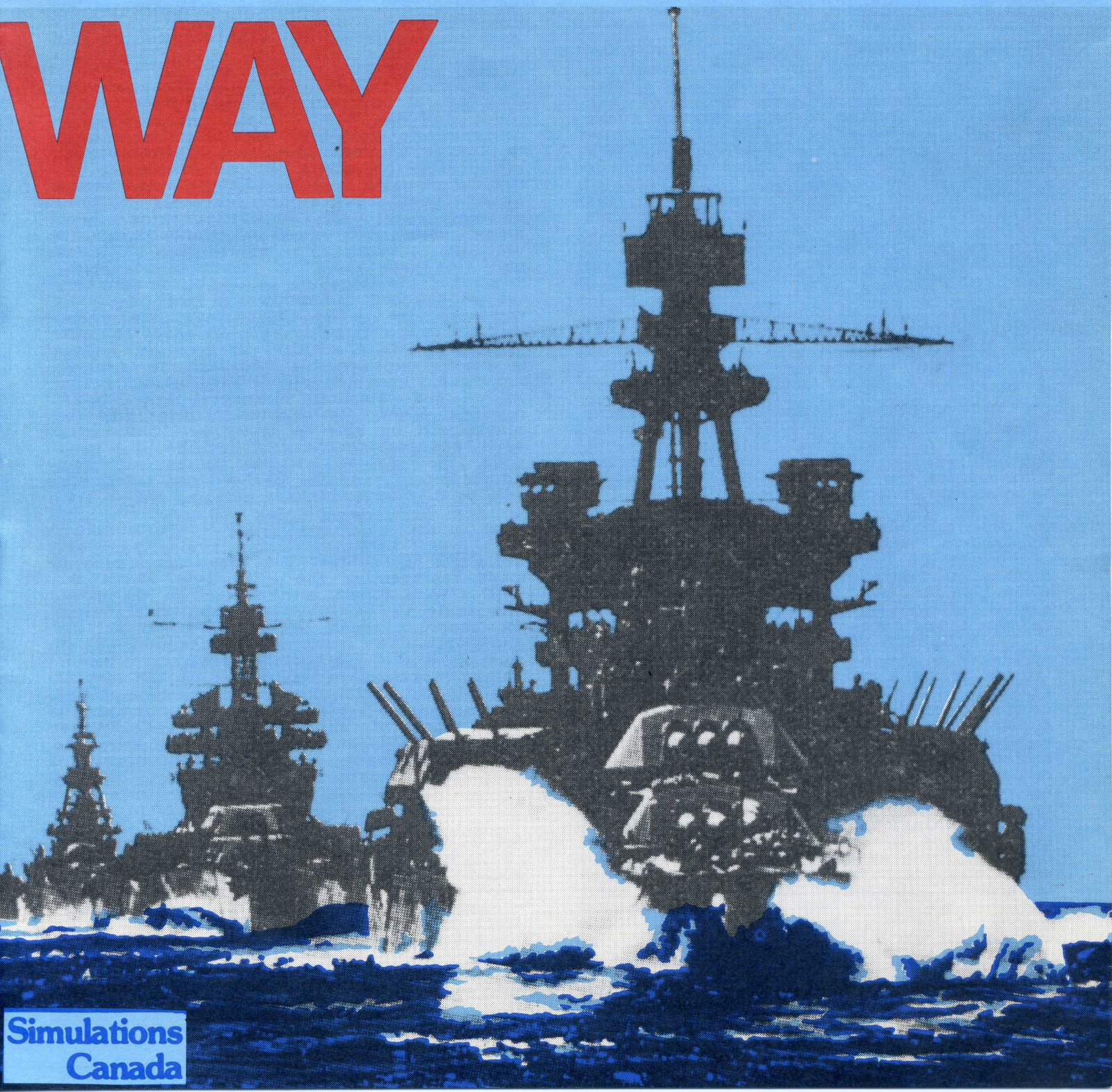
Tactical Naval Combat in the Pacific 1943-1944

IN HARM'S WAY



Simulations Canada

IN HARM'S WAY, Tactical Naval Combat In The Pacific 1943-1944.

Index:

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1.0 INTRODUCTION: Following the Japanese defeat at Guadalcanal a bitter struggle began for control of the central Solomons with the Imperial Japanese Navy now on the defensive. Kolombangara and Vella Lavella Islands had to be reinforced, but the I.J.N. could not afford to risk ships. Naval forces were also scarce on the American side. Furthermore, the U.S.N. commanders were only just beginning to incorporate the lessons of 1942. The ensuing clashes in "The Slot" were costly for both sides. In the end, Japan had to give up the central Solomons just as it had been forced to abandon Guadalcanal.

IN HARM'S WAY is a detailed game type simulation of the naval battles in the Solomon Islands in 1943 and the Philippines in 1944, as well as a scenario generator capable of creating hypothetical Pacific naval actions during 1943/44. The players have the viewpoint of the senior naval commander present for each side. As such, they are responsible for planning their ships' missions before the battle, and commanding their forces in action against the enemy. During the planning phase the player will be able to assign ships to groups, plot their intended movement, and establish the combat doctrine and rules of engagement that will be followed in combat. During battle the player will command his forces from his position on his flagship. He will have first hand knowledge and direct control only of his own ship.

Note to owners of **LONG LANCE:** **IN HARM'S WAY** uses many of the game mechanics from **LONG LANCE**, however, there are some differences between the two games. Players who do not own **LONG LANCE** should read all of the rules to **IN HARM'S WAY** thoroughly. Players who own **LONG LANCE** should skim through the rules, paying particular attention to the following modifications for **IN HARM'S WAY:** **1)** Apple II versions are provided on a ProDOS disk, and require 64K of memory; **2)** 'Build your own' scenarios may be either 1943 or 1944: Scenarios built in 1943 use the Central Solomons map and are always night battles, while 1944 scenarios use the Open Ocean map and may be either day or night battles; **3)** IJN missions may be either to land or evacuate troops at/from a specified location (there are no bombardment missions); **4)** Both sides must plot waypoints to enter and leave the map (there is no USN 'Patrol' order); **5)** Both sides may order their ships to disengage and withdraw; **6)** Smoke is available in day scenarios.

2.0 GENERAL COURSE OF PLAY: The game is composed of two major sections, the planning phase and the battle itself. The planning phase allows the players to select a scenario to play, or to create their own scenario. Most importantly, this phase includes the pre-battle mission planning function of the player, as the senior naval commander present. Once planning is complete, the battle begins. Each sides' ships will move as planned until a detection occurs. No orders may be given until this happens. The player is considered to be "on" his flagship. Thus, his options are centered around this ship and the reports it would receive. The player may give orders directly to his flagship (who to shoot at, with what, where to go, etc.) He may give orders to other ships in his command by sending messages. Once the player has finished giving orders and sending messages, the battle resumes. Every few minutes of game time the player will be able to issue new orders and send additional messages. When the game ends, the players will be given an "After Action Report", and the final victory point total will be displayed.

3.0 GAME EQUIPMENT: Two identical, laminated maps representing the area over which the battles were fought are included in the game. The scale is one nautical mile (2000 yards) per square. Each square is given an X,Y coordinate. The X-coordinate runs from left to right, and the Y-coordinate runs from top to bottom. The upper left corner of the map is position X=1, Y=1. The two differently colored markers provided with the game can be used to keep track of ship locations and contact reports. To erase marker notations from the laminated surfaces, simply rub them off with a damp cloth.

4.0 GETTING STARTED:

4.1 BOOTING: Before first booting the game you should make a backup copy of the game disk. Consult your computer's documentation manual for how to copy a disk. Apple users must copy under ProDOS. To boot the game, place the game disk in the primary drive and turn on the computer. Commodore users must type 'LOAD "IHW",8' followed by 'RUN'. IBMPC users should use DOS 2.0 or later and boot the game by inserting the disk

in the default drive of an already running system and typing 'IHW'. Note that the files can be copied to a hard disk and the game then started from that directory. Atari ST users should start the file IHW.PRG. After starting the game, keep the game disk in the disk drive unless told to do otherwise by the program.

4.2 ONE OR TWO PLAYERS: After booting, the computer will ask if you will be playing with two players or if the computer will play the Japanese or US side. Simply enter the letter 'J' or 'U' indicating your choice.

4.3 SELECT SCENARIO: There are nine historical scenarios in **IN HARM'S WAY**, or the player can choose to build his own. You must enter a number (1-10) indicating your choice. 'Build Your Own' scenarios may be either in 1943 or 1944. This will determine the types of ships that are available. 1943 scenarios always use the Solomons map and are at night. 1944 scenarios always use the open ocean map and may be either day or night battles.

4.4 CHANGE GAME PARAMETERS: Certain parameters can be changed from their historical values for purposes of play balance or experimentation. For example, the characteristics of the Japanese Long Lance torpedo may be downgraded to equal those of the U.S. Mk 15 torpedo, IJN prowess in night combat can be reduced, and the experience level for either side may be enhanced (this represents a heightened state of training and will result in more accurate gunnery, quicker repair of damage, faster torpedo reloading for the Japanese, and a greater chance of achieving surprise over the enemy).

4.5 FREE OR HISTORICAL SETUP: When starting an historical scenario against the computer opponent, the player can decide whether the computer will be restricted to the historical setup or if it will be allowed to do its own planning. In either case, the player will be able to plan his ships' missions, deviating from the historical setup if he wishes.

4.6 ENTERING INFORMATION: The computer detects the completion of each information entry by the player typing in their entry or by pressing the <RETURN> or <ENTER> key. 'Y' or 'N' are responses to Yes/No questions while digits are used for number responses. Note that all entries should be made in upper case.

5.0 PLANNING A MISSION: At the beginning of the game, the player will be required to do pre-battle planning. If the player has decided to build his own scenario, he must also select the ships to be in his force. In addition, the IJN player will be given the type of mission to be performed.

5.1 IJN MISSIONS: In certain scenarios, and in the 1943 'Build Your Own' scenarios, the IJN player will be assigned a transport mission to perform. For transport missions, the IJN player must plan to send at least one destroyer to the stated objective. Destroyers transporting troops to an objective will be automatically loaded with troops and supplies. They must unload their troops at the stated destination to accomplish the mission. Ships evacuating troops must load troops at the stated location and then exit the map. Destroyers transporting troops will not have reloads for their torpedo tubes.

5.2 SELECTING SHIPS: In a 'Build Your Own' scenario, each player must select the ships to be in his force. Each side can have up to 15 ships. All available ships will be displayed. To accept a ship into the force, simply enter its number. Pressing the letter 'X' will exit the ship listing. The IJN player must include destroyers if he has a transport mission. If playing solitaire, the player has the choice of picking the computer's force himself, or letting the computer do it.

5.3 ASSIGNING SHIPS TO GROUPS: Each ship must be assigned to a group. A group may contain up to 5 ships. There may be up to 5 groups on each side. The Flagship for each side will be the ship with the lowest ID number in the force.

5.4 PLOTTING INTENDED MOVEMENT: After assigning ships to groups, each group must be given a set of waypoints representing its planned movement. These are map locations which the group will pass through in sequence, unless events during battle dictate otherwise. The following restrictions apply: **1)** Each group must have at least one waypoint (its starting location), and a group can have no more than 10 waypoints. **2)** *The players' starting and exiting waypoints must be within three squares of the following map edge limits: IJN restricted to squares 5-10 on the North (top) edge and USN restricted to squares 5-23 on the East (right) edge or squares 14-25 on the South (bottom) edge.* **3)** The straight line path between waypoints must not come too near to land (this will be checked at the end of the planning phase, and a warning given if the computer navigator is not satisfied).

5.5 DEFINING BATTLE DOCTRINE: Doctrine represents the guidance given by the force commander (the player) to his Commanding Officers (COs) which they are expected to follow in combat, especially when they are out of contact with their Flagship. Note that doctrine only represents guidance ... a CO will attempt to comply with this, but ultimately the decision on what to do in a given situation will be his own. On startup of the game, each side is given a set of standard doctrine statements which reflect how his forces are trained to fight. The player can revise or modify his battle doctrine within the following categories:

5.51 OPEN/CLOSE RANGE RULES: These rules determine the conditions under which the player's ships will attempt to close or open the range to other ships. Primary considerations here are the number and classification of the opposing ships, and whether the player's ship is being fired upon.

5.52 RULES OF ENGAGEMENT: The Rules of Engagement (ROEs) will determine whether a ship will hold or open fire on other ships. Important here is the classification of the contact (enemy, friendly, or unknown) and whether the ship is being fired upon. The ROEs also indicate the preferred weapon (guns or torpedoes) to be used.

5.53 TACTICAL GUIDANCE: These are specific rules which apply to firing ranges, searchlights, etc. Most are self-explanatory, however, the following elaborations apply: **1)** Gunnery Range. Ranges for commencing gunfire are described as either Short, Medium, or Long Range. Short Range refers to distances at which the shell trajectory is very flat, causing the majority of hits to be on the target's belt armor. At Long Range, the trajectory results in 'plunging fire', with the target's deck armor receiving most hits. Medium Range is the case between, with hits more evenly distributed between belt and deck armor. **2)** Torpedo Firing Range and Minimum Approach Distance. If the preferred torpedo firing range

is less than the minimum approach distance, a ship will temporarily violate the latter in order to launch its torpedoes from optimum range. **3)** Ship Speeds. Slow, Standard and Flank speed correspond approximately to 10, 20 and 30 knots, respectively.

6.0 THE BATTLE PHASE:

6.1 GENERAL: During the Battle Phase, the forces of each side will attempt to carry out their missions as planned by the players. The Battle Phase consists of the initial approach to contact of the opposing forces, their subsequent maneuvering and exchange of fire, and eventual disengagement and retirement. Activity during the Battle Phase is resolved for four minute segments of game time. Until initial contact is made, the player will not be able to give orders to his forces or to change their plans. Once he receives a sighting report, he will be able to issue orders to his Flagship and send messages to his other ships.

6.2 THE ORDERS MENU:

6.21 REVIEW CONTACT REPORTS: This selection will display information on visual sightings and radar detections held by the player's Flagship. Note that contacts reported by the player's other ships will not be listed here unless the Flagship also detects them. Each contact will be given an ID number and an identification (IJN CA, Unknown DD, etc). The contact's position, course, and any special remarks will also be given. Abbreviations used are: 'CL '= Class, 'RNG' = Range (in 1000's of yards), 'POSIT' = Position (X,Y), 'CSE' = Course (with '000'=North, etc.), 'D-I-W' = Dead In the Water, 'LG' = Large, 'SM' = Small, 'SCHLT' = Searchlight, and 'SMOKE' = Making Smoke.

6.22 REVIEW FLAGSHIP STATUS: This selection will give specific information about the condition of the player's Flagship. Searchlights may be turned on and off from within this menu item (night battles only). During day battles, the player can choose to begin or cease making smoke.

6.23 GIVE CONNING ORDERS: This allows the player to input a map location which the Flagship will head toward. To order his other ships to change course, the player must send them a message to do so (see Section 6.25, below).

6.24 GIVE WEAPON ORDERS: This is where the player can assign targets to the Flagship's primary & secondary guns and torpedo mounts.

6.25 SEND MESSAGES: The player can send messages from the Flagship to his other ships. This is the primary means of controlling your forces during battle. Messages can be sent to individual ships, groups of ships, or the entire force. There is no limit to the number of messages that a player can send, however too many messages sent at any one time can 'clutter up the airwaves', resulting in confusion among the player's ships. There is no guarantee that a message will be received and understood by the intended ship. Damaged ships or ships which are heavily engaged in battle are especially likely to miss orders. Most of the messages listed are self explanatory. There are some special messages. 'Disengage and Withdraw' can only be sent to the entire force. When a ship receives this message, it will immediately attempt to leave the map via its assigned exit waypoint. The IJN player may also send orders to 'Commence (or Cease) Loading/Unloading Troops'. This messages can be sent to groups or to the entire force. A ship will not begin to load/unload until this message has been sent and received.

6.26 EXIT: Entering the letter 'X' signifies that you have finished issuing orders. The game clock then resumes execution of combat, movement and search.

6.3 COMBAT: Results of combat which are observed by the players' Flagships will be displayed on the screen. Reports of gunnery hits will include near misses and hits that fail to penetrate the target's armor. It is possible for combat to occur between ships, yet not be reported. This is especially the case when the engaged ships are out of sight of the player's Flagship. Note also that nothing prevents ships from firing by mistake on other friendly ships. When establishing battle doctrine, pay particular attention to the Rules Of Engagement concerning unknown contacts. If the player's Flagship is crippled during combat, an attempt will be made to shift the player's Flag to another vessel. This represents the transfer of authority to the next senior commander; it does not imply the physical relocation of the force commander.

6.4 MOVEMENT: Ships will move toward their next waypoint (or assigned objective, if a message to that intent has been received) in accordance with the guidance and doctrine established during the planning phase. Damaged ships may attempt to avoid contact with enemy forces. Ships will never allow themselves to run aground and collisions, intentional or otherwise, will not occur.

6.5 SEARCH: Surface naval battles in the Solomons occurred at night. Squalls were common and unpredictable. Visibility was typically 4000-7000 yards (Visibility during daylight scenarios varies from 20-40,000 yards). Radar, available on most US and some IJN ships, gave the possibility of better detection ranges, but was degraded by weather, proximity to shore, and poor equipment reliability. Japanese ships often obtained visual sightings before the radar equipped US ships were able to detect them. Searchlights, though not very useful for general search, could give positive identification of unknown vessels and thus help prevent firing on friendly ships. Of course, searchlights and above deck fires also made ships more visible at long distances. The use of starshells is built into the program's search systems and thus is not in the orders menu.

6.6 CONCLUDING THE GAME: The game will end automatically if any of the following occur: **1)** One side's forces are destroyed. **2)** Four hours of game time elapses. **3)** A player has issued a 'Disengage and Withdraw' message and all ships from that side have left the map. On ending the game the computer will determine if IJN ships still on the map are able to return to port without being attacked by US aircraft. Their success in doing so will be affected by: **1)** The time remaining before sunrise. **2)** Their locations on the map. **3)** Any propulsion damage to the ship.

7.0 THE AFTER ACTION REPORT: Following any possible sinkings of IJN ships by aircraft, the computer will display the status of all ships for both sides. Ships that have been sunk will have the conditions of their loss given. The computer will then calculate the victory points for each side. Victory points are awarded for sinking and damaging enemy

vessels. The IJN player will be awarded points commensurate with the degree to which he has accomplished his mission.

8.0 SCENARIOS: Beginning players are advised to first play the BATTLE OF CAPE ST. GEORGE, with Historical Setup, before attempting any of the more complex scenarios.

8.1 BATTLE OF KULA GULF, 5 July 1943: RADM Ainsworth, in the cruiser HONOLULU, intercepted the Tokyo Express while it was unloading troops at Vila. In the ensuing battle, the cruiser HELENA was sunk. Two IJN destroyers were sunk and five others damaged. **IJN Forces:** 10 DDs; **Mission:** Transport troops to Vila. **USN Forces:** 3 CLs, 4 DDs. Night battle, Solomons map.

8.2 BATTLE OF KOLOMBANGARA, 12 July 1943: A week after Kula Gulf, the IJN again attempted to reinforce Vila. RADM Ainsworth was on the scene again. Although the Japanese were unable to accomplish their mission, their Long Lance torpedoes proved deadly. The cruisers HONOLULU, ST. LOUIS, and LEANDER were severely damaged. One US destroyer was sunk. The only IJN loss was ADM Izaki's flagship, JINTSU. **IJN Forces:** 1 CL, 9 DDs; **Mission:** Transport troops to Vila. **USN Forces:** 3 CLs, 10 DDs. Night battle, Solomons map.

8.3 BATTLE OF VELA GULF, 6 August 1943: A small Japanese destroyer group attempted to reach Vanga Point on Kolombangara, but was met by CDR Fredrick Moosbrugger's DESDIV 12. This was the first battle where the US side showed skill in night torpedo attacks. The Japanese DDs were caught completely by surprise -- only one ship escaped. **IJN Forces:** 4 DDs; **Mission:** Transport troops to Vanga Point. **USN Forces:** 6 DDs. Night battle, Solomons map.

8.4 DESTROYERS OFF HORANIU, 18 August 1943: The Japanese evacuation of Kolombangara was underway. A collection of barges had been assembled at Vanga Point to transport troops to Bougainville. Four destroyers were assigned to screen the barges. An equal number of US destroyers had sailed northward to intervene. Torpedoes were exchanged at extreme range by both sides, with no hits. The barges scattered, and both sides disengaged. **IJN Forces:** 4 DDs, 1 Barge group; **Mission:** Evacuate troops from Vanga Point. **USN Forces:** 4 DDs. Night battle, Solomons map.

8.5 BATTLE OF VELLA LAVELLA, 6 October 1943: The remaining Japanese garrison in the central Solomons was to be evacuated by barge from Vella Lavella. On 6 October Admiral Ijuin's barge train and destroyer escort left Bougainville for Warambari Bay. Though sighted by search planes, only six US destroyers were available to intercept. Only three of these actually saw action. Outnumbered three to one, the US lost one destroyer and had another severely damaged. The Japanese lost a destroyer. The barges scattered and managed to make it to Vella Lavella, where they succeeded in evacuating nearly 600 men. **IJN Forces:** 9 DDs, 1 Barge group; **Mission:** Evacuate troops from Warambari Bay. **USN Forces:** 6 DDs. Night battle, Solomons map.

8.6 BATTLE OF EMPRESS AUGUSTA BAY, 2 November 1943: On November 1, 1943, U.S. Marines landed on Bougainville at Cape Torokina. When word reached Admiral Koga at Truk, he immediately ordered ADM Omori to sail from Rabaul to engage the invasion forces. Unlike the situation at Savo Island the year before, the American's were expecting an attack. RADM Merrill, with CRUDIV 12, was in Empress Augusta Bay supported by CAPT Arleigh Burke and the "Little Beavers" of DESDIV 45. Omori, expecting to find helpless transports at anchor, found trouble instead. CL Sendai and DD Hatsukaze were quickly sunk. Omori disengaged in disarray and returned to Rabaul. **IJN Forces:** 2 CAs, 2 CLs, 6 DDs. **Mission:** Engage enemy forces. **USN Forces:** 4 CLs, 8 DDs. Night battle, open ocean map.

8.7 BATTLE OF CAPE ST. GEORGE, 25 November 1943: In what was to be the last run of the 'Tokyo Express', a Japanese destroyer group transported 900 Army troops to Buka on Bougainville and loaded 700 aviation personnel for evacuation. Tipped off by intelligence, ADM Halsey ordered '31 Knot' Burke to intercept. Guided by radar, the US achieved a complete surprise, launching torpedos at 4500 yards. Three Japanese DDs were sunk and one US destroyer was damaged. **IJN Forces:** 5 DDs. **Mission:** Evacuate troops to Rabaul (i.e., off map). **USN Forces:** 5 DDs. Night battle, open ocean map.

8.8 BATTLE OFF SAMAR, 25 October 1944: The Americans returned to the Philippines with amphibious landings at Leyte Gulf on 17-20 October, 1944. The Japanese reacted immediately with a three pronged attack. Kurita's Center Force, including the battleships Yamato and Musashi, was to traverse San Bernardino Strait. The Japanese forces were up against overwhelming US superiority. Kurita's ships were mauled by submarines and air attacks. Musashi was sunk. Shortly after dawn on 25 October, Kurita's battleships, now safely through San Bernardino Strait, fell upon 'Taffy-3', RADM Sprague's task unit of six small escort carriers. During a two hour running gun battle the carrier Gambier Bay and three destroyers were sunk. Rain squalls and smoke screens from the 'Small Boys' kept Kurita from fully appreciating his tactical advantage and constant US air attacks caused him to disengage before achieving more. **IJN Forces:** 4 BBs, 2 CAs, 1 CL, 8 DDs. **Mission:** Engage US forces. **USN Forces:** 6 CVEs, 7 DDs. Day battle, open ocean map.

8.9 YAMATO VS. TASK FORCE 34, Hypothetical Engagement: Admiral Halsey's battle plan had been to detach his six battleships from Task Force 38, thus forming Task Force 34, and send them ahead as a battle line if a surface engagement appeared likely. Instead, when Ozawa's decoy force was discovered, Halsey ordered all of his ships north to intercept, thus uncovering the San Bernardino Strait to Kurita's force. After Taffy-3 came under attack, Nimitz (who had been listening in on the radio communications from Pearl Harbor) sent the following message to Halsey: WHERE IS, REPEAT, WHERE IS TASK FORCE 34? THE WORLD WONDERS. This hypothetical scenario examines what might have happened if Halsey had left Task Force 34 to defend San Bernardino Strait. **IJN Forces:** 4 BBs, 2 CAs, 1 CL, 8 DDs. **Mission:** Engage US forces. **USN Forces:** 6 BBs, 2 CAs, 2 CLs, 5 DDs. Day battle, open ocean map.

9.0 NOTES ON PLAY:

9.1 DOCTRINE: It is important that the player set the doctrine for his groups consistent with the purpose of each group. A destroyer screen, for example, would reasonably have orders to investigate unknown contacts, close to short range, and open fire

with torpedoes. Conversely, destroyers carrying troops might be told to avoid the enemy, only open fire if fired upon, and launch torpedoes from long range.

9.2 COMMUNICATIONS: Once the operations plan and doctrine for the battle has been set, the only way that the commander can exert any control over the course of events is through his communications with his forces. In the surface engagements represented in **IN HARM'S WAY**, ships were frequently out of sight of their Flagship. The primary means of sending messages was by radio. The data rate was very low, the equipment was unreliable, and communications quickly became overloaded in the heat of battle. Although there is no limit to the number of messages that can be sent, it is recommended that no more than two or three be sent during any orders period. Also, bear in mind that the Flagship does not send messages to itself. For example, if you order all groups to go to a certain location and you want your Flagship to go there also, then you must give conning orders directly to your Flagship. Otherwise, you will see your other ships turn and head toward their new destination, while the Flagship maintains a steady course.

9.3 SURPRISE & CONFUSION: The effects of surprise and confusion are explicitly modelled in **IN HARM'S WAY**. The computer keeps track of each ship's current state of alertness and activity. Ships which are not alert will be less likely to detect approaching enemy vessels. Torpedo fire will be especially effective against such ships. As the battle develops, ships will quickly reach their maximum state of alertness. A ship's level of confusion is determined by how 'busy' its CO becomes. A large number of enemy or unknown contacts, for example, will cause an increase in the confusion level. The shock of severe and unexpected damage, such as from a torpedo hit, can cause utter confusion on a ship. Ships that are very active will probably not respond to radio messages and may not be aware that a message has been sent to them.

9.4 COMBAT: IN HARM'S WAY's combat resolution procedure considers the interactions between gun characteristics, firing range, and target armor. As was historically the case, immune zones can exist at certain distances. This is especially important for gunfire between capital ships (CAs, BBs). When a heavy cruiser or battleship fires at another (known) capital ship, an 'Optimum Firing Range' will be displayed. If possible, this will be a range at which the firing ship can cause damage to the enemy yet be immune from the target ship's fire. If no such range exists, then the optimum range will be a range at which the firing ship is likely to cause more damage to the enemy than it receives. The effects of visibility and radar are taken into account in determining the optimum range. Given the short range at which most gunfire was exchanged in night battles, immune zones will usually not play a role at night. Additionally, secondary guns will not fire effectively beyond 10,000 yards. Major considerations in resolving torpedo fire are the range to the target, the size & speed of the target, and effects of surprise. Historically, average hit probability for torpedoes during this period was 6 percent. However, in some battles (most notably, when surprise was achieved), more than 20 percent of torpedoes fired achieved hits. Torpedo effectiveness falls off rapidly with distance. Allied torpedoes become most effective at less than 5,000 yards. The Japanese Long Lance torpedo, although technically capable of a very long range, becomes most effective at below 8,000 yards. Japanese ships, unless carrying troops, are able to reload their torpedo tubes. It will take about 30 minutes to do so. Finally, the poor reliability (about 50 percent) of U.S. torpedoes during 1943 is taken into account in the game. Damage from combat can occur to a ship's propulsion, weapons, fire control equipment, etc. Flooding and fires may occur. Good damage control can halt flooding, put out fires, and regain propulsion. Damage to weapons and fire control systems will be permanent (during the timeframe of the game).

9.5 IJN MISSION ACCOMPLISHMENT: In most scenarios, the IJN player is tasked to transport troops and supplies to/from a specified location. Unless he is able to sneak in undetected, the IJN player will eventually be faced with a critical decision: whether to press on with the mission, or to cancel it and order a withdrawal. Transporting destroyers will need from 30 minutes to an hour to load/unload troops. Loading and unloading cannot occur if the ship is engaged in combat (either shooting itself, or being fired on). Finally, remember that no ship will commence loading (or unloading) troops unless they have received a message to do so.

10.0 DESIGNER'S NOTES: IN HARM'S WAY is the natural follow up to our previous game, **LONG LANCE**. Between the two, nearly every significant World War II surface battle in the Pacific is represented. Historically, the major characteristics of the battles simulated by **LONG LANCE** and **IN HARM'S WAY** were the evolution of battle doctrine and tactics, the need for effective pre-mission planning, and the inescapable 'fog-of-war' once battle began. The primary design intent was to incorporate the essence of WWII naval combat into these games by putting the player in the role of the tactical commander. Consequently, the "God's eye view", common to naval miniatures, boardgames, and most computer wargames, had to be avoided from the start. Four design innovations have made these games possible: **1)** The viewpoint of the player as being 'on' his Flagship. **2)** The Pre-Mission Planning procedure. **3)** The ability of the player to define his ships' battle doctrine, and **4)** Simulated Ship-to-Ship radio communications. These design features form the framework through which the player is presented with the same tactical decisions as his historical counterpart. We hope that you find these games to be as satisfying to play as we have.

William J. Nichols & Stephen M. Newberg

ERRATA: Due to an error at the printer the dark blue and dark brown on the map came out considerably lighter than requested or indicated by the color key. As a result the print is more difficult to read than it should be and the greens are lighter than intended. *Mea Culpa.*

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Our games are extensively tested before release in a process by which we hope to discover and correct any progamming errors. However, due to the complex nature of simulation programming, some errors may not be detected until after publication. Should you discover such an error, please return the original game disk (only) and any saved games you may have to us, along with as detailed a description as possible of what was happening and what actions you had taken in the game just prior to when the error occurred. We will use your information to try to find the problem and, upon correction of the error, we will return an updated disk to you. Please note that this may take some time, so be sure to keep a backup of the program disk for play use during such an interval.

In addition to occasional program errors, the disk itself may be bad. We experience the industry standard 5% failure rate in disk duplication. Before assuming your disk is defective, please check your disk drive. Over 90% of the disks returned to us as defective run on our equipment without problems, but our drives are regularly cleaned and serviced for speed & alignment. If yours has not been so serviced, that could very well be the problem. When we do receive a defective disk within the 30 day warranty period noted above, a free replacment disk will be sent out immediately. If you are out of warranty on a defective disk, you must send the service charge along with the original disk to receive a replacement.

Please note that we cannot maintain any warranty on our game disks if they have been altered in any way. So please do not save games to the game disk, cut extra write notches, etc. Any such alterations void your warranty. In addition, our disks are not copy protected. Make a backup immediately and use it to play the game. Store your original in a safe place in case your backup disk ever becomes defective. Our programs are, however, copyrighted. Please do not abuse our "no copy protection" policy by giving away copies of the game disk. Doing so only hurts us all in the long run.

And finally, please remember to give us your name and address (legibly!) in all communications. We will do our best to correct any problems and get back to you as quickly as possible.

IN HARM'S WAY, Atari ST & IBMPC versions.

A number of changes have been made for these versions of the game that are not covered in the rules booklet.

First, to boot the ST version you must double click the mouse on the IHW.PRG file. The IBM version may be booted by inserting the disk into the default drive of an already running system and typing "HW" or "IHW". To create a self booting IBM disk of the game, the files must all be transfered to a formated system disk or a single directory of a hard drive.

Because of the increased machine capacity available in these computers, several new options are privided, principally for the Solomons Scenarios.

1. The Japanese have new missions available involving the barge staging point at Sumbi (X=33, Y=2) on the island of Choiseul. FERRY refers to moving troops between islands while EVACUATION refers to removing troops from an island base.

2. In FERRY and EVACUATION missions, the Japanese have the option to order their combat groups to ESCORT the barges. Groups with this order will move at high speed from their entry point to the location of the barges and remain with the barges until opposing forces are sighted or the barges complete their mission.

3. In the Solomons scenarios, units on patrol will move at high speed from their entry point to their second waypoint. At this time they will switch to the patrol speed indicated by their doctrine. This allows the players to cover the large distances between their entry points and potential conflict zones in a timely manner. When patrols reach their next to last waypoint, they will again go to high speed to move to their exit point, thus allowing for rapid departures from conflict zones.

IN HARM'S WAY
Tactical Naval Combat In The Pacific, 1943-1944.

You have exercised your command and driven your commanders for a year in the ultimate school of hard knocks: Ironbottom Sound. The I.J.N. seemed invincible at first, but you have learned and you are ready. It is time to take the war to them. **IN HARM'S WAY** unlike any other computer game you have seen (except one!). It is the follow up to our highly realistic, viewpoint oriented, grand tactical simulation **LONG LANCE.** Using the same basic system we have modified the game to reflect the changes of the 2nd & 3rd years of the war in tactics and doctrine, as well as the shift out of the Solomons to new fields of action. New historical scenarios are provided as well as an augmented "build your own" system. **IN HARM'S WAY** is the second in a series of tactical navals and will be followed shortly by titles covering WWII combat in the Atlantic Ocean, the Mediterranean Sea, and **GRAND FLEET**, depicting the WWI navies of England and Germany. Design by W. Nichols, development by S. Newberg, & art by J. Kula. For Apple II, Atari ST, C64/128, or IBMPC systems.

SIMULATIONS CANADA COMPUTER GAMES:

ROMMEL AT EL ALAMEIN, The Battles For Egypt, 1 July - 6 November, 1942. Disk for Apple II, Atari ST, & C64/128 systems.
IN HARM'S WAY, Tactical Naval Combat In The Pacific, 1943-1944. Disk for Apple II, Atari ST, C64/128, or IBMPC systems.
MOSCOW CAMPAIGN, Operations Typhoon & White Storm, 30 September 1941 - 13 February 1942. Disk for Apple II, Atari ST, & IBMPC systems.
LONG LANCE, Tactical Naval Combat In The Pacific, 1942. Disk for Apple II, Atari ST, C64/128, or IBMPC systems.
TO THE RHINE, The Allied Advance In The West, 29 Aug - 14 Dec, 1944. Disk for Apple II, Atari ST, or IBMPC systems.
ROMMEL AT GAZALA, The Battles For Tobruk, 26 May - 27 June, 1942. Disk for Apple II, Atari ST, or IBMPC systems.
STALINGRAD CAMPAIGN, The Turning Point In Russia, Jun 1942 - Feb 1943. Disk for Apple II, Atari ST, C64/128, or IBMPC systems.
KURSK CAMPAIGN, Operation Zitadelle, Summer, 1943. Disk for Apple II, Atari ST, or IBMPC systems.
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BATTLE OF THE ATLANTIC, The Ocean Lifeline, 1940-1944. Disk for Apple II, Atari ST, or IBMPC systems.
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GREY SEAS, GREY SKIES, Tactical Modern Naval Combat. Disk for Apple II, Atari ST, C64/128, or IBMPC systems.

IN HARM'S WAY

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