OPERATIONS MANUAL

POWER BOAT

M/Y Sea of Memories

Call Sign WDP8599





Welcome aboard!

From our family to yours, we are happy you have chosen "Sea of Memories" for your vacation. We are sure you will enjoy cruising the lovely islands of the Pacific Northwest.

Sea of Memories is a well-equipped 2006 Silverton 38 Sport Bridge. She is supported by a 12' Apex tender, equipped with a 30hp outboard. Sea of Memories comfortably sleeps 6 and her tender also holds 6. We trust that you'll enjoy all the amenities she has to offer and will treat her well.

We trust this manual will help you become familiar with the boat. We've also included some good tips on how to use the various systems and equipment on the boat so please review this manual to make the most of your time on Sea of Memories ©.

Please take care of Sea of Memories as if she were your own boat and let us know if there is anything that needs our attention or improvement for the future.

If you have questions about the boat or about places to visit, please do not hesitate to ask the AYC staff. We hope you have a safe and relaxing trip.

TABLE OF CONTENTS

Topic	Page
Safety	4 - 5
Boat Operation	
Engine Inspection	6
Start-Up	6
Shutdown	7
Getting Underway	7
Cruising	7
Docking	7
Fueling	8
Boat Electrical	
A.C. (Shore) Systems	9 - 12
Generator	12
D.C. (House) Systems	13
Batteries	14 - 15
Sanitation Systems	
Marine Toilet	16
Holding Tank	16 - 17
Water Systems	
Fresh Water Tanks	18
Fresh Water Pump	18
Hot Water	19
Shower	19
Galley	
Range/Stove	20
Refrigeration/ Ice Maker	20
Heating Systems	
Diesel Flybridge Heater (DC)	20
Reverse Cycle Heat/Air Conditioning (AC)	20 - 21

Electronics	
VHF Radio, Depth Sounder Multifunction Display/GPS Chartplotter/Radar Automatic Identification System (AIS)	22 23 23
Entertainment AM/FM/CD/Bluetooth Stereo TV/DVD	24 24
Anchoring/Mooring Cans	25 - 26
Barbecue	27
Dinghy/Outboard	27 - 28
Crabbing/Fishing	29
Other: Thru-Hull Locations	29
Other: Flybridge Enclosure	29
Appendix	30 - 31
Electrical System Diagram	31
Storage Areas	32
Docking in slip at Anacortes Marina	33
Quick Reference Garmin & Radar	34
AIS Viewing	35
Auto Pilot Guidance	36

3

SAFETY

SAFETY should be paramount in your daily cruising. A MAN OVERBOARD DRILL should be discussed and perhaps even practiced with a life jacket. Remember your lifejackets are stowed on the flybridge, under the center aft seat. A few should always be out and ready. A throwable type IV is secured to the aft flybridge rail, near the stairs. A second unsecured throwable type IV is typically kept hanging on the back of one of the deck chairs in the cockpit. Your flares and safety equipment are located under the starboard access door to the helm.

Three CO Detectors are installed in the vessel – Salon, Forward Stateroom, and Port Stateroom. Take action and leave the cabin area if any of these detectors are going off.

Three smoke detectors, like at your home, are installed in the Salon, Forward Stateroom, and Port Stateroom. If these are alarming, locate the source of the smoke and extinguish immediately.

Two portable 110 ABC fire extinguishers are located on the vessel. One in the salon, starboard of the sliding door. The second is on the flybridge, on the starboard side of the main bench seat. A third, smaller type ABC extinguisher is also located in the center storage console of the dinghy.

The vessel is equipped with an automatic Sea Fire Halon 1301 Engine Room Fire Suppression System. The system will automatically activate in the event of an engine room fire. The control is to the starboard side of the helm, down low. The control should remain in the 'NORMAL' position with the green light when engines are running. There is a manual discharge adjacent to the control that is secured with an inspection tag. **Do not activate unless you are sure of an engine room fire.** Please keep little kids away from this switch.



Sea Fire Control at Helm

The vessel is also equipped with a Safe-T-Alert monitoring system, with a monitor and alarm located in the salon and at the flybridge helm. These units should always be left ON. These units provide an audible alert in

the event that a fire or fumes are detected in the engine room or there is a high-water level, measured at the mid bilge (in the engine room, forward). If either monitor is alarming, take action based on the alarm.





Salon Monitor

Helm Monitor

The VHF is configured to broadcast your position and distress call if you press the red 'DISTRESS' button under the plastic cover. Only use this switch in a true emergency as the US or Canadian Coast Guard will respond.

A well-stocked first-aid kit is located in the head, in the aft medicine cabinet. Please notify AYC if you use any of the supplies that require re-stocking – such as the last of any item – so that we can re-stock for the next guest.

Bilge Pumps

The vessel is equipped with three AUTOMATIC BILGE PUMPS. The master switch is located on the electrical panel. Normally, the switch will be left in the AUTO position. You may occasionally hear the pumps operate due to condensation and water from the shaft log accumulating in the bilge.

An AUXILIARY HAND OPERATED BILGE PUMP is located in the lazarette. This is used only in emergency situations.

The ENGINE SPARES BLACK MILK CARTONS are stowed aft of the port engine. This includes oil filters, raw water impellers, fresh water pump, wood plugs, and other small parts.

BOAT OPERATION

Engine Inspection

Remember your "WOBBS" every morning: $\underline{\mathbf{W}}$ ater (Coolant), $\underline{\mathbf{O}}$ il, $\underline{\mathbf{B}}$ ilges (Inspect and Pump-out), $\underline{\mathbf{B}}$ elts and Sea Strainer.

Check the level of COOLANT in the expansion tanks. Check the level of OIL in each engine by checking your dipsticks located in the engine room. Look at the etch marks on each dipstick that indicate the proper oil level. **DO NOT OVERFILL OIL!** Only fill if oil levels are below the ½ way mark. Please use a paper towel or oil rag, not the dish towels! Check the general condition of the BELTS, HOSES, and FUEL LINES.

Ensure the valve on each RAW WATER THRU-HULL is in the 'open' position (lever in-line with valve). Observe the glass of each RAW WATER STRAINER for debris. If necessary, close the seacock, open the strainer cover, clean the strainer, and reassemble. Remember to reopen the seacock. Check your generator fluids as well.

Start-Up

Before starting the engines, do your inspection. Ensure GEARSHIFTS are in 'neutral', or the engines cannot be started because of the "neutral lockout". This vessel is equipped with electronic combined throttles and shifters. This system must be powered up first, PRIOR to starting engines. Press switch to the left of the steering wheel. Verify controls show power (neutral lights should illuminate green). Insert both keys into the IGNITION SWITCHES at the flybridge helm. Normally, plan to start the port engine first.

Turn the key clockwise partially until the ENGINE ALARM sounds and pre-heat the engine. Note the voltage drop on the port engine gauge. Once voltage returns to approximately 12 volts, turn the key fully clockwise to engage the engine. If the starter does not engage when the key is turned, move the gearshift lever slightly until you find neutral and try again while turning key.

If the engine cranks slowly or fails to turn over, check the condition of the battery on the ELECTRICAL PANEL. If the battery is low, try the BATTERY PARALLEL SWITCH located to the left of the steering wheel on the flybridge to connect the other engine battery. Press and HOLD to engage parallel switch.

Verify port engine is showing adequate oil pressure, at least 20 psi and no alarms. Repeat this same startup process for the starboard engine. Verify both engines have adequate oil pressure.

Allow the engines to run for a few minutes. Verify that 'WARM' light is illuminated on controls. Move the port engine control to the FORWARD position. Verify transmission does not engage. Move THROTTLES to raise the engine speed to 1000 rpm on the TACHOMETER. Warm the engine for about 5 minutes before engaging transmission. Observe the readings of the gauges. The oil pressure will register about 30-40 PSI. The engine temperature should rise slowly. At cruise speeds with engines warm, oil pressure will typically be between 40-50 PSI. It is normal when coming down to idle speed, with nice warm engines, the oil pressure could drop as low as 10 PSI. This is a normal condition of a well-running and warm Cummins 6BTA. So long as the oil pressure alarm is not buzzing, you should not be alarmed.

Note -- If oil pressure alarm activates, shut down engine, and inspect engine compartment and look for possible cause (for example, loss of oil.) Caution -- If an engine is overheating or there is lack of raw water expelled in the engine exhaust, stop the engine immediately. Recheck the raw water-cooling system to ensure the seacock is 'open' (handle in-line with valve). Next, check the raw water strainer for debris. Remove the strainer, clean, re-assemble, and reopen the raw water intake valve (seacock). Restart the engine and re-check water flow from the exhaust. If water is not flowing properly, the RAW WATER PUMP may need to be serviced. Seek help.

Shut-Down

Before shutting down, allow the engines 'idle' for about 5 minutes to cool them gradually and uniformly. The time engaged in preparing to dock the boat is usually sufficient. Ensure each GEARSHIFT/THROTTLE is in the 'neutral/idle' position. Turn off engines by turning the keys counter-clockwise, one engine at a time. It is a good idea to run the BLOWER while at slow speed coming into the marina, docking, and a few minutes after shut down. The engine room gets quite hot and the blower will help reduce the load on the boat's air conditioning systems.

Getting Underway

DISCONNECT the shore power cord (see 110-Volt next page). Close the PORTHOLES, WINDOWS, and FORWARD HATCH. Turn on your VHF and electronics. ASSIGN crew members their various positions. Once outside the marina, idle the engines while crew brings in fenders and lines.

Cruising

Ensure that throttles are in the neutral position. With the WARM light illuminated, press WARM once to disengage warming mode and allow transmissions to shift into gear. This will allow the transmissions to engage when you operate the combined throttles and gearshifts. Engage the GEARSHIFTS. Cruising speed is a maximum of about 2600 RPMS. If you run at 1800 RPMS you will cruise at approximately 10 knots and use about 10 gallons of diesel per hour. Your speed will vary depending upon the weight and load and weather conditions. When running at cruise speed, TRIM TABS should be put in the BOW DOWN position to improve performance. Remember to return trim tabs to full BOW UP position prior to entering a marina for close quarter maneuvering.

Note -- Avoid higher engine speeds as it causes higher engine temperature, possible damage, and higher fuel consumption.

Engines can be synchronized using the 'SYNC' button on the controls. Both port/starboard throttles must be in the forward positions with about the same throttle applied. Press the 'SYNC' button to make the PORT throttle the master control of both engines. Remember to TURN OFF/DISENGAGE the sync control when approaching a marina or other close quarters maneuvering otherwise you will not be able to split the engines.

Docking

Have your crew make ready the lines and fenders and give clear instructions on how you will be docking. Often times your crew will need to step off from the swim step with the stern line. Another crew member will need to be at the bow or mid-ships to hand over the next lines.

Rock TRIM TAB switches to the BOW UP position (8 to 10 seconds) to make slow-speed backing and turning easier. While moving slowly to the dock or mooring location, center the WHEEL (e.g. rudders straight) and use only the GEARSHIFTS and THROTTLES to maneuver the boat.

Enable the bow thruster by pressing both of the ON switches simultaneously. Note that after ~ 15 minutes of inactivity, the control will be disabled. Remember to ensure control is powered up PRIOR to needing the thruster. The thrusters are intended to be used for minor/moderate adjustments of alignment and in short bursts (3-5 seconds) at a time.

If it is at all windy, open up both side panels of the flybridge enclosure. This will help prevent the wind from pushing the boat around as much.

Fueling Up

OPEN FILLER CAP(S) located in the cockpit, on the port and starboard rails with a DECK FITTING KEY which is kept in the bottom of the breaker panel.

MAKE SURE YOU HAVE THE RIGHT FUEL! <u>DIESEL! DIESEL! MAKE SURE IT IS</u> GOING INTO THE RIGHT DECK FILL! **DOUBLE-CHECK!**

Before pumping, have an oil/fuel sorbs handy to soak up spilled fuel. Absorbers are available in the storage locker under the stairs labeled 'cleaning supplies'. You should have a rough idea of the number of gallons you will need by the engine hour indicator. Also periodically have someone turn on the key to watch the fuel gauge.

Place the DIESEL nozzle into the tank opening, pump slowly and evenly, and note the sound of the fuel flow. Pumping too fast may not allow enough time for air to escape, which may result in spouting from the tank opening. As the tank fills, the sound will rise in pitch or gurgle. Pay attention to the TANK OVERFLOW VENT on the outside of the hull near the tank opening. The sound may indicate that the tank is nearly full. Top off carefully and be prepared to catch spilled fuel. Spillage may result in a nasty fine from law enforcement.

Replace each tank cap and snug only with DECK FITTING KEY. Turn on blower before starting engines. Caution -- Clean up splatter and spillage immediately for environmental and health reasons. Wash hands with soap and water thoroughly.

BOAT ELECTRICAL

The electrical system is divided into two distribution systems: 110-volt AC and 12-volt DC.

The systems are controlled from the AC and DC ELECTRICAL PANEL and BATTERY SWITCHES located on the port side aft of the main salon. When not connected to shore power, batteries are providing all power. Therefore, monitor the use of onboard electricity carefully with your volt meter and ammeter located at the top of each electrical panel and load bank. Always turn off electrical devices that are not needed to avoid unnecessary battery drain. Conserve those volts.

Most breakers are labeled by colored dots. Green signifies "usually on". Red is "usually off" Blue dots are water pressure or water-related like pumps. Yellow signifies electronics or items to use cautiously. No dots are breakers signify irregular use or use with discretion.

110-Volt AC System



SHORE POWER supports all AC equipment and receptacles on board, as well as the battery chargers.

Sea of Memories is equipped with an isolation transformer which allows for a variety of different shore power electrical configurations. Typically, you will use the 50 amp/125V circuit with a 50 amp to 30 amp adapter. This will allow you to then plug directly into the 30 amp/125V shore power on the dock without additional adapters.

Available shore power inputs are shown below:



Available shore power connections, located in aft storage locker. Bottom is cable TV and phone.



Top Plug – Use with 50amp cord when 50amp **250V**is available.



Breaker for each connection. Note that 50 amp/125v is ON (which is typical)



Middle plug – Use with 50amp to 30 amp adapter, when 30 amp 125V power is available at the dock.

To connect to shore power, verify SHORE POWER is turned off in the AC ELECTRICAL PANEL. Plug the 30 amp POWER CORD into the boat and then into the dock receptacle. Check the power rating/plug size of the nearest dock receptacle (that is 50 amp, 30 amp, 20 amp, or 15 amp). If necessary, add a CORD ADAPTER located under the forward stateroom bed in locker labeled 'Additional Power Cords and Adapters'. Turn the dock power on. Cords coming off the bow can be wrapped loosely around the bow line.

At the ELECTRICAL PANEL, flip the SHORE POWER on. Check for reverse polarity. Then turn on appropriate breakers for battery charger, refrigeration, water heater, reverse cycle heat and AC systems. Watch your 110-Volt AC ammeter to keep the load below 30 amps. If the load exceeds the rating of the dock power breaker, you will pop the breaker. If this occurs, wait to turn on one of your systems (i.e. water heater) until your use of volts drop.

If your outlets fail to work, check your GFIs (outlets with test/reset buttons in center) to make sure that they have not been tripped. There are five GFI's located on the vessel:

SalonPort side aft, near A/C control and remote VHF



Forward
Port side guest berth, down low on forward
bulkhead of outside bunk



Galley Counter, behind sink



Exterior Flybridge - Forward side of wet bar



Lazarette

Port side of lazarette/engine room bulkhead – for



If the reset button is found to be protruding, unplug the suspect electrical device and press in to reset.

Generator

To start your GENERATOR, first check that your generator's fluids are topped off and the raw water intake is open. Generator is located in the lazarette. Remove the front cover only using the black push in release to gain access to check the fluid levels. The raw water intake is located below the walk platform. Open the center cover to access the aft bilge.

The generator controls are located in the electrical panel. Hold the switch to the right while the generator starts (about 3-5 seconds). Make sure water and exhaust is exiting to the aft port side.

After generator is running, turn your AC distribution switch to generator at the main AC distribution panel. Then turn on AC systems as you would on shore power one system at a time.

To turn the generator off, first take off the load by turning off AC breakers. Then turn off main AC distribution switch by disconnecting the GENERATOR main breaker. Lastly kill the generator by moving the same switch used to start.

The generator fuel source is set to the port fuel tank by default. If directed by AYC, the generator fuel source can be switched between port and starboard fuel tanks. Generally this should not need to be changed, but see appendix 1 for the fuel selector diagram to be familiar with this if needed.

Inverter

This vessel is NOT equipped with an inverter. All AC loads must be provided by generator (ships power) or shore power.

House (12-volt) System



5 battery banks support 12-volt DC power: 1) port engine battery bank 2) starboard engine battery bank 3) bow thruster battery bank 4) house battery bank 5) Generator starting battery

The ENGINE BATTERY SWITCHES are located in the bottom of the electrical distribution panel. The BOW THRUSTER BATTERY SWITCH is located in the bilge access in the main berth. HOUSE BATTERY BANK SWITCHES are located in the main DC electrical panel, at the top of each load bank. GENERATOR BATTERY SWITCH is located to the starboard of the generator in the lazarette. Normally, leave the ENGINE, BOW THRUSTER, GENERATOR, and HOUSE SWITCHES in the 'ON' position. Note -- Do not change the position of the switches while the engines are running or the alternator diodes will be damaged. Change positions with the engines off.

Your 12 volt panel shows all the systems supported by your batteries. Primarily you will be turning on the breakers for your lights, water pressure, electronics, reverse cycle heat/AC, etc. Bilge pumps should always be left on.

Your breakers such as the Windlass Control, Davit, and Range should always be turned off after every use.

House Battery Bank & Switch

The HOUSE BATTERY BANK provides power for all DC systems, except for starting the engines, automatic bilge pumps, and the anchor windlass. When disconnected from shore power, all 12-volt devices drain the house battery. Use devices as needed. The DC voltmeters on the DC panel shows the House Battery bank to measure charging or resting battery voltage. This vessel is equipped with a large (600 ah) house battery bank located under the forward stateroom mattress access panel.

When a battery bank is being charged, the voltage will read from about 13.1 volts to 14.4 volts depending upon state-of-charge of the battery bank. When the battery bank is at rest, (that is, not being charged), the voltmeter can give a rough indication of the state-of-charge of the battery bank.

Starting and house batteries are charged by the engine ALTERNATORS while underway. The engine and house batteries are also charged by dedicated BATTERY CHARGERS when connected to shore power. Ensure each Battery Charger circuit breaker at the electrical panel are ON. The GENERATOR will also power the chargers to charge the batteries.

The thruster batteries are ONLY charged by running the generator or while connected to shore power. The thruster batteries are NOT charged by the alternators while running.

	Battery State
Voltage (Wet Cell Battery)	-
12.65 volts	100%
12.47 volts	75%
12.25 volts	50%
11.95 volts	25%
11.70 volts	0%

Advanced House Battery Monitoring

This vessel is equipped with a Victron Energy Smart Battery Monitor on the House Bank. You can access advanced data including state of charge (in percent remaining), total load (in amps), and hours/days remaining based on current usage.



Using any Bluetooth-equipped device such as an iPhone, iPad or Android, search for the "VictronConnect" app in the app store. Once installed, open the app and the Smart Shunt should show up as an available device. Connect to it using the PIN <u>119052</u>. Once connected, you should be able to access plenty of data to



help manage your battery usage on the hook and make the most of your available volts.

Note that the Bluetooth range is quite short and the bank is located forward in the forward stateroom. If you're having trouble connecting, be sure you're either in the galley, or more forward. It is not necessary to remain connected as the Smart Shunt stores all the data. Each time you connect, you're just viewing the current status and the historical data available.

Sea of Memories is generally efficient electrically and with the large house bank, should provide for a decent stay at anchor or on a buoy without having to run the generator too much. She's equipped with LED lights throughout that helps reduce electrical consumption.

It is recommended that running the generator twice a day, when not plugged in, helps utilize the generator and top off the batteries most efficiently. In the morning when you're cooking breakfast or making coffee, run the generator for ~1 hour to feed the range/microwave/coffeemaker and top off the batteries from overnight. In the evening when cooking dinner, do the same. If you generally follow this strategy throughout your charter, you should have plenty of battery power onboard and not have to run the generator throughout the day.

Always monitor the house battery bank and be mindful of the charge level.

Starting (Port and Starboard) Battery Bank & Switch

Each ENGINE BATTERY is connected to its corresponding engine. Voltage can be monitored at the helm using the voltmeters when the key for each engine is in the ON position. The disconnect switch for each engine battery bank is located in the main electrical panel. These should always be left in the ON position.

Starting Battery Parallel Switch

Should one engine battery be insufficiently charged to start its engine, the other engine battery may be momentarily connected to provide a boost. Press and hold the BATTERY PARALLEL SWITCH located at the helm, to the left of the steering wheel, and attempt to start the engine. Release/disengage after the engines start up.

If the battery parallel switch fails to allow the engine to start, contact AYC. You can also start the generator and engage the generator breaker in the AC electrical panel, to power up the onboard battery chargers. Contact AYC prior to doing this though a the need to do this indicates an issue that will need to be resolved.

SANITATION SYSTEM

Marine Toilet

The vessel is equipped with a vacuum-operated marine toilet that is fed with freshwater and uses the 12VDC system to operate the whole system.

It is important that every member of the crew be informed on the proper use of the MARINE TOILET. The valves, openings, and pumps are small and may clog easily. If the toilet clogs, it is YOUR RESONSIBILITY!

Always pump the head for children, so you can make sure nothing foreign is being flushed.

Caution – <u>Never</u> put_paper towels, tampons, Kleenex, sanitary napkins, household toilet paper, or food into the marine toilet. Use only the special dissolving marine toilet tissue provided by AYC.

To use the toilet, verify that the toilet breaker is turned on in the breaker panel and either a water hose is connected or the fresh water pump and breaker is also turned on.

Move the FOOT HANDLE 'up' (to wet bowl). To flush, press the foot handle down and hold open briefly. After using the toilet, lift the FOOT HANDLE to wet the bowl again. Flush sufficiently to move effluent in the hoses; heavy effluent may clog hoses. Clean the toilet as necessary.

The TOILET is fed with freshwater if you need to shut off the water to the toilet. Clean the toilet as necessary. If the toilet-pump handle squeaks or sticks, squirt 'pump lube' into the toilet and pump the toilet slowly to draw the lube into the pump unit. The 'pump lube' is located below the sink.

Holding Tank

The sanitation HOLDING TANK holds approximately 40 gallons. Be aware of the rate of waste production. (about 1 gallon per flush). With an overfilled tank, it is possible to break a hose, clog a vent, or burst the tank. The result will be indescribable catastrophe and an EXPENSIVE FIX to you. Empty the tank EVERY OTHER DAY to avoid this problem.

The HOLDING TANK is located mid ship, in the hatch across from the galley. Some may be subject to a visual check with a flashlight or the "watermelon" test by thumping it. There is a tank gauge located at the electrical panel. There is no warning light, so monitor the tank level daily.

The holding tank is emptied in one of two ways:

#1 At the Marine Pump-Out Station, remove the WASTE CAP located mid-ship starboard with a deck key. Insert the pump-out nozzle into the waste opening. Double-check your deck fitting! Turn on pump and open valve located on handle. When pumping is finished, close lever on handle and turn off pump. Remove from deck fitting.

If there is a fresh water hose on the dock, rinse the tank by adding 2 minutes of water into tank. Then repump to leave the tank rinsed for the next charter. This also eliminates head odors.

#2 The tank's contents can be discharged with the MACERATOR only in Canadian waters.

To operate the macerator, open the seacock when regulations allow you to do so. The seacock is located under access hatch outside door to head. With the thru-hull open, turn on the MACERATOR breaker in the DC electrical panel. Listen to the macerator's sound. When the pitch becomes higher, the tank is empty. Discharge may be observed on the starboard side. It should only take a few minutes to empty the tank. After tank is empty, close seacock.



Be familiar with the applicable laws concerning dumping sewage directly overboard. When returning to US waters, close the macerator discharge thru hull and remove the handle.

Y-Valve

This vessel is not equipped with a Y-VALVE.

WATER SYSTEM

Fresh Water Tank(s)

The FRESH WATER TANKS hold 110 gallons (55 gallons each side). Observe the water level by visually checking the level on the tanks in the engine room when conducting WOBBS. The freshwater gauge above the electrical panel is unreliable and will incorrectly show empty or ½ full tanks at times. Waste water from the sinks and showers drains overboard through various thru-hulls usually located under the sinks.

To refill the tank, remove the WATER CAP located mid-ship port with a deck key. Both tanks are filled from the single deck fill port. Avoid flushing debris from the deck into the tank opening. DO NOT fill water and diesel at the same time!

Both tanks are connected together internally in the vessel. Both are filled and consumed together. There is no manifold nor is it necessary to select which tank you are filling or using.

Fresh Water Pressure Pump

The FRESH WATER PUMP is located in the engine room on the starboard side of the aft bulkhead. Activate pump at the DC panel by turning on the breaker. If the water pump continues to run, you are either out of water or might have an air lock and need to bleed the system by opening a faucet. If you run out of water SHUT OFF YOUR HOT WATER HEATER on the AC panel. Serious damage can occur!



Hot Water Tank

The HOT WATER HEATER has a 10.5-gallon capacity tank and is available when connected to shore power or generator while underway. To use on shore power or generator, flip on the water heater circuit breaker on the AC electrical panel. Do not use the water heater if the water tank level is very low. The water heater is located in the lazarette, in the starboard aft corner.

The vessel is not equipped with a heat exchanger to pre-heat the hot water system from the engines. The electric water heat must be running on either the generator or shore power to provide hot water. Allow approximately 30 minutes to get hot water for showers.

Shower

Before taking a SHOWER, make sure water pump is on. The shower is connected to a shower sump equipped with a dedicated bilge pump. The shower sump is activated by a float switch. If the shower backs up, access to the sump is via the bilge access panel between the head and mid-stateroom. Take only very short "boat" showers (turning off water between soaping up and rinsing). To keep shower tidy, wipe down the shower stall and floor. Use the squeegee provided to eliminate excess moisture to help control moisture in the boat. Check for accumulation of hair in the shower and sink drains. An additional FRESH WATER SHOWER is located on the accessway from the cockpit to the swim step. Use this shower to rinse of sand and debris, otherwise this may clog the shower sump. Ensure that the faucets and nozzle are completely off after use.

This vessel is <u>not</u> equipped with a RAW WATER WASHDOWN system. All showers/washdowns are via the FRESH WATER system, so use sparingly to conserve your freshwater.

Water Valves

There are two water valves in the engine room to isolate water supply to the flybridge sink and the anchor washdown. There are also a set of valves in the lazarette that isolate the swim step shower/washdown. These are primarily used for winterization and should normally be left open (valve handles parallel to piping) at all times. If you do not have water supply at these locations, check that these valves (which are labeled in the engine room) are ON.

GALLEY

Range/Stove

The range/stove and is electric and requires either generator or shore power to operate. Turn on the RANGE breaker on the AC panel.

Bridge/Galley Refrigerator and Cockpit Ice Maker

The BRIDGE and GALLEY REFRIGERATOR are dual voltage (12-volt and 110-volt power). They will automatically use 110-volt power when the shore power is connected or generator is running; otherwise, they will operate on 12-volt power. Monitor the use of the refrigerators when the engines are not charging the 12-volt battery system. The local power switch is located below the front door. It can be turned down to the lowest position when anchored or moored or turned off when turning in for the night.

HEATING/COOLING SYSTEM

Flybridge Diesel Heater (DC)

The flybridge is equipped with a DIESEL FORCED-AIR FURNACE located under the starboard access door to the helm. It provides heat in the same way as a household furnace. Turn on the TOGGLE SWITCH located on the helm. Set the THERMOSTAT to the desired temperature. Generally low is a good setting to start with to avoid overheating the bridge. The furnace gets toasty ©

Check the furnace EXHAUST located to the port side of the flybridge for any obstruction such as fenders or lines. Do not block this opening when operating the furnace. Heat will damage fiberglass or rubber. Once it is on, allow it to run for at least 15 minutes before turning it off. Turn 'off' the furnace heater by turning switch back off.

You may need to re-fill the **DIESEL DIESEL** tank as it is not connected to the engine main tanks. There is a fill port located on top of the helm and a YELLOW jerry can located under the flybridge lounger. Take precaution not to spill any diesel fuel on the helm. Typically, the system will run for a week when using periodically without needing to be refilled.

Reverse Cycle Cabin Heat and Air Conditioning (AC)

Two REVERSE CYCLE HEAT-A/C are available when connected to shore power or when running the generator. One is located in the forward stateroom and one is in the salon. Make sure the AIR COND PUMP, FWD AIR COND, and SALON AIR COND breakers in the AC panel is on.

The salon thermostat is located to the right of the TV. The forward stateroom is located to the starboard, next to the closet. Turn on the thermostat with the button to the top left. Adjust the mode and set your temperature. Always check to make sure the system is flowing water on the port side. There are two outlets, one aft (for the salon) and one forward (for the forward stateroom).

If running on plane for an extended period, the Air Conditioning Pump can become air-bound. If you start up the system and no water is flowing out the side of the boat and/or you get a high pressure fault (HPF) on the controller, you'll need to open the air purge near the pump.

With the pump turned off, in the ENGINE ROOM reach under the port aft storage shelf. Under the shelf, near the top is a T shaped valve. Turn it Counter-Clockwise (loosen) approximately a quarter turn. You'll hear air and some water will come out. Purge the air until a steady stream of water comes out. Close the valve by turning clock-wise securely. Restart the system and you should have water flowing.

If you're unable to feel the valve, you can remove the two storage bins and there is a removable section in the shelf that provides access. Generally, it's much easier to do this by feel.





ELECTRONICS

All electronic manuals are located digitally on the MFD. To access:

Accessing Owner's Manuals on the Chartplotter

- 1 Select 😂 > Owner's Manual.
- 2 Select a manual.
- 3 Select Open.

VHF Radio

There are two VHF RADIOS. One is located at the flybridge helm, with a remote in the salon. The second is a handheld for use on the dinghy and is stored in the salon, near the main VHF remote. Make sure the "Fly Bridge Main" breaker are on located at the DC breaker panel. Always monitor channel 16 while underway.

The call sign for the vessel is "Motor Yacht - Sea of Memories" or "WDP8599"

Sea of Memories' flybridge helm VHF is programmed with an FCC-issued MMSI# which provides both the USCG and Canadian Coast Guard with your position and emergency contact information in the event of a distress call. The emergency contact for the vessel is:

Anacortes Yacht Charters 2415 T Avenue, Suite #2 Anacortes, WA 98221 800-233-3004

Depth Sounder

There is one DEPTH SOUNDER, which is physically located in the stern of the vessel. The readout is located on the flybridge helm Garmin multi-function display, in the upper right corner. The reading displayed is from the bottom of the hull of the vessel to the sea bottom and gives depth below hull. Note that the rudders and propellers extend below the hull. Any depth displayed less than about 2.0 ft will result in a prop or rudder strike. Do not travel in waters less than 5.0 ft and always consult your charts and tide tables. Note that some popular marina approaches in the San Juans should only be traveled at or near high tide to avoid grounding.

The sounder should provide reliable readings in shallow waters. If in doubt, switch it off, then turn it back on to reset sounder. If your reading is blinking, it is a FALSE reading. False readings can occur in depths of more then 200 feet or in areas of strong currents or tides. Depth sounder may not immediately show a depth when first powering on the system and may require a few minutes of travelling before registering in shallow or deep waters.

Remember to ALWAYS consult your charts and tide tables for depth!

Multi-Function Display (MFD) GPS Chart Plotter and Radar



To operate the Garmin 8600 GPS/MFD and Radar located on the flybridge, verify that your breaker is on (Flybridge Main) and then press and hold the power button in the bottom right corner of the display. To turn off, press and hold POWER button about 5 seconds. Please see the appendix for useful tips on using the chart plotter and radar during your trip.

The radar can be used in radar/chart overlay mode or standalone radar modes (including an option for dual range).

Remember to always reinstall the cover over the MFD when not cruising (at anchor or docked) to protect the display from sunlight, water, and

other damage.

Remember it is <u>not</u> suggested per your charter agreement and insurance policy that you are allowed to travel in reduced visibility or at night. It is suggested to utilize the radar during clear, daylight hours to have a clear understanding of the information displayed should you need the system in rapidly changing conditions. See the appendix for additional information on using the MFD.

Note -- GPS is considered a navigation aid. Do not rely on it. Compasses, charts, and dividers are the tools to plot position, course, and speed.

Automatic Identification System (AIS)

Sea of Memories is equipped with an AIS receiver and transceiver which allows the position of other AIS-equipped vessels to be displayed on the Garmin MFD. In addition, Sea of Memories' position is broadcasted periodically for the safety of the vessel and its guests. Please see the appendix for useful tips on using the AIS during your trip.

Note – AIS Collision Alarms have been disabled as they tend to become a nuisance in high traffic areas. <u>Do not rely on AIS to alert you to a possible collision.</u> Not all vessels are equipped with AIS so not every vessel will be displayed. It remains your responsibility to always monitor for other vessel traffic.

ENTERTAINMENT SYSTEMS

AM/FM/CD/Bluetooth Stereo

An AM/FM/CD/Bluetooth stereo unit is located at the flybridge. It operates like a normal car radio. There are two speakers (stereo) on the bridge and two (stereo) in the cockpit. The FADER controls the distribution of the bridge and cockpit speakers. The BALANCE controls the sound distribution in the left and right speakers.

To connect to the Bluetooth input of the flybridge/cockpit stereo:

BI	uetooth® Operation
	Pairing a Device
Preparation	Before you can use a Bluetooth device, it must be paired and connected. Make sure that Bluetooth is activated on your device before you begin the pairing process.
Pairing a New Device	The AMB600W broadcasts the pairing signal constantly when no devices are currently connected. Complete the pairing sequence from your Bluetooth device. Refer to the owner's manual for your device for more details.
	The device name is "DUAL BT" The Bluetooth passcode "1234"
	Note: The AMB600W can be in any mode of operation when pairing is performed.
Pairing Additional Devices	If a device is currently connected, press and hold to disconnect the current device before a new device can be paired. Then begin the pairing sequence from the new Bluetooth device.

The Bose 321 AM/FM/CD/DVD/Aux Bluetooth/TV entertainment system is located in the salon. There are two speakers (stereo) and a subwoofer in the salon. Use the source button to select your desired input. Selecting 'TV' source on the Bose 321 to have all TV audio come through the Bose system. Use the large gray remote to control volume. If the Bose decides not to play the audio from the TV (or inputs to the TV, see below), turn off the breaker labeled 'Entertainment', wait 30 seconds, and turn back on. That should fix the issue.

To connect to the Bluetooth input, select Esinkin BT Adapter in your device's Bluetooth device list.

TV/DVD

A TV/DVD is located in both the primary stateroom and the salon. To use, turn on the power with the remote and go to the input on the TV noted.

The salon TV is a Smart TV and applications such as Netflix, Hulu, and other streaming providers can be utilized, but you will need to connect the TV either to your phone hotspot function or to marina WiFi. Alternatively, an HDMI auxiliary input has been provided to use your personal device such as laptop or tablet. Select the 'Tablet' or 'HDMI 2' Input is noted on the cables. Please make sure to leave the USB-C and Lightning to HDMI adapters so that the next charter can utilize them. © Please do not unplug/plug in cables from the back of the TV. Auxiliary inputs (HDMI, USB-C, APPLE LIGHTNING) have been provided for your convenience to plug in any external device.

To use the DVD player, select 'CD/DVD' on the Bose 321 system and insert a DVD. On the TV, select 'DVD Player' or 'HDMI 1'

The forward stateroom TV is equipped with only a DVD Player. Select the DVD Player input.

ANCHORING

The primary WORKING ANCHOR is a Delta Plow 35lb and is attached to 300 ft chain passed through the deck from the ANCHOR LOCKER The locker can be accessed through the bow deck hatch, adjacent to the windlass cover. Release the anchor keeper.

The WINDLASS CONTROL CIRCUIT switch is located in the DC breaker panel. Turn on, and at the bow, tap gently on the 'down' foot control to lower the anchor. If necessary, guide the anchor over the anchor roller to prevent binding on the pulpit. A control is also available at the helm, but the bow control is recommended as there's greater visibility of the chain and windlass.

Let out sufficient ANCHOR RODE (chain) before setting the anchor. Colored markers are placed per the color marking table below. If the anchorage is crowded put down at least a 3 to 1 scope (60 feet for 20 feet of water), back the anchor in with a short burst from the engine. Then let out additional scope dependent upon conditions.

ANCHOR RO	DE PAY-OUT
Chain markings of	correspond to
following color co	odes:
25' WHITE	150' BLUE
50' BLUE	200' YELLOW
100' GREEN	300' RED
	350' BLACK

Note: Yellow marking every 10 ft for the first 30 ft are provided so that you know when the anchor is close to being hauled in.

There is a 26 ft bridle system located below the flybridge lounger seat to provide improved anchoring performance, reduce rolling and pitching, and reduce strain on the windlass. Account for this if you plan to use the bridle as you can initially let out less chain relative to your desired scope, until the bridle is attached. Connect the bridle first by attaching to the bow cleats, keeping the line on the outside of the rail. Then connect the chain hook to the chain. Let out additional chain until the bridle takes the load off the windlass. Do not anchor for extended periods or overnight without using either the bridle or a rope secured to the rode and anchor tie off cleat, to relieve strain from the windlass. Do not use the anchor keeper when the anchor is deployed to relieve tension from the windlass. The keeper is only meant to keep the anchor in the pocket should the windlass free spin while underway to prevent the anchor from deploying. It is not rated to hold the whole boat.

Before raising the anchor, ALWAYS start the engines as it uses large amounts of power. The windlass is connected directly to the port starting batteries. Turn 'on' the WINDLASS CONTROL CIRCUIT switch and as the boat moves toward the anchor, press the 'up' control to take up slack line. Give the windlass short rests as you are pulling it up. Place yourself in position to guide the anchor onto the roller. As the anchor rises, be careful not to allow it to swing against the hull. Wash it down with the FRESH WATER WASHDOWN before it goes into anchor locker.

If the clutch in the windlass slips, use the WINDLASS HANDLE in the center star bolt to snug up the clutch to allow the windlass to haul up the rode and anchor sufficiently.

Reconnect the keeper between the anchor and the vessel. Close the plastic covers on the FOOT PEDAL CONTROLS and the Windlass cover. Turn 'off' the WINDLASS CONTROL CIRCUIT switch.

A SPARE FLUKE ANCHOR is normally stowed in the bow anchor locker. The 165 ft of SPARE ANCHOR RODE is located in the bow anchor locker. The rode is attached via shackle to the spare anchor.

In case of emergency, the anchor can be retrieved manually. Using the handle located in the helm starboard storage locker (located on the flybridge). First, secure the anchor with the bridle or a rope tying the anchor off to the cleat to take the load off the windlass. With the handle, place it in the center of the Windlass to release the clutch. Then, place the handle in the outer portion of the windlass drum to allow it to be manually winched in. Take up tension on the chain and release the rope or bridle. Note that if you let go of the handle, the windlass will free-spin, deploying more chain. It's recommended to have two people perform this operation to prevent free-spinning and trade off as you get tired.

Mooring Cans

To use the state parks buoys, you will need to pay and register at the kiosk usually located at the heads of the docks or by calling the phone number on the buoy. Mooring cans have a metal triangle at the top upon which is a metal ring. The metal ring is attached to the chain which secures your boat. IT IS VERY HEAVY. The strongest member of your crew should be picked for this job.

Come up to the CAN into the wind as you would for anchoring. Have crew members on the bow, one with a boat hook and one with a mooring line secured like a bow line. As you are coming slowly up to the can have the crew holding the boat hook point at the can with the hook so the skipper always knows where it is. Hook the can and bring the ring up to the boat to allow the second crew to thread the ring with the line. Release the hold with the boat hook. If your mooring line is led out the starboard chock bring the end of the line back through the port side. You will essentially create a bridle with about 10 feet of slack from the chalk to the can.

BARBECUE

The BARBECUE with MOUNTING BRACKET is installed in the cockpit. If it is not already installed, it is located in the LAZARETTE.

Place the BARBECUE and MOUNTING BRACKET into the two mounting posts on the port aft corner of the cockpit (if not already installed). To remove, press in on the button on the left post (when facing the Barbecue) to dismount barbecue. Attach a PROPANE BOTTLE to the REGULATOR installed on the barbecue. Carefully light the unit using the red igniter button (usually have to spark it 4-5 times) or preferably with a long-stem butane lighter. The barbecue generates a lot of heat and cooks hot and fast. Please burn off grease/cooking residue and wipe with a paper towel before storing to prevent grease and dirt soiling the boat.

Note: Two (2) propane bottles are stocked by AYC. You may need to purchase additional during your trip. Caution -- For safety reasons, do not store an opened propane bottle within the salon or engine compartment. Chances are these will leak slightly once opened and propane gas could settle into low spaces. Store these bottles under the stairs in the locker labeled 'cleaning supplies'. Do not store propane bottles in lazarette or engine room. Ensure gasoline and flammable materials are not near the barbecue.

DINGHY & OUTBOARD MOTOR

Your 12' Apex center console DINGHY with a 30hp Nissan 4 stroke engine is stored on the davit on the aft swim step. It has a capacity of about 1350 pounds (motor, equipment, and 6 people). It has a 6 gallon fuel tank located under the bow storage hatch and takes UNLEADED GASOLINE – no pre-mix or diesel. It is equipped with an automatic bilge pump which may periodically run when in use.

To deploy the dinghy, first disconnect the battery tender (store cable in swim step power locker), remove the covers from the dinghy and motor, and the black tie down straps. Clip the loose end of the tie downs back onto the davit. **Install the drain plug** (located in main vessel electrical panel) Turn on the davit breaker in the main DC electrical panel and remove the remote. Connect the remote to the black plug located just to the right of the swim step access. Raise the dinghy just enough to take the weight off the safety clips. Unclip the safety clips and lower the dinghy into the water. Watch for any objects around the bow of the dinghy or outboard. Disconnect rigging and raise davit up into a stored/out of way position. Install the seatback (typically stored on the flybridge, behind the aft lounger).

Jerry can, dock lines, fenders, oars, and foot pump can be found under the aft seat. Fire extinguisher, air horn, and emergency kit is located in the mid storage locker of the center console. A 50' line, anchor, and anchor buddy/bungee line is located in the bow storage locker.

Use the key located in the main ship electrical panel to start the outboard. The safety clip must be installed and connected to you when operating. Generally it should start right up without having to squeeze the primer. Once started, you can use the 'warming handle' to increase the throttle slightly to warm up the outboard. Verify that the 'tell tale' is flowing water on the starboard side of the outboard. If it is not flowing, there is a small wire next to the outboard to use to clear the 'tell tale'. Do not continue running if the tell tale does not flow as the outboard could be damaged from overheating.

We don't recommend towing the dinghy and instead strongly encourage using the davit.

If you must tow the dinghy, always keep it tight to the boat any time that you slow down or stop. Assign one of your crew members as the "dinghy" person to be responsible for taking up slack. You don't want to wrap a propeller.

Washington state law and Coast Guard regulations state that any child 12 and under must wear a life jacket in a dinghy. It is a good idea for EVERYONE to follow this rule and connect the safety line to your jacket or persons.

When beaching the dinghy, use the RED bungee-style anchor line attached to the anchor. Clip it to the aft tie down and toss it in, away from the prop, when you are approximately 30 ft from shore. Raise the outdrive as you approach shore to avoid striking the prop. Remember to shut off to avoid damage to the cooling system, but keep the key in the ON position, otherwise the trim/tilt is unavailable. Use the 50 ft line attached to the bow cleat and attach to a rock or driftwood on shore. Give the dinghy a shove so that it is pulled back out by the bungee line and kept off the rocks. This will make it so that you don't have to manage the dinghy relative to the waves and tides and will minimize damage to the hull. DO NOT LEAVE OVERNIGHT.

When ready to return to the dinghy, pull in the line, load up, and disconnect the 50 ft line. The bungee will pull you back out. Lower the outdrive and start it. Do not engage the prop until AFTER the anchor is recovered to avoid fowling. Store in the bow storage locker.

To raise the dinghy, the process is generally the reverse of lowering. First, **remove the seatback**, otherwise it will be damaged by the davit when raising. Lower the davit and connect the rigging (note the color coding, green to the starboard tie downs, red to the port tie downs). Tilt the motor up slightly – no more than about 50%. Fully tilting the motor to the 'beached' positions will cause the motor/davit arm to come in contact. Turn off the ignition, remove the key, store in main vessel electrical cabinet. Before raising, if this is the last time the dinghy will be used, it's easier to partially install the cover on the starboard side prior to raising. Install cover on motor. Raise dinghy with davit remote until safety clips can be installed. Lower davit back down onto safety lines, taking strain off davit winch. Leave enough slack in davit winch line to facilitate getting the cover fully installed. Verify davit arm and outboard are not contacting. Re-install black tie downs, with ratchets installed closest to davit arms and protective covers installed under the ratchets. Snug up dinghy (not to tight). Finish installing cover securely, plug in the battery tender, and **remove drain plug**. Store drain plug and key in electrical cabinet with davit remote.

Spare parts such as oil, spark plugs, and patch kit are located in the lazarette, in an orange bucket as well as a bin labeled 'dinghy spares.'

CRABBING & FISHING

Always check the fishing and crabbing requirements before you leave on your cruise. You will need a license. Many areas are CLOSED to crabbing and fishing on certain months.

CRAB AWAY FROM THE BOAT! Lines can get wrapped around props. Fish-flavored cat food with the pop-up ringed lids work the best for a nice neat way to bait the ring. After 15-20 minutes, retrieve the crab line and ring quickly. Measure the crabs using the CRAB MEASURING GAUGE normally located with the crab pot in the lazarette. Remove the gauge before deploying the pot. Keep the male crabs of proper size (usually 6 ½ inches across the carapace). Boil crabs about 12 minutes to cook, using the pot located in the lazarette, next to the generator.

After using, wash equipment thoroughly with fresh water (available from the cockpit shower faucet). Note -- Please do not store wet rings and gear inside the boat.

OTHER: THRU-HULL LOCATIONS

- Port and Starboard Main Engine Raw Water Engine Room Forward
- Generator Raw Water Lazarette, below Center Access Hatch
- Macerator Discharge Access Hatch between mid-stateroom and head
- Reverse Cycle Heat & A/C Engine Room, below access hatch aft of port engine

OTHER: FLYBRIDGE ENCLOSURE

The flybridge tends to get very warm even on the mildest of days when the sun is out if you do not open it up to vent it. The best way to vent the flybridge is to first open the two side panels at the gates/doors to the bow and slide those forward. Then, open the vertical zippers to the side of the windshield. Open about ¾ of the way, but not all the way and do not disengage the zippers. Finally, open the rear panel by unzipping the two sides and the two bottom zippers. Fold it down and then back toward you. Use the loops on the zippers to hook up so that the panel is up and out of the way. This should provide adequate ventilation while underway.

When docking, ensure both of the side panels are open to minimize the amount of 'sail area' for the wind to push the boat around.

Do not attempt to further disassemble or open up the enclosure as you could damage it. Do not climb on the eyebrow – directly above the glass, below the flybridge – to further open the enclosure as you could damage both the fiberglass and the enclosure.

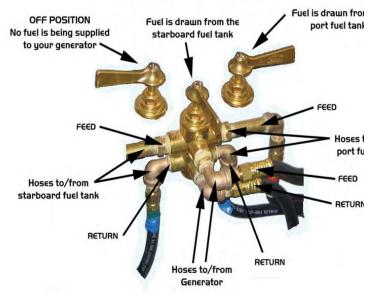
APPENDIX

Generator Fuel Tank Selector

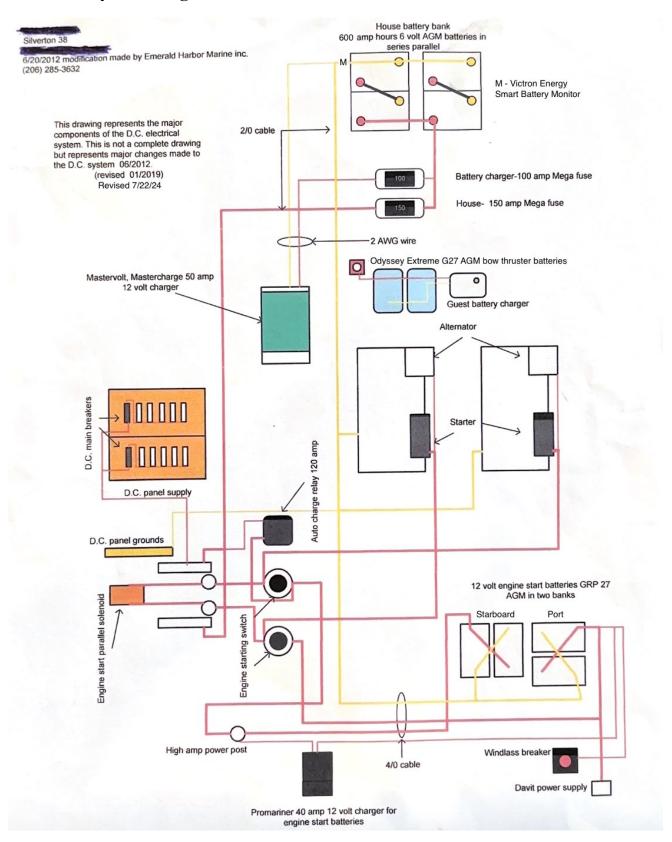
If directed by AYC, the generator fuel source can be changed to either the port or starboard fuel tanks. The selector valve is located in the lazarette, to the starboard side. A diagram is provided at the fuel selector valve and below for reference. The positions are also labeled at the valve - point black arrow on valve handle to desired fuel selection.



385B Generator Fuel Selector Valve



Electrical System Diagram



Provisioning

Sea of Memories has lots of storage options to hold all your provisions. The below guide should assist in finding a location for all your supplies:



2 areas, under dinette



Pantry storage locker, across from galley



Under salon table



Lazarette – good for larger/bulkier items (such as a. Small items may disappear into the bilge.

Docking in Anacortes

Sea of Memories fits *just* perfect in her slip in Anacortes, Washington. Please use the following guide to get her all tied up at the completion of your trip, just as you found her ©

She needs to sit about as far forward as you can comfortably get her, with the anchor just hanging over the front of the slip, to keep the tender out of the fairway. To do this, tie the port bow line snug to keep the anchor from touching the power pedestal as you walk her forward. Use the forward spring line to walk her forward and set her position and the aft spring line to secure it. Let out the port bow line as needed. Secure the starboard bow line. Tie the port aft cleat with a forward and aft spring line.

An additional fender should be placed on the port forward quarter as the prevailing winds tend to blow her against the dock in that spot.

Fenders should be placed alongside the swim step, with a large fender on the starboard side and the one smaller fender on the port side (to keep the vessel slightly port in the slip).



Offset her to the outside/east side of the slip to avoid the anchor hitting the power pedestal. Bow lines – 15'



Use the 35' lines for forward/aft spring lines on the starboard side.



Secure the port aft corner with a forward and aft spring line -15'.

Quick Reference - Using the Garmin MFD, Radar, and AIS on a typical cruise.

Sea of Memories is equipped with a modern Garmin marine electronics package that will enhance your overall cruising experience. As discussed in the Radar section, it is good practice to become familiar with the radar operation and how to interpret items on the screen, should you find yourself in suddenly changing visibility conditions.

On the radar display, in the upper left corner press returns on the display.

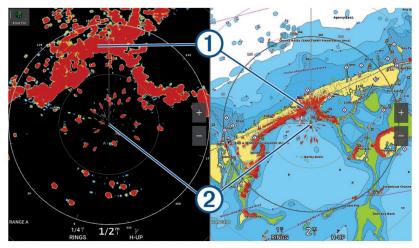


to spin up the radar and begin getting

Use the Radar Overlay

The radar overlay feature can help you interpret the radar display more easily, because it overlays the radar returns on top of the chart. This can help you identify the difference between a radar return of a land mass, bridge, or rain cloud. Showing the AIS vessels on the radar overlay can also help you identify features on the radar display.

In the screenshot below, the radar overlay is turned on. This screen also shows a video feed. We can easily identify a few items on the radar screen.



1	Land
2	Vessel

Configured what is displayed on your Chart

On the chart view, select **Options > Layers** to turn on/off a variety of features

Viewing AIS Targets

If not already shown, on the chart view, select **Options > Layers > Other Vessels > AIS** to view vessels equipped with AIS. Note that not every vessel utilizes AIS, so this will not provide a complete view of all traffic. It is still your responsibility to keep a constant watch for any and all traffic.

AIS Targeting Symbols

Symbol	Description
Δ	AIS vessel. The vessel is reporting AIS information. The direction in which the triangle is pointing indicates the direction in which the AIS vessel is moving.
	Target is selected.
	Target is activated. The target appears larger on the chart. A green line attached to the target indicates the heading of the target. The MMSI, speed, and direction of the vessel appear beneath the target, if the details setting has been set to Show. If the AIS transmission from the vessel is lost, a message banner appears.
×	Target is lost. A green X indicates that the AIS transmission from the vessel is lost, and the chartplotter displays a message banner asking whether the vessel should continue to be tracked. If you discontinue vessel tracking, the lost target symbol disappears from the chart or the 3D chart view.
	Dangerous target in range. The target flashes while an alarm sounds and a message banner appears. After the alarm has been acknowledged, a solid red triangle with a red line attached to it indicates the location and the heading of the target. If the safe-zone collision alarm has been set to Off, the target flashes, but the audible alarm does not sound and the alarm banner does not appear. If the AIS transmission from the vessel is lost, a message banner appears.
×	Dangerous target is lost. A red X indicates that the AIS transmission from the vessel is lost, and the chartplotter displays a message banner asking whether the vessel should continue to be tracked. If you discontinue vessel tracking, the lost dangerous target symbol disappears from the chart or the 3D chart view.
<u> 1</u>	The location of this symbol indicates the closest point of approach to a dangerous target, and the numbers near the symbol indicate the time to the closest point of approach to that target.

Setting a Route using Auto Guidance

On the chart, navigate to your desire destination. Tap to place a marker and then select 'Auto Guidance' from the top ribbon/menu bar that appears.

Auto Guidance

⚠ WARNING

The Auto Guidance feature is based on electronic chart information. That data does not ensure obstacle and bottom clearance. Carefully compare the course to all visual sightings, and avoid any land, shallow water, or other obstacles that may be in your path.

All route and navigation lines displayed on the chartplotter are only intended to provide general route guidance or to identify proper channels, and are not intended to be precisely followed. Always defer to the navaids and conditions on the water when navigating to avoid groundings or hazards that could result in vessel damage, personal injury, or death.

NOTE: Auto Guidance is available with premium charts, in some areas.

You can use Auto Guidance to plot the best path to your destination. Auto Guidance uses your chartplotter to scan chart data, such as water depth and known obstacles, to calculate a suggested path. You can adjust the path during navigation.

Setting and Following an Auto Guidance Path

- 1 Select a destination (*Destinations*, page 56).
- 2 Select Navigate To > Auto Guidance.
- **3** Review the path, indicated by the magenta line.
- 4 Select Start Navigation.
- 5 Follow the magenta line, steering to avoid land, shallow water, and other obstacles (*Route Color Coding*, page 55).

NOTE: When using Auto Guidance, a gray segment within any part of the magenta line indicates that Auto Guidance cannot calculate part of the Auto Guidance line. This is due to the settings for minimum safe water depth and minimum safe obstacle height.