

# IRON & STEAM Gunfire Summary

1. Phase 1—Write Orders
2. Phase 2—Small Arms Fire & Boarding Actions
3. Phase 3—Repairs, Unfouling, Refloating
4. Phase 4—Movement
5. Phase 5—Ramming
6. Phase 6—Gunfire

Does the shot hit?				
Range:	Short	Medium	Long	Extreme
<i>Distance</i>	15"	30"	60"	100"
<i>Smooth Bores</i>	60%	33%	17%	10%
<i>Rifles</i>	70%	43%	27%	15%

Hit Location				
01-55	56-70	71-85	86-95	96-00
Casemate/ Turret	Engine	Hull	Major	Critical
If the target is unarmored and unarmed then a roll of 01-55 is considered a hull hit. If the target is unarmored but armed then a roll of 01-55 is considered a gun major hit. If the target has no speed pints then a roll of 56-70 is considered a hull hit.				

All successful shots on a fort are considered casemate/turret hits except critical hits. Critical hits are resolved as automatic gun major hits.

**Casemate/Turret Hits**—If the penetration value of the gun is greater than or equal to the armor value of the target, the target will lose one armor point and a roll is made on the gun major hit table. The attacker adds the difference between the penetration value of the attacker's gun and the armor value of the target to the roll on the gun major hit chart. For example, if the penetration value of the gun is 10 and the armor value of the target is 7, then 3 will be added to the attacker's roll. Every functional gun in the target's casemate has an equal chance of being hit.

If the penetration value is less than the armor value then there is still a chance of removing an armor point. If the attacker can roll ½ of the penetration value or less on a 10 sided die then the armor of the casemate or turret is reduced by one point on the side facing the attacker.

**Engine Hits**—If the penetration value is greater than or equal to the hull armor then one armor point is removed. If the penetration value is twice the armor value then one armor and one speed point are removed. If the penetration value is three times the armor value then one armor point and two speed points are removed. Think of this as how many times the shot can penetrate the armor. The shot will do one point of damage for each time it can penetrate. The first damage point must be an armor point to the location. No shot can do more than the maximum damage of the attacking gun.

If the penetration value is less than the hull armor then roll ½ the penetration value or less on a 10 sided die to remove one armor point from the hull.

**Hull Hits**—If the penetration value is greater than or equal to the hull armor then one armor point is removed. If the

penetration value is twice the armor value then one armor point and one hull point are removed, etc., up to the maximum damage of the attacking gun.

If the penetration value is less than the hull armor then roll ½ the penetration value or less on a 10 sided die to remove one armor point from the hull.

**Major Hits**—If a major hit is scored the percentile dice are rolled again and the following chart is consulted:

Major Hits Chart					
Stack	Steering	Pilot	Engines	Guns	Equipment
01-15	16-35	36-39	40-64	65-89	90-00

Roll percentile dice on the appropriate chart. If the damage would be non-applicable (e.g., rolling a pivot gun jam on a gun that is not a pivot gun) then the hit converts to the next highest on the chart.

**1. If the Major Hit is on the stack**—One stack is carried away. Once all stacks have been destroyed then the ship's maximum speed will be halved. If the ship has no stacks then this is considered a mast hit. In the case of a mast hit, roll percentile dice:

<b>1-50</b>	Mast falls to port. Due to the increased drag in the water, the ship's speed will be reduced by 3" each turn. The ship's maximum speed will be reduced to ½ of normal. It takes two turns to clear away the damage. If the top masts and sails are in place the ship's current speed is reduced by 4" each turn and it will take five turns to clear away the wreckage. If the ship was moving under sails the fallen sails will also mask all firing to port.
<b>51-00</b>	Mast falls to starboard. Same as above but to the starboard side of the ship.

**2. If the Major Hit is on the steering, roll percentile dice**—

<b>1-30</b>	Rudder is jammed straight. 25% chance to repair
<b>31-55</b>	Rudder is jammed to port: the ship must make a port turn until fixed. There is a 25% chance to fix during the repair phase
<b>56-80</b>	Rudder is jammed to starboard. 25% chance to repair.
<b>81-95</b>	Tiller ropes shot away: The ship must continue its present course until fixed. There is a 20% chance to fix during the repair phase.
<b>96-00</b>	Rudder post shot away: Screw and sailing ships must move straight ahead until the crew can jury-rig a makeshift rudder. There is a 15% chance to get the makeshift rudder in place. Once done, however, the ship can make turns with a turning radius 3" larger than normal. Side-wheel paddle steamers that have had their rudder shot away may make turns without a rudder with a turning radius 2" larger than normal by reversing the direction of one of their paddle-wheels. Double-Enders reverse direction and operate as normal. If they receive this hit a second time they operate as a normal ship without a rudder.

**3. If the Major Hit is on the pilot house**—If the shot penetrates the pilot house armor then the pilot is out of commission for 2-5 turns. The ship must continue on its present course and there is no communication with other ships until the pilot house is re-established. If the shot does not penetrate the pilot house armor then the same restrictions apply but only for 1-2 turns.

**4. If the Major Hit is on the engines**—(disregard any armor protection the engines may have):

<b>1-25</b>	Boiler fires out. The ship's speed will be decreased by 2" next turn. Essentially the ship has no power for one turn so it cannot increase speed to offset this decrease.
<b>26-52</b>	Boiler Hit: Boiler damaged, the ship fills with steam, no firing for 2 turns. Maximum speed is reduced to 75% for the rest of the game. Take 1-10 crew hits.
<b>53-72</b>	Boiler Hit: Boiler damaged, 25% chance of boiler exploding any turn ship travels at 50% or more of available maximum speed any time during the rest of the game. If this hit is repeated then the boilers are destroyed but there is no explosion.
<b>72-90</b>	Boiler Hit: Boiler damaged, the ship fills with steam, no firing for 2 turns. Boiler fires are out, no power next turn, maximum speed reduced to 25% for the rest of the game. Take 1-10 crew hits.
<b>91-95</b>	Engines Destroyed: No power for the rest of the game. The ship will coast to a stop and then begin drifting downstream.
<b>96-00</b>	Boiler explodes: Ship fills with steam, no firing for 2 turns, no power for the rest of the game, ship takes 15 points of hull damage from exploding boiler.

**5. If the Major Hit is on a gun**—(disregard any armor protection the guns may have) Roll a die to determine which gun is affected. Every functional gun will have an equal chance of being hit. This chart is also consulted in unarmored casemate/turret and penetrated casemate/turret hits. In the case of unarmored gun hits add the penetration value of the firing gun:

<b>01-20</b>	Shutter Jammed: No firing out of this port until it is repaired. There is a 35% chance of repairing the port each turn during the repair phase. In addition, take 1 crew hit. If the gun is in an earthen fort, it is destroyed. Each adjacent gun in the fort must roll its armor value or less the next time it is eligible to fire. The roll is made when attempting to fire.
<b>21-45</b>	Turret or Pivot Mechanism Jammed: Guns can be fired but not rotated. During any turn in which this gun is not fired an attempt can be made to repair the pivot or turret. (Note that no guns can be fired out of a turret that is being repaired). There is a 25% chance of repairing a turret and a 40% chance of repairing a pivot. Take 1 crew hit.
<b>46-60</b>	Gun Crew Suppressed: The next firing of this gun is delayed by one turn. Take 1 crew hit.
<b>61-70</b>	Sighting Mechanism Shot Away: Rate of fire for this gun is permanently increased by one turn (i.e., 1:1=1:2, 1:2=1:3 etc.).
<b>71-95</b>	Gun Dismounted: useless for the rest of the game.
<b>96-00</b>	Available Powder Explodes: Gun is destroyed, no firing of any guns next turn, 1-10 points hull damage done to the ship.

**6. If the Major Hit is on the equipment**—Ship takes 2 hull points and 2 additional crew points of damage. In addition, roll percentile dice:

<b>1-5</b>	Captain's good tableware destroyed (12 place settings)
<b>6-15</b>	Flag shot away (unlimited supply)
<b>16-30</b>	Spar Torpedo destroyed (1 maximum)
<b>31-70</b>	Boat destroyed (4 maximum)
<b>71-00</b>	Anchor destroyed (2 maximum)

**Critical Hits**—Roll on the following chart and apply the result found in the Major Hit description. In addition the ship takes 5 hull points of damage. A critical hit on a fort will destroy the gun it hit and one of the guns adjacent to it. The entire fort will be silenced for the next 1-5 turns.

Critical Hits				
Steering	Pilot	Engines	Gun	Magazine
01-24	25-39	40-64	65-94	95-00

**7. If the Critical Hit is on the Magazine**—roll percentile dice:

1-67	Powder room filled with water, ½ of ammunition destroyed. (If you are not keeping track of ammunition, increase the rate of fire of all guns by one turn to simulate the increased difficulty in getting powder and projectiles to the guns.) If this hit is repeated then all remaining ammunition is destroyed.
68-00	Magazine explodes: ship destroyed. Any ship within 6" must check for fires as if hit with shell.

**Damage Application**

Unless stated otherwise in the rules, damage done to a ship is not applied until the end of the turn in which the damage occurs.

**Loss of all Guns**—In general, the loss of all guns does not effect a vessel. The one exception to this rule is when a vessel has no guns *and* no crew points. In this situation, the vessel must withdraw from combat at its top speed towards its point of entry on the gaming table.

**Loss of all Crew factors**—Once all crew factors are destroyed certain situations have automatic results:

Being disarmed (except for howitzers and field guns) results in retreat at top speed.
A penetrating pilothouse hit results in retreat at top speed.
Being aground and under fire results in surrender.
Being boarded by an enemy results in surrender.
Drifting towards the enemy and under fire results in surrender.
Being on fire with less than a 25% chance of putting out the fire <i>and</i> having no speed points results in abandonment of the vessel.

**Loss of all Speed Points**—Current speed will be reduced by 2" each turn until the ship comes to a stop. A ship which has lost all its speed points is dead in the water and will begin drifting unless anchored.

**Loss of all Hull Points**—(Otherwise known as sinking). When a ship has lost all its hull points it is considered destroyed. The hull no longer has enough integrity to remain afloat. The crew will abandon ship and will not continue to fight. The vessel will remain afloat for 1 turn for every 3 hull points it had at the beginning of the turn in which it reached zero hull points. Any vessel which remains fouled with a sunken vessel will lose 3 hull points per turn until it too is drug under.

**Wrecks**—It should be noted that unless the battle is taking place on the open seas, the hulk of a sunken ship should remain as a hazard to navigation. If another vessel crosses over the sunken vessel, the player rolls a d10. The player should then check for grounding as if his ship was that number of inches from shore. Once discovered, the "grounding level" of a wreck will remain the same for the duration of the game.