U.S. Navy Plan Crimson

A Complete Great War at Sea game
by Milan Becvar
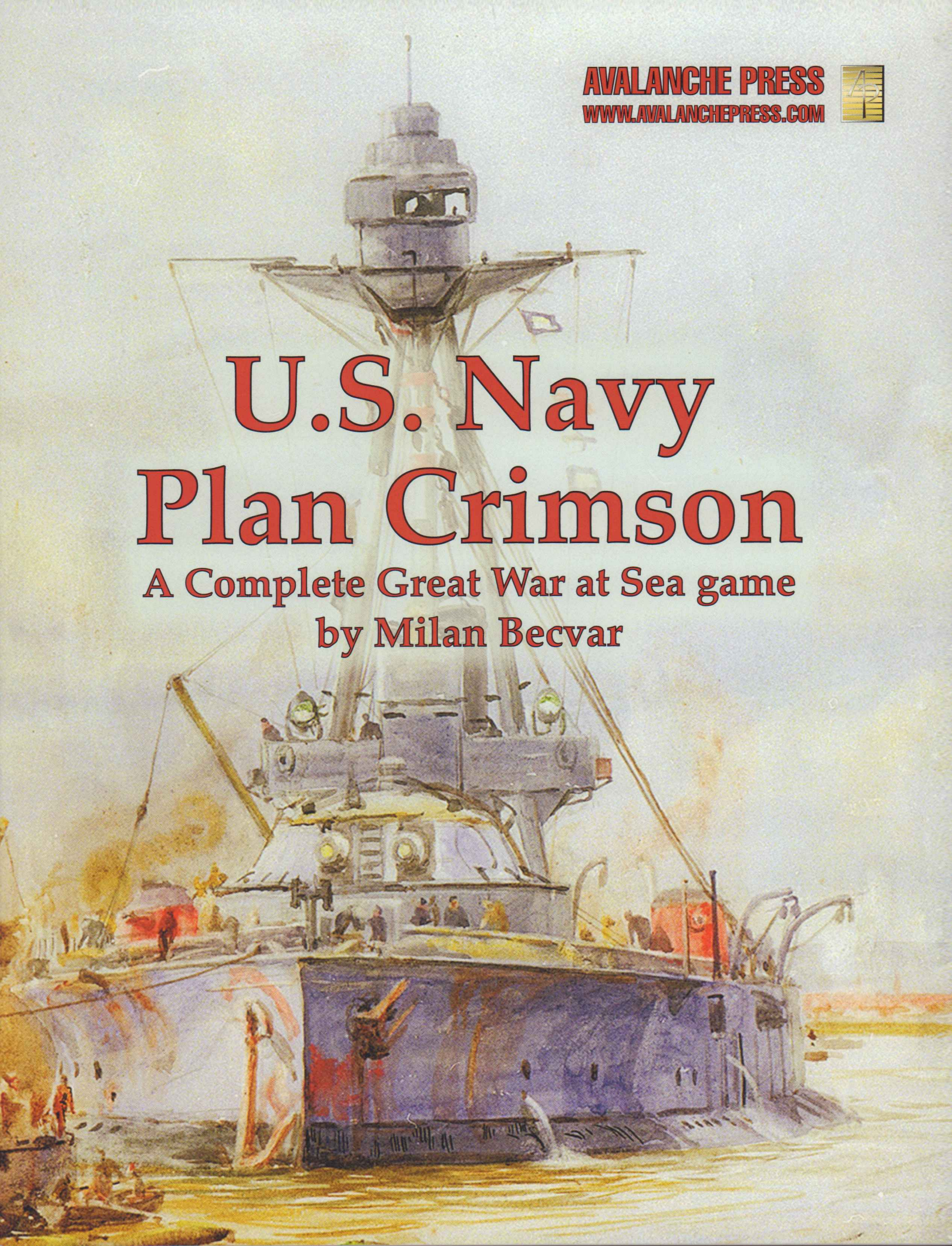
Great War at Sea
U.S. Navy Plan Crimson
Naval Warfare on the Great Lakes, 1900-1922

Introduction

The Great Lakes saw a great deal of fighting during the War of 1812, as British and American forces struggled to control the cities and towns around the lakes and used the waterways to move men and supplies.

Following the conflict, diplomats worked to resolve differences peacefully, recognizing a common bond of language and culture. The Rush-Bagot Treaty of 1818 limited the number of warships on the Great Lakes to two per nation, of 100 tons or less, and one cannon apiece. Later agreements settled delineation of the complete border between the U.S. and British North America (which would become the Dominion of Canada in 1867), and effectively led to a demilitarized frontier.

Long-term peace along the border would ultimately be governed by the relationship between the U.S.

and Imperial Britain. While peace prevailed between these two powers into the early 1900s, various disputes required careful diplomacy to avoid open conflict. Yet British sympathy toward the Confederacy and British annoyance over American meddling in the 1895 Guiana border dispute all provided flashpoints for a potential resumption of hostilities.

At the center of that border would be the Great Lakes region, which by 1900 contained over 11.5 million people (and by the 1920s, over 30 million), burgeoning heavy industry, and key trade routes. And as opposed to defensible (and likely heavily defended) land borders, the freshwater lakes of Superior, Michigan, Huron, Erie and Ontario might offer alternate invasion routes into the heartlands of both nations.

U.S. Navy Plan Crimson examines this unusual alternate history in which the United States and the Dominion of Canada rearm for conflict on and around the Great Lakes over the period 1900-1922. Taking its name from the 1930 U.S. Army-Navy Joint Board War Plan Red color designation for Canada ("Crimson"), the game presents hypothetical warships designed for service in the unique environment of the lakes, and characterizes the potential actions for control of the region through 12 battle and 22 operational scenarios.

Credits

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Rules

Index

1.0 Introduction

THE GREAT WAR AT SEA: U.S. NAVY PLAN CRIMSON is a complete game. Everything you need to play, except dice, is included with this booklet: two maps, playing pieces, and charts and tables.

Each section of the rules is numbered, and a second number identifies paragraphs within each section that discuss important concepts, like this: 2.2. When that section contains subsections, these are identified like this: 2.23.

When the rules refer to another, related paragraph, they will have the number identifying that rule included parenthetically, like this: (2.2). This will help you find that rule for comparison or reference.

2.0 Components

U.S. NAVY PLAN CRIMSON includes this booklet, a map of the Great Lakes, a tactical map, a player aid card and two Fleet Organization Cards.

2.1 Maps.

The Operational Map is divided into sea zones, which define ships' positions like squares on a chessboard, at a scale of 32 statute miles across each zone. This map is used to regulate fleet movement. Fleets may not move through sea zone sides consisting entirely of land or marked with a black line. The Tactical Map, used to resolve combat, is divided into hexagons (called "hexes") at a scale of approximately 8,000 yards across.

2.2 Charts and Tables.

Several charts and tables are used in the play of the game. These include:
• Gunnery Damage Table. Used to determine the effects of gunnery hits (6.1; 7.5).
• Torpedo Damage Table. Used to determine the effects of torpedo hits (7.7).
• Critical Damage Table. Consulted if the Gunnery or Torpedo Damage Table directs "Critical Damage."
• Fleet Composition Cards. Used to apportion ships among the fleets.
• Mine Damage Tables (found on the map). Used to determine the effect of striking a mine (13.0).
• Merchant Location Table (found on the map). Used to find enemy merchant ships (10.2).
• Weather Track (found on the map). Used to track the current weather.

2.3 Playing Pieces.

The die-cut cardboard playing pieces included in the game represent individual ships, groups of small ships or fleets of ships. Other pieces represent aircraft or airships. See the diagrams explaining the pieces and the information they contain. Small ship pieces have only tertiary gunnery factors; large ship pieces have primary, secondary and tertiary gunnery factors (in that order). Aircraft and airship pieces have range, air-to-air combat, torpedo and bomb factors.
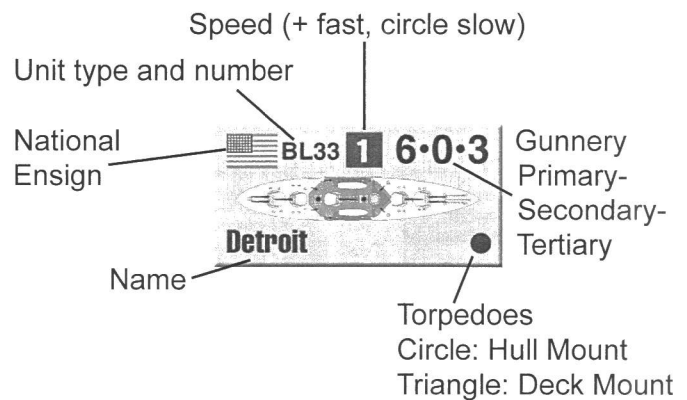
2.4 Ship Data Sheets.

Each nationality present in the game has a record sheet with the characteristics, for game purposes, of each of its ships. These are found in the Ship Data booklet. They may be photocopied for repeated use. Not all ships are used in every scenario; players may wish to circle those ships which are available or cross out those which are not. See the "Sample Record" for an explanation.

2.5 Fleet Composition Boxes.

At various times each player will form fleets of ships. The fleet markers are used on the World Map; the ships making up each fleet are placed in the appropriate fleet boxes on his or her Fleet Composition card.

2.6 Log Sheet.

Each player has a log sheet to record his or her fleets' movement and orders throughout the game. This may also be photocopied for repeated use. Each player may require more than one sheet.

3.0 Prepare for Play

First, select a scenario. Players may wish to begin with one of the battle scenarios. One player takes the role of the American commander and directs all American units listed in the scenario instructions. His or her opponent is the Canadian player and directs all Canadian units listed in the scenario instructions.

Place the Ship Data Sheets, Log Sheets and Fleet Compo-

sition cards out of view of the opposing player, who may not examine them. Place the ship pieces in the boxes corresponding to their fleet assignments. Players may place ships that start in the same location in more than one fleet box. Only the fleet markers are placed on the operational map (numbered side down).

Players must agree before play begins whether they will use the basic combat procedure (6.0) or the more involved tactical rules (7.0).

Each player now selects missions (5.2) and plots movement (5.1) for each of his or her fleets. Mission orders may be aborted, so players may wish to write orders in pencil and keep an eraser handy.

4.0 Sequence of Play

Each game turn represents four hours of actual time, and is divided into phases. Shaded turns on the Log Sheet are night turns, when it is more difficult to contact enemy fleets and sight enemy ships in battle. Both players are active in each phase; there is no "American turn" or "Canadian turn." Play proceeds as follows:

4.1 Weather Phase.
At the start of each turn, the Canadian player rolls one die and applies the result (11.61). Both players plot any air missions (15.4).

4.2 Orders Phase.
Each player writes down the orders he or she wishes each of his or her fleets to execute as required by their mission (5.2). For example, during this phase for Turn 5 for a fleet with an Intercept or Raid mission you should be writing orders for turn 7. Each player must also check his or her ships' remaining fuel (12.0). Note that many missions (5.2) require that all movement be plotted at the start of the scenario.

4.3 Move Fleets Phase.
Each player moves his or her fleets to new sea zones corresponding to their orders for this turn. As this movement is already recorded, it may be carried out simultaneously.

4.4 Air Operations.
Players conduct air searches (15.5) followed by any air strike missions (15.6).

4.5 Check for Contact.
If two or more opposing fleets occupy, enter or pass through the same sea zone or sea zone side there is a

chance that contact (5.4) will occur between them. After contact is resolved, submarines may attack enemy submarines (18.4).

4.6 Tactical Phase.
If contact is made, play moves to either the tactical map (7.0) or to the basic combat procedure (6.0).

4.7 Aircraft Return.
All aircraft return to their base(s).

4.8 Conclusion.
After all battles have been resolved, the turn is complete and play resumes with the Weather Phase of the next turn.

Ship Types

Warships
Capital ships:
BL Lake battleship
MN Monitor

Light ships:
CL Light cruiser
DD Destroyer
DL Destroyer leader
TB Torpedo Boat
ML Minelayer
MS Minesweeper

Other types are not warships. Colliers, oilers and auxiliary minelayers are represented by transport pieces and are treated as warships for mission eligibility.

5.0 Movement

Movement on the operational map is performed by fleets, which represent groups of ships. Individual ship pieces are never placed on the operational map, though a fleet could consist of one ship.

5.1 Plotting.
To represent the time lag between reports of enemy ship positions and reaction to them, as well as the control and planning problems of directing ships across large stretches of open water, fleets must have their orders written on the Log Sheets. In the space for each turn on the Log Sheet

the player writes the sea zone he or she wishes the fleet to enter during that turn.

5.11 Operational Movement. Ships may be plotted to move more than one sea zone per turn, depending on their speed. Fleets may only move at the speed of the slowest ship within the fleet. On the Log Sheet, write in the first sea zone to be entered, a slash mark (/) and then the second sea zone to be entered. Fleets need not move at all, but may remain in the same sea zone if their owner desires.

Use the table below to determine operational movement allowances.

Printed Speed: Movement
2+: Three sea zones per turn.
2: Two sea zones on odd-numbered turns, three sea zones on even-numbered turns.
1: Two sea zones per turn.
1-slow/Fast Transport: One sea zone on odd-numbered turns, two sea zones on even-numbered turns.
Monitor (MN)/Slow Transport/Collier/Oiler: One sea zone per turn.

Example: The American player wishes Fleet 1 to proceed northeast from Sheboyagn at top speed toward Traverse City. Fleet 1 consists of *Lorrain* and *Ithaca*, both of which have movement allowances of "2." In the Turn One section, he writes "N 07/M 08/L 08" and in the Turn Two section he writes "L 09/K 10."

Note that the American player did not have to order Fleet 1 to move three sea zones; he could have ordered it to move two zones, one zone or none at all if he so desired.

5.12 Pre-plotted Movement. For each fleet that is assigned a transport, bombardment, minelaying or minesweeping mission, (see below) all movement is plotted before the start of the game or at least up to the point where the fleet completes six turns in a friendly port (5.22).

5.2 Missions.
At the beginning of each scenario a player's ships are divided into fleets, and each fleet is given a specific mission.

The mission selected limits the orders that may be written for the fleet and how it interacts with other fleets. In addition, certain ship types are limited in the missions they may perform.

Missions are limited to the following:

Abort
A fleet may not start a scenario with an Abort mission, unless specifically stated in the scenario instructions. During the Orders Phase, the owning player may change any mission type to an abort mission. To do so, change the movement plot two turns ahead (plotting movement for all remaining turns) for the fleet changing to the abort mission. The abort mission fleet must have all its movement plotted for the remainder of the scenario or up to the point where it completes six consecutive turns in port, and its movement must take it to a friendly port by the shortest method and at the fastest speed possible (without running out of fuel).

No bombardments may be conducted. Note that fleets involved in combat may change to an abort mission following combat (see 7.37); in this case their orders are changed immediately following the conclusion of combat.

Example: On Turn 10 the Canadian player decides to abort his Fleet 3's bombardment mission. He writes "abort" in the space for Turn 12 and plots movement for Fleet 3 for turn 12 and all the following turns until the fleet has spent six turns in a friendly port.

Blockade Mission
If a fleet with an intercept mission enters or occupies a sea zone that contains an enemy port, the owning player may write BLOCK on the log sheet for it during the Orders Phase. During the Move Fleets Phase of the turn in which BLOCK is plotted for a fleet, the player removes some or all of the ships from the fleet box and places them directly on the map, face-down. If all of the fleet's ships are placed on the map, the fleet marker is removed. Ships placed on the map now have a blockade mission and gain a +2 modifier for contact with any enemy fleets, including those on a raid or supply mission, attempting to enter or exit the port. Ships with a blockade mission do not require a fleet marker, may not move on the operational map, and expend one fuel point (1/24 of a fuel box, see 12.1) per turn. Blockading ships do not roll for encounters with enemy ships in the blockaded port.

All ships blockading a given port are treated as one fleet for contact and combat purposes. When the blockading player wishes to end or reduce the blockade, he or she assigns the ships leaving blockade duty to a fleet with an abort mission to the nearest friendly port.

Blockship
Blockship attacks are attempts to block entrances to enemy canals using specially modified large transports that will (hopefully) sink in positions where they can block the canal

for a period of time. Players may only perform blockship missions if allowed by scenario special rules; the scenario will indicate which Transports are for use as blockships. A blockship mission is plotted the same way as a transport mission, but its destination must be a coastal zone that includes a port at the entrance to an enemy-controlled canal (5.5). At the end of the tactical phase of the turn when the blockship fleet enters its destination zone (after all combat for the turn is complete), the owning player rolls two dice for each surviving blockship that is not dead-in-the-water. Roll for each blockship separately, and add one to the result if it is a night turn and subtract one from the result if the weather is Squall (modifiers are cumulative). For each result of 10 or more, the blockship sinks on-target and scores victory points for the owning player. All other blockships in the fleet (including those that are dead-in-the-water) are removed from play, and the fleet marker for the blockship fleet is removed from the board and becomes available for use. If one blockship is sunk on target, no ship can enter or exit the enemy canal in that zone for one day; if two are sunk on target none can enter or exit that canal for two days, etc. Blockships cannot be sunk on turns when the weather is Storm or Gale. If a fleet with a blockship mission arrives at its destination zone on a turn when the weather is Storm or Gale, it may wait there until such time as the weather is Squall or better and may then attempt to sink the blockships at the end of that turn's tactical phase.

Bombardment
Ships in the fleet have their gunnery halved (round down by type) in the first combat step in which they fire at an enemy ship. Limited to warships and colliers/oilers. Ships assigned this mission may conduct shore bombardment (11.1).

Coastal Defense
Players may place any ships starting the game in port directly on the map face-down. Ships placed on the map this way have a coastal defense mission and gain a +2 modifier when attempting to contact any enemy fleet that enters the sea zone they occupy. Ships with a coastal defense mission do not require a fleet marker, may not move on the operational map, and expend one fuel point (1/24 of a fuel box, see 12.1) per turn. All ships in a given sea zone with a coastal defense mission are treated as one fleet for contact and combat purposes.

When a player wishes to end or reduce the number of ships with a coastal defense mission in a given sea zone, he or she assigns the ships leaving coastal defense duty to a fleet with an abort mission with the nearest friendly port as their destination.

Escort
A fleet plotted to accompany another fleet. The escorting fleet must conform to the movement of the fleet being escorted. Its fleet marker is placed in the fleet box of the fleet being escorted, and treated as part of the same fleet for contact (5.4) purposes. If the fleet being escorted goes to the tactical map or to the basic combat procedure, so does the escorting fleet. The escorting fleet is set up on the tactical map in hexes adjacent to the fleet it is escorting. During advanced tactical combat the escorting fleet may separate from the fleet it is escorting (to better protect the escorted fleet). If this occurs, the escorting fleet must rejoin the fleet it was escorting as soon as possible subsequent to combat, or be assigned an abort mission.

Escort fleet movement is plotted as "escort" with the fleet it is escorting noted. Limited to warships and colliers/oilers.

Ships may be assigned to an escort mission even if not initially co-located with the fleet they are to escort. Once assigned, the escort fleet must pre-plot moves to rendezvous with the fleet to be escorted, after which the escort conforms to the moves of the escorted fleet.

Intercept
Movement is plotted two turns in advance for a fleet ordered to perform this mission. Limited to warships and colliers/oilers.

Minelaying
A fleet must have a minelaying or a raid mission in order for its ships to sow minefields (13.3). Limited to minelayers (ML) plus any other ships specified in the scenario instructions.

Minesweeping
A fleet must have a minesweeping mission in order for its ships to detect and remove minefields (13.6). Limited to minesweepers (MS) plus any other ships specified in the scenario instructions. A fleet with a minesweeping mission may remain in a zone to detect and sweep mines, thus delaying but not changing its pre-plotted movement.

Raid
Players may only give raid missions to fleets if scenario special rules allow. Movement is plotted two turns in advance for a fleet ordered to perform this mission. A raiding fleet may bombard (11.1) and search for enemy merchant ships (10.2). Minelayers and other ships acting as minelayers (per the scenario instructions) may lay minefields if part of a fleet with a Raid mission. Unless scenario instructions specify otherwise, a player may assign a Raid

mission to no more than one fleet, which may contain no more than two ships. Limited to warships.

A player may remove a raiding fleet's marker from the operational map after it moves (so that its future movement is hidden from enemy view) but must return it to the map if it bombards (11.1), sinks (not merely searches unsuccessfully for) an enemy merchant ship (10.2), enters a port or occupies the same sea zone as an enemy fleet marker or airplane. He or she may remove it from the map again two turns afterwards provided none of these conditions apply. A player may always choose to keep a raiding fleet's marker on the map (and must do so if he or she wishes to search for enemy fleets) and may remove the marker at any time if the conditions for removal are met.

Note that raiding fleets of both sides may occupy the same sea zone with neither player being aware (if a player wishes to look for the enemy raiders with a raiding fleet, he or she must place the fleet marker on the map).

Transport
Only ships with a transport mission may load and unload cargo (11.5). No limitation on ship types.

5.21 Combining Fleets. Fleets with the same type of mission may be combined into one during the Orders Phase if they occupy the same sea zone. Remove one of the fleet markers and use the movement orders already plotted for the fleet still in play. Any fleet may combine with an Abort mission fleet. Remove the other fleet's marker and use the movement orders already plotted for the fleet with an abort mission. Escort fleets are not considered to be combined with the fleet they are escorting.

5.22 New Mission. A fleet that spends six consecutive turns in a friendly port may be given a new mission.

5.23 Pursuit. Fleets with intercept or raid missions which engage in combat may attempt to pursue the enemy fleet if it left the tactical map or if combat ended with both fleets out of sighting range (7.26) (or after any battle when using the basic combat procedure). Write "Pursue" in the appropriate slot on the log sheet for the next two turns in place of the former orders. During the Orders phase of each turn, the pursuing player rolls one die. Add two to the result during daylight turns, and add one in addition if all ships in the pursuing fleet are faster than the slowest ship in the fleet being pursued. If the die roll result is 6 or greater the fleet is moved together with the enemy fleet, and contact is made in the new sea zone. If the pursuit is unsuccessful, then the pursuing fleet must remain in

that sea zone for one turn and new orders are written for the two following turns.

5.24 New Fleets. During the Orders phase, either player may divide fleets with raid or intercept missions into smaller fleets. Enter "Divide" on the Log Sheet for that turn, and on that turn place a new fleet marker, if available, on the Operational Map in the sea zone where the original fleet divided and re-arrange the ship pieces on the Fleet Composition card. The new fleet has the same mission as the original fleet.

If a dividing fleet contains ships with a speed of 1 Slow or 1, the fleets may not move on the turn the fleet is divided. If all ships in a dividing fleet have a speed of 2 or 2+, the fleet(s) may move one sea zone before or after dividing. This must be noted on the Log Sheet.

5.25 Limits. Unless the scenario instructions state otherwise, players may form any number of fleets up to the number of fleet markers provided in the game. They may be assigned to any mission (only one per scenario may be assigned a raid mission, unless the scenario instructions state otherwise).

5.3 Fleet Movement.
In the Move Fleets Phase each player moves his or her fleets on the operational map to the locations specified on the Log Sheet. Since this is considered to take place simultaneously, players may move their fleets in whatever order they choose.

5.31 Vast Tracts of Land.
Fleets may not cross zone boundaries consisted solely of land (exception: see Canals, 5.5).

5.32 Fleet Markers.
Unless otherwise specified by the scenario, a player may have all available fleet markers in play.

5.4 Contact.
When two opposing fleets remain in, move into or pass through the same sea zone, there is a possibility that contact will occur. If two opposing fleets remain in, move into the same sea zone, or enter one another's sea zone simultaneously, the British player rolls one die to determine if contact is made. Contact is made on a die roll result of 4 or greater during a Day turn and on a 6 or greater during a Night turn. When contact is made, battle is then resolved using either the basic combat (6.0) or advanced tactical (7.0) rules.

5.41 Surprise Sighting. An unmodified result of "6" is always contact, regardless of the modifiers, and is always a Surprise Sighting (7.27).

5.42 Automatic Contact.
• Contact always occurs between a fleet plotted to bombard or unload cargo in the same zone that an opposing fleet occupies or enters (even a raiding fleet, 5.49).

• Contact always occurs if one fleet is in a minor port and an enemy fleet enters the port.

• Fleets in enemy coastal or island zones are automatically spotted (by coastal observers) on daylight turns when the weather is squall or better. The spotted player must report the number of capital and light ships, and the presence of any carriers or transports.

5.43 Early Contact. If a fleet has passed through the sea zone in which contact is made, return it to the zone. The additional plotted movement is not completed this turn. The movement plot is delayed, but not changed.

5.44 Multiple Zones. If a fleet could make contact in more than one zone, check first for contact in the first zone it entered. If no contact is made, check again for the second zone and then the third zone. If two opposing fleets are plotted to enter each other's sea zone, check for contact in both sea zones (American player's choice of order); if contact is made in the first sea zone do not check for contact again in the second.

Example: Canadian Fleet 1 is plotted to move two zones, from K 16 through L 16 to M 17. American Fleet 2 is plotted to move two zones as well, from M 16 through L 16 to K 17. The Canadian player must roll the die to see if contact is made in sea zone L 16, through which both fleets passed this turn, even though neither now occupies it.

5.45 Weather. Add or subtract from the contact die roll for the following weather conditions:

• Gale: -2
• Storm or Squall: -1
• Clear: +1

5.46 Additional Modifiers. Before the Canadian player rolls the die, either player may declare which, if any, of the following die roll modifiers apply. A player is never required to reveal this information, but must do so for the modifier to be applied to the die roll.

• Leader present: +1
• Fleet contains over 20 ships: +1
• Fleet contains only destroyers: -1
• Fleet has intercept mission: +2
• Fleet has raid mission: +1 or -1 (owning player's choice)

5.47 Multiple Fleets. Resolve all contact possibilities before any battles are resolved. More than one fleet from the same side may as a result be involved in the same battle.

5.48 Roving Fleets. If a fleet leaves a sea zone as a result of combat (7.33) it is involved in no further contact attempts during the current turn.

5.49 Raiding Fleets. Contact is not checked for a Raiding fleet unless the fleet marker is on the map.

5.5 Canals.
The following zones comprise the canals linking the Great Lakes:
• St. Marys Canal: H 14 (there are two canals - one American and one Canadian - in scenarios where the Liberty Canal does not exist).
• Trent-Severn Canal: N21, 0 22, O 23, P 23, P 24
• Welland Canal: R20 and R21
• Freedom Canal: S22 and R22
• Liberty Canal (only exists in certain scenarios - see scenario special rules): G10, H9, I10 and I9

Lake Huron and Lake Erie are linked by the Detroit River-Lake St. Clair route, which is a natural river (not a canal) and has its own rules (see below).

5.51 Canal Control.
Unless scenario instructions state otherwise, all zones of the Trent-Severn Canal and the Welland Canal begin the game under Canadian control, and all zones of the Freedom Canal begin the game under American control. If the Liberty Canal does not exist in the current scenario per scenario instructions, then each side controls one of the two canals at St. Marys. If the Liberty Canal does exist, it is controlled by America while both of the St. Marys canals are controlled by Canada. Players can take control of enemy canal zones through amphibious operations (19.0).

5.52 Canal Ports.
Some canal zones contain ports, and ships treat these as normal coastal zones for all purposes when entering them from another coastal zone or sea zone, but treat them as canal zones for all purposes when entered from another canal zone.

5.53 Canal Movement.
Fleets may use canals to move between the lakes, under certain restrictions:
- No ship may move directly from one canal zone to an adjacent canal zone unless both canal zones are under friendly control (otherwise, enemy personnel simply close the locks).
- Ships may move no faster than one zone per turn when they move directly between adjacent canal zones.
- Each fleet transiting a canal may contain no more than eight ships, with capital ships counting double and multiple ship counters counting as one ship each. For example, such a fleet could contain two BLs (which count as four), three CLs and three DDs (the last of which all occupy one multiple-ship piece).
- Ships may not move in canal zones in storm or gale.
- Each canal zone may be occupied by no more than one fleet at a time, except for canal zones with ports, which can be occupied by any number of fleets.
- Only one fleet per turn may cross the same zone boundary between two adjacent canal zones. Thus if two fleets are at opposite ends of a canal, one must wait for the other to move through the canal and exit it before entering the canal itself (otherwise, the two fleets meet in the middle and block each other from moving any farther).

5.54 Restricted Minor Ports.
Note the following port restrictions:
- Trenton: The approaches to the Trent-Severn Canal were narrow and impossible for enemy ships to force. Coastal zones P24 and P25 may only be entered by ships of whichever nation currently controls them (which is Canada, unless they have been captured by the American player or scenario instructions state otherwise).
- St. Marys: The U.S. and Canadian entrances to the new St. Marys canal systems were located far apart. Zone H14 contains two canals and two ports; one of each is American and one of each is Canadian. The canals connect Lake Superior and Lake Huron, meaning that the ports in H14 can be entered and exited from or to both lakes. Ships entering the port of their nationality in H14 cannot engage in combat with enemy ships in the other port in the zone.

5.55 Canal Air Attacks.
Fleets transiting a canal may be attacked by aircraft (16.3) if spotted. Ships in the fleet are treated as dead-in-the-water, however torpedo attacks may not be made. Ships sunk in a canal zone have the same effect as blockships (5.2); capital ships sunk count as five blockships.

5.56 Infrastructure Damage.
Canal zones may also be damaged by bombardment or air attack. For ships to bombard a canal segment, they must enter the minor port at one end of the canal, in order to attack the locks at the entrance. Each hit scored by gunnery or aerial bombardment renders the canal zone impassable for one turn, starting with the next Fleets Move Phase. For example, if three bomb hits are scored on O23 of the Welland Canal, this zone will be impassable for the next three turns.

5.57 Detroit River.
Coastal zones Q16, R15, R14 and S14 comprise the Detroit River-Lake St. Clair Route that links Lake Huron and Lake Erie. They are not a canal but do have movement restrictions. Ships can move no faster than one zone per turn on any turn when they move directly between adjacent Detroit River-Lake St. Clair Route zones. Each fleet entering any such zone may include no more than 10 capital ships (plus any number of light ships). There is no limit to how many fleets may occupy each Detroit River-Lake St. Clair Route zone. Ships may move normally in surface combat in these zones, but one or more board edges will be land (see 7.4).

5.58 Lake Boundaries.
Some scenarios include special rules which hinge on which lake certain fleets occupy at certain times. For this purpose, the boundaries between the various lakes are in the following locations:
- Lake Superior/Lake Huron: St Marys (H 14)
- Lake Michigan/Lake Huron: J 13
- Lake Huron/Lake Erie: R 14 and R 15
- Lake Erie/Lake Ontario: R20, R21 and R22

Any fleet that is in a boundary zone between lakes is considered to be on both lakes at once for special rules purposes (note that most scenarios state that if a fleet is in a canal it is not at sea on the lake). Georgian Bay (the body of water east of the Tobermory peninsula) is considered part of Lake Huron for all purposes.

5.59 Liberty Canal.
In some scenarios, the mutually undesirable situation at St. Marys (see Restricted Minor Ports, 5.54) has been resolved diplomatically, with the U.S. ceding control of the ports and canals in H14 in return for funds used to build the Liberty Canal, which stretches from Au Train (G 10) to Escanaba (I 9). If scenario special rules say that the Liberty Canal exists, it begins the game under American control and U.S. ships can use it to travel directly between Lake Superior and Lake Michigan. Also, in such scenarios Canada has exclusive control of the ports and canals in H14.

5.6 Game Days.

A game day is six operational turns. The first turn of each game day is the first daylight turn (0600) following a night turn.

5.7 Starting Turn

Some operational scenarios specify one side or the other decides the turn on which play starts. This does not change the length of the scenario; it allows the player to decide what time of day (daylight, nighttime) the scenario actually starts.

5.8 Release (Leaving Port)

In some scenarios, ships which begin play at specific ports are not allowed to leave port until some specified event has taken place. The owning player may begin writing orders for these ships when they are released. They may only be assigned an intercept mission, and thus may not leave port until two turns after they are released (in addition to any delay specified in the scenario instructions). Only ships which start play at ports with release restrictions noted under the name of the port are subject to this rule; ships that start at other ports may leave port right away.

5.9 Decoy Fleets.

At the start of play, players may place fleet markers containing no ships on the operational map, to act as decoys. The decoys must be placed in locations where the scenario indicates ships begin play. Decoy fleets plot moves two turns in advance, and may move at a speed of one or two sea zones per turn. The decoys may not declare any contact modifiers. Any time contact is made with a decoy fleet by enemy ships, submarines, airships or aircraft or minefields, the decoy is immediately removed. Decoy fleets are immediately removed if they enter a space that could be mined per scenario instructions, or enemy coastal or island zones. Players may choose to remove decoy fleets from the map at any time. Players may also create new decoy fleets, subject to scenario limitations and the number of fleet markers, by splitting one off from any existing fleet on the map (real or decoy). If no limit on decoys is stated in a scenario, the maximum number of decoys available to a player is half the number of allowed fleets, rounded down.

6.0 Basic Combat

As an introduction, or for a quicker game, players may wish to use these basic combat rules. After mastering them, players will probably wish to move on to the more involved Advanced Combat rules.

6.1 Gunnery Combat.

Gunnery combat takes place at either short or long range, over a number of rounds. The first round of combat is always fought at long range. All ships are at the same range: a player may not have some ships at long range and some ships at close range in the same combat round.

Gunnery combat takes effect simultaneously. The Canadian player first announces which of his ships will attack which enemy ship. Not all enemy ships need be attacked; all of a player's ships could attack one enemy, though they may only attack once per round. Tertiary guns may not fire at long range.

Once the Canadian player has chosen targets, he or she resolves the attacks. He or she rolls one die for each primary gunnery factor, then one for each secondary gunnery factor and one for each tertiary gunnery factor. On a roll of 6 or greater a hit is achieved. Roll two dice for each hit and consult the Gunnery Damage Table.

6.2 Subsequent Rounds.

After the first round of combat either or both players may elect to attempt to close the range - and in later rounds may attempt to move back to long range. If both players desire to alter the range, the range is altered automatically. If neither wishes to alter the range, it remains the same. If one player wishes to alter the range and the other does not, the player with the faster fleet is allowed to determine the range. A player has the faster fleet if the slowest ship in his or her fleet is faster than the slowest ship in the enemy fleet. There are four speeds: 2+, 2, 1 and 1 Slow. Players may not split their fleets during battle. If neither player has a faster fleet, each player rolls one die and the player achieving the higher result determines the range for this round. Roll again if a tie results.

At the end of a round of combat either player may attempt to disengage. Players may only disengage when at long range. The procedure to disengage is the same as for changing the range in combat, except that instead of moving the battle range the player is attempting to remove his ships from the fighting altogether.

A player with a ship that is dead in the water may not attempt to change the range or to disengage. But see rule 8.5; he or she may scuttle the ship and then attempt to disengage.

6.3 Short Range Combat.

Short range gunnery combat is resolved exactly as long-range combat, except that one is added to each gunnery die roll.

6.4 Night Action.

Some battles will take place at night. No long-range combat is allowed at night. If fleets make contact at night, the battle begins at short range, and players may either continue or attempt to disengage (they may not attempt to move to long range). Ships firing during night combat subtract 1 from their die roll results. There is no penalty for torpedo attacks.

6.5 Torpedo Combat.

When battle is at short range, ships may use torpedoes as well as gunfire. Use the Advanced Combat torpedo procedure (7.7).

7.0 Advanced Combat

Advanced Combat is resolved on the tactical map after contact has been made.

7.1 Tactical Sequence of Play.

The following sequence is used to conduct combat:

A. Players determine which side has the initiative. This determination will be used for setup and the first round of combat (a round is a sequence of 20 impulses or steps). The American player rolls one die. On a result of 3 or less the Canadian player has the initiative; on a result of 4 or more the American player has the initiative. The result may be modified by leaders (14.2). Roll for initiative again on step one of each following round.

B. The player without the initiative sets up his ships in the center of the tactical map (7.23).

C. The player with the initiative sets up his ships beginning on numbered hexes along one of the sides of the tactical map (7.24).

D. Players move and conduct combat as directed by the Impulse Sequence (7.31).

7.2 Placement.

No more than eight ships of the same side may occupy the same hex on the tactical map. No less than four ships may be placed in a hex unless the player has less than four ships in his fleet, in which case they must all be placed in the same hex. Count multiple-ship pieces (9.0) as one ship each for placement.

7.21 Fog of War. All ships are initially placed face-down.

7.22 Fleet Organization. Ships from the same fleet must be placed in the same hex or a series of adjacent hexes with at least four ships in each hex (thus, if the total number of ships in the fleet is less than eight, all must be placed in the same hex). If a player has ships from more than one fleet involved in the same battle, ships may not be placed in groups with ships from a different fleet. After the battle, fleets with like missions that do not leave the tactical map may exchange ships (the only time this is allowed).

7.23 Non-Initiative Placement. The player without the initiative must place a total of eight ships in one or two adjacent shaded center hexes before he or she may place any ships in hexes outside the shaded center hexes. If he or she has more than eight ships, additional ships may be placed in any hexes that are adjacent to any ships that have been previously placed, as long as no ships are placed closer to the numbered hexes on the map side from which the initiative player's ships will enter than the current sighting range (7.26). All ships must be placed as close as possible to the numbered hexes on the map side from which the initiative player's ships will enter.

7.24 Initiative Placement. The initiative player then places his or her ships, starting in the numbered hexes along the side of the tactical map corresponding to the sea zone from which his or her fleet entered the sea zone in which contact was made. If the initiative player's fleet did not move during the turn, it may enter the tactical map from any side the initiative player chooses. He or she must place a total of eight ships in one or two adjacent numbered hexes before he or she may place any ships in hexes outside the numbered hexes. If he or she has more than eight ships, additional ships may be placed in any hexes that are adjacent to any ships that have been previously placed, as long as no ships are placed closer to enemy ships than the current sighting range (7.26).

Example: The Canadian player has the initiative. His fleet entered sea zone M 17, where contact was made with an American fleet. The Canadian fleet entered from sea zone M 16, therefore it enters the tactical map on the left side.

7.25 Raider Placement. Ships from a raiding fleet may be placed in adjacent hexes, but any number up to eight may be placed in the same hex (thus, a raiding fleet of two ships could set up with one ship each in two separate hexes).

7.26 Sighting Range. Sighting ranges are four hexes in Clear weather, three hexes in Mist, two hexes in Fog, Squall and Storm and one hex in Gale. Sighting distances at night are one-half those during daylight (round fractions up). When determining ranges, count the hex

occupied by the enemy ship, but not the hex occupied by the ship being placed. Ships are placed face-down when at maximum spotting range from any enemy ship. Ships at less than the maximum spotting range are placed face-up.

7.27 Surprise Sighting. On an unmodified search result of 6, the initiative player must place his or her ships one hex closer to the center of the tactical map. If the player who located the enemy fleet obtains a night action, the initiative player must place his or her ships two hexes closer to the center of the tactical map. Ships of opposing sides may not begin in the same hex, but may be placed in adjacent hexes.

7.3 Tactical Movement and Combat.

All of a player's ships of the same classification (capital ship, light ship, or other) in a hex form a group. Just as on the operational map, movement is conducted at the speed of the slowest ship in the group. A group may not "split up," but may combine with another group provided the total number of ships remains eight or less. A player may choose to combine ships of different classifications into one group, but is not required to do so.

Note that while setup may result in capital, light and other ship types stacked together at the start of an engagement, each of these constitutes a separate group if desired by a player, which may move independently of the others without receiving any penalty.

7.31 Sequence. Movement and combat are conducted in the order described in the Impulse Sequence. A "round of combat" is one completion of the Impulse Sequence (20 impulses):

Impulse Sequence
1. Determine which player has the initiative (during the second and subsequent rounds; for the first round, initiative is determined before ships are placed on the tactical map).
2. The initiative player moves all his or her groups with a speed of 2 or 2+.
3. Both players conduct gunnery combat.
4. Both players conduct torpedo combat.
5. The player without the initiative moves all his or her groups with speed of 2 or 2+.
6. The initiative player moves all his or her groups with a speed of 1, 2 or 2+.
7. Both players conduct gunnery combat.
8. Both players conduct torpedo combat.
9. The player without the initiative moves all his or her groups with speed of 1, 2 or 2+.
10. The initiative player moves all his or her groups except

those including Monitors (MN), Slow Transports, Colliers and Oilers.
11. Both players conduct gunnery combat.
12. Both players conduct torpedo combat.
13. The player without the initiative moves all his or her groups except those including Monitors (MN), Slow Transports, Colliers and Oilers.
14. The initiative player moves all his groups.
15. Both players conduct gunnery combat.
16. Both players conduct torpedo combat.
17. The player without the initiative moves all his groups. Ships with a speed of 2+ may move two hexes.
18. The initiative player moves all his groups. Ships with a speed of 2+ may move two hexes.
19. Both players conduct gunnery combat.
20. Both players conduct torpedo combat.

7.32 Movement. When a group is allowed to move, it may remain in its current hex or move one hex in any direction provided that the maximum number of friendly ships in the hex (eight) is not exceeded at the conclusion of movement. All ships move one hex per movement step in which they are allowed to move, even those with a speed of 2. Movement is not mandatory. Ships may enter a hex occupied by enemy ships as long as no more than eight ships of the same side (up to 16 total) occupy the same hex.

7.33 Exiting the Map. Ships that leave the shaded ring of hexes (that contains numbered hexes) while outside sighting range of enemy ships have exited the tactical map and may not re-enter it during the same tactical phase. They are returned to their boxes on the Fleet Composition card and their fleet marker is moved to the sea zone into which they exited. If ships exit the tactical map while within sighting range of enemy ships, move all ships back from the map edge an adequate number of hexes to keep all ships in the playing area and in the same positions relative to one another. Note that ships may not move outside the shaded ring of hexes (that contains numbered hexes) on a side of the map that is blocked by land (7.41).

Example: During battle with a Canadian fleet in sea zone T 17, the American lake battleships Lake Erie and Lake Champlain exit the upper left (northwest) side of the tactical map. They are placed in a fleet in sea zone S 17 (the sea zone to the northwest of the battle location).

7.34 Towing. Ships towing or being towed (11.2) may only move on the player's final movement step (#17 or 18) of each round (though the towing ship may break the tow; see 11.26).

7.35 Crippled Ships. A crippled ship is one that has lost half its hull boxes, half its largest gun type or suffered a reduction in speed. During tactical combat, a player may separate a crippled ship from a group. At the conclusion of tactical combat, if a crippled ship has not been sunk a player may choose to remove it from play and the opposing player receives one-half of its victory point value (round fractions up).

7.36 Concluding the Tactical Phase. The tactical phase is concluded when all ships of one side have either exited the tactical map, are outside the sighting range of all enemy ships or have been sunk. If ships of both sides remain on the tactical map and can spot one another at the conclusion of step 20 above, begin the sequence again with step 1 (determining initiative).

7.37 Orders. Following the conclusion of combat, each player corrects movement orders for fleets that had their plots altered by exiting the tactical map (7.33). Fleets may continue their mission or be given an abort mission. Note that ships that left the map will now occupy different sea zones.

7.38 Long Battles. If combat enters a second round, all fleets involved move one less sea zone during the next turn than plotted, except that a fleet of ships with speeds of 1 Slow or greater may always move one sea zone. Adjust the log sheet accordingly. The route taken may not be changed - all orders are re-written to reflect only the loss of time, not a new route, destination or mission.

Example: Lake Erie, alone in American Fleet One engages *Bloor* during Turn Two in sea zone T 15. *Lake Erie* eventually sinks *Bloor*, though the battle extends once through the impulse sequence and halfway through another round before the Canadian ship goes under. *Lake Erie* was plotted to move two zones on Turn Three, from T 16 to T 17, and on Turn Four from T 18 to S 19. She may only move to T 16 on Turn Three, then on Turn Four from T 17 to T 18, and so on.

7.39 Fuel Cost. At the conclusion of combat, each player rolls one die for each of his or her fleets that participated. The result is the fraction of a fuel box expended in addition to any fuel expended in the plotted move (a "3" would be 3/12ths of a box of fuel).

7.4 Land.

Many sea zones contain land in the form of islands or coastlines.

7.41 Tactical Movement. If a sea zone side is all land

on the operational map, players may not move their ships outside the shaded ring of hexes (that contains numbered hexes) on the corresponding tactical map side. They may move ships into these shaded hexes without checking for grounding (7.42). If an island (that is contained in one sea zone) exists in the contested sea zone, treat the seven center shaded hexes as land (the player without the initiative sets up his ships adjacent to the center hex closest to the map side from which the initiative player's ships will enter play; note that this may decrease the initial distance between opposing fleets). Ships may not enter land hexes.

7.42 Grounding. If a ship enters a hex adjacent to a land hex it can run aground. Roll one die for each ship. On a result of 6 or greater the ship is grounded and cannot move. Subtract one from the result if the land is in the ship's home country. Light ships never run aground.

7.43 Refloating. Ships that run aground may be refloated. The owning player rolls one die for each such ship during the Weather Phase. On a result of 1 the ship is freed. Once freed the owning player rolls the die again to determine the extent of the damage to the ship resulting from the grounding. One-half the result (round any fractions up) is the number of hull boxes destroyed. Add one to the result if the ship has no hull armor.

7.44 Intentional Grounding. A player may move ships into a land hex in order to intentionally run them hard aground. The player simply declares the ship hard aground (lake captains of this era were very, very good at running their ships aground). Ships that are hard aground cannot be freed. Monitors may be intentionally grounded.

7.45 Victory Points. Ships aground at the end of a scenario count as sunk. If aground in an enemy-controlled sea zone, the ship counts double the victory points for sinking her. If aground in a friendly-controlled coastal sea zone the enemy only collects 75 percent of the ship's victory points.

7.5 Gunnery Combat.

During gunnery combat, a ship may attack any enemy ships which are in range (7.6) and sighted (7.26; at night or in some weather conditions an enemy ship could be in range, but not be visible — thus, primary guns may not be fired at night or during any weather but Clear or Mist at a target three hexes away). Gunnery results take effect simultaneously. The initiative player first announces which of his ships will attack which enemy ship. Not all enemy ships need be attacked; all of a player's ships could attack one enemy though they may only attack once per gunnery combat step. An individual ship may only fire on one

target; it may not "split" its firepower to attack multiple targets.

Once the initiative player has chosen targets, he or she resolves the attacks for each ship. Roll one die for each primary gunnery factor, then one for each secondary gunnery factor and one for each tertiary gunnery factor. A hit is scored on a result of 6 or more, with the following modifiers applied to the die roll:

• +1 if firing into the same or an adjacent hex.
• +1 if the target ship is dead in the water.
• +1 if the target ship is towing or being towed (11.2).

Roll two dice for each hit and consult the Gunnery Damage Table to determine the effect.

Example: *Lake Erie* and *Lake Champlain* enter combat with *Dufferin* and *Drummond*. The American player has the initiative and when the ships come within three hexes decides *Lake Erie* will fire on *Dufferin* and *Lake Champlain* will fire on *Drummond*. The American player rolls five dice for *Lake Erie*'s primary battery, resulting in two 1's, one 3 and two 6's. *Lake Erie* has scored two hits. Once the initiative player has completed gunnery, his or her opponent repeats the procedure. As gunnery results take effect simultaneously, any damage (8.0) caused during the initiative player's gunnery does not alter non-initiative abilities until the start of the subsequent torpedo combat step.

Once the initiative player has completed gunnery, his or her opponent repeats the procedure. As gunnery results take effect simultaneously, any damage (8.0) caused during the initiative player's gunnery does not alter non-initiative abilities until the start of the subsequent torpedo combat step.

Example: *Dufferin* receives a primary hit during the first gunnery combat step with *Lake Champlain*. The hit is marked on the Ship Data Sheet, but *Dufferin* may still fire with all five of her primary factors during this step. During the next step, however, she is reduced to four primary factors.

7.6 Range.
• Primary. In scenarios prior to 1914, primary guns are limited to two hexes (no plunging fire hits may be scored). For scenarios between 1914 and 1917 (inclusive), primary guns may engage targets at tactical ranges of three; however, each hit at that range must be confirmed by a second die roll result of 4 through 6. For scenarios after 1917, primary guns have a range of three hexes.

• Secondary. Secondary guns may fire at targets up to two hexes away (count the hex occupied by the target, but not the hex occupied by the firing ship). Secondary guns will damage any area of an enemy ship unless it is protected by heavy armor.

• Tertiary. Tertiary guns may fire at targets in an adjacent or the same hex only. Tertiary guns will only damage areas of an enemy ship without armor.

• Very Large Guns. Warships with a primary gunnery factor greater than 10 have 16" or 18" guns and may fire at a range of four hexes on the tactical map. When firing at four hexes, primary gunnery factors are halved (round any fractions up).

7.7 Torpedo Combat.
During a torpedo combat step, ships with torpedo tubes may fire torpedoes at enemy ships in the same or an adjacent hex. The torpedo and gunnery steps are resolved separately; thus, a ship which had its torpedo mount destroyed by gunfire may not fire torpedoes in the subsequent torpedo combat step.

7.71 Procedure. Roll a number of dice equal to the firing ship's torpedo factor (as with gunfire, all torpedoes fired from a single ship must be fired at the same target). A hit is scored on a result of 6 or more, with the following modifiers applied to the die roll:

All modifiers are cumulative.
• +1 if the target is a capital ship or a fast (F-numbered) transport.
• +1 if the target is dead in the water.
• +1 if the target ship is towing or being towed (11.2).
• +1 if the target is in the same hex as the firing ship (scenarios after 1909 only).
• -1 if the firing ship is a capital ship.
• -1 if the torpedoes are fired from a hull mount (within a box on the Ship Data Sheet. Note that most battleships and battle cruisers will suffer a -2 modifier to the die roll).
• -1 if the target is one hex away from the firing ship (scenarios before 1910 only).

Roll two dice and consult the Torpedo Damage Table to determine the effect of each torpedo hit.

Example: Three Canadian Triton-class destroyers attack *Lake Erie* with torpedoes at a range of one hex. The Canadian player rolls three dice, with results of 6, 4 and 1. *Lake Erie* has her full movement factor but is a large target, so the Canadian player adds one to each result. He has scored one hit and consults the Torpedo Damage Table.

He rolls two dice, obtaining a 6 for one hull hit. The American player marks off one hull box on *Lake Erie*.

7.72 Movement. A ship that has lost all of its movement factors may not make a torpedo attack.

7.73 Reloads. A ship may only make one torpedo attack during the game unless it rearms (12.7). Once it has used its torpedo factors, mark this on the ship data sheet. A ship with more than one torpedo factor may not "save" some for later use.

7.74 Destroyed Torpedoes. A ship may not make a torpedo attack if its torpedo mount has been destroyed, even if it has more than one torpedo factor.

8.0 Damage

The Ship Data Sheet contains boxes for each area of the ship that may be damaged by enemy fire. As they are damaged the boxes are marked off from left to right. Once all boxes in a section are marked off, that section is destroyed and further hits there are usually recorded as hull hits. Once all hull boxes are marked off the ship is sunk.

8.1 Armor.
Areas of a ship's record on the Ship Data Sheet that are shaded are protected by armor. There are two types of armor: heavy (boxes shaded gray) and light (diagonal stripes in the boxes). Boxes with no shading or stripes are not protected by armor.

8.2 Penetration.
Hits obtained by torpedoes or primary gunnery will damage (penetrate) any type of armor. Hits obtained by secondary gunfire penetrate light, but not heavy, armor. Hits obtained by tertiary gunfire only affect areas protected by no armor. If secondary or tertiary gunfire obtains a hit on an armored portion of an enemy ship that it cannot penetrate, the hit is ignored.

Example: *St. Lawrence* fires her secondary factor at *Michigan*, rolling a 6 and scoring one hit. The Canadian player then rolls two dice for a "5." Consulting the Gunnery Damage Table, the players find that this results in a hull hit. Since heavy armor protects *Michigan*'s hull, the shot bounces off the ancient tub's tough hide and the result is ignored (but see below).

8.3 Secondary Penetration.
When a secondary gun registers a hit on an area of the target ship protected by heavy armor, there is a chance the hit may penetrate (and cause damage). The firing player rolls one die a second time to see if damage is inflicted.

• A secondary hit inflicted on heavy armor at a range of one hex or less will penetrate and cause damage on a result of 4 through 6.

• A tertiary hit inflicted on light armor at a range of zero hexes (firing from the same hex as the target) will penetrate and cause damage on a result of 4 through 6.

8.4 Excess Damage.
Primary hits on an area with light or no armor may result in extra damage. Roll one additional die for each hit (not for each box destroyed). On a result of 4 through 6, another of the same type hit is recorded. Excess Damage does not apply when rolling on the Critical Damage Table (8.8). If Plunging Fire (8.9) occurs, do not check for Excess Damage. Excess Damage must be applied to the same ship; it cannot damage another ship of a multiple-ship piece (9.0).

8.5 Torpedo Mounts.
Hull-mounted torpedoes (shown within a box on the Ship Data Sheets) carry the same armor protection as the ship's hull. Deck-mounted torpedoes (those with no box around them) have no armor protection. Note that hull-mounted torpedoes are not as accurate in combat (7.71) as those in deck mounts.

Sample Record from Ship Data Sheet

Type and ID   Gunnery Strengths   Fuel Capacity (Coal)

Type	Name	Primary	Secondary	Tertiary	Torp.	Speed	Hull	Fuel
BB34	New York (75)	▦▦▦▦▦ ▦▦▦▦	▨▨▨▨	☐☐☐	1	1	▦▦▦▦▦▦ ▦▦▦▦▦▦	○○○○○ ○○○○○

Victory Point Value   Heavy Armor   Light Armor   No Armor   Hull-Mounted Torpedoes

8.6 Dead in the Water.

If a ship loses all of its movement factors it may not move unless towed (11.2). A player may choose to voluntarily sink (scuttle) any of his ships at any time. On the Tactical Map a towed ship (and the ship towing it) may only move on the player's final movement step (17 or 18) of each round (though the towing ship may break the tow).

8.61 Speed Loss. A ship with more than one-half her hull boxes crossed off is reduced one speed level (2+ to 2, 2 to 1, 1 to 1 slow). Ships that suffer a "lose one speed level" or "lose one movement" damage result are reduced one speed level. Ships with a speed of "1 slow" that are reduced one speed level are left dead in the water and may not move unless towed (11.2).

8.62 Foundering. A ship with more than 75 percent of her hull boxes crossed off is in danger of foundering. At the conclusion of each Move Fleets phase, roll one die for each such ship. On a result of 6 the ship suffers an additional hull hit. Add one to the result if the ship moved two sea zones in the last Move Fleets phase, and the following modifiers for the current weather condition: +1 if Squall, +2 if Storm, +3 if Gale. Add one to the result if the ship is a Monitor (type MN).

8.63 Crippled Ships. A crippled ship is one that has lost half its hull boxes, half its guns or suffered a reduction in speed. During tactical combat, a player may separate a crippled ship from a group. In operational games, a ship must be given an abort mission to a friendly major port within six turns of being crippled (intermediate stops to refuel are allowed). Crippled ships that have not been sunk are worth 50 percent of their VPs (round fractions up) in each operational scenario.

8.7 Referred Pain.

If a ship that started the game with no primary armament receives a primary hit, the hit is recorded as a secondary hit. If a ship started the game with no secondary armament, a hit there is recorded as a tertiary hit (thus, a primary hit on a ship with only tertiary armament is recorded as a tertiary hit). If all of a ship's primary armament is destroyed, however, a hit there becomes a hull hit, not a secondary hit. Additional secondary hits become hull hits after all secondary armament is destroyed (provided that the gun type can penetrate the target ship's hull armor), but additional tertiary hits are ignored after all tertiary armament is destroyed.

8.71 Tertiary Damage. If a ship started the game with primary or secondary armament, but no tertiary armament, any tertiary hits are ignored. If a ship with no guns at all receives a tertiary hit, the hit becomes a hull hit. All other armament hits to a ship with no guns are ignored.

8.72 Torpedo Mount Damage. If a ship with no torpedoes receives a torpedo mount hit, the hit is ignored. One torpedo mount hit on a ship with torpedoes destroys all of its torpedo factors, even if the ship has more than one torpedo factor.

8.73 Merchant Hulls. Any primary or secondary gunnery hits scored against colliers and transports are considered hull hits.

8.8 Critical Damage.

When a gunnery or torpedo hit results in a critical hit, roll two dice and consult the Critical Damage Table. Tertiary gunfire hits do not cause critical damage; ignore these results. Armor protects against critical damage unless the result specifies otherwise.

8.9 Plunging Fire.

If a hit scored by primary guns at three or four hexes leads to a result of 10 on the Gunnery Damage Table, a second hull box is destroyed. No additional damage is caused by such hits to ships with their hull boxes enclosed by a box on the Ship Data Sheet. Plunging fire damage must be applied to one ship; it cannot damage another ship of a multiple-ship piece (9.0).

Note: Warships of this era had thickly protected sides but thin deck armor, as few guns had the range to send their shells "plunging" onto an enemy's deck. Most warships were more vulnerable at longer ranges.

9.0 Multiple-Ship Pieces

Some pieces represent several small ships of the same class. Warship pieces have several silhouettes. Transport pieces have a single silhouette.

9.1 Ship Assignments.

The scenario instructions list the number of ships of each class available. Any number of pieces of the appropriate class may be used to represent them, up to the number provided. The owning player decides at the start of play how many ships each piece will represent. One multiple-ship piece may represent up to three warships, three large transports or five small transports. Each multiple-ship piece's space on the Ship Data Sheet shows three warships, three large transports or five small transports. Cross out unused records to show how many ships the piece represents. Once a ship is assigned to a piece its assignment may not be changed (exception: see 9.6).

9.2 Lone Ships.

If a multiple-ship piece represents only one ship, it is treated like any other ship.

9.3 Combat.

In combat each multiple-ship piece is treated as a single ship for placement and must move as one ship. When a multiple-ship piece is within sighting range of an enemy ship on the tactical map or when the fleet is attacked by an aircraft or submarine, the opponent must be informed how many ships the multiple-ship piece represents.

Example: The American player attacks the Canadian cruiser *Picton* with all 3 ships of a Henry-class destroyer piece. He therefore has 3 tertiary gunnery factors (1 for each destroyer) and 6 torpedo factors (2 for each destroyer).

9.31 Firing. A multiple-ship piece's ships may fire at separate targets if the owning player wishes.

9.32 Damage. A multiple-ship piece is treated as a single target. If hit by enemy fire or torpedoes the owning player distributes hits among the piece's ships in any way he or she sees fit (exception: see 8.7). A player may not assign more hits to a ship than the ship possesses undamaged "boxes" on the Ship Data Sheet. Once a ship suffers enough hull hits to sink, it may not be assigned any other hits of any type.

Example: An American Alcona-class DD piece with three undamaged destroyers suffers two tertiary gunnery hits. Two ships must be assigned a tertiary hit apiece; if a third hit is suffered it must be assigned to the destroyer which still has an undamaged tertiary factor.

9.4 Speed.

All ships in a multiple-ship piece move at the speed of the slowest ship represented by the piece. Thus if one ship is struck dead in the water, no ship represented by the piece may move unless the stricken ship is scuttled or towed (11.2). Players may voluntarily sink (scuttle) such a ship at any time. Ships may be towed (11.2) by ships from their own multiple-ship piece or by another of the owning player's ships.

9.5 Fuel.

Multiple-ship pieces are treated as one ship for purposes of fuel consumption (12.1) and refueling (12.3). Note that a multiple-ship piece only has one set of fuel boxes on the Ship Data Sheet for the piece, not one for each ship.

9.6 Separation.

During the orders phase, a player may divide or combine the ships of a multiple-ship piece if another piece of the same type is available.

Example: One ship of a Canadian Triton-class destroyer piece is damaged and its speed drops to 1. The piece represents three ships, two of them undamaged. The Canadian player puts another Triton-class piece in play, assigning the damaged ship to it.

10.0 Merchant Shipping

Some scenarios direct one or both players to attack enemy merchant shipping. There are two kinds of merchant ships, those represented by the generic transport pieces included in the game (usually representing large troop transports) and those located through the Merchant Location Table (usually sailing ships or small tramp steamers) which are not represented by playing pieces.

10.1 Transports.

Transports are multiple-ship pieces, and are treated like any other ship in the game. They may be located and attacked. Their sinking or safe arrival is usually worth a large number of victory points. Transports have one or two hull boxes each, are never armored and are never armed.

10.2 Merchant Location Table.

Only fleets on a raid mission may use this table (abbreviated MLT). Write "Search 1" or "Search 2" on the Log Sheet when writing orders, depending on how many movement factors are expended in the sea zone.

10.21 Search Speed. Ships with a speed of 1 must be present in the sea zone they wish to search at the start of the turn and may not exit the sea zone. Those with a speed of 2 may move one sea zone and search either the zone they leave or the zone they enter (not both) using the "1" column on the MLT, or may remain in place and use the "2" column.

10.22 Merchant Density. Scenario special rules will list the merchant density number of sea zones within a specified distance of a port or other location.

10.23 Procedure. Players may roll the die once on the MLT for each of their fleets including at least one ship with a gunnery or torpedo factor) assigned a raid or intercept mission which are located in a sea zone with an enemy merchant density number. Add one to the die roll result during a night turn.

10.24 Results. Match the result to the appropriate column on the MLT. The result is the number of merchant ships, each worth 1/2 a victory point, destroyed. If any merchant ships are destroyed by a raiding fleet, the player must place the raiding fleet's marker on the operational map and reveal to his or her opponent the number of merchant ships destroyed and their location, but he or she is not required to reveal the identity of the ship which sank them.

11.0 Special Rules
11.1 Shore Bombardment.

Some scenarios require one or both players to bombard certain enemy coastal zones. To bombard a coastal zone, the ships performing the mission must remain there for one full turn without combat or movement (write "shell" on the log sheet). The bombarding player must announce which zone is under attack and the number (but not identity or type) of ships taking part. A fleet that attempts to bombard is not permitted to bombard if a bombarding ship moves, fires or suffers damage during tactical combat.

Unless otherwise noted, fleets with a bombardment mission may fire at shore targets one time before needing to return to port for more bombardment ammunition. Roll dice to determine hits scored during a bombardment: primary guns score a hit on a result of 5 or 6, secondary guns on a result of 6, and tertiary guns on a result of 6 followed by a second result of 5 or 6. In scenarios where VPs are awarded for bombarding ports, unless otherwise specified the maximum number of VPs that may be accumulated by scoring hits on a given port is ten for a major port, and five for a minor port.

11.2 Towing and Repair.
11.21 Towing. A ship dead in the water through battle damage (losing its movement factors) or by running out of fuel may be towed by another friendly ship. Capital ships may tow anything. Light ships may only tow other light ships. Non-warships may only tow other non-warships.

11.22 Speed. The damaged ship and the towing ship move at a rate of one sea zone every third turn. If contact is made with enemy forces and battle resumes, neither ship may fire during the first combat segment in which one of the ships could normally fire.

11.23 Combat. A ship under tow may move on the player's final movement step (#17 or 18) of each round (though the towing ship may break the tow). The ship towing it must occupy the same hex.

11.24 Multiple-Ship Pieces. If any of the ships represented by a multiple-ship piece is left dead in the water the others may tow it, moving one sea zone every third turn. A ship represented by a multiple-ship piece may be towed by another ship, but all ships represented by the piece suffer the same movement and combat penalties.

11.25 Organization. A ship under tow and the ship towing it may be formed into a new fleet if a fleet marker is available. This fleet must be given an abort mission. The fleets do not suffer the normal speed reduction for creating a new fleet (5.24).

11.26 Breaking a Tow. During any movement step in the Tactical Sequence, a ship may stop towing another ship if the towing ship would otherwise be allowed to move. The ship being towed still may not move, but the towing ship is no longer restricted (and is no longer tied to the towed ship).

11.27 Emergency Repairs. A player may attempt to restore movement to a ship struck dead in the water through battle damage (not by running out of fuel). At the end of each tactical impulse sequence, and once each turn for ships in fleets with Abort missions which were not involved in battle, the owning player rolls one die for each ship unable to move. Subtract one from the result for an American capital ship. On a modified result of 1 the ship may now move at speed "1 Slow." On a result of 5 or 6 the damage is so great that repair is not possible and no further attempts may be made. A damaged ship still capable of movement may not be repaired (repair cannot yield a speed faster than 1 Slow speed).

11.3 Ports.
Ships that are in or that enter a sea zone containing a friendly port may enter the port. To enter a port, a fleet must first enter the sea zone of the port (thus, a fleet with ships only able to move one sea zone per turn would require two turns to enter a port in one turn from an adjacent sea zone).

11.31 Port Battle. A ship in a minor port may be attacked by enemy ships. There is no contact die roll if the player whose ships are attacking the port wishes a battle. The player with ships in port never has the tactical initiative (7.1) and may not move his or her ships during combat resolution. They suffer the target modifier for being dead-in-the-water. The attacking ships may not enter the hex occupied by the ships in port or any hex adjacent to them. Torpedo attacks (7.7) may not be made against ships in a port.

11.32 Port Entry. Ships in a port may re-enter sea zones during a later turn. The first sea zone they enter must be the one containing the port.

11.33 Major Bases. Major ports have certain defensive abilities due to coastal artillery, minefields and light forces not represented in the game. Submarines (18.0) may not be placed in a sea zone containing an enemy major base. Fleets may not enter a sea zone containing a major base they are not allowed to use (exceptions, see below).

11.34 Port Access. Unless scenario instructions state otherwise, Canadian ships may use all Canadian ports and American ships may use all American ports. Fleets may enter sea zones containing enemy major and minor ports for the purpose of bombarding the port, blockading it or landing troops there. They may not enter enemy major ports or attack enemy ships inside in surface combat. Ships may enter enemy minor ports and attack enemy ships inside in surface combat (11.31; see 5.54 Restricted Minor Ports for exceptions). The enemy ships in the port must set up in the center shaded hexes per the normal non-initiative placement rules (7.23). Also see the Shore Batteries (11.8) for coastal guns that can fire in tactical combat in minor ports.

11.4 Night.
Night turns are indicated by shaded spaces on the Log Sheet. Sighting range (7.26) is reduced at night, contact between enemy fleets is less likely and it is more difficult to land aircraft (15.3). Some turns are twilight turns (turns 4, 10, 16, 22, etc.). These turns are treated as night turns in all scenarios.

11.5 Unloading.
Some scenarios require merchant ships and warships acting as transports to load or unload cargo. All transports and warships acting as transports begin a scenario already loaded unless the instructions specify otherwise (except blockships, which are empty). Unloading or loading cargo takes three consecutive turns (write "load" or "unload" on the log sheet). Unless scenario special rules say otherwise, transports which have unloaded may return to their port of origin or any other port listed in scenario instructions, reload and then be plotted to perform another transport mission to the same or another destination. Reloading takes three turns, which count toward the six turns the transport fleet must remain in port to receive a new mission (5.22). A ship may not move or engage in any form of combat (including shore bombardment) during a turn in which it unloads. If it leaves the sea zone where it is unloading, or if it moves, fires or is sunk during tactical

combat, the unloading is canceled and may not be resumed. Any victory points for unloading are lost.

11.6 Weather.
The scenario instructions indicate the starting weather condition for each scenario.

11.61 Weather Determination. During the weather phase, the Canadian player rolls one die to see if the weather condition changes. On a result of 6, the weather condition is increased by one level (for example, from level 1, which is Clear, to level 2, which is Mist). On a result of 1, the weather condition is decreased by one level. In scenarios taking place in November through March, the weather condition is increased on a result of 5 or 6.

Use the following table for weather determination:

Winter
If weather is Fog (3) or better:
Die Roll: Change
1: Decrease one level
2: Roll again; on 1-3 decrease one level, otherwise no change
3-4: No change
5: Roll again; on 1-3 increase one level, otherwise no change
6: Increase one level

If weather is Squall (4) or worse:
1: Decrease one level
2: Roll again; on 1-3 decrease one level, otherwise no change
3-5: No change
6: Increase one level

All Other Seasons
If weather is Fog (3) or better:
Die Roll: Change
1: Decrease one level
2: Roll again; on 1-3 decrease one level, otherwise no change
3-4: No change
5: Roll again; on 1-3 increase one level, otherwise no change
6: Increase one level

If weather is Squall (4) or worse:
1-2: Decrease one level
3-5: No change
6: Increase one level

11.62 Conditions and Effects.

6. Gale.
- Ship maximum speeds are one sea zone per turn.
- No cargo or troop loading, unloading or coaling may take place in port.
- No amphibious operations, unloading in coastal zones or land combat may take place.
- Any aircraft on the map is destroyed.
- Each player rolls two dice for each of his or her DDs or TBs at sea; on a result of 12 the ship is sunk.
- Surviving DDs have their speed reduced to 1.
- Ships may not fire their secondary or tertiary guns.
- Monitors (type MN) may not fire any of their guns.
- No torpedo attacks, including those made by submarines, may be made.
- Aircraft (15.0) may not take off, land or spot enemy fleets.
- Visibility on the tactical map is limited to one hex.
- Subtract 2 from the die roll result for all contact attempts (5.4).
- Add 3 to the foundering die roll result (8.62).

5. Storm.
- Ship maximum speeds are two sea zones per turn.
- No cargo or troop loading, unloading or coaling may take place in port.
- No amphibious operations, unloading in coastal zones or land combat may take place.
- Aircraft may not attack.
- Subtract 3 from aircraft takeoff and landing die roll results (15.3).
- Destroyers (DD) have their speed reduced to 1.
- Ships may not fire their secondary or tertiary guns.
- Monitors (type MN) may not fire any of their guns.
- No torpedo attacks, including those made by submarines, may be made.
- Visibility on the tactical map is limited to two hexes.
- Add 2 to the foundering die roll result (8.62).
- Subtract one from the die roll result for all contact attempts (5.4).

4. Squall.
- Ship maximum speeds are three sea zones per turn.
- No amphibious operations, unloading in coastal zones or land combat may take place.
- Aircraft may not attack.
- Aircraft may not spot enemy fleets (15.51) or assist in making contact (5.4).
- Subtract 2 from aircraft takeoff and landing die roll results (15.3).
- Destroyers (DD) have their speed reduced to 1.
- Ships may not fire their secondary or tertiary guns.

- Monitors (type MN) may not fire any of their guns.
- No torpedo attacks, including those made by submarines, may be made.
- Visibility on the tactical map is limited to two hexes.
- Add 1 to the foundering die roll result (8.62).
- Subtract one from the die roll result for all contact attempts (5.4).

3. Fog.
- Subtract 1 from aircraft takeoff and landing die roll results (15.3).
- Visibility on the tactical map is limited to two hexes.
- Subtract one from the die roll for all contact attempts (5.4).

2. Mist.
- Daylight visibility on the tactical map is limited to three hexes.

1. Clear.
- No effect.

11.7 Victory Points (VPs).

In all scenarios, victory points (VPs) are awarded for ships sunk or damaged, in addition to other VPs awarded under Victory Conditions. If a ship is sunk, the opposing player receives the number of VPs shown after its name in the Ship Data Sheet. For damaged ships, two VPs are awarded for each hull box crossed off each BL not sunk or crippled, while one VP is awarded for each hull box crossed off for each other ship not sunk or crippled. One VP is awarded for each airplane step eliminated and four VPs for each submarine sunk.

11.8 Shore Batteries.

Each Minor Port has two shore batteries to protect ships in the port if they are attacked by enemy ships in tactical combat there (see 11.31 and Ports above). These shore batteries have no effect on amphibious landings (19.0), bombardments (11.1) or battles that take place in the port's zone but outside the port itself.

Each minor port's two shore batteries are located on the tactical map, on the opposite hexside of the shaded ring from the hexside where the attacking ships are placed. Battery A is located in hex 2-3, and Battery B is located in hex 4-5. Each battery has the armament listed on the table below (the same for both batteries). Shore batteries receive a special +1 modifier to each gunnery die roll they make due to having a stable gun platform (in addition to any other standard modifiers per 7.5). Enemy aircraft can also attack a port's shore batteries using the Ground Attack procedure (see 16.4). Enemy ships within range

and sighting distance can fire at shore batteries normally on the gunnery table. Each hit scored by a primary gun or bomb destroys one shore battery gunnery factor.

For scenarios taking place prior to 1914, halve the values shown and round up. Use the gunnery strengths in parenthesis if the Liberty Canal exists per scenario special rules.

United States Shore Batteries
• Oswego: 2 Secondary
• Olcott: 3 Primary, 4 Secondary
• Buffalo: 3 Primary, 4 Secondary
• Erie: 1 Primary, 2 Secondary
• Detroit: 3 Primary, 3 Secondary
• Port Huron: 3 Primary, 3 Secondary
• Bay City: 1 Primary, 2 Secondary
• Alpena: 1 Primary, 2 Secondary
• *St.Marys: 3 Primary, 3 Secondary
• Escanaba: 1 Secondary (2 Primary, 3 Secondary)
• Gary: 1 Secondary (1 Primary, 2 Secondary)
• Sheboygan: none (2 Secondary)
• Milwaukee: 1 Secondary (1 Primary, 2 Secondary)
• Green Bay: none (2 Secondary)
• Muskegon: none (3 Secondary)
• Traverse City: 1 Secondary (1 Primary, 2 Secondary)
• Marquette: 1 Secondary
• Au Train: 1 Secondary (2 Primary 3 Secondary)
• Houghton: 1 Primary, 2 Secondary

Canadian Shore Batteries
• St. Catherines: 3 Primary, 3 Secondary
• Port Colbourne: 3 Primary, 3 Secondary
• Leamington: 2 Secondary
• Goderich: 2 Secondary
• Tobermory: 2 Primary, 3 Secondary
• Espanola: 1 Primary, 2 Secondary
• *St.Marys: 2 Primary, 3 Secondary
• Wawa: 2 Secondary
• Marathon: 1 Secondary
• Nipigon: 1 Secondary

*St. Marys has two sets of batteries: one on the Lake Huron side and the other on Lake Superior side.

12.0 Fuel and Endurance

Each ship has a fuel capacity noted on the Ship Data Sheet. During the Orders Phase, each player must check his or her ships' fuel consumption. Use of these rules is mandatory for all operational scenarios.

12.1 Consumption.
Fuel status is updated on the Ship Record Sheet for each individual ship. Check off one fuel box for every 24 sea zones a ship enters. If a ship enters two sea zones in one turn, count each as three zones (for a total of six for the turn). If a ship enters three sea zones in one turn, count each as four zones (for a total of 12 for the turn). Note any remainder alongside the fleet's column on the Log Sheet; this is counted toward the next fuel box marked off.

Example: The Canadian player sends the cruiser *Picton* on a raid, the only ship in Fleet 1. For the first three turns the cruiser moves two sea zones each turn, but on the fourth through sixth the cruiser moves three. On turn four the Canadian player would mark off one fuel box for *Picton* and write "6" (the remainder, since 6 + 6 + 6 + 12 = 30) alongside the Turn Seven line for Fleet 1. On turn six she would mark off another fuel box for *Picton*, writing "6" (6 + 12 + 12 = 30) alongside the Turn Six line for Fleet 1 as the remainder.

Players may find it easiest to merely keep track of fuel consumption for the ship in each fleet that has the fewest fuel boxes. Additional notes will be necessary if the fleet divides, combines or refuels some of its ships.

12.11 Standing Still. If a ship does not move while at sea, it expends fuel as though it entered one sea zone.

12.12 Sitting on the Dock of the Bay. Ships do not expend fuel while refueling or while in port (exception; American capital ships, 12.8).

12.2 Running Out of Fuel.
Once all of a ship's fuel boxes have been crossed off, it is dead in the water. It may not move, but may be towed (11.2). A ship must have enough fuel to conduct its scheduled movement. A player receives 50 percent of the VPs (round fractions up) for each enemy ship which has insufficient fuel to return to a friendly port (captured or starting) at the end of play.

12.3 Refueling.
A player may restore one of a coal-burning ship's fuel boxes for every complete turn the ship spends in a friendly port (one the player's ships are allowed to use) or three of an oil-burning ship's fuel boxes. Note "Fuel" on the Log Sheet. Note that some scenarios restrict ports in which a ship may refuel. Any number of ships may refuel in the same port at the same time.

Example: Picton, with one fuel box remaining, enters Port Stanley on Turn Ten. On Turn Eleven the Canadian player erases the mark in one of *Picton*'s crossed-out fuel

boxes. On Turn Twelve she erases another. On Turn 13 *Picton* leaves Halifax with three fuel boxes available.

12.4 Combat Restrictions.

A ship may not move or engage in any form of combat (including bombardment) during the turn in which it refuels (including from a collier) or re-arms. If attacked by enemy forces, it gains no fuel or torpedoes.

12.7 Re-Arming.

Ships that have used their torpedoes in combat (7.73) may restore their torpedo factor if they spend three turns in port.

12.8 American Methods

Large American warships employed many more labor-saving devices than those used in other navies. This plus the American practice of heating living spaces required power even when in port. Therefore, American capital ships expend fuel while in port (an exception to 12.11). However, the greater efficiencies plus cross-training and an emphasis on individual initiative has other benefits. Subtract one from the die roll when an American capital ship attempts emergency repairs (11.27). Also, the American player may restore two of a coal-burning ship's fuel boxes, and five of an oil-burning ship's boxes, for every complete turn it spends in a friendly port (12.3).

13.0 Mine Warfare

Minefields may be placed along zone boundaries. Some are placed at the beginning of the scenario (see scenario instructions); others may be sown during the course of play.

13.1 Minefield Location.

Note minefields on the Log Sheet, writing down the two zones bordering the minefield. A player is not required to inform his or her opponent of the location.

Example: The Canadian player places a minefield east of Toronto. On her log sheet under the "Minefields" column she writes "Q 21/Q 22."

13.2 Entering a Minefield.

When an enemy fleet marker crosses a mined sea zone boundary, the player who placed the mines informs his or her opponent. The player who moved the fleet stops moving it and rolls two dice for each ship in the fleet. Add one to the result for each ship in the fleet, up to a maximum of five. Add two to the result if the fleet was plotted to move three sea zones this turn. On a result of 11 or more,

the ship has struck a mine. Repeat the procedure for each minefield on the sea zone boundary.

13.21 Procedure. Resolve each mine hit by rolling one die and consulting the Mine Damage Table.

13.22 Friendly Fire. Minefields do not affect fleets belonging to the player who placed them.

13.23 Mines in Combat. Ships which crossed a sea zone boundary as a result of leaving the tactical map (7.33) also must have possible mine hits resolved.

13.24 Aftermath. After the player moving his or her fleet has resolved possible mine hits for one-fourth of the ships in the fleet (round any fractions up), he or she may stop moving the fleet and re-plot its movement for this turn and the following turns (unless the fleet crossed the boundary when leaving the tactical map).

13.25 Minefields and Hidden Units. Off-map units such as raiding or supply fleets, and submarine flotillas, must be placed on the map when entering sea zones which could contain minefields as declared by a scenario.

13.3 Laying Mines.

Ships capable of laying mines are noted in the scenario instructions. Note that a ship's minelaying capability may not be the same in every scenario.

13.31 Mission Statement. To place a minefield, a ship must be part of a fleet with a Minelaying or Raid mission and must remain in a sea zone for one full turn. Note "mine" on the log sheet for those turns. If the ship does not move, fire (including bombardment) or suffer damage during those turns, the player may note one of that sea zone's six boundaries as containing one minefield. The minefield does not become active (affect passing enemy ships) until the next turn.

13.32 Extent. All of a sea zone's boundaries may be mined.

13.33 Extra Mines. Additional minefields may be placed along a boundary already containing a minefield.

13.34 Prohibitions. Minefields may be placed in any sea zone within two sea zones of a sea zone that contains land (not an island). Count the sea zone that the minefield occupies, but not the sea zone the land occupies to determine the distance. An island is land that is present in only one sea zone. All other land is coastal.

13.35 Activation. A player placing a minefield may delay its activation. Note the game-turn (any turn after that during which it was placed) on which it becomes active. An inactive minefield has no effect on enemy ships.

13.36 Infiltration. Minefields may be placed along the boundaries of a sea zone containing a major base.

13.37 Capacity. Each ship designated as a minelayer in a scenario may lay six minefields per minelaying mission. Ships may replenish mines by spending three turns in a friendly port, after which they may be given another minelaying mission.

13.4 Minelayers in Combat.
When a minelayer (or another ship acting as a minelayer) is hit by gunfire or torpedoes in combat, the owning player rolls one die. On a result of 6, the minelayer explodes and sinks.

13.41 Panic. A player may order a minelayer (or another ship acting as a minelayer) to jettison its mines; its fleet's mission must be changed to Abort and it may lay no more minefields in the current scenario but is not subject to exploding if hit in combat (except through the usual damage results). A ship may not jettison mines during combat.

13.42 Definitions. A warship is only considered a minelayer for purposes of this rule if it has a Minelaying mission and the scenario instructions state that it is capable of laying mines. Minelayers (type ML) are always subject to this rule.

13.5 Auxiliary Minelayers.
Some scenarios direct that merchant ship pieces be used to represent auxiliary minelayers. These may be used as multiple-ship pieces to represent more than one minelayer. Auxiliary minelayers have all the characteristics of the merchant ship piece used to represent them (and may explode in combat).

13.6 Sweeping Mines.
A minesweeper may be used to remove minefields. Only minesweepers and those ships noted in the scenario instructions as capable of sweeping mines may remove mines.

13.61 Mission Statement. To detect or attempt to remove a minefield, the minesweeper must be part of a fleet with a Mine Sweeping mission.

13.62 Detection. Before a minefield may be removed, it must first be detected (minefields placed by the same side are always detected: you do not have to detect a minefield to sweep your own mines). To detect an enemy minefield in a sea zone, the minesweeper must remain in the sea zone for an entire turn. Note "detect" on the log sheet for the turn. If the minesweeper does not move, fire (including bombardment) or suffer damage during that turn, the opposing player must indicate which borders of the sea zone contain minefields, and how many minefields are present.

13.63 Sweeping. After a minefield is detected, a minesweeper may attempt to sweep it. The minesweeper must remain in a sea zone bordering the minefield for two full turns. Note "sweep" on the log sheet for the turn. If the minesweeper does not move, fire (including bombardment) or suffer damage during those turns, the owning player rolls one die for each minesweeper attempting to sweep mines at the conclusion of the second turn. On a result of 1 the minesweeper is destroyed by exploding mines. On a result of 2 or 3, there is no effect. On a result of 4, 5 or 6 one minefield (sweeping player's choice) is removed.

13.64 Auxiliary Minesweepers. Some scenarios may designate ships other than minesweepers (type MS) as capable of sweeping mines. These ships may conduct minesweeping operations per 13.63, but the die roll effects are slightly different: on a result of 1, the minesweeping vessel is destroyed, on a 2, 3 or 4 there is no effect, and on a 5 or 6 one minefield is removed.

14.0 Leaders
Some scenarios include energetic and capable fleet commanders of special ability.

14.1 Flagship.
If a leader is available, as directed by the scenario instructions, write his name on the fleet status sheet next to one of the ships with which he is listed. A leader must be on a ship of the largest type in a fleet. This is his flagship. The leader may not change ships during the course of the game, and if his flagship is sunk he is removed from play as well (even a surviving admiral is considered ineffective). Note that some scenarios will specify a specific ship type on which a leader must be placed.

14.2 Effects.
When determining contact, either player may declare the presence of a leader and add 1 to the die roll result (5.4). When determining tactical initiative, subtract 1 from the die roll result if a Canadian leader is present and add 1 to the result if an American leader is present (7.1). Otherwise, a leader has no direct effect in combat.

15.0 Air Operations

Aircraft pieces represent aircraft capable of attacking enemy aircraft, ships and ports. Each piece represents a group of 10 to 12 aircraft. Most pieces have values on both sides, indicating a piece has two "steps" (with the front side showing the full strength of two steps, while the back shows the reduced values of a single step). When aircraft are called for in a scenario, the number shown is the number of steps required, not pieces.

15.1 Aircraft Basing.

There are no aircraft carriers of any type in PLAN CRIMSON so all aircraft in the game are land-based (L) or seaplanes (S).

15.12 Base Capacity. Aircraft may only take off from and land at friendly ports. Any number may operate from the same port.

15.16 Changing Bases. Unless otherwise specified, if aircraft change bases during a scenario, they may not be assigned to search or CAP missions until six turns have passed, and may not be assigned to strike missions until twelve turns have passed.

15.2 Combat Aircraft.

Combat aircraft usually have values greater than zero in two or more of the following four factors as shown below:
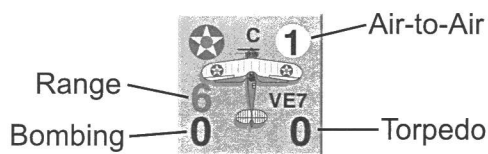
• Air-to-Air Factor: The number of dice rolled for the aircraft when attacking enemy aircraft.

• Range: The number of zones which the aircraft may move per turn, or the maximum range from the aircraft's base at which it may search for enemy fleets (15.5) or perform combat air patrol (15.4).

• Torpedo Factor: The number of dice rolled for the aircraft when attacking enemy ships with torpedoes.

• Bombing Factor: The number of dice rolled for the aircraft when attacking enemy ships or ports with bombs. If the air-to-air, torpedo or bombing factor is circled, add one to the result of each die roll in addition to all other modifiers when resolving the respective attacks.

15.3 Takeoff and Landing.

Roll one die when an aircraft takes off or lands, applying the following modifiers to the result:

• Fog (3) weather: -1
• Squall (4) weather: -2
• Storm (5) weather: -3
• Night turn: -3 for landing (take-off is prohibited)

The aircraft piece suffers a step loss on a modified result of -1 or less. Aircraft return is the very last action of each turn. All aircraft may fly again on the turn after they return to base.

15.4 Air Missions.

Combat aircraft missions must be plotted in advance. Plotting of CAP and search missions is performed in the weather phase of the first daylight turn of each day. Aircraft are committed to the mission for the entire day, landing at the end of the last daylight turn. Aircraft on search missions roll each turn to find enemy fleets. Players assign strike missions in secret immediately after locating enemy fleets by air search. Aircraft may be assigned any mission they are capable of performing it (planes without torpedo or bombing factors cannot perform a Strike mission). The missions are as follows:

• Search.
In the Weather Phase of the first daylight turn of each game day (after the weather roll has been made), players designate which of their aircraft will fly Search missions that day. Place search aircraft on the map at their base, and indicate that they are assigned to a Search mission. Search aircraft are committed to the Search mission for the entire day, landing at the end of the last daylight turn. Each turn, aircraft on Search missions attempt to find enemy fleets (15.5) during the Air Operations Phase.

• Strike.
If friendly Search aircraft locate enemy fleets, or if enemy fleets are located by coastal contact, the friendly player may plot Strike missions for his aircraft which are not currently on Search or CAP missions (15.6). Strike aircraft may only be committed to attack enemy fleets which have been spotted in the current turn (depending on the airstrike die roll result, they may actually strike it on the next turn, 15.61). Strike missions are plotted during the Air Operations Phase after all air searches are complete. Strike aircraft may move a number of zones equal to their range on the turn on which they take off. On the next turn they must return to the port they came from, or any other friendly port in range.

- Combat Air Patrol (CAP).

In the Weather Phase of the first daylight turn of each game day (after the weather roll has been made), players designate which of their aircraft will fly CAP missions that day. They are committed to the CAP mission for the entire day, landing at the end of the last daylight turn. CAP aircraft protect friendly fleets and ports from enemy airstrikes (16.0). The owning player selects one friendly fleet or port for each CAP aircraft unit to protect (it doesn't have to be the base from which it took off). It may only protect that one fleet or port during the current game day. Only a fleet or port that is no farther away from the CAP aircraft's base than half the CAP aircraft's range (round fractions down) may be protected by it. Place the CAP aircraft piece in the fleet box of the fleet the owning player wishes it to protect, or on the map at the port the owning player wishes it to protect. If the fleet it is protecting moves outside the effective CAP range, remove the CAP aircraft piece from the fleet box and place it back at its base. The CAP aircraft may not fly again that day.

15.5 Air Search.

Air Search is conducted during the Check for Contact step of the Air Operations Phase.

15.51 Air Search Resolution. Players resolve search attempts on the Air Search Table below. Select a port where friendly Search aircraft are based, and check to see if any enemy fleets are within the range of aircraft searching out of the port. Aircraft with bomb or torpedo factors of two or more have their range increased by two, for the purposes of Air Search. For each such fleet, total the number of steps of search aircraft at the selected port that have the range to reach the fleet, and find that number in the "Aircraft Steps" column on the Air Search Table. Check the number in the same row in the "Roll to Locate" column, and roll one die. Apply the same die modifiers as for takeoff and landing per the current weather level (15.3), and an additional penalty of -1 for every three sea zones (inclusive) counted from the base of the searching aircraft to the target location, to the search die roll result. If the modified result is equal to or greater than the "Roll to Locate" number, the searching aircraft spot the enemy fleet. Repeat this procedure for each enemy fleet within range of each friendly port where search aircraft are based. If the fleet is spotted by air search, the player owning the fleet reports the number of capital and light ships in the fleet, and whether any transports are with the fleet.

Example: Three steps of Canadian range-8 aircraft and three steps of range-5 aircraft are searching from a base in fog weather. One American fleet is five zones away,

while another is eight zones away. To detect the fleet that is five zones away, the British player must roll a 5 or 6 for success: six steps searching require a result of three or more for success on the Air Search Table, however one is subtracted for the fog weather condition, and one more is subtracted for the fleet being three or more zones away. The fleet that is eight zones away cannot be detected: three steps searching at this range require a result of 5 or more for success, however the modifiers for fog and range (-1 for every three zones) make this impossible.

Air Search Table

Aircraft Steps	Roll to Locate
1	6+
2-3	5+
4-5	4+
6-8	3+
9+	2+

15.52 Searching for Raiding Fleets. The searching player may also attempt to locate enemy fleets with Raid missions which are not on the operational map (5.2). The searching player selects a friendly port and tells the enemy player how many aircraft steps are searching out of that port and their range. He or she then rolls one die, and the enemy player consults the Air Search Table and places the Raid fleet on the map if the search is successful. If the ships spotted are a Raid fleet, he or she tells the searching player how many capital and light ships are in the fleet and whether any carriers or transports are with it.

15.53 Multiple Fleets in Zone. If more than one enemy fleet occupies the same sea zone, the searching player resolves air searches separately for each fleet.

15.54 Air Search and Friendly Fleets. If an enemy fleet is spotted by air search this turn, add two to the die roll result for friendly fleets attempting to contact it on the surface next turn (5.4).

15.55 CAP and Air Search. If a fleet located by a successful search result has CAP aircraft protecting it, roll one die before announcing the search results; on a result of 6, the search is actually unsuccessful (the detecting aircraft is shot down or driven off), while on a result of 5, the search is successful, but no details of fleet composition are reported (the same as for a result of 6, but the fleet location is reported). No search aircraft step losses result from these rolls.

15.6 Airstrike.

Strike missions can be influenced by the range to the target and other factors.

15.61 Launching a Strike. The owning player rolls one die when he launches a strike. On a result greater than the range between the aircraft's base and the target fleet the strike hits the fleet this turn and returns to base on the subsequent turn. On any other result the strike both hits the fleet and returns to base on the next turn, and if the target fleet moves beyond the range of the strike aircraft next turn, then they return to base without striking the fleet. A strike may not hit a fleet during a night turn; if the roll indicates a strike will hit a fleet on a night turn, the strike aircraft return to base without striking the fleet.

15.62 Locating the Target. When the strike aircraft arrive at the sea zone containing the fleet they are plotted to strike, the aircraft-owning player rolls one die. If the result is 2 through 6, the strike attacks the fleet. On a result of 1, the strike does not find the fleet and returns on the next turn without attacking. Subtract one from the result of the arrival die roll, along with the current takeoff and landing modifiers from 15.3. Also subtract one from the result for any airstrike conducted as a result of coastal contact or a submarine sighting.

15.63 Strikes and CAP. Strikes from separate airbases or fleets arrive individually and are engaged one at a time by any defending CAP and anti-aircraft fire (16.3; 16.4). If CAP aircraft are present over the fleet, proceed to the air-to-air step (16.1). If no CAP aircraft are present the strike aircraft proceed directly to attacks against enemy ships (16.3).

15.7 Shelling Airfields.

Ports in coastal or island zones may be bombarded by warships. Each primary or secondary hit scored against a port destroys one step of aircraft, if the aircraft is on the ground at the time of the bombardment.

16.0 Air Combat
16.1 Air-to-Air Combat.

Combat between opposing aircraft occurs when Strike mission aircraft attack a fleet or port protected by CAP mission aircraft. The Strike mission player can either keep all his or her aircraft together in a unified attack force, or divide them into an attack force and an escorting force. This separation must take place before the number of successfully intercepting CAP aircraft is determined (below). The players then conduct air-to-air combat as follows:

1. Resolve combat between the escorting and CAP forces. The CAP player first announces which of his or her aircraft will attack which enemy aircraft. Roll one die for each CAP aircraft piece selected; on a result of 3 or more, the CAP aircraft intercepts and may attack. Subtract one from the result if the CAP aircraft is not defending its own base zone. Each aircraft unit may attack only one enemy aircraft unit. One CAP aircraft unit must be allocated to attack each escort aircraft unit before a second CAP aircraft may be assigned to attack an escort, two CAP must attack each escort aircraft before three can attack one, etc.

2. Once the CAP player has chosen targets, he or she rolls one die for each air-to-air factor on each CAP aircraft; each result of 6 or more scores one hit on the targeted enemy escort aircraft unit. Add one to the result if the firing aircraft's air-to-air factor is circled on the playing piece.

3. The strike player now allocates his or her escorting aircraft to attack intercepting CAP aircraft and rolls dice for the attacks, using the same procedure as above.

4. Each hit reduces the target aircraft unit by one step (see Aircraft Damage, 16.2). Since air combat results take effect simultaneously, a strike aircraft destroyed or reduced by CAP may still return fire at its original strength before being reduced or removed from play.

5. Once combat is resolved between CAP and escort aircraft, or if there is no escort, those CAP aircraft which were not hit by escort aircraft may attack the attack force using the same procedure, except that the attack force may not return fire.

6. Once the CAP aircraft have resolved their fire against the attack force, surviving attack force aircraft may attack enemy ships (16.3).

16.2 Aircraft Damage.

Each hit on an aircraft piece reduces the unit by one step. Most but not all aircraft pieces have two steps. The front is the full-strength side, and an aircraft piece on its full-strength side represents two steps of aircraft. The back is the reduced-strength side, and an aircraft piece on its reduced-strength side represents one step of aircraft. An aircraft piece with only one side represents one step of aircraft. The first hit on a two-step aircraft unit causes it to flip to its reduced-strength side, and the second hit removes it from the map. The first hit to a one-step aircraft unit eliminates it.

16.3 Air-to-Ship Combat.

After all air-to-air combat has been resolved all ships in

the fleet under attack are placed face-up on the tactical map. The strike player may choose to abort the strike and not attack the fleet after the ships are revealed. Combat between the aircraft and ships is conducted as follows:

1. Each attack aircraft which did not function as an escort is placed on the ship the owning player wishes it to attack. There is no limit to how many aircraft may attack the same ship.

2. Each capital ship has an antiaircraft (AA) factor of 2. Each light ship has an AA factor of 1. Total the AA factors of all the ships in the fleet which the airstrike player has targeted. If the number of targeted ships is less than eight, the fleet player may add the AA factors of additional ships until he has reached eight ships total. He or she then divides the sum of all the selected ships' AA factors by three. The result (round any fraction up) is the number of AA "shots" the fleet gets against the attacking aircraft.

3. The fleet player allocates each AA shot against attacking aircraft units as desired, except that each aircraft must be fired on once before any may be fired on twice, etc. Once the fleet player has allocated AA, he or she rolls a number of dice against each attacking aircraft equal to the number of shots allocated against it. Each result of 6 is a hit, and eliminates one aircraft step from the targeted air unit.

4. Once damage from AA fire has been applied to attacking aircraft, the attacking player decides whether each surviving aircraft unit will attack with its torpedo or bomb factors (it cannot attack with both). He or she then rolls one die for each attacking torpedo and bomb factor and adds any applicable die-roll modifiers from the list below. Every modified result of 6 or more is a hit on the targeted ship.

16.31 Die Roll Modifiers. Apply the following modifiers to both bomb and torpedo attacks:

• +1 if target is a capital ship or large transport
• +1 if target has a speed of 1 Slow
• +2 if target is dead in the water
• +1 if the firing aircraft's torpedo factor is circled (for torpedo attacks)
• +1 if the firing aircraft's bombing factor is circled (for bomb attacks)

16.32 Torpedo and Bomb Damage to Ships. Torpedo hits are resolved by rolling on the Torpedo Damage Table (as with ship-launched torpedoes). Bomb hits are resolved by rolling on the Gunnery Damage Table, with the following adjustments:

• Bomb hits are considered primary gunnery hits (they penetrate all armor except as noted below).
• Bomb hits receive no bonus for plunging fire, and do not penetrate hull armor which is immune to plunging fire (8.8).
• A bomb hit on light or no armor may cause excess damage (8.4).

16.4 Ground Attack.
Aircraft may attack enemy ports where aircraft are based. A port under air attack may take three AA shots at EACH attacking aircraft. Attacking aircraft may only use bomb factors to attack a port. After applying any damage to the attacking aircraft from any defending AA or CAP aircraft, the attacking player rolls one die for each bomb factor on the surviving attack aircraft Add one to the result if the attacking aircraft's bomb factor is circled. Each result of 5 or greater is a hit. Each hit destroys one step of enemy aircraft, if the aircraft is on the ground at the time of the attack.

If the port is a minor port with shore batteries (see Shore Batteries, 11.8), the attacking player can opt to destroy gunnery factors instead, one for each hit. The attacking player designates whether the hit is on Battery A or Battery B, but the targeted player decides which gunnery factor of the targeted battery is destroyed by each hit. If all of a shore battery's gunnery factors have been destroyed, any excess hits on it are ignored.

16.5 Port Strikes.
Aircraft may attack enemy ships in a port using the same procedure as 16.3 above. In addition to anti-aircraft fire from ships, port defenses may fire three AA shots at EACH attacking aircraft. Aircraft torpedoes may be used to attack ships in port, and all targets are considered dead in the water.

16.6 Invasion Air Support.
Aircraft with bombing (not torpedo) factors may provide Invasion Fire Support (19.1). If the invasion zone includes a port, port defenses may fire three AA shots at EACH attacking aircraft. Aircraft may also participate in ground combat (19.42); if the invasion zone includes a port, port defenses may fire three AA shots at EACH attacking aircraft, if no port is present than no anti-aircraft fire is revolved.

16.7 Restrictions.
Aircraft cannot use torpedoes in air attacks against ships in canal zones. Fairy Pintail and Douglas DT types may only be given CAP, Escort and Strike missions.

18.0 Submarine Operations

Submarine markers represent one or more submarines operating close to the plotted zone of the marker. These markers are kept off the map unless revealed per (18.6).

18.1 Submarine Plotting.

Submarines are organized into flotillas, each of which can contain up to six submarines. Submarine flotillas may move one sea zone every game day, at the start of the game day (0600). This movement need not be pre-plotted, simply note on the submarine log sheet. Submarine flotillas must start at least two sea zones from enemy ports and locations where enemy fleets may start. Friendly submarine flotillas must start at least five sea zones apart.

18.2 Submarine Contact.

A player may have submarines check for contact, if an enemy fleet moves within two sea zones of a player's submarine flotilla position during daylight turns when weather is Squall or better. This contact range may not be traced across land zone boundaries.

18.21 Making Contact.
Secretly roll once for each submarine in the flotilla; on a result of five or more, the submarine has made contact, and the opponent reports the number of capital and light ships, and the presence of any carriers or transports.

18.22 Searching for Off-Map Fleets.
Flotillas that do not attempt to make contact with enemy fleets on the map may attempt to search for off-map fleets. Place the flotilla on the map, and make a contact roll (subtract one from each result) for each submarine in the flotilla; if successful, and one or more off-map fleets is within two sea zones of the flotilla, the opposing player secretly (and randomly) determines which fleet has been contacted by each submarine, and places any contacted fleets on the map.

18.3 Submarine Attack.

For each submarine that makes contact with an enemy fleet, roll one die, subtracting one from the result if the target fleet moved two sea zones this turn; on a modified result of 4 or more, the submarine may attack the fleet (otherwise, it was too distant to achieve a firing position). Each submarine attack is resolved separately.

18.31 ASW.
For each submarine attack, if there are escorts (DL, DD, TB or MS not on minesweeping missions) in the target fleet, roll one die, adding one to the result for every three escorts in the fleet; the submarine is sunk on a result of 6 or greater. For scenarios prior to 1918, add one to the result for every four (not three) escorts. If

the submarine is sunk, roll a second die, adding the escort modifier as above; on a result of 4 or less the submarine is sunk after it attacks, while on a result of 5 or greater it is sunk before it attacks.

18.32 Target Selection.
For each submarine allowed to attack, the submarine player selects what type of ship (light, or all other types) each will attack, and randomly draws targets for each. If there are more submarines than targets, the excess submarines do not get to attack.

18.33 Attack.
One die is rolled for each attacking submarine, and a hit is scored on a result of 6 or more. Apply all die roll modifiers from (7.71), and resolve damage from the Torpedo Damage Table.

18.34 Torpedo Reloads.
A submarine may make up to two torpedo attacks before needing to reload. Submarines without torpedoes may still attempt to make contact, but may not attack. Submarines may reload torpedoes after spending 30 turns in a friendly port.

18.4 Sub vs. Sub.

At the end of the contact phase (4.5), if a player has an unrevealed submarine flotilla within two sea zones of a revealed enemy flotilla, and one or more submarines in the flotilla has torpedoes, the owning player may reveal the flotilla's location, and attempt to sink an enemy submarine. Roll two dice; on a result of 12, one submarine from the enemy flotilla is destroyed.

18.5 Submarines and Merchants.

In some scenarios, submarines in a flotilla may attempt to sink merchants on the MLT, if they have at least one torpedo attack remaining. Submarines always use the "Search 2" column; the merchant density corresponds to that in the flotilla's sea zone. If a merchant sinking is indicated, roll one die; on a result of 6, the attacking sub has used one of its torpedo attacks. In the event of a successful sinking, the submarine marker is placed on the map.

18.6 Submarine Marker Placement.

A submarine marker must be placed at a flotilla's location if one of the following events occurs:

(1) a submarine from a flotilla makes contact with an enemy fleet,

(2) a flotilla attempts to search for off-map fleets,

(3) a submarine sinks a merchant on the MLT, or

(4) a submarine from the flotilla attempts an attack against

an enemy submarine. The marker must remain on the map until the flotilla moves.

19.0 Amphibious Operations
In some scenarios, one or both players must attempt to unload troops to capture enemy-controlled ports, canal zones or islands.

19.1 Invasion Fire Support.
The turn transports start unloading for an amphibious invasion, the invading player must score at least six hits from bombardment (11.1) or aerial bomb (not torpedo) attacks (see 16.6). If this condition is not met, invading forces may not fire back in ground combat (19.4) until six turns have passed since the start of such combat.

19.2 Transports.
The unloading of transports represents the establishment of a beachhead and the assault landing of troops and supplies. Every loaded large transport carries two points of troops. Every loaded small transport carries one point of troops.

19.21 Unloading. After six turns of unloading, the player unloading troops rolls one die for each transport. On a result of 6, the transport unloads all troops. Every six turns thereafter, roll one die for each remaining unloaded transport, adding one to the result for every six turns that have passed after the initial six. On a result of 6 or greater, the transport unloads.

19.22 Reloading. Unless scenario special rules state otherwise, transports which have unloaded may return to their port of origin, reload, and then be plotted to perform another transport mission to the same or another destination. Reloading takes three turns, which count toward the six turns the transport fleet must remain in port to receive a new mission (5.22).

19.23 Troop Mobility. Troops may move one zone on the first daylight turn of each game day (0600). Troops must cease moving when they are adjacent to enemy troops; they may not move again until all adjacent enemy troops are eliminated.

19.3 Island, Port, Canal Zone and Coastal Zone Capture.
To capture any enemy-owned island, a player must unload at least 15 troop points anywhere on the island. To capture an enemy port, canal zone or coastal zone, a player must unload at least 15 troop points in the port or zone, or in any adjacent coastal zone. If a coastal zone where troops unload is adjacent to more than one enemy-controlled port and/or zone, the owning player must designate which port or zone the troops are trying to capture. If a player captures an island or a zone, he or she also captures any port(s) on that island or in that zone.

19.31 Base Changes.
Ships in port that belong to the side that originally owned the port must leave the port on the turn after it is captured. Aircraft based at the port at the time it is captured are destroyed. Only the capturing side's ships may use the port after it is captured.

19.32 Recapture.
Captured islands and ports can be recaptured by enemy forces, and port capture can be delayed or prevented if opposing forces unload at the island or port (19.4).

19.33 Fuel Capture.
Once a port is captured, the invading player rolls one die. On a result of 5 or 6 the invading forces capture the port's fuel stores, and the invading player can refuel ships there for the rest of the game. On any other result, defending forces destroy the port's fuel stores, and neither player can refuel at that port for the rest of the game.

19.34 Canal Destruction.
If a player captures a canal zone, on a subsequent turn, that player may destroy the canal section while it is under his control, rendering it impassable for the remainder of a game.

19.4 Ground Combat.
If both players successfully unload transports on the same island or within one zone of the same canal zone or port, or if troops unload on an island or within one zone of a port that has a garrison (see scenario instructions), then the island, canal zone or port zone is contested. Each player should record how many points he or she has unloaded or in the garrison at each such location. If both players have troops present within one zone of a port or on the same island, ground combat occurs at the first daylight turn of each game day (0600). Each player rolls one die for each troop point he or she has present; each result of 6 eliminates an enemy troop point.

19.41 End of Battle.
At each contested location, the players keep rolling dice for ground combat at the end of each turn until one side's troops have been eliminated, or until the scenario ends. If the originally-owning player is the one with troops remaining after ground combat ends, he or she retains control. If

the invading player is the one with troops remaining, he or she takes control only if he or she has at least 15 troop points there (or can bring the total up to 15 before the end of the game). If a location remains contested at the end of the scenario, the invading player takes control of it only if he or she has at least 15 more troop points there than the originally-owning player. If not, the original owner keeps control.

19.42 Air and Gunfire Support.
Ships may conduct bombardment missions and aircraft and airships may conduct land attack missions (16.6) against zones with enemy troops engaged with friendly troops. Each hit scored against the enemy troops neutralizes one enemy "hit" in the following land combat phase (one hit achieved by enemy troops against friendly troops is ignored), up to a maximum of one hit neutralized per troop in the bombarded or bombed hexes.

OPTIONAL RULES

Players wishing for more detail in their games are invited to try the following optional rules.

Always Possible
For situations where die roll modifiers would indicate there is no chance of success (in combat or searches, for example), a player may roll a number of dice equal to the difference between the highest modified roll possible and the number needed for success plus one. If all results are 6, the attempt succeeds. This rule allows players to resolve low-odds situations to a finer granularity using six-sided dice, and is highly recommended for air search situations.

Example: Three steps of British range-8 aircraft are searching from a base in fog weather. An American fleet is eight zones away. Three steps searching at this range require a 5 or more for success, however the -1 for fog and an additional -2 for range (-1 for every three zones) make the highest possible modified result a 3. The difference between the highest modified result (3) and the number needed for success (5) is two; with the plus one, the British player therefore rolls three dice. If all three dice turn up with a 6, the attempt succeeds.

Automatic Disengagement
When resolving tactical combat in operational scenarios, at the end of each combat round in which the engaged ships are at maximum sighting range, roll one die; on a result of 5 or greater, the battle is concluded. The player with initiative may choose to add OR subtract one to or

from the result, and the player with an overall advantage in ship speeds (all of his or her ship speeds are least one level faster than those of the enemy) may also add or subtract one to or from the result. This represents the fact that many naval battles tended to end prior to complete destruction of one side, due to circumstances such as weather, deteriorating visibility, failing leadership or miscommunication within the engaged fleet.

Closer Speed Differential
At the start of each tactical combat round, roll one die. On a result of 4 or less, ignore impulses 5, 9, 13 and 17 when proceeding through the tactical impulse sequence for the round. Instead, the non-initiative player moves in the same impulses (2, 6, 10, 14 and 18) as the initiative player, with the non-initiative player moving first.

Long-Range Gunnery
When a hit is scored at three or four hexes, the firing player must roll a second die. On a result of 3 or less the hit is ignored.

Maximum Combat Modifiers
The maximum positive gunnery or torpedo modifier is +1, unless a target is dead-in-the-water (in which case that modifier is added as well for a maximum of +2).

Night Combat
When a gunnery or torpedo hit is scored in combat during a night turn, the firing player must roll a second die. On a result of 4 or less the hit is ignored. In addition, if the hit is scored against a target in the same hex as the firing ship, and other friendly ships are in the same hex, the firing player must roll one die; on a result of 1, a friendly ship has been hit instead (randomly draw one, and roll for damage against it).

No Referred Pain or Excess Damage
Ignore (8.4), and (8.7) when resolving damage to warships. For AMCs, colliers, oilers and transports, any primary or secondary gunnery hits are considered hull hits. Ignoring referred pain and excess damage tends to result in more historical rates of vessel losses, however doing so results in scenarios taking more time to resolve.

Primary Guns vs. Light Ships
When a hit is scored by primary guns against light ships, the firing player must roll a second die. On a result of 3 or less, the hit is ignored. Subtract one from the result if the target is a DD or TB. Primary guns may not engage DD or TB at range zero.

Screening

When a torpedo hit is scored by light ships which occupy the same hex as enemy light ships, the firing player must roll a second die. On a result of 4 or less the hit is ignored due to interference from the enemy screen.

Smoke on the Horizon

As opposed to placing ships at maximum sighting distance when setting up tactical combat, if contact occurs in daylight and weather is mist or better place them one hex beyond sighting range, and mark their locations with a fleet marker. This represents the initial sighting of smoke as opposed to a ship. Players must declare the exact number of ships in each tactical hex (but not types) if less than five, or specify "there are five or more." To disengage during combat, players must move beyond the maximum sighting distance plus one hex.

Tactical Set-up

The initiative player may always set up his or her ships at a distance from the non-initiative player's ships equal to the current maximum sighting range. They still must be deployed to reflect their entry into the tactical map from the appropriate sea zone.
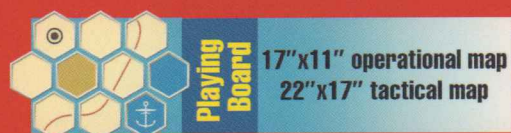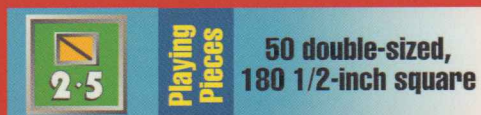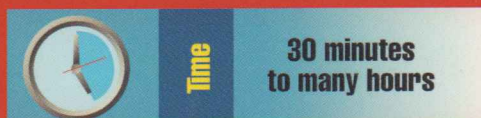
U.S. Navy
Plan Crimson
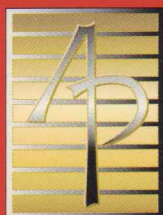
A Great War at Sea game by Milan Becvar

In the 1920s, United States military planners hatched a scheme for the invasion of Canada. Called War Plan Crimson, it was a subset of War Plan Red, the plan for war with England.

U.S. NAVY PLAN CRIMSON takes the *Great War at Sea* series to a very strange place: war on the Great Lakes. It's filled with ships that never existed waging a war that never happened — and all of it taking place in a set of teacups.

PLAN CRIMSON includes 230 die-cut game pieces, a map of the Great Lakes, and 32 scenarios. The game uses the regular *Great War at Sea* rules, with some special rules to address this unusual situation. Everything you need to play (except dice) is included in the Playbook.

Time	30 minutes to many hours
# of Players	2
Scale	32 miles/sea zone
Playing Pieces	50 double-sized, 180 1/2-inch square
Playing Board	17"x11" operational map 22"x17" tactical map
Rules	29 pages, 32 scenarios
Difficulty Level	★★☆☆☆
Solitaire Play	Fair