

# THE MIDWEST BATTLE GROUP RULES MANUAL

Adopted January 21, 1996  
As Revised Effective January, 2006

This edition supersedes the First Edition and all subsequent editions. This edition becomes effective Jan, 2006 upon club approval.

All proposed updates and changes to context are highlighted. Format and structure were updated as well.

Changes from 2006 are highlighted in RED

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# **1 ADMINISTRATION**

## **1.1 What we are about**

The charter of the MBG is to have fun through camaraderie and through practice of the hobby of RC Warship combat. The MBG is a private club and any person with a desire to have fun and the willingness to display good sportsmanship is welcome to apply for membership.

## **1.2 MEMBERSHIP**

### **1.2.1 All members must agree to the following**

1. Have as much fun as possible.
2. Abide by club rules.
3. Practice good sportsmanship.
4. Read and understand the MBG Rules and the MBG Release of Claims form prepared by legal council. If you do not understand this form, or cannot agree with honoring the intent of the form you cannot be a member of the club.
5. Maintain a signed copy of the Release of Claims on file with the club office.
6. Members bringing guests must ensure guests sign a Release of Claims form and been informed of MBG rules.

### **1.2.2 Participants in games**

1. All participants that operate an armed ship or shore battery must be members of a recognized Big Gun club.
2. Minimum age for membership is 18 years
3. Minors under 18 years of age may play, but must have a release of claims form signed by a parent or legal guardian on file with the club office. Their parent or legal guardian must accompany them to club events.

## **1.3 DUES and FEES**

1. Full-time membership: Membership dues are \$US 40.00 per year for adults or \$US 50.00 for a single family household to cover a period from January through December. For those joining during the year dues will be prorated for the remainder of the year. One newsletter subscription is allowed per membership.
2. Subscriptions to club newsletter cost \$US 18.00 per calendar year for nonmembers.
3. Additional fees may be required at a given event to cover unusual costs for that event. Such fees will be announced before the event.

## **1.4 CHAIN OF COMMAND - CLUB OFFICERS**

### **1.4.1 Commanding Officer (CO)**

1. Purpose: Watch over the club, taking extreme care to maintain the spirit and morale of the club.
2. Duties and Responsibilities
  - a. The previous years Executive Officer is promoted to CO on January 1.
  - b. The CO serves for one year.
  - c. Is responsible for the overall activities of the organization.
  - d. Has authority to override decisions of Executive Officer, Technical Officers and Safety Officers, but if in so doing the CO must bring the issue to a club vote at the next regular meeting.

### **1.4.2 Executive Officer (XO)**

1. Purpose: To manage the club operations and to become intimately familiar with the club rules and operations.
2. Duties and Responsibilities
  - a. Elected by a simple majority.
  - b. Has the authority and responsibility of the CO in the absence of the CO.
  - c. Ensures all organizational commitments are fulfilled.
  - d. Promoted to CO on January 1, of year following tenure as XO.
  - e. Has authority to break ties between the Technical Officers on issues where 2 officers are required to agree.
  - f. Acts as the certifying Safety Officer for ship certifications.(In the XO's absence the CO may certify ships.)
  - g. Controls radio frequencies.
  - h. Safety Officer (SO)
  - i. All present members at a meet are considered Safety Officers as all are responsible for the safe execution of our hobby.

### **1.4.3 Technical Officer (TO)**

1. Purpose: To inspect all warships and associated hardware and ensure said equipment complies to club rules, to enforce club rules and to make decisions regarding certification of ships and waivers to ships
2. Duties and Responsibilities
  - a. One technical Officer shall be appointed by each team.
  - b. Inspects all ships compliance to rules and construction specifications and issues certification of ships.
  - c. Authorized to approve minor waivers from Conway's and these rules as defined in Section 4.0, when certifying ships provided that both Technical Officers agree on the waiver. The XO will break a tie vote. The CO may override the vote as defined in this section.
  - d. Monitor teammates for proper use of safety equipment.
  - e. At each campaign game the TO's (or their designated stand-in) shall decide which scenario will be played during that day's scenario time period. Depending on the scenario chosen each TO may be required to make additional inputs to the club secretary. In the event the TO's cannot agree on a scenario the XO shall break the tie. The CO may override the XO's decision as described in this section.

- f. Responsible for providing fair operating schedules in the case of ship captains wishing to use the same radio channel.

#### **1.4.4 Public Communications Officer (PCO)**

1. Purpose: To maintain club camaraderie and promote the growth of the club.
2. Duties and Responsibilities
  - a. Elected by a simple majority
  - b. Edits the Club's E-Newsletter. A club newsletter will be published from time-to-time, approximately monthly and anyone may submit information to be published in the newsletter by submitting the information to the PCO.
  - c. Edits promotional flyers for the club and club activities
  - d. Oversees the content and upkeep of the club's official website.

#### **1.4.5 Secretary/Treasurer**

1. Purpose: To maintain records for the club and accountability for club treasury.
2. Duties and Responsibilities
  - a. Appointed by CO
  - b. Maintains waiver of liability forms for all members.
  - c. Maintains ship and Skipper roster and certification log sheets on ships
  - d. Maintains minutes of all meetings
  - e. Maintains member address and telephone roster
  - f. Maintains and dispenses all club funds
  - g. Maintains radio frequency listing for all ships. To allow proper frequency management axis ships will operate on odd numbered channels and allied ships will operate on even numbered channels. The purpose is to allow any channel conflicts to be on the same team so a team frequency coordinator (usually the TO) can plan operating schedules of ships on the teams fleet during battle.
  - h. The XO can issue waivers of channel.
  - i. Maintains scenario specific records as defined by individual scenario descriptions.

#### **1.4.6 Grievance Committee**

1. Consists of the CO, or XO and any other 2 members
2. This committee deals with grievances.
3. Authorized to make decisions for the club during events on issues other than safety, or technical issues, or rule changes when in their judgment it is not necessary or timely to wait for the next regular meeting.

### **1.5 MEETINGS**

Regular meetings will be held before each club event, or when called by the CO, or XO in the absence of the CO.

### **1.6 RULE CHANGES**

1. Any voting member may submit a rule change request.
2. Rule change requests must be submitted to the Commanding Officer, or Executive Officer in writing with the logic behind the proposal included. The request must have the endorsement of two other members, one from each team, to be considered.

3. The rule change request must be distributed to all members prior to the meeting in which it will be voted on. Voting may be by absentee via mail, e-mail or by telephone.
4. An absentee ballot will be published in a newsletter prior to the rules meeting. Those unable to attend the meeting should fill out the ballot and contact the Club Secretary prior to the rules meeting, as stated above.

## **1.7 VOTING**

### **1.7.1 Eligibility requirements for voting.**

1. Each member who has paid dues is entitled to one vote and a family membership is entitled to 2 votes.
2. A quorum of voting members must vote in favor of a rule change for the change to be adopted into the rules.
3. A quorum of voting members at any meet may pass a measure other than a rule change.
4. A Quorum is defined as a two-thirds majority of voting members present, or voting by proxy or absentee ballot, provided the number represents a simple majority of the club membership.

## **1.8 OFFICIAL SPOKESPERSON**

Only the Commanding Officer, Executive Officer, or their designated representatives are authorized to represent the club for the purpose of making arrangements or obligations for the club.

## **2 SAFETY**

### **2.1 GENERAL PROVISIONS**

1. Safety is the responsibility of all participants.
2. The ruling of the Executive Officer and Technical Officers is final with regards to safety.
3. All members and participants will adhere to the safety rules.
4. The Executive Officer is responsible for safety of shipboard pressure systems and for safety of participants and spectators during a battle.
5. All Ships shall be inspected for safety during Certification described herein. If in the opinion of the Executive Officer or Technical Officers any shipboard system is unsafe the ship shall not be operated until repairs are made and the vessel is re-inspected.

### **2.2 WEAPON SYSTEM SAFETY**

#### **CO<sup>2</sup> Tanks, Air Tanks, and Air Compressors**

1. All systems must be of a commercial design suitable for the pressures used in combat vessels.
2. All vessels must have an on board shut off switch in an easily accessible location so guns can be enabled after the boat is placed in the water and disabled before the boat is removed from the water.

3. The shut off switch must bleed the pressure from the lines supplying the actuator, solenoid valves, or firing valves in such a manner as to completely disable the guns.
4. The maximum pressure delivered to the weapon systems shall not exceed the limit specified in Section 6.2.
5. Air tanks and CO<sup>2</sup> tanks and all fittings operating at non-regulated pressure must be of a commercially approved design and must meet state and local laws.
6. No device may be installed in any pressurized portion of the CO<sup>2</sup> system that will prevent the pressure regulator from performing its function throughout the entire system.

## **2.3 EVENT AND PARTICIPANT SAFETY**

### **2.3.1 Safety Glasses**

**All participants and spectators must wear OSHA approved safety glasses with side protection at all times.**

### **2.3.2 Transport of Armed Vessels**

1. Armed ships should never have their CO<sub>2</sub> safety switch in the armed position unless the ship is in the water or in an approved test fire area.
2. All systems should be off when the ship is not in the water.
3. Powering-up a ship should be done in this exact order:
  - a. Place ship in water
  - b. Turn on transmitter
  - c. Turn on receiver
  - d. Turn on boat's power systems
  - e. Switch the CO<sub>2</sub> safety switch to the armed position.
4. Shutting down a ship should be done in this exact order:
  - a. Switch the CO<sub>2</sub> safety switch to the safe position.
  - b. Turn off the boat's power systems
  - c. Turn off the receiver
  - d. Turn off the transmitter
  - e. Remove the ship from water

### **2.3.3 Firing weapons**

1. No weapons will be fired until certified safe by the Technical Officers and Executive Officer or Commanding Officer.
2. Unauthorized shooting is prohibited. Weapons may only be fired after the XO or CO has declared that shooting is permitted.
3. Test firing of weapons may be conducted only in designated areas.

### **2.3.4 Combat Waters**

1. No person may enter the water until cease-fire is called except as defined in item 2 below.
2. Camera persons may enter the water during combat if they are wearing full head and face protection and then, only with the permission of the two most senior club officers present.

### **2.3.5 General Weapons Provisions**

1. Technically certified pneumatic cannon systems are the only cannon systems authorized.
2. Pyrotechnical devices and bullets may not be used for weapons and are forbidden from R&D development.

## **3 CONSTRUCTION**

### **3.1 PERIOD, REFERENCE SOURCE AND SCALE**

#### **3.1.1 Period**

1. Only vessels that were laid down or “active” between 1900 and 1946 may be used.
2. Sailing vessels are not allowed.

#### **3.1.2 Reference Source**

1. Conway's All the Worlds Fighting Ships (3 volumes)  
1860-1905,  
1906-1921,  
1922-1946  
shall be the only authorized reference sources for ships, except as defined in items 2 and 3.
2. Under certain circumstances defined in Section 4.0 the Technical Officers are authorized to approve waivers to Conway's and the rules.
3. Certain hypothetical ships may be built per Appendix 2, Section 11.5. The club may modify this list by vote at the annual rules meeting.
4. Ships may only be used for the purpose for which they were originally built or physically modified, and may be constructed and operated either as they were originally specified, or in their modified state.

#### **3.1.3 Scale**

1. All vessels must be built to a scale of 1:144 (1 inch = 12 feet) to a tolerance of  $\pm 5\%$ . This tolerance is to allow for honest building errors.
2. Modifications which are determined to give a ship an unfair advantage will not be allowed and shall not be approved for waiver.

### **3.2 HULL CONSTRUCTION**

This section will describe the rules pertaining to the building of the hull and other major components of the model.

### 3.2.1 ALL SHIPS MUST SINK

1. The finished ship must be capable of sinking below the water's surface.
2. No means of delaying or slowing down the sinking of any ship is allowed.
3. Ships may be constructed of a neutral buoyancy design which prevents the ship from sinking completely to the bottom of the pond, but this must be accomplished so that the main deck sinks at least ½" below the water before reaching it's neutral point.
4. 100% of the ship's main deck must be capable of sinking below the water's surface.
5. The superstructure or a portion thereof may remain above the water surface allowing ease in recovery of the vessel provided that this does not interfere with item 1, above.

### 3.2.2 Profile

The hull and superstructure must resemble the profile of the real ship, from all directions.

### 3.2.3 Definitions:

#### 3.2.3.1 Penetrable Areas:

1. Vertical: Penetrable areas are defined as all points below the main deck and cap-rail to a point 1 inch below the waterline.
2. Horizontal: The penetrable area must occupy 90% of the model ship's waterline length, excluding frames / ribs. The impenetrable area should be reasonably divided between the bow and stern.

### 3.2.4 Hull Construction Materials

#### 3.2.4.1 Non-Penetrable areas

Any non-penetrable hull area, comprising of the;  
non-penetrable bow and stern sections,  
any part of the hull below the penetrable area,  
the frames / ribs,  
the cap-rail  
the superstructure,  
the ????

may be made of any material not otherwise forbidden by the rules.

#### 3.2.4.2 Penetrable areas

1. Thickness of material.  
The thickness of the hull will be based on actual armor thickness at the thickest part of a given ships armor belt, see Appendix, 3 Table 1.
2. Sheeting Material.  
Only lightweight 6 to 8 pound density balsa wood may be used on areas defined as penetrable, see Section 3.2.3.1 for further information.

3. Material Covering.  
The penetrable area of the hull and all other areas of the hull may be covered with a single layer of lightweight silk span, applied to the interior or exterior surface of the hull in addition to the approved paints.
4. Restrictions for Repairing Penetrable Area
  - A. Laminations are not permitted in penetrable areas.
  - B. Holes in penetrable areas may be plugged, or hull sections replaced, or holes may be temporarily repaired during battles with;
    - i. one layer of light weight silk span.
    - ii. masking tape,
    - iii. silk span and dope,
    - iv. Sig or Ambroid glue with silk span.
  - C. The silk span may not exceed more than 3/8 inch beyond the size of the hole being repaired and may not overlap areas of previous repairs. This means that multiple layers of silk span can not be allowed to build up on the hull, increasing the thickness of the hull as multiple repairs are made.
  - D. Only model dope, lacquer-based paints, water-based paints or acrylic enamel paints may be used on penetrable areas. Epoxy, oil based, or house type latex paints may not be used.
  - E. No paint shall be used on penetrable areas that increase the hardness, strength, or elasticity of the balsa wood.
  - F. Fillers may be used, but such fillers shall not add strength or thickness to the balsa wood of penetrable areas.
  - G. Wood hardener materials such as penetrating liquids may not be used on the wood covering the penetrable areas of the hull.

### **3.2.5 Frames (ribs)**

1. Frame Spacing:  
For every 1 inch the frames (ribs) are spaced apart (measured from center to center) the frame may be 1/8 inch thick to a maximum of 3/8 inch thickness.  
For example;      1 inch space = 1/8 inch thick frames,  
                             2 inch space = 1/4 inch thick frames,  
                             3 inch space = 3/8 inch thick frames,  
                             4, 5, 6 or more inch spacing = 3/8 inch thick frames.
2. Frame contact with hull bottom.  
Where frames contact the horizontal section of the bottom of the boat the frames may be no higher than 1 inch above the bottom.

### **3.2.6 Deck and Cap Rail**

1. The maximum combined thickness of the deck and cap rail shall not exceed 3/8 inch except as defined in item 2.
2. On boats with at least 1 inch penetrable freeboard remaining the cap rail may be 1/2 inch thick.

### **3.2.7 Armor Plate**

1. To give the effect of armor plate on ships that had such, a horizontal stringer made of any material 1/8 inch wide and flush with the outboard side of the frames (ribs) may be installed.
2. This will provide additional non-penetrable area of no more than 1/8 inch around the horizontal perimeter of the armor plate.
3. The 1/8-inch wide stringer may not be on the waterline.
4. Only one horizontal stringer maybe added per ship.
5. This horizontal stringer is only allowed on ships that:
  - A. Had an armor belt. AND
  - B. The armor belt caused a discontinuity in the shape of the hull, vertically. I.E. if the armor belt stuck out (or was inset) from the hull skin, or caused a bulge in the hull shape that dictated that there be a horizontal joint in applying the balsa siding. An example would be a rounded bulge merged with the vertical surface of the hull. An example of this would in the Yamato hull.

### **3.2.8 Water Channeling**

1. Water channeling to direct water towards the pump is approved.
2. Water Channels maybe constructed inside or outside the hull. This water channeling shall be no higher than 1/2 inch above the bottom most interior surface of the hull if built inside the hull. OR shall be no lower 1/2 inch below the exterior surface of the hull if built outside the hull.
3. A cut out area in the bottom surface of the hull to house the pump is approved, but may not protrude more than 1/2 inch below the bottom of a boat and must not be larger than necessary to allow placement of the pump.
4. Blast shields shall not be sealed to the water channeling.

### **3.2.9 Rudders**

Rudders may be made of any material and may be up to 25% larger in area than the scale size of the combat ship and up to 100% larger for transport ships. Rudders must be the same shape and installed in the same position as on the real ship, but all rudders need not be installed or operational.

### **3.2.10 Propellers And Screws**

1. Propellers and Screws
2. Boats may have up to the same number of props as the real ship.
3. All props need not be installed.
4. Props that are installed must be in the same position as on the real ship
5. Props may be up to 50% larger in area than on the real ship.
6. Bow thrusters may be used only if the real ship was so equipped.

### **3.2.11 Propulsion And Speed**

1. Only electric motors may be used in conjunction with factory sealed batteries. Environmental concerns prohibit all R&D efforts other than electrical or pneumatic based propulsion systems. Fuel, pyrotechnics, combustible gasses, etc., are prohibited.

2. The ship's speed or trial speed as defined in Conway's will be used to determine the maximum scale speed, see Appendix 3, Table 4. If trial speed is not defined in Conway's, the Technical Officers may approve running a given ship at a trial speed defined in at least 2 (two) other credible reference books provided that both Technical Officers agree.
  - a. Minimum speed for Convoy / Cargo ships shall be 20 knots.
  - b. Minimum speed for Combat ships shall be 24 knots.
3. Motors or throttles may not be set to increase power in a turn to improve the maneuverability of a ship, or to increase power during acceleration or deceleration to improve the starting and stopping characteristics of a ship.
4. Modifying the profile of the bow or hull to increase drag as a means of slowing down the ship is not allowed.

### 3.2.12 Waterline and Boots

1. All ships shall float at scale waterline as shown on the ship plans.
2. Boot topplings shall be in scale position as shown on ship plans. Boot-lines must be ¼ inch wide and may be painted or striped with one layer of hobby pin stripe tape.

### 3.2.13 Miscellaneous Items

Lights, anchors, horns, and similar devices are allowed. Ship board smoke generators are allowed, provided no propelled/exploding pyrotechnics or liquid fuels are used. Commercially sold smoke bombs are acceptable, but should be placed in a hollowed out smokestack lined with a nonflammable material.

### 3.2.14 Hull Modifications

#### 3.2.14.1 Increased Displacement

To increase the displacement and allow installation of hardware, frames (ribs) may be 3/8 inch higher than specified on boat plans for boats less than **20,000 tons** displacement, heavy load. The water line shall be placed such that the free board shall be the same area as shown on the plans.

#### 3.2.14.2 Lowering High Bow

On boats with a high bow, the frames may be constructed so the bow is 3/8 inch lower than shown on the plans to allow guns to fire over the bow.

#### 3.2.14.3 External hull modifications (keels, stabilizers, etc.)

Any modifications not present on the ship's plans or not of scale must be submitted for a waiver under R&D rules.

#### 3.2.14.4 Ships Of A Class

All ships of the same class may have the technical specifications of the most desirable ship of the same class. An example would be the Tirpitz and Bismarck, where the Tirpitz is armed with torpedoes, but Bismarck is not, but both of these ships are allowed to have torpedoes.

### **3.2.15 Special Rules for Specific Ship Types.**

See Appendix 2, Section 11.0 for special Rules concerning cargo/convoy ships, Q-Raiders, Aircraft carriers, submarines and hypothetical ships.

## **3.3 CONSTRUCTION BATTLE ITEMS**

### **3.3.1 Recovery Device**

1. All ships must have a recovery device in the form of a float with line securely attached to the ship and float.
2. The float shall break free of the ship as the ship sinks and the line shall deploy.
3. The line shall be of sufficient length to allow the float to reach the surface of the water when the ship is on the bottom, marking the location of the ship and allowing recovery of the ship from the water surface.

### **3.3.2 Blast Shields**

These are devices to prevent rounds from passing through both sides of a ships hull, or from damaging internal hardware.

1. Blast shields may be made of any material and must be mounted no closer than 5/16 inch away from the hull skin of the boat on the interior of the boat.
2. Rounds must be free to penetrate the hull, strike the blast shield and fall away from the hole towards the bottom of the boat.
3. The blast shield may not impede water flow in any way, or allow rounds (balls) to impede water flow.

### **3.3.3 Water Tight Compartments**

1. Watertight compartments may protect electrical and electronic gear.
2. The compartments may only be large enough to hold the gear, but shall not provide enough buoyancy to help keep the boat afloat and may not impede water flow through the boat.

### **3.3.4 Pumps And Pumping Capacity**

1. All vessels may have one or more bilge pumps, but the combined pumping capacity shall not exceed the rates defined in Appendix 3, Table 2.
2. The pump discharge rate for all convoy ships of the liner, cargo ship, or oilier variety shall be as defined in see Appendix 3, Table 2.
3. See Section 3.2.8 for modifications allowed to the hull to aid in water flow to the pump.

### **3.3.5 Recognition flags on ships**

It is recommended that all ships fly their National Flag, but this is not a requirement. There is no minimum size requirement for the National flag. For the French and Italian ships it is required that a recognition flag be flown. Allied French and Italian ships shall fly a blue flag, and the Axis French and Italian ships shall fly a red flag.

## **4 CERTIFICATION of Ship Hull**

### **4.1 STANDARD REFERENCE**

1. See Paragraph 3.1.2.

These books shall be the only sources for information and specifications used for ships with the only exceptions being defined by these rules.

2. If a skipper wants to build a ship not listed in Conway's this may be acceptable provided plans and specifications can be verified by at least 2 other reputable sources. Both Technical Officers and the Executive Officer must agree on the suitability of the vessel for RC warship combat before it can be authorized.

### **4.2 WAIVERS TO CONWAY'S RULES**

1. In some situations minor waivers to the rules may be appropriate. As a guideline, when certifying ships, if the ship does not gain an unreasonable tactical advantage as the result of the waiver, or if the ship is placed at an unreasonable tactical disadvantage without the waiver, then the waiver may be warranted.
2. When the information described in Conway's is found to be incomplete the Technical Officers may accept other reputable sources of information and issue a waiver to supplement the information in Conway's. Both Technical Officers must agree on any waiver.

### **4.3 INSPECTION AND CERTIFICATION**

1. The Technical Officer (s) (TO) and Executive Officer (XO) shall inspect all vessels to insure the vessels are in compliance with the rules the TO shall issue certification and the secretary shall maintain a log on the certified vessel.
2. A complete set of plans, or information from which the ship was constructed shall be provided to the TO prior to inspection.
3. Once a vessel is certified it does not need to be re-certified unless it undergoes modification. Any skipper may request a retest on any ship that the skipper feels may be operating out side the rules.
4. The CO or XO may grant a temporary certification in the absence of the TO, but do not have the authority to grant a waiver prior to review and inspection by the TO.
5. Vessels will be certified for speed and weapon penetration before every meet.

### **4.4 PENETRATION TESTING OF HULLS**

A method of penetration testing shall be developed under the R & D program.

## **5 ARMAMENT AND WEAPONS SPECIFICATIONS**

### **5.1 COMBAT SHIPS WEAPON SPECIFICATIONS**

1. The number of weapons allotted is the same as on the real ship. Not all weapons need to be installed.
2. Weapons must be installed in the same position as on the real ship and barrels must be the same height above the deck as on the real ship. However, 3/8 inch of barrel height may be added to allow ships with a high bow to fire over the bow when gun barrels are horizontal.
3. The length of barrels must be the same as on the real ship within 5%. Barrel length is measured from the end of the barrel to the face of the turret.
4. Gun Barrels may not elevate higher than horizontal, which is defined as parallel with the water's surface, at any point in the arc of rotation. This includes while the ship is moving, i.e. rolling during a turn.
5. The technical officers may approve minor waivers to scale gun placement to allow guns to fit into a particular ship.
6. Weapon caliber shall be the same as on the real ship to the scale size defined in Appendix 3, Table 3.

### **5.2 GUN AND TORPEDO EFFECTIVENESS**

1. Guns and torpedo tubes of a single battery shall not have converging barrels that allow the balls fired to strike at the same point at any given distance.
2. Performance and operating parameters of guns and torpedoes is covered under Weapons Testing and Operating Parameters, see Section 6.0.
3. The minimum spacing between barrels shall be 0.5 inch center-to-center, or the width of the outside dimension of a barrel between the barrels, whichever is greater.
4. The rate of fire is based on the caliber/type of weapon and is defined in Appendix 3, Table 3

### **5.3 GUN ROTATION**

Only ships that had rotating guns may have rotating guns and these guns shall be in the same position as on the real ship.

### **5.4 TORPEDOES**

1. Only ships that had torpedoes may be so armed.
2. Torpedoes shall be ¼ inch diameter balls.
3. The maximum number of torpedoes on any ship shall not exceed the number of tubes on the real ship per side.
4. Torpedo barrels may not elevate higher than horizontal, which is defined as parallel with the water's surface, at any point in the arc of rotation. This includes while the ship is moving, i.e. during a turn.
5. Rotating guns may be installed to accommodate tubes on both sides of a ship are allowed.
6. The spacing of the tubes shall be the same as for cannon barrels, see Section 5.2.

7. Development of flooded or underwater torpedo tubes is allowed, but must be tested and approved as any other gun is approved as described in Section 6.0.

## **5.5 MINES**

1. Mine designs should limit damage to attacked ships. Mine designs should float and be recoverable. Mines fields/nets are limited to 1 foot for every 10 mines the ship historically carried.
2. The mine string must be weighted at one end with sufficient weight to anchor it. The length of the anchor line shall be 3 feet.
3. Every mine string shall have the first float 3 feet from the weighted end plus one float for every 5 feet or fraction thereof, spaced evenly between first float and the last float at the un-weighted end.
4. The individual deploying the mine is responsible for recovering the mines at the end of battle.

## **6 WEAPONS TESTING AND OPERATING PARAMETERS**

### **6.1 SAFETY AND TECHNICAL INSPECTION**

Prior to usage all weapons must be inspected, tested and certified as described herein and in Section 4.0. If the Technical Officers determine that the weapons are unsafe, or fail to meet the criterion described in the rules the weapons shall not be operated until the problem is corrected.

### **6.2 OPERATING PARAMETERS**

1. Maximum operating pressure shall not exceed 140 psig, but may be required to operate at below 140 psig to meet the penetration requirements defined herein.
2. Only CO<sup>2</sup> or compressed air may be used as a propellant.
3. Maximum penetration shall not exceed that described in Section 6.3.
4. Gun Barrels may not elevate higher than horizontal, which is defined as parallel with the water's surface, at any point in the arc of rotation. 1. This includes while the ship is moving, i.e. rolling during a turn.

### **6.3 WEAPONS TESTING**

Prior to certification guns and torpedoes must be tested by checking penetration as described herein.

1. Test weapons by firing into DOW Styrofoam, square edge extruded polystyrene insulation that is 2 inches thick.
2. The foam must be held solidly during the test and may not be allowed to move or flex.
3. The test material must be mounted 12 inches from the end of the barrels of the weapon being tested.
4. The guns shall be fired a minimum of 5 times with delays between shots varying from 10 seconds to 10 minutes.

5. If any ball penetrates completely through the test material, or makes protrusions in the backside of the test material the weapon fails the test. Reduce the operating pressure and retest.

#### **6.4 CERTIFICATION LOG**

1. When the weapon passes the test record the operation pressure used on the certification log sheet so the pressure can be verified at a later date.
2. Complete certification requirements are described in Sections 4.0 and 6.0.

#### **6.5 OTHER WEAPONS/SHIP BOARD SYSTEMS**

1. Aiming devices to simulate radar are NOT allowed.
2. Automated devices that fire a weapon without human input are not allowed.
3. All other weapons/ship board systems added that are visible on the exterior of the ship, must maintain the scale look and profile of the ship.

## **7 COMBAT**

### **7.1 Starting and stopping a battle**

1. The referee, CO, or XO shall start the game by announcing "WAR IS DECLARED, COMMENCE FIRING AT WILL!" The game shall stop immediately when any person announces "CEASE FIRING!" Any person may call a cease-fire any time they feel an unsafe act is in progress and request that the Executive Officer investigate.
2. Once in play all ships on the water are considered fair game, except as defined below;
  - a) Ships "distinctly" marked with a white flag. Ships marked with white flags are out for trial run or are being tested and **SHALL NOT BE** fired upon.
3. Any ship may return to port at any time after the captain loudly announces: "returning to port." Before returning to port a ship must cross the halfway point on the pond **or actively engage in combat** before it can head back to port **or it will be scored as lost**. The halfway point for each team will be explained in the Captain's meeting before each battle.
4. A Technical Time Out may be called by any skipper at any time, see Section 7.5 for details of a TTO.
5. Five minutes maybe called by any skipper at any time, see Section 7.6 for details.
6. Running in reverse during combat is approved, but the speed in reverse shall not exceed the speed forward.
7. If the float and line of any ship is accidentally deployed during a game the ship immediately goes on a Technical Time Out and must return to the nearest shoreline and clear the problem.
8. See Appendix 1, Section 10 for description of Coastal Targets and Coastal Guns and how these can be used to interact with game play.

### **7.2 ELIGIBILITY**

1. The Technical Officers and XO or CO must certify all vessels.
2. All participants must be club members.

### **7.3 Conditions for declaring vessels Sunk, Lost or Surrendered**

1. A ship is considered sunk if the main deck is 95% or more awash, or if the keel or any portion of the bottom of the ship is aground preventing it from sinking completely, or slowing its rate of sinking, or if the ship does not return to the port from which it departed, with the exception of vessels declared lost.
2. A ship is considered sunk if it is removed from the water at any place other than the port at which it departed, but ships on 5 minutes removed from the water anywhere but their port that survived the 5 minute time will be scored as lost.
3. A vessel may be "declared sunk" and immediately be removed from the water by a skipper to prevent further damage and is immediately considered out of play and is scored as a surrendered vessel.
4. A ship that has received no waterline or below hits during a battle, but somehow sinks, will be declared an "Unseaworthy Sink." Unseaworthy sinks are scored at the lost value of the ship.
5. Scoring for a sink, lost or surrendered can be found in Appendix 3, Table 8.

### **7.4 MANEUVERS DURING COMBAT**

#### **7.4.1 Ramming**

1. No ship shall intentionally ram another vessel, but accidental rams will certainly occur from time-to-time. It is the responsibility of all skippers to take appropriate action and make every effort to avoid a ram.
2. If a ship is damaged by an accidental or intentional ram the damaged ship may be removed from the water at the nearest shoreline and the ram damage may be repaired, then the ship may be returned to play.
3. When a ship is sunk as the result of an intentional ram, or unwarranted collision the team of the offending skipper may be assessed a penalty as defined in Section 8.2.6. The rammed vessel shall not be scored as a sink.
4. The gun barrels of ships with rotating guns protruding over the side of the hull may not be side swiped, or a ship may not intentionally make contact with the hull of an opponent's ship to miss-align, or damage the guns. This is subject to a penalty as defined in Section 8.2.8.

#### **7.4.2 Hull To Hull Contact**

1. Hull to hull contact with ships of the opposing fleet, be it accidental or otherwise is not approved.
2. It is acknowledged that a tactic of convoy ships is to move in close to attacking enemy warships to reduce the effectiveness of their fire. However, it is the responsibility of the warship to maintain a reasonable distance from the convoy ship under attack to preclude this occurrence.
3. If a convoy ship causes hull to hull contact with an attacking warship the warship, being the faster ship, must move off to place a reasonable distance between the ships.
4. Hull to hull contact with convoy ships or ships on five minutes of the opposing fleet shall carry a penalty as defined in Section 8.2.7. The decision on this type of mishap is left to the referee, or to the CO, or XO, and their decision is final.

#### **7.4.3 Right Of Passage**

1. All ships have a right of passage.

2. Turning at a high rate of speed into the immediate path of a fast moving enemy vessel (crossing their T) is considered an unrealistic maneuver with the intention of causing the other ship to ram or quickly alter course/speed. In this case, the blocked vessel will not be penalized if it doesn't alter course or speed in time to avoid the collision. For scoring, the quickly turning vessel will be considered a ramming ship and subject to associated ram penalties, see Section 8.2.6. Conversely however, slow speed turn collisions aren't necessarily rams. The decision of either type of mishap is left to the referee..."
3. If two ships are on a bow-to-bow collision course both vessels shall make a starboard (right) turn to avoid the collision.

## **7.5 TECHNICAL TIME OUT (TTO)**

1. The purpose of the TTO is to correct minor technical problems in a timely manner such as props being fouled by weeds, moss or debris, or to align turrets etc.
2. Technical Time Out (TTO) or "Moss" may be called on a ship at any time.
3. The ship shall remain fair game for 30 seconds after which time a cease-fire shall be called by the skipper declaring the TTO, who shall then correct the problem after returning the ship to the nearest shoreline.
4. The ship should not be removed from the water to clear the problem unless it is otherwise unsafe, difficult or impossible to correct the problem.
5. If a ship calls a TTO on "5 MINUTES" and if the ship is removed from the water the five-minute time begins anew after clearing the problem and replacing the ship in the water. If the ship is not removed from the water the 5-minute time stops during the TTO and is resumed when the TTO is over.
6. If a ship is removed from the water on a TTO the ship must remain on the water and in play for 5 minutes before entering port.

## **7.6 FIVE MINUTE RULE**

1. If a skipper feels his/her ship is in danger of sinking, or if the ship is disabled and can not return to port, then the skipper may request that the referee call "5 MINUTES!" The referee shall call "5 MINUTES" then start a timer, but shall not announce which ship is on 5 minutes.
2. If no referee is available then any skipper may call "5 MINUTES" and start a timer, or have a teammate make the announcement and start a timer. It is not required that the ship on 5 minutes be identified.
3. The ship on "5 MINUTES" remains fair game for the 5-minute time, but may maneuver and return fire if able to do so and may be defended by teammates.
4. After the 5 minutes have elapsed the referee or skipper will call "CEASE FIRING!" See Section 7.9 of this chapter for rules governing the recovery of vessels, see Section 7.7 of this chapter for rules defining cease-fire.
5. If the ship sinks prior to the expiration of the 5 minutes it shall be scored as sunk, otherwise it shall be scored as lost.
6. A ship on "5 minutes" may be pushed or towed into port by friendly ships, but these ships are fair game during this operation. If this is successfully accomplished before the 5-minute time has lapsed the timer is stopped and the ship shall not be scored as lost. The ship must be returned to the port from which it departed.

## **7.7 CEASE FIRE**

1. The purpose of a cease-fire is to stop the game for a TTO, or to recover a sunk or disabled ship, or to correct a safety problem.
2. Any person may call a cease-fire at any time.
3. When a Cease Fire is called all skippers shall immediately cease firing
4. During a cease-fire all ships must hold their present position and no ships may launch from port.
5. A ship that was in route to port may continue to port.

## **7.8 Repairs During Combat**

1. Only masking tape, or silk span and dope, or Sig or Ambroid glue with silk span may be used for temporary repairs to the penetrable area of a ship.

## **7.9 RECOVERY OF SUNK OR DISABLED VESSELS**

1. If a ship sinks for any reason the skipper or referee shall call "CEASE FIRING!" once recovery is ready to commence. When Cease-fire is called all ships must abide by the rules, see Section 7.7 defining cease-fire. All ships shall steer clear of the recovery vessel while the sunk or disabled ship is being recovered.
2. Once the vessel is recovered and the recovery boat has returned to shoreline the referee or skipper that called cease fire shall announce "RESUME BATTLE!" The game will continue.

## **7.10 SCENARIO PLAY**

1. Scenarios are intended, but not required, for normal play. Scenarios are found in Appendix 4, Section 13, and listed in fleet size order. The scenario selected for play should be based on the fleet sizes and ship types present for the battle. A team in majority attendance may not simply vote to select a particular scenario for the purpose of dominating play. Club Officials may direct selection of another scenario if a team rejects the vote in good faith. Scoring scenarios is contained within the scenario.
2. New scenarios can be designed and added to the rules of play using the normal rule change process. A member may create a scenario and have battle attending members vote to play it under R&D. All scenarios are under R&D until played at least once before formally voted on.

# **8 SCORING**

## **8.1 SCORING SYNOPSIS**

1. The winning team of a monthly battle will be the team having obtained the most points from the four scoring categories described herein.
2. Ties aren't possible. How to score each category is contained elsewhere within this section.
3. Which categories are played / forfeited will be determined by a simple vote of the members in attendance prior to war being declared. Tie votes are broken by the CO or the highest ranking club official.

4. A scoring category can be forfeited if a team wishes. The spirit of this rule is to speed transition to scenario play when one team's fleet is greatly outnumbered.

### **8.1.1 Scoring categories**

1. Team winning Combat gets- four points
2. Team winning Convoy gets- two points
3. Team winning Port/Shore Bombardment gets - one point
4. Team obtaining Scenario objectives gets up to two points as defined by the scenario being played

## **8.2 COMBAT SCORING**

The Combat score category includes the following: hits on ships, coastal targets, coastal weapons, sunken ships, lost/disabled ships, and surrendered ships. There are also penalties for rule violations that are added to the offending teams combat score. The winner of this category is the team with the lowest number of combat points.

### **8.2.1 Hits on Ships**

Cannon Fire:

1. All hits that "penetrate" the hull will be scored according to Appendix 3, Table 7. Hits on or above the cap rail, or to non-penetrable areas will not be scored.

Aircraft hits:

1. An aircraft that strikes a ship shall be scored at the value given in Appendix 3, Table 7 regardless of where it struck the ship.
2. Only the first ship struck shall be scored as a hit if the aircraft glances off one ship and strikes a second ship.
3. If the aircraft skips off the water surface and hits a ship it shall be scored as a hit.

### **8.2.2 Scoring Hits to Coastal Targets and Coastal Weapon Batteries**

1. Hits to shore targets shall be scored as indicated in Appendix 3, Table 7.
2. The score for disabling a coastal gun shall be 20 times the combat factor of the gun.

### **8.2.3 Scoring Sunk Vessels**

1. Points for a sunken vessel are scored at 20 times the Combat Factor plus all points for hits.

### **8.2.4 Scoring Lost Vessels**

1. If a vessel is declared lost points it is scored at 10 times the combat factor plus the score of all combined hits.

### **8.2.5 Surrendered Vessels and Vessels Declared Sunk**

1. Surrendered vessels are scored at 30 times the combat factor plus all points for hits.

### **8.2.6 Scoring Rams**

1. If a vessel is sunk by an intentional or avoidable ram the team of the skipper causing the ram shall be assessed points equal to 30 times the combat factor of the rammed ship, which sank. Neither ship, nor team will be assessed a point penalty for accidental rams or collisions resulting in a sinking.

2. In addition to score penalties for intentional enemy rams resulting in a sink, the ramming captain shall remove his ship from play while the damage is being repaired on the rammed ship. If the rammed ship cannot reenter play the day of the battle, then the ramming captain shall also not play that day. The out of play ram/sunk Captain may grant the offender to continue play.

### **8.2.7 Penalty for Hull To Hull Contact**

1. Ships may not make contact with convoy ships, or ships on 5 minutes of the opposing fleet.
2. All ships may not make contact with the hull of another ship in an effort to miss-align the cannon barrels.
3. A non-safety rule violation penalty as defined in Section 8.2.8 shall be assessed for making hull-to-hull contact as specified above.

### **8.2.8 Penalty for Non-Compliance to the Rules**

A penalty for non-compliance to rules is imposed.

1. Safety violations, accidental or otherwise shall be assessed at 1500 points per occurrence to the team of the offending skipper. Penalties are multiplied for repeat violations: 2x for second, 3x for third etc.
2. Ships with safety violations shall be immediately removed from play until the problem is corrected.
3. Non-safety rule violations, accidental or otherwise, shall be assessed at 500 points. Penalties are multiplied for repeat violations: 2x for second, 3x for third etc.
4. The non-compliant ship shall be immediately removed from play until the problem is corrected.

### **8.2.9 Challenges to Ship Certification Compliance**

1. Challenges to a ship's technical compliance to certification can be made at any time during or after a game.
2. Whenever a challenge is made during play a Non-safety rule violation penalty will be issued.
3. A challenge may be made at any time by a skipper participating in the game.
4. The challenged ship and the challenging ship will both proceed to the test area and an appropriate test will be conducted.
5. If a ship fails the test then it shall be removed from the water until the situation is corrected and retested, but the challenging ship may return to the game immediately.
6. A Non-safety rule violation penalty as defined in the rules, see Section 8.2.8, shall be issued to the challenged ship's team if it fails the test. A Non-safety rule violation penalty shall be issued to the challenging ship's team if the challenged ship passes the test.
7. Challenges made after game play will not effect the scoring. If the ship is found out of spec it will automatically be checked at the next meet for compliance before the start of game play.

## **8.3 SCORING CONVOY RUNS**

1. For each successful convoy run the team shall be awarded points as defined in Appendix 3, Table 5.
2. Convoy ships running the minimum speed of 20 knots must depart port, complete one lap around the defined course and return to port to score points.

3. Convoy ships running greater than 20 knots must depart port, complete 2 laps around the defined course and return to port to be awarded points.
4. If 3 or more convoy vessels make a successful convoy run, starting, staying on, and completing the course together an additional bonus shall be awarded, see Appendix 3, Table 5.
5. If faster convoy ships maintain the 20 knot speed of the slower convoy ships and stay with the convoy for the entire course as defined in Item 3, they need complete only 1 lap around the course to score points.
6. To simulate loading/unloading of cargo convoy ships must wait 10 minutes after completing a convoy run before launching another.

#### **8.4 SCORING SHORE BOMBARDMENT**

1. All hits on shore targets are scored as detailed in Appendix 3, Table 7.
2. The team with the lowest score wins this category of play.
3. Teams disabling a Coastal Gun, shall be scored as 20 x the combat factor of the Coastal Gun.

#### **8.5 SCORING SCENERIOS**

The scenario category of scoring like any other category is conducted throughout the day simultaneously with the other categories of scoring. The difference is there are no points to keep track of simply a list of objectives defined in the selected scenario, see Appendix 4.

4. When the objective is completed the scenario points are awarded as defined by the chosen scenario in Appendix 4.

#### **8.6 Determining the Year's Winning Team**

The annual winning team (bragging rights) will be obtained by combining the monthly team points obtained over the whole year. The number of months victorious is not relative to the annual winner.

### **9 Computing Combat Factors**

#### **9.1 Combat Factor of Warships**

1. Each warship shall be assigned a combat factor to reflect the ships relative combat value for the sake of scoring and for comparison to other ships.
2. The formula for computing combat factor is the sum of the combat factor values as listed below

Armour:	Appendix 3, Table 1
Weapons:	
Guns:	Appendix 3, Table 3
Rotation:	Appendix 3, Table 6
Depression on barrels:	Appendix 3, Table 6
Torpedoes:	
	1 point for each operational non-reloading tube
	2 points for each operating reloading tube
Speed:	Appendix 3, Table 4
Pump Capacity:	Appendix 3, Table 2
Defensive (Tonnage):	Appendix 3, Table 6

## **9.2 Combat Factor Of Convoy Ships**

The Combat Factor of convoy ships shall be derived in the same manner as warships except that the portion derived from weapons shall be reduced by 50%, or  $\frac{1}{2}$  of that calculated. Convoy ships will also have an additional category to add to the combat factor;

Cargo Value:

Appendix 3, table 5

## **9.3 Combat Factor Of Raiders And "Q" Ships**

Raiders and Q-ships shall be assigned a Combat factor in the same manner as warships.

## **10 APPENDIX I COASTAL TARGETS AND GUNS**

### **10.1 Coastal Targets (CT)**

Coastal targets are intended to serve as targets for the opposing team.

1. The CT should be semi-scale in size and a minimum of 2 stories, or about 1 ½ inches in height.
2. The CT may be constructed of any material, however they must be constructed such that hits can be detected and scored. In other words, the material used must be soft enough to be penetrated or dented by gunfire so hits can be scored, or some other method of scoring hits must be devised and approved by the TO.
3. Both teams must have identical CT.
4. CT must be installed at the water's edge and in an area so they are visible to the opposing team.
5. The lowest most point of the CT can be a maximum of 1½ inches above the water surface.

### **10.2 Coastal Guns (CG)**

Coastal guns are intended to defend the coastal targets and the port area of the given team to which they belong and are not intended to be an operational battery with a field of fire over the entire pond.

1. CG must meet the same construction and safety requirements as other cannon, see Section 5.0 and Section 6.0, and must be approved by both Technical Officers and the Executive Officer or Commanding Officer.
2. CG may have a total of 3 working barrels of any caliber defined herein.
3. CG must have a system of cut-off switches, one per barrel, or in the case of multi-barreled guns the number of switches shall equal the number of barrels, with all the switches having to be shut off before disabling the gun, allowing the CG to be disabled by gunfire from warships.
4. The targets on the cut-off switches must be a minimum of 2 inch by 2 inch square, totaling 4 square inches per target. One target will be placed on each cut-off switch.
5. The lowest point of the target area of the cut-off switches may be a maximum of 1-½ inches above the water surface.
6. The cut-off switches must be capable of being disabled from gunfire from any caliber weapon firing at rated power from a minimum distance of 6 feet.
7. The target area of the cut-off switches must be positioned so they can be engaged and hit by gunfire from warships on the water at any angle that the cannon can fire on the warships.
8. The CG may have deflectors installed to prevent cut-off switches located close to one another from being hit by ricochet fire, provided that the deflectors do not interfere with item 7, above.
9. The barrels of the CG may be a maximum of 12 inches above the water surface.
10. The appearance of the CG should be semi-scale in nature.
11. Both Technical Officers and Executive Officer must approve the construction of the CG. Once certified, the gun need not be re-certified unless modified.

## **10.3 GAME PLAY with COASTAL TARGETS AND COASTAL GUNS**

### **10.3.1 Coastal Targets**

1. Coastal targets must meet the construction requirements defined in Section 10.1.
2. Each team shall have identical coastal targets.
3. Coastal targets may be defended with warships or shore guns.
4. Warships may engage coastal targets at any time.
5. Hits scored on coastal targets shall be scored as defined in Section 8.4 and Appendix 3, Table 7.

### **10.3.2 Coastal Guns (CG)**

The purpose of the CG shall be to defend the coastal targets, the port entrance and the general area of the water around these positions. The CG may fire at any ship within range however; they are not intended to serve as a working cannon battery to fire at shipping anywhere on the water's surface.

1. A team may install and use shore guns even if the other team has no shore guns.
2. If a shore gun is disabled by gunfire it shall remain disabled for 30 minutes, or as defined by the addendum defining rules for a particular battle.
3. The CG shall be assigned a combat factor in the same manner as other weapons as defined in Section 9.1.
4. If disabled, the CG shall be scored as defined in Section 8.4.
5. Any person may operate a CG.

## **11 APPENDIX 2 – Special Rules for Specific Ship Types**

### **11.1 Aircraft Carriers**

#### **11.1.1 Primary Guns**

1. For every 10 combat aircraft on a given carrier, one x ¼ inch barrel is allowed.
2. The guns must be installed under the flight deck with approximately ½ of the guns pointed directly forward and the remainder pointed directly rearward and the guns may not rotate. The spacing between barrels shall be the same as for cannon.

#### **11.1.2 Secondary Guns**

1. The secondary guns must be installed in the same approximate position as on the real ship.

#### **11.1.3 Aircraft**

1. Aircraft carriers may launch aircraft.
2. Aircraft must be launched from the flight deck forward over the bow and are scored as defined in Section 8.2.1 and Appendix 3, Table 7.
3. One aircraft may be launched every eight seconds.
4. Aircraft must be 1: 144 scale and of the proper type and may be made of any material but must not be heavier than ½ ounce each.
5. Aircraft must be constructed such that they are recoverable and may not be allowed to sink to the bottom of the pond and be lost after firing.

#### **11.1.4 Side Torpedo Systems**

Side torpedo systems may be installed on each side of the ship. These systems shall be comprised of triple torpedo tubes and shall follow all rules pertaining to torpedo tubes, see Section 5.4.

#### **11.1.5 Construction**

1. Aircraft carriers must meet the construction requirements of other ships except the hanger deck area, which may be made of any material, provided that at least 1 inch of penetrable free board remains above the waterline.
2. Aircraft carriers are inherently top heavy, so to achieve a stable balance the waterline may be raised ½ inch, effectively reducing the free board and increasing the displacement, provided that at least 1 inch of penetrable free board remains above the waterline.

### **11.2 Convoy And Cargo Vessels**

#### **11.2.1 Definition**

Convoy and cargo vessels are those ships whose main function was the delivery of war materials and troops.

#### **11.2.2 Construction**

1. Oilers and cargo vessels must meet the construction requirements of other ships except rudder area may be 100% oversize.
2. Ships converted into convoy vessels, such as ocean liners and destroyers must meet the same construction requirements as other ships, but do not get the added 100% rudder area of oilers and cargo ships.

#### **11.2.3 Weapons**

Cargo vessels may be armed as per the real ship.

### **11.3 Raiders and Q-ships**

2. Raiders and Q-Ships are armed warships and may not haul cargo, but do get the oversize rudder of cargo ships.
3. Raiders and Q-Ships may render their excess weapons inoperative and serve as cargo ships, but may not serve as cargo ships and warships during the same sortie.
4. Raiders/Q-Ships may carry only weapons as historically armed and documented.

### **11.4 Submarines**

1. Submarines may increase their rudder area up to 100% greater than the scale size.
2. Submarines may not be submersible and must run on the surface as any other warship.
3. Submarines may not mix both above and below waterline torpedoes on the same cannon, this will cause an overpressure condition for the above water tubes.
4. Submarines due to their small size and item 3 above may rapidly fire the installed cannon up to the number of times required to get them the same number of torpedoes as the sub had in that position. For example, the I-400 had 8 bow mounted torpedoes, but the skipper only installs a two barreled reloading torpedo in the bow. In this

configuration he can fire the cannon rapidly up to 4 times before needing to start his count for the normal fire rate of torpedoes.

## 11.5 Hypothetical Ships

### British "G3" Battlecruiser (WWI)

Displ - 53,900tons; Dimensions - Length - 856ft, Beam - 106ft, Draft - 36ft;  
Speed - 32knots; Armour - 14inches; Armament: 9-16in, 16- 6in, 2 torps(sub).

### French Lyon class (WWI)

Displ - 29,000tons; Dimensions - Length - 638ft, Beam - 95ft, Draft - 28.5ft;  
Speed - 23knots; Armour - 11.75inches; Armament: 16-13.4in, 24- 5.4in, 6 torps (sub).

### Japanese KII class (WWI)

Displ - 48,500tons; Dimensions - Length - 820ft, Beam - 101.5ft, Draft - 31.75ft;  
Speed - 30knots; Armour - 11.5inches; Armament: 10-16in, 16- 5.5in, 8 torps.

### Japanese No13 Battlecruiser (WWI)

Displ - 47,500tons; Dimensions - Length - 900ft, Beam - 101ft, Draft - 32ft;  
Speed - 30knots; Armour - 13inches; Armament: 8-18in, 16- 5.5in, 8 torps.

### US Montana class (WWII)

Displ - 70,500tons; Dimensions - Length - 925ft, Beam - 121ft, Draft - 36.6ft;  
Speed - 28knots; Armour - 16.1inches; Armament: 12-16in, 20- 5in.

### Japanese B64 type (WWII)

Displ - 34,800tons; Dimensions - Length - 802ft, Beam - 89ft, Draft - 29ft;  
Speed - 33knots; Armour - 7.5inches; Armament: 9-12.2in, 16- 3.9in, 8 torps.

### German P-class (WWII)

Displ - 35,700tons; Dimensions - Length - 841.5ft, Beam - 98.5ft, Draft - 34.5ft;  
Speed - 33knots; Armour - 7inches; Armament: 6-15in, 6- 6in, 6 torps.

### Netherlands Projected Battlecruiser (WWII)

Displ - 28,000tons; Dimensions - Length - 778ft, Beam - 98ft, Draft - 25ft;  
Speed - 34knots; Armour - 9inches; Armament: 8-11in, 12- 5in.

### French Alsace Battleship (WWII)

Displ - 55,125tons; Dimensions - Length - 886ft, Beam - 116.5ft, Draft - 30ft;  
Speed - 31knots; Armour - 12.6inches; Armament: 12-15in, 12- 6in.

### P Kreuzer (WWII)

Displ - 26,100tons; Dimensions - Length - 731.6ft, Beam - 88.5ft, Draft - ??ft;  
Speed - 34knots; Armour - 5.9inches; Armament: 6-11in, 4- 5.9in, 8 torps.

### H39 (WWII) As per Conway's listed under H-class

## 12 APPENDIX 3 Scoring / Combat Factor Tables.

<b>12.1 TABLE 1- ARMOR THICKNESS</b>		
<u>Armor Thickness of Belt</u>	<u>Maximum Balsa Thickness</u>	<u>Combat Factor</u>
0.00 to 6.99 inches	1/16 inch	2
7.00 to 11.9 inches	3/32 inch	3
12.0 and greater	1/8 inch	4

<b>12.2 TABLE 2- PUMP DISCHARGE RATES FOR WARSHIPS</b>		
<u>Combat Ship Tonnage</u>	<u>Gallons per Hour</u>	<u>Combat Factor</u>
Ships under 13,499	30	1
13,500 to 24,999	45	2
25,000 to 34,999	60	3
35,000 to 47,999	75	4
48,000 to 64,999	90	5
Ships over 65,000	105	6
<b><u>Cargo Ships</u></b>		
Ships under 25,000 tons	30	1
Ships 25,000 tons and over	45	2

<b>12.3 TABLE 3- GUN CALIBER SIZES AND RATE OF FIRE</b>			
<u>Actual Gun Size</u>	<u>Authorized Ball Size</u>	<u>Rate of Fire</u>	<u>Combat Factor</u>
3.00 to 6.99 (76mm to 179mm)	.177 inch diameter (BB)	4 seconds	1 per barrel
7.00 to 10.9 (180mm to 279mm)	3/16 inch diameter	4 seconds	2 per barrel
11.0 to 14.9 (280mm to 379mm)	7/32 inch diameter	6 seconds	3 per barrel
15.0 and larger (380mm and larger)	¼ inch diameter	8 seconds	4 per barrel
Torpedoes	¼ inch diameter	30 seconds	1 per barrel single shot 2 reloading

**12.4 TABLE 4- SPEED CHART** (Time = 1125.2/Speed)

<u>Knots</u>	<u>Sec./100 ft.</u>	<u>Combat Factor</u>	<u>Knots</u>	<u>Sec./100 ft.</u>	<u>Combat Factor</u>	<u>Knots</u>	<u>Sec./100 ft.</u>	<u>Combat Factor</u>
20	56.3	0	30	37.5	1	41	27.4	4
21	53.6	0	31	36.3	2	42	26.8	4
22	51.1	0	32	35.2	2	43	26.2	4
23	48.9	0	33	34.1	2	44	25.6	4
24	46.9	0	34	33.1	2	45	25.0	4
25	45.0	0	35	32.1	2	46	24.5	4
26	43.3	0	36	31.3	3	47	23.9	4
27	41.7	1	37	30.4	3	48	23.4	4
28	40.2	1	38	29.6	3	49	23.0	4
29	38.8	1	39	28.9	3	50	22.5	4
			40	28.1	3	51	22.1	4

**12.5 TABLE 5- Cargo value - for Cargo Ships Only**

<u>Convoy Ship Type</u>	<u>Convoy Score</u>	<u>Combat Factor</u>
Converted Destroyers	200 points	
1,000 to 9,999 tons	500 points	0
10,000 to 19,999 tons	1,000 points	1
20,000 to 39,000 tons	1,500 points	2
40,000 or more tons	2,000 points	3
3 convoy ships or more in "Convoy"	500 points	

**12.6 TABLE 6- Additional Combat Factor Calculations**

<u>Condition</u>	<u>Combat Factor</u>
For each rotating barrel	1 per barrel
For each depressing barrel	½ per barrel
Max Tonnage	Max Tonnage / 1000

## 12.7 TABLE 7- Scoring Hits

<u>Type of Hit</u>	<u>Combat Points</u>
Kamikaze (hits ship anywhere)	200
Hole in Ship - Above the waterline	10
Hole in Ship - On the waterline	25
Hole in Ship - Below the waterline	50
Coastal Targets / Coastal Guns	150 points damage for each ounce of shot in target. Weight to be rounded down to the nearest ounce.

## 12.8 Table 8 – Scoring Sunk, Lost, or Surrendered Ships

<u>Situation</u>	<u>Combat Points</u>
Surrendered Ship	30x the combat factor
Sunk ship	20x the combat factor
Lost ship	10x the combat factor

## 13 APPENDIX 4 – Battle Schedule and Scenarios

### 13.1 Battle Order

**Description:** On battle days the following schedule will be followed unless changed by the membership previous to the day of the battle.

10:30 AM Battle to start with a “Cruiser Hour”. See Section 13.1.1 below for definition of ships allowed to battle at this time.

Between 10:30 AM and 11:30 AM convoy ships are allowed only one run.

11:30 AM All ships are allowed on the water at this time.

12:30 PM Captains meeting (and lunch)

12:30 PM Full battle and scenario start at this time.

#### 13.1.1 Definition of allowed ships for “Cruiser’s Hour”

WWI BB’s and Cruiser’s are allowed to battle during this time. Ships must meet the following requirements to be allowed to battle at this time.

**WWI BB’s:** Speed  $\leq$  28 knots, Pump  $\leq$  60 gph, and laid down before 1916.

**Cruisers (must meet 2 of the following):**

Armor =  $1/16^{\text{th}}$  inch, Cannon  $\leq$   $3/16^{\text{th}}$  inch, Pump  $\leq$  45 gph

**Monitor’s:** No limiting requirements.

**Submarine’s:** No limiting requirements.

### 13.2 INVASION SCENERIO

Conditions for play: Each side (axis/allied) has roughly equal fleets with each side having at least two transports.

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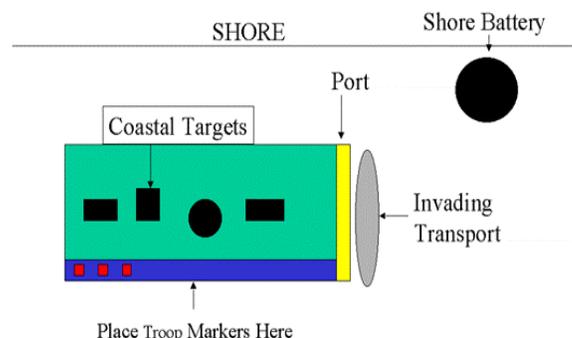
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#### A. DECLARATION OF PORTS

1. Before the beginning of battle each team shall name one home port and one neutral. This allows for newsletter titles such as Axis fleet invades Pearl Harbor, etc.

#### B. PORT SETUP

1. There will be four ports, two homeports and two neutral ports. Each port will have identical floating coastal targets. The homeports are located at opposite ends of the pond and the neutral ports are located at the middle of each side of the pond.



**The yellow stripe indicates the "port" where ships "dock". The blue stripe is where troop markers are placed. Notice troop markers can be easily shelled by ships, and any transport invading a port with an active shore battery would be committing suicide.**

2. Each homeport begins with 10 troop markers. Each neutral port begins with 5 neutral (gray) troop markers.
- C. INVASION OF PORTS
1. To invade a port a team must dock a troop transport ship next to and parallel to the coastal target port. One troop unit will be unloaded every 60 seconds. One troop unit takes up 250 points of cargo space. Therefore a 500 point transport ship would unload two units of troops in two minutes.
    - a. The skipper of the invading transport may walk along the side of the pond normally reserved for the other team in order to properly dock his transport at the coastal target being invaded.
  2. Troop units will be represented by 1 inch balsa cubes painted red for axis and blue for allied. Unloaded troop markers are placed on the coastal target and are subject to either enemy or friendly fire. If a troop marker is hit by gun fire it is considered destroyed and is counted towards the shore bombardment score as normal.
  3. Should undestroyed enemy troop markers exist on a port which is being invaded then two attacking troop markers will be destroyed along with one defending troop marker.
- D. CAPTURING A PORT
1. To capture a neutral port a team must have six "live" troop markers located on the coastal target.
  2. To capture an enemy port the attacking team must have two "live" troop markers located on the coastal target.
  3. Should a port be captured which has a shore battery it now comes under control of the capturing team. A captured shore battery will remain disabled until 30 minutes after the captured base becomes a forward base (see item E below)
  4. The team capturing the port can now walk along the pond side between their homeport and the captured port, even if this side was reserved for the other team.
- E. ESTABLISHING A FORWARD BASE AT A CAPTURED PORT
1. To establish a forward base at a captured port the owning team must deliver 1500 points of cargo. Cargo is unloaded at the rate of 500 points per minute.
  2. Once a forward base is established ships and convoys may be launched and recovered from this port.
- F. MOVEMENT OF TROOPS AND SHORE BATTERIES BETWEEN BASES
1. A shore battery may be "shipped" to a forward base by a cargo ship, which departs either from the port where the shore battery currently is or the home port should the side be deploying a second shore battery. No port can have more than one shore battery. The "cargo" size of the battery is equal to ten times it's combat factor in points.
    - a. Should the ship "carrying" the battery be sunk then the side must wait 1 hour to try and deploy the shore battery again and the battery is out of play during this time.
  2. Troops may be ferried between forward bases and homeports each troop unit takes up 250 points of cargo space and are unloaded at a rate of 2 per minute.
- G. TROOPS

1. Each troop unit is represented by a 1 inch balsa cube painted in either red (axis), blue (allied), or gray (neutral).
  2. Each side begins the battle with 10 troop markers placed on the coastal target of his home port and are subject to attack. The neutral ports start with 5 gray neutral troops. The port will be periodically inspected and killed troops removed from the port. Troops can also be moved from homeport to other ports via ferrying or invasion. If the ship figuratively carrying the troop markers is sunk the troops are consider killed.
    - a. The number of troop markers a team can accumulate through the game is unlimited. See below for how to acquire additional troops.
  3. Additional troops may be brought into the theater of operation by completing a convoy run and declaring the cargo points to be troops (250 equals one troop marker) instead of claiming cargo points for convoy portion of the game. The new troop markers are placed on the home port coastal target.
- H. LOSS OF HOME PORT
1. If a team still controls a forward base(s) then the team can declare a forward base to be the new home port and game play continues.
  2. If the team has no forward bases and loses its home port due to invasion normal play comes to an end and a scoring tally is done.
- I. SCORING THE INVASION PORTION OF THE CAMPAIGN
1. Each team will receive 1/2 scenario point for each neutral port that it controls at the end of the game.
  2. If a team controls the enemy's starting homeport at the end of the game they would receive one scenario point.

### 13.3 Nuclear Transports

**DESCRIPTION:** 1000-1500 pt 20 knot TX's from both sides are hauling heavy water for nuke research across the ocean, but which TX? One is selected in advance and must complete 2 back to back convoy runs to achieve its mission.

**FLEET:** Fairly even, two TX's per side required.

**OTHER:** Two TX's may be selected. One TX is marked.

**RULES:** Heavy Water laden TX's are worth one scenario point sunk or with two completed convoy runs.

### 13.4 Hunt for the Red October

**DESCRIPTION:** A captain volunteers to be a mutineer Capital ship coming from the superior fleet. The mutinous Captain's intention is to cross the Atlantic (6 laps) and defect at the opposing team's port. The "defection" is only for the duration of the scenario UNLESS the captain has declared to everyone that he wishes to permanently switch sides prior to starting the scenario. This is the only method for a player to change sides during the course of a season.

**FLEET:** Lopsided (2 to 1)

**OTHER:**

**RULES:** Once near port, after her sixth run, she must refrain from firing and must wait in the general area for two minutes awaiting permission to port. Two points are awarded to the defector's team should they prevent him from completing the six laps and entering the enemy's port. Two points are awarded to the gaining side should the defector complete his mission.

### 13.5 Gauntlet

**DESCRIPTION:** The lesser fleet's warships are in another theater. They must re-supply them or fail. To affect this, their transports will attempt to sneak through the larger enemy's waters.

**FLEET:** One fleet outnumbered other by 2-1

**OTHER:**

**RULES:** The outnumbered side's objective is to get one transport (1000 points or greater) to make two complete laps (four laps for fast transports). The superior team's objective is to sink the enemy's transports. Each transport can only attempt the gauntlet once. If they get sunk or abort their run, they are out of play. All transports must begin their gauntlet run within a half hour of the start of scenario play.

### 13.6 Carrier Task Force

**DESCRIPTION:** An Allied Carrier Task Force is launched with the intent to attack mainland Japan. Conversely, an Axis Carrier Task Force is launched to attack mainland United States. A distance of six laps is required to reach the enemy's shore. Carriers should conserve their main gun's ammo for the shore bombardment.

**FLEET:** One carrier on each side required

**OTHER:** If a Carrier Task Force member wishes to abort the mission and return to port, then they must complete the same quantity of laps already completed, but backwards. No five minute calls allowed. All ships on the water must be assigned to a task force. The lap requirement to return to base is based solely on their carriers current lap number. Escort ships are free to break off and engage the enemy's task force, but have their carriers lap number as the number of laps needed to return to port.

**RULES:** One scenario point each is awarded for either completing a task force mission or preventing the completion of a task force.