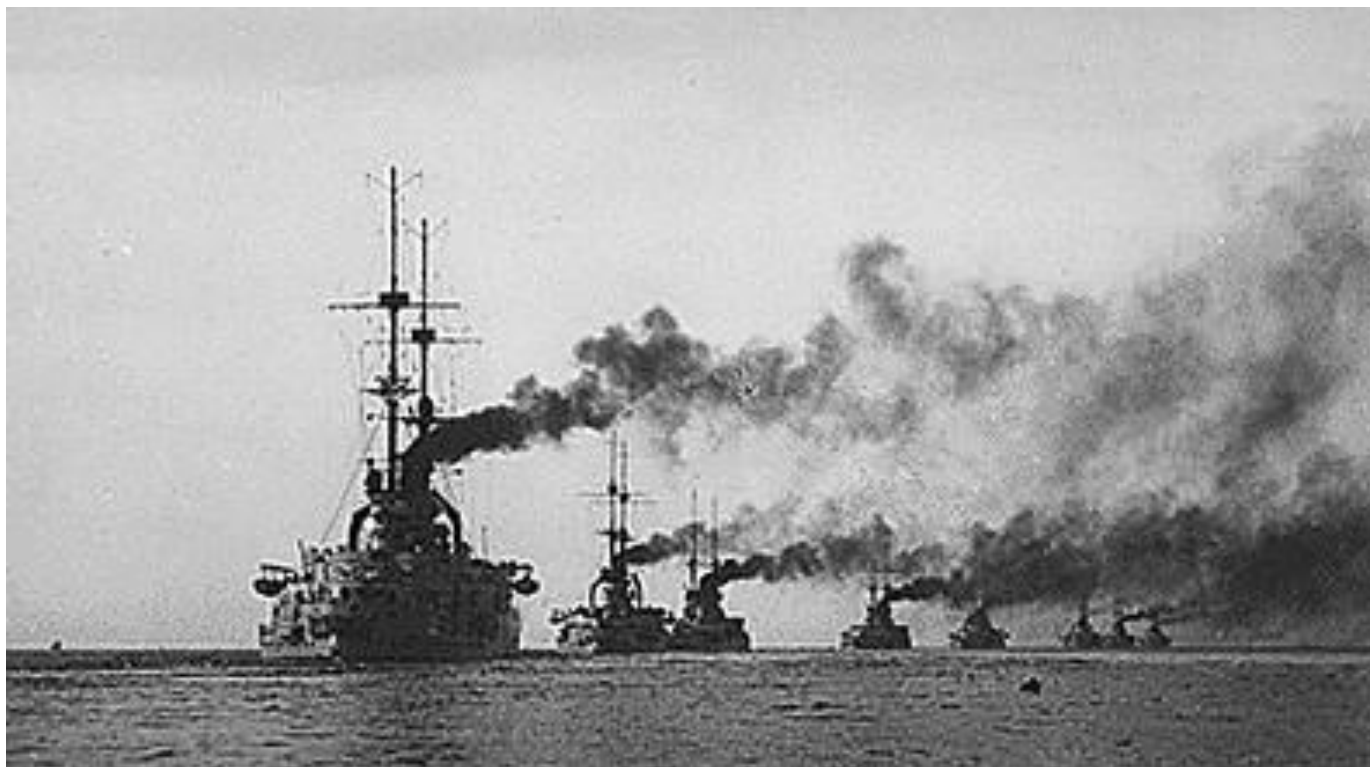


QUEEN OF THE SEAS

An attempt at a set of naval wargame rules for the period from about 1890 to about 1920.

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(Exodus 20:15 - "Thou shall not steal.")



Something that I have noticed over the years is that the writers of naval wargame rulesets seem to have the need to incorporate every tiny, little detail that they can possibly think of into their rules, and I have found this to be especially true for this period (from about 1890 to about 1920).

When one looks at existing rulesets for this period, one usually finds movement rules that are overly detailed, firing procedures that are always complicated and time consuming, and as for the procedures for how and where damage is to be applied to a ship...

This may be all well and good for very small actions, or if you have lots of time, or if you love lots of charts and bookkeeping, but such rulesets with their inclination for every minute detail I find somewhat tedious and frustrating, especially when playing larger actions.

Therefore, when starting out to develop these rules, I decided to see if a less detailed approach could possibly work, and this ruleset is the result.

In them you will find that movement, firing and damage determination can all be done reasonably quickly, thus allowing large actions to be played in a reasonable amount of time... and with a minimum amount of bookkeeping.

Finally, you will note that submarines, aircraft and mines have been totally ignored. Why? Submarines in this period were simply too slow to keep up with a fast-moving engagement; aircraft had very little impact in this period; mines and minefields were used in a strategic sense, not tactically within engagements.

So, if you are curious to see how I have approached the subject of naval wargaming for this period, then please read on...

BASICS



- To state the obvious, 1 Ship = 1 Ship.

A ship is regularly referred to as a *casting* which refers to the ship's actual casting (or model) on the table.

- Ship casting scale = 1:3000 is recommended.

These rules have been developed with this scale in mind simply because there is a large variety of ships commercially available in this scale. However, **these rules can be easily adapted to any scale.**

Most players normally glue their ship castings onto a small rectangular base which usually has the ship's name on it. These rules make use of these rectangular bases, and so the bases are required.

The game uses standard six-sided dice (D6) always reading 1 to 6; 1D6 means one standard six-sided dice; 2D6 means two standard six-sided dice; etc. The game also makes use of the term 1D3. If you are not familiar with this term, it means that one standard six-sided dice is rolled, with the outcome being thus:

If a 1 or 2 is rolled, the result is 1.

If a 3 or 4 is rolled, the result is 2.

If a 5 or 6 is rolled, the result is 3.

Ship Data Cards:



Well before the game commences, players must prepare a simple *Data Card* for each of the ships involved (see Appendix A for how to prepare a ship's Data Card, and Appendix C for blank Data Cards to photocopy).

For example, the Data Card for the British battle-cruiser HMS Tiger would look like this at the start of a game:

Name: HMS Tiger		Size: Large	Class: B	Launched: 1913
Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11	12 13 14 15 16 17 18 19 20	
Medium Guns	M	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Secondary Guns	S	01 02 03	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	
Quickfirers	Q	01 02 03 04	05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Gun Director	GD	01		
Armour	A	01 02 03 04 05	06 07	
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14	15 16 17 18 19 20	
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15	16 17 18 19 20	

Current Speed:

Hits:

Notes: Turbine engines.

Sea State:



Before the game commences, the players must determine the *sea state*.

To do this, one player from each side simply rolls 1D6. If both of these dice rolls are a 1, then the sea state is *rough* and it will remain rough for the entire game. Otherwise, the sea state is not particularly rough and so the sea state has no effect on the game.

Placing Fleets:

Players can use whatever method that they can all agree on to place their fleets on the table. When all ships have been placed on the table, play commences.

SEQUENCE OF PLAY

A full *Game Turn* consists of four *Phases* thus:

1) The Determine the Tactical Advantage Phase:

Each side tallies up the number of *capital ships* that it has on the table (see Appendix A for determining which ships are capital ships and which ships are not). The side with the greater number of capital ships on the table has the *Tactical Advantage*.

If the number of capital ships is equal, then each side simply tallies the total number of ships that it has on the table. The side with the greater number of ships on the table has the *Tactical Advantage*.

If still equal, then one player from each side simply rolls 1D6; re-roll on a tie. The side rolling the *lowest* dice roll has the *Tactical Advantage*.

2) The Movement Phase:

The side *without* the Tactical Advantage chooses one of its ships that has not yet been chosen during this phase, and then conducts movement on the table with that ship.

The side *with* the Tactical Advantage then chooses one of its ships that has not yet been chosen during this phase, and then conducts movement on the table with that ship.

Players keep choosing and moving their ships in this alternating fashion, one ship at a time, until all ships on the table have been moved.

3) The Firing Phase:

Both sides then resolve all of their gunfire and torpedo attacks thus:

- a. Players first place their splash markers.
- b. Players then fire their guns noting any hits.
- c. Players then resolve the above noted gunfire hits.
- d. Players then fire their torpedoes noting any hits.
- e. Players then resolve the above noted torpedo hits.
- f. Players then determine if any of their ships suffer any special damage.
- g. Players remove all of the splash markers and then check for ships sunk.

4) The End Phase:

Players decide whether to continue the game or not.

All phases and all sub-phases are done in the order as noted above.

PHASE 2: THE MOVEMENT PHASE

Before discussing movement in detail, we need to discuss *speed* in detail. For the purpose of the game, a ship has two *speeds* thus:

- a) **Maximum speed**, that is, the maximum speed which a ship could achieve.

A ship's maximum speed (the maximum speed as built, in knots) is usually found in any good reference source. A ship starts the game with this maximum speed as found in such references.

For game purposes, the maximum speed achievable for a ship is shown by the remaining *Propulsion* stats on the ship's Data Card.

This maximum speed of a ship will be reduced during the game as the result of the ship losing these *Propulsion* stats.

- b) **Current speed**, that is, the speed that you actually want the ship to go at, set anywhere between zero and whatever the maximum speed is that the ship can currently attain at the time.

The ship's current speed is set each Game Turn by the player controlling the ship, and it is noted on the ship's Data Card. The current speed *must always be in whole numbers*.

Regardless of what current speed a ship can actually attain, all ships are limited to a maximum current speed of 8 or less if the sea state is rough.

A ship with its current speed set to zero is deemed to be *adrift*, and so that ship does not move or turn for the entire Game Turn. It just sits there. It can still fire its guns (if able) and fire its torpedos (if able).

Changing a Ship's Current Speed:

There are some restrictions by how much you can change the speed of a ship by per Game Turn. The player controlling the ship can either:

- Increase the ship's current speed by one per Game Turn, or,
- Maintain the ship's current speed at its current setting for the Game Turn, or,
- Decrease the ship's current speed by one per Game Turn, or by two per Game Turn.

The current speed selected for the ship is then noted on the ship's Data Card.

For example: A ship has a current maximum speed achievable of 12 (refer to the ship's Propulsion stats), and the ship's current speed has been set at (say) 10 thus:

Propulsion P 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Current Speed: 10

Now, and only at the required time, the player controlling this ship can either:

- Increase the ship's current speed by one from 10 to 11, or,
- Maintain the ship's current speed at 10, or,
- Decrease the ship's current speed by one to 9, or by two to 8.

Now, (let's say) this ship takes some damage which results in a Propulsion stat loss of 3 stats. Therefore, and again only at the required time, the ship's maximum Propulsion stat of 12 is reduced by 3 to the new maximum Propulsion stat of 9 thus:

Propulsion P 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Current Speed: 10

Throughout the game, when crossing off any stats on a ship's Data Card, the player must always cross them off from *right to left* as shown in all the examples, and to state the obvious, the player can only cross off stats that have not already been crossed off.



Continuing the example: Now, because the ship's current speed of 10 is now greater than the ship's maximum speed of 9, the ship *must* decrease its present current speed *by two each Game Turn* until its current speed is less than or equal to its maximum speed (its Propulsion stats).

Therefore, and again only at the required time on the next Game Turn, the player controlling the ship must decrease the ship's current speed of 10 *by two* to a speed of 8 thus...

Propulsion P 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Current Speed: ~~10~~ 8

Now, and again only at the required time on a subsequent Game Turn, (let's say) the player controlling the ship decides to increase the ship's current speed of 8 by one to its maximum speed of 9 thus...

Propulsion **P** 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Current Speed: 10—8—9

Now, (let's say) the ship takes some more damage which results in a further Propulsion loss of 4 stats (ouch). Therefore, and only at the required time, the ship's maximum Propulsion stat of 9 is reduced by 4 to the new maximum Propulsion stat of 5 thus:

Propulsion **P** 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Current Speed: 10—8—9



Again, because the ship's current speed of 9 is greater than its maximum Propulsion stat, the ship *must*, and only at the required time, decrease its present current speed *by two each Game Turn* until its current speed is less than or equal to its maximum Propulsion stat.

Therefore, and only at the required time, the player proceeds to cut the ship's current speed of 9 by two to 7 thus...

Propulsion **P** 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Current Speed: 10—8—9—7

...and then on the following Game Turn by another two to 5 thus...

Propulsion **P** 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Current Speed: 10—8—6—7—5

PHASE 2: MOVING SHIPS



A ship receives a movement allowance of 1 cm per current speed noted on its Data Card. For example, if a ship's current speed is set at 6, then that ship has a movement allowance of 6 cm.

A ship *must* use all of its movement allowance. For example, if a ship has a movement allowance of 6 cm, then that ship must be moved that 6 cm on the table. Always be careful not to move a ship any further than it should be moved, or any less than it should be moved.

Ships are manoeuvred on the table by moving the ship directly forward in a straight line and by turning. Regardless of a ship's size or its current speed, a ship always turns using the simple *Turn Device* (see Appendix B for the Turn Device).

However, **a ship can only conduct one turn per Game Turn using the Turn Device**, but this turn can be done at any time while manoeuvring the ship on the table.

A ship can pass through any gap large enough to allow the moving ship's *rectangular base* to pass through. However, in doing so, the moving ship's rectangular base must not touch any other ship *casting* (be it friend or foe), or any land feature (such as an island or reef). The rectangular bases can overlap with each other, but rectangular bases and ship castings (or land features) cannot touch or overlap with each other. If they do, then a *Collision* occurs (see the next page).

While moving and/or turning on the table, if any part of a ship's rectangular base leaves the table, then that ship is deemed to be *Breaking Off*, and so is immediately removed from play. It plays no further part in the game.

Can a ship be moved backwards?

Yes. Should a ship need to move backwards for some reason, then that ship must first come to a complete stop (and to state the obvious, that is when the ship's current speed reaches zero).

Then on a *subsequent* Game Turn, it may move backwards at a maximum current speed of no more than 1, but it can turn normally.

To go forward again, the ship must again come to a complete stop (again, that is when its current speed reaches zero). Then on a *subsequent* Game Turn, it may move forward again and turn normally.

COLLISIONS



The commander of a ship always tried to avoid colliding with another ship (or land feature such as an island or reef) simply because such a collision would do about as much damage to his own ship as his ship would do to the other ship.

Therefore, a player MUST always manoeuvre a ship on the table in such a way as to avoid a collision if at all possible.

However, should a ship simply not be able to avoid a *collision* (and remember, that is where the rectangular base of the moving ship touches another ship's casting), then both of those ships *collide*, and so the following *collision sequence* is performed:

- 1) First, the ship that is moving is moved as far as it can go until the ship's *rectangular base* just touches the other ship's *casting*. The moving ship is then moved 1 cm directly backwards. It remains at that position and does no more movement or turns for the remainder of the Movement Phase.
- 2) Next, both of the ships involved in the collision immediately suffer an amount of Propulsion stat losses and a number of Hull stat losses depending on the *moving* ship's current speed. If the moving ship's current speed before the collision was set at:

1 to 4	then 3 Propulsion stats and 1 Hull stat are immediately crossed off both ships.
5 to 8	then 6 Propulsion stats and 2 Hull stats are immediately crossed off both ships.
9 or more	then 9 Propulsion stats and 3 Hull stats are immediately crossed off both ships.
- 3) Next, the *current speed* of both ships involved in the collision are immediately set to zero.
- 4) Last, neither ship involved in the collision can fire any guns or fire any torpedos during the upcoming Firing Phase (the crews on both ships are too busy bracing for the collision, performing emergency damage control, etc, etc).



For example, (say) a ship with a current speed set at 8 cannot be manoeuvred in such a way as to avoid a collision with another ship (be it friend or foe), and so a collision takes place.

The moving ship is first moved forward until its rectangular base just touches the other ship's casting. The moving ship is then moved 1 cm directly backwards and it ends its movement for this Game Turn there.

Then, because the moving ship has a current speed of 8, *both* ships involved have 6 Propulsion stats and 2 Hull stats immediately crossed off their respective Data Cards.

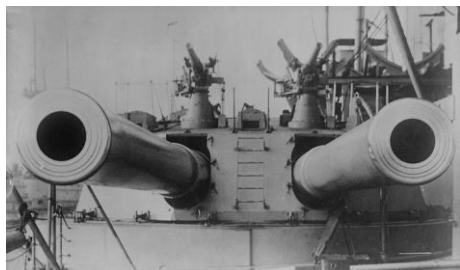
Both ships then have their current speeds set to zero, and this is also noted on their respective Data Cards. Play then moves on to the next ship.

Both of the ships involved in this collision cannot fire any guns or fire any torpedos during the upcoming Firing Phase. However, on a subsequent Game Turn, both ships may begin to move again (if able), and fire again (if able).

When all ships have been moved on the table, players proceed to the Firing Phase.

PHASE 3: THE FIRING PHASE

FIRING GUNS



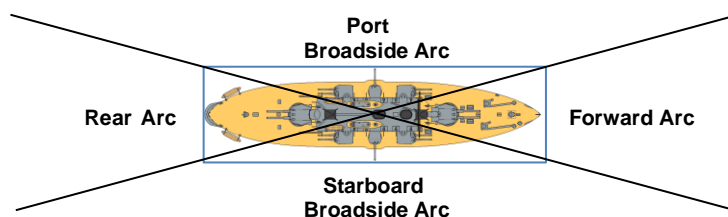
First, and to state the obvious, you can only ever fire at the enemy.

Next, when firing Heavy guns, the gun crews on the small external guns needed to take cover because of the quite substantial blast from the heavy guns.

Therefore, a ship can either fire its Heavy guns and not its Quickfirers, or fire its Quickfirers and not its Heavy guns. Fire from Medium guns and Secondary guns is unaffected.

Firing Arcs:

As already noted, all ships are to be based on small rectangular bases. These rectangular bases are then used to determine four *arcs*. The four arcs are the areas between two straight lines projected diagonally from opposite corners of the rectangular base thus:



To fire guns or torpedos, the player must first determine which arc the *target ship's casting* is in thus:

- To be in a ship's *port broadside arc*, the other ship's casting must be *wholly within* the friendly ship's port broadside arc. All guns and torpedos can fire into the port broadside arc.
- To be in a ship's *starboard broadside arc*, the other ship's casting must be *wholly within* the friendly ship's starboard broadside arc. All guns and torpedos can fire into the starboard broadside arc.
- To be in a ship's *forward arc*, the other ship's casting must be *partially or wholly within* the friendly ship's forward arc. Only Medium guns and Heavy guns can fire into the forward arc.
- To be in a ship's *rear arc*, the other ship's casting must be *partially or wholly within* the friendly ship's rear arc. Only Medium guns and Heavy guns can fire into the rear arc.

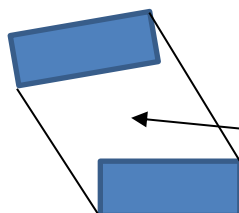
Range or Distance:

The players then proceed to determine the *range* or *distance* to the target.

To measure the range or distance between any two ships at any time during the game, simply measure the shortest distance between the two ship's *castings* regardless of anything between.

Point-Blank Fire (that is, any fire under 20 cm in range) **and Short-Range Fire** (that is, any fire from 20 cm to 40 cm in range) both used a flat trajectory, firing almost straight at the target. Therefore, to fire point-blank fire or short-range fire, your ship will **need a clear Zone of Fire** between your ship and the intended target ship.

- A *Zone of Fire* is defined as the area between two straight lines projected from the corners of the firing ship's *base* to the corners of the intended target ship's *base* maximising the *area in-between*) thus:



The Zone of Fire is this area between the two straight lines and between both ship's rectangular bases.

Now:

- If there are no ship *castings* (friend or foe) and no land features (such as islands, etc) *in or partially in* the Zone of Fire, then the **Zone of Fire is clear** and your ship **can fire** point-blank fire or close-range fire at that target ship. Otherwise:
- If the **Zone of fire is not clear**, then your ship **cannot fire** point-blank fire or close-range fire at that target ship. Therefore, always manoeuvre you ships carefully so as not to affect your Zones of Fire.

Long Range Fire (that is, any fire over 40 cm in range) required firing the guns at a much higher trajectory with the shells eventually plunging down onto the target. Therefore, to fire long range fire, your ship will **need a valid line of sight** to the target ship.

- Your ship is deemed to have a *valid line of sight* to a target ship if a single straight line can be projected from any point on your ship's *casting* to any point on the target ship's *casting*, AND this straight line does not pass over and beyond any other ship *castings* (or over or beyond any land features such as islands, etc).

However, for the purposes of determining a valid line of sight, Large ships can see over and past Small ships, that is, Small ships (be they friend or foe) are treated as if they are not there when determining a line of sight for Large ships. In any other situation, the intervening ship castings (be they friend or foe) do prevent a valid line of sight, and so your ship cannot see over or beyond those intervening ship castings. Therefore, for long range fire:

- If your ship has a **valid line of sight** to the enemy ship, then your ship **can fire** long range fire at that target ship. Otherwise:
- If your ship **does not have a valid line of sight** to the enemy ship, then your ship **cannot fire** long range fire at that target ship. Therefore, always manoeuvre you ships carefully so as not to affect your lines of sight.

Smokes Screens:



For game purposes, smoke screens can only be generated by Class E ships, and Class E ships can generate smoke screens at any speed.

The player controlling a Class E ship shows that the ship is generating a smoke screen for the Game Turn by placing a small piece of cotton wool onto the ship's casting once the ship's current speed has been determined for the Game Turn. If the ship is not generating a smoke screen, then the cotton wool is simply removed.

The **whole rectangular base** of a ship that is generating a smoke screen is then deemed to be the smoke screen. If your ship's Line of Sight to a target passes *over and beyond* any part of a smoke screen, then that target is *obscured* by that smoke screen, and so your ship does not have a valid line of sight to that target.

However, and depending upon what the wind is doing at the time, there is chance that you may be able to see the enemy ship that is generating the smoke screen and fire at it. Therefore, if your ship does have a valid Line of Sight (or does have a clear Zone of Fire) at an enemy ship that is generating a smoke screen, then before your ship fires *each* salvo at that enemy ship, you must roll a 1D6 for that salvo, the result being that:

- On a 1 or 2 The wind just happens to be blowing the smoke screen away from the enemy ship at the time (see the image above), and so your ship can briefly see that enemy ship and so fire that salvo at that enemy ship.
- On a 3 or more The enemy ship's smoke screen is currently obscuring the enemy ship, and so your ship cannot see it to fire that salvo at it this Game Turn. The salvo is ordered to *hold fire*, and so the salvo is not fired at all. The player cannot opt to change targets to fire the salvo at some other eligible target.

If your ship satisfies all of the above requirements, then you proceed to determine whether the enemy ship is actually within range of the *types* of guns firing from your ship.

Gun Ranges:

The maximum *effective* ranges for each of the gun types are:

Gun Type	Pre-1905	1905 On
Heavy Guns	75 cm	100 cm
Medium Guns	50 cm	75 cm
Secondary Guns	30 cm	30 cm
Quickfirers	20 cm	20 cm

As noted, to measure the *range* or *distance* between any two ships at any time during the game, simply measure the shortest distance between the two ship's *castings* regardless of anything between.

Salvo Fire:

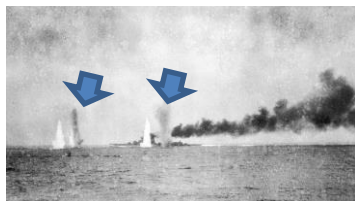


The different gun *types* on a ship must fire in *salvos* (as they tended to do in real life). This means that *all* of the guns of a particular gun *type* on the ship (that is, heavy, medium, secondary or quickfirers) must all fire at the same target. For example, all of the heavy guns on the ship must fire at the same target; all of the medium guns on the ship must fire at the same target; etc.

However, and to be clear, the different gun *types* on the ship can be tasked to fire at different targets (and even in different arcs). For example, the heavy guns on the ship could all fire at one target, the medium guns on the same ship could all fire at some other target, and the secondary guns on the same ship could all fire at yet another target, etc. They could also, of course, all fire at the same target if within range.

So, summarising the firing process, you first determine which arc the target ship is in, and then measure the range to the target. Then, for point-blank fire and short-range fire, your ship must have a clear Zone of Fire to the target ship. For long range fire, your ship must have a valid line of sight to the target ship. Then, if the target ship is within range of the gun type firing, then the player can fire a salvo of that gun type at that target ship as set out below (unless the target ship is obscured by a smoke screen).

PHASE 3a: PLACE SPLASH MARKERS



Determining the range to a target at long range was an exercise in optics.

As previously noted for long range fire, firing trajectories were high and plunging. To zero in on the range to a target at long range, the ship would fire a salvo at an estimated range and then observe where the shots from that salvo fell via the resulting *splashes*.

The ship would then use this splash information to correct the range for the next salvo (the splashes being observed as being *short* of the target, *straddling* the target, or being *over* the target). When the salvo straddled the target, the range would be reasonably established, and so the guns would be ordered to go into a more rapid fire hoping to hit the target before it moved too much.

However, when more than one friendly ship fired at the same enemy ship, it became a little more difficult for each ship to distinguish their own splashes from those splashes caused by the other ships. At closer ranges where firing trajectories were much flatter and more direct, this was much less of a problem.

Therefore, before any firing takes place in Phase 3b, the player controlling a ship that is firing **Medium guns or Heavy guns** at an enemy ship that is at **more than 40 cm** in range must place a small **splash marker** adjacent to the enemy ship that the player's ship is firing at. This is to be done by all players for each of their ships that are firing Medium or Heavy guns at enemy targets that are over 40 cm in range.

When all such splash markers have been placed, players proceed to Phase 3b.

PHASE 3b: RESOLVING GUNFIRE

To fire a salvo from a ship, the player controlling that ship first refers to the ship's Data Card and determines the number of *stats* remaining for the gun *type* firing.

The player then starts with 1D6 for each remaining stat for the gun type firing. This basic number of dice is then modified thus:

If the range is under 40 cm, then halve the basic number of dice (round up) for each of the following:

- if the sea state is rough.
- if the target ship is in the firing ship's forward arc or is in the firing ship's rear arc.

If the range is over 40 cm, then halve the basic number of dice (round up) for each of the following:

- if the sea state is rough.
- if the target ship is in the firing ship's forward arc or is in the firing ship's rear arc.
- if the ship firing has no Gun Director stat AND the target ship has two or more splash markers adjacent to it.
- if the target ship is Small.

For example: The ship below fires its Heavy Guns at a Large enemy ship that is wholly within its forward arc 53 cm away, and that target ship has two splash markers adjacent to it.

Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Gun Director	GD	01

The range is over 40 cm, and so this Heavy gun salvo is at long range. The player starts with 1D6 for each remaining Heavy gun stat, which in this case is 11. For long range, the player proceeds thus:

- the sea state is not rough, therefore no effect.
- the target ship is in the forward arc, therefore halve the 11D6 to 5½ D6 (round up) to 6D6.
- the firing ship still has its Gun Director stat, and so the splash markers have no effect. (If the ship had no Gun Director stat, then the player would have to halve this 6D6 again.)
- the target ship is not Small, therefore no effect.

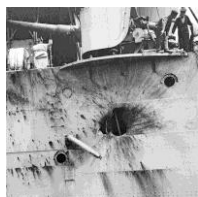
The final result in this example is that 6D6 are to be rolled.

The player then rolls the final number of dice as determined above (6D6 in this example). Now, if the target is:

- **At long range** (over 40 cm), each 5 and each 6 rolled scores one hit, but the player firing can pair 6's to call them critical hits (see how this works in the example below).
- **At close range** (from 20 cm to 40 cm), each 4, 5 or 6 rolled scores one hit, but the firer can pair 5's to call them critical hits, and pair 6's to call them critical hits.
- **At point-blank range** (under 20 cm), each 3, 4, 5 or 6 scores one critical hit.

Continuing the example: The player rolls the 6D6 and (say) rolls extremely well, the result of the roll being that one 5 and three 6's is rolled. The five is a single hit. The three 6's are also single hits, but the firing player can pair two of them together and call that a critical hit, which the player does. Therefore, the result of the salvo is a 5, a 6, and a double 6. For long range, all of the other dice rolls that were less than five are misses.

Armour Saves:



The player controlling the target ship then rolls that ship's *armour save* roll for that particular salvo.

To do this, the player controlling the target ship first determines the number of *Armour* stats that are still remaining on the target ship's Data Card. The player controlling the target ship then rolls 1D6 for each remaining *Armour* stat.

Continuing the example: The enemy player checks the target ship's Data Card, and finds that the ship has four *Armour* stats remaining thus:

Armour	A	01 02 03 04 05 06 07
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Therefore, the player controlling the target ship rolls 4D6.

Now, if the target ship is:

- **At long range** (over 40 cm), then for each 4, 5 or 6 rolled, one hit dice is saved.
- **At short range** (from 20 cm to 40 cm), then for each 5 or 6 rolled, one hit dice is saved.
- **At point-blank range** (under 20 cm), then for each 6 rolled, one hit dice is saved.

(Players should think of a saved hit as being things like a direct hit that failed to explode, or a shot that just misses the target by a whisker and then explodes, etc, etc, things causing little or no damage.)

Continuing the example: The result of the 4D6 armour save roll is (say) that only one 5 is rolled with all of the other dice rolls being less than 4. As a result, only one hit has been saved by the armour.

- The player controlling the target ship then decides which hit *dice* are to be saved (removed).

Continuing the example: The enemy player, wisely enough, chooses to save (remove) one of the critical hit's 6's, thus reducing that critical hit to just a hit. Therefore, the final result of that salvo is that the enemy ship takes three Heavy gun non-critical hits with a 5, a 6, and now, just another 6.

For every hit, the type of hit is immediately noted on the target ship's Data Card thus:

Non-Critical Hit:

Heavy Gun	H
Medium Gun	M
Secondary Gun	S
Quickfirers	Q

Critical Hit:

Heavy Gun Critical	HC
Medium Gun Critical	MC
Secondary Gun Critical	SC
Torpedo Critical	TC

As you can see, in the list above Quickfirers cannot inflict critical hits. Players are to treat any critical hits from Quickfirers as non-critical Quickfirers hits (Q).

Continuing the example: The ship took three unsaved Heavy gun hits and no critical hits. Therefore, the player controlling the target ship notes three H's in the Hits section on the ship's Data Card representing these three unsaved Heavy gun hits thus:

 Hits: **H H H**

When all players have finished firing all of their gunfire from all of their ships, and finished noting all hits, then the players proceed to resolve those gunfire hits by proceeding to Phase 3c.

PHASE 3c: DAMAGE RESOLUTION



During this phase, all players proceed to resolve all of the hits that are noted in the Hits section on their ship's Data Cards.

Each player proceeds to do so by resolving all of the **critical hits** on the ship **first**, and then, when all of these critical hits have been resolved, the player resolves all of the non-critical hits on the ship.

Resolving a Critical Hit:

First, any Heavy gun critical hits (HC) or any Torpedo critical hits (TC) on a Class E ship or a Class F ship immediately *sinks* that ship, and so that ship is removed from play.

Otherwise, the number of stats that the player controlling the ship has to cross off from that ship's Data Card for each type of critical hit is determined thus:

For a Secondary Gun critical hit	SC	2 stats
For a Medium Gun critical hit	MC	1D3+1 stats
For a Heavy Gun critical hit	HC	1D3+3 stats
For a Torpedo critical hit	TC	1D3+5 Hull stats

For example: Suppose a ship has taken a Medium Gun critical hit (MC) thus:

Hits: MC

To resolve this critical hit, the player controlling the ship would first roll 1D6 and (let's say) the player rolls a 4. Now, for a 1D3 roll, a roll on the D6 of a 4 translates to a 2 (see page 2), and then the player adds 1. Thus, 2 plus 1 means 3 stats will need to be crossed off.

For critical hits, the player controlling the ship chooses *one and one only of the ship's stat types*, and then crosses off the required number of stats on that ship's Data Card as determined above with one exception. The one exception is that for torpedo critical hits, only *Hull* stats can be crossed off.

Continuing the example: The player is required to cross of 3 stats because of the MC hit. The player studies the ship's Data Card and decides to (let's say) take these 3 stats off the ship's Propulsion thus:

Propulsion (Before)	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Propulsion (After)	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20

The MC hit as noted on the ship's Data Card has now been resolved, and so it is crossed off as well thus:

Hits: ~~MC~~

Now, in the case where there are insufficient stats to cross off from the stat type chosen, the remainder of the stats that are required to be crossed off from that stat type are deemed to be *misses*, and so cause no further damage to the ship.

(Because of the time scale involved for each Game Turn, players should think of these misses as the results of swift damage control, successful emergency repairs, damage into non-vital areas, etc, etc.)

For example: A ship takes a critical hit, and because of it is required to cross off (say) 4 stats (ouch). The player controlling the ship studies the ship's Data Card and decides to (let's say) cross the stats off the ship's Secondary Guns type thus:

Secondary Guns (Before)	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Secondary Guns (After)	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20

As noted above, the player has crossed off the last two remaining Secondary Guns stats. Having no more Secondary Gun stats to cross off, the third and fourth stats that are required to be crossed off from the stat type become *misses* instead, and so do no further damage to the ship.

Resolving a Non-Critical Hit:

To resolve a non-critical hit on a ship, the player controlling that ship simply chooses one stat type on that ship's Data Card, and then simply crosses off just **one stat**.

Continuing the previous example: The ship took three unsaved non-critical Heavy gun hits (H) that were noted on its Data Card thus:

Hits: H H H

The player controlling the ship studies the ship's Data Card and decides to take (let's say) two of the three stats off the ship's Propulsion stats thus:

Propulsion (Before)	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Propulsion (After)	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20

... and take the other stat off the ship's Secondary Guns stats thus:

Secondary Guns (Before)	S	01 02 03 04 05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20
Secondary Guns (After)	S	01 02 03 04-05-06-07-08-09-10-11-12-13-14-15-16-17-18-19-20

The three H's as noted in the Hits section of the ship's Data Card have now been resolved, and so they are crossed off as well thus:

Hits: ~~HHH~~

When all of the players have finished resolving all of their gunfire hits, players then proceed to fire their torpedos (if able).

FIRING TORPEDOS



Firing torpedos is similar to firing guns but with a few small changes.

First, torpedos cannot be fired at all if the sea state is *rough*.

Next, the **effective range for all torpedos is from 5 cm to 20 cm** regardless of the torpedo's size.

(Torpedos need time to get upto speed and prime the fuse, hence the 5 cm minimum range. Torpedoes could travel much further than this 20 cm range, however, because of the unreliability of torpedos during this period, the chance of them actually hitting what they were fired at was very poor indeed... but, when they did hit and explode... ouch.)

Firing Arc for Torpedo Fire:

Torpedos can only be fired into either one of the firing ship's broadside arcs. However, if the target ship is *bow on* or *stern on*, then the ship cannot fire (and wouldn't fire) its torpedos at that target ship (it would be just too hard to hit).

- **A target ship is considered to be bow on or stern on** if the *firing* ship's casting is in or partially in the *target* ship's forward arc, or if the *firing* ship's casting is in or partially in the *target* ship's rear arc (see the arc diagram on page 7).

Zone of Fire for Torpedo Fire:

When firing torpedos, the ship firing must have a clear Zone of Fire established in exactly the same manner as for gunfire (see page 7), and smoke screens can obscure a torpedo salvo (see page 8).

Do I have to fire all of the torpedos?

Yes, all of the torpedos on the ship must be fired as a salvo at the same time and at the same target just like a gun salvo.

So, summarising the process, if the target ship's casting is wholly within one of your ship's broadside arcs, and the target ship is not bow on or not stern on, and your ship has a clear zone of fire to that enemy ship, and the target ship is more than 5 cm away but less than 20 cm away, then your ship can fire its torpedos at that enemy ship (if the ship is not obscured by a smoke screen).

Can you reload torpedo tubes?



Reloading torpedo tubes was a difficult and time-consuming procedure at the best of times, and even more so if the ship was underway and in a combat situation.

Therefore, once a ship has fired off its torpedos, that ship cannot fire torpedos again for the remainder of the game, and so this is noted in the Notes section on the ship's Data Card. (The remaining torpedos stats cannot be fired, but they can be used for damage resolution purposes.)

PHASE 3d: RESOLVING TORPEDO FIRE

The player controlling the ship firing torpedos starts with 1D6 for each remaining Torpedos stat on that ship's Data Card. This basic number of dice is then modified thus:

- +1D6 if the target ship is Large
- 1D6 if the target ship is Small

The player then **doubles** this number of dice if the **target ship is stationary** (that is, it has a current speed of zero), **or halves** this number of dice (round up) if the **target ship has a current speed of 4 or more**.

For example: The destroyer below manages to get close enough to fire a torpedo salvo at a Large ship which has a current speed of 6, that is 16 cm away, and is broadside on.

Torpedos T 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20

The player starts with 5D6, the number of Torpedos stats remaining on this destroyer. The player then adds 1D6 for the target ship being Large. This 6D6 is then halved because of the target ship's speed is greater than 4. The final result is that 3D6 are to be rolled.

The player then rolls the number of dice as determined above.

- **When firing torpedos, only 6's score hits.**

All other dice rolls are complete misses. The torpedos do not continue on to hit anything else. Next:

- **There are no armour saves for torpedo hits.**

As a result, all torpedo hits are automatically deemed to be *torpedo critical hits* (TC), and so are noted as such in the Hits section on the target ship's Data Card thus:

Hits: TC

When all players have finished firing all of their torpedos, players proceed to Phase 3e.

PHASE 3e: RESOLVING TORPEDO HITS

To resolve a torpedo critical hit, refer to the Resolving a Critical Hit procedures (see page 11).

When all torpedo hits have been resolved, players then proceed to Phase 3f.

PHASE 3f: CHECK FOR SPECIAL DAMAGE

If a ship has not taken any hits at all during this Firing Phase, then the player simply skips this phase for that ship.

Otherwise, when all of the hits on a ship have been resolved (critical, non-critical and torpedo), the player controlling that ship then proceeds to determine if any of those hits on the ship resulted in any special damage on the ship by rolling **2D6** once and once only for that ship. Now:

If the total of this roll is 2, then the ship suffered a penetrating hit that results in a **secondary explosion**.

To determine the outcome of this explosion, the player rolls a 1D3 three times. For the first roll, the ship loses that number of Hull stats immediately. For the second roll, the ship loses that number of Propulsion stats immediately. The ship also has *fires onboard* for the next few Game Turns. The result of the third roll determines for how many of the next Game Turns the fires continue, after which time the fires are deemed to be extinguished.

While a ship has *fires onboard*, the smoke, firefighting activities and general confusion affect the ship's gunfire and torpedo fire. Therefore, while a ship has *fires onboard*, if that ship fires any salvos (gun or torpedo), then the player *halves* the final number of dice that the player would normally roll for each and every one of those salvos (round fractions up).

If a ship suffers another secondary explosion while the ship has fires onboard, then more fires break out and they all rapidly get out of control. These out of control fires soon lead to a *catastrophic magazine explosion* causing the ship to seriously list at first, then roll over, and then sink. Remove the ship from play.



If the total of this roll is 11, then the ship suffered a **waterline hit** that results in some flooding. The damage control crews manage to stop the flooding fairly quickly, however the flooding causes ongoing problems with the ship's boilers, engines and associated machinery. Therefore, and for each waterline hit taken, the ship loses 1D3 Propulsion stats immediately.

If the total of this roll is 12, then the ship suffered a hit near the stern that results in ongoing problems with the **rudder**. Therefore, the ship can only turn (move around) the Turn Device a maximum of 5 cm per Game Turn for the remainder of the game.

If the ship suffers any more hits near the stern, then the ship's rudder is put out of action permanently, and so the ship cannot conduct a turn at all for the remainder of the game. The ship also loses one Propulsion stat immediately for each of these additional hits near the stern due to ongoing problems with the ship's propeller/s.

No special damage occurs with any other rolls.

When all players have resolved all of their special damage rolls, and noted any ongoing problems with their ships in the Notes section of those ship's Data Cards, they proceed to Phase 3g.

PHASE 3g: REMOVE SPLASH MARKERS AND CHECK FOR SHIPS SUNK



At the very end of the Firing Phase, players remove all of the splash markers from the table, and then check to see if any ships have been sunk thus:

- Any ship that has **zero Hull stats** remaining at this point in the game is considered **sunk**. Remove any such ships from play.

PHASE 4: THE END PHASE

The game ends when one side or the other is found to have no ships left on the table. The side that still has ships on the table is then said to have *won the engagement*. However, in that rare circumstance where both sides are found to have no ships left on the table at the same time, then the engagement it is considered to be a *loss* for both sides.

Otherwise, the players proceed to decide between themselves whether to continue the game and conduct another full Game Turn, or whether to end the game by declaring one side or the other *likely to win*. The players can, of course, decide that the engagement is *likely to end in a draw*.

If the players cannot agree to end the game, then players simply proceed to conduct another full Game Turn.

FORMATIONS



To avoid the spectacle of having independent ships going here, there and everywhere, players may wish to use these rules for *formations*. Their use is optional but strongly recommended.

Ok. For game purposes, *capital* ships are to operate in *battle-groups* of one to five ships, and non-capital ships are to operate in *flotillas* of three to eight ships. A flotilla must begin the game with at least three ships. If losses reduce the flotilla to below three ships, then the flotilla still continues on as a flotilla.

If a battle-group or flotilla contains (or ends up containing) just one ship, then to state the obvious, that ship is *in formation* with itself by default. Otherwise, where a battle-group or flotilla contains more than one ship, then to determine if a ship of that battle-group or flotilla is *in formation* or not, the player controlling the ship in question proceeds as set out below.

First, players only determine whether their ships are in formation or not *at the start of the Movement Phase* before any ships from either side are moved on the table.

Next, when determining if a ship is in formation or not, players need only consider the ships from the same battle-group or flotilla. Therefore, and for this section on formations only, players simply ignore the ships from other friendly battle-groups or flotillas, all enemy ships, smoke, and land features (such as an island or reef) as if they are not there.

Next, the ships of a battle-group or flotilla normally tried to maintain a *line abreast* formation or a *line astern* formation.



In ***line abreast formation***, the ships tried to stay side by side in a straight line. When manoeuvring in a line abreast formation, the ships normally all turn at about the same *time*, by about the same amount, and in about the same direction.



In ***line astern formation***, the ships followed the *leader*. When manoeuvring in a line astern formation, the ships all turn at about the same *position* on the table as where the leading ship turned. This point is referred to in this formations section as the ***turn point***, and the player must place a small marker to indicate where this turn point is.

When manoeuvring in a line astern formation, the ships normally all turn at about where the turn point is, by about the same amount, and in about the same direction as the lead ship.

Next, and by default, a battle-group or flotilla has a ship at each end (at the extremities) of such linear formations. These two ships are called the *end ships* for the purposes of this formations section, and both of these end ships are deemed to be *in formation*.

Now, to determine if a ship is in formation or not, the player simply proceeds to *project a straight line* from any point on one of the *end ship castings* to any point on the other *end ship's casting*.

However, where the ships of the battle-group or flotilla are in a *line astern formation* that is in the process of *turning*, this *straight line* is projected from any point on one of the *end ship castings* to the *turn point*, and then from the *turn point* to any point on the other *end ship's casting*.

Now:

- ***If this projected straight line does not pass over*** a ship's casting from the same battle-group or flotilla, then that particular ship is said to be ***out of formation***, and so the player places a small marker adjacent to that ship to indicate that it is currently out of formation.
- ***If this projected straight line passes over*** a ship's casting from the same battle-group or flotilla, then that particular ship is said to be ***in formation***. If such a ship currently has an out of formation marker adjacent to it, then that marker is removed.

What happens if a ship is out of formation?

The player controlling a ship that is out of formation *must* manoeuvre that ship on the table in such a way as to get the ship back into formation with its own battle-group or flotilla, and this *must* be done as quickly as possible.

What happens if a ship is in formation?

The player controlling a ship that is in formation can manoeuvre that ship on the table as the player wishes.

EVASIVE MANOEUVRE

Regardless of all of the above formation requirements, if there are any enemy ships ***within 25 cm*** of a friendly ship when that friendly ship begins its movement on the table (the enemy ship is getting close to point-blank range and torpedo range), then that friendly ship, whether in formation or not, can be manoeuvred on the table as the player controlling it wishes.

BREAKING OFF



A ship in a battle-group or flotilla can be ordered to *Break Off*. The player controlling the ship simply announces to all players that the ship is breaking off just before moving that ship on the table.

A ship breaking off is no longer considered to be part of the battle-group or flotilla that it came from. It operates as *independent* ship, and as a single independent ship, it is always *in formation*. Therefore, the ship can be manoeuvred on the table as the player controlling it wishes.

However, a ship breaking off *must* be manoeuvred *away from the enemy as quickly as possible*, and must keep doing so until the ship leaves the table.

A ship breaking off can still fire its guns (if able) and fire its torpedos (if able) until it leaves the table.

SPEED AND PROXIMITY TO THE ENEMY



The speed that the ships of a battle-group or flotilla moved at depended largely on the proximity of the enemy and the make-up of the battle-group or flotilla itself (that is, whether the battle-group or flotilla had a mix of reciprocating and turbine engined ships, or whether the battle-group or flotilla had turbine engined ships only).

Therefore, for ships that are *in formation*:

- If the nearest enemy ship to any ship in a friendly battle-group or flotilla is more than 100 cm away, then the maximum current speed of any ship in that friendly battle-group or flotilla is 6.
- If the nearest enemy ship to any ship in a friendly battle-group or flotilla is less than 100 cm away, and the battle-group or flotilla contains any *reciprocating* engined ships at all, then the maximum current speed of any ship in that friendly battle-group or flotilla is 8 (unless noted otherwise).
- If the nearest enemy ship to any ship in a friendly battle-group or flotilla is less than 100 cm away, and the battle-group or flotilla contains *only turbine* engined ships, then the maximum current speed of any ship in that friendly battle-group or flotilla is 10 (unless noted otherwise).
- If the nearest enemy ship to any ship in a friendly battle-group or flotilla is less than 40 cm away, then there are no restrictions on the maximum current speed of a ship (unless noted otherwise).

For ships that are *out of formation*:

- Regardless of how far away the enemy is, there are no restrictions on the maximum current speed of a ship that is out of formation (unless noted otherwise). However, remember that such a ship *MUST* be manoeuvred on the table in such a way as to get that ship back into formation with its own battle-group or flotilla as quickly as possible.

Finally, and regardless of the all above speed restrictions:

- If the sea state is rough, then no ship can exceed a maximum current speed of 8 under any circumstances.

SCREENS



It was common for a battle-group to have a flotilla of smaller ships attached (usually destroyers and/or auxiliaries) whose task it was to help protect the bigger ships of the battle-group from small, fast, torpedo carrying enemy ships.

This attached flotilla then acts as a *screen* for that battle-group.

The *majority* of the ships of the screening flotilla *must* remain within 30 cm of one of the ships of the battle-group that they are screening.

If any enemy ship comes to within 60 cm of any ship of the *battle-group*, then the ships of the screening flotilla may be manoeuvred further away.

However, as soon as there are no longer any enemy ships within 60 cm of all of the ships of the battle-group that they are screening, then the ships of the screening flotilla must be manoeuvred back as quickly as possible to reform their screen for the battle-group (and use some common sense here please).

FINALLY

I hope all of this makes sense. Please remember that *it's just a game!* Try to have fun and sort out any problems thus:

- One player from each side simply rolls 1D6; re-roll on a tie.
- The side rolling the *lowest* dice roll gets to decide.

However, be careful because the decision made for the particular situation in dispute by the side with the lowest dice roll will then apply to *both* sides for the same situation for *remainder* of the game.

APPENDIX A: PREPARING A SHIP'S DATA CARD

Each ship requires a simple Data Card showing the ship's basic *statistics* (hereafter referred to as *stats*). To generate a ship's stats, good reference books and other reliable resources should be referred to.

First, ships are classified by their overall length (size) thus:

Large	Any ship that is 500 feet or more in length.
Average	Any ship not included above or below.
Small	Any ship that is less than 300 feet in length.

Each ship is then classified into one of the following classes:



CLASS A: Dreadnoughts

A Dreadnought is any ship with a maximum belt armour of 10" or more. All Class A ships are capital ships.



CLASS B: Pre-Dreadnoughts

A Pre-Dreadnought is any ship with a maximum belt armour of 7" or more, but not 10" or more. All Class B ships are capital ships. Battle Cruisers often fall into this class.



CLASS C: Armoured Cruisers

An Armoured Cruiser is any ship with a maximum belt armour of 4" or more, but not 7" or more. All Class C ships are capital ships.



CLASS D: Protected Cruisers

A Protected Cruiser is any ship of 3000 tons or more, with a maximum belt armour of up to but not including 4". All Large Class D ships are capital ships. Flotilla Leaders often fall into this class.



CLASS E: Destroyers

A Destroyer (or Torpedo Boat Destroyer) is any ship of 500 tons or more but less than 3000 tons with maximum belt armour of up to but not including 4".



CLASS F: Auxiliaries and Merchants

An Auxiliary is any ship that does not fit into any of the above classes. All Merchant ships are this class regardless of their size or tonnage.

GUNS



The ship's guns are then classified into one of four basic *types* thus:

- Heavy Guns
- Medium Guns
- Secondary Guns
- Quickfirers

Heavy Guns:

Heavy guns are all guns that are 10" or more in calibre. Heavy guns are further classified by their vintage thus:

- | | |
|-----------|--|
| Pre-1905 | On ships <i>launched</i> up to (but not including) 1905. |
| Post-1905 | On ships <i>launched</i> from 1905 onwards. |

Medium Guns:

Medium guns are all guns of 7.5" or more in calibre but not included above.

Secondary Guns:

Secondary guns are all guns of 4.5" or more in calibre but not included above. For game purposes, Secondary guns can only fire into either broadside.

Quickfirers:



The number and variety of guns under 4.5" in calibre varied greatly from ship to ship, and so guns such as these are all bundled together and referred to in these rules simply as Quickfirers.

For game purposes, Quickfirers can only fire into either broadside.

A note about Gun Director Systems:

Various optical systems were employed to better determine the range to a distant target. These gun director systems would send information to the ship's centralised fire control, and the ship's centralised fire control would then use this information to quickly calculate and then transmit the necessary firing information to the ship's guns. Most ships had some form of gun director/centralised fire control system.

However, around 1912, more advanced systems began to be employed. Therefore, in these rules a ship only gets the benefit of an advanced gun director system (GD) if that ship is a *capital* ship, AND the ship was *launched* from 1912 onwards.

TORPEDOS

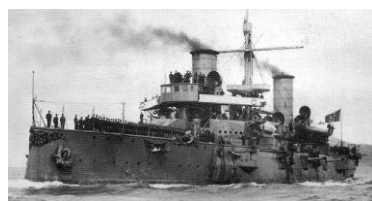


The only torpedo mounts considered in these rules are *above water mounts* (where torpedos are launched from fixed above-water mounts or from pivoting above-water mounts) that are on *Class D ships* or *Class E ships*. The odd, single *submerged* mounts often found on capital ships are simply ignored.

Torpedoes are classified by their size into one of the following types:

- | | |
|--------|---|
| Large | Torpedoes that are 19" or more in diameter. |
| Medium | Torpedoes that are not included above or below. |
| Small | Torpedoes that are 15" or less in diameter. |

HOW TO DETERMINE A SHIP'S STATS FOR ITS DATA CARD



The *stats* for the various gun types and torpedos are determined by what the ship can actually fire into the *broadside*.

Some common sense is required to determine which guns or torpedos can fire into which arc. Any ship with an unusual layout should have its capabilities agreed to well before the game.

For example, Medium gun wing mounts and Heavy gun wing mounts usually had a theoretical arc of fire forward and/or to the rear, and occasionally even into the opposite broadside. However, in practice the resulting gun blast would do quite a lot of damage to its own ship, and so such fire was rarely, if ever, done.

Therefore, and for the sake of simplicity, Medium gun wing mounts and Heavy gun wing mounts are restricted to firing into the broadside arc on which they are mounted. It should be noted that because of these issues, Medium gun wing mount and Heavy gun wing mount designs were only employed over a relatively short time span, and quickly went out of fashion.

For example, a ship like the original HMS Dreadnought had 10 x 12" guns, but only eight of those 12" guns could fire into the same broadside arc. Therefore, for calculation purposes, the Dreadnought would only count as having 8 x 12" guns in the broadside, with the other two wing-mounted 12" guns on the opposite side disregarded for the calculations.

Similarly, a ship like HMS Erin had 16 x 6" Secondary guns, but only eight of those 6" guns could fire into the same broadside. Therefore, for calculation purposes, the Erin would only count as having 8 x 6" guns in the broadside, with the other eight 6" guns on the opposite side disregarded for the calculations.

Next, for the sake of simplicity, and regardless of what the ship actually carried, a ship gets a fixed number of Quickfirer stats based purely on the ship's *size* thus:

- A Merchant ship 0 Quickfirer stats.
- A Merchant ship, if armed 1 Quickfirer stat.
- A Small ship 2 Quickfirer stats.
- An Average sized ship 3 Quickfirer stats.
- A Large ship 4 Quickfirer stats.

Now, as we all know, most Class E ships (destroyers and the like) and Class F ships (merchants and the like) had very little armour to speak of or no armour at all. Therefore, and for game purposes:

- Any ship with less than 4" of maximum belt armour starts the game with zero Armour stats.

How to Determine the Ship's Stats:

In all cases, round any fractions up.

Heavy Guns stats are determined as per the pattern set out below (and see the examples) thus:

16"	H	Get 1.6 stats per gun.
15"	H	Get 1.5 stats per gun.
14"	H	Get 1.4 stats per gun.
13.5"	H	Get 1.35 stats per gun.
12.6"	H	Get 1.26 stats per gun, etc.
10"	H	Get 1 stat per gun.

Medium Guns M Get **0.85** stats per gun.

Secondary Guns S Get **0.5** stats per gun.

Quickfirers Q Get **0 to 4** stats depending on the size of the ship (see above).

Torpedos are only noted for Class D and Class E ships. Ignore torpedos on any other ships.

Large Torpedos	T	Get 1.5 stats per tube.
Medium Torpedos	T	Get 1.25 stats per tube.
Small Torpedos	T	Get 1 stat per tube.

Gun Director GD Get **0 or 1** stats (see page 19).

Armour A Get **1** stat per 2" of maximum belt armour to a maximum of 7 stats.

Propulsion P Get **1** stat per 2 knots of maximum speed.

Hull X Get **1** stat per 2,000 tons displacement or part thereof.

For example: The British Battle-Cruiser...

Name	HMS Tiger
Launched	1913
Size	675 feet, therefore Large.
Armour	Maximum 9" belt, therefore a Class B capital ship.
Displacement	28,430 tons. Oil fired turbines.

Heavy Guns	8 x 13.5"
Medium Guns	None.
Secondary Guns	12 x 6"
Quickfirers	4 x 3 pdrs.
Torpedos	4 tubes, all submerged.
Maximum Speed	28 knots.

The stats for HMS Tiger are determined thus:

Heavy guns	8 guns x 1.35 = 10.8 (round up) = 11 stats.
Secondary Guns	12 x 6", but only six into the same broadside; so, 6 x 0.5 = 3 stats.
Quickfirers	Large ship, therefore gets 4 stats (see page 20).
Torpedos	Zero stats. Ignore submerged torpedo tubes (see page 20).
Gun Director	Capital ship launched 1913, therefore gets 1 stat (see page 19).
Armour	9" belt, so $9/2 = 4.5$ (round up) = 5 stats.
Propulsion	28 knots; so, $28/2 = 14$ stats.
Hull	28,430 tons; so, $28,480/2000 = 14.24$ (round up) = 15 stats.

As a result, HMS Tiger's Data Card stats at the start of the game would look like this:

Name: HMS Tiger		Size: Large	Class: B	Launched: 1913
Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11	12 13 14 15 16 17 18 19 20	
Medium Guns	M	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Secondary Guns	S	01 02 03	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	
Quickfirers	Q	01 02 03 04	05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Gun Director	GD	01		
Armour	A	01 02 03 04 05	06 07	
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14	15 16 17 18 19 20	
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15	16 17 18 19 20	
Current Speed:				
Hits:				
Notes: Turbine engines.				

Another example: The old French battleship...

Name	Carnot
Launched	1891
Size	380 feet, therefore Average size.
Armour	Maximum 17" Steel Belt, therefore a Class A capital ship.
Displacement	11,954 tons. Coal fired reciprocating engines.

Heavy Guns	2 x 12" plus a wing mounted 10.8" into the broadside.
Medium Guns	None.
Secondary Guns	8 x 5.5"
Quickfirers	4 x 9 pdrs, 18 x 3 pdrs.

Torpedos	2 tubes, both submerged.
Maximum Speed	18 knots.

The stats for Carnot would be determined thus:

Heavy guns	2 guns x 1.2 plus one more gun x 1.08 = 3.48 (round up) = 4 stats.
Secondary Guns	8 x 5.5"; but only four into a broadside so, 4 x 0.5 = 2 stats.
Quickfirers	Average size, therefore gets 3 stats (see page 20).
Torpedo Tubes	Zero stats. Ignore submerged torpedo tubes (see page 20).
Director	Capital ship but launched 1891, therefore gets zero stats (see page 19).
Armour	17" steel belt, so $17/2 = 8.5$ (round up) = 9, but the maximum is 7 stats.
Propulsion	18 knots, so $18/2 = 9$ stats.

As a result, Carnot's Data Card stats at the start of the game would look like this:

Name: Carnot		Size: Average	Class: A	Launched: 1891
Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Medium Guns	M	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Secondary Guns	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Quickfirers	Q	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Gun Director	GD	01		
Armour	A	01 02 03 04 05 06 07		
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Current Speed:				
Hits:				
Notes: Reciprocating engines.				

Another example: The British I Class Destroyer...



Name	HMS Lurcher
Launched	1910
Size	262 feet, therefore Small.
Displacement	765 tons, therefore Class E. Oil fired turbines.

Armour	Maximum Belt is less than 4". Therefore, gets zero stats (see page 20).
Heavy Guns	None.
Medium Guns	None.
Secondary guns	None.
Quickfirers	Small, therefore gets 2 stats (see page 20).
Torpedos	2 x 21" tubes (Large), pivoting deck mounts. So, 2 x 1.5 = 3 stats.
Director	Not a capital ship, therefore gets zero stats (see page 19).
Maximum Speed	32 knots, so $32/2 = 16$ stats.

As a result, HMS Lurcher's Data Card stats at the start of the game would look like this:

Name: HMS Lurcher		Size: Small	Class: E	Launched: 1910
Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Medium Guns	M	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Secondary Guns	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		

Quickfirers	Q	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Gun Director	GD	04
Armour	A	01 02 03 04 05 06 07
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20

Current Speed:

Hits:

Notes: Turbine engines.

Another example: The British monitor...



Name	HMS Sir John Moore
Launched	1915
Size	320 feet, therefore Average size.
Armour	Maximum 6" belt, therefore a Class C capital ship.
Displacement	5,900 tons. Coal fired reciprocating engines.

Heavy Guns	2 x 12", so 2 x 1.2 = 2.4 (round up) = 3 stats.
Medium Guns	None.
Secondary Guns	4 x 6", but only two into a broadside, so 2 x 0.5 = 1 stat.
Quickfirers	Average size, therefore gets 3 stats (see page 20).
Torpedos	None.
Director	Capital ship launched 1915, therefore gets 1 stat (see page 19).
Armour	6" belt, so 6/2 = 3 stats.
Maximum Speed	6.7 knots; so, 6.7/2 = 3.35 (round up) = 4 stats.

As a result, HMS Sir John Moore's Data Card at the start of the game would look like this:

Name	HMS Sir John More	Size: Average	Class: C	Launched: 1915
Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Medium Guns	M	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Secondary Guns	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Quickfirers	Q	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Gun Director	GD	01		
Armour	A	01 02 03 04 05 06 07		
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		

Current Speed:

Hits:

Notes: Reciprocating engines. Main guns cannot fire into the rear arc. Ignores the firing modifier for firing into the front arc.

Note: As you can see, the monitor only has one forward two-gun turret and no rear turret. Therefore, firing those two heavy guns into the front arc is exactly the same as firing them into a broadside arc. Therefore, the ship doesn't need to halve the stats when firing its Heavy guns into the forward arc.

Another example: The old Italian battleship...



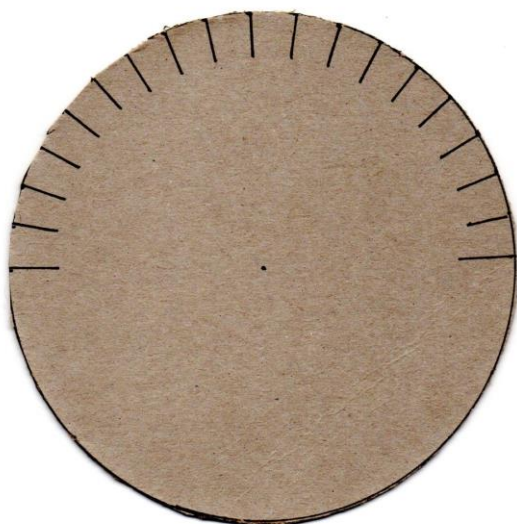
Name	Roma
Launched	1907
Size	435 feet, therefore Average size.
Armour	Maximum 9.8" belt, therefore a Class B capital ship.
Displacement	12,660 tons. Coal fired reciprocating engines.

Heavy Guns	2 x 12", so 2 x 1.2 = 2.4 (round up) = 3 stats.
Medium Guns	12 x 8", but only six into a broadside, so 6 x 0.85 = 5.1 (round up) = 6 stats.
Secondary Guns	None.
Quickfirers	Average size, therefore gets 3 stats (see page 20).
Torpedos	2 tubes, both submerged. Ignore submerged torpedos (see page 20).
Director	Capital ship but launched 1907, therefore gets zero stats (see page 19).
Armour	9.8" belt, so 9.8/2 = 4.9 (round up) = 5 stats.
Maximum Speed	21.5 knots; so, 21.5/2 = 10.75 (round up) = 11 stats.

As a result, Roma's Data Card stats at the start of the game would look like this:

Name	Roma	Size: Average	Class: B	Launched: 1907
Heavy Guns	H	01 02 03	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	
Medium Guns	M	01 02 03 04 05 06	07 08 09 10 11 12 13 14 15 16 17 18 19 20	
Secondary Guns	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Quickfirers	Q	01 02 03	04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20	
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Gun Director	GD	01		
Armour	A	01 02 03 04 05	06 07	
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11	12 13 14 15 16 17 18 19 20	
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13	14 15 16 17 18 19 20	
Current Speed:				
Hits:				
Notes: Reciprocating engines.				

APPENDIX B: THE TURN DEVICE



Players can make their own Turn Devices.

A Turn Device is 120 mm diameter, and it is marked off in 1 cm increments.

Note: A standard CD is 120 mm in diameter.

APPENDIX C: BLANK SHIP DATA CARDS

Throughout the game, when crossing off any stats on a ship's Data Card, the player must always cross them off from *right to left* (as shown in all the examples), and to state the obvious, the player can only cross off stats that have not yet been crossed off.

Name:		Size:	Class:	Launched:
Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Medium Guns	M	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Secondary Guns	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Quickfirers	Q	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Gun Director	GD	01		
Armour	A	01 02 03 04 05 06 07		
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		

Current Speed:

Hits:

Notes:

Name:		Size:	Class:	Launched:
Heavy Guns	H	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Medium Guns	M	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Secondary Guns	S	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Quickfirers	Q	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Torpedos	T	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Gun Director	GD	01		
Armour	A	01 02 03 04 05 06 07		
Propulsion	P	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		
Hull	X	01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20		

Current Speed:

Hits:

Notes:

QUEEN OF THE SEAS: QUICK REFERENCE

Resolving Gunfire: The maximum *effective* gun ranges for each of the gun types are:

Gun Type	Pre-1905	1905 On
Heavy	75 cm	100 cm
Medium	50 cm	75 cm
Secondary	30 cm	30 cm
Quickfirers	20 cm	20 cm

Start with 1D6 for each remaining gun type stat.

If the range is under 40 cm, then halve the basic number of dice (round up) for each of the following:

- if the sea state is rough.
- if the target ship is in the firing ship's forward arc or is in the firing ship's rear arc.

If the range is over 40 cm, then halve the basic number of dice (round up) for each of the following:

- if the sea state is rough.
- if the target ship is in the firing ship's forward arc or is in the firing ship's rear arc.
- if the ship firing has no Gun Director stat AND the target ship has two or more splash markers adjacent to it.
- if the target ship is Small.

Roll the final number of dice (D6).

- **At long range** (over 40 cm) each 5 and each 6 rolled scores one hit, but the firer can pair 6's and call it one critical hit.
- **At close range** (from 20 cm to 40 cm) each 4, 5 or 6 rolled scores one hit, but the firer can pair 5's or pair 6's and call it one critical hit.
- **At point-blank range** (under 20 cm) each 3, 4, 5 or 6 scores one critical hit.

Armour Saves:

- **At long range** (over 40 cm), each 4, 5 or 6 rolled, one hit dice is saved (removed).
- **At short range** (from 20 cm to 40 cm), each 5 or 6 rolled, one hit dice is saved (removed).
- **At point-blank range** (under 20 cm), each 6 rolled, one hit dice is saved (removed).
- Quickfirers cannot cause critical damage.

Resolving Torpedo Fire: Range is from 5 cm to 20 cm. Refer to page 13 for more details.

Damage Resolution: For an unsaved non-critical hit 1 stat. Otherwise, for critical hits:

For a Secondary Gun critical hit	SC	2 stats
For a Medium Gun critical hit	MC	1D3+1 stats
For a Heavy Gun critical hit	HC	1D3+3 stats
For a Torpedo critical hit	TC	1D3+5 Hull stats

Resolve Special Damage: Roll 2D6 and add them together. Refer to page 14 for more details.

- On a roll of 2, the ship suffers a secondary explosion and fires.
- On a roll of 11, the ship suffers a waterline hit and flooding.
- On a roll of 12, the ship suffers rudder and propeller problems.