Kiss Me, Hardy

Wargames rules for combat at sea during the time of Nelson

by
Nick Skinner

TooFATLardies

He then told Captain Hardy, "he felt that in a few minutes he

should be no more;" adding in a low tone, "Don't throw me

overboard, Hardy."

The captain answered: "Oh! No, certainly not."

"Then," replied his Lordship, "you know what to do: and,"

continued he, "take care of my dear Lady Hamilton, Hardy;

take care of poor Lady Hamilton".

"Kiss Me, Hardy"

The captain now knelt down, and kissed his cheek; when his

Lordship said,

"Now I am satisfied.

Thank God,

I have done my duty."

Narrative of William Beatty,
Surgeon on board HMS Victory
21st October 1805

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1. Introduction

Kiss Me, Hardy! (KMH!) rules have been designed to recreate simply, yet realistically, battles at sea during the age of Nelson. In writing and play testing them I have attempted to avoid over complicating matters, looking to represent the factors of chance that the wind and the sea introduced to battles where the participants had to combat the elements as well as the enemy. These rules provide for a fast moving game of low complexity that works equally well for small and large engagements.

Designed primarily for the naval wars during the period of Bonaparte, they can equally be used for most periods where war at sea was conducted with a combination of gunpowder and sail, from the Seven Years War to the Crimea.

The rules assume that:

a) There are three basic types of crews: *Jolly Jack Tars*, *Sans Culottes and Landlubbers* and within those categories crews can be either elite, average or poor. Elite Jolly Jack Tar crews are the best and this category is designed to reflect the superiority so often enjoyed by the Royal Navy during the period. Poor Landlubbers are the worst of the worst (it would be unfair to single out any one nation for particular attention!).

b) Crews will automatically set the most appropriate sail setting for any particular situation. Their ability and speed of doing so however will be affected by the class of crew.

c) Crews will always fire the most appropriate kind of shot for their individual circumstance. This assumes that crew firing at the rigging will use chain shot, that many crews will fire double (or even triple) shotted at close range. The exception to this is grape shot and hot shot, which remains in the rules as an additional extra something up the Admiral's (or shore battery commander's) sleeve.

d) Most ships of most navies are able to form a line of battle, but maintaining that formation once an action starts may prove a bit tricky for some less experienced or less well trained crews.

e) Poor quality crews are more reluctant to close with the enemy, and are more likely to strike their colours – unless driven by political or religious as well as military motives.

f) Wargames can be realistic and fun at the same time.

Whatever your interest in this period these rules should provide a fast paced, entertaining game, in which you can concentrate on 'playing the period' rather than stretching your mental arithmetic skills with hundreds of complicated casualty calculations.

Fire as she bears!

Nick Skinner

2. What you will need

2.1.   Equipment
To fight an engagement on the tabletop you will need:

>   Lots of d6 (20 will be plenty)
>   1 x d4
>   1 x d20
>   1 set of percentage dice (2 dice numbered 0 - 9)
>   A tape measure marked in cm

In addition, you will need to cut out the turning circles and wind direction indicator included at the back of these rules. You will also need to produce a set of 'cards' (see section 5) to determine the turn sequence. For small or single ship actions you may also wish to use the optional rule of placing a maker next to each ship at the beginning of the turn in which case you will need to make three markers for each ship (tack, port, straight, and starboard).

2.2.   Ship Data Sheet
You will need a ship data sheet (see Appendix I) for each ship on the table. This provides a record sheet for each vessel on which data associated with the ship are recorded, including it's name, nationality, quirks (elite, cowardly lubbers etc) and damage incurred.

2.3.   Terrain
Don't be afraid to use terrain. Most naval engagements were fought within sight of land and many great engagements - St. Kitts, The Nile, Copenhagen - for instance, were fought whilst one fleet was at anchor in a secured bay. Imaginative scenarios will involve 'cutting out' expeditions to capture an anchored ship, launching an 'amphibious assault' by a landing party to destroy a shore battery, or sending fireships into an enemy port and all require a strip of land, plus maybe a few rocky shoals offshore.

2.4.   Ships
Pretty vital really. The KMH! rules are designed for 1:1200 model ships of which those produced by Rod Langton are probably the best. There are no standard base sizes in KMH! and I know gamers also use these rules for 1/2400th and smaller scales!

2.5.   A flexible mind.
These rules are not for pedants and should be played in the spirit in which they are written. Any points of dispute should be considered in terms of what would happen historically and what is realistic in that instance. I suggest that protractors especially be banned!

3. Ship & National Characteristics

Navies of this period can generally be assigned to one of three broad categories. It is not too much of an oversimplification to say that American and British sailors, with their dominance of the seas, became hardened veterans keen to bring their enemies to action. The same cannot be said for other navies who spent great lengths of time either blockaded in port or avoiding action.

National characteristics in KMH are broadly covered by assigning ships and individual vessels to one of three categories, each of which is described over the next few pages:

Jolly Jack Tars

Sans-Culottes

Landlubbers

3.1. Privateers

Privateers, highly motivated and professional, should always be classed as Jolly Jack Tars unless specifically dictated by the scenario. Such privateers, operating under a 'letter of marque', were frequently in combat during this period.

Letters of marque were official licences issued by government to private citizens granting the holder limited legal protection to act as Privateers. These intrepid individuals used their own ships, at their own expense, to make war on the shipping of countries with which their own county was at war, and to profit from the sale of any ships and cargoes captured. Without legal protection such individuals were liable for prosecution for piracy.

Jolly Jack Tars

"High o'er the poop the flattering winds unfurled
Th'imperial Flag that rules the watery world"

Elite:
> Fire double shotted at close range
> Boarding party (good marines)
> Fervently determined
> May have "Foul Bottom"

Average:
> Fire double shotted at close range
> Boarding party
> Determined

Poor:
> Boarding Party
> Determined

Jolly Jack Tars

General Characteristics

Restricted to British and American ships.

These ships attempt to close with the enemy as soon as possible and are manned by crews well trained and experienced in rapid fire. To reflect this in the rules, these crews have an improved fire factor at point blank and short range.

Ships with this characteristic are manned by experienced sailors and officered by professionals with a firm control over their crew.

They will automatically assemble boarding and counter boarding parties when necessary, and may count as 'fervently determined'. These ships are not automatically fast sailors, and in fact, due to extreme service at sea, may be 'foul bottomed'.

No ships operating under this system can be 'cowardly lubbers'.

Elite, Average or Poor?

At the start of the game, roll a d20 for each vessel (alternatively, characteristics may be assigned by the umpire as part of the scenario).

Elite:	1 - 13
Average:	14 – 18
Poor:	19 – 20

Sans Culottes

"...our consciousness of superiority over the French at sea led us to a preference for a French antagonist."
Samuel Leech 1812

"What is to be done with Admirals who hasten home at the first damage they receive?"
Napoleon, 1805

"I am about to sail, but I do not know what I should do...our naval tactics are antiquated. We know nothing but how to place ourselves in line, and that is just what the enemy wants"
Admiral Villeneuve, 13th August 1805

Elite:
>   Boarding Party
>   Determined

Average:
>   No modifications

Poor:
>   Poor firing (after first broadside)
>   Poor sailors
>   Cowardly lubbers

Sans Culottes

General Characteristics

This covers the French, Dutch, Swedes and Danes.

With less opportunity to operate at sea these fleets are not as professional as their American and British counterparts. These vessels receive may receive advantages in firing at long range (to reflect the fact that they often carried heavier guns).

Elite crews under this category have taken the opportunity to train boarders and develop a cohesive and enthusiastic unit. Average crews have no automatic extra characteristics but can purchase any using the points system. It is quite possible that vessels operating under this system will be 'cowardly lubbers', and a fair proportion will be poor sailors, unable to sail in tight formation.

Elite, Average or Poor?

At the start of the game, roll a d20 for each vessel (alternatively, characteristics may be assigned by the umpire as part of the scenario).

Elite:	1 - 4
Average:	5 – 15
Poor:	16 – 20

Special Note:
3 decked vessels under the Sans Culottes category may not be elite

Landlubbers

"The enemy's line was formed with a Spanish ship between two French ones, nearly all through the line; as I suppose to make them fight better."
William Robinson, an English sailor at Trafalgar

Elite:
Not permitted

Average:
Poor firing (after first broadside)
Poor sailors

Poor:
Poor firing (at all times)
Poor sailors
Cowardly lubbers
Foul Bottomed

Landlubbers

General Characteristics

This covers the navies of Spain, Russia, Turkey, Naples and other Italians.

These ships, confined to port for so much time (partly because of the British blockade system and partly because their officers preferred the beds in local brothels to the discomfort of their ships) have no positive factors assigned automatically, will automatically fire at a minus and are more likely to strike.

Their lack of experience in the open seas provides them with no opportunity to practice their firing and means that the crew are not well practised in sailing the ship. They may well be poor sailors - making close formation manoeuvring extremely tricky.

Elite, Average or Poor?

At the start of the game, roll a d20 for each vessel (alternatively, characteristics may be assigned by the umpire as part of the scenario).

Elite:	Not permitted
Average:	1 – 10
Poor:	11 – 20

4. The Size of Your Purse [optional]

> *"I had 100 carbines fitted with long bayonets…all the men armed with swords were instructed in broadsword practice every day and pistols had become familiar arms to them…When the drums beat to quarters, each went to his station ready armed and with his weapons loaded"*

Captain Lucas of the French 74 gun 'Redoubtable', the vessel from which the musket shot was fired that killed Nelson.

In addition to the features listed as standard, extra 'bonus' features may be purchased (or adverse features may be reversed) at the beginning of the game, up to a 'budget' assigned by the umpire or diced for randomly. Historically, Captains would use their own money to improve the performance of their ships, buying extra powder and shot to practise gunnery, or swivel guns for the fighting tops to assist boarding actions. A particularly rich Captain may even have structural changes made to his ship to improve its performance. It may well be that the size of the player's purse is dictated by the umpire in a scenario. If no umpire is present it is possible for players to dice to discover their budget for enhancing their vessel.

To determine the size of your purse for a single ship action throw 1 average dice (DAve). For a larger action throw 1D10 per squadron.

4.1.   Positive Features

Upgrade Vessel *(5 points)*
Enables the player to upgrade a vessel (i.e. Poor becomes average, average becomes elite etc – within class permissions)

Initial Broadside *(1 point)*
Adds one dice per deck for the initial broadside on either side of the vessel and is in addition to any other gunnery characteristics:

Fast Sailor *(1 point)*
Such vessels may double the lowest dice score thrown when that vessel moves, or half it if a minus dice.

Determined *(1 point)*
Crews with this characteristic are less likely to strike and therefore can add 10% on to any throw made on the striking table

Fervently determined *(2 points)*
Crews with this characteristic may add 20% to any throw made on the striking table.

Boarding Party *(1 point)*
Vessels with this characteristic may double the lowest dice thrown in a boarding action.

'Go Large' (*3 points*)

American frigates only may upgrade to large frigates. This upgrades damage points to the same as that enjoyed by a 74 gun ship.

4.2. Negative features

Vessels may have intrinsic negative features, which can only be reversed by allocating points to remove them.

Cowardly lubbers (*2 points*)

This reflects the overall weakness in command and poor stomach for fight exhibited by a significant proportion of French, Spanish and Turkish vessels during this period. Crews with this characteristic are more likely to strike their colours than 'normal' crews. Cowardly lubbers will also refuse to move within close range during their turn, and must attempt to move to a further range band if closed by an enemy vessel so that that ship remains outside close range. **They will always fire at the rigging when possible.**

Foul Bottom (*1 point*)

Vessels that have spent long periods at sea eventually fall into disrepair, making a spell in port vital to ensure the fighting effectiveness of the ship. As such wear and tear was nearly always manifested in loss of sailing ability, vessels with this characteristic sail more slowly than might otherwise be the case. Poorly maintained vessels may also exhibit this trait.

Poor sailors (*2 points*)

Often associated with cowardly lubbers, this represents the poor seamanship exhibited by French, Spanish, Russian and Turkish crews. Ships with this characteristic must use the next turning circle up when turning the vessel, and may not apply group rolls when travelling in squadron formation – instead, each vessel with this characteristic must always dice independently for movement.

5. Cards

*"Something must be left to chance, nothing is
sure in a sea fight beyond all others"*

*Horatio Nelson,
Memo to the Fleet,
off Cadiz, 9th October 1805*

The game sequence is determined by the turning of cards. Each squadron commander has a card for moving, and one for firing. All the cards are placed together, shuffled and laid face down on the table. The umpire then turns each card over and each card is acted on. For instance, the first card turned may be 'French Squadron A: Move', enabling the player commanding French Squadron A to move his ships. When he's done that the next card is drawn, which may be 'British squadron A: Fire', at which time the British captain may fire. This system represents the 'risk' element of 'derring-do' manoeuvres, and the uncertainties of the elements. It also does away with the need to write orders. Players should bear in mind that if the cards go against you your opponent may be able to move, fire, fire again and move again before you able to respond. Such is the way of the sea.

> **Cards:**
>
> 1 Wind Change Test Card
> 1 Getting Choppy Test Card (may depend upon scenario)
> 1 Ships Boats Move Card (can be added when small boats are launched)
> 1 Shore Battery Fire Card (if necessary)
> 1 Fire Test Card
> 1 Steering damage test card
> 1 Strike Test Card
> 1 Boarding Party Card
> 1 Steering Damage Card
>
> plus (obligatory):
>
> For each squadron of each nation: 1 Move Card, 1 Fire Card

5.1.   Holding back of cards
Players may hold back their firing card to be played at a later point in the turn if desired. Cards may not be carried over from one turn to another (e.g. a card held back for later fire can not be carried over into the next turn, it must either be used before the end of the turn in which it is drawn or else it goes back into the pack.

5.2.   Combining Commands
If a line of battle is made up of more than one squadron, the senior officer can inform the umpire that he wishes the squadron to be combined for movement purposes. For this to happen, all ships in the squadrons to be combined **must be in a conventional line of battle formation**, with ships deployed fore and aft in a reasonable line. When a command is consolidated in this way the movement cards for the subordinate commands are removed from the pack and the whole line will move on the C in C card. Each squadron retains its own firing

card. The C in C announcing the consolidation must do so at the beginning of the turn, before any cards are turned, to allow the umpire to remove cards from the pack. The 'fleet' will then move as one, but as soon as formation is lost (maybe due to failing a tack test, or through poor sailors not maintaining the line), then the individual cards are returned to the pack and squadrons return to independent movement.

Similarly, a full line of squadrons which is moving as a fleet can be deliberately split into it's squadrons in the same way, by adding the squadron commanders movement cards back into the pack at the beginning of the turn.

Movement may be consolidated, but firing cards are always kept independently.

6. Movement

> "Every sail was got ready, the helm put up, and in a few moments she was under a cloud of canvas before the wind"

George Little, on board the privateer 'Paul Jones', 1812

> "The enemy set his square mainsail, and, shaping a diagonal course, gradually increasing his distance from the land, he neared us. I was on the watch for a favourable moment to tack"

William Dillon, HM Brig 'Childers'

6.1.   Basic speeds

All vessels have a basic speed as follows (and as shown on the ship record sheet). These may be adjusted to represent variability and different ship designs.

Rate	Guns (approx)	Basic Speed
1st Rate	100 +	10cm
2nd Rate	98 to 90 guns	11cm
3rd Rate	80 to 64	12cm
4th Rate	60 to 50	11cm
5th Rate	40 to 32	15cm
6th Rate	28 to 20	14cm
Sloops	18 to 16	16cm
Gun-Brigs		10cm
Cutters		16cm

These rates are indicative, and may be changed to represent the particular quirks of individual vessels. Many 2nd rate and some 3rd rate ships were frustratingly slow.

The basic speed will be reduced as the vessel sustains damage. Damage is recorded on the ship record sheet.

A reduction of 1cm in the basic move factor is normally applied for 'Foul Bottomed' vessels (this adjustment should be shown in the base speed as shown on the ship record sheet).

Where merchant vessels are included within the scenario, the umpire should decide a basic move distance that is consistent with the size of the vessel. Most merchants will be poor sailors and poor shots.

6.2. Position relative to the wind

The speed of a sailing vessel is determined by its relative position to the wind at the <u>beginning</u> of the turn (as seen in the diagram below).
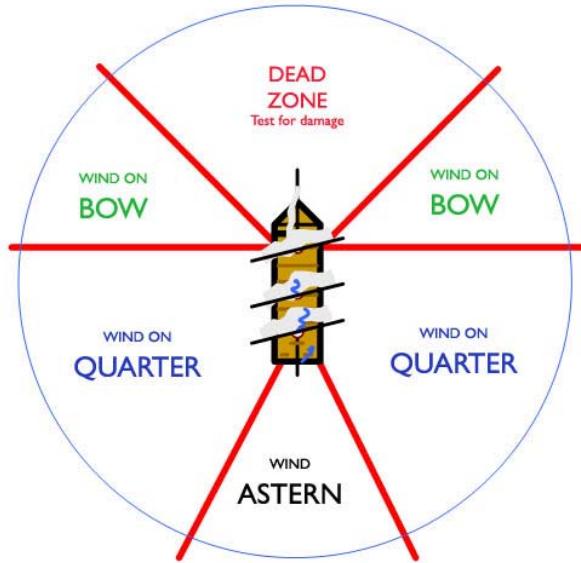
Wind on **BOW**: Basic **-1d6**
Wind on **QUARTER**: Basic **+2d6**
Wind **ASTERN**: **Basic +1d6**

Additional modifiers may be applied if dictated by scenario or (optionally) as a result of additional features purchased with bonus points (see chapter 4)

Wind on BOW
The vessel may sail between 90 degrees and 45 degrees of the wind. This is pretty generous. Any vessel sailing closer than 45% to the wind will need to take the 'dead zone' test. Vessels travelling at wind on bow move at basic speed MINUS the throw of a d6. A high throw for some vessels may mean that the vessel hardly moves at all (and damaged vessels might not move at all!)

Wind on QUARTER
This is the fastest rate of movement because all sails can be used to maximum effect. Vessels travelling with the wind on quarter move at basic speed PLUS the total score of 2d6 in cm.

Wind ASTERN
Not as beneficial as wind on quarter, because some of the sails mask each other. The arc or zone for wind astern is approx 60 degrees. Vessels travelling with wind astern move at basic speed PLUS the score of a d6 in cm.

6.3. Turning
Ships turn according to the turn templates provided (see below), depending upon the size and quality of the vessel. Poor sailors always use the next size turning circle up, as do vessels that have lost a mast [one circle per mast]. Once the vessel goes off the largest turning circle then it must move one cm straight for each cm that it turns.

When turning, vessel speed is determined by its relative position to the wind at the <u>beginning</u> of the turn.
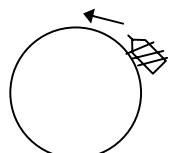
Turning Circle:

Smaller vessels may use a larger turning circle if desired. Poor sailors use the next turning circle up.

6.4.   Slowing Down and Speeding Up
The ability of a vessel to control its course and speed depends on the class of crew. Elite crews could reduce speed rapidly by turning their sails side on to the wind. Poor crews took a bit longer to figure it out.

Elite crews:	Drop from quarter, to basic to stop (i.e. it takes two moves to stop when travelling wind on quarter, one from aft, and can stop instantly if wind on bow).
Average:	Drop from quarter, to basic, to bow, to stop (i.e. three moves to stop when travelling wind on quarter, two moves from aft and one move from bow).
Poor crews:	Drop from quarter, to aft, to basic, to bow, to stop (i.e. four moves to stop when travelling wind on quarter, three moves from aft and one move from bow).

Speeding up is the same, only backwards (although of course, you cannot increase speed to more than that allowed for that angle to the wind).

6.5.   Drift
Vessels that are stationary but not anchored (perhaps because they are dismasted, grappled or simply have no anchor) will **drift downwind at d6 cm** per turn, and will do so when the ship movement card is turned (if grappled, both ships move on the first card drawn). They will also swing one compass point per turn until they are pointing with their stern facing directly into the wind. If there is no wind then they stay motionless and can only move by towing.

6.6.   Towing
Vessels may be towed by other vessels. To tow, a line must first be attached between the two ships. This can either be performed by launching ships boats or by moving to within point blank range. It takes **one turn within 2cm to attach a tow**. **Vessels towing or being towed move at half speed**. In choppy seas, a d10 must be rolled each turn that a ship is under tow. A zero means that the tow cables have been lost. Vessels may also be towed by ship's boats (see page 36).

6.7.   Sailing into the wind and moving 'In The Dead Zone'
No vessel may sail closer than approx 45% degrees of the wind without taking the 'Dead Zone Test'. When attempting to move within The Dead Zone a vessel rolls 3d6 and subtracts the result from its basic move rating (at the start of the game). If the resulting figure falls below zero the vessel is 'taken aback', has a 50% chance of losing its foremast and receives 3DP's automatically plus an additional DP for each point that its dice score was below zero. Elite crews may re-roll one dice on the Dead Zone test if desired.

6.8.   Tacking

Vessels with wind on bow may 'tack'. **Vessels that have lost a bowsprit or foremast may not tack**. Better sailors in slower vessels could outrun poorer sailors by frequently tacking. There are three possible outcomes from a decision to tack:

1. **Perfect tack!**, no speed lost
2. **Successful tack**, but speed lost
3. **Failure**. Becalmed.

Vessels wishing to tack must take the following test:

Tack test

	Elite	Average	Poor
Jolly Jack Tars	2/1	3/2	4/2
Sans Cullottes	3/2	4/2	5/3
Landlubbers	n/a	5/3	6/4

First figure is on a D6 for a perfect tack. Second for a successful tack, anything less fails

Perfect: No speed loss: vessel moves at its normal speed for that turn as determined by the dice, but with the wind on its opposite bow.

Successful: Tack but no move: vessel rotates so that the wind is on the opposite bow.

Fail: No move, next turn drift back to wind on bow.

All tacks are performed individually and must be diced separately for each ship.

KMH example
Sailing a ship

Captain Jarce's Frigate rounds Ushant to spot a Chasse Marie, probably a French Privateer running for the French coast. The wind is coming in from the West while Jarce is heading South South West with the wind just on his bow.

Keen to snap up a prize Jarce decides to give chase. In his first turn he rolls 1D6, ordinarily he would subtracting that amount from his base speed of 15cm, but as he is a "Fast Sailor" he halves the minus dice. The base speed can be seen by the number of speed boxes on his ship record card. In this instance he throws a 4, and the frigate, nimble in the water, turns 13cm tightly around the smallest turning circle to port, running eastwards towards the Privateer.

Even though this turn sees him move from wind on bow, through wind on quarter to wind aft his speed this turn is dictated by his position at the start of the turn. The only variation on this would be if Jarce attempted to sail through the dead zone, straight into the face of the wind.

6.9.   Maintaining the Line Of Battle / Poor Sailors

The higher the quality of the ships that make up the squadron, the better will be the ability of that squadron to retain its formation when executing complex (and simple) manoeuvres. Ships in ordered Line of battle may all move at the same (slowest) ship speed, and the player commanding that squadron need only roll once for movement.

Fleets that contain no poor sailors will maintain their line. However, once you get one poor sailor in your command then the chances of maintaining that formation drop.

On the assumption that even poor sailors can sail straight ahead, the influence of poor sailors on the squadron is handed in KMH!! as follows:

Any squadron containing one or more poor sailors must roll a d6 each time it manoeuvres (i.e. each move that it doesn't maintain a simple line of battle). The outcome is as follows:

> **Roll is greater than the number of poor sailors in the line: Line is maintained**

> **Roll is equal to or less that the number of poor sailors in the line: Line is not maintained and each ship must dice independently for movement.**

This test need not be performed when tacking as all ships must test to tack individually anyway.

When a squadron or fleet is in line of battle at different angles to the wind (perhaps because the front half have wind on bow and the second have wind on quarter) and desire to move as a group, they must first test to maintain their line of battle or current formation (see above). If they succeed, the fleet moves at the speed of the slowest vessel in the formation.

e.g.: the lead ship of a four ship squadron is wind on bow, the others are wind on quarter. If the ships pass their test to maintain their formation, then all ships move at wind on bow speed.

However, once the line of battle is broken (either naturally or by failing the test below), ships must dice independently for movement.

6.10. Collisions
When two or more ship models come into contact with each other (intentionally or not) then there has been a collision.

Vessels in collision lose DP's as follows:

Speed of fastest moving vessel:

1-6cm: Each vessel looses 1DP
7 – 15cm: Each vessel looses 2DP and a secondary speed box
Over 15cm: Each vessel looses 2DP and a primary speed box
                   plus roll extra d6:

                   1,2,3 = no effect
                   4 or 5 = 1 mast lost 6 = roll again :
                   1,2,3, = 1 mast lost, 4,5 = 2 masts, 6 = 3 masts lost

When the forward third of the vessel is contacted or contacts another ship a d6 is rolled. On a roll of 1-5 the bowsprit is lost.

Each mast lost = 5 damage points

Ships in collision may attempt to grapple (see Boarding Actions, page 32).

6.11.   Small action movement option rule [optional rule]
(this option is designed for use with single ship actions and is not recommended for actions where each player commands more than 3 vessels).

Each player has a card with port, starboard or straight on it. At the start of each turn the player will select one and place it face down. One the turning of his movement card he will show the option he selected.

Tack: Ship must perform a tack
Port: Ship must turn at least three points (cm) to Port (left) at any time in the turn.
Starboard: Ship must turn at least three points to Starboard (right) at any time in the turn.
Straight: Ship will move straight, that turn, but may turn two points in either direction in
               the second half of his movement.

7. Anchoring

7.1. Raising the anchor
Vessels start from stationary as follows:

Turn 1:   Cut Anchor
Turn 2:   Raise Sails 1
Turn 3:   Raise Sails 2
Turn 4:   Speed up in accordance to class (see page 15)

Alternatively, you could raise the anchor rather than cut it. This takes four moves of 'heave ho' and sea shanties (banned in the RN of course) to get the thing hauled up, so that raising sails becomes turn four, with the whole process taking seven turns. By which time your ship will probably have been captured. One of the luxuries of fighting one off battles is that you do not have to consider the longer-term consequences of loosing an anchor. In the campaign game (see KMH campaign supplement) this becomes more of a consideration.

7.2. Dropping Anchor
Vessels that drop anchor must be stationary (see 'slowing down', page 15). It takes one move to drop an anchor. Vessels riding one anchor will rotate until they are in line with the wind with their bow facing directly into the wind. Vessels riding two anchors can be 'manoeuvred' into any angle desired. Taking one move to swing on their anchor.

8. The Wind and Sea Conditions

> *"…at the critical moment of weathering the Dane, the wind headed us two or three points…instead of gaining the wind I was obliged to bear up to prevent the jib-booms of the two vessels coming in contact"*

William Dillion, commander, HM brig 'Childers'

8.1.   Wind Direction

The easiest way to determine wind speed at the beginning of the engagement, when not set in the scenario, is to imagine the tabletop as being a clock face and role 2d6 (or a d12 if you have one). The resulting score is the direction from which the wind is blowing, and you should set the wind indicator on the table to show that the wind is blowing from that direction.

8.2.   Wind Change Test

During the game there is a chance that the wind may change at any time. A Wind change test card is present in the deck used to dictate the run of play, when this is turned throw 2D6, 11 or 12 see the wind change.

Throw 1D6, the result is 1 to 5 throw again, with the wind moving one point clockwise (on an eight point compass) on 1 to 3, one point anti-clockwise on 4 to 6. If the second throw is a 6 roll again. On a 6 all ships will be becalmed and may only move by anchoring and warping or when being towed by the ships boats. On a result of 1 to 5 roll a D8, with 1 being the top left hand corner of the table, and moving round an eight point compass (5 being the bottom left hand corner for example). The result shows a complete wind change with the breeze now coming from the new compass point.

8.3.   "Getting Choppy" Test

KMH! includes no direct provision for the wind strengthening or lessening, as any movement is the same for both sides and adds complexity to the game where it is not necessary. It does however account for the effects of such a shift. A "Getting Choppy" card is also included in the card deck (the suggestion is that including the card should be dependent on the scenario – don't include it just for the sake of it). This allows a chance for seas to become rougher with the effect that lowest deck gun ports must be closed on two and three deckers. There is no change in wind direction, but the sea becomes blowier and choppier. Each time the getting choppy card is played role a d10. A 0 indicates that the seas have got choppier (if not already choppy). If the seas are already choppy then the same result with mean that the seas have calmed slightly to allow vessels the opportunity of using all their weaponry.

Firing factors are reduced by one third (rounded up to the nearest whole factor) when the seas are choppy for three deckers, and reduced by half (again rounded up) for two deckers.

Choppy seas have no effect on single decked ships as they had greater clearance above the waterline.

9. Firing

"This is too warm work, Hardy, to last long"
Nelson at Trafalgar

9.1. Full or Partial Broadside?
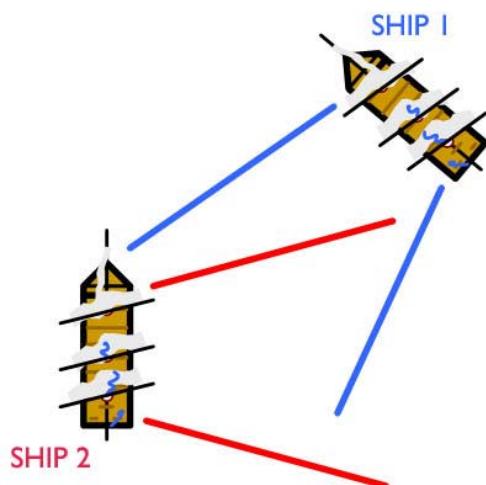
An umpire is always handy here. To be able to claim a full broadside the mainmast of the target vessel must be inside the broadside arc of the firing vessel (broadside arc = 15 degrees either side of main body of ship).

In the diagram on the left, SHIP 1 has a full broadside against SHIP 2 because SHIP 2's mainmast is inside the full broadside arc of SHIP 1. However, SHIP 2 cannot even claim as partial broadside on SHIP 1 as the whole of SHIP 1 is outside SHIP 2's arc of fire.

You may fire both broadsides in any one go. Only one of them can be a full broadside, the other can only be a partial broadside. The firer decides which is which!

9.2. Firepower
In simple terms, the more guns you have the greater your firepower. The table below shows how many dice each vessel has for its base firepower

Table: Firepower

No. Guns (up to)	120	112	100	98	80	74	64	50	44	40	36	24	< 20
No of Dice (main broadside)	14	13	12	11	10	9	8	7	6	5	4	3	2
Stern/Bow Chasers:	2	2	2	2	2	2	2	1	1	1	1	1	1

The actual number of dice thrown may be increased or reduced according to the modifiers listed below. It was not that uncommon for vessels to be either over or under gunned. If representing particular historical vessels then one dice may be added or taken from the basic fire factor to represent this.

Modifiers to firepower:

Poor shots (all Landlubbers):	- 1d6
Initial Broadside (elite)	+ 1d6 per deck (minimum 2).
Initial Broadside (not elite)	+ 1d6 per ship
Fire on board:	- 2d6 (for each move of burning)
Each 5 damage points sustained:	- 1d6
Basic speed now halved:	- 1d6 (represents rigging obscuring guns)
Elite Jolly Jack Tars:	+ 1d6
Average JJT's at short range or less	+ 1d6 (the *Bellingham Bonus*)
Elite JJT's at short range or less:	+ 1d6 per deck (min 2) (cumulative)
Elite Sans Culottes:	+ 1d6
Sans Culottes at extreme range:	+ 2d6
Sans Culottes at long range:	+ 1d6
Stern rake (hull):	Double dice – after all other modifiers
Bow rake (hull):	50% more dice *(rounded up)* – after all other modifiers
Rake of rigging (from bow or stern):	Double dice – after all other modifiers
Partial Broadside:	Divide total by two and round up.

To Hit:
Measure the range from firer to target (from centre of broadside to nearest point of enemy hull). From the ships fire factor, determine how many dice should be rolled, then consult the table below to see what needs to be thrown in order to hit.

Table: To Hit

Range	Distance to target	Needed to hit on d6
Point Blank (no rigging)	5cm or less	2 or more
Short	6cm to 12cm	3 or more
Medium	13cm to 20cm	4 or more
Long	21cm to 30cm	5 or more
Extreme	30cm to 40 cm	6

Before firing, players must declare whether they are firing at the hull or the rigging. **Firing at the rigging is only possible at above point blank range.**

9.3. Hot Shot
May only be fired from shore batteries. It takes eight turns to prepare and hot shot, but once available it may be fired each turn thereafter

9.4.   Grape

May only be fired at point blank range and if a player choose to 'hold' his firing card until later in the turn. When raking with grape there is a 50% chance of inflicting of CREW casualties no matter what the special effect throw.

9.5.   Carronades

The Carronade or "Smasher" was a short gun developed by the Carron Company, a Scottish ironworks, in 1778. The gun was half the weight of an equivalent long gun, but could throw a heavy ball over a limited distance. The effect of vessels carrying one or two carronades are generally considered to be covered by the main firing rules, but some vessels (notably frigates) were exclusively carronade armed. **These vessels may only fire at close or point blank range, but throw double the number of dice when firing**.

9.6.   Bomb Ketches

Must be stationary to fire (anchored if possible) and must be able to see the target or have it observed by friends that they can see (this could be a shore based party if relevant). Bomb ketches will hit on a roll of 10 or more on two d6, firing with one throw per turn. Add one to the dice if the vessel is elite, and deduct one for each 3cm that the target moved in its last turn. (unless you are elite you will not hit a ship moving at more than 6cm per turn). If a hit is obtained, roll for damage points on a D20 (yes, they can do serious damage) and dice for specials as normal fire on the hull. **Bomb Ketches have a maximum range of 50cm, and a minimum range of 15cm**.

9.7.   Shore Batteries

See separate section on shore batteries (page 42).

9.8.   Raking

A rake - a punishing cannonade of fire that runs the length of the target vessel - really only occurs when the firing ship is at 90 degrees (+/- 2 or 3 degrees either side if you are feeling generous, which I seldom am) to the target vessel and the shot therefore passes directly along the hull of the target vessel. Don't be over generous. Rakes are deadly.

10. Damage

*"The execution wrought amongst their ranks by the sudden broadside was dreadful,
and the whole ship resounded with the shrieks and groans of the wounded."*

Robert Eastwick of 'La Forte' against 'La Sybille', 1799.

An 18 pounder long gun with a charge of 5lb of powder was capable of penetrating nearly 2 feet six inches into oak at a range of 400 yards and over 12 inches at 1000 yards. The damage inflicted on softer targets (sails, small boats and trembling midshipmen for instance), would be even more horrendous.

10.1. Base Factors (Damage Points)
Each vessel has a base factor that represents the ability of that vessel to withstand damage. The larger the vessel, the greater its ability to absorb damage. As the vessel takes hits this factor is decreased by incurring Damage Points (DP's). The greater damage a vessel takes, the more likely it is to strike its colours. Sinking a vessel was an uncommon occurrence as nearly all damage was inflicted above the waterline.

The base factor of any vessel is the number of guns (i.e. a 74 guns vessel can withstand 74 hits before it ceases to exist, whilst a 36 gun frigate will only be able to absorb half as much damage)

Bomb Ketches will normally have a base level of 20. Merchantmen and others should be dictated by the scenario.

10.2. Damage to the Hull
For each hit obtained 1 Damage Point (1DP) is done to the target vessel and this is indicated on the ship record sheet by striking out one Damage Point box (working downwards from the initial level). **For every five damage points (cumulative) sustained the vessel losses one dice when firing.**

When **firing at the hull, one secondary speed box must be stuck out for every 5DP's inflicted** This represents damage to spars, rigging etc as well as to the general manoeuvrability of the ship.

10.3. Damage on the Rigging
Each ship record sheet has a range of primary 'speed boxes', one for each centimetre of basic movement. Within each primary speed box there are three secondary speed boxes. These boxes will be crossed off as the vessel takes damage to its rigging and masts.

When firing on the rigging, **each hit removes a DP, but all sixes thrown remove a secondary speed box INSTEAD of a DP**. Specials are then diced for on the rigging column of the special effect sheet, needing to throw equal to or less than the total number of combined DP and speed box hits.

Ships start the game with a number of speed boxes equivalent to their basic speed. Each time the combined damage to secondary speed boxes reduces to zero under each primary speed box, the primary speed box is also crossed through, and the basic speed of the vessel drops by 1 cm.

Primary speed box:

12cm
1	2	3

Secondary speed boxes

(note: when firing at the rigging at extreme range all hits will knock off a speed box, thereby encouraging French & Spanish crews to engage at greater distance, as they did historically).

KMH example
Firing on the rigging

Captain Jarce is fortunate, the Chasse Marie is indeed a French Privateer, clearly damaged and running for her home port, probably Brest. From the British Frigate it is clear that the Frenchman's pumps are working constantly suggesting that the vessel is shipping water. Despite this, however she is a trim sailor and as evening approaches Jarce is still at long range. If he is to stop his foe escaping in the dark he must act now.

With the wind still behind him Jarce turns the ship to starboard, firing his broadside at the rigging in the hope of slowing the Frenchman further. Despite his average crew he can produce a good first broadside thanks to the sights he has purchased privately. As a 32 gun Frigate his ship has a basic 4 firing dice, with a fifth for his initial broadside. Jarce is lucky (he is known in the service as "Lucky Hugh Jarce") and throws 1,3,5,5,6. A total of three hits. As he is firing at the rigging he inflicts two DP's on the hull, and knocks a speed box off because he threw one six. To inflict additional damage he must roll a 3 or less on a d10 (see section on special damage). Jarce rolls a D10, throwing 1, he does extra damage as this is under or equal the 3, and rolls again consulting the columns for rigging fire. This time a 7 sees 2 speed boxes taken off the Chasse Marie, reducing his potential maximum. The Frenchmen started the turn with 10 full speed boxes with two secondary under the ten. As a result of the damage he crosses off three secondary speed boxes, reducing his basic to 9 primary and one secondary speed box (his maximum basic speed is now 9). If Jarce is able to do the same damage next time round he will slow the Frenchman to 8.

11. Special Damage

At the same time as the firing dice are rolled the firer rolls a d10. If he rolls less than or equal to the number of total hits obtained (including sixes and other hits if firing on the rigging), he has inflicted additional damage and must roll a d10 again using the table below:

Table: 'Special Damage'

Score d10	*Firing on Hull*	*Firing on Rigging*	*Rake of Hull*	*Rake of Rigging*	*Firing Grapeshot*	*Firing hot shot*
1	No effect [GB]	No effect [GB]	No effect [GB]	No effect [GB]	No effect [GB]	No effect [GB] [F]
2	No effect	No effect	+ 1 DP's	- 1 speed box	No effect	No effect
3	+ 1DP	- 1 secondary speed box	+ 2 DP's	- 2 speed box	No effect	[B] and [F]
4	+ 2 DP's	- 2 secondary speed boxes	+ 2 DP's	- 2 speed box	+ 1 DP	+ 2 DP's [F]
5	+ 2 DP's	- 3 secondary speed boxes	+ 3 DP's	- 2 speed box	- 1 speed box	+ 2 DP's [F]
6	+2 DP's [B]	- 3 secondary speed boxes [B]	+ 3 DP's [B]	- 3 speed box [B]	+ 1 DP's [HOC]	+2 DP's [F]
7	+ 3 DP's [F]	- 4 secondary speed boxes	+ 3 DP's [M]	- 3 speed box [M]	- 2 speed box [HOC]	+ 3 DP's [F]
8	+ 3 DP's [HOC]	- 4 secondary speed boxes	+ 3 DP's [HOC]	- 3 speed box[M]	+ 2 DP's [HOC]	+ 3 DP's [F*]
9	+ 3 DP's [S]	- 5 secondary speed boxes [M]	+ 4 DP's [S]	- 4 speed box [M]	- 2 speed box [auto CREW]	+ 3 DP's [S] [F*]
0	+ 5 DP's [M]	- 5 secondary speed box [M] [HOC]	+ 5 DP's [M]	- 4 speed box [M&M]	+ 2 DP's [auto CREW]	+ 5 DP's [M] [F*]

Damage Points [DP's]

Hits on vessels inflict Damage Points. For each five damage points sustained the vessel losses one dice when firing. The more DP's a vessel has, the greater its chances of striking its colours or, eventually, sinking. Vessels whose value is reduced to zero will drift downwind at half their base movement speed for d6 moves before sinking.

Gun Burst [GB]:

Gun burst on firing ship. Lose 5DP. *Elite Jolly Jack tars have a 50% chance of preventing this.*

High Officer Casualties [HOC]:   Represents unusually high casualties amongst senior ships officers. Increases the chances of striking.

Damage to Masts [M]:   Mast destroyed, dice (d6) to see which one.

1,2 Mizzen Mast [lose 3 speed points and an extra 5DP's]
3,4 Main Mast [lose 3 speed points and an extra 5 DP's]
5 Foremast [lose 3 speed points and an extra 5 DP's]
6 Bowsprit [lose one speed point and 5DP's].
(For two masted vessels adjust accordingly.)

Vessels that have lost their bowsprit or foremast may not tack

When masts are destroyed by raking fire, the closest mast to the firer is always the first to be destroyed.

A mast lost in will destroy 50% (rounded down) of the ships complement of small boats.

Double Mast Damage [M&M]:   Two masts destroyed, test as above. The same mast cannot be destroyed twice, keep rolling until a surviving mast is destroyed.

Steering Damage [S]:   Damage to wheel / rudder / dead helmsman: Continue on current course until a 6 is rolled on d6 to recover. 50% chance of repair once the vessel stops.

Fire [F]:   Fire on board. Roll a d10 in move. 1 to 5 puts the fire out, 6 to 9 the fire continues. On a roll of zero roll again with 50% chance of explosion. In second move, 1 to 4 puts the fire out, 5 to 9 continues, 0 tests of explosion, etc. Burning vessels always succeed in dowsing the flames on a roll of 1.

Extremely Hazardous Fire [F*]   Represents fire dangerously near the Powder Store. Test as above but zero equals guaranteed explosion.

Boats [B]:   One ship's boat destroyed, reduce number of boats on damage sheet by one (for rules on boats see page 36). In large games the effect of damage to ship boats is best ignored.

Crew [CREW]:   Heavy casualties amongst vital crewmen, especially boarders & marines. Ships with a boarding party have that bonus permanently removed. Ships with *CREW* casualties suffer a penalty on the strike test. When firing with grape there is a 50% chance of incurring CREW casualties. This 50% is automatic if 9 or 0 rolled as a special.

11.1. Repairing damage / Jury rigging

For each turn that a vessel is not in combat (i.e. not firing or being fired upon) it can attempt to recover some of its DP's. The vessel rolls the number of dice that it has stern/bow chasers. Each 4, 5 or 6 rolled recovers one point. Speed boxes can be repaired in the same way, although only one speed box may be recovered for every three boxes lost – thereby representing the fact that new masts can not be replaced after half an hour at sea. This repair can either take place on the ships move card or, as some gamers prefer, on the fire card with no fire allowed.

12. The Strike Test

"I hope none of our ships have struck, Hardy"
"No my Lord, there is no fear of that"

A dying Nelson and Hardy, Trafalgar

"...and although there was no disgrace in being captured by an enemy so superior, still my spirit rebelled at having to strike to a Frenchman"

Robert Eastwick, 'La Forte' vs 'La Sybille', 1799

The more damage a vessel sustains, the more likely the crew are to 'strike' (haul down) their colours. The Strike Test is a kind of nautical morale test and is performed when the 'Strike Test' card is turned.

Vessels must Test when:

(a) The first time the number of damage points sustained equals or passes 50% of the original base value.
(b) More than 15 damage points are inflicted in any one turn.
(c) When the vessel is completely dismasted (Bowsprit does not count as mast in this test)
(d) Losing a deck in a boarding action.
(e) After being raked (bow or stern).
(f) When basic speed drops below 50% of the vessels original basic speed
(g) If condition (a), (d) or (f) is already satisfied and the vessel sustains more damage or looses more speed (as appropriate)

The Strike Test

Current value	Original value							
	100+	80-99	60-79	50-59	40-49	30-39	20 - 29	<20
100+	0	0	n/a	n/a	n/a	n/a	n/a	n/a
80-99	5	0	0	n/a	n/a	n/a	n/a	n/a
60-79	15	5	0	0	n/a	n/a	n/a	n/a
50-59	25	20	10	0	0	n/a	n/a	n/a
40-49	35	30	25	10	10	0	n/a	n/a
30-39	45	40	35	30	20	10	0	n/a
20-29	55	50	45	40	35	30	25	0
15-19	65	60	55	50	40	35	30	10
10-14	70	65	65	60	50	45	40	30
1-9	80	75	70	65	60	55	50	50

Cross-reference the original strength with the current strength to give the % chance of striking. Modify as follows (all modifiers are cumulative):

PLUS:

Each mast brought down:	+10%
Basic speed reduced to less than half original	+10%
Losing a boarding action (per deck)	+10%
On fire:	+10%
Rudder shot through:	+5%
High Officer Casualties:	+10%
CREW casualties	+5%
Raked in this turn:	+15%
Raked previously:	+5%
For each friendly vessel previously struck (in sight)	+5%
Grappled to a bigger ship	+5%
Cowardly lubbers:	+15%
Merchant:	+30%
Flagship already struck:	+5%

MINUS:

Winning a boarding action:	-5%
More friends than enemy within 20cm:	-5%
Determined:	-10%
Fervently Determined:	-20%
Elite:	-5%
Flagship:	-15%

Vessels sustaining damage points amounting to 75% or more of its original strength in any one turn will automatically strike regardless of any other situations

12.1. Result of Strike test

Vessels failing the strike test will attempt to **retire from action** (see below) but will **STRIKE to the nearest enemy IF**:

a) Number of enemy vessels within 20cm exceeds number of friendly vessels by 2:1

b) The vessel isolated from friends by intervening enemy.

c) Vessel is losing a boarding action

d) The vessel subsequently suffers more than 5DP's from any one broadside

e) The vessel is raked

f) It suffers High Officer Casualties

g) The vessel loses any more masts

h) A larger enemy vessel closes to within short range

12.2. Retire from Action

A vessel that must retire from action as a result of failing a strike test must head off table at its best speed, and must always sail away from enemy warships. It may only fire a partial broadside, and will strike if any of the conditions listed under 12.1 apply.

12.3. Merchant Vessels

If unaccompanied by a friendly warship, merchant vessels will strike as soon as the foe closes to within close range. If with an escort they will strike as soon as they receive a full broadside.

If they get a partial broadside they have a 50% chance of striking.

> ### KMH example
> ### The Strike Test
>
> *Black Jaques Chirac is a French Privateer from Brest returning home after an unintended and nearly fatal brush with a British 74 yesterday. A steady flow of water into the hold has seen his pumps constantly at work, but the weight of the water is still slowing his progress. For the past three hours an English Frigate has chased him, unleashing a broadside a few moments ago that saw a couple of spars crash to the deck, and the pace of the vessel decrease markedly. A further broadside has inflicted further DP's on the Frenchman, whose hull strength points have now dropped to 9. Because this is now below 50% of basic, the vessel must take a Strike Test on the turn of that card.*
>
> *Escape is now a matter of chance, and the crew are looking nervously from the larger British ship to the French colours still flying defiantly at their stern.*
>
> *Technically, the French vessel started with a strength of 20. She is now at 9 and has a basic chance to strike of 50%, but Black Jaques and his crew are determined men, bringing the figure down to 40%. Black Jaques throws 97 on a D%, making a typically gallic gesture to the rotund English Capitaine who is observing so closely through his telescope.*

13. Boarding Actions

"Westminster Abbey or Victory!"

*Nelson leading the boarding of the San Josef,
Battle of St Vincent*

A boarding action can only occur once two or more vessels are locked together. To determine whether touching vessels become locked roll a d6. Add two to the roll for each captain wishing to become locked with the other vessel (i.e. if both captains wish to lock then add four to the dice).

A result of 6 or more will lock the vessels together.

There are a minimum of six stages to a boarding action:

    Stage A: Gain access to the deck
    Stage B: Capture deck (repeat for each deck)
    Stage C: Capture ship
    Stage D: Consolidation (rounding up officers, assigning Prize Crew etc)
    Stage E: Cutting Away
    Stage F: Rejoining the Action

The boarding action is fought when the boarding action card is turned.

Roll 1 d6 for each 10 points of hull remaining (rounding down – if you have less than ten points left don't get boarded!). Modify as follows:

Jolly Jack Tars:	+2d6
Elite:	+1d6
High Officer Casualties	-1d6
Poor Crew:	-1d6
CREW casualties:	-1d6
Landlubbers:	-1d6
Cowardly lubbers:	- 2d6
Boarding Party Feature:	+1d6

The winner is the person with the highest total score.

The first victory stage in any boarding action is gaining access to the deck. Vessels are captured one stage at a time, and once secured ships may not immediately rejoin the action.

To win that stage the attacker must beat the defender. If the defender wins by more than two points then the defender is deemed to have successfully countered the attack and the attacker looses a stage (i.e. if fighting at Stage B and the defender wins by two points, he throws the attacker off the ship completely, and the next round fought will be for Stage A). Once on the opposing vessel, for every 3 excess victory points incurred the defending vessel looses 1DP. (e.g.: if vessel A beats vessel B by 8 points it captures that deck and inflicts 2DP of damage to the enemy vessel).

Crews that throw an attacker off their vessel can choose to either counter board or to ungrapple. Ungrappled attackers may attempt to re-grapple in their next turn.

Vessels engaged over both beams (sides) must decide which enemy vessel they wish to counter (Elite vessels will automatically fight both).

13.1. Firing on ships in boarding actions

Vessels may initially exchange broadsides until Stage A of the boarding action is complete. Vessels winning a boarding action may fire a partial broadside only from the side not in contact. Other ships may continue to fire into vessels engaged in boarding actions, but **every third hit counts against the friendly vessel**. Any 'special hits obtained' must be on the main target vessel.

13.2. Prize Crews

Vessels which have been taken by boarding are assumed to have a prize crew on board and cannot initiate any action. They may fight defensively but fight as poor quality ships and will count as a one decked vessel for firing and boarding purposes (i.e. - it's best to sail if off table as soon as possible).

13.3. Boarding from ships boats:

See section on 'boarding from ships boats' on page 36.

KMH example
Away boarders!

After his lucky broadside Captain Jarce saw both the damage to his foe and the gesture from the French Captain. In the next turn the Frenchman slowed considerably, due as much to a lull in the wind (poor dice) as anything, while Jarce, now with the wind on quarter, swung his ship around to the East again, reducing the gap to short range. Nobody fired as the British ship followed in the wake of the Privateer. On both vessels cutlasses and boarding pikes were broken out, while red coated marines scrambled to the fighting tops of Jarce's ship, priming their short rifled carbines.

The next turn saw Jarce draw his firing card first, he retains this, planning to use grape if he can close to grapple. The Frenchman, concerned that Jarce could swing round to rake his stern, turns to the South East himself in an attempt to present his broadside to the closing threat. The run of cards is now critical. If the Frenchman's firing card is next he can reserve it to use as grape if Jarce closes. Luck, however, is with the British, and their movement card is turned next. Slowing down to just his base speed, loosing one dice with wind aft, he runs up neatly along side the Frenchman. He throws to see if he can grapple.

Jarce is keen to finish this, the Frenchman is not so sure. Jarce rolls a 4, just managing to tie the two vessels together despite the attempts of the French to fend him off. Jarce now plays his reserved firing card, spraying the deck of Black Jaques' vessel with grape, Black Jaques counter boarding party suffer horrendous casualties (When firing grape there is a 50% chance of inflicting CREW damage).

The French fire card is last to be played, but it cannot be reserved, being the final card of the turn, and is used to blast round shot into the Frigate's hull. It does some damage, but doesn't affect the boarding action.

In the next turn only the boarding action begins when the BOARDING ACTION card is turned. Jarce gets two D6, having between 20 and 30 damage points remaining. Black Jacques has less than ten points and gets no dice as his basic. Both had boarding parties, but Black Jaques' is now just a sad memory running red in the scuppers. Jarce gets 2 extra dice for being Jolly Jack Tars, plus an extra again because he has the Boarding Party feature (total dice = 5). The Frenchman has a basic of zero to which he adds one because he too has a boarding party, but deducts one because the burst of grape caused high crew casualties (Total 0). Jarce throws 2,3,3,4, and 6, totalling 18. Jarce wins by 18 meaning that his men take a foothold aboard the Chasse Marie (Stage A complete). Because he won by 18 the French ship receives an additional 6DP's crucially dropping the total to 3. The next card out is the strike test, and Black Jaques' men throw down their arms (they fail the strike test). A blood splattered Black Jaques offers up his sword to the rotund, red faced Englishman he now sees before him on his quarter-deck.

Before moving off Jarce must consolidate his victory and allocate a Prize Crew (one turn), before cutting away (another turn) and leading his prize back to Plymouth.

14. Running Aground

14.1. Standard rule on shallows
Any vessel approaching within 10cm of a land mass, (or 5cm of rock outcrop) must test for running aground.

Test for Running Aground
Roll a d6 when within 10cm of shore (5cm of rock)

	3 decker	2 decker	1 deck (3 original masts)	1 deck (2 masts or less)
Cruunch!	5,6	6	6	6
Stuck	4	5,4	5	5
Damaged	3,2	3,2	4,3,	4
Lucky	1	1	2,1	3,2,1

Effect of damage:

Cruunch!:   Vessel has hit hard. Incurs 3d6 damage, and roll for each mast. Masts will fall on a roll of 6 on d6. Each falling mast causes 10 DP's. Must attempt to 'warp' off (or tow)

Stuck: Vessel has struck ground. Incurs 2d6 damage. Must attempt to 'warp' off. (or tow)

Damaged: Take 1d6 of damage and immediately turn out to sea.

Lucky: Vessel scrapes along, looses a few barnacles but is otherwise OK. No damage incurred.

14.2. Sounding
To prevent running aground vessels may 'sound' (dropping a line at intervals to check depth beneath the keel. Sounding vessels can move at no faster than basic speed. Each turn they are within shallows they take the test for running aground) but deduct 2 from the dice roll.

14.3. Warping
Vessels that run aground with either a Cruunch! or Stuck Result must attempt to use an anchor to warp the vessel off the shallows. Warping involved placing an anchor in a ships boat and rowing out to deeper water, dropping the anchor and then using the anchor as a 'hook' to pull the boat off the shallow ground. This is also a way of moving vessels in periods of dead calm.

In KMH! warping is performed as follows:

Turn 1:   Ships Boat(s) launched
Turn 2:   Prepare anchor and hoists etc
Turn 3:   Boat moves (on ships boat card, which must be introduced to the pack before the turn)
Turn 4:   Anchor is dropped
Turn 5:   Warping begins. Vessels that stuck fast and damaged badly will move on the roll of a 6 on a d6. Vessels that only stuck fast will move on the roll of 5 or 6. Ships will move 2cm per turn.

Ships must continue to warp until they are out of shallows.

14.4. Establishing a tow
Tows can be set up by any vessel (or ships boat) closing to within 2cm of the stricken vessel. For rules on towing see section on in the Chapter on movement (Page 15).

15.   Small boats

"The boats on the quarters of the ship, being found in the way of the guns, were now lowered down and towed astern"

William Beatty, HMS Victory, 1805

Small ships boats (jolly boats, launches etc) were commonly used in cutting out expeditions, as well as to launch amphibious assaults on shore batteries and to send prize crews onto surrendered enemy ships. There were also crucial for towing the parent vessel when becalmed.

The number of boats carried by a ship will depend upon the size of the ship. In general, KMH assumes the following:

Number of Boats:

3 decked ship:	7 boats
2 decked ship:	roll d6. 1,2,3= 5 boats; 4,5 or 6 = 6 boats
1 decked ship:	4 boats
Cutters:	2 boats
Others:	3 boats

It takes one move to launch (or stow) boats. Vessels launching boats must be traveling at less than 5cm. Boats may be launched when the movement card comes out.

15.1.   Speed and movement
When ships boats are launched, a 'Ships Boats' card should be added to the card deck. All ships boats of all nations - and ships being towed by ships boats - will move or perform another action only when the 'Ships Boats' card is turned.

Ships boats move at 4cm per turn, but their move is affected by the direction of movement relative to the wind.

Basic speed:	4cm
Wind aft:	Basic
Wind quarter:	Roll d6, 6=extra 2 cm, 5 = extra 1cm
Wind bow:	50% of Basic

15.2.   Boarding from ships boats
A player attempting to board a vessel from a ships boat roles 1d6 and adds the number of boats he is attacking from (e.g. if attacking with two boats he roles 1d6 and adds two). If the boats are elite then add two for each boat. The boarding action is fought as normal, except there is no test to grapple for ships boats as it is assumed to take place automatically.

15.3. Using ships boats to tow

Boats may only be used to tow ships if the wind is becalmed. One boat can tow one ship 1cm per turn (2 cm if elite). One boat cannot tow more than one boat.

15.4. Firing at ships boats

Firing is performed as normal, but for every DP inflicted a d6 is rolled. A 6 signifies a hit on the boat. Any boat that is hit is destroyed and all hands are lost.

15.5. Damage to ships boats when firing on the parent vessel

When clearing for action it was common practice for ships boats to be lowered and towed astern, often carrying items that could not be stowed below decks without hampering the fighting ability of the ship. Destruction of boats is treated as a 'special' gunnery result.

KMH example
McTodger's Prize

The Caribbean, May 1802. Lieutenant McTodger is leading three boats from HMS Phoebe in a daring raid against a becalmed French Frigate. The Frenchman is a 36-gun frigate, but has sustained 8 points of damage during an earlier engagement with HMS Phoebe and is down to 28 points. McTodger left HMS Phoebe with three boats but one has been sunk by accurate French long guns whilst closing with the Frenchie. With a clatter the boats run up alongside the ship and the boarding action begins. McTodger rolls 1d6 and adds two for each boat (because the British are elite Jolly Jack Tars). He rolls a five and adds four to get nine. The damaged French Frigate rolls two dice but scores eight. McTodger and his men are aboard, but only just. In the next round McTodger again throws nine but is matched this time by the Frenchman - the bloody fight continues. In the next round, another boat carrying marines from HMS Howard arrive, the extra boat giving McTodger a plus six on his dice. He rolls a four, which goes up to ten. The Frenchman rolls two dice and gets a total of seven - not enough stop the gallant Brits, who capture the deck. In the next stage McTodger is again victorious and the French captain, wounded in the head by McTodger himself, offers up his sword and a loud cheer goes up from the brave Brits as they claim their prize money.

16. Galleys

Galleys, as seen in the Baltic and parts of the Mediterranean Sea, are powered by wind and by oars. The favourite of Barbary Pirates they add interest to any encounter. Even Hornblower found them challenging.

16.1. Movement (Galleys)

Galleys ignore wind effects and move their basic speed plus 1D6. They have five turns where they may move with +2D6, to represent the fat guy banging the drum faster, but this is all their energy allows.

Galleys may turn on the spot, but loose 2cm for each point turned on an 8 point compass, a ship turning 90 degrees will loose 8cm.

16.2. Firing (Galleys)

Due to the rowers being at the side, Galleys tended to mount two big guns in the bow, which fire as bow-chasers with a factor of 3.

16.3. Ability to withstand damage (Galleys)

You can't choose to fire at the rigging of a galley, you just try to sink it as fast as you can. Galleys may vary in size, with suggested standards being:

Big Galley   25 points
Medium Galley   20 points
Little Galley   15 points

17.   Fireships

"although the captains of the fireships remained on board
until their vessels were completely in flames,
the enemy managed to cut and run,
escaping within the Braak Sand"

Admiralty account of attacks by HM Fireships
Falcon, Wasp, Comet *and* Rosario,
on four French frigates in
Dunkirk Roads on 7 July 1800

Fireships were old vessels filled with highly combustible materials arranged in fire chambers between the decks with 'fireworks' hanging from the rigging and yards. The combustible materials often included faggots, pitch and gun powder. A small crew was tasked with sailing the vessels into the heart of an enemy formation (or often a harbour) and to set the ship on fire at the right moment and then grapple the vessel alongside enemy ship. The crew would then make good their escape and the ship would burn out of control, spreading fire to the enemy ship.

Fireships have no projectile weapons and so may not fire.

17.1.   Launching and Controlling Fireships
Fireships may be set on fire on the turning of the commanding officers card. Once ablaze, the crew must abandon ship and be placed on the table in ships boats. Thereafter the small boats move on the commander's card and a new card, 'fireships' is placed in the pack. Fireships will move when that card is turned. Fireships dice independently for movement but will continue to head a steady course each turn, although they will 'drift' a quarter move with the wind until they have wind aft. They loose 1 d6 of movement each turn.

At the end of the turn the umpire will roll a dice (d6) for each fireship. On a roll of 6 the vessel explodes, and all ships with a 10cm radius must take a fire test.

17.2.   Defending against fireships
The best defence against fireships is to meet them with small boats well before they get near their objective, grapple them and tow them out of harms way. Alternatively the defender can aim to outmanoeuvre to avoid them and, if they come to close, to fend them off – an operation that required a full crew and considerable courage.

Fending off fireships:

> Roll 2d6.
>
> -2 for elite
> -3 sans culottes
> -4 landlubbers
> -1 for each 2 cm that fireship moved that turn

If result is greater than zero then the fireship has been fended off. It will scrap along the side of the target vessel but move its entire move. The defender must take a fire test.

17.3. Firing on fireships

Fireships sustain damage to rigging as normal, and damage sustained from firing on the rigging slows them down as normal. They also incur damage to the hull as normal, but take a *fire test for each five points of damage sustained* (i.e. you can set them on fire prematurely by sustained fire)

17.4. Fireships and morale

Because of the kamikaze nature of fireships they are not bound by the same rules as ordinary warships.

When encountered on the high seas Fireships will act as merchantmen and, if they cannot evade, will strike. However, depending on the crew the captain may decide to set the ship ablaze anyway. To determine if this is the case roll a d6. Elite captains will torch the vessel on the throw of a 5 or 6. Average captains will do so on the throw of a 6. Poor captains are the first ones in the boat…..

KMH example
A hot night!

Gibraltar, 1806. Lieutenant McTodger is Officer of the Watch onboard HMS Phoebe which is at anchor in the lee of the Great Rock. It is 3am. Suddenly his night is interrupted by the cry of 'Fireship off the larboard bow!' and he races to the side netting to see a blazing schooner looming up out of the mist. There is no way he can remove the Phoebe from danger in time. He calls his elite sailors to rally round him and prepare to fend off the devilish craft. In the light generated by the flames he can just see the cursed enemy rowing away for all their lives are worth in a small boat. With a fair breeze at its back the fireship is bearing down at him rapidly (12cm). His men sound the alarms and break out the boathooks to fend off the enemy. With the burning vessel now upon them (within 2cm) they try to fend it off. Two d6 are rolled, scoring a total of 9. From that McTodger deducts 2 because his crew are elite, and therefore standing their ground bravely amid the heat. A score of seven. He now deducts a further six because the fireship moved 12cm in its turn (or could have moved had the vessels not collided), leaving a score of one. They have succeeded – just! The vessel scraps along the side of the Phoebe and on into the night. The Phoebe must take a fire test as normal, but it is not grappled with the fireship

18.   Bomb Vessels

18.1. General
Bomb vessels (also known as bomb ketches) were relatively small vessels of around 100 feet in length with reinforced hulls and a displacement of around 375 tons. They had their foremasts removed to make room to carry one, or perhaps two, heavy mortars (10-inch or 13-inch). Some also carried 8-10 cannon.

A 13-inch mortar could hurl its 192-pound shell two miles.

The vessels could deliver high volumes of fire at a considerable rate. HMS Volcano for instance fired one round every five minutes over a twelve hour period during the Battle of Baltimore in 1812. In total she discharged 146 shots.

18.2.   Firing Bomb Ketches
(see also chapter on Firing)
Must be stationary to fire (anchored if possible) and must be able to see the target or have it observed by friends that they can see (this could be a shore based party if relevant). Bomb ketches will hit on a roll of 10 or more on two d6, firing with one throw per turn. Add one to the dice if the vessel is elite, and deduct one for each 3cm that the target moved in its last turn. (unless you are elite you will not hit a ship moving at more than 6cm per turn). If a hit is obtained, roll for damage points on a D20 (yes, they can do serious damage) and dice for specials as normal fire on the hull. **Bomb Ketches have a maximum range of 50cm, and a minimum range of 15cm.**

18.3.   Damage to Bomb Ketches
Most Bomb Ketches should start with basic 20 damage points. Each turn damage is inflicted the vessel must roll a d10 to see if the weapon is damaged. A roll of 0 will mean that the weapon is destroyed or damaged.

Once the vessel receives 50% damage, the dice is changed to a d6, with a roll of 6 meaning it is destroyed.

19. Shore Batteries and Other Static Defences

'February 9th: Light airs and clear weather. At 1 weighed and came to sail, let go the steam anchor under the stern and the best bower (anchor) with a spring on it abreast of Mortella tower which immediately began firing on us. As soon as the ship was properly placed we returned the fire and kept a constant firing until half after three when an explosion took place between decks occasioned by a red hot shot striking a powder box, which communicated to others and blew up several men. Soon after the ship was perceived to be on fire, by red hot shot'.

William Young, Captain, HMS Fortitude, 1794, Corsica

It was common place to find ports or harbour installations to be defended by floating batteries or by heavily fortified guns strategically situated to protect against attacks form the sea. No two coastal defences were the same, so some artistic flexibility is necessary when designing a scenario.

KMH assumes that there are four kinds of coastal batteries:

- (a) Floating Batteries
- (b) Improvised Defences
- (c) Antiquated Defences
- (d) Impressive Fortifications

In addition, rules for the use of defensive chains are also considered in this section.

When using shore batteries it is important to consider arcs of fire. Range bands are the same as for normal firing, but some larger guns in Antiquated Defences and Impressive Fortifications may have a longer range (say 50cm).

19.1. Floating Batteries
Floating Batteries were often mastless, perhaps old, ships of the line, and unsurprisingly, fire and sustain damage in the same way as for a ship of the line. Historically, Floating batteries varied in size from a frigate to the largest ship of the line, but generally, each floating battery will have a points value (normally 70), reflecting the defensive structure of the hull (assuming it's a two decked battery). Each hit incurs DP's in the same way and every 5 points of damage sustained reduces the gunnery factor by 1. Typically, floating batteries would have a gunnery factor similar to an 80 gun ship, or perhaps larger for larger batteries.

Floating batteries may not fire Red Hot shot, and should generally be considered poor shots. They test to strike in the same way as a ship of the line.

19.2. Improvised Defences
Coastal defences like this represent hastily assembled batteries, probably created by removing cannon from warships. They will normally be fortified in some way, but certainly can not be considered as fortifications.

Improvised Defences would perhaps hold 10 guns and have a fire factor of 3. They can prepare and fire red hot shot. Improvised Defences have a defensive strength of 10, and lose a gun for

each 2 points of damage incurred. They test to 'strike' in the same way as a ship. As the guns were probably manned by sailors dropped from the ships, they should reflect the general gunnery ability of the nation they represent (i.e. Spanish and French may well be poor shots, and some may be cowardly lubbers).

19.3. Antiquated Fortifications
This represents old defences of that have fallen into decay. They provide more substantial defensive capabilities than improvised defences, as they are probably located in once grand forts that are now crumbling. Often the guns may be as old as the fort.

In KMH antiquated fortifications house upwards of ten large guns and may have a fire factor of between 5 and 8. In defence, they may have a base defence value of 100, with a gunnery factor lost for every 15 points of damage incurred.

Again, because these forts were often manned by irregular troops, they will be classed as poor shots, and will often be cowardly lubbers. They may prepare and fire Red Hot Shot.

19.4. Impressive Fortifications
These represent the latest in naval defensive technology and are often equipped with mortars and heavy guns in well sited and strongly protected fortifications. Impressive fortifications may house dozens of guns, and a have a fire factor as strong as a ship of the line (say 10). In defence, they may have a base defence of 200 with a gunnery factor lost for every 20 points inflicted. Best assaulted from dry land. It is advised that these are sparingly used in KMH as they represent the state of the art defences of a major harbour. Crews may still be poor shots. Red Hot shot can be prepared and fired. These defences test to strike in the same way as a ship of the line.

19.5. Note on Martello Towers
The idea for the Martello Towers came from Corsica, where a defensive tower had withstood heavy bombing from British forces in 1794. The towers were round, defensive bastions holding a 24pdr gun with a 360 degree arc of fire. The English were so impressed with the towers that 74 'Martello Towers' (somebody spelled the name wrong and it stuck!) on the South and South East coast of England as a defensive measure against an invasion by the French (although the project commenced in 1805 and only 6 were completed by 1806).

The squat tower had a central pivoting system for the cannon allowed the gunners a 360 degree arc of fire.

In KMH!, individual Martello Towers have a gunnery factor of one, can prepare and fire hot shot and count as Impressive Fortifications with a basic strength of 50. Damage is sustained as normal, but the gun remains in action until the strength falls below half. Once this point is reached there is a one in six chance that additional damage will destroy the gun.

19.6. Defensive Chains
It was fairly common practice in naval warfare to lay a 'boom' or 'chain' across the mouth of a harbour to prevent the enemy sending in fireships. The chain would normally consist of a (or a series of) heavy ropes or chains stretched on or just below the surface of the water. Fireships and other smaller vessels would normally be stopped by the chain. Larger vessels may be able to use their extra tonnage to break through the chain.

19.7. Breaking the Chain
Any vessel sailing into the chain must test to see if it is halted by the chain. This is done as follows:

Roll d6 and subtract the vessels rating (small vessels = 6). If the result less than 0 the chain has stopped the vessel, which must take a test for sailing into the wind and stops in the water.

If the result is 0 or higher then the ship has broken the chain and sails on, taking 2cm off its move. For each factor above 0 on the breaking the chain test, the vessel takes double that in DP's incurred as a result of breaking the chain.

19.8. Lowering and raising the chain
The chain may be lowered by a player when his movement card comes up, and it takes his full turn to lower it (i.e. he can sail his ship[s, but they may not pass over the chain). The chain is considered to have been lowered at the end of his turn. He may sail over it in his next turn.

He may raise it again afterwards, again when his movement card is played. It takes three moves to raise the chain and is only considered to be raised at the end of the third turn.

19.9. Weak or strong chains
Stronger chains may be recreated by applying a minus to the d6 roll. Weakened and old chains may be recreated by applying a plus modifier

19.10. Spotting the chain
In most battle situations the chain would not be spotted. If a player wishes to spot, it is suggested that they roll a d6, with a 5 or 6 showing that the chain has been spotted, and subtracting one from the dice for each 10cm of distance between the player and the chain.

In some scenarios of course the chain would be known about in advance.

20. Land Actions

'My ship's company behave most exceedingly well.
They begin to look upon themselves as
  invincible, almost invulnerable.
They really mind shot no more than peas'.

Nelson writing about his landing party at the siege of Calvi, 1794

20.1. Landing Parties

Landing parties / infantry companies are represented in KMH by the use of small bases, wooden blocks or 'hair roller armies'. Each base represents one company or detachment, which has a total fighting effectiveness similar to a ships DP.

> DP's for landing parties:
>
> Veteran Infantry: 8
> Regular Infantry: 6
> Landing Party: 4 (plus 1 if from elite ships)
> Militia: 4

This represents the number of hits that command may take without breaking. Once broken, bases are removed from the table.

20.2. Movement:
Each infantry base moves a basic of 6cm per turn.

20.3. Firing:
Infantry bases may engage each other, or vessels within 5 cm. They throw 1d6, needing a 6 to inflict one DP. Elite units may rethrow their dice. Units in cover get a saving throw.

> **Saving throw:**
>
> In impressive fortifications: Saved on 2,3,4,5,6
> In hard cover: Saved on 3,4,5,6
> In soft cover: Saved on 5 or 6
> In open: No saving throw

Ships may fire on land targets (within reason), but require a 6 to hit. Each six thrown inflicts one DP.

20.4. Melee
Troops in melee roll a d6 for each DP. A DP is incurred for each 6 thrown (troops in cover still get a saving throw). The side that inflicts the most DP's wins, and sends the others back 6cm

Appendix I – Ship Data Sheet

Ship ID	Ship Name		No. of Guns	Rate	Nationality

Characteristics

☐ Elite ☐ Jolly Jack Tars ☐ Determined ☐ Must fire at rigging if possible ☐ Fast Sailor

☐ Average ☐ Sans Cullottes ☐ Fervently Determined ☐ Armed with Carronades only ☐ Poor Sailors

☐ Poor ☐ Landlubbers ☐ Cowardly Lubbers ☐ Boarding Party ☐ Foul Bottomed

☐ Poor shots for all gunnery

Fighting Ability / Sailing Ability

No. of d6 for firing main broadside: ☐

☐ Fired Initial Broadside (Port)

☐ Fired Initial Broadside (Stbd)

No. of d6 for firing BOW CHASERS: ☐

No. of d6 for firing STERN CHASERS: ☐

BASIC SPEED ☐

Base Factors (Damage Points)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

Speed boxes (current max speed)

1cm			2cm			3cm			4cm		
1	2	3	1	2	3	1	2	3	1	2	3

5cm			6cm			7cm			8cm		
1	2	3	1	2	3	1	2	3	1	2	3

9cm			10cm			11cm			12cm		
1	2	3	1	2	3	1	2	3	1	2	3

13cm			14cm			15cm			16cm		
1	2	3	1	2	3	1	2	3	1	2	3

Other Damage

☐ Steering Damage ☐ Bowsprit Destroyed ☐ Aground

☐ High Officer Casualties ☐ Foremast Destroyed ☐ No of Boats lost

☐ CREW Casualties ☐ Main Mast Destroyed

☐ Boarding Party Lost ☐ Mizzen Mast Destroyed ☐ Extremely hazardous fire

Notes:

Further Quotes

Each of these quotes adds flavour to our understanding of this unique wargaming period and adds support to the systems in KMH

"The captains have no heart left to do well; attention is no longer paid to signals, which remain flying at the masthead for two three hours. Discipline is utterly relaxed"

General Lauriston, military commander aboard the French Fleet
that was to be defeated by Nelson at Trafalgar, in a letter
written to Napoleon on 22 August 1805.

* * *

"The business of an English commander in chief being first to bring an enemy's fleet to battle and on the most advantageous terms to himself…and secondly, to continue them there, without separating, until the business is decided"
Horatio Nelson, memorandum to his captains, 1805

* * *

"Our rigging completely dismantled, totally dismasted, having lost all our men in the upper works, the 24 pounder battery entirely dismounted and abandoned…the starboard side masked by the masts; unable to defend ourselves, having nearly 450 men killed and wounded; not being supported by any ship…we were cut off in the midst of 5 enemy ships which were pouring a very hot fire into us"
Captain Jean-Jaques Magendie, of the Bucentaure, *flagship of the French fleet at Trafalgar,*
describing the state of the vessel just before Admiral Villeneuve agreed to strike.

* * *

"There was the fire from above, the fire from below…the guns recoiling with violence, reports louder than thunder, the decks heaving and the sides straining"
Lieutenant Rotely, Royal Marines, on board Victory *at Trafalgar*

* * *

"All that [a gunner] knew was that he heard the crash of shot smashing through the rending timbers, and then followed at once the hoarse bellowings of the captains of the guns calling out to the survivors 'Close up there! Close up!"
A gunner on the Belleisle *at Trafalgar*

* * *

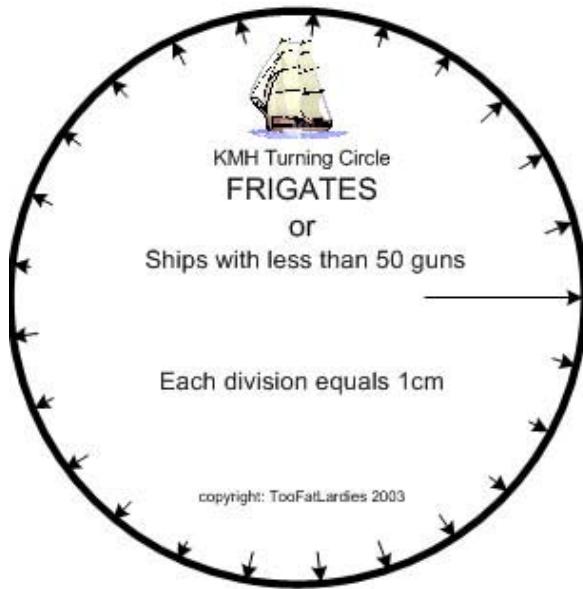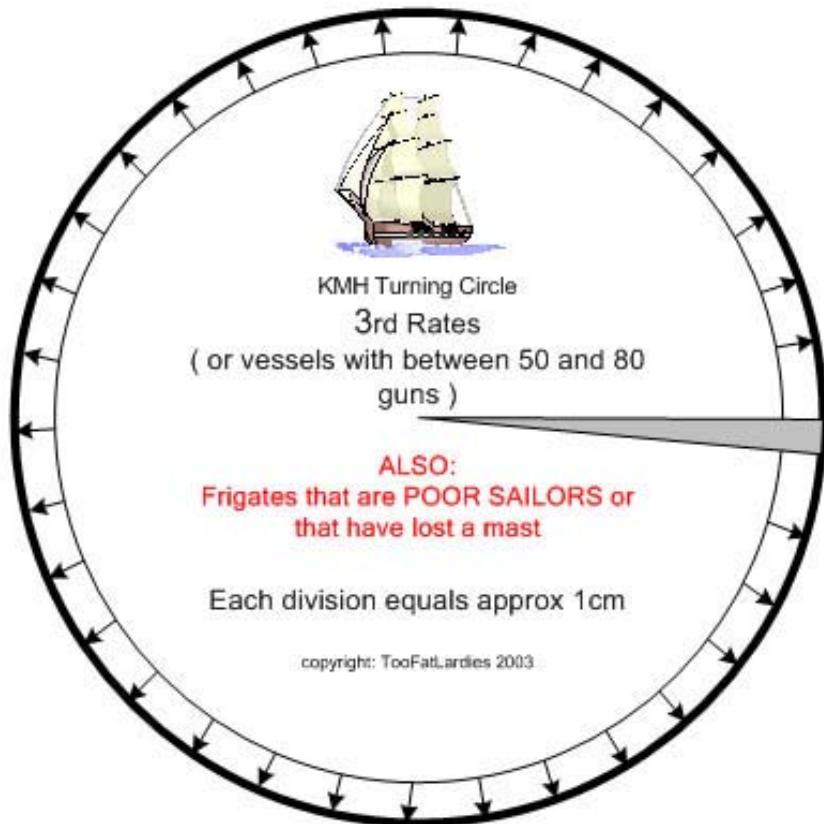*"Not a moment must be lost, it can never be regained."*
Nelson, 20 Jun 1798 whilst preparing for an action with the
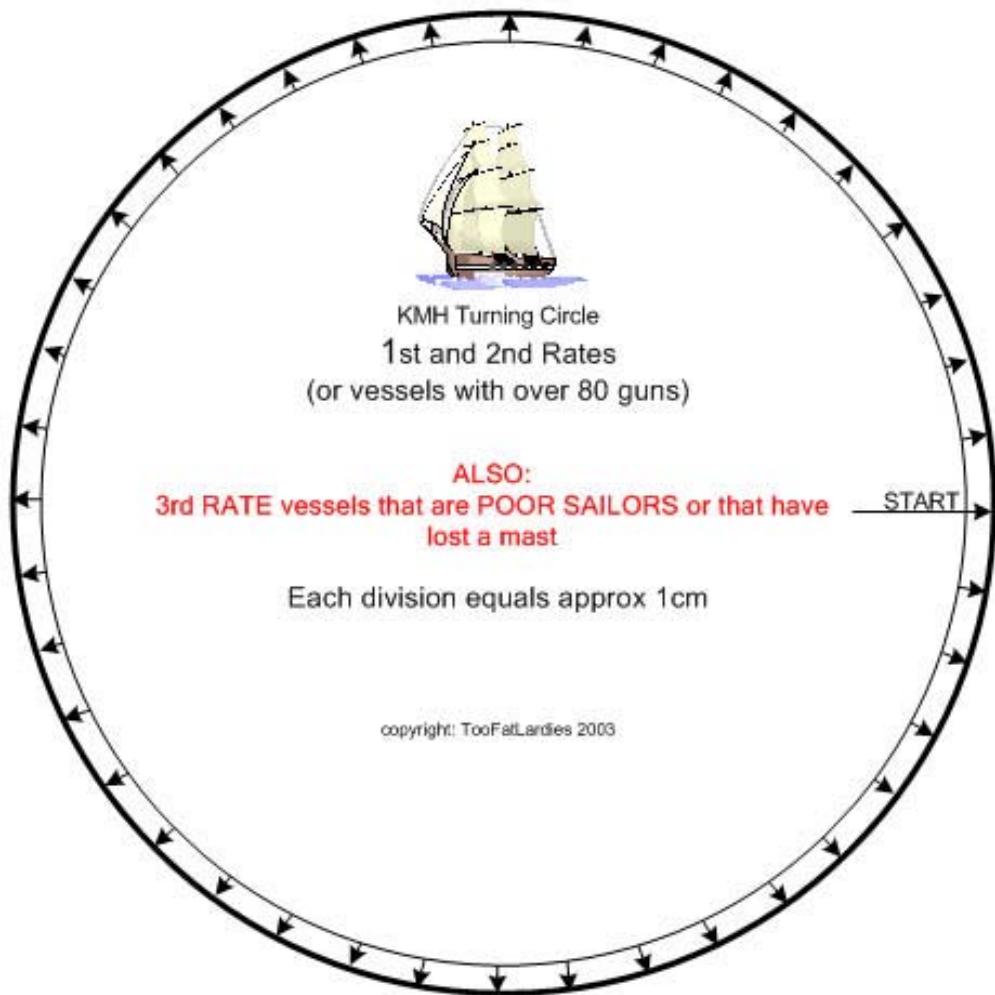*French*

* * *

"There was such a number of privateers on the coast that we were falling in with some almost every day"

Jacob Nagle, HM sloop Netley, 1798

Turning Circles

KMH Turning Circle
3rd Rates
(or vessels with between 50 and 80 guns)

ALSO:
Frigates that are POOR SAILORS or that have lost a mast

Each division equals approx 1cm

copyright: TooFatLardies 2003

KMH Turning Circle
FRIGATES
or
Ships with less than 50 guns

Each division equals 1cm

copyright: TooFatLardies 2003

KMH Turning Circle

1st and 2nd Rates
(or vessels with over 80 guns)

ALSO:
3rd RATE vessels that are POOR SAILORS or that have
lost a mast

Each division equals approx 1cm

copyright: TooFatLardies 2003

START

WIND
DIRECTION