

Battle of Mobile Bay

“Homework” Packet

(feel free to print this out and bring it with you)

HMGS-PSW

Mini-Wars

“Fifteen minutes could save your ship...”

Hello and welcome to the Battle of Mobile Bay, fought on August 5, 1864 between the United States Navy under the command of Rear Admiral David G. Farragut and rebel forces under the command of Admiral Franklin Buchanan and Brigadier General Richard L. Page. Your game master for this scenario will be Steve Thorne, the big guy with the famous 1886 chromolithograph by J.O. Davidson and Louis Prang of the Battle of Mobile Bay (part of the Lincoln Financial Foundation Collection in Boston, MA, courtesy of the Indiana State Museum) on his t-shirt.

The purpose of this “homework” packet is to familiarize you with the general situation that led to the battle, the forces and personalities involved, basic game information (such as the “cheat sheet” version of the rules, the fire tables, “what do I have to roll” issues) and so on. About 15 minutes of time spent reading this sometime before the game starts will allow you to get to gaming as soon as possible. I've included more information than you really need to play, but I hope you will find it interesting.

Situation: Blockade running has been a problem at Mobile, Alabama since the conflict began. The effort to put down the rebellion has reached the point where operations to seal off Mobile are now possible. USN warships and equipment, along with United States Army units in transports have been gathered to secure the port. In the general area of Mobile, Alabama, there are several batteries, forts, areas of pilings and other obstructions to movement by water, torpedoes (“mines” in the parlance of those times) and soldiers to prevent the Government's efforts to secure Mobile, Alabama.

Commanders: Rear Admiral David G. Farragut commanded the United States Navy forces in the action. He had the foresight to ask for Signal Corps support from the Army in order to be able to pass along signals to United States Army units ashore. In the event, their presence allowed Farragut to give more precise and detailed instructions to his naval subordinates as regular naval signal flags proved to be a time consuming method during battle. Rebel naval forces were commanded by Admiral Franklin Buchanan and Fort Morgan by Brigadier General Richard L. Page. Many of the USN officers knew some of the rebel officers before they resigned to join the rebellion and had a very low opinion of such dishonorable conduct. They have been anticipating a chance to get them at last.

Forces: Besides Fort Morgan, a masonry fort completed in 1834, a detailed Order of Battle may be found on page five of this packet.

Game Commands: There are five Rebel commands, three for Ft. Morgan (FM1, FM2 and the Water Battery) and two naval commands of two ships each. There are nine USN commands, two for the four ironclads and seven two-ship commands as Farragut's plan had pairs of ships lashed together to join less protected ships and to keep the pairs moving if one was damaged.

The Terrain: The game surface consists of a six by sixteen foot blue felt cover with GHQ Terrain Maker material used to make Fort Morgan and the land around it. Fort Morgan is as close to the same scale as the ships as I could make it. (Please avoid balancing yourself by the knuckles of one hand on this land area.) The tide is coming in and will add 1 inch of movement from the ocean through the main channel. The wind is from the southwest which could affect Fort Morgan's return fire due to smoke. There is a belt of 180 torpedoes which were used to force ships closer to the Fort. Farragut knew the approximate location of the torpedoes (there was a black buoy marking the edge of the channel). These torpedoes are approximately in the area of the "Damn Me! I'm a Torpedo" markers. There will be an on-site briefing about torpedoes and grounding.

What do you need to bring to the table?: Not much. I have supplied a clipboard, a pencil, an eraser, a movement template and Log Sheets for the ships and fort sections. Tape measures will be used by the GM with player assistance on the "target" end. The automatic return feature, if screwed up by the GM, will cause him to question his dexterity while he does repairs later. Fourteen players having this capability is more than the GM can tolerate. Thank you for your understanding.

"What Do I Need to Roll?" The GM will make most routine rolls with players marking the results on the forms. This GREATLY speeds up the game and helps everyone learn what's going on at the same time. Anything that puts you or your ship at risk (morale, possible magazine detonations...) will be rolled by the affected player (fair is fair, after all) with the dice provided at the time. Simply pick it up and drop it someplace "blue" near you from a height of at least six inches. Disturbing the dice gods with arcane rituals prior to doing so will only serve to irritate other players and the GM.

Game Etiquette: With 14 players and the GM around a 6 by 16 table, we're going to need some. Players will be arranged by commands around the table. The GM will inform the players about what happened and provide explanations of events. The affected player will kindly reply by repeating that information and marking their Log Sheets accordingly. You don't need to follow that with "Aye!" but it would add to the naval atmosphere (e.g., "One suppression, one hull box. Aye!"). The reason for this is to keep the game flowing smoothly and keep the noise level down to a tolerable level. Please feel free to ask questions and make witty comments as the situation permits, but try to avoid side conversations.

What the GM will do each turn: Move the ships (within limits). If you can comfortably reach out to a ship to move it expeditiously, then please do if asked. Try to move the model by the base and avoid snagging the felt, if you can. Most routine dice rolls will be made by the GM using the "Senior Chief Petty Officer L.W. Hoyt Memorial Dice Tower" (named after the GM's late father-in-law) to avoid errant dice hitting the ships or the fort or the floor (or I-5 if you dislike the roll).

What you will do: Players will be solely responsible for targeting, noting plotted speeds, telling the GM where you want to move (what you want to do) and marking damage on the Log Sheets.

Have fun and learn something about an important naval action during the War of the Rebellion.

Sail and Steam Navies Cheat Sheet

The Basics: Dice and Scale: Two D10 are used for fire and hit location with 0 = 10. High numbers for hits are good. Little D6's are used to mark distance moved left over from the previous 30 degree turn. The ships are 1:600 scale and the ground scale is 1"=37.5 yards (Ratio of 2.25:1). A game turn represents 2-3 minutes. All modifications are cumulative and some apply to hit and damage, so if you fire at close range, you have a greater chance to hit and a greater chance to do damage.

Log Sheets: Used for keeping track of damage, ammo levels, Speed Orders (SO) in inches, and has a drawing of the ship with the guns located by type and their fire numbers. Log Sheets are NOT secret.

Gun types: Gun types and firing arcs are color coded on the log sheet. The types are **Light Smoothbores**, **Medium Smoothbores**, **Heavy Smoothbores**, **Light/Medium Rifles**, **Heavy Rifles** and **Mortars**. There are no mortars in the Mobile Bay scenario. The firing arcs are 40 degrees for guns fired through ports (Port Arc), 90 degree arcs, 135 degree arcs and 270 degree arcs (various pivot guns). Each gun type has its own range band: Close, Medium and Long.

Sequence of play: Mark SO's, Cannonade, (Musketry, Boarding/Melee phases are not used in this scenario as this is a big gun fire and ship ramming event. Yeah!) Movement, Morale, Repair.

Fire: Types of projectiles: Shot, Shell, Grapeshot/Canister (G/C) (Hot Shot and Mortar not used). Each gun has a Gun Round (GR) factor which is modified for range and type of round. Range is from the closest points on the models. Triangles on log sheets are for guns that take longer to reload. Check the white box when fired and the gray box the next turn(s) for reloading. Howitzers only use shell and grapeshot/canister, may not fire long range and GR is not affected by shell type. Gun Port arc guns may battery fire at the same target in groups of 4 or less and get +1 to GR and to hit D10.

Fire resolution: A gun hits on D10 of 2+, 5+ or 8+ after modifications for firer, target, night (N/A here) and smoke at close, medium and long ranges. Another D10 is used to determine hit location by matching the data on the Log Sheet. G/C only hits high and stack locations (misses other areas). Forts have sections, so if you hit, you've hit, with no location roll necessary.

Damage: Subtract the armor rating of the area hit from the modified GR to get the number of D10's to roll, with at least one D10 for a hit regardless. 8, 9 and 10's result in damage of some kind, depending on the type of round, and can result in suppression, armor damage, or hull hits. G/C hits result in suppression. No armor boxes left? Hull hits! Mark suppression hits with "/" by row. Make that "/" an "X" in that row if still there after the Damage Phase. Upper and Turret location hull hits are marked off in squares then round spots. Lower hits mark off round spots then any squares. When all round boxes are filled, the ship begins to fill with water. Hull hits on Ft. Morgan are treated as armor hits.

Special Damage: Stack, paddle box, mast (for every 2 gray boxes reduce speed by 1). Fires (when > 1 D10 is rolled for shell, mortar or hot shot, add 1 for each armor and hull hit. 8+ rolls result in fire). Guns (shot, shell, hot shot or mortar rounds with triples 1 through 5 knocks out a gun. If no guns in the area, then armor hit instead).

Smoke: For every 10 D10 hit results of a natural 1 increase the smoke marker by one. Smoke will affect the area from the western most ship east to the board edge. Smoke subtracts -1 per smoke marker from hit chances.

Critical Hits: Result from each set of triples on damage D10 rolls. Triple 1-5 destroys a gun, from 6 to 10 is a Critical hit (affects steering, engine, magazine hits, steam, wheel (paddlewheel), turret jammed). Example: 5D10 rolled with 1,1,1, 6 and 8. 8 is a suppression, but the triple 1's disable a gun. The 6 is nothing (unless tripled, which would be a Critical hit). Details of each explained as they happen. See the Advanced Critical Damage Chart in the .pdf file.

Movement: Two rounds of movement per turn. Speed Order in inches. Initiative: Each side rolls D10. The side with the highest SO adds 1 and the side with the highest quality adds one. Higher number has choice of moving first or second. Ships for one side move one at a time before the other side moves (lashed ships move as one). Moving with or against the current affects speed by one except that a vessel with a movement die equal to its turn rating may make a turn first. Templates are used for turns, align the template with the center of the model and pivot. Ships must move a distance equal to its turn rating before being able to turn, use a D6 (Movement Die) to track movement across turns. A Tight Turn reduces the turn requirement by 1. Steam vessels with a SO of 0 but with at least 1 Max Speed box remaining may turn up to 60 degrees. Sailing vessels in irons (pointing at the wind) may turn 30 degrees if a morale roll is passed. Steam vessels may move backwards after first stopping. Grounding, obstructions, torpedoes and drifting will be explained by the referee as they occur.

Ramming: Ramming occurs if the bow of a ship contacts another ship. The ramming ship stops and distance moved is noted by placement of a Movement Die (D6). If the angle of attack is outside 45 degrees on the template, it's a glancing blow-- reduce SO by 1 and continue movement, if possible. Resolve with an unmodified D10. If the angle of attack is within 45 degrees, add 1 to the D10 roll for every inch of attacker movement up to 5. Ram attack is resolved by rolling D10's equal to the number of MS boxes used for its SO this turn, subtracting the armor number at the point of contact modifies the rolls. If the target is smaller add 1, if larger add 1. The range of modifiers is +5 to -2. Roll a D10 for fouling after attack resolution with fouling on a 1 or 2. Unless fouled, the attacking vessel must continue movement after being turned to parallel the target. Remove the Movement Die after this.

Morale: Check morale by rolling a D10 for certain events, adding the quality rating and subtracting all morale modifiers. Passes on 6+, fails otherwise and a withdraw marker given. Ships withdraw to a friendly edge or to land to be grounded—may not ram or fire. Fort sections no longer fire. If a ship or fortification has all suppression boxes marked in any way (/ OR X), it surrenders. Surrendered ships may not fire or ram or be fired upon. It must move to a friendly map edge. Ships and Ft. Morgan may remove the withdrawal by passing a morale check on subsequent turns. Ships that have been grounded through withdrawal may attempt to set the ship afire by passing a morale check. If passed, roll D10 and place that number of fire markers on the ship. Then run like Hell away from it before the magazine goes BOOM.

Repair: Firefighting: Roll 1 D10 for each fire marker, modify by adding crew quality and subtracting 1 for each row of suppression. 8+, remove a marker. 4 -, add a marker. Critical Damage repair: Roll 1 D10 with a result of 10+ removing a turret jam or steering damage. Suppression removal (“/” marks only): Roll a number of D10's equal to the quality rating and erase a box for every 6+ rolled. X in the rest of the / boxes. Unfouling: Roll a D10 and add the quality rating, removing the marker on 10+. May immediately make a 30 degree turn. Ungrounding: Roll a D10, adding 1 if the SO is B and 2 for each towing vessel, removing the marker if the number is > the ship's draft rating. May make a 30 degree turn immediately. Sinking vessels mark off additional damage. Sinking (does NOT apply to Fort Morgan). Ships with all lower hull boxes marked off will begin to sink. Additional boxes will be marked off in subsequent Repair phases until all are marked off or the ship is grounded.

Ships at Mobile Bay (from Wikipedia)

United States Navy

Commander: [Rear Admiral David Farragut](#)

14 wooden ships:

- [USS Brooklyn](#) (screw sloop) — Captain [James Alden](#)
- [USS Galena](#) (950-ton ironclad gunboat/screw steamer) — Lieutenant Commander [Clark H. Wells](#)
- [USS Hartford](#) (2900-ton screw sloop; Farragut's flagship) — Flag Captain [Percival Drayton](#)
- [USS Itasca](#) (gunboat) — Lieutenant Commander [George Brown](#)
- [USS Kennebec](#) (gunboat) — Lieutenant Commander [William P. McCann](#)
- [USS Lackawanna](#) (1240-ton steam screw sloop-of-war) — Captain John B. Marchand
- [USS Metacomet](#) (1173-ton *Sassacus*-class "double-ender" steam gunboat) — Lieutenant Commander [James Edward Jouett](#)
- [USS Monongahela](#) (screw sloop) — Commander [James H. Strong](#)
- [USS Octorara](#) (981-ton "double-ender" side-wheel gunboat) — Lieutenant Commander Charles H. Green
- [USS Oneida](#) (screw sloop) — Commander J. R. Madison Mullaney
- [USS Ossipee](#) (1240-ton steam screw sloop) — Commander [William E. Le Roy](#)
- [USS Port Royal](#) (sidewheel steamer gunboat "double-ender") — Lieutenant Commander [Bancroft Gherardi](#)
- [USS Richmond](#) (screw sloop) — Captain [Thornton A. Jenkins](#)
- [USS Seminole](#) (screw sloop) — Commander [Edward Donaldson](#)

4 [ironclad monitors](#):

- [USS Chickasaw](#) (1300-ton *Milwaukee*-class ironclad river monitor, twin-turrets) — Lieutenant Commander [George H. Perkins](#)
- [USS Manhattan](#) (2100-ton *Canonicus*-class monitor) — Commander [James W. Nicholson](#)
- [USS Tecumseh](#) (2100-ton *Canonicus*-class monitor) — Commander [Tunis Craven](#) (sunk by torpedo)
- [USS Winnebago](#) (1300-ton *Milwaukee*-class ironclad river monitor, twin-turrets) — Commander [Thomas H. Stevens, Jr.](#)

Rebel Forces

Commander: Admiral [Franklin Buchanan](#) (captured)

1 [ironclad](#):

- [CSS Tennessee](#) (1273-ton ironclad ram; Buchanan's flagship) — Captain [James D. Johnston](#) (captured)

3 gunboats:

- [CSS Gaines](#) (863-ton side-wheel gunboat) — Lieutenant Commander J. W. Bennett (grounded and abandoned)
- [CSS Morgan](#) (863-ton side-wheel gunboat) — Commander George W. Harrison
- [CSS Selma](#) (320-ton side-wheel gunboat) — Lieutenant [Peter U. Murphey](#) (captured)

Medals of Honor
Battle of Mobile Bay
Crew of the USS *Lackawanna*

Seaman John M. Burns: “On board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, on 5 August 1864. Although severely wounded and sent below under the surgeon's charge, Burns promptly returned to his station and assisted the powder division throughout the prolonged action which resulted in the capture of the rebel ram *Tennessee* and in the damaging and destruction of Fort Morgan.”

Landsman Michael Cassidy: “Served on board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee*, in Mobile Bay, 5 August 1864. Displaying great coolness and exemplary behavior as first sponger of a gun, Cassidy, by his coolness under fire, received the applause of his officers and the guncrew throughout the action which resulted in the capture of the prize ram *Tennessee* and in the destruction of batteries at Fort Morgan.”

Landsman Louis G. Chaput: “On board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the rebel ram *Tennessee* in Mobile Bay, 5 August 1864. Severely wounded, Chaput remained at his gun until relieved, reported to the surgeon and returned to his gun until the action was over. He was then carried below following the action which resulted in the capture of the prize ram *Tennessee* and in destruction of batteries at Fort Morgan.”

Landsman Patrick Dougherty: “As a landsman on board the U.S.S. *Lackawanna*, Dougherty acted gallantly without orders when the powder boy at his gun was disabled under the heavy enemy fire, and maintained a supply of powder throughout the prolonged action. Dougherty also aided in the attacks on Fort Morgan and in the capture of the prize ram *Tennessee*.”

Captain of the Top John Edwards: “As second captain of a gun on board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, on 5 August 1864. Wounded when an enemy shell struck, Edwards refused to go below for aid and, as heavy return fire continued to strike his vessel, took the place of the first captain and carried out his duties during the prolonged action which resulted in the capture of the prize ram *Tennessee* and in the damaging and destruction of batteries at Fort Morgan.”

Landsman Samuel W. Kinnaird: “Served as a landsman on board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, 5 August 1864. Showing a presence of mind and cheerfulness that had much to do with maintaining the crew's morale, Kinnaird served gallantly through the action which resulted in the capture of the prize rebel ram *Tennessee* and in the destruction of batteries at Fort Morgan.”

Seaman Adam McCulloch: “On board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, on 5 August 1864. Wounded when an enemy shell struck, and ordered to go below, McCulloch refused to leave his station and continued to perform his duties throughout the prolonged action which resulted in the capture of the prize ram *Tennessee* and in the damaging and destruction of Fort Morgan.”

Boatswain's Mate William Phinney: “On board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram, *Tennessee* in Mobile Bay, 5 August 1864. Serving as a gun captain Phinney showed much presence of mind in managing the gun, and gave much needed encouragement to the crew during the engagement which resulted in the capture of the prize rebel ram *Tennessee* and in the damaging and destruction of Fort Morgan.”

Captain of the Forecastle John Smith: “On board the U.S.S. *Lackawanna* during the successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, 5 August 1864. Serving as a gun captain and finding he could not depress his gun when alongside the rebel ironclad *Tennessee*, **Smith threw a hand holystone into one of the ports at a rebel using abusive language against the crew of the ship** (emphasis mine). He continued his daring action throughout the engagement which resulted in the capture of the prize ram *Tennessee* and in the damaging and destruction of Fort Morgan.”

Armorer George Taylor: “On board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, on 5 August 1864. When an enemy shell exploded in the shellroom, Taylor although wounded went into the room and, with his hand, extinguished the fire from the explosion. He then carried out his duties during the remainder of the prolonged action which resulted in the capture of the prize rebel ram *Tennessee* and in the damaging and destruction of Fort Morgan.”

Quarter Gunner James Ward: “Serving as gunner on board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the ram *Tennessee* in Mobile Bay, 5 August 1864. Although wounded and ordered below, Ward refused to go, but rendered aid at one of the guns when the crew was disabled. He subsequently remained in the chains, heaving the lead, until nearly caught in the collision with the ram *Tennessee*. He continued to serve bravely throughout the action which resulted in the capture of the prize ram *Tennessee* and in the damaging and destruction of Fort Morgan.”

Quartermaster Daniel Whitfield: “Serving as quartermaster on board the U.S.S. *Lackawanna* during successful attacks against Fort Morgan, rebel gunboats and the rebel ram *Tennessee* in Mobile Bay, August 5, 1864. Acting as captain of a gun, Whitfield coolly stood by his gun, holding on to the lock string and waited alongside the rebel ram *Tennessee* until able to fire the shot that entered her port. Whitfield courageously carried out his duties during the prolonged action which resulted in the capture of the prize ram *Tennessee* and in the damaging and destruction of Fort Morgan.”

1. Log number and Module
2. Victory point value
3. Service dates and area of operation
4. Name
5. Nation
6. Class
7. Hull – the amount of Hull damage the vessel unit can sustain with squares for upper hull and circles for lower hull.
8. Hit Locations – the various locations with Armor rating and damage boxes. The Armor rating is shown as a “red stop sign” shape with the number in white.
9. Maximum Speed (MS) – the maximum movement in inches a vessel has available each round. As boxes are marked off this maximum is reduced. The tan boxes show the maximum speed a steam vessel may move in reverse. Sailing vessels also have dark gray boxes with white numbers that are only available when Full Sails is ordered.
10. Wind Effects Compass – shows a sailing vessel’s facing in relation to the wind direction and the number of MS boxes not available in that facing. (Only shown on sailing vessel log sheets)
11. Speed Order – the area where the Speed Order (SO) for each turn is written. A SO is always written in whole numbers.
12. Morale – the area where morale events and effects are noted.
13. Suppression – the area for marking temporary and permanent crew damage.
14. Steering Damage – is marked when indicated by a Critical Damage result.
15. Turn – the number of inches a vessel must move straight before executing a 30° facing change.
16. Draft – the relative depth of the vessel used to determine the chance of grounding.
17. Quality – the morale and capability rating of the crew and leadership.
18. Crew – the number of crew factors.
19. Sharpshooters – the number used in the Musketry phase.
20. Ram Attack – the value used by the attacker during ramming. Higher numbers represent vessels equipped with reinforced bows and/or rams.
21. Size – the relative size of the vessel.
22. Torpedo – indicates whether or not the vessel is equipped with a spar torpedo.
23. Transport – the number of points available to transport land units.
24. Gun Symbols – these represent each gun on the vessel or fortification.
25. Section Lines – show Bow, Side, and Stern sections of a vessel or sections of a fortification.
26. Vessel/Fortification Plan View – This is a top down view of the vessel/fortification in the center area of the log sheet and shows the position of the Gun Symbols.
27. Low Freeboard – indicates that the vessel has a low freeboard (deck is close to the water) or low reserve buoyancy.



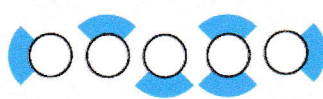
Gun Firing Arcs and Lists

BOW

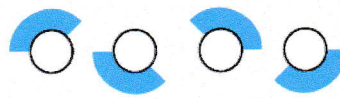
STERN



40 degree arcs



90 degree arcs



135 degree arcs



270 degree arcs

○ Smoothbore, Muzzle-Loading Rifle, Mortar ○ Breech-Loading Rifle or Converted SB ○ Howitzer

GR Light Smoothbore

- 0 9 pdr or smaller
- 1 12 pdr
- 2 18 to 24 pdr
- 3 32 to 42 pdr

GR Heavy Smoothbore

- 7 9.2 in. Somerset
- 8 10 in. Brooke 2B
- 10 10.5 in. Armstrong, 11 in. Brooke 2B, 11 in. Dahlgren
- 20 15 in. Dahlgren, 15 in. Rodman
- 34 20 in. Rodman

GR Medium Smoothbore

- 4 8 in. Columbiad, 8 in. 55 to 65 cwt, 48-60 pdr
- 5 68 pdr British, 8 in. Brooke 2B, 9 in. Dahlgren
- 6 10 in. Columbiad

GR Heavy Rifle

- 7 6.4 in. Brooke 2B, 7 in. Brooke, 120 pdr Blakely, 7 in. Armstrong, 7.64 in. French BL 1864
- 8 7 in. Brooke 2B, 130 pdr James (CSB), 7.9 in. Hontoria BL
- 9 7 in. Brooke 3B, 150 pdr Blakely, 150 pdr Parrott, 6.3 in. French BL 1870, 8 in. Obuchoff BL
- 10 8 in. Brooke 2B, 8.2 in. Krupp BL
- 11 200 pdr Blakely, 9.45 in. French BL 1864
- 13 7.64 in. French BL 1870, 9 in. Obuchoff
- 14 250 pdr Blakely, 10 in. Parrott, 9 in. Armstrong, 9.4 in. Krupp BL
- 15 10.8 in. French BL 1864
- 18 10.2 in. Krupp BL, 11 in. Obuchoff BL
- 20 10 in. Armstrong
- 21 9.45 in. French BL 1870
- 23 11 in. Armstrong, 12 in. Obuchoff BL
- 24 12 in. 25 ton Armstrong
- 29 10.8 in. French BL 1870
- 33 12 in. 35 ton Armstrong

GR Light and Medium Rifle

- 0 9 pdr or smaller
- 1 3 in. Ordnance, 10 pdr Parrott, other 10-18 pdr, 2 to 3.4 in. BL
- 2 20 pdr Parrott, 20-24 pdr, 3.8 in. (12 pdr CSB)
- 3 30 pdr Parrott, 4.5 in. Ordnance, 3.5 in. Blakely, 4.2 in. Obuchoff BL, 4.9 in. Krupp BL, 40 pdr Armstrong BL 5.8 in. (24 pdr CSB)
- 4 6.4 in. (32 pdr CSB), 50 pdr Dahlgren, 60 pdr Parrott, 64 pdr British, 5.5 in. French 1864
- 5 7 in. (42 pdr CSB), 7 in. Armstrong BL, 80 pdr Dahlgren, 5.9 in. Krupp BL, 70 pdr Whitworth, 6.4 in. French 1858, 6.4 in. French BL 1864, 6 in. Obuchoff BL
- 6 6.4 in. Brooke, 100 pdr Blakely (CSB), 100 pdr Parrott, 6.7 in. Krupp

Mortar

4 - 8 inch, 6 - 10 inch, 10 - 13 Inch



Sail & Steam Navies Player Aid

Turn Sequence

- Orders
- Cannonade
- Musketry
- Boarding/Melee
- Movement
- Morale
- Repair

Orders

Write the speed for the turn in the Speed box.
Mark ST if using Spar Torpedo.
May order FS.

Hit Number - White d10		Close	Medium	Long
Gun Class	8"	20"	32"	8
Light Smoothbore	8"	28"	44"	
Medium Smoothbore	12"	32"	56"	
Heavy Smoothbore	12"	44"	80"	
Light/Medium Rifle	16"	60"	100"	
Heavy Rifle	NA	NA	14-100"	
Mortar	2"	NA	NA	
Pistol/Shotgun	4"	6"	8"	
Smoothbore Musket	6"	8"	12"	
Rifle Musket				

Hit Location - Color d10

See Target Log and modify based on firing arc.
Firer in Target Bow Arc -2
Firer in Target Stern Arc +2
Deck is hit if Firer is a Mortar or 2 levels higher and Hit d10 is modified 8+

Hit Modifiers	Other
Firer	Night turn
Per gun in Group	Each Smoke Marker
Per SS/SA Factor	
Quality 4	
Higher elevation	
Lower elevation	
Per Suppression Level	
Quality 2	
Target	
Illuminated at night	
Monitor or Size < 4	
Vessel Target of Mortar	

Gun Round Modifiers

Close Range	+2
Long Range	-2
Shell	-1
Shell - Heavy SB	-2
Per gun in Group	+1
Per SS/SA Factor	+1

Cannonade & Musketry

Damage - (Roll d10 = Modified GR - Armor)

Damage	Shot	Shell/Mortar	Grape/Canister	Small Arms
Suppression	8	8(x2)	8+	8+
Armor	9	9	9	9
Hull	10	10	10	10
Gun	Triple 2	Triple 2	Triple 2	Triple 2
Critical	Triple 3	Triple 3	Triple 3	Triple 3

1 Add Fire on 8+
2 Triple 1-5
3 Triple 6-10
4 Stack, Mast, PB gray box; Mast x2 if FS

Critical Damage	Upper	Lower	Deck	Magazine
1-3 Steering	1-3 Engine	1-5 Engine	Paddle Box	1-5 Steering
Turn +2	d10 MS	d10 MS	Turn +2	Turn +2
4-7 Engine	4-7 Magazine	6-10 Steam	6-10 Wheel	6-10 Jammed
d10 MS	d10 Suppress	d10 Hull	2 d10 Gray	1-5 Bow
8-10 Steam	8-10 Steam	8-10 Steam	Sail Vessel Deck	6-10 Stern
d10 Suppress	d10 MS	d10 Suppress	d10 Hull	Sail Vessel Mast
d10 MS	d10 MS	d10 MS	Sail Vessel Deck	Sail Vessel Upper/Lower
d10 MS	d10 MS	d10 MS	d10 Hull	d10 Hull

Boarding/Melee

- Determine Attacker/Defender
- Roll d10 = Crew/SS - suppression level
- Add Quality rating
- Subtract 2 if Mon/CIC Defender
- Mark suppression for each 8-10
- All roll for Morale with any modifiers
- Attacker repulised if fails morale
- Defender surrenders if fails morale
- Attacker repulised if both fail morale
- No affect if neither fails morale

Movement

- Roll d10 per side for Initiative adding +1 for highest speed and +1 for highest Quality
- Winner chooses to move 1st or 2nd
- Each vessel must complete movement for the round before another vessel may move.
- If Moving vessel bow contacts another vessel go to Ram/Spar Torpedo Table
- If moving vessel enters Hazard zone go to Hazard table
- Move drifting vessels then hazards

Ram/Torpedo Table

Hit Chance

- Check Angle of Attack:
Outside arc or if hit roll fails roll unmodified d10 for damage
Inside arc roll d10 modified by +1 for each inch moved straight before contact with a maximum of +5.
- Go to Ram or Torpedo Damage

Ram Damage

- Roll d10 = SO MS boxes
- Modify by Ram Attack - Armor Attacker Size > +1; < -1
Total modifier Min = -2, Max = +5
- Damage:
3 or less... 1 Attacker Hull
4 to 7 NA
8 to 10 1 Target Hull
11 2 Target Hull
12 + 4 Target Hull

Torpedo Damage

- Explores on 6+
- Damage:
Drift- 2 d10 - 2
Keg- 3 d10 - 2
Spar- 3 d10 - 2
Prong- 2 d10
Bouyant- 3 d10
Electric- 6 d10

Hazard Table

- Shore - Grounded, SO 6+ = Lower Hull
- Shoal - Grounded on d10 <= Draft
- Piles & Hulks - Fouled.
SO 6+ = Lower Hull
- Chains & Booms - See Ram Damage
- Fire Raft - d10, 6+ = Fire
- Torpedo Marker - See Torpedo Damage

Morale

Make each required morale check in order starting at the top, using all modifiers that apply. Modifiers are cumulative.

Morale Check Requirement	Modifier	Morale Check Requirement	Modifier
Vessel - 1st turn 1/2 Hull Damage	-1	Fortification - 1st turn 1/2 Armor Damage	-1
Vessel - 1st turn 3/4 Hull Damage	-2	Fortification - 1st turn 3/4 Armor Damage	-2
Vessel - Each turn grounded	NA	Vessel/Fortification - Each turn 1/2 C/SS - Row	NA
Vessel - Each turn no MS	NA	Vessel/Fortification - Each turn 3+ Fire	NA
Vessel - Each turn sinking	-3		

Roll d10 for each check adding Quality rating. Morale check fails on 5 or less.
Failed Morale Check - 1st = Withdraw, 2nd = Surrender

Repair

- Firefighting - each fire d10 + Quality - Suppression level. 1-4 Fire, 5-7 NA, 8+ Out
- Repair succeeds d10 + Quality = 10
- Suppression, d10 = Quality, 6+ remove
- Un-fouling succeeds on d10 + Quality = 10
- Un-grounded on d10 roll greater than Draft
- Grapple/Un-grapple. d10 = 5+, auto friendly.
- Loading/Unloading
- Sinking vessel lose hull: Ironclad Lower Hull number, Low Freeboard 2 x Lower Hull, all others 1/2 Lower Hull (round up). -50% MS

Sail and Steam Navies Advanced Critical Damage Chart

Die Roll Modifiers: Light Gun -2 Heavy Gun +2 Shell +2

Die Roll	Lower Bow	Lower Side	Lower Stern	Upper Bow	Upper Side	Upper Stern	Turret	Paddle Box	Deck	Mast	Central Battery	Fort Section
1-2	1 Armor 1 Lower Hull	1 Armor 1 Lower Hull	1 Armor 1 Lower Hull	1 Armor 1 Upper Hull 2 Suppress	1 Armor 1 Lower Hull 2 Suppress	1 Armor 1 Lower Hull 2 Suppress	3 Armor 1 Upper Hull 2 Suppress	2 Gray Box 1 Suppress	Steering: Turn +2 until repaired 3 Upper Hull	2 Gray Box 1 Suppress	3 Armor 1 Upper Hull 2 Suppress	3 Armor 2 Suppress
3-4	1 Armor 3 Lower Hull	Engine: d10 MS Sailing: 5 Lower Hull	1 Armor 3 Lower Hull	1 Armor 3 Upper Hull 2 Suppress	1 Armor 3 Upper Hull 2 Suppress	1 Armor 3 Upper Hull 2 Suppress	Steering: Turn +2 until repaired 3 Armor 4 Upper Hull	4 Gray Box 2 Suppress	Engine: d10 MS Sailing: d10 Upper Hull	4 Gray Box 2 Suppress Fire if Shell	Steering: Turn +2 until repaired 3 Armor 4 Upper Hull	5 Armor 3 Suppress
5-6	Ram Attack -2 4 Lower Hull	Boiler: d10 Suppress d10 MS Sailing: d10 Lower Hull	Boiler: d10 Suppress d10 MS Sailing: 4 Lower Hull	Steering: Turn +2 until repaired 4 Lower Hull	Ammunition: Gun Damaged 4 Upper Hull 2 Suppress Fire	Ammunition: Gun Damaged 4 Upper Hull 2 Suppress Fire	Jammed: 1-5 Bow 6-10 Stern 3 Armor 3 Suppress	6 Gray Box 2 Suppress Fire if Shell	Boiler: d10 Suppress d10 MS Sailing: d10 Upper Hull	6 Gray Box 2 Suppress Fire if Shell	Ammunition: Gun Damaged d10 Armor d10 Upper Hull 5 Suppress Fire	Ammunition: Gun Damaged d10 Armor 5 Suppress Fire
7-8	Boiler: d10 Suppress d10 MS Sailing: d10 Lower Hull	Magazine: d10 Suppress d10 Lower Hull Fire	Magazine: d10 Suppress d10 Lower Hull Fire	Engine: d10 MS Sailing: d10 Lower Hull	Engine: d10 MS Sailing: d10 Upper Hull	Ammunition: Gun Damaged 4 Upper Hull 2 Suppress Fire	Ammunition: Gun Damaged 3 Armor 4 Upper Hull 3 Suppress Fire	2d10 Gray Box 2 Suppress Fire if Shell	Magazine: d10 Suppress d10 Lower Hull Fire	Mast Falls Left: Turn +4 Right until repaired 2d10 Gray Box 3 Suppress	Ammunition: 2 Guns Damaged d10 Armor d10 Upper Hull d10 Suppress Fire	2 Guns Damaged d10 Armor d10 Suppress Fire
9-10	Magazine: d10 Suppress d10 Lower Hull Fire	Magazine: d10 Suppress 2d10 Lower Hull 2 Fire	Magazine: d10 Suppress d10 Lower Hull Fire	Boiler: d10 Suppress d10 MS Sailing: d10 Upper Hull	Engine: 2d10 MS Sailing: 2d10 Upper Hull	Engine: d10 MS Sailing: d10 Upper Hull	All Guns Damaged d10 Armor d10 Upper Hull 5 Suppress Fire	Paddle Box Destroyed Turn +2 to opposite side 3 Suppress	Magazine: d10 Suppress 2d10 Lower Hull 2 Fire	Mast Falls Right: Turn +4 Left until repaired 2d10 Gray Box 3 Suppress	Magazine: d10 Suppress 2d10 Lower Hull 2 Fire	Magazine: 2d10 Armor 2d10 Suppress 2 Fire
11+	Magazine: 2d10 Suppress 2d10 Lower Hull 2 Fire	Magazine: 2d10 Suppress 3d10 Lower Hull 3 Fire	Magazine: 2d10 Suppress 2d10 Lower Hull 2 Fire	Boiler: 2d10 Suppress 2d10 MS Sailing: 2d10 Upper Hull	Engine: All MS Sailing: 2d10 Upper Hull	Engine: 2d10 MS Sailing: 2d10 Upper Hull	All Guns Damaged 2d10 Armor 2d10 Upper Hull 10 Suppress Fire	Paddle Box Destroyed Turn +2 to opposite side 10 Suppress	Magazine: 2d10 Suppress 3d10 Lower Hull 3 Fire	Mast Falls 3d10 Gray Box d10 Suppress	Magazine: 2d10 Suppress 3d10 Lower Hull 3 Fire	Magazine: 3d10 Armor 3d10 Suppress 3 Fire