OPERATION MANUAL

San' Dollar

Welcome Aboard!

We are happy that you have chosen Ship Harbor Yacht Charters and the vessel San'Dollar for your vacation. We hope you enjoy your cruising experience in the lovely islands of the Pacific Northwest.

The San' Dollar is a 37' President and, while not often so common in Northwest waters, it's a very popular boat on the east coast and worldwide.

This manual will help you become more familiar with your boat. If you have any further questions about the boat or your itinerary, please do not hesitate to ask the SHYC staff.

Remember our vessels are non-smoking boats. But please feel free to smoke out on deck.

Bon Voyage!

The Ship Harbor Yacht Charters Staff

TABLE OF CONTENTS

BOAT OPERATION

Engine Inspection

Remember your "WOBBS" every morning. (Water (Coolant), Oil, Bilges (Inspect and Pump-out), Belts, and Sea Strainer. Check the level of COOLANT in the expansion tanks. Check the level of your engine oil with the dipstick located below the floor panel just aft of the lower helm. Note that there are engine lights and the switch for them is on the DC panel. Look at the etch mark on the dipstick that indicates proper levels. DO NOT OVERFILL! Only fill if oil levels are below the ½ mark. Check the general condition of the hoses and belts.

Ensure the valves on each RAW WATER THRU-HULL are OPEN! (Lever in-line with valve). Observe through the glass of the sea strainer for debris. If necessary, close the thru-hull, open the strainer lid, clean out debris, and reassemble. REOPEN the Thru-hull!

Start Up

Having finished your inspection, start your engine from the lower helm station. Ensure that gearshift is in neutral or the engines will not start (neutral lockout). Run your throttle (black knobbed handle) up and bring back to just above the idle position. Inset the key into the ignition and turn the key clockwise until the engine alarm sounds. After a few seconds, press the START button to start the engine. If the engine does not turn over, move the gearshift slightly while pressing START until the engine engages. If the engine cranks slowly, check the condition of your batteries at the electrical panel. If the battery is low, engage the Battery Parallel Switch located just to the right of the lower helm (open cabinet door) to connect other batteries. After the engine has started, return Battery Parallel Switch to "Both".

After the engine starts, warm it up at about 1000 rpms for about 5 minutes. Observe your gauge readings. Engine temperature should rise very slowly.

Note: If water temp is high or oil pressure low, shut down engine and look for problem. Was there a lack of water exiting with exhaust? Are thru-hulls open and debris cleared from sea-strainer? If problem keeps occurring, call SHYC Service.

Shut Down

Before shutting down, let the engine idle for about 5 minutes letting it cool. Ensure the gearshift is in the neutral position and the throttle is in idle. Turn off the engines by pressing and holding down the STOP button at the lower helm until the engine shuts off. The alarm will then sound -- to indicate it's working -- until you switch the ignition key off (counterclockwise).

Getting Underway

Disconnect the shore power cord (see AC Power next page). Close portholes, windows, and hatches. Turn on VHF and electronics. Assign crewmembers to their tasks. Once outside marina, have crew members bring in fenders and put lines away.

Cruising

All close quarter maneuvering should always take place at the upper helm. Make certain the throttle is in idle and engage the gearshift. Slowly come up to cruising speed of 1600 to 2000 rpms. If you run at about 1800 rpms, you will cruise at approx. 8 knots, using only 3 or 4 gallons of diesel/hour. Your speed may vary depending on weight, load, tides, and weather conditions. Trim Tabs can bring the bow down to the idle cruising position. Watch your speed on the GPS as you adjust. Although fully functional, the trim tabs on San'Dollar have minimal effect at typical trawler speeds.

Note: Avoid high engine speeds as it causes the engine to overheat causing damage as well as high fuel consumption.

Docking

During docking, use the upper helm for the best visibility. Give clear instructions to the crew on what you will expect of them i.e. with lines and fenders.

Ensure trim tabs are rocked back up for slow speed backing. While moving slowly towards the dock, center the wheel and use the gears and throttles to maneuver the vessel. Throttles should only be used in moderate to windy conditions. Otherwise, the use of the transmission should be sufficient. San'Dollar has no thrusters at this time so use caution when approaching a dock and don't hesitate to request docking assistance from a marina crew.

Fueling

Open filler caps located on both sides of the boat just forward of the sundeck with the deck-fitting key kept in the drawer next to the lower helm. MAKE SURE YOU HAVE DIESEL (or gas if applicable)! Make sure it is going into the right deck fill! DOUBLE-CHECK! Before pumping, have your oil/fuel sorb ready to soak up any spilled fuel. You should have a rough idea of how many gallons you will need, but have someone check the fuel gauge periodically by turning on the key.

Put Diesel nozzle into the deck fitting and pump slowly listening to the sound of the flow. Pumping too fast may not allow excess air to escape, which will lead to spillage out the vent. As the tank fills, the sound will rise in pitch or gurgle. Pay attention to the vent that it does not spill fuel into the water. Top off carefully, catching any spillage with your sorb.

Check your gauge periodically. Note that filling on just one side of the boat will put fuel into both tanks but it may take awhile for the fuel level to rise in the tank opposite the side you filled. Replace the deck fill caps and turn on the engine room blowers for a few minutes. Clean up any spatter and wash hands thoroughly.

BOAT ELECTRICAL

The electrical system is divided into two distribution systems: 110 volt or AC and 12 volt or DC. The systems are controlled from the electrical panel located just to the right of the lower helm behind the cabinet door. The battery switch is located at the top of the electrical panel. When connected to shore power or when underway, select "both" on the battery switch to allow both house and starting batteries to charge. When at anchor or on a mooring buoy, select 2 or "h" for house batteries so that your starting battery is isolated and is not being drained. Then, when starting the boat, put the switch on either Both or on 1 or "s" for starting.

When not connected to shore power your batteries provide most of your electrical power. Therefore the use of onboard electricity needs to be monitored very carefully. Turn off electrical devices when they are not being used (lights, instruments, etc.)

110 Volt or AC (Alternating Current)

Shore Power supports all AC equipment and receptacles on board as well as the battery charger.

To connect to shore power, plug the power cord into the boat and then into the dock receptacle. Check your power rating/plug size of the dock receptacle (i.e. 30amp, 20 amp etc.) If necessary, add an adaptor. Secure the cord around the shore power electrical receptacle and off the bow (i.e. wrap around bowline a few times) turn the dock power breaker on.

On the boat, turn the shore circuit breaker on at the electrical panel. Turn on appropriate breakers for battery charger, refrigeration, and water heater. Watch your voltmeter for load. If the load exceeds the voltage, it will pop the breaker. If this occurs, wait to turn on one of your systems (i.e. water heater) until the use of power decreases.

Inverter

The inverter provides AC power to the 110 receptacle plugs (i.e. microwave) when the boat is disconnected from shore power. The inverter does not supply power to the water heater or battery charger. Your inverter panel is located at the lower helm with an on/off switch. Make certain it is on. The actual inverter is located under the settee. Your inverter also acts as a battery charger. The amount of DC power is limited to the capacity of these batteries so use it very sparingly!!! This means use of the toaster, hair dryer, microwave, coffee maker etc. must be limited!

When connected to shore power, the inverter often acts as a battery charger for the 12-volt house batteries. Should you detect the inverter failing to charge the house batteries, check the circuit breaker on the AC panel and the inverter panel to make certain it is on. There is usually a circuit breaker located on the inverter itself that can get tripped during a surge of power.

House 12-volt System

Five batteries support your 12 volt system: #1 Engine battery supports engine starting.

Your battery switch is located on the AC/DC electrical panel in the cabinet door just to the right of the lower helm. Normally you will leave the switches in the both position. *Note: Changing the position of the battery switches with the engine running will cause damage! Only change positions with the engine off!*

Your 12 volt panel shows all the systems supported by your batteries. Primarily you will be turning on these breakers for lights, water pressure, electronics, etc. Bilge pumps will always be left on. Your breakers such as propane should be turned off after every use.

When disconnected from shore power, the 12–volt systems will drain the battery especially when at anchor. Monitor your batteries very carefully. The DC voltmeter on the DC panel can be switched between your battery banks to measure battery voltage. Typically the bank should read from about 13.0 to 14.5 volts when being charged. While at rest, your voltage will drop as indicated in the figures below.

All your batteries are charged while underway by the alternator. The engine and house batteries are charged by the battery charger/inverter while connected to shore power. Ensure that the charger is on as well as the inverter charger.

Voltage	Battery State of Charge		
12.65 volts	100%	12.25 volts	50%
12.47 volts	75%	11.95 volts	25%
		11.70 volts	0%

SANITATION SYSTEM

Marine Toilet

It is imperative that every member of the crew be informed on the proper use of a marine head. The valves, openings, and pumps are small and will clog easily. If the head gets clogged, it is your responsibility! Always pump the head for small children so you can be certain of what is being flushed. *Note: Never put paper towels, napkins, sanitary products, household T.P., or food into marine heads.* ***Use only marine T.P. (provided by SHYC)****.*

To use toilet, on the San' Dollar's aft cabin head, move selector switch to the "wet bowl" position. Pump the handle 3-5 times to wet the bowl. After using head, pump to remove waste from bowl (approx. 20 times). Then return selector back to "dry bowl" position and pump for a few times until bowl is dry.

Should the toilet squeak or be a bit sticky to pump, lubricate with a couple squirts of dish soap or salad oil. Put in bowl and pump 2-3 times to get it to pump and leave overnight. Again, leave in the "dry bowl" position.

The San' Dollar's forward head is equipped with convenient VacuFlush system. To use it, press the foot lever down slightly to fill the bowl with adequate water, then press down further to flush and hold down for about three seconds and let it up quickly. You will hear a "chugging" sound and that's normal. It's pumping the waste into the holding tank while

building up pressure for the next flush. Make sure that the seal is closed on the toilet by checking to see that everything flushed sufficiently and that there is a small amount of water in the bowl. If the seal is opened even slightly, the flush system can't build up a vacuum and you may hear the "chugging" sound re-occur even when not flushing the toilet.

Holding Tanks

Your sanitation holding tanks hold approximately 20 gallons. Be aware of the rate of waste production (about 1 gallon/flush). If you overfill your tank, you will break a hose, clog a vent, or burst the tank which is an indescribable catastrophe! And a very expensive fix for you. Empty the tank at least every other day to avoid any problems.

The holding tank is located below the lower helm.

The holding tank is emptied in one of two ways:

#1 At the pump-out station, remove the deck waste cap located amid ships on the starboard side and labeled "Waste." Insert the pump-out nozzle into the waste opening. Double-check that you have the right deck opening! Turn on the pump on the dock and open the valve on the handle of the hose. When pumping is finished, close lever on handle and turn off pump. Remove from deck fill. If there is a fresh water hose on the dock, rinse the tank by adding water for 1-2 minutes. Then re-pump to leave the tank rinsed and clean for the benefit of the next charterer. This also eliminates any head odors.

#2 The tank's contents can also be discharged at sea by using the macerator. To operate the macerator, open thru-hull located in the engine room, depress macerator switch, and pump until pitch becomes higher indicating an empty tank. This should take about 2 minutes. Discharge can be seen on the starboard side of the boat. *Note: Overboard discharge is only allowed in Canadian waters. It is illegal to discharge overboard within U.S. waters.*

Y-Valve

The Y valve directs the flow of waste into the holding tank or directly overboard. The Y Valve is located at the base of the toilet for the aft cabin toilet only. To flush directly overboard, move the handle in line with the overboard hose. Usually, because of Coast Guard regulations the Y- Valve will be wire-tied to the holding tank position.

WATER SYSTEM

Fresh Water Tank/Pump/Hot Water Heater

The fresh water tank(s) holds 150 gallons and is located port side. To fill the tank, remove the deck water fill cap located on the port side aft of the sundeck. Note that it is labeled "Water." Do not confuse this with the deck fill labeled "Fuel." Fill the tank avoiding flushing debris into the tank. Do not fill water and diesel at the same time! Waste water from the sinks and showers drains overboard through various thru-hulls usually located under the sinks.

The water pressure pump is located portside in the engine room. Activate the pump by turning on the breaker at the DC panel. If when in use, the pump continues to run, you are either out of water or have an air lock which can be corrected by opening a faucet. If you run out of water, shut off pump and turn off hot water heater on AC panel. You can cause serious damage to the heating element.

The hot water heater has a 10 gallon capacity. It is heated when the AC breaker is on while connected to shore power. When underway, the water heater is heated from a heat exchanger attached to the engine. Do not use the water heater if the water level is low. The water heater is located portside in the engine room just behind the dinette.

Shower

Before taking a shower, make sure the water pressure and shower sump pump breakers are on. Take short "boat" showers by turning off the water between soaping and rinsing. Please wipe down the shower stall and floor when finished to keep shower tidy. Pick up any accumulation of hair in the drains as it clogs the hoses. Ensure that the faucets are tightly turned off after each shower to save water. NOTE: for the aft shower, there is a pull switch just at the front of the sink that activates the pump to put out the water. Run this pump during your shower and leave on after your shower until the water has drained.

GALLEY

Propane/Stove/Oven

The boat is equipped with a low pressure propane system for cooking. The propane tank is located in the cabinet just to the left of the upper helm in the flybridge. Open the tank valve. Then turn on the propane solenoid switch in the galley just below and slightly to the right of the sink. The propane burners or oven cannot be lit unless this switch is on. When lighting the first time, allow a few seconds for the gas to travel from the tank to the stove. You might need to keep the stove top or the oven in the light position for a few more seconds while the thermo-coupler warms up.

To ensure safety, turn off the propane solenoid switch, the propane at the bottle, and the DC breaker when finished.

Refrigerator

The refrigerator is 12 volt. It will automatically be powered as 12 volt when shore power is on. Carefully monitor the use of the refrigerator when the engines are not charging the 12-volt system as when you are at anchor. Use a cooler when possible for all your drinks to keep the refrigerator door closed as much as possible.

The power switch is located below the front door of the fridge. It can be turned down at night to conserve energy while anchored or moored.

HEATING SYSTEMS

The Espar diesel forced-air heater is located just to the left of the lower helm. It provides heat much like your household furnace. Turn on the toggle switch in the main salon and set the temperature at the desired temperature. Check the exhaust port on the port midship to make certain that no obstruction such as a fender or line exists. Let the furnace run at least 15 minutes before turning it off. Turn the furnace off back at the thermostat.

Electric heaters are also available when connected to shore power or when using the generator. Make sure the appropriate AC breaker is on.

Cabin heat is also available through a "red Dot" heat system when the engine is running. Pull the pull switch located under the dinette seat that faces the mirror. There are two blower settings. When the engine is not running, turn off to conserve heat.

ELECTRONICS

There are 2 VHF radios located at lower and upper helms. Make sure the breaker is on at the DC Panel. Always monitor Channel 16 while underway.

There are two depth sounders located on the upper and lower helm. To activate, ensure that the DC breaker is on. The sounder is reliable in waters less than 200 feet and at slower speeds. If your reading is blinking, it might be a false reading due to excessive depths or strong currents! Watch your depth carefully when cruising unknown waters that might have rocks or obstacles.

To operate the radar, press and hold the power button. To turn off, hold the power button for about 3 seconds. Remember you are not allowed to travel in fog or at night.

A Garmin GPS is located at the upper helm. Turn on by depressing the power button. Press the "page" button to scroll through the functions.

ANCHORING

Your primary working anchor, a CQR is attached to 200 feet of chain and several more feet of line. It is marked on the chain in ten foot increments.

Turn on the anchor windlass using the switch just to the left of the lower helm and proceed to raise and lower the anchor as needed. Be sure to always have your engines running. Windlass Instructions here. See page 9 in the White Binder for further anchoring instructions.

Turn off the breaker when finished.

DINGHY AND OUTBOARD MOTOR

To deploy the dinghy, detach all lines and the stand-off davits so that it can swing free on its cables. Then lower the dingy into the water using the hand cranks on both davits, holding in the gear locks while lowering it. When raising it, the gear locks will automatically engage to keep the dingy from lowering.

After the dinghy is in the water and readied to go (PFDs etc), open the vent in the fuel tank and choke the engine once while starting. Make sure outboard is in neutral. While there is extra outboard gas on board, if you need to add more, mix gasoline with 2-cycle motor oil at a ratio of 50:1. *Note: Failure to use proper mix will damage outboard*.

Please use extreme care in beaching your dinghy. Make sure the engine gets tilted up a safe distance from shore so the prop does not hit the bottom or shear the pin. Do not drag the boat on the beach. Please lift it up with your crew. Make sure it is secured as the tide comes in fast in these here parts.

When returning to the boat, leave your shore shoes in the cockpit and slip on your deck shoes or slippers to keep the boat neat and tidy.

SAFETY & OTHER NOTES

Safety should be paramount to your daily cruising. A "man overboard" drill should be discussed and practiced with an unlucky PFD as the victim (please rinse and dry afterward before stowing). Remember that your lifejackets are stowed on the flybridge. A few should always be readily available. Flares and other safety equipment are located in the salon nav station.

Always have a sharp lookout posted for logs, deadheads, or other flotsam and jetsam. A log hitting your prop can ruin your vacation. As you are traveling, the debris does seem to gather along current lines. It is sometimes best to go around these areas and miss the "mine fields".

San' Dollar is equipped with numerous automatic bilge pumps that can be activated on the DC panel. The switch should normally be left in the "Auto" position and can be switched to "manual" for a minute or so to pump the bilge. If you continually hear the bilge pump running, check your bilge! You may have a serious problem!

The engine spares are located in the engine room and in the drawers under the dinette. They include extra oil filters, impellers, head pump, etc. Extra oil and coolant is located in the galley, under the floorboards.

Crabbing is fun but requires the correct license and season. Please be sure not to crab off the stern as the crab line can easily get tangled in your prop as you swing with wind or current. You certainly don't want to be the person who has to dive over and cut the line out of the propeller. It is best to use the dinghy to set your crab pot/ring away from the boat. A partially open can of seafood cat food works as well as any other bait and is less messy. Please clean up any seaweed or crab shells afterwards to keep the boat neat and tidy.