1.0 INTRODUCTION

Pacific Subs is a solitaire game allowing you the player to take command of a United States Navy (USN) or Imperial Japanese Navy (IJN) submarine during World War II in the Pacific Theater. You may conduct a single patrol or string together a series of patrols to make a campaign. Your objective is to sink enemy vessels, gather intelligence, rescue downed airmen or fellow sailors, and conduct other missions as directed by the patrol instructions. Success means promotion.

1.1 Components

A complete game of Pacific Subs includes one 34 x 22 inch map, one counter sheet containing 280 1/2 inch counters and these rules. You must provide at least one six-sided die; more would be useful (1.6).

1.2 Rules

These rules describe the procedures and mechanics needed to play the game. Read them once for familiarization, then a second time while examining the components. All charts and tables needed for play are located on the map or in the center pull out of the rules.

Important: Throughout the rules, there are references to Japanese submarines and US escorts. Those rules are included to allow players to command Japanese submarines and provide for future expansions and or variants. Players should use Japanese escort counters as US escorts when commanding Japanese submarines.
1.3 Map
The map sheet contains the situation map, on which your sub will move, the tactical display used for engaging enemy vessels, and the boat status tracks. The terrain on the situation map has been altered to fit the grid but retains the spatial relationships of the real world. One hex represents 375 miles from side to side. Each hex has a unique four-digit number for ease of location: the first two digits identify the column of hexes, the second two the hex in that column.

Map Errata:
- The to-hit number (2) in the extreme range of the Port Bow 4, 5 Curved, is incorrect. The value should be “1” not “2.”
- Engagement Time: The arrows in the second row of are pointed in the wrong direction.
- The range modifiers (those with the arrows) are incorrect. Use the notes +2 Extreme Range, +1 Long Range.

1.4 Player Aid Card
Charts and tables are included on the player aid section. It is located on pages 7 through 10. Remove it from the rules by bending back the staples, removing the entire sheet, and refolding the staples to secure the rest of the rules.

Important: Players can download examples of play and set up diagram from the Decision Games web site at: http://strategyandtacticsmagazine.com/site/e-rules/

1.5 Counters
The counters are used for a variety of purposes as noted throughout the rules. When first cutting out the counters, separate them from the sheet and from one another; we recommend using a knife or scissors to cut the counters from the sheets. Most counters are easily identifiable, however note the information on the counter tree that identifies escorts, flotillas and targets. The colors on the counters do not relate to specific sides (i.e. Japanese or US); escorts (red), flotillas, bases and garrisons (orange). Targets are black with periscope views of ships. The “T” on a target denotes it as a tanker. A Counter Display is located on page 16.

Counter Errata: The submerged timer marker was inadvertently not included in the counter mix. The back of harbor marker inadvertently left blank. Replacement counters (2 loose in the sealed packet) are provided.

1.6 Dice
The rules call for rolling a specified number of dice with the notation #d# where # is the number of dice rolled. Read it as requiring that total number of rolls, whether of multiple dice at once, or one die the specified number of times, or any combination thereof.

16.A Sequenced Dice
In many cases, two dice are thrown in sequence, and the sequence is critical. The notation will be “F” for the first die (F1d6) and “S” for the second (S1d6). In these cases, you will find it useful to have dice of different sizes or colors.

2.0 HOW TO PLAY
Choose a patrol (3.0) and set up the map and counters (4.0 & 5.0). Each patrol lasts for one season, indicated by moving the date marker along the Patrol Log Track on the map. Conduct the patrol one action at a time (6.0), resolving any engagements (7.0 through 13.0) before moving on to the next action. The patrol ends when the boat returns to port, runs out of fuel or is sunk. Determine its success or failure (14.0).

When playing a campaign game, place a patrol marker in the just completed season box on the Patrol Log to note that a patrol was completed.

Example: The player completes his first patrol in the Fall of 1941, place the Patrol-1 marker in the Fall 1941 box.

3.0 PATROL ORDERS
Your orders for a patrol will either be assigned by the scenario instructions or by using the Doctrine Chart on the map and the Patrol Types Chart.

3.1 Doctrine
There are seven doctrine columns on the Doctrine Chart: five for the USN (each corresponding to specific dates) and two for the IJN. Choose a side and place the doctrine marker on the chart in the appropriate column.

3.1A USN Doctrine
The USN submarine fleet went through a long trial and error process of different doctrines. Those used early in the war impose operational restrictions on boat captains (you). You may violate the doctrine (in other words, do as you think best) at the risk of a poor evaluation at the end of the patrol (14.2).

3.1B IJN Doctrine
The standard Japanese doctrine assumed submarines would be used to assist the surface fleet during naval battles. It evolved slowly and incompletely by the end of the war. The alternative doctrine assumes a more rapid evolution and may be used at your discretion depending on patrol orders.

3.2 Patrol Types
Cross reference the patrol orders line, with the current doctrine (time frame) and roll 1d6 to determine the type of patrol that will be conducted. The subcases below and the Patrol Types Chart indicate permissible or prohibited actions for the patrol.

Important: Each column on the Doctrine Chart covers two seasons. The Set-Up Chart has a column for each season. When playing a scenario ensure you use the correct columns on both charts.

3.2A Evac (Evacuation)
Evacuation involves picking up passengers in danger of capture by enemy forces. The boat must enter eligible pick up hexes and pluck the passenger in question from a beach.

3.2B Fleet (Cooperation with the Fleet)
Fleet has the boat operating in conjunction with the battle fleet. Its primary task is sinking enemy warships but may also be involved in peripheral missions.

3.2C Harbor Blockade
Harbor blockade involves laying in-wait near an enemy port to pick off shipping and lay mines.

3.2D Raid
Raid involves landing and retrieving a raiding party, either a small special operations (SO) team or a raider unit (Raid). The boat may conduct all activities in the harbor blockade (3.2C) in between the landing and retrieval.

3.2E Strategic (Strategic Warfare)
Strategic is the sine qua non of submarine warfare, giving the skipper the broadest possible latitude in finding and engaging targets.

3.2F Supply (Supply Transport)
Supply is an IJN mission comparable to raid but involving the landing of supplies to an otherwise cut-off ground unit.
3.3 USN Coordinated Attack Groups
Beginning in Fall 1943, USN boats may be made part of a CAG (colloquially referred to as wolfpack). Conduct a normal patrol subject to the changes listed below.

- The captain must receive a promotable or promoted evaluation on the previous patrol.
- After making the CAG selection, advance the date one season ahead on the Patrol Log to allow for training.
- Do not roll for patrol type: it is automatically strategic.
- Add one (+1) to all contact die rolls (7.1). Add two (+2) to all target scatter rolls (11.3).
- Add one (+1) to all contact die rolls (7.1).
- After making the CAG selection, advance the date one season ahead on the Patrol Log to allow for training.
- The captain must receive a promotable or promoted evaluation on the previous patrol.

4.0 SITUATION
The Set-Up Chart lists every naval installation on both sides for the entire war.

4.1 Forces & Installations
To set up a scenario, cross-index the appropriate season with each location to see what counter is to be placed in it (listed below). The line items printed in bold and blue type indicate a change from the previous season; when playing the campaign game, it will be necessary only to check the changed locations.

- JN or USN: For ports with no installations, it indicates which side controls the port during that season.
- JN-# or USN-# = Base: Place a base with the appropriate side and number showing.
- JN-G or USN-G = Japanese or US Garrison.
- JN-F = Japanese flotilla.
- LB = Land Battle: Affects the location and all six hexes surrounding it.
- NB = Naval Battle: Affects the location and all six hexes surrounding it.
- - = No Marker.

4.2 Ports & Bases
Your boat may enter a friendly port or base at any time (it may be useful for conducting repairs and drills). Entering a friendly port or base ends the patrol. You may choose to enter any friendly port or base, but the next patrol will have to start from that location. See below for information regarding the capability of ports and different size bases.

4.2A Port
The boat may take on up to six fuel points but may not exceed the boat’s maximum. The crew may be given liberty in a non-base port. Roll 1d6 and add the captain’s skill. On a result of six or more, the crew’s readiness is increased by one. On a roll of one or two, the crew readiness is reduced by one.

4.2B Base-1
Refueling is unlimited (up to the boat’s maximum). Torpedoes may be moved from forward storage to aft storage, or vice versa. Any damage eligible for jury rigging (6.4) may be fixed automatically. Crew readiness automatically returns to ready status.

4.2C Base-2 or Base-3
Refueling is unlimited (up to the boat’s maximum). The boat may be restocked completely with torpedoes. Any damage eligible for jury rigging (6.4) or dockside repairs (14.4A) may be fixed automatically. Crew readiness automatically returns to ready status.

4.3A Pier-3
Mines may be carried in lieu of torpedoes on a one-for-one basis. IJN submarines may be able to carry mines without reducing the number of torpedoes carried. Refer to the Boat Class Information Chart. Consult the Patrol Types Chart to determine the patrol’s requirements.

4.3B Pier-4
Mines may be carried in lieu of torpedoes on a one-for-one basis. IJN submarines may be able to carry mines without reducing the number of torpedoes carried. Refer to the Boat Class Information Chart. Consult the Patrol Types Chart to determine the patrol’s requirements.

4.4 Events
The four listed events on the Event Chart are in effect automatically on and after the turns specified.

5.0 FITTING OUT
You are the captain of a submarine. The patrol orders indicate the type of boat (5.1), your rank and skill level (5.2), and the quality of your crew (5.3).

5.1 The Boat
Your submarine class is given in the Doctrine Chart. The Boat Class Information Chart indicates its capabilities. Set up the boat status markers as indicated on the chart. Any or all status markers may be moved during the patrol.

5.1A Torpedoes
Refer to the Doctrine Table to determine the type and mix of torpedo counters for the time of the patrol. The first number shown is the number of straight and true torpedoes in the mix, the second number is the number of duds, the third, premature explosion and the fourth circling. Place the number of each type face down (torpedo name side up). Mix them together and then draw the number of torpedoes that the submarine can carry as listed on the Boat Class Information Chart. The number of torpedoes to be carried is listed for the forward and aft torpedo storage boxes. Once placed forward or aft, a torpedo may not be moved from one to the other except at a base (6.3). Set aside all remaining torpedoes (if any).

5.1B Mines
Mines may be carried in lieu of torpedoes on a one-for-one basis. IJN submarines may be able to carry mines without reducing the number of torpedoes carried. Refer to the Boat Class Information Chart. Consult the Patrol Types Chart to determine the patrol’s requirements.

5.1C Damage
Your boat may suffer damage because of an engagement. For each hit taken, draw one damage marker from the damage pool and place it on the appropriate box. For systems, capable of absorbing more than one hit, place the first marker in the “1” box, second in the “2” box, and so on. The effect of each hit is indicated in the box on and the Damage Chart. Damage may be repaired while underway (6.4) or after the conclusion of the patrol.

5.1D Maximum Boat System Status
On the Boat Class Information Chart, the numbers following the system codes are damage markers placed to modify the boat’s capabilities. Place a damage marker flipped to its no hit side on each damage box listed on the chart (letter abbreviations are listed, the number indicating the box to be filled). These no-hit markers do not count as hits when calculating the tally at the end of the patrol. The boat operates at full capacity until a hit is taken in combat, except for those systems having all boxes filled. When an “A” and/or “R” is listed, that signifies that the boat in question does not have that capability.

5.2 The Captain
You have two ratings (rank and skill). Initial ratings are indicated by the patrol orders and may be altered after the patrol (14.2). Place the appropriate markers n the Captain’s Cabin Box on the map.

5.2A Rank
This is your rank in the navy. It has no effect except in the campaign game, when the objective is to make captain. Promotability (P) on the reverse side of each rank indicates you have been marked out for advancement but have not yet made the grade.
5.2B Skill
Skill reflects your experience in command and is used during operations.

5.3 The Crew
The crew also has two ratings (skill and readiness), again indicated in the patrol orders. Crew skill may be affected by a successful patrol. Crew readiness may increase or decrease during a patrol. Place the appropriate markers in the Condition of the Crew Box on the map.

5.3A Crew Skill
Crew skill is ranked from 0 (low) to +3 (high), reflecting the crew’s ability to carry out tasks.

5.3B Crew Readiness
Crew readiness is ranked from sharp (high) to panicky (low) and reflects the crew’s fatigue level. As the crew becomes fatigued by combat and certain special events, its ability to carry out tasks is temporarily diminished.

5.4 Passengers
Some patrols may require your boat to carry or pick up passengers. Passengers can also be picked up as part of a mission of opportunity (7.3). They take up space on the boat, which may necessitate the removal of one or more torpedoes. If the passenger is being picked up while on patrol and the boat has too many torpedoes, the excess must be fired. Some passengers also restrict the boat’s freedom of action.

5.4A Raid
Raiders are part of a ground unit to be used for an attack on an enemy position. If carried, the maximum number of torpedoes carried is reduced by four. When conducting a raid, you may not conduct missions of opportunity.

5.4B SOT
A SOT (Special Operations Team) is comparable to raiders but smaller (meteorologists and the like). No torpedo reduction is required.

5.4C Top Brass (TB)
Top Brass is a flag officer in need of transportation.

5.4D Very Important Person (VIP)
VIP are high-ranking officers or other military bigwigs in need of transportation.

5.4E Unacceptable Human Ballast (UHB)
UHB are a civilian or civilians in need of rescue or transport. The crew cannot be fully rested while transporting UHB.

5.4F Obstreperous Civilian Detainee (OCD-front)
OCD could be anything from a tin-pot dictator or an ambassador to a junketing congressional aide to be transported.

5.4G Officious Junketing Congressmen (OJC-back)
A congressman that requires transportation.

6.0 ACTIONS
A patrol consists of any number of actions. Each action represents approximately three days of real time. During an action, the boat either remains in the same hex or travels to a new hex. The boat may encounter enemy vessels or mission-significant events in each hex entered (7.0). If it does, you may bypass the hex or decide to engage (8.0). Continue conducting actions until you return to base and end the patrol.

6.1 Movement
The boat always travels from hex to hex on the surface; submerged operation is limited solely to engagements. Movement is conducted by expending the necessary fuel (move the fuel marker down the track) to move from zero to three hexes, depending on the speed chosen. Fuel requirements are listed on the Movement Rates Chart (on the map).

6.1A Traveling Speeds
The chosen speed lasts only for a single action. It may be changed freely from action to action. Traveling speeds can affect the boat’s signature when entering an engagement (8.2).

Cruising: Costs one fuel and allows the boat to move up to two hexes. This is the standard form of movement and is the most economical.

High Speed: Costs two fuel and allows the boat to move up to three hexes.

Stalking: Costs one fuel and allows the boat to move one hex with a reduced chance of detection.

Drills: Costs one fuel and allows the boat to move one hex. At the end of the action, if no contact has been made, roll 1d6. A result of 5 or 6 improves the crew’s readiness by one (+1). Alternatively, the crew may attempt to jury rig damaged components (6.4).

6.1B Terrain
The boat may cross any hexside containing at least some kind of ocean; all-land hexsides may not be crossed. The type of hex entered affects the likelihood of enemy contact (7.0) and the possible depth of dives.

6.1C Running out of Fuel
If the boat runs out of fuel before returning to a friendly port, it must be abandoned, and you are beached permanently (in other words, you lose the game). The return fuel marker is provided to allow you to keep a running count of how much fuel you will need to return to a friendly port; it’s use is optional but recommended.

6.1D Launching Aircraft
An LN boat equipped with an aircraft traveling at cruising or stalking speed may launch its aircraft.

6.2 Enemy Flotillas
If you leave a hex containing an enemy flotilla, you must move by stalking. There is a chance the flotilla will attempt to pursue. Roll 1d6 for each eligible flotilla, on a roll of 1 to 4, the flotilla pursues. Only one flotilla can pursue all other flotillas remain in the original hex no matter their Dr. The pursuing flotilla moves into your current hex. Conduct the necessary contact rolls.

6.3 Entering Port
If an action ends in a friendly port, you may embark or debark any passengers in addition to conducting drills or repairs without expending fuel.

6.4 Jury Rigging
Certain damage is eligible for repair while underway. Consult the Damage Chart cross referencing the damage with the Jury Rig column to determine if the damage may be repaired while underway. The boat must move at drill speed. At the end of the action, if no contact has been made, roll 1d6 and add crew skill. On a modified roll of 5 or 6, the damaged component is repaired.

7.0 CONTACT
The boat may encounter enemy forces or other mission objectives each time it enters a hex containing the following:
- Enemy shipping lane.
- Enemy port, base, or garrison.
- Enemy Flotilla.
- Land or naval battle. In this case roll for contact in the land and naval battle hex and when entering a hex adjacent to either of those markers.
7.1 Contact Rolls
Consult the Contact Table on the map after entering the hex. Roll the number of dice indicated on each column of each line applicable to the hex.

Note: Oil Routes may appear in hexes with one of the above, they are a modifier to the other line items.

Exception: In the case of a hex with more than one line of a specific type of route, treat it as having only one route line for each type.

Example: Hex (07)10 has two major and two minor routes. Only one route of each type would be used as a modifier.

Roll the number of dice indicated in each column. Any roll of 5 or 6 results in one counter of the type of contact listed in that column. If one or more enemy escorts are contacted, you must engage (8.0) even if only to break contact. If only enemy targets are present, you may decide to engage or bypass the hex. If no contact is made, continue moving.

- If your boat is submerged, subtract one (-1) from each contact die roll.
- If your boat is equipped with functioning radar and you are on the surface, add one (+1) to each contact.

Exception: If the boat is in a strait hex (see Terrain Key) radar has no effect, do not apply the radar modifier.
- Do not modify the die roll when determining rescue.

Note: Oil routes exist only in hexes containing the oil route symbol.

7.1A Targets & Tankers
Pick up the rolled number of each type of target from the corresponding pool, ensuring they remain face up. Place them in a convenient location near the Plot (the blue rings on the tactical display) on the map.

7.1B High Value Targets (HVT) & Rescues
Pick up the rolled number of each type from the corresponding pool and place them in a convenient location near the plot (the blue rings on the tactical display) on the map.

7.1C Escorts
Pick up the rolled number of escorts from the current escort pool as determined by the Doctrine Chart. Place them in the “0” box of the Escort Track. The total number of escorts deployed cannot exceed the number available in the pool.

Escort types: When more than one is available, they are taken one at a time in the following order: 1, 2, 2H and air, then back to 1. If none of a type is available, skip that type. Continue the selection until the rolled number of escorts is fulfilled.

Air escorts: Can only be deployed in engagement hexes on or adjacent to a friendly port or base, or; for US escorts only, a US flotilla.

US Escort rolls: Are increased by one die for each air unit in the current US escort pool.

7.1D Friendly Fire
If the boat’s radio is not working and your boat enters a hex where it would roll for contact if it were an enemy boat, you must make a contact roll for friendly fire. If any are contacted, you must go through an engagement with them until you break contact. You may not fire at them.

7.1E Aircraft Search
An IJN boat equipped with an aircraft that was launched as part of the action adds one to each contact die roll for tankers and merchantmen (only). If any USN escorts are contacted, the boat may evade the engagement before it begins.

7.2 Enemy Ports
The following special tasks may be conducted only in enemy ports.

7.2A Harbor Penetration
If you wish to penetrate an enemy harbor, you must enter the hex by stalking (8.1). The actual entry of the port must be done during an engagement (8.0). Place the harbor marker on the target plot. Once in the harbor, you must exit the harbor following the same procedure.

7.2B Minelaying
Mines may be laid outside an enemy harbor. You must conduct an engagement in the port hex.

7.3 Missions of Opportunity
Consult the Patrol Type Chart to determine possible missions of opportunity. These are potential actions which become available to the boat during operations. They are only available if the boat’s radio is working and the boat is on the surface. The skipper has the option of disregarding the opportunity. If accepted, the boat must immediately conduct a new action to reach the opportunity hex. Roll for contact normally in all hexes entered except as modified below.

- Missions of Opportunity are only conducted when within two hexes of a marker or enemy controlled port (may be base or just enemy controlled). The mission of opportunity could change in each hex where a die roll is made, each is considered a separate action.
- If there are two or more hexes that would generate a mission of opportunity, the player should randomly select which hex is being rolled for. Only roll once for missions of opportunity once in each hex entered. Do not roll for mission of opportunity when moving to complete an accepted mission of opportunity.

7.3A Emergency Evac
Emergency evacuations are a call to pick up an endangered passenger in the hex that generated the mission of opportunity. Consult the Missions of Opportunity List to determine type. See 3.2A for more details concerning evacuations.

7.3B HVT
HVT means a large enemy combatant has been spotted in the hex that generated the mission of opportunity. It is automatically accompanied by escorts. Roll 1d6 after entering the HVT hex in addition to any other contact roll. On a 1-3 there is one escort, 4-6 there are two. Draw randomly from the current escort pool, but an air escort is available only in or adjacent to an appropriate base, garrison, or LB.

7.3C Scout
Scout is a request from higher headquarters to search a hex. Consult the Missions of Opportunity Special Instructions to determine the hex you have been ordered to scout. The boat must spend three full actions in that hex. Roll for enemy contact in each action.

7.3D Take Station
Take station is a directive to cruise in a specified hex. Consult the Missions of Opportunity Special Instructions to determine the hex you have been ordered to assume station. The boat must spend three actions in the hex. Make normal contact rolls each action but increase the HVT and rescue rolls by one (a minimum of one each).

8.0 ENGAGEMENT
An engagement occurs automatically if enemy escorts are present in a hex, or by your choice in all other instances.

Important: You may not fire on targets, enter an enemy port, or embark or disembark passengers except during an engagement.

If an engagement occurs, determine the engagement conditions (8.1), set the boat’s status (8.2), and plot targets (8.3) before conducting your approach.

8.1 Engagement Conditions
Determine the conditions under which the engagement begins.

8.1A Time
Roll 1d6; add 4 to the result for each hex traveled during the action and...
add 4 if the boat entered the hex by stalking. Place the timer marker on the corresponding box of the engagement timer of the map.

**Submerged timer**: If the boat is submerged, place the submerged timer six (6) boxes forward of the current time. If the current time is 13 or later, the submerged timer will wrap around to the beginning.

**Example**: If the current time is 14, the submerged timer is placed on the 2-box.

### 8.1 Weather
Roll 2d6 and consult the Weather Forecast Table on the map. Cross-index the season with the sea zone containing the hex entered. If the die roll falls within the span for a storm or fog, place the weather marker at a convenient location near the engagement time. Weather effects are listed at the bottom of the table. Die roll modifiers can never reduce the die to less than one.

**8.1C Seabed**
Place the seabed marker in the appropriate box of the depth gauge.

**Abyss Box**: If the boat is in open water.

**Mid-Water**: If the boat is in shallows.

**Shallow**: If the boat is attempting a harbor penetration or landing/evacuation.

### 8.2 Boat Status
Set your boat’s status as indicated below.

**Depth**: Surface unless the boat was stalking, in which case it is at periscope depth.

**Speed**: Standard (both surfaced and if submerged).

**Signature**: Is based on the speed the boat used to enter the hex (6.1A).

For each speed, place the marker in the indicated box of the Signature Track.

**High Speed**: 4
**Stalking**: 1
**Cruising & Drills**: 3

### 8.3 Plot Targets
Place all the counters contacted in 7.0 on The Plot, in the outer (blue) rings of the tactical display, as determined below.

**8.3A Targets, HVT, and Rescue**
Roll 2d6 for each target; the first die determines bearing, the second distance.

**Bearing**: Indicates the direction of the target from the boat. Use the bearing number around the outer edge of the Plot corresponding to the die result.

**Distance**: Is the distance of the target from the boat. Find the blue tinted ring in the plot corresponding to the die result.

**8.3B Harbor**
If you are going to attempt a harbor penetration or minelaying, place the harbor marker bearing ahead. Roll 1d6 to determine distance as in 8.3A.

**8.3C Land**
If you are going to attempt an embarkation or debarkation of passengers, place the land marker bearing ahead. Roll 1d6 to determine distance as in 8.3A.

### 8.3D Escorts
Place all escorts in the “0” box of the Escort Track (to the right of the plot).

### 9.0 APPROACH
The approach consists of steps you take to put your boat in the desired location for a firing solution (10.0). You must determine your depth (9.1), speed (9.2), and course (9.3). You may call your crew to battle stations (9.4) and prepare weapons (9.5). Approaching land, harbor, or a rescue has special tasks (9.6).

### Important
If the Doctrine Chart prohibits reengagement but you are either required to reengage by 13.0, or you choose to reengage, you will be in violation of current doctrine by conducting any firing other than a hip shot on an escort (12.4).

**Note**: Some of your engagements will consist of your boat sitting on the bottom for several engagement-rounds while the escort action rages above you and all targets continue to scatter.

#### 9.1 Set Depth
Set your depth as desired. You may change your depth from what was set in in 8.2 if you are re-engaging. Make the following status adjustments; all signature adjustments are simultaneous and cumulative.

- **If you changed depth**: Increase your signature by one (+1).
- **Depth Gauge**: Adjust your signature as indicated on the depth gauge.
- **If you break the surface**: If the depth change starts or ends on the surface, increase your signature by one (+1). This is in addition to changing your depth.

**Designer’s Note**: In a press conference held in June 1943 by Congressman May, it was revealed that US submarines had been conducting a successful underwater war against Japanese shipping and frequently escaped Japanese depth charge attacks. Soon after it was discovered that the Japanese had adjusted their depth charges to explode at a deeper depth. A later report from the US Navy’s Pacific Submarine Fleet made no finding as to whether Japanese forces altered their depth charge attacks to deeper settings because of May’s revelation to the press.

**May Incident**: Prior to the May incident, the signature modifier for US submarines at midwater is +1. After the May Incident (Summer 1943) the signature changes to +2.

### 8.4 Submerged Timer
If the boat was on the surface and is now submerged, place the submerged timer six boxes forward as in 8.1A. If the boat was submerged and is now surfaced, remove the submerged timer.

### Recharging Batteries
If you end up on the surface, flip the battery charge marker to its charging side.

**Stow Deck Gun**: If the boat starts on the surface and the deck gun is in ready status, you may attempt to stow it prior to diving. Roll 1d6 and add the crew skill rating. On a modified result of 5 or 6, the gun is stowed (flip it to its stowed side). On any other roll the gun is damaged. Place the deck gun damage marker in the Deck Gun Box on the plot. The AA guns (if any) are stowed automatically at the same time. An IJN boat with an aircraft must secure the hangar before diving. It is considered secured at the same time as a deck gun. If not secured, the aircraft is lost at the end of the first turn of the engagement.

**9.1A Crush Depth**
If the boat drops to its crush depth, roll 1d6. On a roll of 5 or 6, the boat suffers hull damage.
- If it is a young boat, remove the young boat marker.
- If it is not a young boat, place the old boat marker near the hull boxes.
- If the boat was already an old boat, it suffers one hull damage. Place the hull damage marker and place it on the next hull damage box. The boat does not need to change depth immediately. Adjust the boat’s crush depth as needed.

**9.1B Bottoming the Boat**
If the boat’s current depth has a bottom box, you may bottom the boat. Your speed must be set to stop (9.2) and you will not be able to fire (10.0). You may search for a rise on the sea floor if your sonar is working.

- Increase signature by 1. Roll 1d6; on a roll of 5 or 6 you have found a rise and may bottom the boat on the next depth above your current depth.

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In a press conference held in June 1943 by Congressman May, it was revealed that US submarines had been conducting a successful underwater war against Japanese shipping and frequently escaped Japanese depth charge attacks. Soon after it was discovered that the Japanese had adjusted their depth charges to explode at a deeper depth. A later report from the US Navy’s Pacific Submarine Fleet made no finding as to whether Japanese forces altered their depth charge attacks to deeper settings because of May’s revelation to the press. **May Incident**: Prior to the May incident, the signature modifier for US submarines at midwater is +1. After the May Incident (Summer 1943) the signature changes to +2. **Recharging Batteries**: If you end up on the surface, flip the battery charge marker to its charging side. **Stow Deck Gun**: If the boat starts on the surface and the deck gun is in ready status, you may attempt to stow it prior to diving. Roll 1d6 and add the crew skill rating. On a modified result of 5 or 6, the gun is stowed (flip it to its stowed side). On any other roll the gun is damaged. Place the deck gun damage marker in the Deck Gun Box on the plot. The AA guns (if any) are stowed automatically at the same time. An IJN boat with an aircraft must secure the hangar before diving. It is considered secured at the same time as a deck gun. If not secured, the aircraft is lost at the end of the first turn of the engagement. **9.1A Crush Depth**: If the boat drops to its crush depth, roll 1d6. On a roll of 5 or 6, the boat suffers hull damage. - If it is a young boat, remove the young boat marker. - If it is not a young boat, place the old boat marker near the hull boxes. - If the boat was already an old boat, it suffers one hull damage. Place the hull damage marker and place it on the next hull damage box. The boat does not need to change depth immediately. Adjust the boat’s crush depth as needed. **9.1B Bottoming the Boat**: If the boat’s current depth has a bottom box, you may bottom the boat. Your speed must be set to stop (9.2) and you will not be able to fire (10.0). You may search for a rise on the sea floor if your sonar is working. Increase signature by 1. Roll 1d6; on a roll of 5 or 6 you have found a rise and may bottom the boat on the next depth above your current depth.
SET UP SEQUENCE
Choose a Scenario (15.0)
Scenario determines the season and provides specific details for set up and your mission.
Patrol Orders (3.0)
Determined using Doctrine Chart and then the Patrol Types Chart.
Situation (4.0)
Set up naval installations and situational markers using the Set-up chart. Check for Events.
Fitting Out the Boat (5.0)
Set up the boat using the Boat Class Information Chart.
EVENT CHART
Date | Event
--- | ---
Fall 1942 | USN Radar: All USN boats have radar
Summer 1943 | May Incident: IJN escorts may attack at all depths
Fall 1943 | USN Mk 27 available for all boats
Summer 1944 | IJN Radar: All IJN boats have radar

PROMOTION TABLE
<table>
<thead>
<tr>
<th>Tally</th>
<th>Captain’s Evaluation</th>
<th>Crew Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=3</td>
<td>Beached! Roll 1d6, halve the result (round up). Result is number of seasons the captain is beached.</td>
<td>—</td>
</tr>
<tr>
<td>4-6</td>
<td>Acceptable: Skill +1 New boat 1d6 (1-2)</td>
<td>Skill +1 1d6 (1-2)</td>
</tr>
<tr>
<td>7-9</td>
<td>Promotable: Skill +1 New boat 1d6 (1-3)</td>
<td>Skill +1 1d6 (1-4)</td>
</tr>
<tr>
<td>10+</td>
<td>Promoted: Skill +1 New boat 1d6 (1-4)</td>
<td>Skill +1</td>
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PATROL TYPES CHART

<table>
<thead>
<tr>
<th>Patrol</th>
<th>Actions</th>
<th>Missions of Opportunity (7.3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evac</td>
<td>In LB and enemy garrison/base/port hexes conduct contact die rolls normally. In all others roll for escort and rescue contact only. If contact is successful, roll 1d6 for type of passenger (at right). Any number of passengers may be picked up per hex, but the sub must exit and then reenter the hex prior to conducting additional contact and passenger die rolls.</td>
<td>None available, do not roll.</td>
</tr>
<tr>
<td>Fleet</td>
<td>Conduct contact die rolls for escorts only unless rolling for a flotilla, LB or NB. When conducting die rolls for those three types add two dice to the number of dice rolled for rescue (on the Contact Table) and roll for missions of opportunity (at right). If Emergency Evac is rolled, it is no mission unless LB or enemy port is within the two-hex range.</td>
<td>1: EM. Evac if LB or Enemy Port 2-3: HVT 4: Scout 5-6: Take Station</td>
</tr>
<tr>
<td>Harbor Blockade</td>
<td>Roll for escort contact only except when stalking in an enemy port hex. May lay mines in port hex. Roll 1d6 for missions of opportunity when exiting the enemy port hex.</td>
<td>1-3: No Mission 4-5: HVT 6: Scout</td>
</tr>
<tr>
<td>Raid</td>
<td>Transport raiders to land on LB or enemy port; retrieve raiders before end of patrol. May conduct port blockade after landing but before extraction of raiders. When fitting out, player may convert this patrol to Evac or Supply.</td>
<td>None available, do not roll.</td>
</tr>
<tr>
<td>Strategic</td>
<td>No restrictions. Roll 1d6 for mission of opportunity when leaving any hex in which you made a successful contact roll. For mission of opportunity results (other than “no mission”) each mission is a no mission if the type hex or marker is not within the two-hex range.</td>
<td>1-2: No Mission 3: EM. Evac if LB or Enemy Port 4: HVT if Enemy Base 5: Scout if LB or NB 6: Take station if LB or NB</td>
</tr>
<tr>
<td>Supply</td>
<td>IJN boats may land supplies to LB or IJN garrisons. When exiting, roll 1d6 for mission of opportunity (at right) TB to home port</td>
<td>1-3: No Mission 4-6: Transport</td>
</tr>
</tbody>
</table>

MISSIONS OF OPPORTUNITY (7.3)
SPECIAL INSTRUCTIONS
Missions of Opportunity are only conducted when within 2 hexes of a marker or enemy controlled port (may be base or just enemy controlled). The mission of opportunity could change in each hex where a die roll is made, each is considered a separate action.
If there are two or more hexes that would generate a mission of opportunity, the player should randomly select which hex is being rolled for. Only roll for missions of opportunity once in each hex entered. Do not roll for mission of opportunity when moving to complete an accepted mission of opportunity.
Emergency (EM.) Evac: Roll 1d6 to determine type: (use the list on the Patrol Types Chart under “Evac.”
HVT: Roll 1d6 after entering the HVT hex in addition to any other contact roll. On a 1-3 there is one escort, 4-6 there are two. Draw randomly from the appropriate escort pool. An air escort is available only in or adjacent to an appropriate base, garrison, or LB.
Scout & Take Station: Roll 2d6 to determine location of mission, first die result is top number, second is bottom range.
**Boat Class Information Chart**

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<tr>
<th>Boat Class</th>
<th>Torpedo Tubes</th>
<th>Torpedo Stowage</th>
<th>Max. Fuel</th>
<th>Max. Charge</th>
<th>Max. Speed</th>
<th>Crush Depth</th>
<th>Deck Gun</th>
<th>Maximum Boat System Status</th>
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<td>24</td>
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<td>Fu/St</td>
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<td>A, E1, E2, M1, M2, H1, H2, H3, R</td>
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<td>H1</td>
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<td>M1, M2</td>
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</table>

**Notes:**

^{1} Plus Aircraft (Search only).
^{2} Plus up to 7 Mines.
^{3} Use +1 charge for any speed, max submerged signature +1 at any speed.
^{4} Plus up to four supplies.
^{5} Plus Aircraft (Search or Attack)
^{6} Use a blank counter or some other means to note that these boats have charged more than 12.

**Patrol Sequence**

**Actions (6.0)**
Determine speed of move and expend necessary fuel. Check return fuel if desired.

**Drills:** Either conduct drills (1d6; 5-6 to improve readiness) or jury rig eligible damage (1d6 + crew skill; 5-6 to repair)

**Contact (7.0)**

**Step 1.** Roll for contact when entering a hex adjacent to a land or naval battle, and when entering an enemy shipping lane, port, base, or naval battle hex.

**Step 2.** Refer to on-map Contact Table and select the appropriate lines. Roll the number of dice indicated for each column (remember to add die if oil route exists). Each DR of 5 or 6 creates one contact of the type rolled. When rolling for a base, roll the number of die indicated times the level of the base.

**Contact Table DR modifiers & Types**
- If your boat is submerged, subtract one (-1) from each contact die roll.
- If your boat is equipped with functioning radar and you are on the surface, add one (+1) to each contact.

**Exception:** If the boat is in a strait hex (See Terrain Key) radar has no effect, do not apply the radar modifier.
- Do not modify the die roll when determining rescue.

**Escort types:** When more than one is available, they are taken one at a time in the following order: 1, 2, 2H, and Air, then back to 1. If none of a type is available, skip that type. Continue the selection until the rolled number of escorts is fulfilled.

**Air escorts:** Can only be deployed in engagement hexes on or adjacent to a friendly port or base, or, for US escorts only, a US flotilla.

**US Escort rolls:** Are increased by one die for each air unit in the current US escort pool.

**Engagement Sequence**

**Engagement (8.0)**
If contact is made, decide on engagement. Mandatory if escorts present.
- Set Timer.
- Determine Weather and determine seabed.
- Set Depth.
- Set Speed.
- Set Signature.
- Plot Targets.

**Approach (9.0)**
- Set Depth (9.1). Charge batteries if on surface. Start submerged timer if submerged.
- Make Speed (9.2). Adjust battery charge if submerged.
- Lay in Course (9.3): Counter rotate targets as needed.
- Call Battle Stations (9.4).
- Load Torpedoes: Loading is automatic if at battle stations. If not, see 9.5A.
- Flood tubes as desired.
- Prepare Deck Gun: Automatic if at battle stations. If not, see 9.5B.
### SET UP CHART

<table>
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<tr>
<th>PLACE</th>
<th>Hex</th>
<th>F-41</th>
<th>F42</th>
<th>Sp42</th>
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</tbody>
</table>

Unless otherwise noted, all named locations inside the Imperial Perimeter are Japanese ports in all scenarios; those outside the Imperial Perimeter are Allied ports.

**F**: Fall  
**W**: Winter  
**Sp**: Spring  
**Sm**: Summer  
**NB**: Naval Battle  
**USN**: US Navy  
**IJN**: Imperial Japanese Navy
WEAPONS CHART

USN Mk 14 and Mk 18 torpedoes had significant problems with depth-keeping, maintaining course, and even exploding on impact. They must be chosen, stored, and fired face up. When one reaches a target, flip it over and proceed as follows.

- Straight & True run and hit normally.
- Duds never hit.
- Premature explosion cannot score a hit but is treated as a hit for signature purposes.
- Circling: roll 1d6 and subtract 2; a result of 1 or higher is the number of hull hits your boat suffers. You may attempt to evade the torpedo by crash diving (11.1C).

USN Mk 27 torpedoes become available as an event and always run straight & true.

IJC Type 95 torpedoes are always available and always run straight & true. They are the only torpedo type available for the IJC.

IJC aircraft represent seaplanes carried by certain sub classes. They may always be used to search. Aircraft on the I-400 class are also able to launch attacks.

Mines may be used by both sides. Their only utility is to be laid to block harbors.

Supply is used only for IJC supply missions.

FIRING SOLUTION (10.0)

Angle on the Bow:

- + 1d6
- 1d6 +/– modifiers on Plot
- + Captain’s Skill
- +3 On Surface at Night
- +2 On Surface in Fog with Radar

Range:

- +1d6
- +/- modifiers on Plot
- +/- modifiers on EDT

Launch Torpedoes:

- Flood additional tubes if desired (+1 signature)
- Present stem tubes if desired: rotate all targets 180 degrees
- Select target.
- Choose spread or salvo.
- Roll 1d6 per torpedo, compare to hit number in firing solution box for hit; modify roll for depth.
- Reveal US torpedoes.
- Roll 1d6 for degraded torpedo; 5-6 is no hit.

Fire Deck Gun: Always sinks target. Roll 1d6 per hit needed, add crew skill. Ammo expended for each roll of 1 or 2 (always on natural 1).

REACTION (11.0)

Escorts Close: If 1d6 within top span on signature box.

-2 if escort has “H” notation.

Escort Attack: Hit on submarine if 1d6 is less than or equal to number in current escort box.

- +1 For each escort after first in same box on track.
- If Sub on surface or at periscope depth, danger of collision.
- Scatter targets into plot on same bearing. Roll 1d6, modify for range.

EVASION (12.0)

Roll 1d6 for each escort. Move escort to the next lower numbered box if result is greater than the number at the bottom of the current signature box. A unmodified roll of six always moves the escort.

- Clever Plan: Add the captain’s skill rating to the roll. On a modified roll of “5” or higher the escort is moved one box lower on the track. On an unmodified roll of “1” the escort closes one box and attacks again (11.2).

DAMAGE CHART

<table>
<thead>
<tr>
<th>Equipment &amp; Damage</th>
<th>Repair Jury Rig</th>
<th>Dockside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hull. Each hit reduces the boat’s ability to reach certain depths as indicated in the hull damage boxes. Some scenarios start with hull damage markers in place, flipped to the no-hit side; this indicates a weaker hull.</td>
<td>Hit #6</td>
<td>Hits #5 &amp; 6</td>
</tr>
<tr>
<td>Engine. Each hit reduces the boat’s maximum speed as indicated in the engine damage boxes.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Motor. Each hit reduces the boat’s maximum speed as indicated in the motor damage boxes.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fuel Tanks. Each hit reduces the boat’s fuel storage and increases its signature as indicated in the fuel tanks damage boxes.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Batteries. Each hit reduces the boat’s maximum charge as indicated in the batteries damage boxes.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Radar. While on the surface and operative, radar increases the likelihood of making contact but also increases your signature.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sonar. Add 1 to firing from shallow depth, subtract one from evasion rolls.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Navigation. Maximum movement is 1 hex.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Radio. If radio is operative, the boat has a chance of being attacked by friendly forces (7.1D).</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Torpedo Tubes. Disabled tubes cannot be used.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Deck Gun. Disables the deck Gun.</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Jury Rigging: The boat must move at drill speed. At the end of the action, if no contact has been made, roll 1d6 and add crew skill. On a modified roll of 5 or 6, the damaged component is repaired.</td>
<td></td>
<td></td>
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</tbody>
</table>

- Quick Quiet: Roll 1d6, add the crew’s skill to the roll. On a result of “5” or higher the trick works. Add one (-1) to each escort’s die roll.
- Escorts with an “H”: Subtract two (-2). It is still moved one box on an unmodified roll of “5.” Apply this modifier to aircraft if your boat is on the surface, at periscope or shallow depth, or is in a strait or shallow hex.
- Hip Shot: +1 If hip shot, if a MK27 torpedo is used for the hip shot the modifier is +2.

REENGAGEMENT (13.0)

If you choose to or are required to reengage.

- Advance engagement timer.
- If the timer has reached the submerged timer marker, roll 1d6, on a result of 5 or 6, reduce crew readiness reduced by one.
- Torpedoes left in flooded tubes may be fired harmlessly or mark for degraded.
9.2 Make Speed
You may choose any speed. Higher speed improves the possibility of getting a good bow firing position but worsens stern firing and increases your signature.

Note: To avoid confusion and reduce the number of terms used, both surfaced and submerged speeds use the same terminology.

Adjust your Signature: Up or down as indicated on the appropriate portion of the speed dial.

Battery Usage: If submerged, reduce the current battery charge by the number in the appropriate box on the speed dial.

9.3 Lay in a Course
You may alter course by any number of bearings. For each bearing turned, counter-rotate all targets one bearing in the opposite direction. Target distance is unchanged.

9.4 Call Battle Stations
Call your crew to battle stations if desired. Battle stations will aid in preparing weapons but may fatigue the crew. If already at battle stations, the crew may be stood down.

9.5 Prepare Weapons
You may ready some, none, or all your weapons as detailed below.

9.5A Load Torpedoes
You may load any or all tubes. Forward tubes may be loaded from the forward torpedo storage only. Aft tubes may be loaded from the aft torpedo storage only. Loading is automatic if the crew is at battle stations. If not, roll 1d6 and add it to the current crew skill level. Subtract the current crew fatigue level and the number of tubes being loaded. The loading is completed on a modified roll of 6 or more.

Flood Tubes: Tubes must be flooded to fire; they may be flooded later but at a cost in signature adjustment (10.2A). You may flood any or all loaded tubes. Push the affected torpedoes into the flooded boxes. Once flooded, tubes may not be emptied except by firing.

Important: US torpedoes must be stored and loaded face up. Their true quality is not revealed until launched (10.2).

9.5B Prepare Deck Gun
If surfaced, the deck gun status may be changed from stowed to ready or vice versa. The change is automatic if the crew is at battle stations. If not at battle stations, roll 1d6 and add it to the current crew skill rating. On a modified result of 5 or 6, the status is changed; flip the gun to its appropriate side.

9.5C AA Guns
If surfaced, the AA guns (if any) may be readied. This is always automatic.

9.6 Special Tasks
Harbor penetration, embarking or debarking rescues or other passengers, and minelaying require specific methods of approach.

9.6A Harbor Penetration
Course must be ahead, depth must be periscope, speed must be slow. Determine the firing solution but no firing may be conducted. The penetration is resolved during the escort attack (11.2).

9.6B Landing, Evacuating, or Effecting a Rescue
Course must be ahead, depth must be surface. Any speed may be chosen. Determine the firing solution but no firing may be conducted; the embarkation or debarkation is resolved in lieu of firing (10.4B).

9.6C Laying Mines
Course must be ahead, depth must be surface, speed must be stop. Determine the firing solution but no firing may be conducted; the mine laying is resolved in lieu of firing (10.4C).

9.6D Ambush an Escort
Course must be ahead, depth must be periscope speed must be stop. Increase signature by 3 (reflecting deliberate noise). Firing is conducted during the escort attack (11.2).

9.6E Aircraft Launch
An LN boat with an aircraft not launched may launch it. The boat must be surfaced and stopped. A launched aircraft from a boat with aircraft attack capability (Boat Class Information Chart) may be used to attack targets.

10.0 FIRING SOLUTION
Firing solution uses the red rings on the Plot Display. The solution is the distance and direction of the desired target, to include any special task (9.6). Determine the firing solution for each potential target (10.1), then fire any eligible weapons (10.2 & 10.3). In lieu of firing, carry out a special task (10.4).

10.1 Calculating the Solution
Each box on the firing solution represents the combination of the firing angle (10.1A) and range (10.1B) from your boat to a target in that box.

10.1A Angle on the Bow or Stern
Roll 1d6 for each target. Add the captain’s skill rating and the bearing modifier (white row with +/- # Bearing) for the target’s current location on the Plot. Starting from the appropriate beam, move the target to the resulting angle sector on the Firing Solution arcs of the plot.

10.1B Range
Roll 1d6 for each target and modify for the following to determine the target’s range.

Distance: Add or subtract the distance modifier from the target’s initial distance on the Plot.

Speed: Add the modifier from the speed dial for targets ahead or on the bow, subtract for targets astern or on the quarter.

10.1C Reveal Targets
Flip all targets to their face up side. If a Q-ship (Q-ships are noted with a “Q” on the back of the counter) turns up and your boat is on the surface or at periscope depth, the Q-ship attacks as though it is an escort. Use a firing roll of “4” at close range, “3” at mid-range, “2” at long range, and “1” at extreme range. You may attempt to evade the attack with a crash dive (11.1C), but in doing so, no firing may be done.

10.2 Firing Torpedoes
You may fire any or all loaded tubes from surface, periscope, or shallow depth. Any or all flooded tubes may be fired (including firing at multiple targets). Bow tubes fire only at targets in bearings 8, 1, and 2; stern tubes at bearings 3, 4, and 5. Increase your signature by one for firing torpedoes (exception 10.2H).

Important: Your signature can only increase a maximum of one for firing
torpedoes, no matter how many actual torpedoes are fired (even when firing against multiple targets).

10.2A Flooding Tubes
You may flood any loaded and unflooded tubes. Add one (+1) to your signature.

10.2B Presenting Stern Tubes
You may turn the boat at the last minute to fire from the stern tubes. Counter-rotate all targets 180 degrees. Decrease your signature by one if only stern tubes are fired.

10.2C Select Target
A torpedo may be fired at any one eligible target. You need not fire at every eligible target. More than one eligible torpedo may be fired at the same target. If multiple torpedoes are fired at a target, you must select one of the following firing methods; use the Salvo/Spread marker as a mnemonic.

Salvo: Fire each torpedo individually (10.2D).

Spread: Add one to the firing roll for the first torpedo, use the actual roll for the second, subtract one from the roll for the third, subtract two to the roll for the fourth, and so on.

10.2D Launch Torpedoes
Roll 1d6 for each torpedo. If the roll is less than or equal to the hit number in the target’s firing solution, the torpedo scores a hit (10.2F). Check for any of the following that apply.

Spread: Modify each torpedo fired as part of a spread (10.2C).

Depth: Add one to the hit roll if firing from shallow depth. Add two if firing from shallow depth with inoperative sonar.

Degraded Torpedo: If a torpedo is marked with a degraded marker, roll 1d6 after a hit is scored. On a result of 5 or 6, the torpedo fails to function properly, and no hit is scored.

Close Range: If the target is at close range roll a second 1d6 for each torpedo that hit. On a result of 1 to 3, the torpedo failed to arm and is treated as a miss.

10.2E US Torpedo Flaws
When firing any US torpedoes other than a Mk 27, leave the torpedo face up (torpedo name showing) until after the hit roll is made. Flip it over after the roll and adjust the outcome as indicated on the Weapons Chart.

10.2F Hits
Each target is rated for the number of hits needed to sink it (back of counter, left number). The number of hits required to sink a HVT is printed on the front, left side.

Important: Each time a HVT receives a hit (even the first hit), the player rolls an additional 1d6. If the result is a six (6), the HVT has received a catastrophic hit and immediately sinks.

- If hits equal or greater than the target’s hit number are scored, it is sunk. Place the target in the sunk portion of the Tally Box on the map.

Important: During longer scenarios, players may need to track sunk and damaged targets using pencil and paper. The Tally Box is used to track targets and escorts for one engagement.

- If the target is not sunk but at least one hit is scored, leave the torpedo marker on the target; it is damaged and may be reengaged (13.0). If by the end of the engagement the vessel has not been sunk, place it in the damaged portion of the Tally Box on the Tactical Display.

- If any torpedoes explode (hit or premature) add one to your signature (maximum of one increase).

10.2G Misses
A live torpedo missing its target continues to run. If there is another vessel in a cell in the same bearing at longer range, roll to attack it. Add one to the roll. If the torpedo reaches extreme range without hitting anything, remove the torpedo.

10.2H MK 18
Do not increase or decrease the signature when firing Mk 18 torpedoes.

10.3 Firing the Deck Gun
A readied deck gun may be fired at a target or tanker, but not at an HVT or Q-ship. If either of the latter is engaged while on the surface, your boat is sunk automatically. Other targets are sunk automatically by deck gun fire.

10.3A Deck Gun Range
Range is limited as noted on the firing solution.

10.3B Ammunition Expenditure
Roll 1d6 for each hit needed to sink the target. Add the crew skill to each roll. Any modified result of “1” or “2” results in the expenditure of ammunition; a natural roll of “1” always results in an expenditure. After the first expenditure, turn the deck gun type marker over to show the low ammo side. After the second expenditure, set the deck gun type marker off to the side, the gun is out of ammo and can no longer be fired.

10.4 Special Tasks
In lieu of firing, conduct a special task.

10.4A Harbor Penetration
If the firing solution puts the harbor entrance anywhere but down the throat at close or mid-range, the attempt has failed. If the attempt has succeeded, flip the harbor marker to its in-harbor side. Adjust the seabed to shallow.

10.4B Embarking, Disembarking, or Rescue
If the firing solution places the land or rescue marker within close or mid-range, at any bearing, you may embark or disembark passengers. You must bring the boat to a stop, adjust the speed setting on the EOT but make no change to your signature. If the attempt has failed, you may reengage.

10.4C Minelaying
If the firing solution places the harbor marker within close or mid-range, at any bearing, you may lay mines. You must bring the boat to a stop; adjust the speed setting on the EOT but make no change to your signature. If the attempt has failed, you may reengage.

10.4D IJN Aircraft Attack
An IJN boat with a launched aircraft capable of making an attack (Boat Class Information Chart) may strike a target using the aircraft. The target may be anywhere on the plot. Make one attack (1d6); a hit is scored on a roll of 5 or less.

11.0 REACTION
After firing, even if no actual firing was carried out (10.4), you must determine whether any enemy escorts have zeroed in on your boat.

11.1 Escort Closing
Roll 1d6 for each escort. Compare the result to the number at the top of the box corresponding to the current signature. If the result falls is less than the number, the escort closes to the next higher box on the Escorts Track.

11.1A Surface Engagement
If the escort ends up in any box except “2” or lower and your boat is on the surface, your boat is sunk unless you crash dive (11.1C).

11.1B Collision Danger
If the escort ends up in the “4” box and your boat is at periscope depth, there is a danger of collision unless you crash dive (11.1C). If you do not crash dive, roll 1d6; on a result of “5” or “6” there has been a collision and your boat is sunk.
11.1C Crash Dive
Roll 1d6 and add the crew skill. On a modified roll of “5” or “6” the boat successfully dives; it must end up at mid-water or lower depth or be bottomed. You may go to crush depth (9.1A). Increase your signature by “2.” If the crash dive fails, resolve the surface engagement or collision normally. If the boat survives, it must end up at mid-water or lower or be bottomed. Reduce crew readiness by 1.

11.1D IJN Aircraft Attack
An IJN boat with a launched aircraft capable of making an attack that did not attack a target during firing may be used to force an escort to turn away. Choose any one escort closing and roll 1d6; add the result to the closing roll for the escort. If the result is more than 6, the escort fades one box on the track.

11.2 Escort Attack
Roll 1d6 for each factor of each escort vessel. If the result is less than or equal to the number in its box of the Escort Track, it scores a hit on your boat. Draw a damage marker from the damage marker pool and apply the hit to your boat.

Multiple Escorts: If there is more than one escort in a single box the first escort roll is unmodified, subtract one from the roll for the second, two from the roll for the third, and so on.

Surfaced Boat: All hits are hull hits.

Crew Fatigue: Each hit scored on the boat reduces crew readiness by 1.

11.2A Ambush Resolution
You may fire at an escort in the “4” box only. Fire torpedoes as in 10.2. You may fire a spread or salvo. The hit number for all torpedoes is “1.” One hit sinks the escort; place it in the sunk portion of the Tally Box.

11.2B Aircraft
If an escort is an aircraft and your AA guns (if any) are not readied, subtract one from the escort’s hit rolls if your boat is surfaced, at periscope or shallow depth, or in shallow water or a strait. Roll 1d6 for the AA guns; a roll of one or two reduces its ammunition (10.3B).

11.3 Target Scatter
Roll 1d6 for each target. Apply the below modifiers for the current firing solution range.

<table>
<thead>
<tr>
<th>Extremo</th>
<th>2</th>
<th>Mid:</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long:</td>
<td>1</td>
<td>Close:</td>
<td>1</td>
</tr>
</tbody>
</table>

HVT: Subtract 2 from the roll for an undamaged HVT.

Rescue, Land, or Harbor Markers: Add 3 to the die roll when rolling for these markers.

Damaged Vessels: Add 2 to the roll for damaged vessels.

Breaking Contact: If the modified die roll is less than 1, the target has moved out of range and may not be re-engaged. Place the target in the corresponding ring of The Plot, keeping the same bearing.

12.0 EVASION
Evasion is the result of your efforts to break contact with escorts. Roll 1d6 for each escort, as modified below. If the roll is greater than the number at the bottom of the current signature box, the escort fades one box (moved to the next lowest numbered box). Escorts in the zero box remain in the zero box.

12.1 Special Escorts
For escorts with an “H” notation, subtract two from the evasion roll. It is still moved one box on a natural roll of “6.” The same rule applies to aircraft if your boat is on the surface, at periscope or shallow depth, or is in a strait or shallow hex.

12.2 Clever Plan
You may attempt to improve your evasion chances through subterfuge. Expending one fuel and stop the boat. Add the captain’s skill rating to the roll. On a roll of “5” or higher the escort is moved back one box on the escort track. On a roll of “1” the escort closes one box and attacks again (11.2).

12.3 Quick Quiet
If your boat is submerged, you may order the crew to quick quiet mode. Remove the battle stations marker, stop the boat, and reduce crew readiness by one. Roll 1d6 and add the crew skill; on a result of “5” higher the trick has worked; add one to all evasion die rolls.

12.4 Hip Shot
If you have a stern tube loaded and flooded, you may fire it. Add one to the evasion roll for the nearest escort. If the torpedo is a Mk 27, add two to the roll.

13.0 RE-ENGAGEMENT
You may break off (13.1) at the end of the engagement round unless your boat is still in harbor or there are enemy escorts in any box except “0” on the escort track (11.2). If you must or choose to reengage, conduct the steps in 13.2.

13.1 Breaking Off
Draw an enemy flotilla and place it on the hex, then proceed to your next action.

13.2 Reset Conditions
Conduct the following steps, then commence another approach (9.0).

13.2A Timer
Advance the timer to the next box on the track. If it was in the 18-box, move it to the 1 box and expend 1 fuel for another action.

13.2B Battery Usage
If submerged, reduce the battery charge by one. On the surface, increase the battery charge by the number indicated on the eOt for your current speed, but never beyond maximum charge.

13.2C Fatigue
If the timer has reached the submerged timer marker, roll 1d6. On a result of “5” or “6” reduce crew readiness by one. Advance the submerged timer to the next box on the engagement timer.

13.2D Unload Tubes
If you have torpedoes remaining in flooded tubes, you must either fire them (a hot run) or mark them with a degraded marker.

13.2E Rescues
Roll 1d6 for each rescue marker waiting to be picked up on the Plot. On a roll of 4-6, the marker has been taken by a shark; remove it.

13.2F Evacuation
Roll 1d6 for each passenger waiting on the plot to be evacuated. On a roll of 4-6, the passenger has been wiped out by enemy action; remove it.

14.0 REPORT
The outcome of the patrol is determined by survival of the boat and by achieving any objectives set by the patrol orders.

14.1 Tally
Your score for the patrol is the sum of the following. Total the tally ratings (number on back of counter right side) for all merchantmen and tankers sunk.

Important: Q-ships possess a tally rating of “3.”
Add half the tally rating of all damaged merchantmen and tankers.

- Roll 2d6 for each HVT sunk and add it to the total.
- Roll 1d6 for each successful rescue and for each damaged HVT and add it to the total.
- Roll 1d6 for each mine successfully laid.

14.1A Clean Sweep
If you return to port with all torpedoes expended by firing at targets, and at least one target has been sunk, add 3 to your tally. If any torpedoes have been discharged in a hot run, you cannot score a clean sweep.

14.1B Damage
Reduce your tally by one for each hit that can be repaired in port, and by two for each hit requiring an overhaul (14.4 and the Damage chart).

14.1C Doctrine Violation
If you violated doctrine at any time during the patrol, and the violation did not result in sinking an enemy vessel, affecting a rescue, or successfully conducting a special task, roll 1d6 and subtract it from the tally.

14.2 Captain’s Evaluation
Cross-index the final tally with the captain’s evaluation column on the Promotion Table. The result will be one of the following.

- Beached: Roll 1d6 and halve the result, rounding up any fraction. The result is the number of seasons you must sit out before conducting the next patrol. When you do conduct another patrol, you must start with a new boat and a green crew.
- Acceptable: Keep your boat and crew and conduct another patrol. Roll 1d6; on a roll of “1” or “2” your skill increases by 1.
- Promotable: Flip your current rank marker to its promotable (P) side. If already flipped, you are promoted to the next grade. Increase your skill by 1. You have a possibility of getting a newer, better boat. Roll 1d6; on a roll of “1” through “3” you receive a new boat (14.4C).
- Promoted: You are promoted to the next grade (even if the rank marker is not on its promotable side) and have a better possibility of getting a newer, better boat. Roll 1d6; on a roll of 1 through 4 you receive a new boat (14.4C). Your skill increases by 1. If you have made captain, see 14.5.

Design Note. Rank progresses as follows: Lieutenant, Lieutenant Commander, Commander, Captain.

14.3 Crew Evaluation
Cross-index the final tally with the crew column on the Promotion Table. Crew skill improves as noted on the table.

14.4 Boat Evaluation
Some damage can be repaired dockside, others can only be repaired through an overhaul.

14.4A Dockside Repairs
Consult the damage table to determine what, if any, repairs can be made dockside. Roll one die and add the number of repairs needed. On a modified roll of “5” or “6” it will take one full season to affect repairs. Advance the season marker accordingly.

14.4B Overhaul
If any damage requires overhaul, the boat must be in a Base-3. If necessary, conduct a patrol to get the boat to an eligible base. Roll 1d6 and halve the result, rounding up any fractions. That is the number of seasons the overhaul will take. At the end of that time, all repairs of all types are accomplished.

14.4C New Boat
If the result of the patrol is promotable or promoted, and there is a newer boat type available, you may, but are not required to, request a new boat.

If you do, follow the procedures in 14.2, and immediately upgrade to the new boat class. You do not need to wait for the old boat to be repaired. You keep your old crew. You lose one season for familiarization.

Returning to Sea Duty: If you have been beached, you return to sea duty with the second-newest boat type for your navy.

14.5 JANAC
At the end of the war, the Joint Army-Navy Assessment Committee was convened to review actual performance against reported performance of sub captains, among others. (Actual sinking’s numbered about one-third of those reported, while tonnage was around half.) Many captains had their official scores reduced considering hard evidence from Japanese sources. The outcome can affect the assignment you receive in your next rank. Roll 1d6 and consult the following.

Outcome Posting:
1: Dutch Harbor, as cold as your career opportunities.
2: Kwajalein, nicer weather but still a dead end.
3: The Pentagon, where you will fade away in staff positions.
4: Staff duty at CINCSUBPAC, so you’re still in the game.
5: You are made commodore of a submarine flotilla and marked for flag rank.
6: Your path to flag rank is laid out and your boat becomes a museum.

15.0 PATROL ORDERS (SCENARIOS)

15.1 Silent Victory (Campaign)
- You are USN
- Start: Fall 1941
- End: NLT Summer 1945
- Mission: Make Captain.
- Start in Manila.
- Conduct up to 12 patrols as determined by Doctrine Chart.

Important: When playing the campaign game, set up each patrol as if playing a separate patrol scenario. Reset all pools, and on map facilities to match the season of the new patrol.

Service & Support
- Roll 1d6 to determine your first boat: 1-3 = V, 4-5 = Sargo, 6 = Tambor.
- Your fuel is limited to 12 in December 1941
- Home ports available: Pearl Harbor

Command & Signal
- Your rank: Lieutenant
- Your Skill: 0
- Crew Skill: 0
- Crew Readiness: Dull

15.2 Operation Petticoat
- You are USN
- Start: Winter 1942
- End: Winter 1942
- Mission: Get your boat to safety.
- Start in Manila, proceed to any home port.
- Each time you enter a friendly port, roll 1d6; on a roll of 4-6 you must take a UHB or OCD (civilian) on board.

Service & Support
- Your boat is a Tambor.
- Home ports are Brisbane and Pearl Harbor.
- You have two engines and two motors out (No Hit).
- Your hull is pink; add 2d6 for all enemy escort rolls and roll 2d6 for...
friendly escorts when entering a friendly port anywhere but the South China Sea or East Indies; disregard after evading one friendly escort.

- Max fuel at any time is 7.

**Command & Signal**
- Your rank: Lt. Commander
- Your Skill: 2 (c'mon, you're Cary Grant)
- Crew Skill: 1
- Crew Readiness: Ready

**15.3 Destination Tokyo**
- You are USN
- Start: Spring 1942
- End: Spring 1942
- Mission: Penetrate an IJN Base-3, land and retrieve an SO.
- Start in San Francisco.
- Pick up SO from beach in hex 2201. Roll 2d6 for IJN escort after entering hex.

**Service & Support**
- Your boat is a Tambor.
- Home ports are Brisbane and Pearl Harbor.

**Command & Signal**
- Your rank: Lt. Commander
- Your Skill: 2
- Crew Skill: 1
- Crew Readiness: Dull

**15.4 Down Periscope**
- You are USN
- Start: Spring 1942
- End: Summer 1942
- Mission: Penetrate any IJN port and sink at least one target.
- Start in San Francisco.
- All sea areas are open to you.

**Service & Support**
- Your boat is an old Tambor. At the beginning of each action, roll 1d6: any result of 4-6 draw one hit.
- Home port is Pearl Harbor.

**Command & Signal**
- Your rank: Lt. Commander
- Your Skill: 2
- Crew Skill: 1
- Crew Readiness: Dull
- Ignore doctrine violations.

**15.5 Run Silent, Run Deep**
- You are USN
- Start: Fall 1942
- End: Winter 1943
- Mission: Successfully ambush an IJN escort.
- Start in Brisbane.
- Conduct Harbor patrols in the Southwest Pacific, Outer Perimeter, or Inner Perimeter.

**Service & Support**
- Your boat is a Tambor.
- Home port is Brisbane.

**Command & Signal**
- Your rank: Lt. Commander
- Your Skill: 1
- Crew Skill: 1
- Crew Readiness: Ready.

- Crew Readiness: Ready. Roll 1d6 for each contact made. On a roll of 4-6 crew readiness is reduce by one.

**15.6 Up Periscope**
- You are USN
- Start: Spring 1943
- End: Spring 1943
- Mission: Land and retrieve an SO on any IJN-occupied hex.
- Start in San Francisco.

**Service & Support**
- Your boat is a Tambor.
- Home ports are Brisbane and Pearl Harbor.

**Command & Signal**
- Your rank: Lt. Commander
- Your Skill: roll 1d6 each time your skill is needed: 1-2=0, 3-4=1, 5-6=2.
- Crew Skill: 1
- Crew Readiness: Dull. Roll 1d6 for each contact made. On a roll of 4-6 crew readiness is reduce by 1.

**15.7 The Enemy Below**
- You are USN
- Start: Spring 1944
- End: Spring 1944
- Mission: Get your boat to Brisbane.
- Start in Fremantle.
- Add 1d6 to all IJN escort rolls (a minimum of 1d6). Once an escort has been contacted, make no further rolls. Use a 2 escort and add 1 to all IJN escort close and fade rolls.

**Service & Support**
- Your boat is a Gato.
- You start with 8-fuel.
- Home port is Brisbane.

**Command & Signal**
- Your rank: Lt. Commander
- Your Skill: 2
- Crew Skill: 1
- Crew Readiness: Ready.

A detailed example of play and Set Up Diagram are available online at http://strategyandtacticsmagazine.com/site/e-rules/
Counter Display
Note: Not all counters are displayed.

**Targets**
Used by both sides. Deployment determined by Contact table.

<table>
<thead>
<tr>
<th></th>
<th>Tanker Front</th>
<th>Tanker Back</th>
<th>Merchant Ship Front</th>
<th>Merchant Ship Back</th>
<th>Q Ship (Back only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>hits to sink</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tally points</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**High-Value Target & Rescue**
Front Back
- HVT
- 1d

**Escorts**
- 1
- 2
- 2H
- 2

**Missions**
Determined by patrol orders and patrol type.

- **Harbor**
- **Harbor Penetration**
- **Recon**
- **Scout**
- **Landing or Evacuation**
- **Top Brass**
- **Raid**
- **Unnecessarily Hot Babe**
- **Undesirable Human Ballast**
- **Special Operative**
- **Officious Congressional Delegate**
- **Obstreporous Civilian Detainee**

**Situation Markers**
Used on situation map to display current force deployments.

- **Japanese (IJN)**
  - Garrison
  - Base
  - Flotilla
- **US Navy (USN)**
  - Garrison
- **Battles**
  - Naval Battle
  - Land Battle

**Weapons**

**Torpedoes (Front)**
- Type 95
- Mk 27
- Mk 14
- Mk 18

**Torpedoes (Back)**
- Vio
- Bn
- Iron Shell
- Fragmentation

**External Weapons**
- 20mm AA Gun
- IJN Aircraft

**Damage Markers**

**Status Markers**

**Note:** Not all counters are displayed.