy ships. They are difficult to employ effectively, but are very effective if they detonate as desired.

Each explosive ship takes six days to prepare with 10 CF working 8 hours each day. Sailing the ship requires only 1 CF, but several more may be added to aid maneuvering.

Lighting the fuse requires 1 CF, and one die is rolled, with rolls 1-4 meaning that the fuse has started and will burn satisfactorily. Once the fuse is burning, evacuation is immediate, and is done as outlined for fireships.

The fuse of the explosive ship will burn for 1-6 turns, and this is determined by a secret roll (if there is a referee, have him keep both players in suspense). When the fuse runs out, the ship detonates. If enemy CF's board the ship and are on board for a full turn, the fuse is considered disrupted and the ship will not explode.

If an explosive ship is hit by gunfire before the fuse is set off, there is a chance that it will explode prematurely. For every 100 points damage low or for any hit by hot shot, there is a 1 in 6 chance that the vessel will detonate.

When an explosive ship goes up, the effects are devastating to ships nearby. All ships within 1" receive 1600 points low and 800 points high, ships within 2" receive 800 points low and 400 points high, ships within 3" receive 400 points low and 200 points high, ships within 4" receive 200 points low and 100 points high, ships within 5" receive 100 points low and 50 points high, and ships within 6" take 50 points low and 25 points high.

Galleys--Oared galley vessels, long-standing naval designs, were on their way out during the Napoleonic times, but there still were a number in service and they occasionally pop up in accounts of actions in the Mediterranean.

Galleys can vary in size from small vessels of around 100 tons up to a limit of about 600 tons or slightly larger; most, however, are in the middle or lower half of this tonnage range.

Because individual design and sailing characteristics affect a galley's speed and sailing ability, it is difficult to give anything more than general information on a galley's speed.

Galleys normally proceed under sail according to their sailing class characteristics. In normal sailing the oars are not usually used, except to afford quick maneuverability. Galleys may turn up to 180° in a single turn, losing 10% for every 45° turn. They may also stop when desired and, of course, may row into the wind, a definite advantage in the era of sailing ships!

Normal rowing speed for a galley is about 8", and the oarsmen can maintain this pace without too much difficulty for about 2 hours. Battle and ramming speed is a maximum of 12", but this backbreaking pace can be maintained for no more than 20 minutes. After rowing for any length of time, the crews must rest to recover their rowing abilities, so it takes 2 turns rest for each turn spent rowing the galley (continued rowing of several turns or more in succession is possible, but the oarsmen should be rested afterwards). After a good rowing session, the crews will function at reduced efficiency, but since such performance is dependent on the nature of the particular crew, you should just use your own judgment in specific instances. Keep in mind, however, that rowing a galley is tremendous work, and should not be done until necessary.

Low hits on a galley, if scored in sufficient number, can disrupt the efficiency of the slaves that do the rowing. Besides the fact that the oars are being damaged, the rowers themselves are likely taking losses, so their efficiency is lessened. Therefore, for every 10% of the ship's tonnage taken low, the rowing speed of the galley is reduced by 10%.

With a galley intent on ramming, the object is to cross the target ship's path at a near 90° angle. If the course taken by the galley intercepts the course of the other ship within a 22½° angle of its side, a die is rolled: 1 or 2 the galley passes ahead of the ship, 3 or 4 the ram is successful, 5 or 6 the galley passes astern of the ship. Head-on or stern attacks are not possible because of the low probability of success. Attacks at an angle of 45° have only 1/6 chance of suc-

cess: a roll of 3 (on the previous table) means a successful ram, but a 4 means a normal side to side collision without the ram penetrating. If such a side to side collision occurs, the galley's oars on that side are sheared off for the most part, meaning only turns are thereafter possible with the oars, and they are otherwise not helpful with movement.

On the turn it strikes its target, the galley must suffer a raking shot from the other ship. Then one die is rolled to see how long the rammed ship will take to sink. Boarding actions are possible. Rammed ships are dead in the water. Crews may stay on board if the vessel is sinking only slowly, but if this is done, a die must be rolled to see if they will abandon each turn. One point crews will stay on with rolls of 1 or 2, two point crews with rolls of 1, 2 or 3, etc. All crews must abandon a sinking ship one turn before it sinks, in all cases.

A galley must withdraw straight back after a ram, and may only turn during this withdrawal move. One die must be cast, with a 1 or 2 meaning that the two ships are entangled. The galley can attempt to disentangle every turn, but if the ship sinks beforehand, the galley goes down as well.

Steam tugs or gunboats--Small steam vessels saw their beginnings in the late Napoleonic era and grew as a new type of naval weapon in the years afterwards. Nonetheless, they are included here.

Steam vessels move as normally, usually being Class I sailing vessels. They may turn up to 90° in a turn, and may go into the wind at normal speed in winds of Force 2 or less, or at half speed in greater winds. Steam vessels are useful for tug and towing purposes.

The major disadvantage of steam vessels was the vulnerability of the paddlewheels. For each hit taken low, there is a chance of a disabled paddlewheel on rolls of 1 or 2. If a wheel does jam (the free-wheeling paddlewheel was not invented yet) the ship must use its auxiliary sail-power and is reduced to half its speed.

The space taken up by the engine and paddlewheels reduces a steam vessel's gun-carrying capacity by 30%. Steam vessels may never be used as rams because of the great chance of the engine becoming upset if the ship is badly shaken.

As footnote, it might be noted that the Americans built a very advanced steam frigate in 1815. Truly a revolutionary design, it would need special rules to incorporate it in a game such as this. Had the War of 1812 still been going on, the British squadrons around New York would have been up a creek without a comparable design to counter the American invention.

Changing Ranges

If desired, players may modify the ranges and factor values in the game for added realism. The basic data is supplied, and may be adjusted as desired.

If space permits (and provided you have a good lengthy tape measure or the like), you may wish to double or even triple the ranges and movement factors of the guns and ships. When tripled, you will have a situation somewhat approximating actual ranges. Of course, this takes up quite a bit of space.

Gun factors and crew factors might also be modified if desired. This would be most likely on a single ship action with small vessels, but with proper preparation can really be done at any level. Remember that, to start, a CF is 21 men and a fire factor (1 die) is 3 guns. You might want to adjust to CF of 7 men and a fire factor of 1 gun (having one die then for each gun firing). SF and CF values, of course, would have to be adjusted. And the time of each turn (originally about 5 minutes) would also have to be changed.

Special Guns

Howitzers--Howitzers are effective weapons but due to their special characteristics cannot be readily employed from a moving ship. Instead, they must be fired from an anchored position (floating battery) or from shore. The probability of a howitzer hit is listed below (land howitzers receive double fire) for a fire factor of 3 guns:

	I	II	
A Range	66%	16%	I Stationary battery shooting at a stationary target
B Range	27%	7%	II Static positioned guns shooting at a moving target
C Range	16%	4%	

Howitzer hits do four times as much damage (for instance, a 24# howitzer hit scores 96 points damage) due to the explosion of the shell. For every shell that hits the target vessel, a die is rolled (roll over on 6's) on this table: 1, 2 or 3 Fire starts on either bow or stern deck area, 4 or 5 No fire starts, just the shell explosion.

Mortars--The heavy 13" mortar of the era was a blockbuster if it hit anything, but was not always readily employed. But nonetheless it was a dangerous weapon.

From sea, mortars are fired from special bomb ketches of about 300 tons that are designed to carry one or two of these guns (and little else). A bomb vessel anchors in a suitable area and takes an hour and a half to set up with the full crew working. Once set up (and provided the wind is no stronger than Force 5) the mortar ship is ready to fire. When in operation, each mortar can fire once every three turns.

On land, mortars (usually only used from well-fortified areas) can be more easily used and are, if action is expected, usually ready to fire with minimum of preparation time. When firing from land, each mortar may fire once each turn.

When they begin firing, mortars choose a single target point where the shots will be aimed. Two footrulers are placed crossing each other at this point, with each ruler intersecting the other and this point at the 7" mark. Then for each round fired, a pair of dice is rolled twice, with the first roll determining the fall of the shot along the firing line represented by the first ruler, and the second showing the fall of the shot laterally as represented by the second ruler. The exact spot where the mortar shell falls is then determined. Assuming the base of each ship counter to be about $1\frac{1}{2}$ " by 1", any hit on a ship counter or its base will have a 50% chance of hitting the vessel itself. Near misses are not counted, but if a mortar hits, it scores 2000 points low and 1000 points high. One can see that

mortars are not very accurate, but are extremely devastating if they do score a hit.

Mortars have a maximum range of 48". Changing aiming points takes one turn.

Rockets--Rockets, used on occasion in sieges and the like, are not included because of their great inaccuracy (land vs ships). Rocket barrages on towns might be effective on ships inside such a town, but data is too scarce and too little mentioned to justify inclusion of such a rule.

Gun Weight and Tonnage

The number and size of guns carried on a warship affects its speed; fully gunned warships move less swiftly than lighter gunned vessels of the same size. Use of this rule allows computation of such speed differentials.

Fully gunned vessels, under this rule, are assumed to carry guns of a total weight that would be equal to their own tonnage. This would mean that a frigate of 960 tons carrying 12-32# and 24-24# (total weight 960#) would be fully gunned and would move its base speed, no more or less in this case. If it carried more guns, it would be slower than its base speed, and if it carried fewer guns, it would be faster than its base speed.

Let's use a 1000 tonner for our example. Now, it is important to remember that a bonus or loss of speed will be equal to one-half the difference of the percentage of gun weight carried (as related to tonnage) and 100%. If this 1000 tonner carries guns totaling 700#, it is 70% gunned. Its speed bonus, then, is half of the difference (30% in this case), or +15%. The concept of this computation is difficult to grasp at first, but once learned is easy to implement with a little figuring. Remember--a ship with no guns at all would be +50%, and a ship with double its normal weight of guns (although it would be difficult to hold all these guns unless some were stored below-decks) would be -50%. When figuring gun weights, carronades are only half as heavy as long guns of the same caliber.

Use the eady reference chart for gun weights to aid in figuring.

Melee Losses

This optional rule allows the real enthusiast to figure exact crew losses occurring in melees (in the normal game melee losses are disregarded). When this rule is used, it is possible to determine casualties occurring in boarding actions.

The boarder is considered to be taking the offensive when boarding; if both parties are attacking they are both considered offensive.

Winners and losers roll on separate sides of the table; on ties both sides roll on "losing side offensive."

The table is used by taking the final roll of each side during each turn's hand-to-hand fighting and using it to determine losses on the table. It is important to remember that losses are in men, not points low as is the case when suffering losses from normal gunfire. Additional spots on the die (for lopsided odds of 5-1 or better, as explained in the basic rules) are disregarded on this table if the total

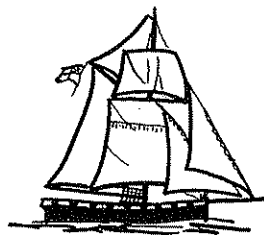
roll would be greater than 6.

Here are the tables:

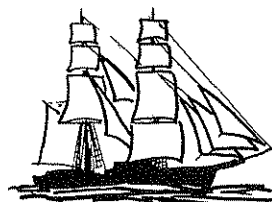
Winning Side		Die Roll Losses this turn per 5 CF (105 men) of enemy
Offensive	Defensive	
6 5 4 3 2 1 ▼ ▼ ▼ ▼ ▼ ▼ 2 3 4 5 6 8	6 5 4 3 2 1 ▼ ▼ ▼ ▼ ▼ ▼ 1 2 3 4 5 6	
Losing Side		Die Roll Losses this turn per 5 CF (105 men) of enemy
Offensive	Defensive	
6 5 4 3 2 1 ▼ ▼ ▼ ▼ ▼ ▼ 5 6 7 9 10 12	6 5 4 3 2 1 ▼ ▼ ▼ ▼ ▼ ▼ 3 4 5 7 8 9	

To illustrate, let us take as an example a boarding battle that lasts two turns. The boarder, who takes the offensive, enters the battle with 10 CF and gets a 1-1 on the defender who meets him with 20 CF shaken (assuming both crews are of the same point value). The initial boarding results in the boarder rolling a 5, and the defender a 4. This one-spot victory for the boarder results in a melee. Now the losses are 12 for the boarders and 10 for the defenders. The boarders lose 3 men per 5 CF the enemy have according to their roll of a 5 on the Winning Side Offensive table; since they have 20 CF, they lose a total of 12. The defenders lose 5 men per 5 CF the enemy have according to their Losing Side Defensive roll of a 4; since they have 10 CF, they lose a total of 10.

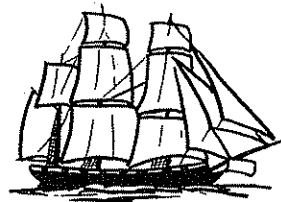
On the next and deciding turn, the boarders carry the ship by rolling another 5 while the defenders roll a 2. The losses for this turns melee are again 12 for the boarders (same table, same result) and 16 for the defenders. In this case, the defenders rolled a 2 as Losing Side Defensive and lose 8 men for every 5 CF of the enemy, or a total of 16. The total losses for this two-turn boarding battle are 24 men for the boarders and 26 men for the defenders. Keep in mind that these are not all killed, but also include casualties wounded and missing as well.



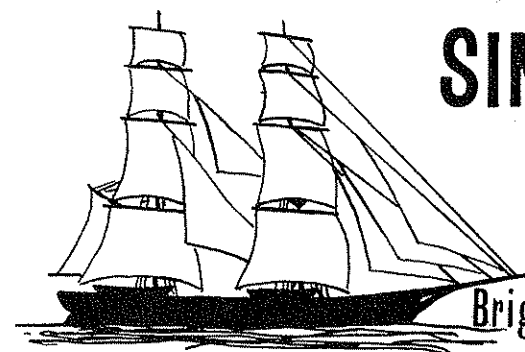
REVENUE CUTTER



BRIGANTINE



SLOOP OF WAR
or CORVETTE



SINGLE-SHIP ACTION RULES

You will note that there are a number of GENERAL HISTORICAL ACTIONS and those of THE WAR OF 1812 included in this booklet. While such actions may be fought with the rules of the Standard Game, with whatever optionals desired, it is recommended that the more detailed and complex SINGLE-SHIP ACTIONS rules given below be employed in order to more closely recreate such historical simulations. The general historical characteristics are reflected in these rules; but there are always exceptions, and should you locate an exception to any of the following rules simply amend them accordingly for that particular action. A striking example of this is the generally superior U.S. rate of fire in the War of 1812. In most of the actions they fired 3:2 over the British; but in the engagement of the Wasp versus Frolic the latter fired more rapidly, although the Americans were more accurate and won the contest. On the other hand, the Chesapeake and the Shannon offer an example where the U.S. ship was out-fought all round. Incorporation of the Optional Rules is recommended when using the "Single Ship" Rules.

A. SAILING CLASS:

Obviously all ships of the same rate do not sail equally well. To reflect this fact the following table is included in order that you may more accurately gauge the abilities of the combatants. The assignment of a specific class should be based on historical information, and careful judgment is required.

Sailing Class	Bonus or Penalty
A	+10%
B	+ 5%
C	0
D	- 5%
E	-10%

As an example, assume a Class III Frigate sailing before a Wind Force of 6:

Sailing Class	Move
A	13.2"
B	12.6"
C	12" (Normal move)
D	11.4"
E	10.8"

B. WEATHERLINESS:

The ability of a sailing ship to sail more directly into the wind is referred to as weatherliness. When employing this rule it is mandatory that the Optional Rules for movement (SPECIAL MOVEMENT RULES) also be employed.

A mariner's compass is marked off in 32 points, i.e., N, NbyE, NNE, NEbyN, NE, NEbyE, ENE, EbyN, E, EbyS, ESE, SEbyE, SE, SEbyS, SSE, SbyE, S, and so on. The closer to the direction of the wind a vessel can sail, the more weatherly it is. Thus, three classes are set up, and assignment of a ship in a particular class must be done in the same manner as SAILING CLASS is--careful judgment based on historical information.

<u>Weatherliness Class</u>	<u>Points Off Wind</u>
1.	2 points
2.	3 points
3.	4 points

As an example, assume a wind blowing due north (N). This means that no vessel may sail directly north into the wind. However, a Class 1. ship could make a course NNW or NNE (two points off of due north), a Class 2. ship could sail NWbyN or NEbyN (three points off the wind), and a Class 3. vessel could only come NW or NE (four points off the wind, or the 45 degrees "close hauling" of the BASIC GAME.

C. FIRING SPEED:

Historically (C. War of 1812), the British fired at least 3:2 over their opponents, while the United States fired at about the same rate against the British. Regardless of the nationality of the combatants, however, base firing speed on historical precedent or the details of the action to be recreated, for there are always exceptions, as previously mentioned. To duplicate the effects of the superior firing ship simply increase the effects of any hits it scores proportionately. For example, a ship with a 3:2 superiority would score 9 points of damage on a 6# hit, 18 points on a 12# hit, etc.

D. SHOT TYPES:

Basically, two types of shot have been ignored in the STANDARD GAME. They are: 1) grape/cannister, and 2) star/bar/chain. Their characteristics are as follows:

<u>Type</u>	<u>Maximum Range</u>	<u>Effect: High--</u>	<u>Low--</u>
1)	A	High-- $\frac{1}{4}$ damage only	Low-- x2, but additional points recorded aside as they count toward crew casualties only and do not cause hull damage.
2)	B	High-- x2	Low-- $\frac{1}{4}$ damage only

Note that firing must be ordered before movement as far as shot types are concerned, and that as a general rule only the U.S. used Type 2) shot although the British sometimes used chain shot.

E. LOSS OF A MAST:

Every time hits sufficient to cause the loss of a mast are scored, the ship must check to see which mast is lost and if it is clear or foul of the ship:

<u>Two Masted Ship</u>	<u>Three Masted Ship</u>
Die: 1-3 = Fore 4-6 = Main	1 & 2 = Fore 3 & 4 = Main 5 & 6 = Mizzen

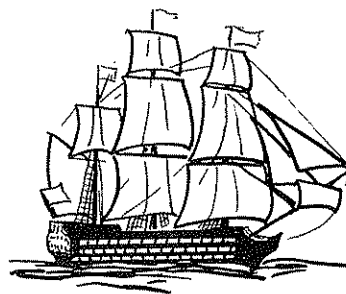
To determine if the fallen mast is cleared or foul:

Die: 1 & 2	Clear
3 & 4	Foul left
5 & 6	Foul right

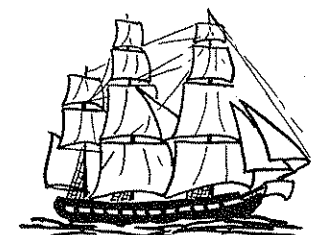
A fouled mast caused an additional loss of speed due to its drag, as well as a 1 point (11 1/3 degree) turn towards the side on which it fouled. Speed loss is 20% until the mast is cleared. To clear a fouled mast 1 CF must be assigned to cut it away, and a die is rolled on the turn after it falling to see if the crew has cleared it. If they fail, successive rolls must be made as indicated below:

<u>Turn of Attempted Clearing</u>	<u>Successful</u>
first	1-2
second	1-4
third	automatic

In addition, one-third of the guns on the side of the ship on which the mast has fouled cannot fire until it has been cleared.



FIRST RATER



FRIGATE

F. SPECIAL DAMAGE

For every 100 points of damage (high or low) scored upon a ship a dice roll must be made in order to determine if any additional or special damage has occurred. Use the SPECIAL DAMAGE TABLE given below:

SPECIAL DAMAGE TABLE	
For every 50 pts. of damage roll two dice and consult below.	
HULL (Low)	SPAR (High)
2 Hulled below waterline - pumps manned - speed slowed by 5% (cumulative)	Direct hit on mast - if gun over 9# or 2nd hit - lose mast (sails on it)
3 (Broadside only) Rudder shot away - steer by sails only - straight course with 15° max. variation	No effect
4 No effect	Additional 25 points damage due to rigging carried away
5 Additional 50 points damage done (only if at A Range)	No effect
6 No effect	No effect
7 Fire on board, two turns to put out, if on fire already fire damage adds 10 pts.	Braces shot away; speed slowed by 10% next turn only
8 No effect	No effect
9 Additional 50 points damage done (only if at A Range)	No effect
10 No effect	Additional 25 pts. damage due to rigging carried away
11 (Broadside only) Wheel shot away - steering by chains - turning cut to 30° at same penalty as 45° turn	No effect
12 Ready powder blows - (or cannon explodes); add 25 points damage	(Broadside only) Bowsprit shot away - reduce speed by 10%

G. DAMAGE TO AND DISMOUNTING OF GUNS:

In the STANDARD GAME this type of damage is subsumed in CF losses, so that after a certain amount of points are accumulated in hits a ship will not have enough CF's to man all of the guns. Actually, many guns will be damaged and dismantled in an action. To incorporate this, divide the number of guns carried on the ship into its tonnage. A 1300 ton Frigate carrying 50 guns would lose a gun for every 26 points of low damage (1300 ÷ 50). Only about one in ten of these guns are permanently damaged. The remainder are simply dismantled or in some similar condition. One gun will automatically be repaired every battle turn as long as there is at least 1 CF available to do such work. During non-battle turns 1 CF can restore 2 guns (see H. REPAIRS, below).

On ships with guns on more than one deck simply roll a die to determine which deck losses come from.

H. REPAIRS:

High, low, and gun damage can be repaired to a certain extent during non-battle turns in a game.

1. High damage is repaired at a rate of 10 points per turn (battle or non-battle) if 1 CF is assigned to this work. Additional CF's do not increase repair rate. To restore sails, and after a certain amount of repair they must be considered as repaired or new ones rigged, 2 CF are required. At such time as sufficient repairs are effected to equal a mast, it is assumed that the crew has readied a spar to jury-rig to the stub of the missing one; 3 CF must work for 6 additional turns in order to set the new mast, and during this time no further high damage can be repaired. Once the new mast is rigged it is equal to one-half the former, i.e., it produces 50% of the speed of the mast it replaces.

2. Low damage is repaired at a rate of 10 points per non-battle turn (one-half that rate in battle) if 1 CF is assigned to this work. Up to 5 CF's may be assigned to such repairs, so that up to 50 points of damage can be repaired each non-battle turn. However, when repairs equal 20% of the ship's tonnage they become more difficult (superficial damage has been taken care of), and it requires 2 CF to repair each additional 10 points of damage until repairs equal to 40% of the ship's tonnage have been made. Finally, an additional 10% of the ship's tonnage may be effected, but 3 CF are necessary to repair 10 points. The above may sound somewhat complex, but examples will make it clear:

Example: Assume a ship of 1000 tons. It suffers 700 points of damage in battle, and then it draws off to repair. When 200 points of repairs have been made (20% of its tonnage), 2 CF will be required for additional repairs of 10 points/turn, and when 400 points have been restored (40% of its tonnage) 3 CF will be necessary to continue to restore 10 points of damage each turn. Damage beyond 500 points (50% of the ship's tonnage) cannot be made at sea, so it will carry at least 200 points of low damage during the remainder of the game.

Note: Low damage cannot be repaired by fewer than the minimum number of CF's specified above; so, for example, $\frac{1}{2}$ CF cannot repair 5 points of damage, except on Class I vessels.

3. Guns: Dismounted guns can be replaced at rate of 1 gun per 1 CF per turn, regardless of the weight of the piece. Up to 90% of knocked out guns may be restored to action in this manner. (During battle the guns can also be returned to action, but it takes twice as long to do so.)

I. SEAMANSHIP:

The best crews in the world were American, for the U.S.N. was small and filled with the pick of men. Because of the necessity of maintaining a huge navy, Britain suffered rather severely in comparison, yet she still managed to maintain her superiority of seamanship against all the other nations. In order to reflect the varying degrees of seamanship the following guidelines are offered:

Turning: Decrease U. S. penalty to 5%, and increase all other nations (except Britain) by from 5% to 15%.

Crew Tasks: Multiply U. S. CF's by 4/3, and all other nations (except Britain) by 3/4. (In order to simplify this use the usual method for determining CF and CF Value, but then refigure CF's by using 15 men for U.S., and 26 for other (non-British) nations, for Tasks only, not for losses.)

J. WATER DEPTH:

Actions fought near shore may be affected by water depth. To simulate a rising bottom indicate areas of the playing area where vessels with deep draft cannot go, closer inshore another line where ships with lesser draft cannot go, and so on. Class I ships will draw the least, and situations may arise where such vessels can escape from large pursuers by moving into shallow water.

K. SHIP DATA SHEET:

Note the SAILING CLASS, WEATHERLINESS, FIRING SPEED, DISMOUNTED GUNS, and REPAIRS somewhere on the front of the form. Special damage can be noted on the back, with effects on the front side.

L. DETERMINATION OF VICTORY:

Teddy Roosevelt worked out a very handy system of determining the relative force of opposing vessels and then computing relative damage done by each and ratioing it over the relative force in order to arrive at an estimation of how well each ship was fought. This formula is: $\frac{B}{C}$, where B = weight of broadside metal and C = casualties--of course, this is the simplest comparison. For purposes of this game, a comparison of tonnages, broadside weights, and crew numbers should be drawn up (with the heaviest ship expressed as 10) and final results assessed against this comparison. As an example compare the Chesapeake vs. the Shannon:

	<u>TONNAGE</u>	<u>RATIO</u>	<u>B'SIDE WT.</u>	<u>RATIO</u>	<u>CREW</u>	<u>RATIO</u>
CHESAPEAKE	1135	10	584#	10	391	10
SHANNON	1066	9.4	535#	9.2	330	8.5

These ratios are simply arrived at by dividing the upper figure into the lower. Note it is possible to have a ratio of 10 : greater than 10 in BROADSIDE WEIGHT and CREW.

M. SHOT WEIGHT -- OPTIONAL:

Various tests made have proved beyond reasonable doubt that U. S. shot was lighter than it should be. To reflect this, deduct 7% from the number of points of low damage scored (high damage is not affected) at B-D Ranges. Likewise French shot was at least 10% heavier than its poundage. If the Firing Speed Rule is employed, add 10% to French hits scored at B-D Ranges.

Single-ship actions do not mean a short game. They will, in fact, take more time than some multi-ship battles which employ only the STANDARD GAME rules; but they will bring much enjoyment if they are carefully planned for in advance, data sheets are prepared well and accurately kept, and plenty of time for completion of the action is allowed for. Circumstances of historical battles will sometimes call for the addition of other rules--do so however you desire, and let us know about them if you please.

Single-ship Actions

WAR OF 1812

19 August 1811 Due east of Cape Cod 1700 hours

44 Constitution: 1576 tons, 456 men (21 2/3 CF), 30-24#, 22-32#C
Captain Isaac Hull. SF value 78.9, CF value 72.6.

36 Guerrier: 1338 tons, 272 men (13 CF), 30-18#, 16-32#C, 2-12#, 2-9#
Captain Dacres. SF value 66.9, CF value 102.9.

Of all the victories of the U.S. Navy during the war, this was perhaps the sweetest, for English journals had called Constitution: "a bunch of pine boards, under a bit of striped bunting." Meanwhile the London Courier proudly asserted: "There is not a frigate in the American navy able to cope with the Guerrier." When that latter vessel struck her colors she was in sinking condition, and so the prize was burned. The Constitution suffered the loss of seven killed, seven wounded, very slight hull damage, and rather extensive damage to her rigging.

17 October 1812 500 miles off Cape Hatteras 1130 hours

Ship-sloop Wasp (U.S.): 450 tons, 140 men (6 2/3 CF), 16-32#C, 2-12#
Captain Jacob Jones. SF value 22.5, CF value 67.5.

Brig Frolic (British): 467 tons, 110 men (5 CF), 16-32#C, 2-6#, 1-12#C*
Captain Whinyates. SF value 23.4, CF value 93.4. (-3 SF Storm Damage)

Rough seas cut maneuvering to a minimum in this action, and both antagonists opened at only 60 yards. Frolic was raked and captured, but she saved her convoy, and the Poitiers, a 74, came up shortly thereafter to make Wasp a prize.

25 October 1812 700 miles E. Boston Approximately 1300 hours

44 United States: 2576 tons, 478 men (22 1/2 CF), 30-24#, 20-42#C
Commodore Stephen Decatur. SF value 78.9, CF value 70.

38 Macedonian: 1325 tons, 362 men (17 1/4 CF), 28-18#, 16-32#C, 2-12#, 2-9#, 1-18#C. Captain Carden. SF value 66.3, CF value 76.8.

29 October 1812 10 leagues off Brazil Approximately 1400 hours

44 Constitution: 30-24#, 20-32#C, 1-18#*, 485 men (23 CF)
Commodore William Bainbridge. (As above)

38 Java: 1340 tons, 426 men (20 1/3 CF), 28-18#, 18-32#C, 2-12#, 1-24#C. Captain Lambert. SF value 67, CF value 66.4.

38

24 February 1813 Off Demarara River 1700 hours

Ship-sloop Hornet: 440 tons, 140 men (6 2/3 CF), 2-12#, 18-32#C
Lieutenant James Lawrence. SF value, CF value 66.6 or 62.8.

Brig-sloop Peacock: 477 tons, 130 men (6 CF), 2-6#, 16-24#C, 2-12#C
Captain Peake. SF value 29.8, CF value 79.5.

1 June 1813 Off Boston, U.S.A. 1750

38 Shannon (British): 1066 tons, 330 men (15 CF), 28-18#, 4-9#, 16-32#C. Captain Philip Broke. SF value 53.3, CF value 71.

36 Chesapeake (American): 1135 tons, 386 men (18 CF), 29-18#, 20-32#C. Captain James Lawrence. SF value 56.8, CF value 63.

This battle occurred when the Chesapeake responded to a gallant challenge from the Shannon to fight. Once battle was joined, however, the Americans took the worst of the fighting and lost their ship after a sharp exchange of fire lasting little more than 10 minutes. As one may notice, this is one of the most balanced battles of the era, but in this case the British showed up with an exceptionally well-drilled and disciplined crew that was more than a match for the Americans who were ill-trained, having just joined the ship.

14 August 1813 52°15' N, 5°50' W 0600 hours

Brig-sloop Pelican (British): 385 tons, 113 men (5 1/3 CF), 16-32#C, 2-6#
Captain John Fordyce Maples. SF value 19 1/4, CF value 72.6.

Brig-sloop Argus (American): 316 tons, 125 men (6 CF), 18-24#C, 2-12#
Captain William Henry Allen. SF value 15.8, CF value 53.

This contest was won by the Pelican. When refighting this battle, you may wish to modify SF and CF values proportionately, since both vessels are small in size.

5 September 1813 Off Penguin Point within sight of Portland, Me.
1500 hrs.

Brig Enterprise: 245 tons, 123 men (6 CF), 14-18#C, 2-9#
Lieutenant William Burrows. SF value 25, CF value 41.

Brig Boxer: 197 tons, 66 men (3 CF), 12-18#C, 2-6#
Captain Samuel Blythe. SF value 13, CF value 66.

39

8 March 1814 (See below) Approximately 0900 hours

2 Essex: 850 tons, 328 men (15 2/3 CF), 40-32#C, 6-18#
Captain David Porter. SF value 42.5, CF value 53. (Mas 8 SF aloft)

Essex Jr.: 355 tons, 60 men (3 CF), 10-18#C, 10-6#
Lt. Dowes. SF value 17.7, CF 118.3.

36 Phoebe: 926 tons, 300 men (14 1/4 CF), 27-18#, 14-32#C, 1-12#C,
1-18#C, 4-9#. Captain James Hillyar. SF value 46.3, CF value 66.

Brig Cherub: 424 tons, 121 men (5 3/4 CF), 18-32#C, 6-18#C, 1-12#C,
1-6#. Capt. Thomas Tudor Turner. SF value 26 (8), CF value 70.

This action took place in the harbor of Valparaiso, Chili, where the British first tried to board the Essex, and then (due to a squall which carried away the American's main-top-mast) when the latter failed to put to sea, the two began a long-range duel which eventually wrecked Essex, as she was armed primarily with carronades.

29 April 1814 27°47' N, 80°9' W Around 1200 hours

Ship-sloop Peacock (U.S.): 540 tons, 140 men (6 2/3 CF), 20-32#C, 2-12#
Captain Lewis Warrington. SF value 27, CF value 77.

Brig Epervier: 382 tons, 122 men (6 CF), 16-32#C, 2-6#, 1-12#C*
Captain Wales. SF value 21, CF value 64.

28 June 1814 Off Land's End 1500 hours

Ship-sloop Wasp: 509 tons, 173 men (8 1/4 CF), 20-32#C, 2-12#
Captain Blakeley. SF value 20.4, CF value 64.

Brig Reindeer: 385 tons, 118 men (5 1/2 CF), 16-32#C, 2-6#, 1-12#C*
Captain Manners. SF value 24, CF value 64.

1 September 1814 Bay of Biscay, 48°36' N, 11°15' W
Approximately 2100 hours

Ship-sloop Wasp: (As above)

Brig Avon: 391 tons, 123 men (6 CF), 16-32#C, 2-6#, 1-12#C*
NIGHT ACTION! Firing at A Range only.
Capt. The Hon. J. Arbuthnot. SF value 24, CF value 65.

Brig Castilian: (As Avon)
Capt. Bremer. (Arrives at scene of action)

* Shifting gun able to fire to either port, starboard, or stern.

15 January 1815 Off New York = 50 miles 1400 hours

44 President: (Same as United States) 2533 tons, 477 men (22 1/2 CF), 32-24#,
20-42#C, 5-14#, 1-68#C. Commodore Setphan Decatur.

38 Endymion: 1277 tons, 346 men (16 1/2 CF), 26-24#, 22-32#C, 2-18#,
1-24#C*. Captain Hope. SF value 63.8, CF value 77.4.

20 February 1815 1730 hours

44 Constitution: 1576 tons, 460 men (22 CF), 30-24#, 20-42#C
Captain Charles Stewart. SF value 78.8, CF value 72.

Ship-sloop Cyane: 539 tons, 185 men (8 3/4 CF), 22-32#C, 9-18#C, 2-9#
Captain Falcon. SF value 27, CF value 60.

Ship-sloop Levant: 462 tons, 135 men (6 1/2 CF), 18-32#C, 1-12#C, 2-9#
Captain Douglas. SF value 23, CF value 77.

23 March 1815 1425 hours

Ship-sloop Hornet: 440 tons, 140 men (6 2/3 CF), 18-32#C, 2-18
Captain James Biddle. SF value 22, CF value 63.

Brig Penguin: 387 tons, 122 men (6 CF), 16-32#C, 2-6#, 1-12#C*
Captain Dickenson. SF value (8) 24, CF value 65.

* Shifting gun able to fire to either port, starboard, or stern.

General Historical Actions

17 June 1793 South of Falmouth, England 0615 hours

36 Nymphe (British): 938 tons, 240 men (11½ CF), 26-12#, 2-6#, 8-24#C. Captain Edward Pellew. SF value 46.9, CF value 81.5.

36 Cleopatre (French): 913 tons, 320 men (15¼ CF), 28-12#, 8-6#, 4-36#C. Captain Mullon. SF value 45.6, CF value 60.

This action was won by the Nymphe after a sharp battle lasting 50 minutes and was preceded by an unusual exchange of salutes when both vessels drew alongside at 0600 hours!

21 April 1798 20 mi. out of Brest, France 2115 hours

74 Mars (British): 1853 tons, 634 men (30 CF), 30-24#, 16-9#, 2-32#C, 6-24#C. Captain Alexander Hood. SF value 92.7, CF value 61.

74 Hercule (French): 1876 tons, 680 men (32 CF), 28-36#, 30-24#, 16-8#, 4-36#C. Capitaine Louis L'Heritier. SF value 93.8, CF value 59.

This action was fought for the most part at point-blank range as the two ships entangled side by side. After enduring a punishing bombardment the Hercule was forced to surrender. The French ship was new, but was severely damaged in this encounter.

20 October 1798 48°23' N, 7°W. 1130 hours

38 Fisgard (British): 1182 tons, 284 men (13½ CF), 38-18#, 8-32#C. Captain Thomas Byam Martin. SF value 59.1, CF value 87.5.

38 Immortalite (French): 1010 tons, 330 men (16 CF) plus 250 extra soldiers (12 CF), 24-24#, 14-8#, 4-36#C. SF value 50.5, CF value (crew) 63/ (soldiers) 84.

This battle was won by the Fisgard. The extra soldiers on board the French vessel are of one point morale, and may be used only in a boarding action (they are not trained for any other naval tasks).

24 October 1798 30 mi. NW of Texel Is., Holland 0800 hours

36 Sirius (British): 1049 tons, 261 men (12½ CF), 26-18#, 10-9#, 8-32#C. Captain Richard King. SF value 52.5, CF value 84.

36 Furie (Dutch): 827 tons, 153 men (7 CF) plus 165 soldiers (8 CF), 24-12#, 12-6#. Captain Pletz. SF value 41.4, CF value (crew) 118/(soldiers) 103.

24 Waakzaamheid (Dutch): 504 tons, 100 men (5 CF) plus 122 soldiers (6 CF), 24-8#, 2-6#. Captain Nierop. SF value 25.2, CF value (crew) 101/(soldiers) 84.

In this day-long action, the Sirius took both vessels. At the start of the action, the Sirius took the Waakzaamheid virtually without a fight while the Dutch ships were about 2 miles apart. The Furie attempted to escape, but after a lengthy sea chase the Sirius brought her to action around 1700 hours and captured her after an hour's fight.

14 December 1798 Off Bordeaux, France Approximately 1200 hours

32 Ambuscade (British): 684 tons, 190 men (9 CF), 32-12#, 8-24#C. Captain Henry Jenkins. SF value 34.2, CF value 76.

28 Baionnaise (French): 580 tons, 280 men (13 1/3 CF), 24-8#, 6-6#, 2-36#C. Lieutenant de vaisseau Jean-Baptiste-Edmond Richer. SF value 29, CF value 44.

This action was won by the Baionnaise, even though she was inferior in size and firepower to the Ambuscade. The English defeat was due in part to a very poor crew, and in this battle morale should be regarded as even.

21 June 1806 26°13' S, 56°45' E 1020 hours

AMS Warren Hastings (British): 1356 tons, 138 men (6½ CF), 22-18#, 10-18#C, 4-12#C. Captain Thomas Larkins. SF value 67.8, CF value 209.

44 Piemontaise (French): 1093 tons, 385 men (18 CF), 28-18#, 12-36#C, 2-8#, 4-9#. Capitaine Jacques Epron. SF value 54.6, CF value 61.

This action, which resulted in the loss of the Warren Hastings, occurred during its return from a voyage to China. The vessel, an armed merchant ship owned by the East India Company, was undercrewed and at a great disadvantage when intercepted by the Piemontaise. Still, she protracted her struggle in a very admirable defense until finally forced to strike the colors at 1650 hours.

11 May 1808 40°30' N, 6°34' E 0900 hours

Brig-sloop Wizard (British): 283 tons, 95 men (4½ CF), 2-6#, 14-24#C. Captain Abel Ferris. SF value 23.6, CF value 63.

Brig-corvette Requin (French): 332 tons, 110 men (5 CF), 2-6#, 14-24#C. Capitaine de fregate Rene Berard. SF value 16.6, CF value 66.

This action was a draw. The Wizard first sighted the Requin on May 10, but did not bring her to battle until the morning of the 11th. The action lasted for an hour and a half until the Requin fled, relying on her superior sailing to effect an escape. A lengthy sea chase ensued as the Wizard tried everything to overtake its adversary, but after a pursuit covering 369 miles in 88 hours the Requin at last took refuge in the neutral port of Tunis. The French vessel was later taken on July 28 by another British vessel, the Volage.

5 July 1808 Near Scopolo and Dromos Islands, Greece 2130 hours

38 Seahorse (British): 998 tons, 251 men (12 CF), 30-18#, 12-32#C. Captain John Stewart. SF value 49.9, CF value 83.2.

44 Badere-Zaffer (Turkish): 1300 tons, 543 men (26 CF), 2-36#, 8-24#, 20-18#, 20-12#. Captain Scandril Kichuc-Ali. SF value 65, CF value 50.

32 Alis-Fezan (Turkish): 730 tons, 230 men (11 CF), 24-12#. Captain Duragardi-Ali. SF value 36.5, CF value 66.4.

This battle occurred when the two Turkish vessels ventured into waters off Salonica to put down a band of pirates who occupied several islands in the area. This was in violation of a treaty with the English, and the Seahorse was dispatched to fight the Turks.

The battle commenced at 2130 hours with the Seahorse engaging both opponents. At 2215 hours, after she had taken several good broadsides, there was an explosion aboard the Alis-Fezan, which then retired permanently from the battle. The Badere-Zaffer fought on until 0115 hours, when her fire was silenced. The Seahorse hauled off and awaited dawn, at which time she resumed the attack. Although beaten, the Turkish commander refused to surrender until several seamen subdued him and pulled down the flag themselves!

For the Turks, forego the opening broadside, and change ranges to A 3", B 6", and C 9".

10 November 1808 Off Isle de Croix, France 2100 hours

40 Amethyst (British): 1046 tons, 261 men (12½ CF), 26-18#, 2-9#, 14-32#C. Captain Michael Seymour. SF value 52.3, CF value 83.7.

40 Thetis (French): 1090 tons, 330 men (16 CF) plus 106 Soldiers (5 CF), 28-18#, 4-8#, 12-36#C. Captain Jacques Pinsum. SF value 54.5, CF value (crew) 68.1/(soldiers) 218.

This battle occurred just as the Thetis was leaving France bound for Martinique in the New World with a complement of soldiers and a cargo of 1000 barrels of flour, among other supplies. The battle raged on and off until the Thetis was forced to strike its colors at 20 minutes past midnight.

22 February 1812 Gulf of Venice 0430 hours

74 Victorious (British): 1724 tons, 506 men (24 CF), 28-32#, 30-18#, 18-32#C, 6-18#C. Captain John Talbot. SF value 86.2, CF value 71.8.

74 Rivoli (French): 1804 tons, 810 men (38½ CF), 28-36#, 30-24#, 12-8#, 8-36#C. Commodore Jean-Baptiste Barre. SF value 90.2, CF value 47.

This battle occurred as the new 74 Rivoli left Venice on a cruise to Pola and was intercepted by the 74 Victorious, which was keeping station off Venice. Although several brigs were involved on both sides, the main battle "stole the show." The Rivoli put up a stout resistance but was beaten after losing nearly half its crew killed and wounded.

When fighting these actions, start the ships a ways apart and start by maneuvering for position. Once the ships are placed on the playing surface, wind direction and speed are determined randomly as explained in the basic rules.

Use the pre-figured values for SF and CF value. Remember; morale rolls are taken for every mast lost (3 times the SF value high) and for every 10% of crew lost (1/10 of the ship's tonnage low).

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Crew Factor Conversions

This reference table gives easy conversions for changing the number of men on board to the number of crew factors.

Crew	CF	Crew	CF	Crew	CF
21		546		1071	
42		567		1092	
63		588		1113	
84		609		1134	
105	5	630	30	1155	55
126		651		1176	
147		672		1197	
168		693		1218	
189		714		1239	
210	10	735	35	1260	60
231		756		1281	
252		777		1302	
273		798		1323	
294		819		1344	
315	15	840	40	1365	65
336		861		1386	
357		882		1407	
378		903		1428	
399		924		1449	
420	20	945	45	1470	70
441		966			
462		987			
483		1008			
504		1029			
525	25	1050	50		

GUNNERY INDEX

HITS		1	2	3	4	5	6	7	8	9
6#	$\frac{1}{3}$	2	4	6	8	10	12	14	16	18
	NORMAL	6	12	18	24	30	36	42	48	54
	$\frac{3}{2}$	9	18	27	36	45	54	63	72	81
9#	$\frac{1}{3}$	3	6	9	12	15	18	21	24	27
	NORMAL	9	18	27	36	45	54	63	72	81
	$\frac{3}{2}$	13	27	41	54	67	81	94	108	121
12#	$\frac{1}{3}$	4	8	12	16	20	24	28	32	36
	NORMAL	12	24	36	48	60	72	84	96	108
	$\frac{3}{2}$	18	36	54	72	90	108	126	144	162
18#	$\frac{1}{3}$	6	12	18	24	30	36	42	48	54
	NORMAL	18	36	54	72	90	108	126	144	162
	$\frac{3}{2}$	27	54	81	108	135	162	189	216	243
24#	$\frac{1}{3}$	8	16	24	32	40	48	56	64	72
	NORMAL	24	48	72	96	120	144	168	192	216
	$\frac{3}{2}$	36	72	108	144	180	216	252	288	324
32#	$\frac{1}{3}$	11	21	32	43	51	64	75	85	96
	NORMAL	32	64	96	128	160	192	224	256	288
	$\frac{3}{2}$	48	96	144	192	240	288	336	384	432
42#	$\frac{1}{3}$	14	28	42	56	70	84	98	112	126
	NORMAL	42	84	126	168	210	252	294	336	378
	$\frac{3}{2}$	63	126	189	252	315	378	441	504	567

This index lists damage totals for numbers of hits of the different calibers with $\frac{1}{3}$, normal, and $\frac{3}{2}$ multipliers.

GUN WEIGHT CHART

This reference chart is for use as an aid when using the Gun Weight and Tonnage optional rule, and shows for quick reference the relative weights of guns and carronades of various calibers. The chart lists various numbers of guns in multiples of six (eight for 42#), which correspond to one first factor (or die roll) off each side of a ship. When figuring gun weight, use of this chart will eliminate some of the multiplication involved in determining the exact weight of the guns on a vessel.

Type Number	6# or 12#C	9# or 18#C	12# or 24#C	32#C	42#C	18# or 36#C	24#	32#	42#
6	36	54	72	96	126	108	144	192	336
12	72	108	144	192	252	216	288	384	672
18	108	162	216	288	378	324	432	576	1008
24	144	216	288	384	504	432	576	768	1344
30	180	270	360	480	630	540	720	960	1680
36	216	324	432	576	756	648	864	1152	2016
42	252	378	504	672	882	756	1008	1344	2352
48	288	432	576	768	1008	864	1152	1536	2688

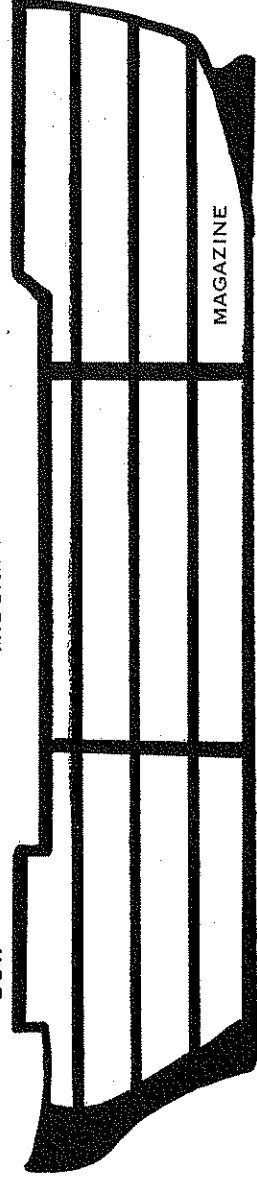
BURNING SHIP CUTAWAYS

120 (1st RATE, 2,100 - 3,600 tons)

BOW

MIDSHIPS

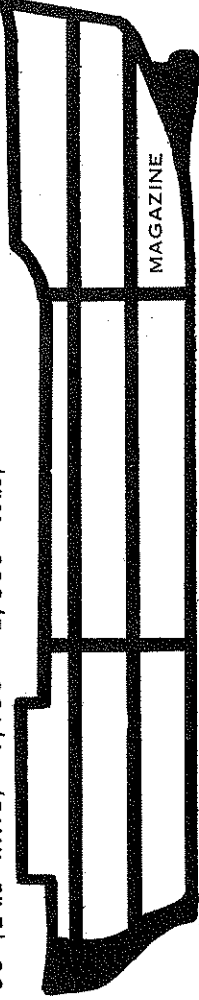
STERN



GUNBOAT, less than 149 tons



80 (2nd RATE, 1,400 - 2,000 tons)



18 (BRIG, 150 - 249 tons)



44 (5th RATE, 400 - 1,200 tons)

FOUR TURNS OF FIRE WILL DESTROY ANY GIVEN AREA.

28 (CORVETTE, 250 - 390 tons)

