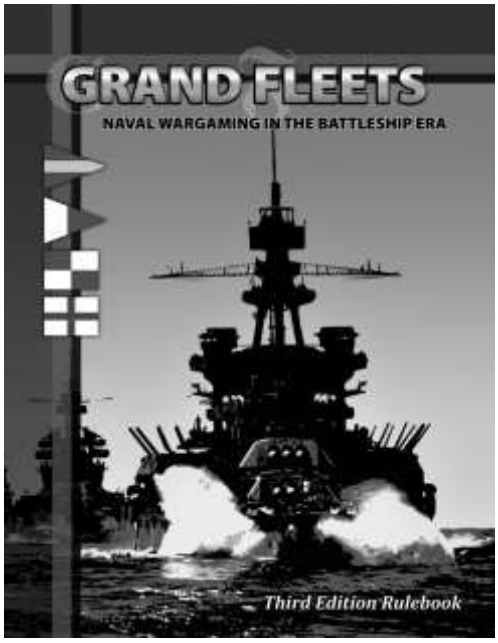

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GRAND FLEETS: THIRD EDITION RULEBOOK
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INTRODUCTION

We may now picture this great Fleet, with its flotillas and cruisers, steaming slowly out of Portland Harbour, squadron by squadron, scores of gigantic castles of steel wending their way across the misty, shining sea, like giants bowed in anxious thought. We may picture them again as darkness fell, eighteen miles of warships running at high speed and in absolute blackness through the narrow Straits, bearing with them into the broad waters of the North the safeguard of considerable affairs …

The King's ships were at sea.

—Winston Churchill

Grand Fleets™ is a tabletop game of naval warfare during the age of the battleship. From the ironclads of the late 1800s to the floating fortresses of World War II, players can take command of the ships that altered the course of history.

In addition to the basic rules for surface actions between 1890 and 1950, ***Grand Fleets*** includes rules for using submarines and aircraft alongside your battlewagons. Advanced rules are also provided for things like RADAR, smoke screens, critical hits, fleet morale, night fighting, and destroyer flotillas.

The rulebook contains 160 ship data cards representing over 50 different classes. Best of all, you'll never have to wait for official publication of your favorite ships: comprehensive, step by step guidelines are provided to generate game stats for any vessel that put to sea during the battleship era.

GAME COMPONENTS

In addition to the components listed here, players will need to provide a number of six sided dice, some pens or pencils, and at least one measuring tape (unless playing on a hexgrid—see below).

The center pages of this book provide additional game components (see below). Full-color versions of these pages can be downloaded from our web site: **mj12gam.es/gf3**.

Ship Data Cards

A ship's data card provides all of the necessary game data, and is used to mark off damage as it occurs (see p.5).

Miniatures

Each ship is represented by a plastic or metal miniature. Naval miniatures are generally available in one of four scales: 1:2400, 1:3000, 1:4800, and 1:6000. Recently, 1:1800 has also made an appearance. Some suggested sources for miniatures include:

- **www.GHQ.com** has a wide selection of 1:2400 scale miniatures covering both World Wars.
- **www.panzerschiffe.com** lists over 500 different epoxy castings in 1:2400 scale, ranging from the pre-dreadnought era through World War II.
- **www.wtj.com** carries both an extensive line of 1:3000 scale pre-dreadnought ships, along with rapid-prototyped plastic miniatures for both pre-dreadnoughts and World War I in multiple scales, ranging from 1:1500 to 1:3000.
- **www.navwar.co.uk** produces a variety of 1:3000 scale miniatures, including some hard to find classes from many of the minor navies.
- **www.spanglefish.com/mickyarrowminiatures** has a fine selection of 1:4800 scale miniatures spanning both World Wars.
- **www.nobleminis.com** is the U.S. distributor for Figurehead Ships, 1:6000 scale miniatures covering the entire battleship era.

Miniatures should be mounted on flat, rectangular bases to make them easier to handle. While you can size your bases however you see fit, a good rule of thumb is to use a base that is at least ½" longer than the ship's miniature, with a width based on the scale:

Scale	1:2400	1:3000	1:4800	1:6000
Base Width	1¼"	1"	¾"	½"

For example, a 1:3000 scale miniature of the British battleship *Iron Duke* (approximately 2½" long) would fit nicely on a 3" by 1" base.

Players without access to appropriate miniatures can make use of cardboard or cardstock counters. One excellent option is **www.topsideminis.com**, who sell flat "counters" (actually stickers mounted on 3mm plywood) in 1:1850 scale. Their range is somewhat limited at the moment, but expanding rapidly.

Another source for counters is the *Mad Game-Designer's 2nd Page*, which includes a section entitled "All the Ships", with literally thousands of individually-named ship counters that are free to download: **www.cke1st.com/m_games4.htm**

Regardless of what you are using, these rules will refer to each ship's playing piece as its "model".

Playing Area & Scale

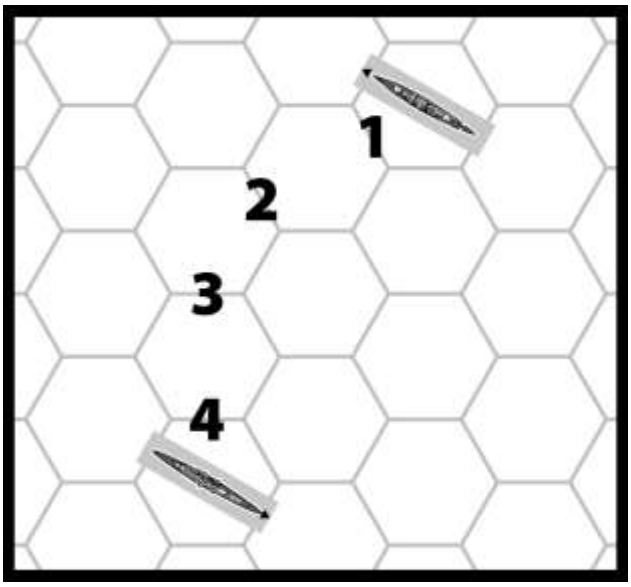
The game is played on an open tabletop. Distances are expressed in thousands of yards (abbreviated as "kyds"). Every 2" on the tabletop represents 1kyd in the game.

The playing area should be approximately 20kyds by 30kyds, which means a 3' × 5' table will suffice. If using larger miniatures (1:2400 or 1:3000), you may wish to increase the scale so that 1kyd = 3" or even 4". When doing so, you will need to have a bigger table, such as 4' × 6' or 5' × 8'.

The game can also be played on a "board" overlaid with a hexgrid to regulate distances. Each hex represents a distance of 1kyd. A suitable board can be purchased from **www.hotzmats.com**. We recommend the half-size Sea Blue or Sea Blue Grey mat, width grain with 2" hexes. For larger miniatures, the full size mat with 3" hexes is also suitable, although the playing area is slightly smaller.

On the tabletop, the distance between two ships is determined by measuring from the bridge of one ship model to the bridge of the other. Regardless of how far apart their bridges are, two ships in base-to-base contact are considered to be at a range of 1kyd.

On a hexgrid, distances are determined by counting the number of hexsides crossed along the shortest path from one ship to the other.

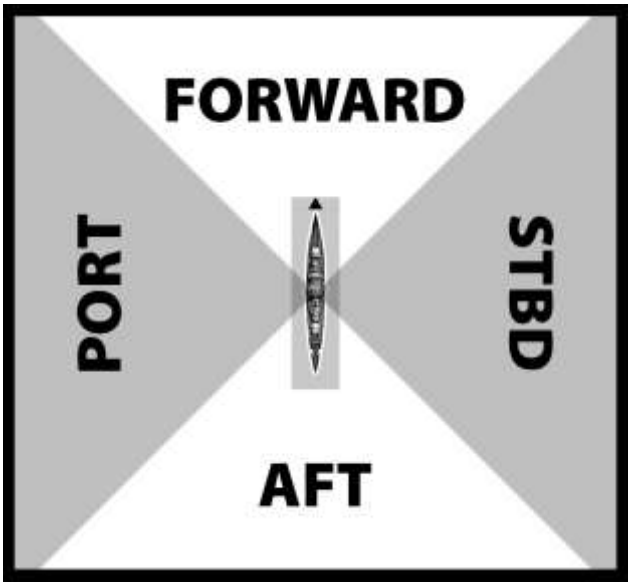


In the above illustration, the distance between the two ships is four hexes (4kyds).

By definition, two ships in adjacent hexes are 1kyd apart. When placed on a hexgrid, each ship must completely occupy a single hex, and must always clearly face one of the hexsides.

Firing Arc Templates

Ships have four firing arcs, each covering 90° as illustrated below:

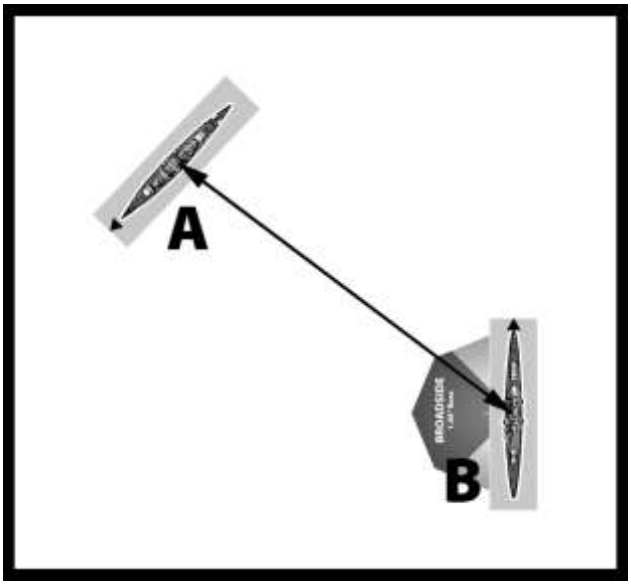


In the center of this book is a sheet with five sets of templates for use in determining whether a target falls into a ship's broadside (port or starboard) arc. These should be carefully cut out using a hobby knife or pair of scissors. If desired, the sheet can be glued onto heavier stock, such as a manila file folder or the side of a cereal box, prior to cutting out the templates.

The appropriate template depends upon the width of the firing ship's base: templates are provided for base widths of ½", ¾", 1", 1¼", and 1½".

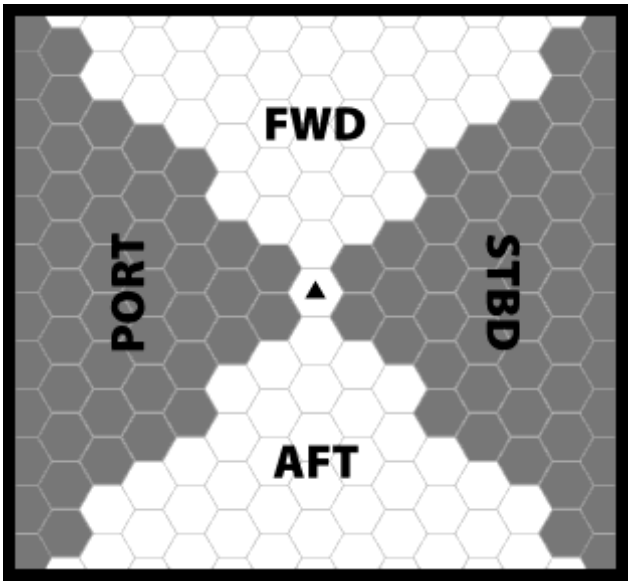
To use a template, place it against whichever side of the attacking ship's model is closest to the target, and align it so the center mark is even with the ship's bridge.

Next, draw an imaginary line from the bridge of the target ship to the bridge of the attacking ship. If this line falls within the shaded area on the template, the target is considered to be in either the port or starboard arc; otherwise, it is in the forward or aft arc.



In the above illustration, ship (A) is in ship (B)'s port firing arc.

On a hexgrid, a ship's firing arcs are defined by the following diagram:



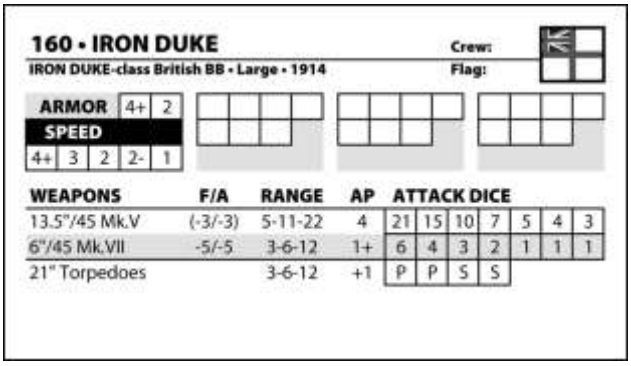
Markers

At the center of this book is a sheet of markers for use with the game. Markers are used for administrative purposes, and do not represent ships on the table.

The markers require some assembly. First, fold the sheet along the indicated line (lightly scoring the sheet with a hobby knife along the fold line will make this much easier). Then, glue the two halves together. For added durability, you may wish to glue heavier stock between the two halves. Finally, carefully separate the individual markers using a hobby knife, pair of scissors, or paper trimmer.

SHIP DATA CARDS

The ship data cards (p.40) provide all of the information needed for play.



160 • IRON DUKE

IRON DUKE-class British BB • Large • 1914

Crew:

Flag:

ARMOR	4+	2
SPEED		
4+	3	2	2-	1

WEAPONS	F/A	RANGE	AP	ATTACK DICE						
13.5"/45 Mk.V	(-3/-3)	5-11-22	4	21	15	10	7	5	4	3
6"/45 Mk.VII	-5/-5	3-6-12	1+	6	4	3	2	1	1	1
21" Torpedoes		3-6-12	+1	P	P	S	S			

Some data cards represent two or three extremely small ships (*e.g.* the card for the German destroyers *G11* and *G12*). These are treated for all game purposes as a single ship; no special rules apply. (*Cf.* "Multi-Ship Models", p.18.)

Victory Points & Name

Victory points (VPs) are a quantification of how powerful the ship is in comparison to others in the game. The higher the VP value, the longer the ship will last in combat and/or the more damage it can inflict on the enemy.

Class, Type, Size, & Year in Service

Most ships are not unique, but instead share their design with a number of "sister" ships. The name given to this group is the ship's ***class***.

The ship's ***type*** is given as a two-letter abbreviation, such as "BB" for battleship, "CA" for heavy cruiser, and so on. This is the classification given to the ship by the operating navy; thus, for example, *Scharnhorst* and *Gneisenau* are considered battleships (*Schlachtschiffe*), not battlecruisers.

Ships are broken down into five ***sizes***: very small, small, medium, large, and very large. A ship's size has various effects in the game.

The ***year in service*** is the date of the ship's commissioning or completion. In some cases, a different date is shown: for example, "r" shows the date of a significant refit; "n" denotes that the ship was renamed; "t" indicates the ship was transferred to another navy.

Crew & Flag

If using the "Crew Quality" optional rule (p.15), this quality is recorded in the space after "Crew".

If the ship is acting as a divisional flagship, the command quality (p.8) is recorded in the space after "Flag".

Armor

The ***armor rating*** indicates how difficult it is for enemy gunfire to penetrate to the vulnerable interior of the ship. Two ratings are given: the first is used to defend against attacks that originate from the sides of the ship; the second is used to defend against attacks that originate from the ends (*i.e.* the front or rear) of the ship.

Some armor ratings are followed by either a plus (+) or minus (-). These are for use with an advanced rule (p.16).

Speed

A ship's ***speed*** represents how far (in kyds) it can move each turn. There are five speeds listed: the first value is used at the start of the game. The subsequent values come in to play as the ship takes damage.

Some speeds are followed by either a plus (+) or minus (-). These are for use with an advanced rule (p.17).

Hull Boxes

A ship's ***hull boxes*** are an indication of how much damage it can sustain before being sunk. The boxes are divided into three sets: when all of the hull boxes in the first set have been checked, the ship is "damaged"; when all of the boxes in the second set have been checked, the ship is "crippled"; when all of the boxes in the third set have been checked, the ship has been sunk, and is immediately removed from the game.

Weapons

Each set of weapons carried by the ship is referred to as a ***battery***, and is defined by several values:

1) The ***forward/aft*** (F/A) modifiers indicate the loss of firepower when attacking targets in front of or behind the ship. The modifier before the slash is applied to attacks made into the ship's forward arc; the modifier after the slash is applied to attacks made into the ship's aft arc.

   If a gun battery's F/A modifiers are encased in parentheses—*e.g.* "(-2/-2)"—this indicates the guns are mounted in turrets.

   A hyphen (—) indicates the guns in that battery cannot be fired into that arc, whereas a zero (0) indicates no reduction in firepower.

   A ship's anti-air battery has no F/A modifiers, but may have a single ***dual-purpose*** (DP) modifier (p.24).

   Torpedoes have no F/A modifiers.

2) A battery's ***range*** is the distance (in kyds) at which the weapons can be used to attack an enemy ship. Guns and torpedoes have three range ***bands***: short, medium and long.

   Gun batteries with an asterisk (*) following their range bands are capable of also firing at extreme range (p.13).

   Anti-air batteries have no range bands.

3) ***Armor penetration*** (AP) is an indication of how well the guns are able to penetrate armor, expressed as the maximum armor rating they can attack without penalty.

   Some AP values are followed by either a plus (+) or a minus (-). These are for use with an advanced rule (p.16).

   Anti-air batteries have no AP value.

   Torpedoes have no AP value; instead, this column indicates the ***damage modifier*** (p.13).

4) The last part of the battery display is a string of ***attack dice***. The first number indicates how many dice are rolled when making an attack at full strength; as modifiers are applied to an attack, the number of attack dice may be reduced.

   Torpedoes do not have attack dice; instead, this section shows the number of torpedoes which can fire into each arc. Each box represents a single torpedo; the letter inside indicates the arc(s) into which that torpedo can be fired.

   Torpedoes are "one-shot" weapons. Once a torpedo has been fired, draw an "X" in the box to show it cannot be used again. Due to space limitations, some ships will list two torpedoes per box (*e.g.* "P2" indicates two torpedoes which can fire into the port arc). When the first torpedo is fired, draw a slash through the box. When the second torpedo is fired, draw a second slash, completing the "X".

PLAYING THE GAME

This section assumes you are playing a "pick up" game; *i.e.* a battle pitting two players against each other using whatever forces they wish. Scenarios meant to refight specific engagements (historical or hypothetical) may deviate from the guidelines provided below.

Several example scenarios are provided, starting on p.25.

ASSEMBLING THE FLEET

The first step in playing the game is to determine the relative size of the battle being fought. There are five standard sizes:

Battle Size	Fleet Limit/VP Threshold
Very Small	200/120
Small	400/240
Medium	600/360
Large	800/480
Very Large	1000/600

The "fleet limit" indicates the maximum allowed VP total for all ships on each side; the "VP threshold" indicates how many victory points must be scored in order for a player to win the game.

To assemble your fleet, select a nationality and start choosing from the ships available to it. The only limitation is that the total VP value of all your ships may not exceed the fleet limit for the size of battle chosen. You should also set a time frame for the battle; for example, if a battle is to take place in 1922, only ships with a year in service of 1922 or earlier may be selected.

Each player should select ships exclusively from one nationality. It is possible for both players to select from the same nationality: think of it as a training exercise, or the opening battle of a civil war.

Once you have chosen your ships, you can either photocopy the appropriate ship data cards (starting on p.40) or write the necessary information onto one or more blank sheets of data cards, provided in the center pages of this book.

Another option is to copy the data card pages of this book onto cardstock and carefully cut them apart using a hobby knife or pair of scissors. The individual cards can then be placed into protective sleeves, and damage tracked using a dry erase marker or grease pencil. Most office supply stores carry sheets of such sleeves meant for business cards which would work perfectly for this purpose.

There are a number of advantages to this method: first, it allows cards to be reused without making multiple photocopies; second, cutting the cards apart allows you to grab only those needed for your current fleet, while the sheets hold 10 cards each, thus reducing the amount of clutter; finally, the protective sleeves can be stored in a three-ring binder when not in use, keeping all your data cards in one place.

Divisions

Ships are arranged in divisions for command and control purposes. This can be done according to the whims of the controlling player, subject to the following restrictions:

1) Each division must have at least three and no more than six ships.
2) All ships in each division must be of the same size, or of two "adjacent" sizes. Thus, a division may consist of all medium ships, a mix of small and medium ships, or a mix of medium and large ships. However, a division may not include a mix of small and large ships.
3) If a fleet contains only one or two ships of a given size, they must be included in a mixed division, if possible. Otherwise, they will form a single, under-strength division.

Ships must remain in the divisions to which they have been assigned; *i.e.* a ship cannot switch from one division to another in the middle of the game.

One ship in each division is designated as the flagship. A mixed division must designate one of the larger ships as the flagship; *e.g.* in a division of very small ships that includes one small ship, the small ship must be the flagship.

After the flagship has been identified, roll two dice on the following table to determine the commander's quality (CQ):

Roll	Command Quality	VP Modifier
2-3	Terrible (-2)	-25%
4-5	Poor (-1)	-10%
6-8	Average (0)	n/a
9-10	Good (+1)	+10%
11-12	Superb (+2)	+20%

Alternatively, command quality can be chosen freely. In this case, the listed VP modifier is applied to the total VP cost of the division.

The British First Battlecruiser Squadron consists of Lion (125 VPs), Tiger (135 VPs), and Princess Royal (125 VPs), for a total of 385. The division commander, Admiral Beatty, is rated as "Superb (+2)". Therefore, the division's total VP cost is increased by 77 points (20%) to 462.

Note that if command quality is determined randomly, the VP modifier is not applied. The decision whether to determine randomly or to select freely must be made for the fleet as a whole; a player cannot choose quality for some commanders and roll for others.

Record the command quality on each flagship's data card.

SETTING UP

Once the fleets have been chosen and divisions assigned, the final step before starting the game is to set up the playing area.

You and your opponent should each claim one short edge of the table. Place your ship models along this edge; however, they are not formally in play until they have entered the game during the first Movement Phase (p.9).

Set your ship data cards within easy reach, grab some dice, and get started!

SEQUENCE OF PLAY

Each game turn consists of several phases that regulate how and when players can perform specific actions. One game turn represents the passage of approximately six minutes. Keep in mind that the turn sequence cannot go backwards or skip around—*e.g.* movement can only take place during the Movement Phase, and so on.

Once all of the phases have been completed, one game turn is over, and the next begins with the first phase in the sequence of play.

During the ***Initiative Phase***, players roll two dice for each division under their control, adding the flagship's CQ modifier to the result. This is the division's initiative score for the turn. Record this value on the flagship's data card.

During the ***Movement Phase***, players move their ships across the table. See p.9 for details.

During the ***Command Phase***, players determine if their ships remain in command. See p.11 for details.

During the ***Combat Phase***, players make attacks with their ships. See p.12 for details.

During the ***End Phase***, check to see if either player has met the conditions for victory (see below).

A detailed sequence of play can be found on the quick reference sheet at the back of this book.

VICTORY!

During the End Phase of each game turn, compare the number of victory points earned by each player to the VP threshold for the size of battle being fought. If one player has scored more than the required number of VPs, that player has won. If both players have scored enough VPs, the game is a draw.

In the standard scenario, victory points are scored exclusively by sinking enemy ships. Other scenarios may include additional methods for scoring VPs.

THE MOVEMENT PHASE

In the Movement Phase, players move their ships across the table. Movement is conducted by one division at a time, in ascending order of initiative score.

If two or more divisions on the same side have the same initiative score, the controlling player may move them in any order desired. If divisions on opposing sides have the same initiative score, each player should roll a die; beginning with the player getting the lower roll, alternate moving the tied divisions.

If there are any out of command ships on the table, before moving any divisions, each player should roll one die; beginning with the player getting the lower roll, alternate moving one out of command ship at a time.

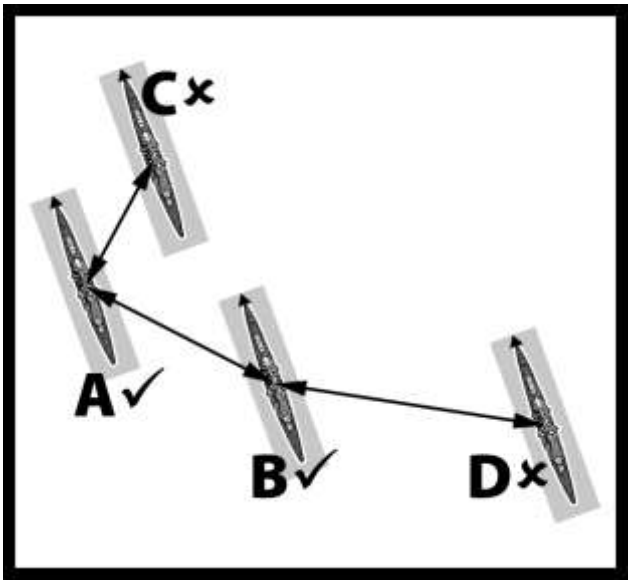
When a division's opportunity to move comes up, each ship's movement must be completed before moving on to the next. The first unchecked speed box on a ship's data card indicates how far (in kyds) it may move. Ships must move directly forward; "sideslips" and backwards movement are not allowed.

Under normal conditions, ships are prohibited from leaving the table. Any ship doing so is removed from the game, and the opposing player receives 50% of the normal VPs (rounded up).

First Movement Phase

During the first Movement Phase of the game, ships do not move normally; instead, when a division's opportunity to move comes up, place its flagship anywhere on the table within its speed rating (in kyds) of your edge of the table. The second ship is placed within 1kyd of the flagship. Each subsequent ship is placed within 1kyd of any of the previous ships. No ship can be placed closer to the opposing side of the table than its division flagship.

Remember that two ships in base-to-base contact are considered to be at a range of 1kyd: this allows for ships with slightly longer bases to be placed in line-ahead formation.



In the above example, ship (A) is the division flagship, and the opposing side of the table is towards the top of the diagram. Ship (B) is placed correctly, as it is within 1kyd of ship (A). Ship (C) is also within 1kyd of ship (A), but it is incorrectly placed, as it is closer to the opposing side of the table than the flagship. Ship (D) is also incorrectly placed, as it is not within 1kyd of either ship (A) or ship (B).

No speed markers (see below) are placed during the first Movement Phase.

TURNING

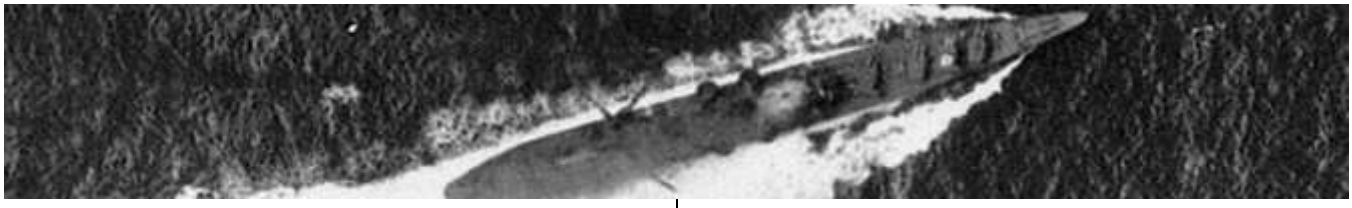
A ship may make a single turn of up to 180° at any point during its move. However, a ship performing a turn will have its speed for the current Movement Phase cut in half (rounded up).

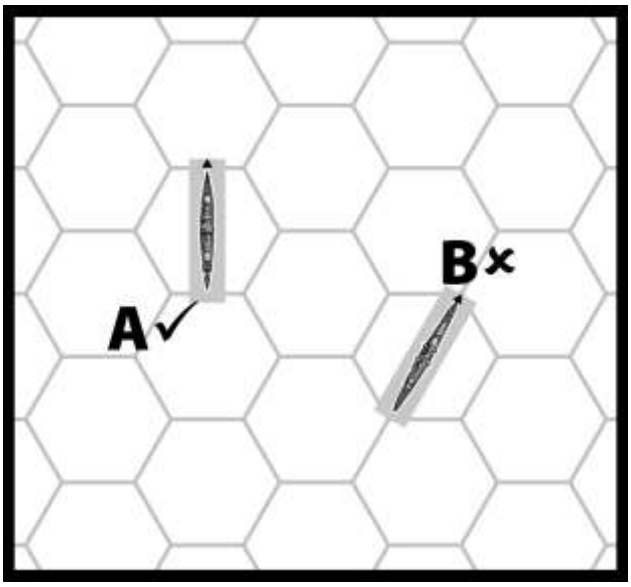
The British battleship Iron Duke has a speed of 4. If she makes no turn, she can move up to 4kyds. If she turns at any point during her move, she can only travel up to 2kyds (4 ÷ 2 = 2).

A ship must move forward at least 1kyd during a Movement Phase in which it turns; *i.e.* a ship cannot turn in place while stopped (see below).

On a hexgrid, a ship must always clearly face one of the six surrounding hexsides; therefore, ships may only turn in increments of 60°.

* As you might expect, pillbugs may not wheel.





In the above example, Ship (A) is correctly placed, as it clearly faces the top hexside. Ship (B) is incorrectly placed, as it is facing a corner instead of a side.

STACKING

A ship may move through the space occupied by any friendly ship, or an enemy ship that is out of command; however, a ship may not move through the space occupied by an enemy ship that is in command, or between two enemy ships from the same division that are both in command.

On the tabletop, at the conclusion of its move, you may move a ship up to ½kyd in any direction in order to avoid overlapping another ship's model.

On a hexgrid, two ships from the same side may co-exist in the same hex, provided one of them is out of command. A ship may never end its movement in the same hex as an enemy ship.

SPEED MARKERS

After a ship has completed its move, place an appropriate speed marker next to it. The marker placed (if any) depends on the amount of forward movement performed:

Distance Moved	Speed Marker
1-2 kyds	SLOW (+1)
3-5 kyds	None
6+ kyds	FAST (-1)

Note that, since they are not required to move in formation, it is possible for individual ships from the same division to end up with different speed markers. However, to help reduce clutter on the game board, assume that a flagship's speed marker is shared by the other ships in its division unless otherwise indicated.

Ships may decelerate without restriction; thus, a ship may have a "FAST" marker in one Movement Phase and a "SLOW" marker the next. However, acceleration is limited: a ship with a "SLOW" marker cannot move more than 5kyds straight ahead, or 3kyds while turning, in the following Movement Phase.

Stopping

A ship may choose to stop; indicate this by placing a "STOP" marker next to the ship. A stopped ship does not move or turn at all. Doing this is not normally advantageous, as it provides significant bonuses to your opponent's gunnery and torpedo attacks (p.13); ships will usually stop only as the result of an engine critical hit (p.15). A ship may not move more than 2kyds straight ahead, or 1kyd while turning, in the first Movement Phase after having stopped.

THE COMMAND PHASE

During the Command Phase, players must determine whether their ships are currently in command. This can be done by both players simultaneously.

A ship is in command if it meets any one of these three criteria:

1) It is the division flagship; or
2) It within 1kyd of its division's flagship; or
3) It within 1kyd of another ship from the same division that is itself in command.

Thus, a chain of ships from the same division, in which no "link" is further than 1kyd from the next, will always be in command, provided one of those ships is the division flagship.

Note there is no requirement that ships remain in a particular formation* or even face in the same direction; they only need to remain within 1kyd of each other. This distance is somewhat larger than the historical spacing between ships, which typically was anywhere between two and four cables (400 to 800 yards). This is a nod to playability, as grouping ships any closer would require their models to overlap.

Also remember that two ships in base-to-base contact are considered to be at a range of 1kyd: this allows for ships with slightly longer bases to remain in a line-ahead formation without falling out of command.

Place an "OUT OF COMMAND" marker next to any ship that is out of command. If a division's flagship is out of command, such as due to a bridge critical hit (p.15), the entire division is out of command. Ships that have dropped out of command are slower to react, meaning that they move first in the Movement Phase and attack last during the Combat Phase.

* Although not required, players will find that keeping ships in a typical "line ahead" formation will be most efficient, due to the "Line of Fire" rule (see p.12).

Returning to Command

A ship that has dropped out of command does not automatically return to "in command" status if it meets one of the above criteria. At the start of the Command Phase (*i.e.* before placing any new "OUT OF COMMAND" markers) roll two dice and add the division command modifier: if the total is 7 or more, the "OUT OF COMMAND" marker is removed. If the total is 6 or less, the ship remains out of command.

TRANSFERRING THE FLAG

It is assumed that divisions have a pre-determined chain of command. Therefore, if a flagship is sunk, simply choose another ship in the division, not currently out of command, to immediately become the new flagship. In a mixed division, the flag cannot be transferred to a smaller ship if any larger ships are still afloat and in command.

However, the capabilities of subordinates are largely unknown until they are tested under fire. Whenever a new flagship takes over a division, roll two dice and subtract -1 from the total. Then consult the table on page 8 to determine the new command quality.

If all remaining ships in the division are out of command, the flag cannot be transferred, and the entire division remains out of command for the remainder of the game.

It is possible for a previous flagship to regain command; for example, if the initial flagship suffers a bridge critical hit, and the new flagship is later sunk. In this case, the ship may retain its previous command quality.

Note that a ship may not voluntarily give up command of a division; *i.e.* the flag may only be transferred at the time the flagship is sunk (or suffers a bridge critical hit).

THE COMBAT PHASE

In the Combat Phase, players make attacks with their ships' weapons. Combat is conducted by one division at a time, in descending order of initiative score.

If two or more divisions on the same side have the same initiative score, the controlling player may make their attacks in any order desired. If divisions on opposing sides have the same initiative score, each player should roll a die; beginning with the player getting the higher roll, alternate attacking with the tied divisions.

If there are any out of command ships on the table, after all divisions have attacked, each player should roll one die; beginning with the player getting the higher roll, alternate attacking with one out of command ship at a time.

When a division's opportunity to attack comes up, each ship's attacks must be resolved before moving on to the next. A ship may choose one target for each battery of weapons. All targets must be declared before any dice have been rolled. The order in which a ship's attacks are resolved is up to the controlling player.

As an optional rule, players may allow non-turreted gun batteries to fire at two separate targets, provided one target is in the ship's port firing arc and the other is in the starboard arc.

This chapter is concerned only with ship-to-ship gunfire and torpedo attacks: see p.23 for a description of anti-aircraft operations.

Line of Fire

In order to attack a target, a ship must have an unobstructed line of fire to that target. Draw an imaginary line from the bridge of the firing ship to the bridge of the target; if this line crosses over any part of any ship (friendly or enemy) that is of the same size class or larger than either the firing ship or the target, the attack cannot be made.

On a hexgrid, draw an imaginary line from the center of the firing ship's hex to the center of the target's hex. If this line crosses over any part of a hex containing any ship (friendly or enemy) that is of the same size class or larger than either the firing ship or the target, the attack cannot be made.

MAKING AN ATTACK

The first step in making an attack is to determine the number of attack dice. This is done by first calculating the attack modifier (see below). Then, consult the appropriate line in the "Weapons" section of the attack ship's data card to determine the number of attack dice. Start at the first (unchecked) attack dice box: if the net attack modifier is positive or zero, use the number in that box; if the net attack modifier is negative, shift one box to the right for every -1.

The British battleship Iron Duke has a battery of 13.5"/45 Mk.V guns. Its attack dice boxes are 21, 15, 10, 7, 5, 4, and 3. If the net attack modifier is positive or zero, 21 dice are rolled when making an attack. If the net attack modifier is -2, only 10 dice are rolled.

In the event the attack modifier would cause you to move past the last box in the row, simply reduce the number of attack dice by one for every additional -1.

Once the number of dice is determined, the attack roll is made. Each die that comes up 5 or 6 scores one hit on the target. If the net attack modifier is +1, hits are scored on any roll of 4 or higher; if the net attack modifier is +2, hits are scored on any roll of 3 or higher; if the net attack modifier is +3 or more, hits are scored on any roll of 2 or higher.

For each hit scored, check off one hull box on the target ship's data card. When a ship's entire first group of hull boxes has been checked, the ship is considered "damaged"; when all the boxes in the second group have been checked, the ship is "crippled"; when all the boxes in the third group have been checked, the ship is sunk, and the opposing player receives the appropriate number of VPs.

Damage takes effect immediately; thus, if a ship is sunk before it has attacked, it will not have the opportunity to return fire before being removed from the game.

The conditions which affect the attack modifier in the basic game are listed below. A summary of all attack modifiers can be found on the quick reference sheet at the back of this book.

Armor vs. Penetration

If the target's armor rating is higher than the guns' AP value, subtract the difference from the attack modifier. For example, if the guns' AP value is 2 and the target's armor rating is 4, subtract -2 from the attack modifier. If the AP value is equal to or higher than the armor rating, there is no effect.

The armor value used for this comparison depends upon the aspect of the target: if the firing ship is in the target's port or starboard arc, use the first (side) armor value; otherwise, use the second (end) armor value.

Range

Each gun battery has three range bands, expressed in kyds: short, medium, and long. Measure the distance between the firing ship and the target. If the result is equal to or less than the firing guns' short range, add +1 to the attack modifier; if the result is equal to or less than the firing guns' medium range, there is no effect; if the result is equal to or less than the firing guns' long range, subtract -2 from the attack modifier; if the result is greater than the firing guns' long range, the attack cannot be made.

As an optional rule, any gun battery with an asterisk (*) following its range bands may be allowed to attack targets at "extreme" range, which is 50% longer than long range. For example, a gun battery with range bands of 5-10-20 could make attacks at up to 30kyds. Extreme range is considered long range for all purposes, with the exception that hits at extreme range are scored only on attack dice results of 6, instead of 5 or 6.*

Firing Arc

Determine the firing arc in which the target lies. If the target is in the port or starboard arc, there is no effect; if the target is in the forward or aft arc, apply the appropriate F/A modifier.

Target Size

If the target is very small, and the firing guns are 6" or larger, apply a -1 penalty to the attack modifier.

If the target is small, and the firing guns are 12" or larger, apply a -1 penalty to the attack modifier.

If the target is medium, there is no modifier.

If the target is large, and the firing guns are smaller than 6", apply a +1 bonus to the attack modifier.

If the target is very large, and the firing guns are smaller than 12", apply a +1 bonus to the attack modifier.

Target Speed

If the target ship has a speed marker, apply the attack modifier indicated; *i.e.* +1 if the ship is moving slow, or -1 if it is moving fast. If the target has stopped, increase the attack modifier by +2.

The firing ship's speed marker (if any) has no effect.

ANTI-AIRCRAFT BATTERY

See p.23 for a full description of aircraft (and anti-aircraft) operations.

TORPEDOES

Torpedo attacks are made at the same time as gunfire attacks. However, the process is somewhat different for torpedoes.

After declaring a target, the controlling player must announce how many torpedoes will be launched. Each torpedo on the ship is positioned to fire into one (sometimes two) of the four firing arcs:

- **F** torpedoes can only fire into the forward arc;
- **A** torpedoes can only fire into the aft arc;
- **P** torpedoes can only fire into the port arc;
- **S** torpedoes can only fire into the starboard arc; and
- **PS** torpedoes can fire into either the port or starboard arc.

All torpedoes launched in a single turn must be fired at the same target.

Then, determine the attack modifier. Torpedoes are unaffected by armor, and have no F/A modifiers. Target size modifiers are determined differently for torpedo attacks than for gunfire:

- If the target is very small, apply a -1 penalty to the attack modifier.
- If the target is small, and the attacking ship is in the target's forward or aft firing arc, apply a -1 penalty to the attack modifier.
- If the target is medium, there is no modifier.
- If the target is large, and the attacking ship is in the target's port or starboard firing arc, apply a +1 bonus to the attack modifier.
- If the target is very large, apply a +1 bonus to the attack modifier.

Instead of determining a number of attack dice, the torpedo attack modifier is used to determine the chance of scoring a hit. Roll two dice for each torpedo and add them together. Then consult the following table:

Attack Modifier	7	8	9	10	11	12
+3 or more	Hit	Hit	-	Hit	Hit	Hit
+2	Hit	-	-	Hit	Hit	Hit
+1	-	Hit	-	-	Hit	Hit
0	-	-	-	Hit	Hit	Hit
-1	-	-	-	Hit	-	Hit
-2	-	-	-	-	Hit	Hit
-3 or -4	-	-	-	-	Hit	-
-5, -6, or -7	-	-	-	-	-	Hit
-8 or less	-	-	-	-	-	-

Note that any roll of 6 or less is a miss, regardless of attack modifier.

For each torpedo that hits, roll one die and add the torpedo's damage modifier. The result is the number of hull boxes checked off the target's data card. If the unmodified damage roll is a 6, roll a second time (again adding the damage modifier) and check off that number of additional hull boxes. If this second roll is also an unmodified 6, roll a third time; and so on.

A Japanese destroyer launches four 24" torpedoes at the American heavy cruiser Pensacola. These torpedoes have range bands of 4-8-16 and a damage modifier of +2. The cruiser is 4kyds away, putting it at short range (+1). The target is small, but the destroyer is in her broadside arc (0). She moved 6kyds in the previous Movement Phase (-1). A net attack modifier of 0 means that hits are scored on rolls of 10, 11, or 12.

The Japanese player rolls two dice for each torpedo, coming up 4, 5, 9, and 10. One torpedo has hit, so one die is rolled for damage, coming up 6. Adding the damage modifier (+2) means 8 hull boxes are checked off. Since the unmodified roll was a 6, the die is rerolled, coming up 2. Therefore, a total of 12 hull boxes are checked off (6 + 2 + 2 + 2). Since Pensacola only had 11 boxes to start with, she has been sunk.

DAMAGE CHECKS

Immediately after a ship has been damaged, and again after it has been crippled, the controlling player must make a series of damage checks for the ship:

1) Roll one die for the ship's engines: on a result of 1 or 2, two speed boxes are checked off; on a result of 3, 4, or 5, one speed box is checked off; on a result of 6, there is no effect.
2) Roll one die for each gun battery on the ship (including the anti-air battery): on a result of 1 or 2, two attack dice boxes are checked off; on a result of 3, 4, or 5, one attack dice box is checked off; on a result of 6, there is no effect.
3) Roll one die for each torpedo remaining on the ship: on a result of 1 or 2, that torpedo is lost.