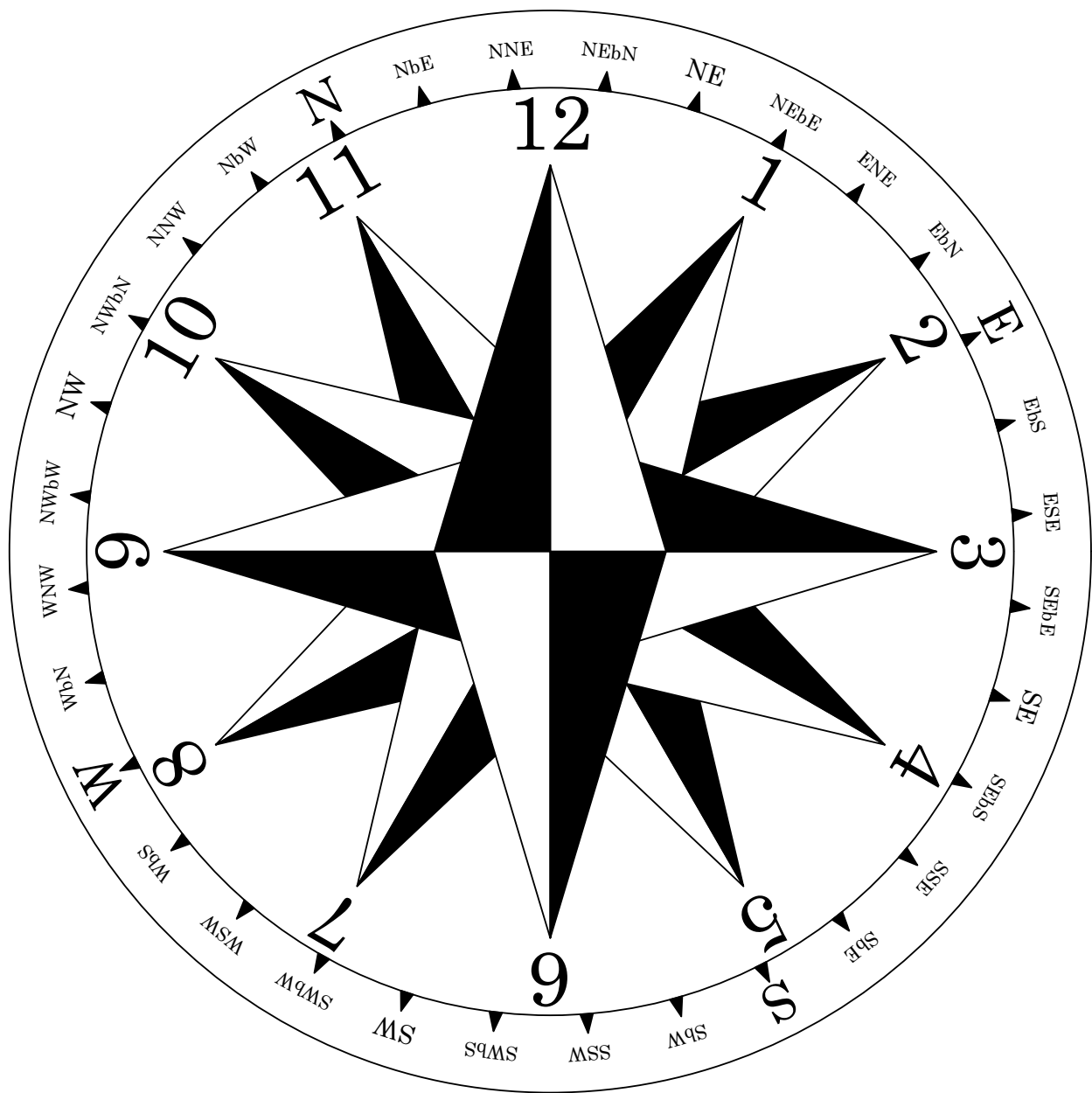


Boxing the Compass

twelve-direction rules for Mark Campbell's *Close Action*
by Thomas Arndt



Acknowledgment: These rules are based to a large extent on the work of Albert C. E. Parker.

Introduction

In standard *Close Action* (CA), each ship may face in any one of six directions. Each ship must have its bow and its stern centered at the dot at the center of a hex. In *Boxing the Compass* (BC), we add a dot to the center of each hexside, so that the bow point (center of the bow half) and stern point (center of the stern half) of a ship are also allowed to be centered on hexsides. This allows a ship to face in any one of twelve directions.

There are then eight possible ways a ship may be oriented to the hex grid:

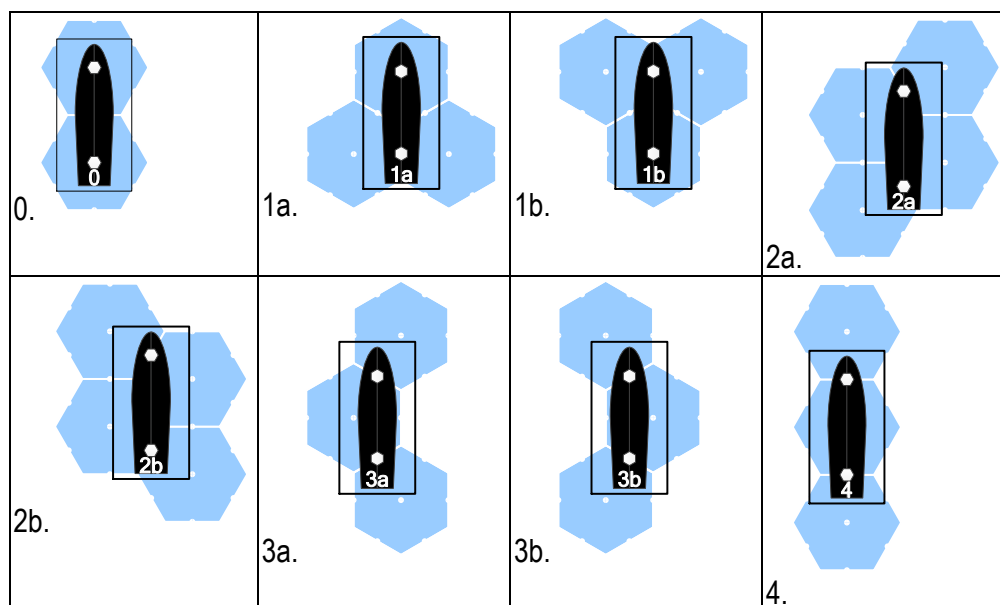


Figure 1. Hex-grid orientations for *Boxing the Compass*

Now, we change the move notation so that a "P" or "S" designates a 30° turn. A double letter, "PP" or "SS" designates a 60° turn. The twelve directions are designated "1" through "12" as seen on an analog-clock face. Thus, the even-numbered directions run along the hex rows and the odd-numbered directions run parallel to the hexsides.

The table below indicates how a ship's hex-grid orientation changes as it maneuvers. For example, a ship in grid attitude 2b which makes a turn "S" (30 degrees to starboard) will then be in grid attitude 1b. A forward movement of "1" would then bring it to grid attitude 1a.

	<u>0</u>	<u>1a</u>	<u>1b</u>	<u>2a</u>	<u>2b</u>	<u>3a</u>	<u>3b</u>	<u>4</u>
1	0	1b	1a	2a	2b	3b	3a	4
P	1a	0	2b	1b	3b	2a	4	3a
PP	0	1a	3b	2b	4	1b	3a	2a
S	1a	0	2a	3a	1b	4	2b	3b
SS	0	1a	3a	4	2a	3b	1b	2b

The distance from one ship to another is counted from the bow point or stern point of one to the bow point or stern point of the other. In every case, any distance which is not a whole number is rounded down. Thus, ships $1\frac{1}{2}$ hexes apart are considered *adjacent*, and the maximum range for gunfire is $15\frac{1}{2}$ hexes.

Here is a more-detailed depiction of the eight hex-grid orientations:

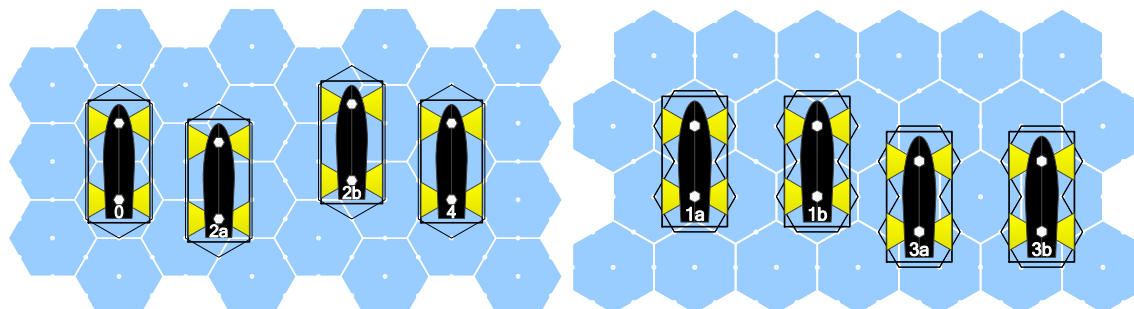


Figure 2. Hex-grid orientation detail

In this diagram, the rectangle around each ship silhouette represents the cardboard counter used to fix the ship's position on the map. The white hexagonal dots indicate the ship's bow point and stern point. The yellow triangles indicate the ship's arcs of fire. In the left half of the diagram, there is an elongated hexagonal shape around each silhouette; in the right half, there is a double-hexagon shape. This is the ship's *jacket*, indicating the area occupied by the ship, for purposes of determining collisions and lines of fire. It includes all of the area enclosed by the ten dots within a half-hex of the bow point and stern point. The jacket and the counter rectangle are depicted as transparent in the diagram, for clarity.

A word about dots: The dot in the center of a hex is considered adjacent to (half a hex away from) each of the dots in the hexsides around that hex. Dots on hexsides which share a vertex are adjacent. Dots on hexsides which do not share a vertex are not adjacent, and are considered to be one hex apart, even if the hexsides are not the opposite sides of the hex. In the diagram below, the dotted-line arrows indicate pairs of adjacent dots; the solid-line arrows indicate pairs one hex apart.

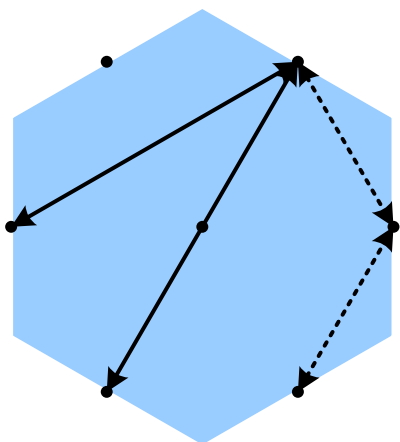


Figure 3. Distances within a hex

This booklet includes changes to the rules, revised ship's logs, a player-aid card, critical-hit charts, speed cards, and broadside sheets for calculating gunfire.

Changes to the log:

The ship's log has been revised. The list of movement-plot codes and the wind-facing diagram have been moved offsheet to the player-aid card. The gunnery modifiers have been moved to the broadside sheet. Movement allowances have been moved to the speed cards.

The number of factors of each type of gun has been moved to the status line. The row of basic gunfire numbers has been changed to a column. The LDGM has been split into two boxes—one for the leeward side of the ship and one for the windward. The circles for initial broadsides have been enlarged to allow the player to write in the game-turn number.

A number of items have been added. In the status line are now a scenario identifier and an order-of-battle number (primarily for the use of GMs in multi-player games). Just below the status line appear new boxes to indicate fleet and division flagships, division membership, and the maximum length of a message sent from the ship ("word limit").

The rigging, hull, and crew damage boxes appear as dotted lines. To fill out the logs, overwrite the dotted lines with solid lines for the correct number of boxes in each section. Leave the other boxes dotted until repairs are made. Don't blacken out any boxes.

Two boxes have been added to record the expenditure or loss of anchors. Admittedly, these will not often come into use.

In the crew-quality area, the boxes for the CQ values are enlarged, so that the player can write in the game-turn number of each morale-check failure.

In the gunnery area, a guns-dismounted track has been added for each broadside, as well as a fatigue track. Fill in the boxes with g-t numbers as guns become dismounted, and as fatigue mounts.

Finally, the game-turn record area has been expanded to 40 turns for those games which run long, and the sail-state column ("sail") has been shifted left of the move column, since a player needs to know his sail state in order to determine his move.

As in CA, sample logs are provided (British 74c and French 80) along with a completed log for the *Majestic*.

Changes to the rules:

1.G.3 (suggestion): When you fill out the ship's log, subtract $\frac{1}{2}$ from the MR listed in the scenario and write that number in as the MR on the ship's log. (Example: where the SDC gives a MR of "3", write in "2½".) This does not change the play of the game; it simply means that you no longer have to remember what happens if your morale-check die roll equals the ship's MR.

3.B.3 (Note that in **CA** and **BC**, the wind direction is given as the direction *toward* which the wind is blowing, unlike the usual practice of giving it as the direction *from* which the wind is blowing.) Figure 4 repeats part of Diagram 6 of the rulebook, but adds an outer ring of numbers to show the direction numbers for **BC**. Note that the twelve numbers are oriented just like an analog-clock face. Be sure to use the original **CA** direction numbers for setting up a scenario from any scenario instructions intended for use with the six-direction rules.

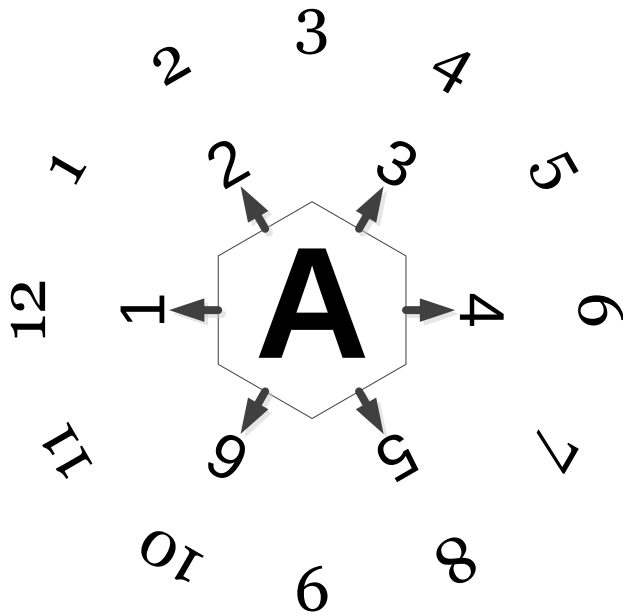


Figure 4. Wind-direction rose for BC, based on diagram 6 in CA

3.C: Instead of the WIND DIRECTION CHANGE table on the red card, use the table below to check for changes to the wind direction, based on last turn's wind-direction change and the roll of 2d10. On game-turn 1, use the "no change" column. If the number rolled does not appear in the "die roll" column, or if the table result is a box with no text, that means "no change."

Table 1. Wind-direction-change table:

	oceanic			coastal		
last turn►	back	no change	veer	back	no change	veer
▼die roll						
2		back				
3	back					
5		revert back			revert back	
6	revert back			revert back	back	
7				back		
11						veer
12			revert veer		veer	revert veer
13		revert veer			revert veer	
15			veer			
16		veer				

back = change the wind direction 30° counterclockwise;

veer = change the wind direction 30° clockwise;

revert = make this change only if the wind would become closer to its original direction.

5.A.2, part c. Wind Facing (WF). There are now twelve different wind facings.

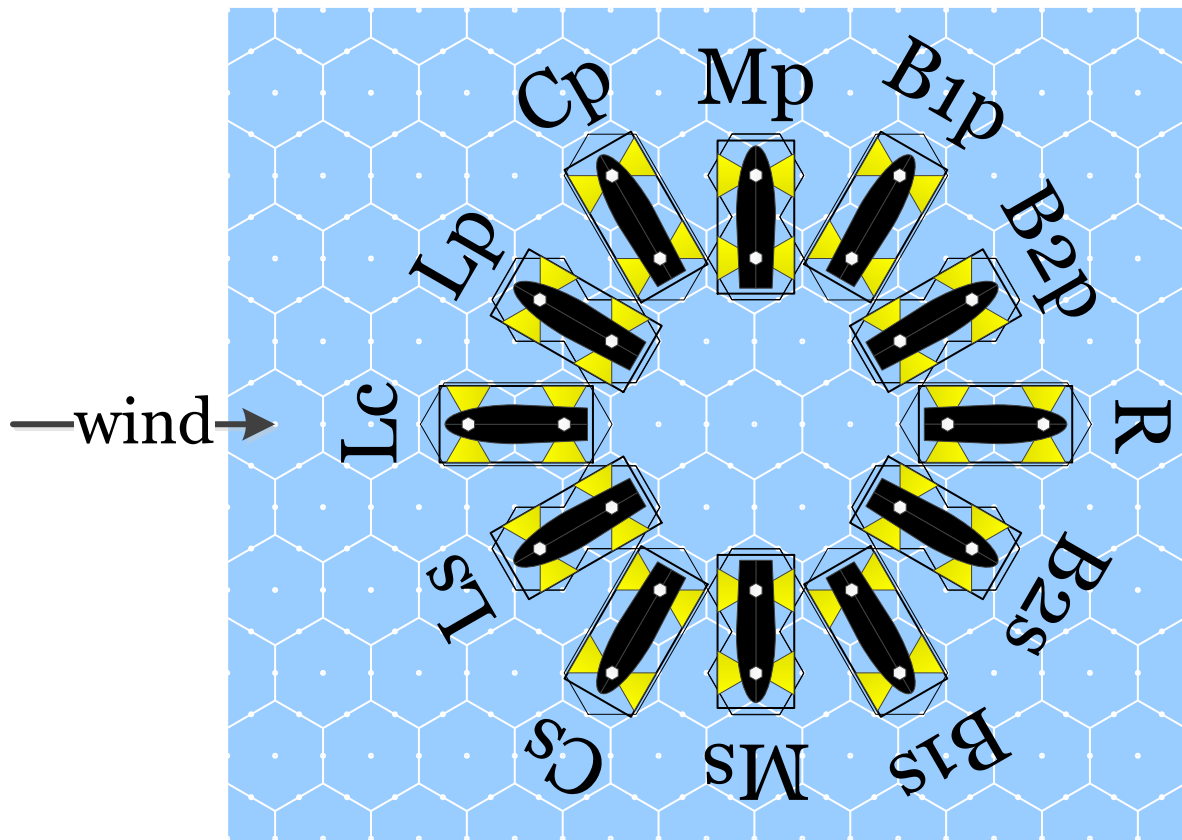


Figure 5. Wind facings

The twelve directions are grouped into five categories: luffing (any direction whose code begins with "L"), close-hauled ("C"), beam-reaching ("M"), broad-reaching ("B"), and running ("R"). A lower-case letter in the WF code indicates whether the starboard or port side of the ship is the weather side (that is, the side the wind is blowing against). The movement allowance for a ship which is luffing is always zero. Movement allowances for all other WF's are shown on the speed card.

In general, all of the **CA** rules for each wind facing apply for all of the **BC** wind facings in that group, except as noted. For instance, rules for ships at WF = L apply to ships at WF = Ls, Lc, and Lp. Rules for ships at WF = C, B, or R (that is, not at WF = L) also apply to ships at WF = M.

Below is an example speed card, for a fast ship-of-the-line (Lf) for wind speed 3. To find a ship's movement allowance, cross-index the row (determined by the number of rigging sections remaining and the ship's sail state) by the column (determined by the ship's WF). For example, if British Lf *Swiftsure* has three remaining rigging sections, and is at sail state MS or PS, and has a WF = B2p, then she has a movement allowance of 6.

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wind speed: 3		ship's speed type: Lf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	8
	MS	4	6	7	6
	FS	3	4	5	4
3	PS	3	5	6	5
	MS				
	FS	2	3	4	3
2	PS	1	2	3	2
	MS				
	FS				
1	PS	0	1	2	1
	MS				
	FS				

sections = full or partial rigging sections remaining

PS = plain sail; MS = maneuvering sail; FS = fighting sail

C = close-hauled; M = beam-reaching;

B = broad-reaching; R = running

Figure 6. Example of a speed card.

There are 36 different speed cards—one for each combination of speed type and wind speed (other than WS=0). I recommend photocopying the speed-card pages onto cardstock (with a different pastel color for each wind speed) and cutting the sheets into individual cards for the players to use. When there is a change in wind speed, hand out new cards to the players for the new wind speed. This avoids having to erase and re-write these numbers on the ship's log.

5.B.2 Plot Procedure. A ship may perform any one of five possible actions with each MP; *each action uses one MP*. These actions (with the proper way to plot them on the ship log) are:

- Move ahead ("1", "2", etc.). For each MP spent on ahead movement, the ship moves into the hex towards which its bow is currently pointing. To go ahead several hexes in a row, write the number of consecutive ahead moves. See Figure 7 for examples of ships moving forward one.
- Turn 30° to *starboard* ("S"). The ship turns clockwise so that its bow faces 30° to the *right* of its previous course. See Figure 8 for examples of ships making thirty-degree turns.
- Turn 30° to *port* ("P"). The ship turns counterclockwise so that its bow faces 30° to the *left* of its previous course.
- Turn 60° to *starboard* ("SS"). The ship turns clockwise so that its bow faces 60° to the *right* of its previous course. See Figure 9 for examples of ships making sixty-degree turns.
- Turn 60° to *port* ("PP"). The ship turns counterclockwise so that its bow faces 60° to the *left* of its previous course.

Note that when the ship turns, its bow does not move. The bow remains in position and the stern swings.

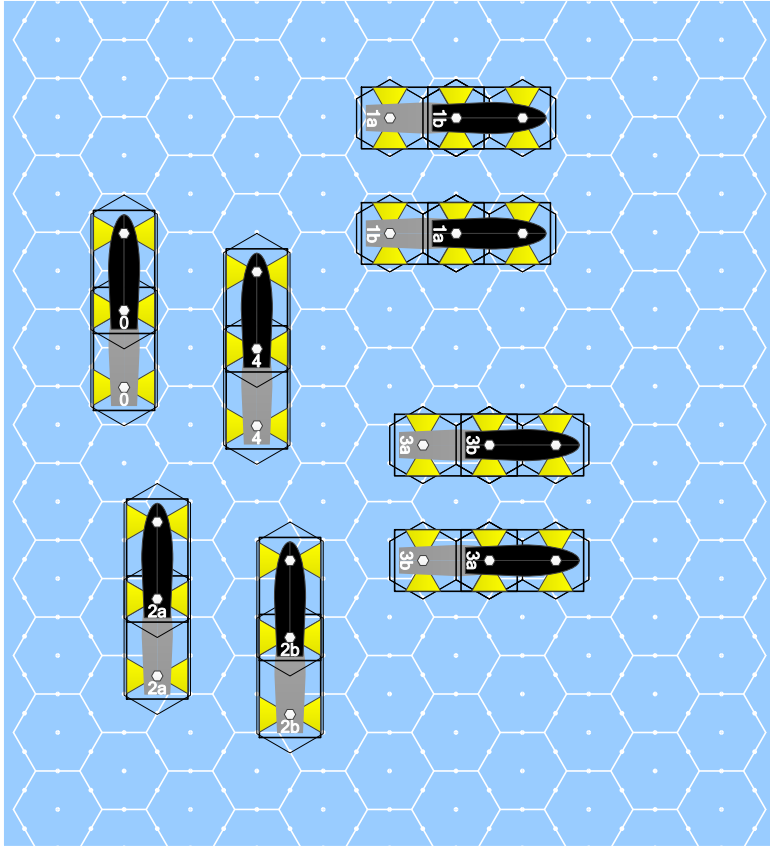


Figure 7. Ships moving forward 1. Each light-gray outline is the pre-move position; each black outline is the post-move position. Note that the ship's stern point moves to take the former position of the bow point. Ships do not change heading while moving forward.

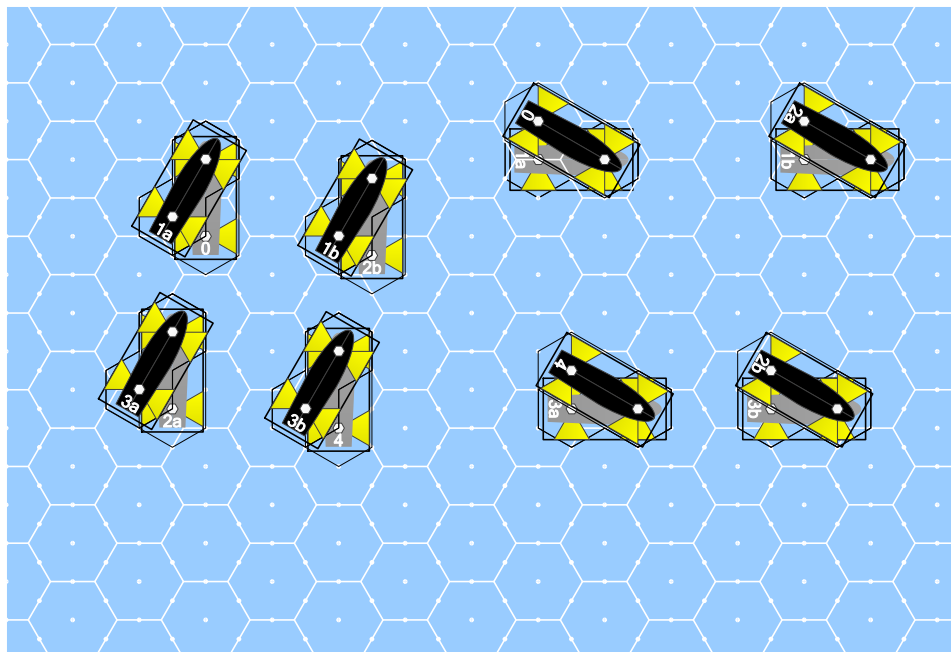


Figure 8. Ships turning thirty degrees. For starboard turns ("S"), each light-gray outline is the pre-move position; each black outline is the post-move position; for port turns ("P"), it is the opposite. Note that the ship's bow point never moves as the ship turns.

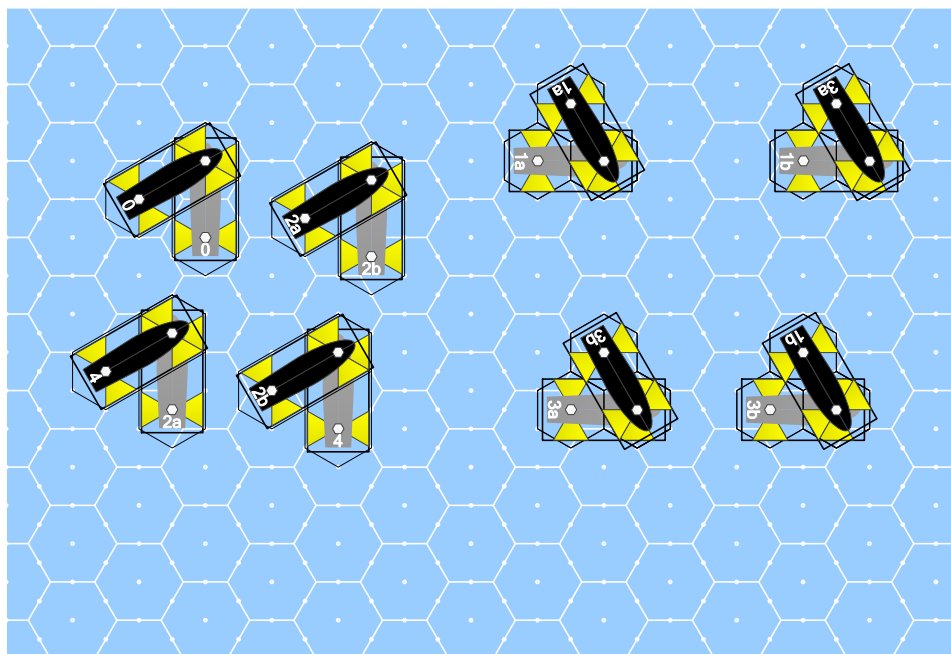


Figure 9. Ships turning sixty degrees. For starboard turns ("SS"), each light-gray outline is the pre-move position; each black outline is the post-move position; for port turns ("PP"), it is the opposite. Note that the ship's bow point never moves as the ship turns.

5.B.4 Turning into WF = L. The proper way to tack is to turn from WF = C to WF = Lc, and then to WF = C on the other side. Any ship which turns to WF = Ls or WF = Lp immediately goes into irons (5.D.4), unless the result is due to a change of wind direction.

5.D.2, b: If the ship is 30° off the wind (WF = Ls or Lp), add a -1 modifier to the die roll.

5.D.8 (from *Monsoon Seas*) This applies to ships at WF = M, also.

5.G.2 To determine whether a ship's wind is blocked in **BC**, look at the two dots one hex upwind of the ship's bow point and stern point. If they touch or are within the jacket of another ship, then the ship's wind is blocked. A ship at WF = R has only one dot to check—the dot one hex upwind of her stern point. See diagram 9.

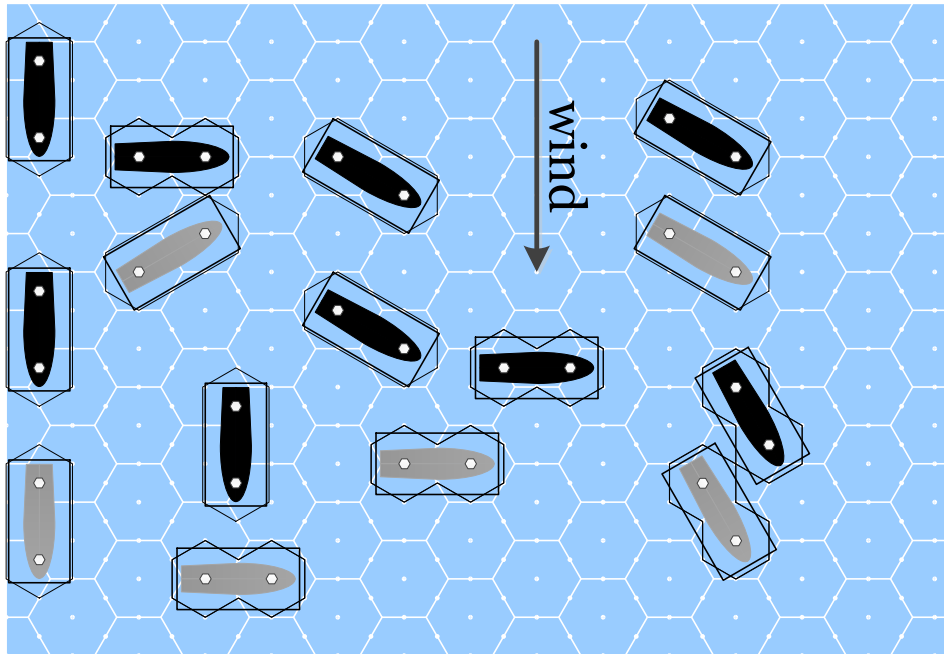


Figure 10. Blocked wind. The gray ships are affected by blocked wind; the black ships are not. None of the depicted ships are dismasted.

6.A.3 (additional) A ship moving forward always moves a whole number of hexes forward. A ship may never move forward half a hex, even to avoid a collision.

6.A.4 One Ship per Hex. The general rule in **CA** is that only one ship may occupy a hex in any given movement segment. The general rule in **BC** is that ships' jackets may never be allowed to overlap. That means that ships must always have a minimum separation of one hex, measured from one ship's bow or stern point to the other ship's bow or stern point. For this reason, special rules are required to handle cases in which two or more ships attempt to overlap their jackets. Such situations are called *movement conflicts*. There are three possible variations, as follows:

- When one or more ships create an overlap by turning, it is called an *overlapped hex* situation. If either (or both, or all, or all but one) of the ships is continuing movement, often the overlapped situation will be resolved in the next movement segment. See 6.B.
- When the bows of two or more ships *simultaneously* create an overlap, it is a *contested hex* situation. Only one of the ships may advance, and the ship which *loses* the contested hex DR has a *potential collision* to resolve. See 6.C.

Note: there is one special contested hex situation which occurs when two or more ships use their last plotted MP to turn their sterns to create an overlap (i.e., a stern vs. stern encounter in which neither ship is moving any further this g-t). See 6.C.5.

- c. When one ship's bow moves ahead into another ship, it is a *potential collision*. The ramming ship may attempt an emergency turn if the turn would not exceed its turning limits; this emergency turn is called *bearing off*. If the bearing off attempt fails, or if the ramming ship chooses *not* to bear off, a *collision* results. See 6.D and 6.E.

[I decided not to try to change the terms defined here, even though they're not entirely appropriate any longer. In **BC**, it's possible for a hex to be shared among as many as six (admittedly closely packed) ships, so the concept of "one ship per hex" has gone "by the boards."]

6.B.2 Turning Stern into Another Ship. A ship may create an overlap by turning, *provided* that the overlap is corrected during the same g-t. This is a temporary exception to the rule which prohibits two ships from overlapping.

General note concerning sections **6.B** through **6.E**: Rather than go through all of these sections and replace the word "hex" wherever it occurs, I will simply state that all of these rules apply in **BC**, but to any locations occupied by ships, not just hexes. Where the rule talks about ships entering the same hex, think instead of ships overlapping their jackets.

6.E.3 (addition) A ship is considered to be pointing at another ship if its centerline, extended forward, would touch the other ship's bow point, stern point, or any point between them.

7.B.1 Bow and Stern Batteries. Each ship counter spans two hexes (see Diagram 1). For gunnery purposes, the ship is divided into four *batteries*, one bow and one stern battery on each of the port and starboard broadsides. the firing arc and lines of sight for each battery are judged separately. The firing arc of each battery is traced from the ship's bow point or stern point. The field extends 30° forward of the beam and 30° astern, regardless of the ship's orientation in the hex grid.

Diagram 16 shows the starboard-bow firing arc for a ship in hex-grid orientation 0. **BC** includes figures which show the firing arcs for target ships at all 8 hex-grid orientations:

0	Figure 11
1a	Figure 12
1b	Figure 13
2a	Figure 14
2b	Figure 15
3a	Figure 16
3b	Figure 17
4	Figure 18

7.B.5 (replace) Tracing LOS is done from the battery, located at the ship's bow point or stern point, to the bow point and stern point of the target ship. A firing battery must have a clear LOS to each half of the target ship within its firing arc to be allowed to fire.

7.B.8 and 7.B.9 (replace): A LOS may not be traced through any point at which two (or three) ship's jackets touch.

7.B.10 Friendly Ships Blocking LOS. There are limits on how close to friendly ships a ship can fire at some ranges:

- Medium Range.** A friendly ship in the firing battery's arc and 5–9 hexes away blocks any LOS within one hex of her jacket to any target farther from the firing ship than herself.
- Long Range.** A friendly ship in the firing battery's arc and 10–15 hexes away blocks any LOS within two hexes of her jacket to any target farther from the firing ship than herself.

See Figure 19 and Figure 20 for diagrams showing LOS-blocking footprints.

7.C.4 (replace) Count the distance in hexes from the firing battery to the bow point and stern point of the target ship. Take the lesser distance. If both the bow and stern batteries are firing, take the least of the four distances. Round down the range if it is not a whole number of hexes. See the fire diagrams for example ranges.

7.C.12.g (Delete this section. Firing at two targets is no longer allowed.)

7.E.2 (addition) No rake may occur between ships which are 0°, 30°, 150°, or 180° apart in facing.

7.E.7 (new rule) If the centerline of the target ship intersects the bow point or the stern point of the firing ship, or the point halfway between, and the firing ship is perpendicular to the target ship's centerline, there is an additional gunnery modifier for a 90° rake. This modifier is +2 at range 1 or 2, +1 at range 3, 4, or 5.

7.G.1 (addition) Determine the range for marine fire the same way as for gunfire (7.C.4).

8.A.5 Partial Drift. If a drifting ship is *partially* blocked (i.e., its bow or stern can drift, but not the whole ship), then the part of the ship that *may* drift does so. The ship's WF will change: this is an exception to 8.A.3. Roll on the Collision table to see if the ships are fouled, but do not check for "extra rigging lost". Note: fouled and grappled ships *do not* partially drift. Check for fouling before adjusting a ship for partial drift. A ship in WF = Lc or WF = R never drifts partially. Ships in other WFs may drift partially, and may go into or out of irons as a result. If a ship which partially drifts can turn 60° without overlapping, she does. If she can turn only 30°, she does that instead. However, the half of the ship which does move may not get closer to the obstruction than the half which does not drift. See Figure 21. *Formidable's* stern may not drift, but her bow drifts, and she turns from WF = Cp to WF = B1p. *Duguay-Trouin's* bow turns 30°, turning her from WF = Mp to WF = B1p, because if she turned 60°, her bow would then be closer to *Princesa* than her stern was. For the same reason, *Mont Blanc* turns from WF = Mp to WF = Cp. *Eveille's* bow stays in position as her stern swings 60°. Her WF changes from B2p to Mp. *Guillaume Tell* does not drift at all because any downwind movement of her stern would bring it closer to *Fenix* than the bow.

12.A.4 Beginning Tow. To tow, the towing ship must first send the tow line to the ship to be towed. This procedure is simulated as follows:

- a. Locate the point on the map one hex ahead of the bow of the ship to be towed. The sternpoint of the towing ship must be within one half hex of this point at the end of the Movement Phase. The two ships do not have to be in the same WF, however.

Referring to diagram 24 in CA: Note that the sequence of ships' positions in the diagram is: 1, 2, 4, 3.

I recommend (even for players not using BC) that a towing ship not be allowed to turn unless the towed ship is dead astern of her. Otherwise, a ship might turn, stay in place for one game-turn, and then turn again in the same direction, which would be awkward.

13.C.4 Facing the Wind. (addition)

If a 30° turn would take the ship to its proper WF, it turns 30° instead of 60°.

13.D.2 Turning While Anchored With Springs. After anchoring with springs, a ship may make one 30° or 60° turn per g-t.

13.G.1 Draft. Each ship's *draft* is indicated on the SDC or scenario OB. The draft is the depth of water (in feet) required to float the ship. Actually, this is not correct. According to 13.G.2, the draft is the maximum

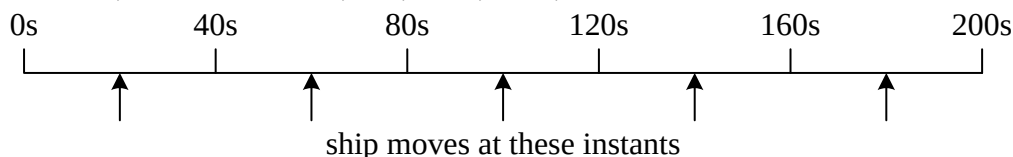
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depth of water at which the ship *runs aground*. The depth of water required to float the ship is one foot greater than the draft.

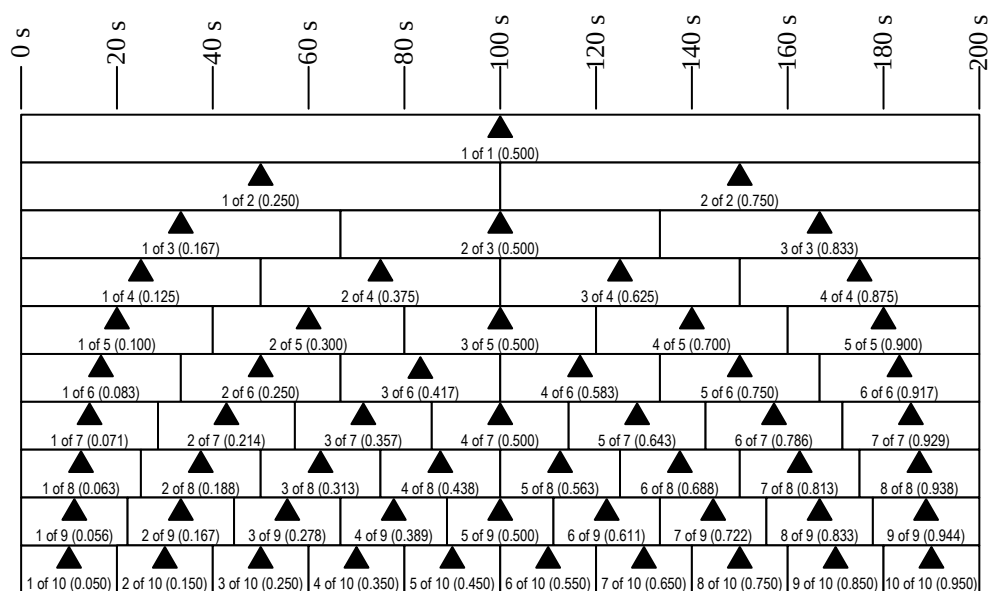
14.A IMPULSE MOVEMENT (alternative)

(Delete sections 14.A.1, 14.A.2, 14.A.4, 14.A.5, and 14.A.7; keep 14.A.3 and 14.A.6)

Concept: As noted in section 1.C, each game-turn represents 200s (two hundred seconds). Divide this period into n equal segments, where n is the ship's speed. Now model each ship's expenditure of one movement point as if it occurred not throughout the segment, but all at once, in the middle of the segment. For example, a ship moving at a speed of 5 would have 5 segments of 40s each, and move at 20s, 60s, 100s, 140s, and 180s.



When a possible collision occurs, move each ship according to the following chart, using the row corresponding to its speed. Thus, if you have a ship moving 2 and another moving 5, the sequence will be: faster, slower, faster, faster, faster, slower, faster. Thus the slower ship will still move twice and the faster five times, but now the moves will be conducted proportionately.



If there is no possible collision, do not use the chart at all, as it makes the game drag.

A ship may still overlap another ship as long as the overlap is resolved during the next impulse of the ship which created the overlap.

Appendix (the mathematics of *Boxing the Compass*):

In *Boxing the Compass*, each ship is considered to be located at two points, each coinciding with either the center of a hex or the center of a hexside. If the ship's heading is parallel to a hexrow (an "even-numbered" heading), the two points will lie a distance a apart, where a is the

distance between the centers of adjacent hexes. If the ship's heading is parallel to a hexside (an "odd-numbered" heading), then the two points lie a distance of $(a \cdot \sqrt{3} / 2)$ apart.

Calling the distance from the center of a hex to the center of an adjacent hex a , the side-to-opposite-side measure of a hex (diameter) is also a . The distance between two non-opposite non-adjacent hexside centers is $a \cdot \sqrt{3} / 2$.

The area of a hexagon is $a^2 \cdot \sqrt{3} / 2$.

The area of a ship's jacket on an even-numbered heading is $a^2 \cdot 7 \cdot \sqrt{3} / 8$, or 1.75 times the area of one hexagon. Its width is $a \cdot \sqrt{3} / 2$. Its centerline length is $2 \cdot a$. The length of each long side is $1.5 \cdot a$. The length of each short side is $a / 2$. The entire circumference is $5 \cdot a$.

The area of a ship's jacket on an odd-numbered heading is $a^2 \cdot 3 \cdot \sqrt{3} / 4$, or 1.5 times the area of one hexagon. Its width is a . Its length is $a \cdot \sqrt{3}$. The length of each of the ten sides is $a / 2$. The entire circumference is $5 \cdot a$.

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Ship's log for *Boxing the Compass*:

scen.	nat.	rate	long	med.	carr.	o/b	ship's name	class	C.H.	draft	I.D.	value	player's name and e-mail address

division: ☐ word limit: ☐ ☐ fleet flag ☐ division flag

rigging

1
(r)

2
(r)

3
(r)

4
(r)

hull

1
(h)

2
(h)

3
(h)

4
(h)

crew

S1
(m)

S2
(m)

S3
(m)

S4
(m)

M
(m)

anchors: ☐ ☐

⊖x

= x guns dismantled from each broadside

(h)

= hull check

(m)

= morale check

(r)

= rigging check

(s)

= strike

crew task

g-t	sail	move	S1	S2	S3	S4	M	gunfire	notes	MC
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
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34										
35										
36										
37										
38										
39										
40										

crew

initial:

A	B	C	D	E	F	G
---	---	---	---	---	---	---

morale (MR):

--	--	--	--	--	--	--

skill (SK):

-3	-2	-1	0	+1	+2	+3
----	----	----	---	----	----	----

movement

speed type: ☐

maneuver type: ☐

acceleration: ☐

deceleration: ☐

hexes between turns

speed

same

opposite

1	1*	1*
2	1	1
3		1
4,5		1
6,7		
8+		

Poor Maneuvering

☐ inherent

☐ rudder destroyed

☐ wheel shot away

Also, see the player's aid.

gunnery

0

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

-11

-12

-13

-14

-15

-16

P

port

initial

range

basic gunfire

maximum range for dismantling shot = 7

maximum range for firing low = 9

starboard-side guns dismantled

S

starboard

initial

lower-deck gunport modifier (LDGM)

freeboard: ☐ leeward: ☐ windward: ☐

fatigue

0	0	0	0	0	-1	-1	-1	-1
-2	-2	-2	-2	-2	-3	-3	-3	-3
-4	-4	-4	-4	-4	-5	-5	-5	-5
-6	-6	-6	-6	-6	-7	-7	-7	-7

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Boxing the Compass: how to play twelve-direction Close Action by Thomas Arndt

Ship's log for a British 74 in *Boxing the Compass*:

scen.	nat.	rate	long	med.	carr.	o/b	ship's name	class	C.H.	draft	I.D.	value	player's name and e-mail address
	Br.	74c	16	0	4			2	0	22			

division: ☐ word limit: ☐ ☒ fleet flag ☐ division flag

rigging

1
r

2
r

3
r

4
r

hull

1
h

2
h

3
h

4
h

crew

S1
m

S2
m

S3
m

S4
m

M
m

anchors: ☐

-x

= x guns dismantled from each broadside

h

= hull check

m

= morale check

r

= rigging check

s

= strike

crew task

g-t

sail

move

S1

S2

S3

S4

M

gunfire

notes

MC

1													
2													
3													
4													
5													
6													
7													
8													
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31													
32													
33													
34													
35													
36													
37													
38													
39													
40													

crew

quality

initial:

A

B

C

D

E

F

G

skill (SK):

-3

-2

-1

0

+1

+2

+3

movement

speed type: L

maneuver type: b

acceleration: 2

deceleration: 2

hexes between turns

speed

same

opposite

1

1*

1*

2

1

1

3

1

1

4,5

2

1

6,7

2

2

8+

3

3

Poor Maneuvering

☐ inherent

☐ rudder destroyed

☐ wheel shot away

Also, see the player's aid.

gunnery

0

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

-11

-12

-13

-14

-15

-16

port

initial

port-side guns dismantled

range

basic gunfire

1

29

2

28

3

27

4

25

5

23

6

20

7

17

8

15

9

13

10

12

11

10

12

9

13

8

14

7

15

5

0

-1

-2

-3

-4

-5

-6

-7

-8

-9

-10

-11

-12

-13

-14

-15

-16

starboard

initial

starboard-side guns dismantled

lower-deck gunport modifier (LDGM)

freeboard: 4

leeward: ☐

windward: ☐

fatigue

0

0

0

0

0

-1

-1

-1

-1

-2

-2

-2

-2

-2

-3

-3

-3

-3

-4

-4

-4

-4

-4

-5

-5

-5

-5

-6

-6

-6

-6

-6

-7

-7

-7

-7

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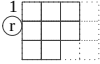
Boxing the Compass: how to play twelve-direction Close Action by Thomas Arndt

Ship's log for a French 80 in *Boxing the Compass*:

scen.	nat.	rate	long	med.	carr.	o/b	ship's name	class	C.H.	draft	I.D.	value	player's name and e-mail address
	Fr.	80	24	0	1			2	0	24			

division: ☐ word limit: ☐ ☐ fleet flag ☐ division flag

rigging

1


2


3


4


anchors: ☐ ☐



= x guns dismantled from each broadside



= hull check



= morale check

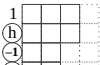


= rigging check



= strike

hull

1


2


3


4




= hull check



= morale check

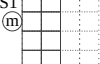


= rigging check



= strike

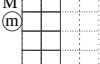
crew

S1


S2


S3


S4


M




= morale check



= morale check



= morale check



= morale check



= morale check

g-t

sail

move

S1

S2

S3

S4

M

gunfire

notes

MC

1												
2												
3												
4												
5												
6												
7												
8												
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33												
34												
35												
36												
37												
38												
39												
40												

crew

initial:

A

B

C

D

E

F

G

quality

skill (SK):

-3

-2

-1

0

+1

+2

+3

movement

speed type: ☐ hexes between turns

maneuver type: ☐

acceleration: ☐

deceleration: ☐

Poor Maneuvering

☐ inherent

☐ rudder destroyed

☐ wheel shot away

Also, see the player's aid.

speed

same

opposite

1	1*	1*
2	1	1
3	2	1
4,5	2	1
6,7	3	2
8+	3	3

gunnery

range

basic gunfire

port

starboard

initial

initial

port-side guns dismantled

starboard-side guns dismantled

maximum range for dismantling shot = 7

maximum range for firing low = 9

lower-deck gunport modifier (LDGM)

freeboard: ☐

leeward: ☐

windward: ☐

fatigue

0	0	0	0	0	-1	-1	-1	-1
-2	-2	-2	-2	-2	-3	-3	-3	-3
-4	-4	-4	-4	-4	-5	-5	-5	-5
-6	-6	-6	-6	-6	-7	-7	-7	-7

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Boxing the Compass: how to play twelve-direction *Close Action* by Thomas Arndt

A NARRATIVE OF MAJESTIC'S BATTLE

The ship log on the other side represents a "Free build" tournament game, with 93 VPs per side. One side chose a British 74 (L-f, CQ=B3, 93 VPs) and named it *Majestic*. The other chose a French 74 (L-f, CQ=D4, 70 VPs) and a French 36 (F-f, CQ=D4, 23 VPs, naming the 74 *Heureux* and the 36 *Régénérée*. As with most tournament games, the WS=3, there are no WD or WS changes, and anchoring is allowed. The following paragraphs primarily explain the more unusual events in the "game".

G-T 1: All ships start at Plain Sail, and are assumed to have been moving at maximum speed ahead on the "previous g-t". *Majestic* plots her marines to **Prepare Stern Anchor**. *Majestic* is "close-hauled" (WF=C) and plots "6".

G-T 4: *Majestic*, seeing *Régénérée* charging impetuously towards her, plots "PP2SS2" to keep her distance. With the range closing, *Majestic* begins lowering sails to avoid excess damage later. *Majestic* uses S3 and S4 to bring down the sails instead of the marines so that they don't have to abandon the anchoring preparation, which is completed at the end of this g-t.

G-T 5: *Majestic* is still cautious about *Régénérée* and so only plots 5 (noted as "V" to avoid confusion with "S") (she could have done PP2SS2 again but chose not to). *Régénérée*'s gun fire is a half-chance ("h/c") hit; a DR 3 yields a hull hit. S3 and S4 complete altering sail to MS at the end of the g-t.

G-T 6: To take advantage of the French splitting their ships, *Majestic* tacks (i.e., turns into WF=L). She plots "SS", a normally illegal move (her deceleration of 3 would normally require her to use 2 MPs), but since MA=0 in WF=L, *Majestic* may exceed deceleration limits. The marines lower sails to FS. *Majestic* fires her port "initial broadside" (and marks her port side **IB** with the g-t number), but range=6, so she does not get any IB bonus. *Majestic* has a BGN=20, her CQ=B crew adds +4 for an MGN of 24; the d6 DR of 3 makes FGN=27 against *Régénérée*, inflicting a one box each of **r-h-c** (roll on the Crew Loss table to see whether the crew loss is a sailor or a marine box). *Régénérée* gets one **h** and a half chance for an **r** hit (because *Majestic* is still at MS until the end of the g-t). *Régénérée* rolls another critical hit. It is a 7 with 2d6 on the Hull Critical Hit table; but #7 says "rigging damage", so *Majestic* rolls 2d6 again and consults the Rigging Critical Hits table; the result is 6, causing a "falling rigging obscures broadside"; another d6 makes it a -2 gunnery modifier on the starboard side ("OS"). In the unfouling phase, *Majestic*'s CQ=B crew successfully clears the OS with a d10 = 3. The DRMs are -2 for skill and +1 for "marines not available" (they are altering sail), so the final DRM is -1, which reduces the DR to 2, which is just good enough to unfoul on the first attempt. *Majestic* rolls for drift but does not.

G-T 7: *Majestic* plots "SS" (completing the tack), and assigns three CSs (the marines and two sailor sections) to "T" to maximize chance of success. *Régénérée* charges in, and *Majestic* has only a range-4 half broadside (-8), which, with 2 sailor sections unavailable (-6), gives a MGN of only 11. *Majestic* rolls for drift and does.

G-T 8: *Majestic*'s marines plot RR. The movement plot of "1SS" is *Majestic*'s maximum move (acceleration of 2); and she fires her starboard broadside for the first time at range=3 (IB bonus of +3), for an MGN of 34! The d6 = 6, thus FGN = 40, resulting in **3r-4h-3c**. There is a chance for a critical hit. At an FGN of 40, a DR of ≤5 on d6 yields a CH; but *Régénérée*'s CH mod is -2, so *Majestic* inflicts the critical hit automatically. An 11 on 2d6 on the Hull Critical Hits table (for firing low) causes *waterline damage*, making the frigate (class 3) send 2 sailor boxes to the pumps for the rest of the battle (mark as casualties). In turn *Majestic* receives **2r-2h-c** from her two opponents.

G-T 9: *Majestic* plots 3. The frigate takes a range-5 stern rake from *Majestic*, with a MGN of 28, to get away next turn. *Heureux* gets a critical hit on *Majestic*, causing "Braces Cut", reducing her accel./decel. to 0 for one g-t. After combat she rolls d10 to fix braces, but fails (DR= 8).

G-T 11: *Majestic*'s marines complete rigging repairs, so one box is **added** to the current (first) rigging section. Note that the "RR" notation is circled to show that it has been completed. This is *Majestic*'s sixth broadside, so a "-1" modifier for fatigue comes into effect.

G-T 13: *Majestic* would like to do "S1P" again, but cannot due to turning limitations. She plots "3" instead. *Heureux* scores a "Shrouds Severed" critical hit on *Majestic*, causing -1 MP in all directions and every sail state until repaired. *Majestic* also lost her first hull section, thus causing a -1 guns dismantled on both broadsides automatically, and the hull Check (d6 = 6) causes another -2 guns dismantled on the engaged (port) broadside. She passes her MC for the hull section loss.

G-T 14: *Majestic* keeps the marines "RR" (so as not to lose their progress), and assigns S4 to "RS" (3 g-ts with CQ=B). The -1 MP won't allow for any more zigzags until repaired, so *Majestic* plots "2". *Majestic*'s gunfire at range 8 is down to a MGN of 13 with the -3 guns dismantled on the port side, -3 for sailor section unavailable (repairing shrouds), and +4 for CQ.

G-T 15: *Majestic*'s marines finish repairing another rigging box.

G-T 16: *Majestic*'s marines plot more rigging repairs. *Heureux* has pulled ahead, and now turns in to close, scoring an **2r-h**, causing the loss of the first rigging section as well as a critical hit. The result of the critical hit is "crew becomes disorganized", which immediately cancels S4's "RS" just before completion; S4 must now plot "RO" for the next 5 g-t's + SK. The rigging check DR = 6 on d6 ("sheets cut") - causing -1 MP and -1 accel. for one g-t only (automatically fixed). This is *Majestic*'s eleventh broadside, so her fatigue modifier is now "-2".

G-T 17: *Majestic* now has only 3 rigging sections remaining, is -1 for shrouds severed, and another -1 for sheets cut. Combined, this yields an MA=0, and so she can only plot "0" or attempt a turn. She plots S3 to "RS" (starting again), and S1 & S2 to "T" (work the lines to assist difficult turns) to reduce the penalty on the "tacking" table (the turn attempt fails on a 9). All the sailor sections are busy so the guns can't be fired. *Heureux*'s gunfire causes a hull critical hit, but the die roll of 7 changes that to a rigging critical hit, with the result being "stays cut". Fortune now abandons *Majestic*; the d10 DR is 0. This result means that the current rigging section (the almost fresh 2nd rigging section) is crossed out, and a morale check must be taken; after crossing out the rigging section, one additional rigging box is marked out from the now-current 3rd rigging section. The rigging check for losing the second section results in "signal halyards cut". In the maintenance phase *Majestic* does not drift, and she passes the morale check.

G-T 18: "Sheets cut" lasts only one g-t, so *Majestic* should have one MP now, because at WF=C with 2 rigging sections remaining equates to an MA=1, but the "shrouds severed" causes -1 MP, leaving MA=0. So *Majestic* plots "S" but most roll to succeed at MA=0 again. Only one CS is plotted to "T" this g-t because *Majestic* would rather devote crew to work the guns. Nevertheless *Majestic* succeeds in turning this g-t. A "minor explosion" CH causes another hull box of damage and adds another -2 guns dismantled to the engaged (still port) broadside. The ship catches fire from the explosion and must take another MC. As no CSs are plotted to FF, there is no chance to put out the fire this turn, and the fire accordingly causes one additional rigging box and hull box of damage. This eliminates the second hull section, so a -2 guns dismantled is added to both broadsides (now -7 port and -3 starboard), and a second MC must be taken. *Majestic* needs 3+ to pass, but the MC DRs are 2 and 6, so *Majestic* fails one and is now CQ=C. The "CQ gunnery modifier" goes from +4 to +2 and the SK mod. goes from -2 to -1 (extending RR and RO times by a g-t).

G-T 19: *Heureux* plots BR for his S1 and Marine CSs, and in *movement* rams *Majestic*; she loses rigging and fouls *Majestic*, and is thus stuck in a range-1 bow rake. *Majestic*, with only half a broadside, has only one sailor section available (one CS must be assigned to fight the fire), so the MGN is only 13. *Heureux* has no battery bearing on *Majestic*, but her marines shoot and kill a British marine box. *Majestic* fails to put out the fire, so another rigging box and hull box of damage is incurred, and she also fails to unfoul from *Heureux* (who wanted to grapple but could not because of the fire).

G-T 20: The two ships are fouled, so neither can plot movement. *Majestic* plots S1 to FB, but keeps the marines RR (as they finish repairing another rigging box at the end of this g-t), in case *Heureux* decides not to try to board. In the event the French ship *does* plot BA for S1 and M, and FB for S2 and S3. As a result the British marines automatically abandon their repairs (losing all their progress) and form boarders in defense. Crew section S2 continues fighting the fire, and finally puts it out.

G-T 20-28: For the description of the boarding action, see Chapter 10, which describes it in detail. After the Boarding combat, *Majestic*'s crew sections have to reorganize, which takes until g-t 26. On turn 27, *Majestic* begins to try to unfoul from *Heureux*, and on turn 28 she succeeds, and at this point *Régénérée*, which has been plinking at *Majestic* from long range, gives up. .

Boxing the Compass: how to play twelve-direction Close Action by Thomas Arndt

Close Action player's aid

2020 February 17

movement plot

plot	actual move	rule
n	move forward n hexes (n = 0, 4, 6, 10)	5.B.2.a
V	move forward five (5) hexes	
P (PP)	turn 30° (60°) port (CCW)	5.B.2.c
S (SS)	turn 30° (60°) starboard (CW)	5.B.2.b
D	drift (plotted by GM)	8.A
—0	ship is stopped at end (plotted by GM)	5.E.3

crew tasks

plot	activity (1 CS except as noted below)	time required		rule
		CQ = ABCD	EFG	
PS	MS→PS (2 CS)	2	3	5.F.2
MS	PS→MS (2 CS)	2	3	5.F.3
MS	FS→MS	1	2	5.F.3
FS	MS or furled→FS	1	2	5.F.4
furl	FS→furled	1	2	5.F.5
T	tack; (0–3 CS)	see tacking table		5.D
FFn	fight fire #n	see unfouling table		8.E.2
RR	repair rigging	6+SK		8.F
RH	repair hull	10+SK		8.F
RS	repair shrouds	5+SK		8.F
PBA	prepare bow anchor	2	3	13.B
PBS	prepare bow springs	2 times (5+SK)		13.B
PSA	prepare stern anchor	6+SK		13.B
PSS	prepare stern springs	2 times (6+SK)		13.B
A	anchor	1		13.C
AX	cut anchor	1		13.F
VO	veer out	1		13.E.1
VI	veer in	1		13.E.2
HS	handle springs	1		13.D
PT	prepare to tow	5+SK		12.A.3
TX	cut towline	1		12.A.9
FB	form boarders	1		10.B.2
BR	boarders ready	1		10.B.3
BA	boarders away	1		10.C.1
BD	boarders disband	1		10.B.5
RO	reorganize	5+SK		10.G

morale check

causes list (9.B.1)
 becoming dismayed
 being raked while dismayed
 losing a hull section
 losing a crew section
 suffering a critical hit: MM, LC, ST, MF, LQ, EI, WD, E2
 colliding (GM discretion)
 upsetting the GM

reminders

PS = plain sail; MS = maneuvering sail; FS = fighting sail;
 CQ = crew quality; CS = crew section; SK = skill level;
 LDGM = lower-deck gunnery modifier; WS = wind speed.

A ship's **port** side is her left; **starboard**, right. A **port** turn is counterclockwise (as viewed from above); **starboard**, clockwise.

A stern rake inflicts double crew hits.

Dismantling shot inflicts no hull hits.

When a hull check occurs, guns-dismounted results are applied according to the most severe type of rake suffered by the target ship that game-turn.

furled



fighting



maneuvering



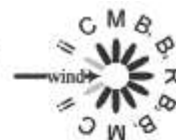
plain



unfouling (1d10) rule 8.D

—an unmodified roll of 0 always succeeds

first attempt:	≤2
second attempt:	≤3
later attempt:	≤4



unfouling modifiers

- all attempts { +SK (skill level)
+1 if marines are not available
- ungrappling { −1 for each CQ level better than the enemy
−2 for friendly ships
−1 if wind speed = 4
- firefighting { +1 if the ship moved voluntarily this game-turn
only

tacking (2d10, not added together) rule 5.D, modified in Monsoon Seas

—each unmodified roll of 0 is always good

If both dice are "good" (table below): immediate success.

If one die is good: one-turn delay in tacking.

If neither die is good: in irons this game-turn & next.

wind speed▶	1	2	3	4
maneuver type a:	≤2	≤4	≤6	≤5
maneuver type b:	≤3	≤5	≤7	≤6
maneuver type c:	≤5	≤7	≤8	≤7
maneuver type d:	≤7	≤8	≤9	≤8

tacking modifiers

- +SK (skill level) +2 if there are only 2 CS plotted "T"
- +1 in irons +4 if there is only 1 CS plotted "T"
- +1 towing +6 if there are no CS plotted "T"
- +3 rudder destroyed +2 per rigging section lost
- −1 30° off the wind −2 wind attitude C, M, B, or R

poor maneuvering (nd10) rule 6.F; Monsoon Seas 14.F

Roll once for each 30° or 60° turn; results in the table below succeed.

The number of dice to roll:

- 1 if the ship is **wearing**; plus
- 1 if the ship is **towing**; plus
- 1 if the ship is an **inherently** poor maneuverer; plus
- 1 if the ship's **wheel** has been **shot away**; plus
- 1 if the ship's **rudder** has been **destroyed**; plus
- 1 if the ship has a **movement allowance of zero**.

Each failure delays the turn one hex or one game-turn.

crew quality▶	A	B	C	D	E	F	G
maneuver type a:	≤6	≤5	≤5	≤4	≤4	≤4	≤4
maneuver type b:	≤7	≤6	≤5	≤5	≤4	≤4	≤4
maneuver type c:	≤8	≤7	≤6	≤5	≤4	≤4	≤4
maneuver type d:	≤8	≤8	≤7	≤6	≤5	≤4	≤4

messages rule 11

A message from a flagship may contain up to 5* words. A British message in 1803 or later may contain up to 7* words. It must indicate the turn number, which does not count against the limit. "BROAD-REACHING", "CLOSE-HAULED", "PORT-TACK", "STARBOARD-TACK", and "DIRECTION #" count as one word each.

If you are not a flag officer:

1. your message may not be longer than 3 words;
2. you must indicate which ship you are, such as: "from Constitution."; this does not count against the word limit;
3. you must address only the commander;
4. if you suggest a course of action for yourself, the first of your 3 words must be "SUBMIT"; and
5. you may not suggest a course of action for the fleet or for anyone else in the fleet.

*modified in *Rebel Seas* to a commander-specific rating

crew loss (1d6) rule 7.D.9

die roll▶	1	2	3	4	5	6
round shot fired at hull:	S	S	S	S	S	M
any other cause:	S	S	S	M	M	M

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wind speed: 1		ship's speed type: Lvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	2	3	4	3
	MS	1	2	3	2
	FS	0	1	2	1
3	PS	0	2	2	2
	MS	0	2	2	2
	FS	0	1	1	1
2	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1
1	PS	0	0	0	0
	MS	0	0	0	0
	FS	0	0	0	0

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Ls			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	3	4	5	4
	MS	2	3	4	3
	FS	1	2	3	2
3	PS	1	2	3	2
	MS	1	2	3	2
	FS	0	1	2	1
2	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1
1	PS	0	0	0	0
	MS	0	0	0	0
	FS	0	0	0	0

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Lf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	5	6	5
	MS	2	4	5	4
	FS	1	2	3	2
3	PS	1	2	3	2
	MS	1	2	3	2
	FS	0	1	2	1
2	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1
1	PS	0	0	0	0
	MS	0	0	0	0
	FS	0	0	0	0

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Fvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	3	4	5	4
	MS	2	3	4	3
	FS	1	2	3	2
3	PS	1	2	3	2
	MS	1	2	3	2
	FS	0	1	2	1
2	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1
1	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Fs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	5	6	5
	MS	3	4	5	4
	FS	2	3	4	3
3	PS	2	3	4	3
	MS	2	3	4	3
	FS	1	2	3	2
2	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1
1	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Ff			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	6	7	6
	MS	3	5	6	5
	FS	2	3	4	3
3	PS	2	4	5	4
	MS	2	4	5	4
	FS	1	2	3	2
2	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1
1	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Cvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	5	6	5
	MS	3	4	5	4
	FS	2	3	4	3
3	PS	2	3	4	3
	MS	2	3	4	3
	FS	1	2	3	2
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Cs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	6	7	6
	MS	4	5	6	5
	FS	3	4	5	4
3	PS	3	4	5	4
	MS	3	4	5	4
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 1		ship's speed type: Cf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	7	8	7
	MS	4	6	7	6
	FS	3	4	5	4
3	PS	3	5	6	5
	MS	3	5	6	5
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

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wind speed: 2		ship's speed type: Lvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	3	5	6	5
	MS	2	3	4	3
	FS	1	2	3	2
3	PS	1	2	3	2
	MS	0	1	2	1
	FS	0	1	2	1
2	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1
1	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Ls			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	6	7	6
	MS	3	4	5	4
	FS	2	3	4	3
3	PS	2	3	4	3
	MS	1	2	3	2
	FS	1	2	3	2
2	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1
1	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Lf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	7
	MS	3	5	6	5
	FS	2	3	4	3
3	PS	2	4	5	4
	MS	1	2	3	2
	FS	1	2	3	2
2	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1
1	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Fvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	6	7	6
	MS	3	4	5	4
	FS	2	3	4	3
3	PS	2	3	4	3
	MS	1	2	3	2
	FS	1	2	3	2
2	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1
1	PS	0	1	1	1
	MS	0	1	1	1
	FS	0	1	1	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Fs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	7
	MS	4	5	6	5
	FS	3	4	5	4
3	PS	3	4	5	4
	MS	2	3	4	3
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Ff			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	8
	MS	4	6	7	6
	FS	3	4	5	4
3	PS	3	5	6	5
	MS	2	3	4	3
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Cvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	7
	MS	4	5	6	5
	FS	3	4	5	4
3	PS	3	4	5	4
	MS	2	3	4	3
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Cs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	8
	MS	5	6	7	6
	FS	4	5	6	5
3	PS	4	5	6	5
	MS	3	4	5	4
	FS	3	4	5	4
2	PS	2	3	4	3
	MS	2	3	4	3
	FS	2	3	4	3
1	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 2		ship's speed type: Cf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	7	9	10	9
	MS	5	7	8	7
	FS	4	5	6	5
3	PS	4	6	7	6
	MS	3	4	5	4
	FS	3	4	5	4
2	PS	2	3	4	3
	MS	2	3	4	3
	FS	2	3	4	3
1	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

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wind speed: 3		ship's speed type: Lvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	6	7	6
	MS	3	4	5	4
	FS	2	3	4	3
3	PS	2	3	4	3
	MS	2	3	4	3
	FS	1	2	3	2
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Ls			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	7
	MS	4	5	6	5
	FS	3	4	5	4
3	PS	3	4	5	4
	MS	3	4	5	4
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Lf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	8
	MS	4	6	7	6
	FS	3	4	5	4
3	PS	3	5	6	5
	MS	3	5	6	5
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Fvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	7
	MS	4	5	6	5
	FS	3	4	5	4
3	PS	3	4	5	4
	MS	3	4	5	4
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Fs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	8
	MS	5	6	7	6
	FS	4	5	6	5
3	PS	4	5	6	5
	MS	4	5	6	5
	FS	3	4	5	4
2	PS	2	3	4	3
	MS	2	3	4	3
	FS	2	3	4	3
1	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Ff			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	7	9	10	9
	MS	5	7	8	7
	FS	4	5	6	5
3	PS	4	6	7	6
	MS	4	6	7	6
	FS	3	4	5	4
2	PS	2	3	4	3
	MS	2	3	4	3
	FS	2	3	4	3
1	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Cvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	7
	MS	4	5	6	5
	FS	3	4	5	4
3	PS	3	4	5	4
	MS	3	4	5	4
	FS	2	3	4	3
2	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2
1	PS	0	1	2	1
	MS	0	1	2	1
	FS	0	1	2	1

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Cs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	8
	MS	5	6	7	6
	FS	4	5	6	5
3	PS	4	5	6	5
	MS	4	5	6	5
	FS	3	4	5	4
2	PS	2	3	4	3
	MS	2	3	4	3
	FS	2	3	4	3
1	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 3		ship's speed type: Cf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	7	9	10	9
	MS	5	7	8	7
	FS	4	5	6	5
3	PS	4	6	7	6
	MS	4	6	7	6
	FS	3	4	5	4
2	PS	2	3	4	3
	MS	2	3	4	3
	FS	2	3	4	3
1	PS	1	2	3	2
	MS	1	2	3	2
	FS	1	2	3	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

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wind speed: 4		ship's speed type: Lvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	6	7	7
	MS	3	4	5	5
	FS	2	3	4	4
3	PS	2	3	4	4
	MS	2	3	4	4
	FS	1	2	3	3
2	PS	1	2	3	3
	MS	1	2	3	3
	FS	1	2	3	3
1	PS	0	1	2	2
	MS	0	1	2	2
	FS	0	1	2	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Ls			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	8
	MS	4	5	6	6
	FS	3	4	5	5
3	PS	3	4	5	5
	MS	3	4	5	5
	FS	2	3	4	4
2	PS	1	2	3	3
	MS	1	2	3	3
	FS	1	2	3	3
1	PS	0	1	2	2
	MS	0	1	2	2
	FS	0	1	2	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Lf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	9
	MS	4	6	7	7
	FS	3	4	5	5
3	PS	3	5	6	6
	MS	3	5	6	6
	FS	2	3	4	4
2	PS	1	2	3	3
	MS	1	2	3	3
	FS	1	2	3	3
1	PS	0	1	2	2
	MS	0	1	2	2
	FS	0	1	2	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Fvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	8
	MS	4	5	6	6
	FS	3	4	5	5
3	PS	3	4	5	5
	MS	3	4	5	5
	FS	2	3	4	4
2	PS	1	2	3	3
	MS	1	2	3	3
	FS	1	2	3	3
1	PS	0	1	2	2
	MS	0	1	2	2
	FS	0	1	2	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Fs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	9
	MS	5	6	7	7
	FS	4	5	6	6
3	PS	4	5	6	6
	MS	4	5	6	6
	FS	3	4	5	5
2	PS	1	3	4	4
	MS	1	3	4	4
	FS	1	3	4	4
1	PS	0	2	3	3
	MS	0	2	3	3
	FS	0	2	3	3

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Ff			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	7	9	10	10
	MS	5	7	8	8
	FS	4	5	6	6
3	PS	4	5	6	6
	MS	4	5	6	6
	FS	3	4	5	5
2	PS	1	3	4	4
	MS	1	3	4	4
	FS	1	3	4	4
1	PS	0	2	3	3
	MS	0	2	3	3
	FS	0	2	3	3

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Cvs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	4	6	7	7
	MS	3	5	6	6
	FS	2	4	5	5
3	PS	2	4	5	5
	MS	2	4	5	5
	FS	1	3	4	4
2	PS	1	2	3	3
	MS	1	2	3	3
	FS	1	2	3	3
1	PS	0	1	2	2
	MS	0	1	2	2
	FS	0	1	2	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Cs			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	5	7	8	8
	MS	4	6	7	7
	FS	3	5	6	6
3	PS	3	4	5	5
	MS	3	4	5	5
	FS	2	3	4	4
2	PS	1	2	3	3
	MS	1	2	3	3
	FS	1	2	3	3
1	PS	0	1	2	2
	MS	0	1	2	2
	FS	0	1	2	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

wind speed: 4		ship's speed type: Cf			
		ship's wind facing			
sections	sail state	C	M	B	R
4	PS	6	8	9	9
	MS	4	6	8	8
	FS	3	5	6	6
3	PS	3	4	5	5
	MS	3	4	5	5
	FS	2	3	4	4
2	PS	1	2	3	3
	MS	1	2	3	3
	FS	1	2	3	3
1	PS	0	1	2	2
	MS	0	1	2	2
	FS	0	1	2	2

sections = full or partial rigging sections remaining
 PS = plain sail; MS = maneuvering sail; FS = fighting sail
 C = close-hauled; M = beam-reaching;
 B = broad-reaching; R = running

Notes for the fire diagrams:

On the following eight pages are the fire diagrams for *Boxing the Compass*. Each corresponds to one hex-grid orientation for the firing ship. Orientations 0, 2a, 2b, and 4 are for ships with even-numbered headings; orientations 1a, 1b, 3a, and 3b are for ships with odd-numbered headings. The fire diagrams correspond with these orientations.

In each diagram, the firing ship is shown in red. Its bow-section firing arc is depicted by one gray polygon; its stern-section firing arc is depicted by another. In the even-numbered diagrams, the polygons are triangles; in the odd-numbered, they are quadrilaterals. Only the starboard broadside is depicted; the port broadside is symmetric to the starboard.

Although many possible target positions are shown in each figure, read the figure as if only one target were depicted (as in diagram 20 in **CA**). For example, the fourth green ship from the red ship can be hit with a full broadside if all the other target ships do not exist. Lines of sight are not considered here.

For a ship to be struck by a full broadside from the firing ship, each polygon must touch or enclose at least one of the target ship's two points. Green ship outlines designate target positions which qualify as full broadsides.

For a ship to be struck by a half broadside from the firing ship, only one polygon must touch or enclose one or both of the target ship's two points. Blue ship outlines designate target positions which qualify as half broadsides.

The orange ship outlines indicate positions in which an enemy ship would be invulnerable to fire from the red ship, lying either outside its angle of fire or too far away.

Note that all of the ship positions indicated are exactly the same relative to the firing ship on all of the even-numbered diagrams—only the hex-grid orientation is different. They are also all the same on all of the odd-numbered diagrams. However, there is a difference between the even-numbered and the odd-numbered diagrams.

In each diagram the number on the stern of each ship indicates its range from the firing ship. A slash "/" indicates that the actual range is half a hex greater than the number.

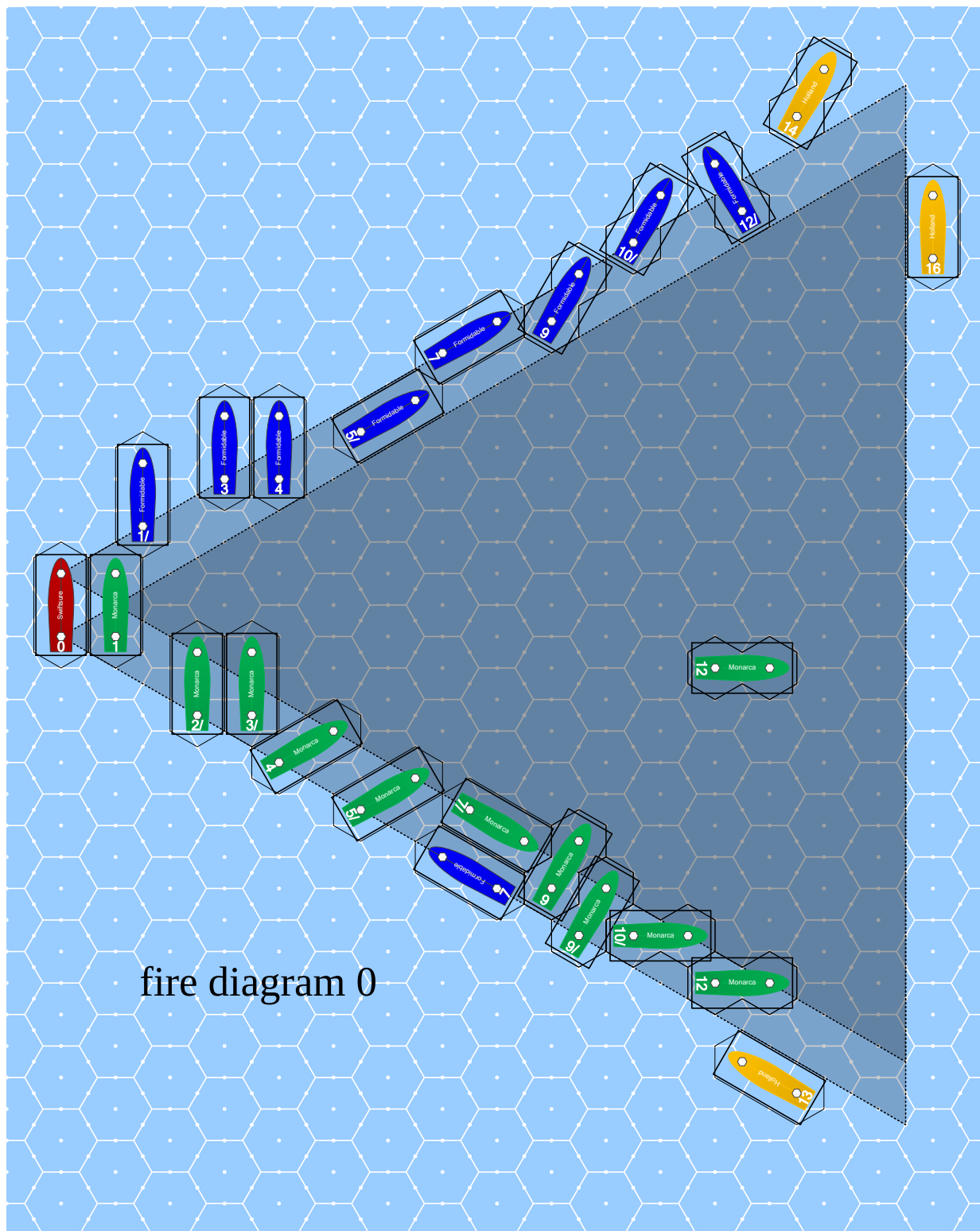


Figure 11. Fire diagram for a firing ship in hex-grid orientation 0

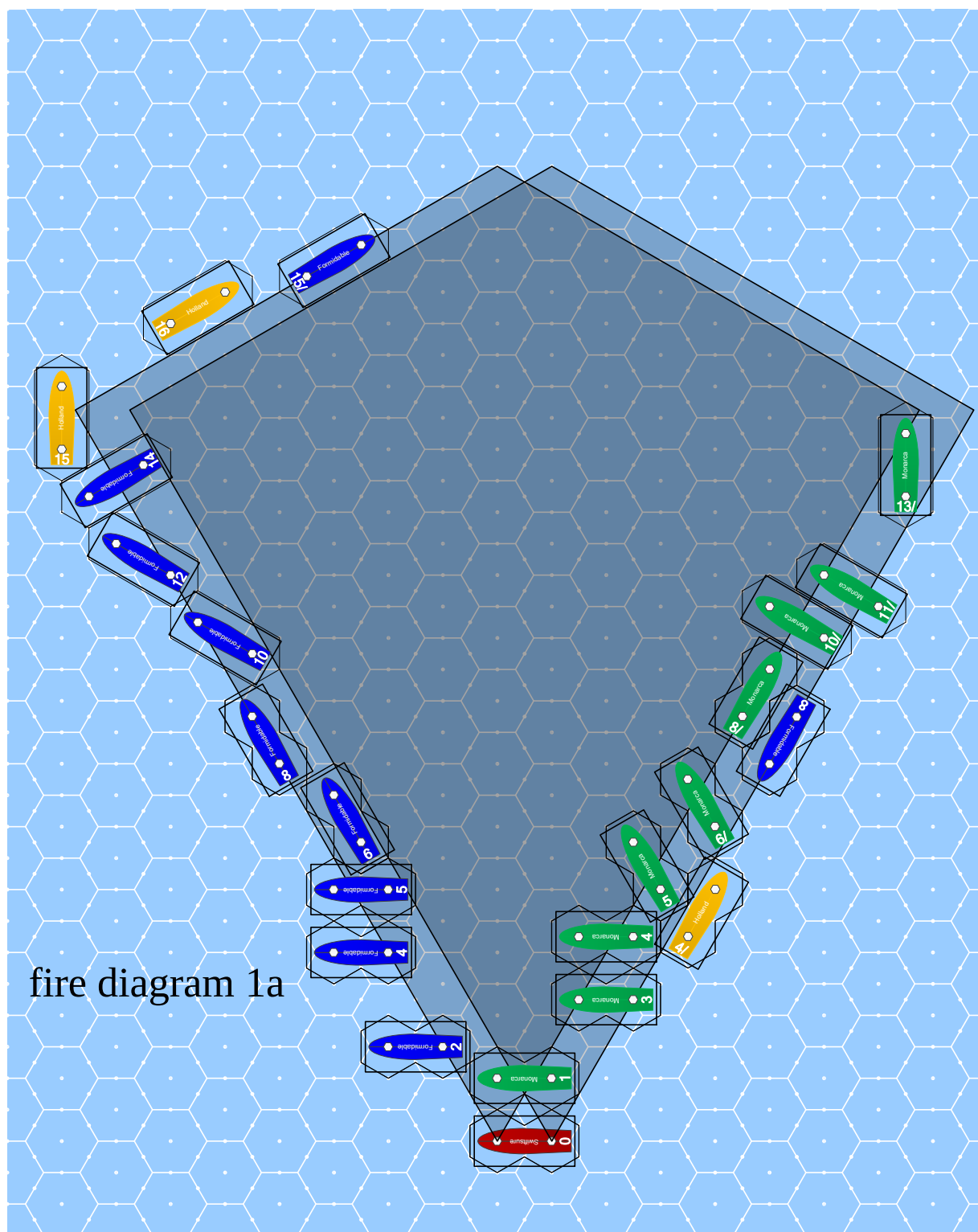


Figure 12. Fire diagram for a firing ship in hex-grid orientation 1a

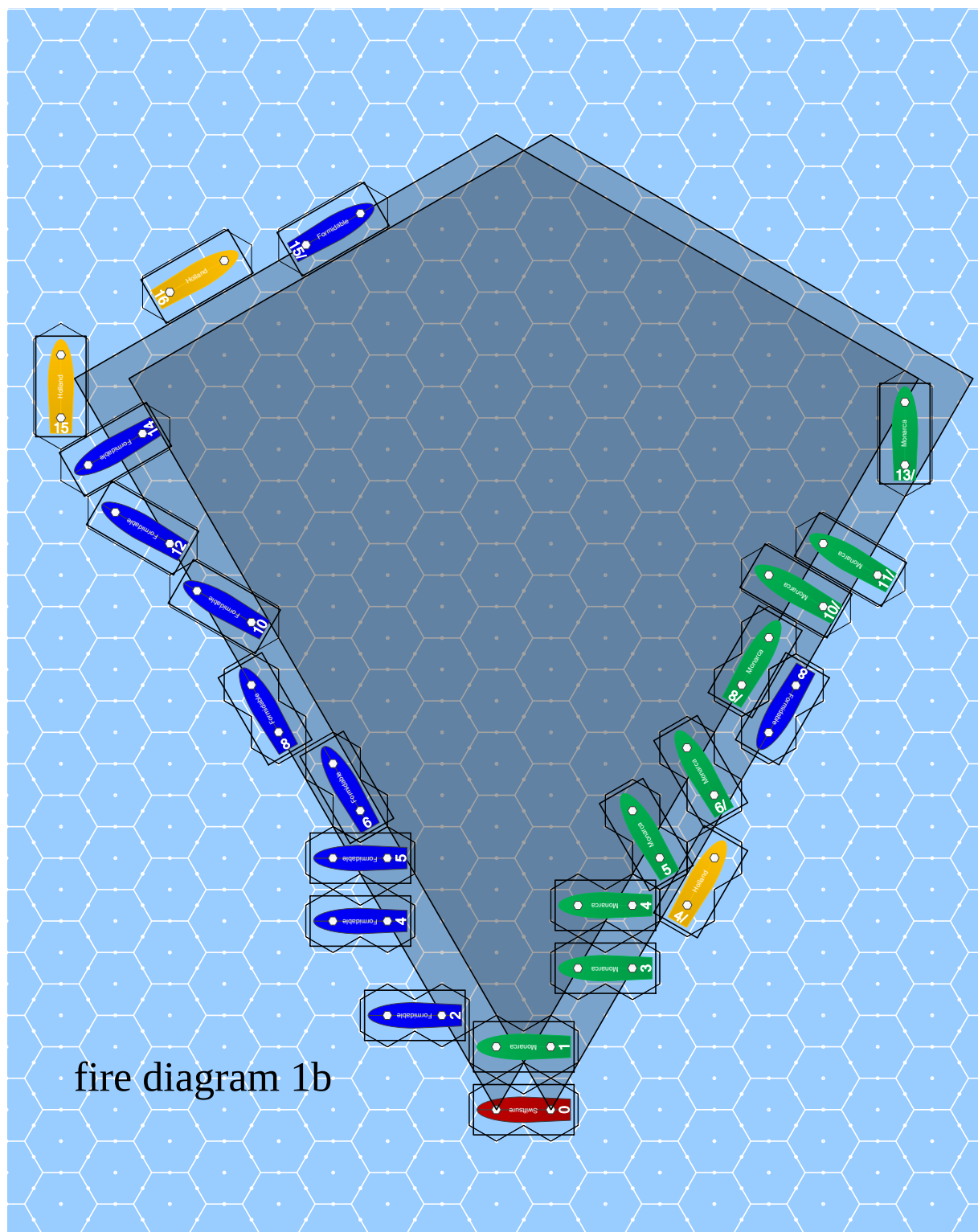


Figure 13. Fire diagram for a firing ship in hex-grid orientation 1b

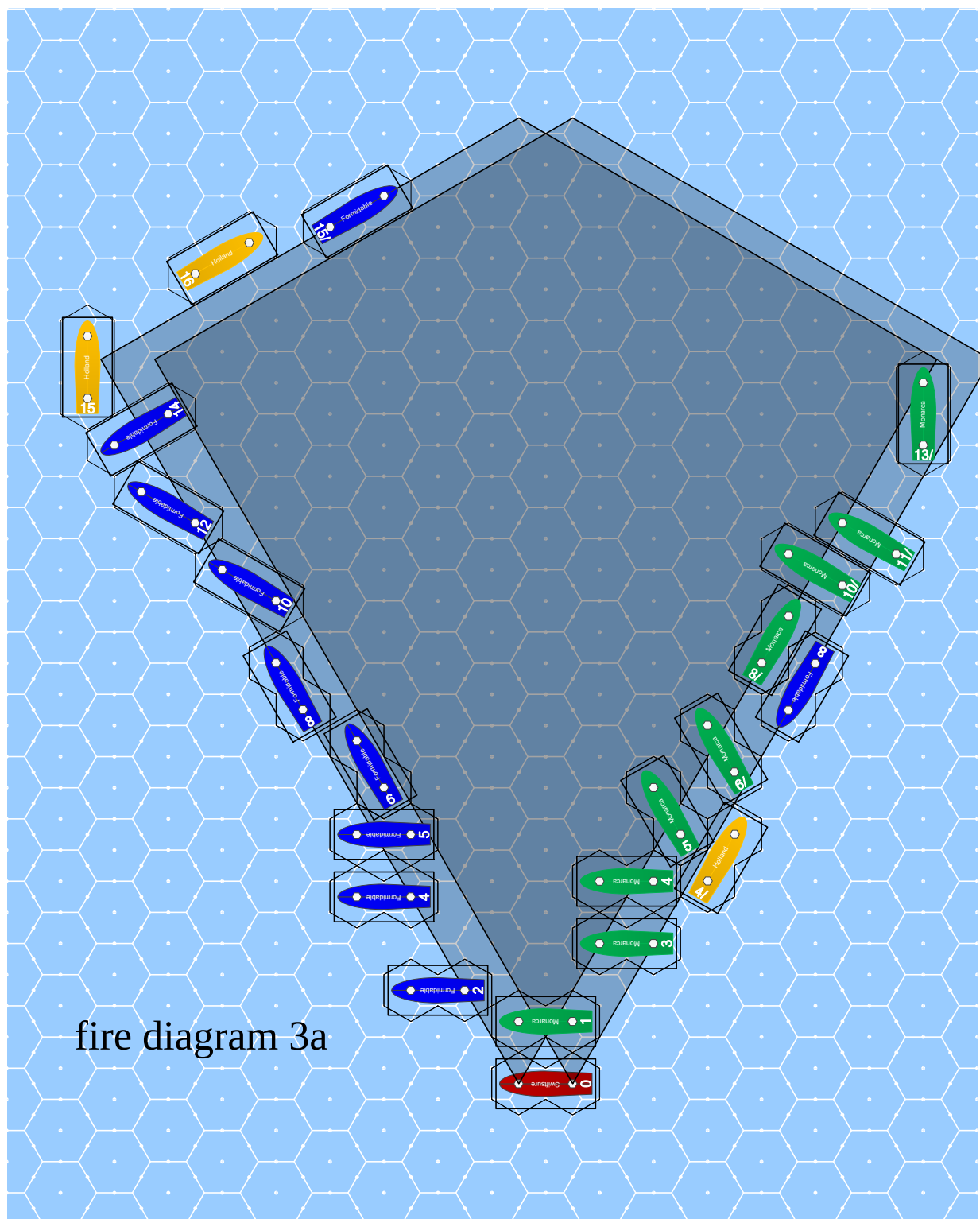


Figure 14. Fire diagram for a firing ship in hex-grid orientation 2a



fire diagram 2b

Figure 15. Fire diagram for a firing ship in hex-grid orientation 2b



fire diagram 3a

Figure 16. Fire diagram for a firing ship in hex-grid orientation 3a

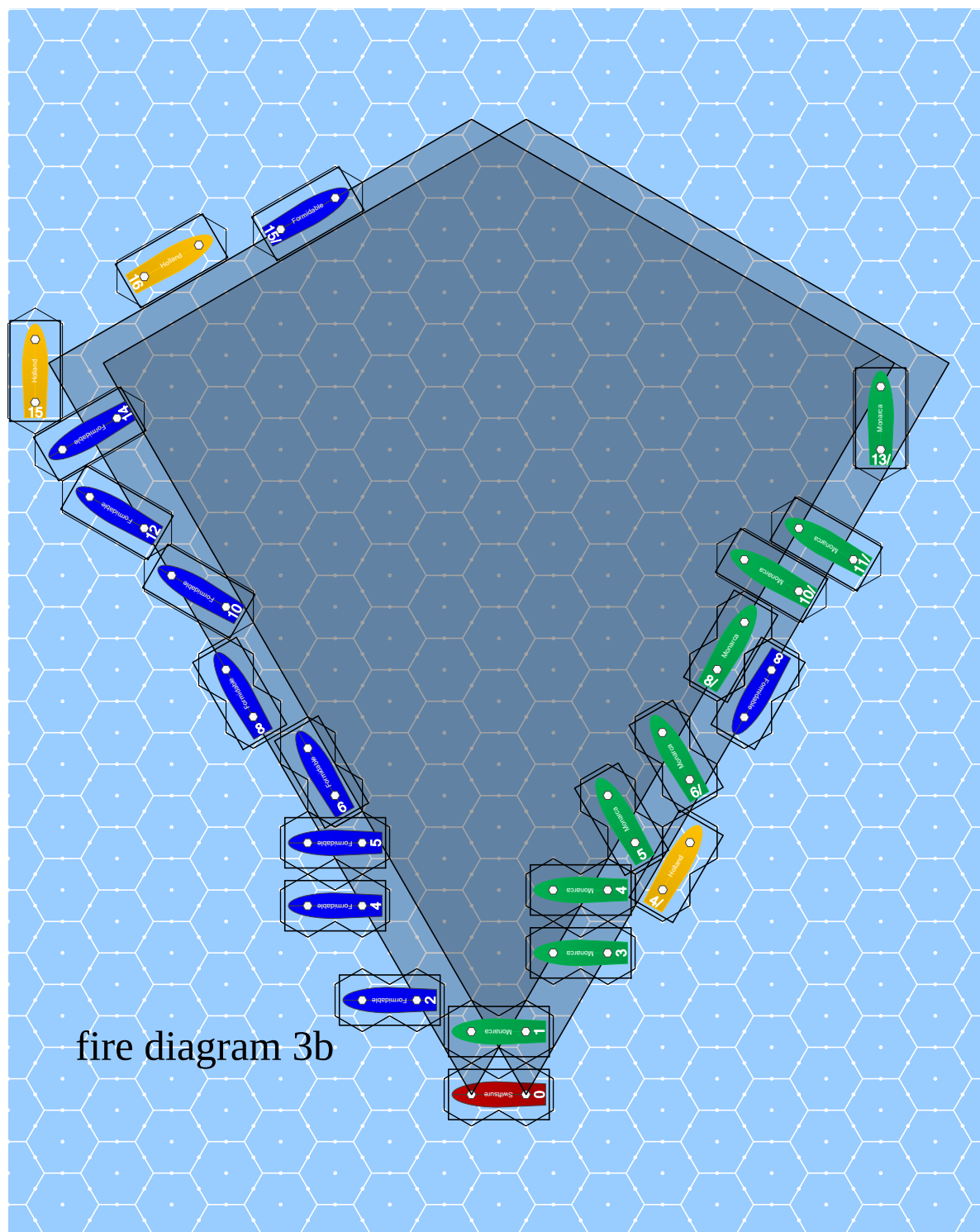


Figure 17. Fire diagram for a firing ship in hex-grid orientation 3b

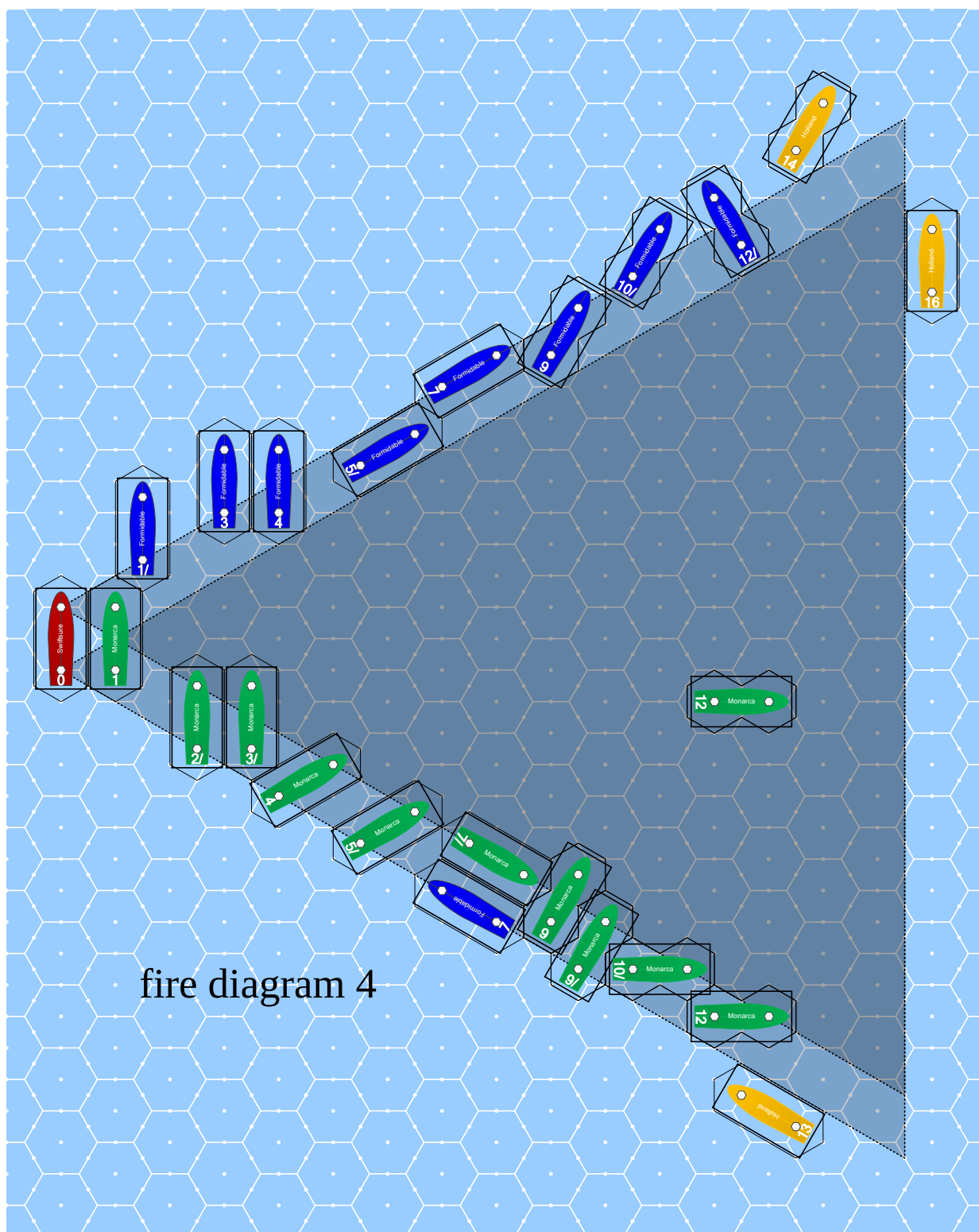


Figure 18. Fire diagram for a firing ship in hex-grid orientation 4

On this page and the next are diagrams to indicate the blocking footprints for tracing line of sight for combat. The ship's jacket is the blocking footprint when a friendly ship 1–4 hexes away is firing; the dashed line one hex from the jacket is the footprint when a friendly ship 5–9 hexes away is firing; and the dashed line

two hexes from the jacket is the footprint when a friendly ship 10 or more hexes away is firing. Lines of sight for firing may not pass through the footprint.

"jackets" and "footprints" for ships on even-numbered headings

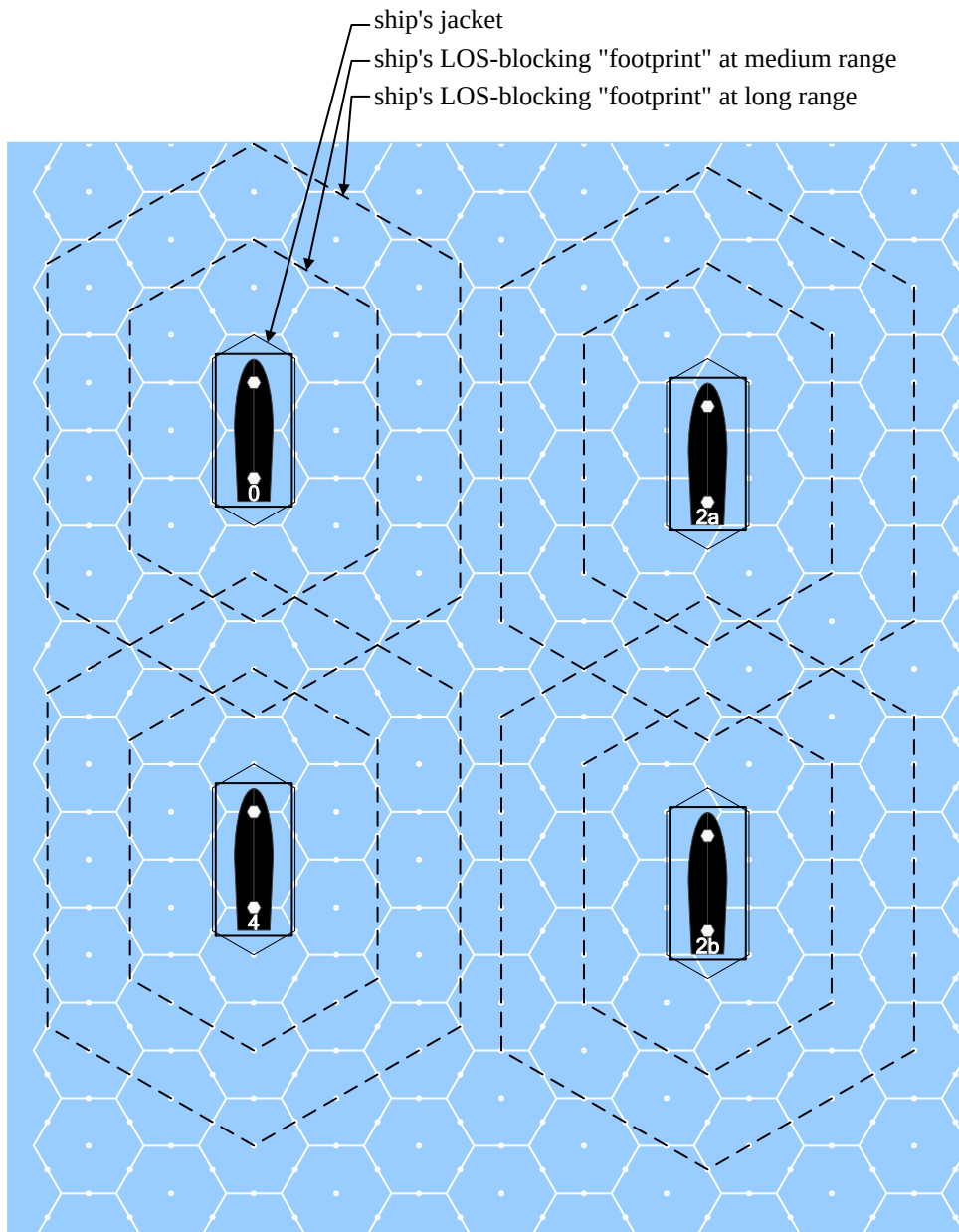


Figure 19. LOS-blocking footprints for even-numbered hex-grid orientations.

"jackets" and "footprints" for ships on odd-numbered headings

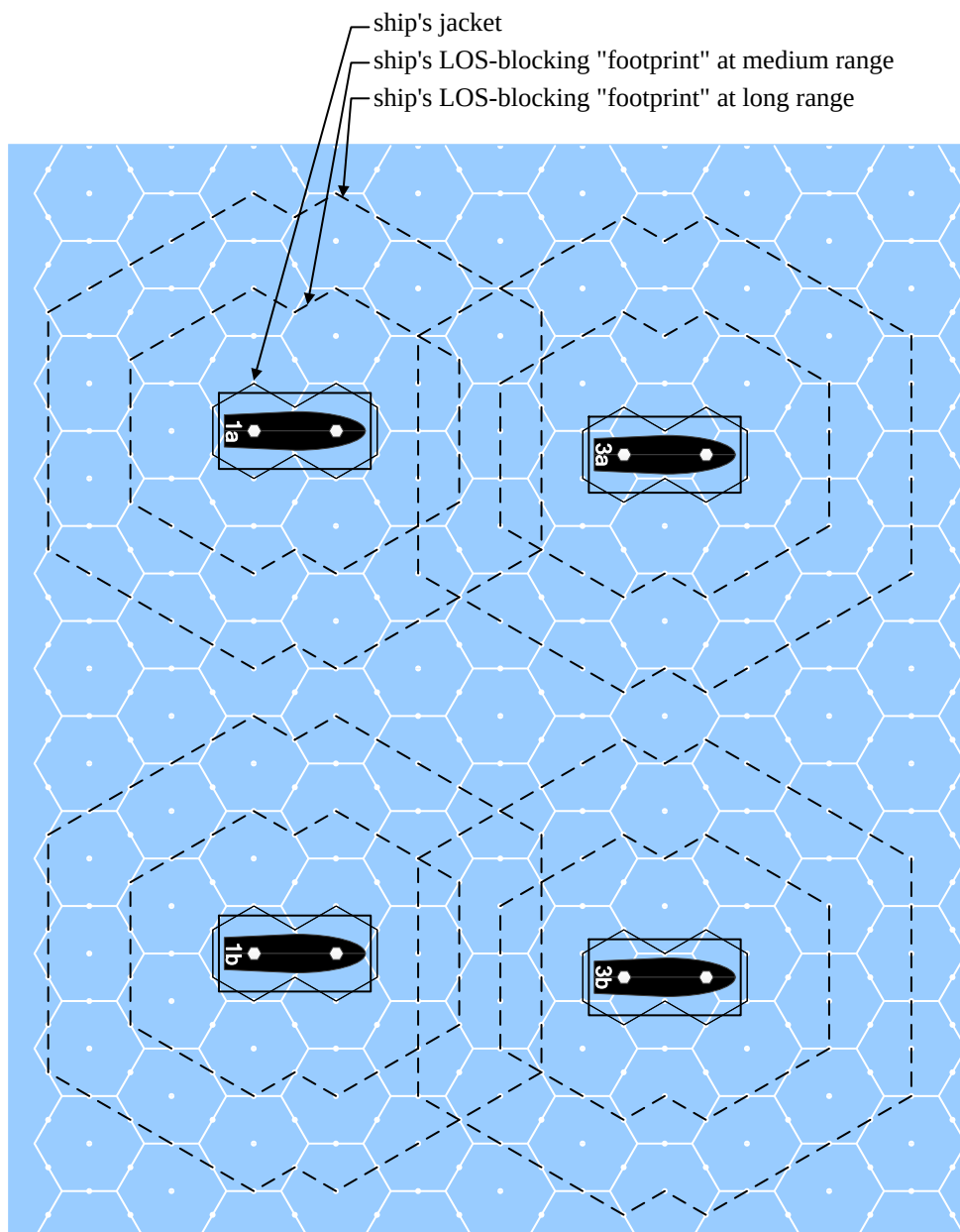


Figure 20. LOS-blocking footprints for odd-numbered hex-grid orientations.

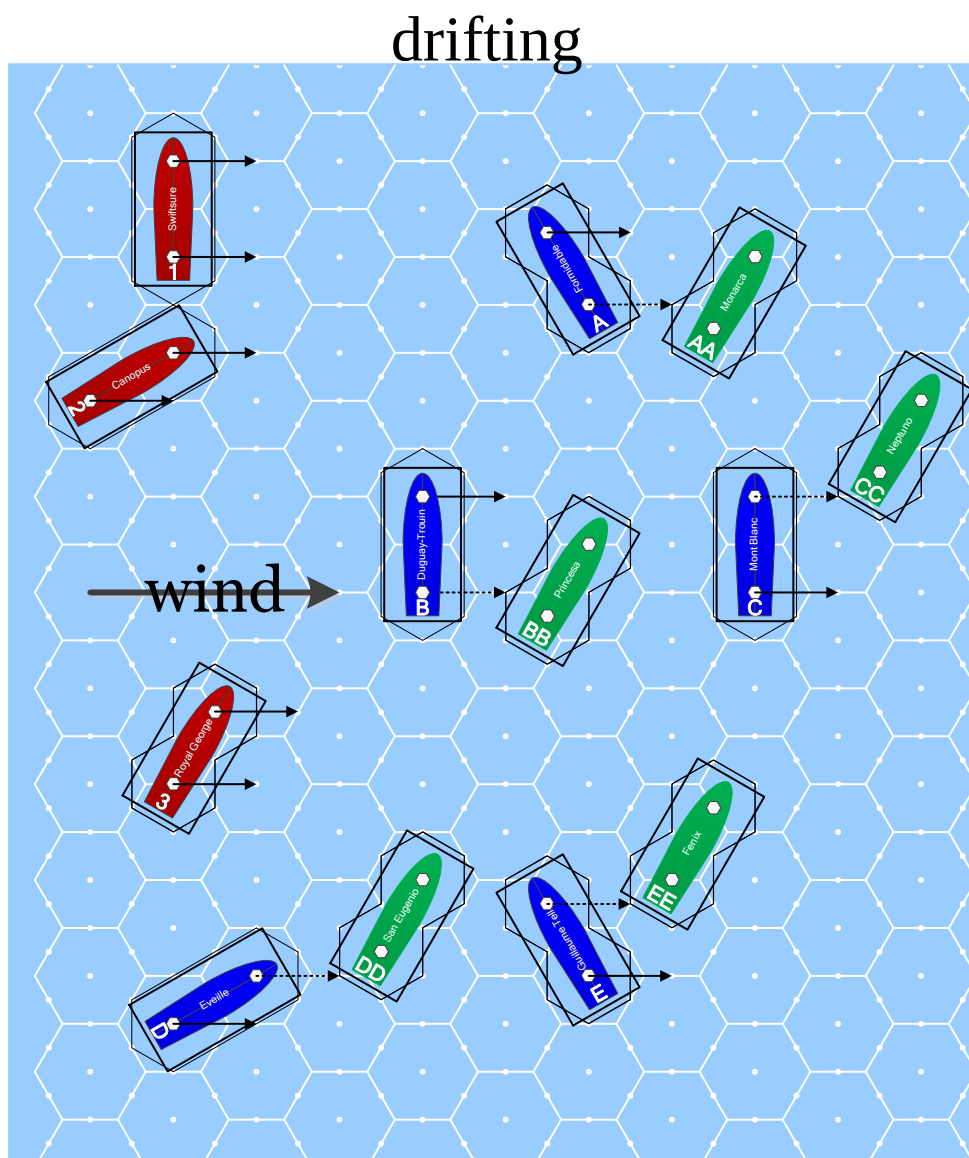


Figure 21. Drifting. The red ships drift fully; the blue ships drift partially; the green ships are not eligible to drift for some reason.