

MANUAL

PHM

PEGASUS



ELECTRONIC ARTS™

Part I: Getting To Know Your Hydrofoil

Preliminary Training If this is your first experience controlling a hydrofoil, you may want to sit back and watch a demonstration. Here's how:

When you have your computer up and running (see your Command Summary Card for details), you will be presented with a selection of assignments. Each assignment is a mission taking you to various sensitive parts of the world. These are described in detail in Part II of this Handbook. To watch the demonstration, select **Mission 0** from the list of nine. As you watch, take note of the two "view modes" (*Bridge* and *Operations Map*) and the features you can control from each. You may want to read Part III of this Manual as you watch the demonstration.

When you feel you are ready to undertake a real mission, press **Shift-Q** to quit the demonstration and then select another one. We suggest you start with one of the early missions before attempting the more advanced ones.

Part II: Assignments

Once you have received basic hydrofoil training, you will be in a position to undertake the following assignments as part of the TAG task force. Of these eight assignments, the first two are part of your advanced training, and provide you with simulated combat experience. We strongly recommend that you gain proficiency in the first two assignments before you proceed to the more advanced missions.

At the end of each assignment you will receive a score and a rank, based on your performance during the mission. Scores are calculated on the basis of five factors, as described below. Note that the actual values will vary from mission to mission, because of the different objectives of each one. For example, in the first assignment (*Battle Training*), speed and destruction are the most important factors, while survival is not. By contrast, in the fourth mission (*A Better Part of Valor*), survival is most important, while destruction of enemies is relatively unimportant.

SCORES

1. Main Objective: Full points are awarded if the mission is successfully completed; no points if the main objective was not accomplished.

Range: 1000 - 5000 points.

2. Enemies Destroyed: Points are awarded for each enemy destroyed.

Range: 50 - 500 points.

3. Enemies Damaged: Points are awarded for each enemy hit but not destroyed.

Range: 25 - 250 points.

4. Time Remaining: Points for time remaining are awarded only when the mission is successfully completed before time runs out. Points are for each minute of time remaining.

Range: 1 - 4 points/minute.

5. Survival Bonus: Survival points are awarded when the mission is successfully completed or when time runs out, assuming you haven't been blown out of the water by the enemy. Points are awarded for each of the twelve sections of the ship that are capable of sustaining damage (six for the hull and six for the systems). Full points are awarded for undamaged sections, half for slight damage (yellow on the damage display), and no points for heavy damage (red on the damage display).

Range: 20 - 200.

RANKS

Ranks are based on points earned, with different scales for each mission, depending on their relative difficulty. For example, because the training exercise is the easiest of all the missions, you can only advance to Lieutenant, no matter how high your score. More difficult missions, such as the *Search For Terrorists*, allow you to achieve the rank of Captain, while the most difficult ones, such as the *Supply Convoy*, allow you to reach the top rank of Admiral. In any case, to achieve the top rank in an assignment you must accomplish the main objective.

The ranks are as follows: Deck Mopper, Ensign, Lieutenant, Commander, Captain, Commodore, Rear Admiral, Admiral.

THE MISSIONS

1. Battle Training

Ten enemy ships will be introduced to your training area off Key West, one at a time. These vessels will range from simple patrol boats all the way to the powerful Nanuchka II missile corvettes. This exercise is designed to familiarise you with the PHM and its weapon systems.

Objective: Sink all simulated enemy ships.

Rank Attainable: Lieutenant.

Enemy Vessels: Patrol Boat; OSA I, Nanuchka II.

Strategy Tips: This is a good learning assignment. Use your gun on the patrol boats, and save your missiles for the bigger ships.

2. Graduation Exercise

In this exercise, all the enemy vessels you encountered in the first assignment will be coming at you at once, doing their best to blow you out of the water. Sinking all the enemy vessels as quickly as possible is more important than surviving undamaged.

Objective: Sink all simulated enemy ships.

Rank Attainable: Lieutenant.

Enemy Vessels: Patrol Boat; OSA I, Nanuchka II.

Strategy Tips: Get moving right away; you're a sitting duck if you don't. Use your missiles on the more distant ships and your gun on the closer ones. Watch your radar for fast-moving dots approaching your ship. These are enemy missiles. Use chaff to deflect them (see Part III of your Manual for instructions on using chaff).

3. Terrorist Attack

Approximately eight hours ago, terrorists attacked a seaside resort, killing dozens of vacationers and wounding hundreds. The terrorists were seen fleeing west in various patrol craft. Witnesses estimate seven to ten vessels of varying types, some suspected to be OSA I missile boats, others small patrol vessels. Your mission is to seek and intercept these vessels, and sink them.

Be advised that interventionist forces from nearby countries may attempt to aid the terrorists as they try to escape to their base. Be particularly alert for enemy ships heading southwest out of Syrian waters. The terrorist base is suspected to be somewhere on Cyprus, but the terrorists split off into at least four separate groups when fleeing. An Israeli *Flagstaff II* with Gabriel missiles has been made available.

Objective: Sink all terrorist vessels.

Rank Attainable: Commander.

Enemy Vessels: Patrol Boats, OSA I, OSA II, Zhuk.

Strategy Tips: The terrorist vessels are to the west of your starting position and moving rapidly north. Try to cut them off, while avoiding (or destroying) their allies coming in from the northeast. Save your missiles for the OSA class ships.

4. A Better Part of Valor

War is brewing in South America. Your PHM is needed there as soon as possible. From your base at Key West, you will need to navigate the dangerous Yucatan Straits between Mexico and Cuba in order to reach southern waters. To accomplish your objective in this assignment, you need only get the PHM to the southern edge of the map. Look out for enemy vessels who will be trying to stop you. Use your SeaSprite helicopter to screen your PHM and help you avoid the enemy or to help you seek out and destroy them.

Objective: Escape with your hydrofoil off the south edge of the map with as little damage as possible.

Rank Attainable: Commander.

Enemy Vessels: Komar and Assad missile boats.

Strategy Tips: Keep moving at full speed. Engage enemies at extreme range with your missiles if they are in your path.

5. Search for Terrorists

Two missile corvettes have unsuccessfully attacked an American base off the southern coast of Sicily. A Sparviero hydrofoil (armed with Exocet missiles) and an AB 212 helicopter are available to help hunt them down. The mission objective is to sink both attackers (who will be fleeing south to a friendly port) before they escape. They are thought to be fleeing toward Tripoli, and can be distinguished from similar vessels by their course. Although a variety of enemy ships will be patrolling along a line north of Tripoli, remember that the fleeing ships are your main objective.

Objective: Sink the two fleeing Nanuchka II class ships.

Rank Attainable: Captain.

Enemy Vessels: OSA I, OSA II, Nanuchka II.

Strategy Tips: Try to avoid the other ships on your way to your objective (the two ships fleeing south together). Save your missiles for them.

6. Supply Convoy

A South American country has been taken over by a dictator, who has succeeded in turning the Caribbean into a war zone. Your mission is to escort a special high-speed cargo ship carrying medical supplies and food to a group of refugees. The dictator's forces consist of two varieties of a convertible Vosper-Thornycroft ship that comes with either two missiles and a small caliber gun, or just a 76mm cannon identical to your own.

Objective: Get your convoy ship to the southern part of the eastern edge of the map.

Rank Attainable: Admiral.

Enemy Vessels: Vosper-Thornycroft 121 ft class.

Strategy Tips: Conserve fuel by keeping your engine setting at 2 or less as much as possible, sprinting ahead at high speed only when you spot enemies or when you fall behind your convoy ship. Keep the convoy moving at full speed toward the south one-third of the east edge of the map, and use your helicopters to spot attackers before they can get close. Keep your hydrofoil between the attackers and your convoy ship.

7. Surveillance Mission

It is suspected that military equipment is being smuggled to the dictator through an outwardly neutral South American country. A cargo ship has been photographed loading up with tanks and aircraft parts in the Baltic, and is believed to be approaching Nicaragua. Seven ships of similar construction carrying farm machinery and building supplies are also entering the area to provide cover for the arms ship. Your mission is to find all eight ships and photograph them at close range so their identities can be established and compared with that of the suspected arms ship. Photography is accomplished automatically by approaching to within 1500 feet of the ship and training your binoculars on it (by choosing it as a target). *Be careful not to sink them!* Sinking one of these vessels will result in an international incident, and will immediately end the mission in failure. Use your two Seahawk helicopters to scout out the cargo ships. Some of the dictator's forces are believed to be in this area, so try to identify any ships you find at as long a range as possible. Watch your fuel usage!

Objective: Find and photograph all eight cargo vessels in the Caribbean without sinking any.

Rank Attainable: Rear Admiral.

Enemy Vessels: Cargo ships, OSA II missile boats.

Strategy Tips: The cargo ships move slowly, but they are scattered all over the sea and will eventually reach safe port. Move fast, and use your helicopters to find them as soon as possible.

8. JIHAD

Your mission is to escort a supply ship out of the Persian Gulf. The only complication: a war is going on, and innocent ships are being fired upon without warning. The supply ship is trying to evacuate western workers from the war zone, but the captain is too frightened to try to escape through the maelstrom of warring factions that fill the Gulf. You will need to make your way through the Straits of Hormuz to Kuwait where you will rendezvous with the supply ship. The supply ship will respond to your controls in the same way as an auxiliary helicopter (see Part III of your Manual). Try to avoid conflict if possible. Enemies are less likely to attack if you are peaceful. However, if you take hostile action or if you get too close, they will pass the word to their fleet to attack. The supply ship will be a tempting target for them at all times, so guard it well. In any case, remember that your primary mission is to get the supply ship out safely — damage to your hydrofoil is important only insofar as it compromises that mission. Use your two Seahawk helicopters to provide you with critical information on ship movements. Watch out for the ongoing battles — if you get too close you will be presumed hostile and fired upon. Watch your fuel and time limit!

Objective: Escort the supply ship safely into the Indian Ocean.

Rank Attainable: Admiral.

Enemy Vessels: OSA I and OSA II missile corvettes.

Strategy Tips: You're on your own for this one.

Part III: Hydrofoil Operation

INTRODUCTION

The hydrofoil is an all-weather, high-speed, compact weapons system, making it ideal for strike, patrol and surveillance missions. Because of its fully submerged foils (see Part IV for technical details), the hydrofoil is capable of sustained high-speed runs across heavy seas, with a maneuverability unmatched by any other sea-going vessel. In addition, the hydrofoil carries an arsenal consisting of a 76mm gun, missiles (Gabriel, Exocet, or Harpoon, depending on configuration), and chaff for radar deflection.

As hydrofoil commander, you can switch between the view from the hydrofoil's bridge and a top-down view of the operations map. Each uses its own set of keyboard and joystick controls. Specific operating instructions are given in the Command Summary Card, included in your information packet.

THE VIEW FROM THE BRIDGE

Refer to Figure 1, below. The top half of the screen shows the view from the bridge. Inset at the top of the screen shows a close-up view through binoculars.

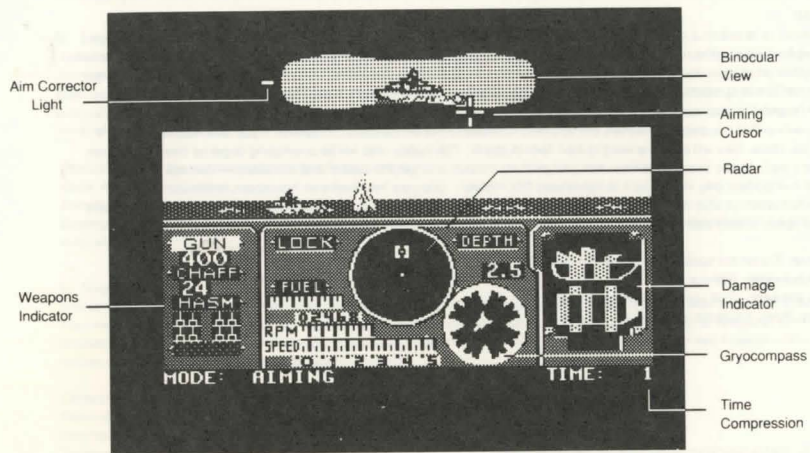


Figure 1: Bridge View

The lower half of the screen shows the hydrofoil's instruments. These are described as follows:

Gyrocompass — Indicates hydrofoil's current bearing: north is straight up.

RPM — Indicates engine speed.

Speed — Indicates hydrofoil's speed in knots (nautical miles per hour).

Radar — Shows all craft within hydrofoil's radar range.

Weapons Status — Indicates which weapons are currently active and the number of rounds remaining.

Fuel — Indicates the amount of fuel remaining.

Warning Indicators — Red warning indicators show a potential problem:

Depth — Indicates danger of running aground. Depth warning flashes to indicate that the hydrofoil is pointed toward land. An automatic avoidance system keeps the hydrofoil from running aground; just turn the ship away from land to stop the warning.

Lock — One or more enemy missiles are locked onto your hydrofoil. This means that the enemy have fired or are about to fire missiles at you.

Damage — The damage indicators show which parts of the hydrofoil have sustained light or heavy damage. See detailed discussion below.

OPERATIONS MAP

You can switch from the view from the bridge to a map of the surrounding area (see Figure 2). The map

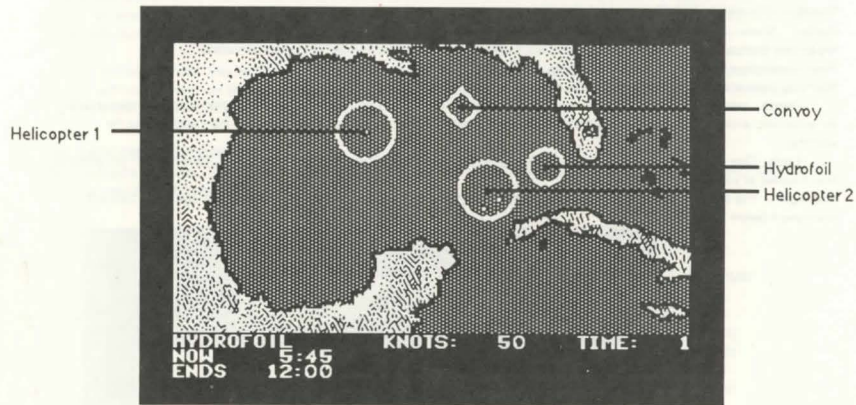


Figure 2: Operations Map

shows the entire area of operations for the current assignment. It shows all the major land masses, the borders of the assignment area, the current location of the hydrofoil, the locations of all the friendly forces and the locations of all enemy forces that are within radar range. The hydrofoil is shown in white, together with its radar range. In addition, the operations map shows the locations of your helicopters (if applicable, see below). Control of such helicopters or an escorted convoy is maintained from the Operations Map. See your Command Summary Card for details.

WEAPONS AND DEFENSES

Your hydrofoil is equipped with the very latest in offensive and tactical weaponry. The following information is a general description of each of the weapons and defense systems. Specific operating instructions can be found in the Command Summary Card.

76mm Cannon

The Oto-Melara 76mm automatic water-cooled cannon is widely used by navies throughout the world. Its fire rate of 90 rounds per minute makes it effective even against aircraft and missiles, while its range of almost ten miles makes it effective against small ships. Note, however, that because of the time needed for a shell to travel to its target, the Oto-Melara's effective range against moving targets is approximately six miles. Thus, even though your fire control radar (see below) allows you to lock on to a target, you will need to "lead" your cannon ahead of moving targets further than one or two miles away. The further the moving target, and the faster it moves, the more you will need to lead your cannon, and the greater the likelihood of error. For best results, use the "aim corrector lights" around the binocular view to adjust your aim (see **Aiming and Firing Weapons**, below), and "walk the shells" in toward the target.

Chaff Rockets

The Mark 34 Chaffroc system on your hydrofoil allows you to fire exploding rockets filled with aluminum foil ("chaff") into the air. When they explode, the rockets disperse their chaff into the air, attracting the enemy missiles and deflecting them from your ship. Because the enemy missiles will tend to follow the chaff as your hydrofoil moves away, your best strategy is to fire the chaff when you are travelling at right angles to the oncoming missile. Timing is also important. If you fire too early, the missiles will lock back onto you when the chaff disperses. If you fire too late, the missiles will not have time to be deflected to the chaff before their proximity warheads explode. Chaff is best fired when the enemy missile is about a mile away.

Harpoon Missiles

The Harpoon missiles are your most accurate and most potent weapons. They will hit their target 90 per cent of the time and will destroy most small ships with a single hit. Because your radar is likely to be more accurate over greater distances than the enemy's, you can destroy an enemy vessel by firing a Harpoon at your maximum (40 mile) sighting range even before the enemy has a chance to launch against you.

Gabriel Missiles (Israeli hydrofoils only)

This missile has a shorter range than the Harpoon missiles (see above), but their guidance systems are reputed to be slightly more accurate than those of the Harpoons. In addition, they carry a 400 pound high explosive warhead. Use the Gabriels against ships beyond gun range.

Exocet Missiles (Italian hydrofoils only)

A French missile, used effectively by Argentina in the Falklands war. The Exocet is very similar in effect to the Harpoon missile.

Radar

Your radar system's range is generally 40 miles, although it is greater from the front or the back of the hydrofoil. You can take advantage of this by turning the hydrofoil towards the target. Your hydrofoil is represented by a flashing "blip" in the center of the display. If the blip is not flashing, another vessel must be very close to you.

Auxiliary Craft

Some assignments involve the use of search helicopters. In such cases, helicopters are controlled from the Operations Map (see above). The same applies to convoy ships, where applicable.

DAMAGE

Your hydrofoil is capable of operating even if it sustains damage. The following outlines the different kinds of damage and the effect each has on the hydrofoil's operation. Refer to Figure 3, below.

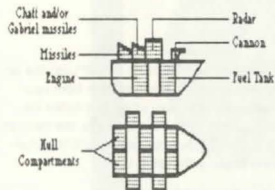
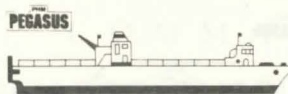


Figure 3: Damage Indicator

Hull Damage

The hydrofoil's hull is separated into six watertight compartments. Light damage (shown in yellow on the damage indicator, see Figure 3, above) to any or all of the six compartments does not affect the ship, but serves as a warning that continued hits will cause heavy damage. Heavy damage (shown in red on damage indicator) to a critical number of compartments can sink your hydrofoil. This critical number varies among the different hydrofoils, as follows: the *PHM* can sustain heavy damage to four compartments before sinking, the Israeli *Flagstaff II* will sink after heavy damage to three compartments, while the Italian *Sparviero*, the smallest of the three,

will sink after heavy damage to two compartments. Note, however, that even with a critical number of compartments heavily damaged, a hydrofoil can still remain afloat while foiborne, but will sink only when hullborne. Note also that when foiborne, more of your hull is exposed, increasing the probability that enemy hits will damage it.



Class: SOVIET CARGO SHIP
Type: Standard Soviet/Warsaw Pact Cargo Carrier

Manufactured by: U.S.S.R.
Used by: Many
Length (feet): 200 and up
Tons Disp. (full load): 600 and up
Cruising speed (knots): 8
Max speed (knots): 15
Guns: Unarmed
Anti-Ship Missiles: Unarmed
Other:

Notes: Used to transport a variety of goods.

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Class: NANUCHKA II
Type: Missile Corvette

Manufactured by: U.S.S.R.
Used by: Algeria, India, Libya, U.S.S.R.
Length (feet): 198
Tons Disp. (full load): 950
Cruising speed (knots): 15
Max speed (knots): 34
Guns: Twin 57mm
Anti-Ship Missiles: 4 SS-N-2C Styx
Other: 1 SA-N-4 Anti-aircraft missile launcher

Notes: A Libyan ship of this class was sunk by US warplanes in April, 1986.

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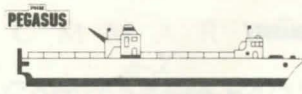


Class: OSA I/OSAII[†]
Type: Fast Attack Craft - Missile

Manufactured by: U.S.S.R.
Used by: Algeria, Bulgaria, Cuba, Egypt, E. Germany, India, Libya, Syria, Iraq, Romania, Poland, U.S.S.R.
Length (feet): 128
Tons Disp. (full load): 210/214*
Cruising speed (knots): 30
Max speed (knots): 38-40[†]
Guns: 2 twin 30mm
Anti-Ship Missiles: 4 SS-N-2A Styx
Other:

Notes: The SS-N-2C version of the Styx missile is six feet longer than the SS-N-2A of OSA I, and has almost double the range.

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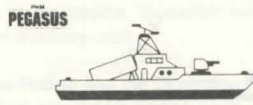


Class: Small Algot Variant
Type: Special Fast Cargo Container Ship

Manufactured by: U.S.A.
Used by: U.S.A.
Length (feet): 250
Tons Disp. (full load): 2000
Cruising speed (knots): 20
Max speed (knots): 33
Guns: Unarmed
Anti-Ship Missiles: Other

Notes: Special ship designed for rapid movement of small, important cargo.

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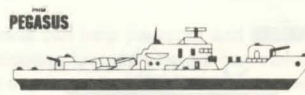


Class: KOMAR
Type: Fast Attack Craft - Missile

Manufactured by: U.S.S.R.
Used by: Cuba, Egypt, North Korea, Syria, Vietnam
Length (feet): 88
Tons Disp. (full load): 85
Cruising speed (knots): 30
Max speed (knots): 40
Guns: Twin 25mm
Anti-Ship Missiles: 2 SS-N-2A Styx
Other:

Notes: This older class of ship has less endurance and range than the OSA.

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Class: ASSAD
Type: Missile Corvette

Manufactured by: Italy
Used by: Libya, Iraq
Length (feet): 202
Tons Disp. (full load): 670
Cruising speed (knots): 14
Max speed (knots): 32
Guns: 70mm, twin 30mm
Anti-Ship Missiles: 2, 4, or 6 Oramus
Other: 6 Torpedos tubes, can lay mines

Notes: A powerful missile boat; capable of attacks at up to 80 miles away.

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Class: ZHUK
Type: Fast Attack Craft - Patrol

Manufactured by: U.S.S.R.
Used by: Algeria, Angola, Bulgaria, Cuba, Ethiopia, Iraq, Mozambique, Nicaragua, Syria, U.S.S.R., Yemen
Length (feet): 75
Tons Disp. (full load): 50
Cruising speed (knots): 16
Max speed (knots): 30
Guns: 2 twin 14.5mm
Anti-Ship Missiles: None
Other:

Notes: An older patrol craft, used mostly in coastal waters



Class: Vosper-Thornycroft "121 Ft"
Type: Fast Attack Craft - Gun/Missile

Manufactured by: U.K.
Used by: Venezuela
Length (feet): 121
Tons Disp. (full load): 170
Cruising speed (knots): 18
Max speed (knots): 41
Guns: 76mm or 40mm
Anti-Ship Missiles: May have 2 Orkan
Other:

Notes: This is a variably armed ship. Some have the Orkan missile and a 40mm gun, used mostly for anti-aircraft. Others have only the 76mm Orkan.

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Class: LARGE PATROL CRAFT
Type: Standard Patrol Vessel

Manufactured by: Many
Used by: Many
Length (feet): 125
Tons Disp. (full load): 90
Cruising speed (knots): 15
Max speed (knots): 27
Guns: Varies - twin 30mm or 40mm typical
Anti-Ship Missiles: None
Other:

Notes: This is a generic class representing many similar lightly armed patrol vessels

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Class: Kaman Seasprite
Type: LAMPS I helicopter

Manufactured by: U.S.A.
Used by: U.S.A.
Length (feet): 36
Take-off weight (lbs): 12,800
Cruising speed (knots): 130
Max speed (knots): 143
Guns: None
Anti-Ship Missiles: None
Other: Can carry torpedoes or depth charges

Notes: LAMPS stands for Light Airborne Multi-Purpose System, and is a U.S. Navy designation for their ship-based helicopters



Class: Sikorsky Seahawk
Type: LAMPS III helicopter

Manufactured by: U.S.A.
Used by: U.S.A., Japan
Length (feet): 43
Take-off weight (lbs): 20,000
Cruising speed (knots): 145
Max speed (knots): 160
Guns: None
Anti-Ship Missiles: None
Other: 2 Mk 46 torpedoes

Notes: This later model variant of the Army's Blackhawk helicopter is much improved over the LAMPS I helicopter

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PHM PEGASUS™

Commodore 64/128

OVERVIEW

PHM Pegasus is a simulation requiring both strategic and tactical ability. The object is to complete each mission by achieving its main objective in as short a time as possible. See your Manual for details on the assignments.

Hydrofoil operation is by means of keyboard and joystick. You can use either to control the hydrofoil's movement, weapons aiming and firing, and any auxiliary craft. Use the keyboard to pause and resume play, to increase or decrease time compression, to switch between the Bridge and the Operations Map, and to select weapons or auxiliary craft.

Two main viewing "modes" are available at any time — the Bridge and the Operations Map. The key table on the inside pages shows the effect of each keystroke under each of the two modes.

GETTING STARTED

Remove all cartridges from the computer; turn on the disk drive, the computer and the monitor. Plug your joystick into Port 1. Insert the disk in the drive, type LOAD "EA", 8,1 and press Return. C128 users need only turn on the disk drive, insert the disk label side up, and turn on the computer; Pegasus then loads automatically. To load cassette hold down Shift and press Runstop. Press play on tape.

SPOTTER CARDS

The identification cards in the center pages of your Manual can help you spot and identify the vessels and aircraft that are active in each mission. Shooting friendly vessels can make you very unpopular with the Commodore, so it is particularly important that you identify the vessels in each mission. This way you won't end up shooting the convoy you are trying to rescue. To use the cards, *carefully* remove them from the manual by tearing the center perforation, and then tear out each card individually. Before you start an assignment, read the mission description in the Manual and select the card for each vessel in the mission. Keep the cards handy as you proceed with your assignment, and refer to them when you need help identifying one of the vessels.

KEYBOARD COMMAND SUMMARY

(Note: Some of the following commands are accessible through the joystick. Such commands are marked with an asterisk *. See Joystick Control section following.)

KEY:	Bridge	Operations Map
P	Pause/Resume play	Same
Shift-Q	Quit	Same
V	Toggles view between Operations Map and Bridge	Same
+	Each press doubles time rate up to 128 x real time	Same
-	Each press halves time rate down to real time (1 x)	Same
N	Returns time rate to real time (1 x)	Same
1-5*	Sets hydrofoil's maximum speed	Sets maximum speed for hydrofoil or auxiliary vessel
0*	Stops hydrofoil	NA
Shift-R	Each press doubles radar scan from 2.5 miles to 40	NA
R	Each press halves radar scan to 2.5 miles	NA
T	Selects targets for view in binoculars	NA

System Damage

76 mm Cannon: Light damage may cause your gun to misfire; heavy damage will disable it completely.

Radar: Light damage restricts your radar range to 20 miles; heavy damage restricts the range to 10 miles. Even though your radar may be heavily damaged, you still have a limited longer range view on your Operations Map, which simulates spotting by binoculars to compensate for the damaged radar.

Chaff: With light damage, the chaff rockets may misfire, expending a round in vain. With heavy damage, they will not work at all.

Missiles: With light damage, missiles may misfire; with heavy damage, they will not work at all. The same applies to the Gabriel missiles on the Flagstaff hydrofoils.

Fuel Tanks: Light damage increases fuel drain; heavy damage increases it even more. If you run out of fuel, your mission will end in failure. Keep to low speeds if you are running out of fuel.

Engines: Light damage decreases your maximum speed. Heavy damage decreases your maximum speed even more, sometimes to the point of rendering you completely immobile. Note that with light damage you may still have enough power to remain foiborne, but if you come down off your foils you may not have enough power to get back up. This could result in difficult tactical decisions in circumstances where you need to choose between staying foiborne and maintaining a higher speed, and coming down off the foils to slow down and conserve fuel.

OPERATING INSTRUCTIONS

You can operate your hydrofoil either from the Bridge or from the Operations Map. To switch from one to the other, press V on the keyboard. From the Bridge you can maneuver the hydrofoil, or select, aim and fire your weapons. You can also adjust your radar scanning range from 2.5 miles to 40 miles. From the Operations Map you can control your auxiliary vessels (helicopters or a convoy of ships, where applicable), or you can set your hydrofoil on a course using automatic pilot. Some operations are available in either mode. Thus, from either the Bridge or the Operations Map you can pause and restart proceedings, you can quit and select a new mission, and you can speed up or slow down the passage of time. (You can speed time up to 128 times; when you do so, every element is affected equally). These are discussed in greater detail below. Specific commands are given in the Command Summary Card.

Bridge

Maneuvering the Hydrofoil: You can maneuver your hydrofoil with either the keyboard or joystick. Moving the joystick forward speeds up the hydrofoil, while moving it back slows it down. Moving the joystick right or left moves the hydrofoil right or left. See your Command Summary Card for keyboard equivalents. Note that maneuvering the hydrofoil manually from the Bridge has the effect of disengaging the automatic pilot (see discussion under Operations Map, below).

Aiming and Firing Weapons: You can also use the joystick to aim and fire your weapons. Pressing the **Spacebar** toggles the joystick between *maneuvering* the hydrofoil and *aiming* your weapons. To aim at a target, you first need to select it from among the enemy craft within your radar range by pressing **T** several times until the target is bracketed on your radar screen. At that point the targeted vessel appears in the binocular view at the top of the screen. To aim your gun, move the aiming cursor (see Figure 1) so that it is over the target in the binocular view. Move the joystick forward to move the cursor up, and move it back to move the cursor down. Moving the joystick left or right moves the cursor left or right. To fire a weapon, press the joystick fire button or **Return** on the keyboard. You can correct your aim by using the "aim corrector" (see Figure 1, above): move the aiming cursor toward the aim corrector and fire again. Note that you only need to aim your gun. Missiles automatically go toward the ship in the binocular view at the time of firing, while chaff affects all incoming missiles depending on their distance from the hydrofoil. You can select among the available weapons from the keyboard. See your Command Summary Card for details.

Operations Map

Automatic Pilot: To set a course for your hydrofoil, first make sure that the hydrofoil is selected (by pressing the appropriate key, see your Command Summary Card). Move the crosshair to your destination point and press key 1 through 5. Pressing 5 moves the hydrofoil to its destination at full speed, while 1 moves the hydrofoil at its slowest speed. If you already have a speed selected, you can press the joystick button to move the hydrofoil to the new destination at the currently selected speed. Pressing 0 stops the hydrofoil. When you return to the Bridge, changing direction (with keyboard or joystick) disengages the automatic pilot and returns you to manual control. You can, however, change the hydrofoil's speed from the Bridge (by pressing keys 1 through 5) without disengaging the automatic pilot.

To re-engage automatic pilot, return to the Operations Map, select the hydrofoil, then press the joystick button or select a speed as before. Your hydrofoil will then move toward the previously selected destination. Messages on the Bridge and Operations Map indicate current status of the automatic pilot.

Controlling Auxiliary Craft: When you are in the Operations Map you can also control the auxiliary craft that are available to you. Depending on the assignment, these can include helicopters, or a convoy of ships. To control an auxiliary craft, first select it by pressing the key for that craft (see your Command Summary Card for details) and then move the crosshair to the destination point. Press a key 1 through 5 to set the auxiliary craft's speed and start it off towards its destination.

Auxiliary craft in the Operations Map are colour-coded: Helicopters are green, and the convoys are gray. Each auxiliary craft is also identifiable by its own icon. To display the auxiliary craft icons, press D. This changes the display from radar circles (circles around each craft showing its radar range) to the vessel icons. This feature is particularly useful if many enemies are nearby.

Time Compression: You can use time compression to speed up events in the Operations Map until you get to the centre of the action. You can then slow events back down, or you can leave them speeded up. If you like, you can play through the entire mission with time compressed up to 128 times normal. If you compress time to more than eight times normal, any action from the enemy (such as a missile or cannon shot) will automatically slow it back down to eight times. This way you can use time compression to make your assignments more challenging.

KEY:**EFFECT:**

	Bridge	Operations Map
D	NA	Toggles between radar circles and vessel icons
F1	Selects cannon	Selects Hydrofoil
F3	Selects chaff rocket	Selects Helicopter 1**
F5	Selects missiles (Harpoon or Exocet)	Selects Helicopter 2**
F7	Selects Gabriel missiles**	Selects Convoy**
Spacebar	Toggles between maneuver and weapons aiming modes	NA
Return*	Fire currently selected weapon	NA
I,J,K,M*	Aim weapon up, left, right, down	Moves destination cursor
Comma*	Turn Hydrofoil left	NA
Period*	Turn Hydrofoil right	NA

** when available

JOYSTICK CONTROL

You can use the joystick either to control the hydrofoil or to aim and fire your weapons. From the Bridge, in Movement mode, you can control the hydrofoil's movement by moving the joystick left or right, and its speed by moving it forward or back. In Weapons mode, use the joystick to move the aiming cursor around the binocular view. Fire your weapons in either mode by pressing the fire button. You can toggle between Movement and Weapons mode by pressing the Spacebar. From the Operations Map, use your joystick to set your destination cursor, and the fire button to set off on your course.

PHM Pegasus™

Apple II Series

OVERVIEW

PHM Pegasus is a simulation requiring both strategic and tactical ability. The object is to complete each mission by achieving its main objective in as short a time as possible. See your Manual for details on the assignments.

Hydrofoil operation is by means of keyboard and joystick. You can use either to control the hydrofoil's movement, weapons aiming and firing, and any auxiliary craft. Use the keyboard to pause and resume play, to increase or decrease time compression, to switch between the Bridge and the Operations Map, and to select weapons or auxiliary craft.

Two main viewing "modes" are available at any time — the Bridge and the Operations Map. The key table on the inside pages shows the effect of each keystroke under each of the two modes.

GETTING STARTED

Insert the disk in the drive, label side up, and turn on the computer; Pegasus loads automatically. When the computer asks you to insert Side 2, flip the disk over and press **Return**.

SPOTTER CARDS

The identification cards in the center pages of your Manual can help you spot and identify the vessels and aircraft that are active in each mission. Shooting friendly vessels can make you very unpopular with the Commodore, so it is particularly important that you identify the vessels in each mission. This way you won't end up shooting the convoy you are trying to rescue. To use the cards, *carefully* remove them from the manual by tearing the center perforation, and then tear out each card individually. Before you start an assignment, read the mission description in the Manual and select the card for each vessel in the mission. Keep the cards handy as you proceed with your assignment, and refer to them when you need help identifying one of the vessels.



KEYBOARD COMMAND SUMMARY

(Note: Some of the following commands are accessible through the joystick. Such commands are marked with an asterisk *. See Joystick Control section following.)

KEY:	Bridge	EFFECT:	Operations Map
P	Pause/Resume play		Same
Ctrl-Q	Quit		Same
V	Toggles view between Operations Map and Bridge		Same
+ or =	Each press doubles time rate up to 128 x real time		Same
-	Each press halves time rate down to real time (1 x)		Same
N	Returns time rate to real time (1 x)		Same
1-5*	Sets hydrofoil's maximum speed		Sets maximum speed for hydrofoil or auxiliary vessel
0*	Stops hydrofoil		NA
Ctrl-R	Each press doubles radar scan from 2.5 miles to 40		NA
R	Each press halves radar scan to 2.5 miles		NA
T	Selects targets for view in binoculars		NA
Ctrl-S	Toggles sound on/off		Same

KEY:	Bridge	EFFECT:	Operations Map
D	NA		Toggles between radar circles and vessel icons
6	Selects cannon		Selects Hydrofoil
7	Selects chaff rocket		Selects Helicopter 1**
8	Selects missiles (Harpoon or Exocet)		Selects Helicopter 2**
9	Selects Gabriel missiles**		Selects Convoy**
Spacebar	Toggles between maneuver and weapons aiming modes		NA
Return*	Fire currently selected weapon		NA
I,J,K,M*	Aim weapon up, left, right, down		Moves destination cursor
Comma*	Turn Hydrofoil left		NA
Period*	Turn Hydrofoil right		NA
W	Toggles among weapon types		NA

**when available

JOYSTICK CONTROL

You can use the joystick either to control the hydrofoil or to aim and fire your weapons. From the Bridge, in Movement mode, you can control the hydrofoil's movement by moving the joystick left or right, and its speed by moving it forward or back. In Weapons mode, use the joystick to move the aiming cursor around the binocular view. Fire your weapons in either mode by pressing the fire button. You can toggle between Movement and Weapons mode by pressing the Spacebar. From the Operations Map, use your joystick to set your destination cursor, and the fire button to set off on your course.

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