# Owners' Notes *Fair Winds* 2008 Island Packet 370

Dear Friends,

Welcome aboard to Fair Winds!

Our 2008 Island Packet 370 is a great choice for your cruising vacation. We love sailing and had completed our Bareboat Sailing Courses with San Juan Sailing in 2018 and then became charter guests 2019 so we knew they were a well-run charter company. We looked carefully for the perfect San Juan and Canadian Gulf Islands' cruiser, which lead to acquiring *Fair Winds* in 2019. Island Packets are recognized to be among the best built yachts in the world.

We know everyone will make many wonderful memories sailing *Fair Winds* in the San Juan Islands, southeast Alaska, and up the outside of Vancouver Island. Our hope is that you will enjoy *Fair Winds*, and maybe even cherish her, as much as we do.

If you can think of anything ... anything at all ... that would make her more enjoyable for you, please let us know through San Juan Sailing. We've tried not to overlook any detail in our effort to make her our ultimate sailboat.

"Fair Winds" is defined as "safe journey, good fortune." An early example of the phrase is in Herman Melville's *Moby Dick*, published in 1851, where near the end is says, "Let me square the yards, while we may, old man, and make a fair wind of it homeward."

Thanks for being our charter guests, we wish you Fair Winds and Following Seas.

Sincerely,

*Fair Winds* Crew Maintenance Professionals – Mike's Marine Service (808) 640-8909. Owner's – (469) 275-6219.



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# **1. Vessel Specifications and Information**

Washington State Parks Annual Permit Decal – Located on the anchor roller, port side.

**U.S. Customs Re-Entry Decal** – Located on the aft side of the helm binnacle.

**Vessel Official Number 1212366** – Vessel Name's number is located on the bulkhead above the salon dining table. Look for 3" high characters.

AIS MMSI No. 367402110 – Programmed into the VHF radio to transmit *Fair Winds* position and vessel data (heading, speed, vessel name, MMSI number). Refer to Section 13, Electronics/Instruments, for detailed description of AIS and vessel name's capability.

Make	Island Packet
Model	370
Year Built	2008
LOA	37' 10"
LWL	31'
Beam	13′ 1″
Draft	4' 3"
Mast height	54' 3"
Water Tank	160 US gal
Fuel Tank	75 US gal
Holding Tank	55 US gal
Displacement	23,800 lbs
Ballast	8,400 lbs
Engine	54 hp Yanmar
Cruising RPM	2100-2400
Propeller	3 blade fixed pitch
House Battery Capacity	315 amp-hour (3 @ 105 AH each)
Engine Battery Capacity	106 amp-hour (1 @ 105 AH)
Shore Power	30 amp / 120 VAC
Sails	Jib, Staysail, Main all furling
Navigation Electronics	B&G Zeus 2 chartplotter
Other Electronics	iPad Mini with sailing apps and files
VHF	B&G V50 VHF w/ B&G remote
Stereo AM/FM/BT	Fusion MS-RS70NSX
Staterooms	Double forward and Double aft
Headroom main salon	6'5"
Heads	1 on-suite to Forward Stateroom
	with separate shower
Refrigerator	New in 2020
Freezer	New in 2020

# 2. Nuances

There are a few things about *Fair Winds* that are not 'typical'. These are the things that may require special attention or deviation from customary operating procedures. We have listed some here because we believe they will help you plan your charter.

**Anchor**: When used the anchor windless to retrieve the anchor please leave a small amount of slack in the anchor chain so that the anchor is not tight against the roller. If the anchor chain is too tight this will place extra stress on the windless causing premature failure. **See Section 4 Anchor**.

**Anchor Light:** Fair Winds' anchor light is not visible form the boat deck due to the shape of the masthead. Check the anchor light function from the dock before leaving the harbor. The anchor light is LED and not likely to burn out.

**AC outlets**: The AC circuit breaker switches (Port and Starboard) on the electrical panel above the port salon must be "ON" for the outlets to work. The AC outlets will only work underway with the inverter turned "ON" (located behind the seatback cushion just below the electrical panel).

## Battery Management

- Fair Winds has three house batteries, which provides ample (300 A/hr) capacity. However, there are also electronic systems that require a lot of power. The systems that draw the most current may not always be obvious. See Section 6 Batteries/Charging/Inverter.
- *Fair Winds*' batteries can be charged while motoring or while connected to shore power. However, depending on the state of charge in the house batteries, it can take more than 3 hours under power or more than 10 hours on shore power to fully charge the batteries. **See Section 6 Batteries/Charging/Inverter.**
- If charging the batteries with the engine alternator, the engine must be running at least 1200 rpm. The output of the alternator is not optimum at lower RPM and the batteries will not charge effectively if the engine is just idling. See Section 6 Batteries/Charging/Inverter.

**Bow thruster**: The engine *must* be running to use the bow thruster. Operate thrusters in short bursts when maneuvering in tight spaces. DON'T run the thruster more than 2 minutes continuously as this will overheat the motor. The controller is activated by pressing both left (red) and right (green) buttons simultaneously. Right (green) button moves the bow to the right, left (red) button moves the bow to the left. Turn off using the OFF button. The thruster automatically turns off after 30 minutes of inactivity (no audible tone). Using the thruster only on battery power will very quickly deplete the batteries. See Bow Thruster Section 9.

**Cabin hatch**: The companionway has a sliding top panel and three slat boards, all must be closed to lock the hatch. There is a pin and hole on the portside of the companionway, which allows the slat boards to be "locked" in place. This is a great safety feature for sailing/steaming in heavy seas. Unless it's a requirement based on the sea state it's not recommended to use this feature.

**Chain Locker**: The Chain Locker is connected to the bilge. The holding tank seacocks and valves located in the forward stateroom under the cabin sole is part of the bilge. You may see some water in this bilge area. As long as there is a small amount of water it's normal.

**Cockpit Lockers**: There are 5 locker located in the cockpit. These lockers are not waterproof so please don't use these for storage of items overnight that you may not wish to get wet when it rains.

**Dodger**: Please don't scrub the clear plastic part of the dodger. This plastic is soft and will scratch very easily. Use only fresh water to rinse the dodger.

#### Handling Characteristics

- Fair Winds handles well under sail or power but she is a heavy displacement, full-keel boat, and her handling characteristics reflect that fact. She will track very straight, both ahead and in reverse. Fair Winds will carry way even when shifting into neutral. Fair Winds will not turn while idling in reverse with the wheel; the bow thruster may be used to control your direction in reverse or will quick short bursts of power followed be neutral. See Section 23 Sailing and Rigging.
- Keep in mind that *Fair Winds* is a cruising yacht not a racing boat. She will move in light air but don't expect light, fin-keel sailboat type performance. **See Section 23 Sailing and Rigging.**

**Heads and holding tanks**: The head are equipped with a raw water toilet. Pump-out access port is located on the port deck midship. The caps screw out/in to open/close. Use the small tool located in the nav station (overtightening will make it hard to reopen).

**iPad**: Located at the Nav Station in the Aft Statement. This iPad has some of the useful manuals for various systems such as the diesel heater as well as some sailing apps such as Windy and iNavX. The code is the same as the door lock.

**Mainsail**: The mainsail does not have telltales because the in-mast furling system. Telltales tend to get lost and could bind the furler.

Prop walk: Notable to port in reverse but may be easily off-set by the bow thruster.

**Shower Sump Operation:** Be sure the shower sump breaker is turned on at the electrical panel before showering or using the sink in the head. The shower and sink drain to a sump below the sole at the forward end of the salon. The sump will quickly overflow if the sump pump is not turned on or is not operating properly. **See Section 24 Shower.** 

**Salon Cushions**: Please don't pull on the cushions by the fabric. This places stress on the seams leading to failure of the stitching. The seat backs have wooded back to provide back support. Move the seat cushions with both hands.

**Salon Table**: We keep the table folded up and out of the way when not in use. To fully open the table, fold out the second leaf and support it with the two suction-cup legs that are stowed in the salon hanging locker starboard side. Please be careful with seating at the table with the suction-cup legs in place as they can be moved causing damage to the table.

**Stateroom doors**: The latch which keeps the door closed must be in the full up or down position when closing the door otherwise the door will not close completely and damage the wood. The doors fold in half and when closed are held closed by a latch at the bottom of the door. Ask for help working these doors when completing your check out.

**Storing the fenders and dock lines**: The fenders can be stored in the starboard lazarette. Extra dock lines are stored in the port cockpit locker.

**Swim platform**: The swim platform may be accessed in the middle of the cockpit over the helm seat. Raise the door, pull the black treads up to clear the bracket, and pull the ladder out.

#### (Updated January 2023)

**USB Outlets**: Both electrical outlets in the forward cabin have USB charger outlets built into the outlets, which only work with the AC power turned on. One double 12VDC outlet located at the Nav station will work with battery power after turning on the circuit break on the DC side.

# 3. Emergency/Safety Equipment

Emergency/Safety Equipment Locations: You are not likely to need these but must know their location.

**Bilge Pump (Manual) and Handle**. Manual bilge pump is located on aft face of starboard cockpit near the helm. The bilge pump handle is located inside the starboard cockpit locker. Note: if water rises above floorboards you can use shower sump pumps also in emergency.

**Carbon Monoxide Detector.** Main Salon near the Wallas heater control panel on the starboard side hang-up cabinet.

**Cockpit Cushions**. In case of MOB, throw anything that floats, quickly.

**Emergency Tiller**. Long curved pipe mounted in the top of the starboard lazarette.

**Fire Extinguishers (3)**: In galley under the sink, in the starboard hanging locker in the salon, and in the aft stateroom behind the door.

**First Aid Kit.** The ship's first aid kit is located in the port cabinet above the settee. Please notify San Juan Sailing of any items are used from this kit during your trip so they may be replaced.

**Flares**. Electronic flashing beacon replaces conventional flares, in plastic bin with green top labeled "Emergency Equipment" behind the back cushions in the port salon seating area.

Flashlights. Inside the Nav station table and under the companionway stairs.

**Horn, handheld.** In the port side lazarette locker table and an extra canister is located in the "Emergency Equipment" behind the back cushions in the port salon seating area.

**Lifesling.** Starboard stern pulpit. Please review the cartoons on the face of the case for procedures. The lanyard is secured to the boat so that tossing the floating harness allows it to tow behind the boat like a ski tow rope. Circling the person overboard will draw the recovery line near them.

**PFDs (2 vests, 4 inflatables)**. Located in the salon hanging locker on the starboard side. NSO: please check for "green" visible at bottom of clear canister before each cruise. That verifies the auto-inflate function when immersed. We wear these at all times when working the deck and often in the cockpit.

**Tapered Plug, Universal Foam Orange StarPlug.** In "Emergency Equipment" behind the back cushions in the port salon seating area.

Tools and Spares. Tool boxes are located in the aft stateroom under the cabin sole near the Nav station seat.

**VHF Radios**. Channel 16. VHF base unit is located at Nav station as well as a handheld repeater, which should be used at the helm when underway.

# 4. Engine

## **Highlights**

- Fair Winds' Yanmar 54hp 4-cylinder diesel will provide many hours of cruising pleasure.
- Maximum RPM is 3100. Cruising RPM is 2000-2500. Comfortably cruise at 6-7 knots at about 2200 rpm. Idle is around 900 RPM, which propels Fair Winds at 3 knots in no wind conditions. It's OK and in fact preferred to vary engine speed as you cruise. Please try not to exceed the 2500 cruising RPM.
- The fuel tank holds an ample 75 gallons of diesel providing a considerable range. Access to the engine for checking the oil is very easy, through a small door in the galley.

## **Details**

## Before Starting Engine

## Inspect the raw water strainer for debris:

- Unscrew the top of the strainer (located under an access panel in the center of the salon area), clean out any debris, and then replace it.
- Close the thru-hull before unscrewing and opening the strainer (strainer is below the waterline).
- In case of an engine overheat alarm, check for eelgrass clogging the strainer.
- Sea water intake seacock located in this compartment.

We recommend performing the following inspections departing on your vacation:

• Remove the front engine access panel located just behind the companionway steps to access the engine compartment (there is no need to remove the stairs to gain access, which is rather heavy). *Look around and below* the engine for any signs of oil or other fluid leaks.

*Check belt tightness*. If you hear the belt slipping please report that to San Juan Sailing. The belt must be checked by the maintenance professionals. Mike's Marine Service (808) 640-8609.





#### Inspecting the Engine

We recommend performing the following inspections each morning before getting underway:

- Check oil level the dipstick may be accessed through the small door on the starboard side of the engine compartment in the galley. If the oil level appears to be low, contact San Juan Sailing before starting the engine.
  - For longer charters (> 7 days), check the oil level once a week. If you need to add oil, there is spare oil stored in the container marked "Engine" spares behind the starboard salon seatback.
  - The oil filler caps is located on top of the engine. Do not overfill, add no more than a cup at a time and re-check the oil level.
- The fuel filter is on the left (starboard) side engine access door.
- *Check the coolant level*. Anywhere between the two lines (high and low) on the overflow reservoir is where you want to be.
- Check the fuel level the gauge is under the dustpan at the foot of the companion ladder.

# <image>

#### Starting the Engine

A key is need in the staring process. The main battery engine switch, located in the port salon settee, must be in the "ON" position to start the engine.

- 1. Ensure that the throttle/gearshift is in neutral.
- 2. Insert and turn the key clockwise.
- 3. The 2 red lights for oil and water pressure will illuminate. A buzzer alarm will sound until the engine is running.
- Push the black "START" button to the right of the key – hold the button until the engine starts (should only take 2-3 seconds). Do not crank for more than six seconds
- 5. Look for the tachometer to come up to about 900 rpm.
- If starting is slow push the black "Battery Parallel" button, which gives extra starting power from the House Batteries.



Fair Winds Owners' Notes	(Updated January 2023)
7. Also, note that the oil pressure has risen to	
about 70 PSI.	
8. Listen/look for water discharging from the aft	
starboard end of the hull.	
9. If water is not in the exhaust immediately	
shut the engine down	
10. Contact SJS. (360) 671-4300.	

When docked in a marina, or leaving the boat for an extended period, switch the engine battery switch to "OFF" and lock the companionway hatch.

**OPERATING TIP**: Allow 5-10 minutes of warm up before placing a load on the engine. It stresses a diesel engine to be placed under load when cold. Letting the engine warm up while organizing the deck is a great way to accomplish this task. We recommend targeting 1000-1200 RPM for warm-up and battery charging.

## Running the Engine

- Engage forward or reverse gear by moving the transmission directly from Neutral to Idle-Forward or Idle-Reverse (the transmission will click into each setting), pause momentarily, then move the throttle forward/backward smoothly to your desired RPM setting. Engaging the transmission in jerky incremental steps can slip the clutch, causing damage over time.
- To keep the transmission "healthy" when shifting from forward to reverse and vice-versa, pause ~2 seconds in the 12 o'clock neutral position (say "one and two and") before shifting gears.
- An economical cruising speed of 6-7 knots is achieved at 2200-2800 RPM, which uses about 0.5 to 0.75 gallons of diesel per hour. Please <u>do not</u> exceed 3000 RPM: it's hard on the engine and fuel consumption goes way up with very little increase in speed. We recommend keeping the engine speed under 2500 RPM for most operating conditions.
- To avoid sucking in air or sludge when the fuel level approaches ¼ of a tank, refuel when the fuel drops below ½ full and before it reaches ¼ full. The tank holds 75 gallons, so topping up at about 35-40 gallons is a reasonable exercise and doesn't take too long.

## Shutting Down the Engine

- 1. Allow the engine to idle for a few minutes in neutral to cool down. This can be accomplished by just let the engine idle while tying the dock lines.
- 2. Return the throttle lever to the neutral position.
- 3. Press the red "OFF" button to the right of the ignition switch, which will stop the engine.

- 4. The 2 red lights for oil and water pressure will again illuminate after the engine as stopped. A buzzer alarm will sound until the key is turned off.
- 5. Turn the key counterclockwise, remove, and replace back in the nav station table.

**SAFETY REMINDER** – Never stop the engine by turning off the battery switch. Doing so will seriously damage the diodes on the alternator and the batteries will no longer charge.

<u>Troubleshooting Engine Problems:</u> Yanmar engines are incredibly durable and you shouldn't have any problems on your voyage. Nevertheless, there are a few things to watch out for:

#### Engine Overheating

- If the engine overheat buzzer sounds while the engine is running, it's usually no more serious than eelgrass plugging up the raw water strainer. The solution to this problem is prevention keep an eye out for eelgrass mats, especially along those "soapy" looking tide and eddy lines in the water, and don't run over it. When eelgrass gets sucked into the engine cooling water intake, it collects in the raw water strainer.
- To clear eelgrass from the raw water strainer, stop the engine, twist off the clear screw-top and extract the eelgrass. Replace the lid and tighten by turning it clockwise until the lid is seated firmly on the rubber gasket. Don't over tighten as the lid can crack. Make sure the lid's threads are not crossed as this can give the appearance of a tightened lid but the gasket won't seal. Then restart the engine. If after restarting the engine it overheats again, check the seal between the strainer, the rubber gasket, and the lid. If the strainer is drawing air, it won't draw water. If needed, open and then retighten the lid on the strainer and check to make sure the rubber gasket is in place in the lid (and not lying in the bilge).
- If the above steps fail to solve the problem, call San Juan Sailing for assistance.

#### Loss of Oil Pressure or Coolant

- If the engine loses oil pressure, the warning buzzer will sound and the oil icon warning light on the tachometer will light up, so check which light is showing red. If it's the oil light, shut down the engine, check the oil level, and contact San Juan Sailing.
- The alarm buzzer is more likely to indicate engine overheating, and the temperature icon light will light up. Before you shut down the engine, check for water gurgling out the exhaust. If you have a "wet exhaust," check the coolant level in the overflow reservoir bottle. If none is seen, add enough to reach the top-level line on the bottle. After the engine cools down, remove the cap on the engine block and add coolant. And check the bilge for a light orange liquid (coolant). If coolant is found in the bilge, call San Juan Sailing immediately.
- If the coolant reservoir bottle is full, check to see if the engine threw a belt. Without a belt on the raw water pump, the coolant won't circulate and cool the engine. Replacement belts are in the engine spares kit. One other possibility is that the impeller in the raw water pump has failed. While

they are replaced each spring with a new one, it's still possible that a hard object may be drawn in and break off an impeller blade. A replacement impeller is found with the engine spares. Call San Juan Sailing if you suspect you have an impeller problem.

**OPERATING TIP: Bottom line – you're on vacation!** If the engine is giving you problems, call SJS for assistance **(360) 671-4300.** They have repair teams in the Islands to assist you.

#### Boat Handling with the Engine

- Fair Winds has a full-foil keel is not as responsive as a fin keel sailboat but is still able to turn in a narrow radius.
- San Juan Sailing offers free handling instruction before you leave for your charter.
- Spending 30-60 minutes practicing getting in and out of the Bellingham marina can be a great experience.
- The Bow Thruster shouldn't be used as a substitute for good boat handling skills but can be used as a great aid in low speed maneuvering.

#### Forward

Because the propeller is just aft of the keel and close to the rudder so wash from the prop acts on the rudder almost immediately; not much of a delay should be anticipated when maneuvering in tight spaces. A short burst of throttle will direct water at the rudder, which if already turned, will result in a short, sharp turn with little forward movement – a strategy that can be handy when turning in confined spaces.

## <u>Reverse</u>

*Prop walk* is to **port** in reverse. With the shifter in reverse *Fair Winds* will not turn. When driving in reverse make short power busts followed by placing the shifter into neutral. This will negate most of the prop walk and make driving in reverse more pleasurable. Grip the wheel firmly wheel when in reverse: water pressure on the aft edge of the rudder can push the rudder over to one side, which is hard on the steering mechanism (and your arms).

## <u>Docking</u>

- *Fair Winds* will not stop quickly when you put the engine in neutral. Like all heavy boats, *Fair Winds* will carry way on (motion) even with the engine in neutral. Remember this fact when docking to avoid inadvertently striking a dock or adjacent boats.
- Unless there are high winds, we typically motor in the marina in Idle-Forward, which will produce a boat speed of about 3 knots. About 3-4 boat links from our target dock, we shift to neutral and glide in. Use of a short burst in reverse may be necessary to stop her after entering a slip. Down the engine until the vessel is secured at the dock.

(Updated January 2023)

- *Fair Winds* is very beamy (13' 1"), it helps to have someone assist the skipper from the bow or the widest point of the beam otherwise it is difficult to determine whether the boat is too close or too far from the dock.
- *Fair Winds* will back straight in idle reverse (with some prop walk) but her stern will swing slightly to port if bursts of throttle are applied in reverse. In idle reverse, use the thruster to keep the bow oriented in the desired direction. She will not turn in idle reverse using the wheel so use the bow thruster to control your orientation.
- Use the thruster to assist the helm in turning into or out of slips in calm conditions with no cross current, Fair Winds can be pivoted with the thruster to align with a slip.
- The full foil-keel makes *Fair Winds* very sensitive to cross currents be aware of currents, particularly if they are running in a direction different from the wind.
- Use a spring line from the midships cleat as the primary control after stepping ashore with this line secure, *Fair Winds* can be aligned in the slip using the bow thruster and/or bow and stern lines
- In windy conditions, some power will be required to keep from falling off during docking use bursts of power in reverse to stop her but keep in mind these bursts will cause the stern to pivot to port (and the bow to pivot to starboard).
- We always have someone on deck with the roving fender available "just in case".
- You can stow the fenders in the starboard lazarette or stern rail. Some extra dock lines are located in the port cockpit locker.



**SAFETY REMINDER**: It's difficult for people holding lines on the dock to stop the momentum of a heavy cruising sailboat. Using a dock line on a cleat can stop movement; this can result in a sudden swing of the boat and damage if there is too much momentum. And please, no crew should jump to the dock. If you can't step off calmly back-up and try again.

When coming into our docks in strong winds, or if you'd just like a little assistance on arrival, hail "San Juan Sailing" on **VHF Channel 80**. They'll be glad to offer some coaching and/or catch your lines. In fact, most marinas in the Islands will help you if you hail them and ask for assistance. Asking for docking assistance is a sign of smart seamanship.

**SAFETY REMINDER:** Whenever you are departing or arriving at the dock have a crew member designated as the "**roving fender**" team mate. If you are going to accidently "touch" a boat or other object, lower the fender to the point of contact.

#### (Updated January 2023)

<u>Using the Bow Thruster</u>: The bow thruster allows you to control bow alignment using short bursts when docking or departing (See Section 9 Bow Thrusters for details).

# 5. Bow Thruster

## <u>Highlights</u>

- Activate the controller at the helm by simultaneously holding the two "ON" pushbuttons.
- Maximum continuous use of the bow thruster is 2 minutes.
- Use minimally, in short 1-2 second bursts. Continual use will overhead the thruster and shutdown. It will shut down and not restart until cool – 30 minutes.



#### **Details**

- Press both "ON" buttons simultaneously to ready the thruster for use a green light (just between the 2 "ON" buttons) will illuminate indicating the 7.5hp Side-Power bow thruster is ready.
- The bow thruster is controlled by the joystick on the instrument pod in the cockpit (see photo above)
- Turn the bow by pushing the control toggle in the direction of desired bow direction. It is best to use short bursts on the thruster to control movement and avoid overheating the electric motor.
- Most of the vessel maneuvering should be done using the engine and rudder. The thruster is meant to be used for small corrections during your final approach into the slip or emergency situations to keep from hitting another vessel or dock.
- There is no circuit breaker for the bow thruster. There are in-line fuses on the electric bow thruster motor and in the port aft stateroom (for the bow thruster battery charger). Spare fuses are attached, but they are seldom if ever needed. Because the thruster draws significant current, *never* use the bow thruster when the engine is not running

Caution: Overuse will deplete its battery.

Caution: The bow thruster is powerful enough to push into a 30 knot sidewind. It will rotate the boat on its keel and can swing the stern sharply into the dock. Position crew with fender between stern and dock when departing and arriving.

# 6. Anchors

## **Highlights**

- Windlass controller is just forward of the anchor locker on the foredeck.
- The primary anchor is lowered using the electric windlass. Windlass breaker under the port salon seating area.
- The primary anchor is a 55lb Rocna on the bowsprit (starboard anchor roller) with 175' of 5/16" chain and 130' of anchor line the anchor is well-suited for the holding ground in the Pacific Northwest.
- Operate the windlass *only while running the engine*.
- Turn ON the Anchor light overnight.

#### **Details**

Main anchor – 55 pound Rocna anchor mounted on the bowsprit.

- The primary anchor chain is marked with yellow poly line interwoven, one at 25', one at 50', one at 75', two at 100', and one at each 25' thereafter. There is a sign on the inside of the anchor locker door as a reminder
- The chain is followed with 1 piece 130' of anchor line for a total of 305 feet of line.

<u>Snubber</u> – The snubber line is attached to the anchor chain on deck. We use a snubber employed for overnight if a light breeze predicted. The snubber is not required for nesting the anchor underway (use the installed deck break between the windlass and the anchor roller).

• The windlass gypsy is not designed to hold the boat while anchored, so please use the snubber line attached to the single chain hook to hold the chain while anchored. Connect the chain hook to the chain just after it exits the bow roller, then lead the snubber lines outside the lifelines directly to the bow cleats on each side of the bow. Let the chain out after this until the snubber lines are taking the load and the chain is slack coming off the bow roller. Secure the anchor after retrieval with the crown pin above the roller.

<u>Secondary</u> – Heavy duty but lightweight aluminum Fortress anchor stowed in the starboard lazarette locker, with 30' 3/8" chain and 130' rode in separate bag.

#### To Deploy Main Anchor:

- 1) We check tide tables to determine current water level and amount of drop while anchored. (Weather ch 4, "Northern Inland Waters" or ch 7 helps select an anchorage).
- 2) Start the engine. *Do not run the windlass without the engine running*.
- 3) Turn on the power to windlass using the breaker switch located under the port salon seating area.
- 4) Normal for the islands is a 4-to-1 scope, bow to bottom (add 5 feet to depth sounder reading: 4' freeboard and 1' for transducer below waterline). In the San Juans', anchorages are often about 25' bow to bottom, so we often deploy about 100' chain—hence the 10' marker at 100'.
- 5) Flip up the cam brake on the anchor chain, just ahead of the windless.

(Updated January 2023)

- 6) To avoid hitting the hull we push the anchor forward keeping the shank *level* before gradually allowing the shank to rise as we ease it forward slowly into the hanging position (no swing!). Otherwise the flukes anchor into the fiberglass of the bow (Ouch!).
- 7) Depress the "DOWN" footswitch for the windlass and let out the desired amount of anchor chain.
- 8) Lower the anchor to approximately the number of feet on the depth sounder so the anchor is on the bottom by depressing the "DOWN" switch.
- 9) A signal to the helmsman prompts reverse at idle speed while deploying rode to the desired scope.
- 10) We then allow the anchor to set and to stop the boat while it continues in reverse, idle speed. We then line up objects on shore to determine if we are holding, staying in reverse at idle for about one minute.
- 11) Stop the windlass, attach the snubber line over the bow sprit to the chain and secure it to the forward cleat on starboard side of the bow, and then release the chain tension on the windlass by a tap on the "DOWN" footswitch. [The subber line is stored in anchor locker.]
- 12) Flip the cam chain lock back on the chain.
- 13) Then ease the windlass so it is not under strain.
- 14) If stronger winds are forecast, we test with RPM at half the projected wind speed (60 seconds at 1,000 rpm for winds to 20 knots; 1,500 rpm for 30 knots, etc.), *after* setting snubber. (We check movement shoreside, not the significant prop current going by the chain.)
- 15) In storm conditions (or storm forecast), you can increase scope if there is adequate room to leeward.
- 16) The secondary anchor is available for additional holding power if a storm is anticipated but best if set before the storm hits.
- 17) If anchored in a small cove, you may wish to deploy a stern tie line ashore. 600' floating polypropylene on a reel resides in starboard lazarette locker. Use the mop handle as an axle through the reel; set mop handle on helm seats. Deploy the line with the dinghy while the spool unwinds. If sufficient length, bring the line around a secure shore object and back to the boat to a transom cleat for ease of retrieval.
- 18) Turn the windlass breaker switch off.



Imtra Windlass Breaker on the right

## To retrieve the anchor:

- NOTE: When you pull the anchor back up, please stop when the anchor clears the water and pull the chain by hand to get the anchor into its final position on the bow roller. Once it is there, put the locking elbow plate on the anchor chain and just slightly bump the windlass to pull in most of the slack chain, but do not pull the slack tight with the windlass. If you tighten the chain, the windlass can bend its shaft resulting in it not being available for your next anchorage.
- 1) Start the engine, *do not run the windlass without the engine running,* given that the windlass draws from the battery.

- 2) Turn on the circuit breaker is below the port salon settee forward of the battery breakers.
- 3) Take off the snubber line by taking in a little chain.
- 4) Depress port "UP" switch in short spurts, always assuring the chain is vertical during retrieval—this avoids either towing the boat or dragging the chain against the hull. Into a breeze, we engage forward gear as needed but exercise care that we don't over run or drag the chain against the hull.
- 5) When the anchor just breaks the water stop the windlass to ensure the anchor does not hit the bow.
- 6) As the anchor nears the anchor roller, use short toe taps on the footswitch to finish bringing the anchor on the roller.
- 7) A mountain on chain under the windlass can jam it and in rare cases cause a wild gravity runout of rode. If that happens, stand clear for safety. We avoid that chain "mountain" by "lifting" the chain forward in the well as it is retrieved, using the boat hook. We grab the chain with the boat hook and pull it forward as another crew feeds it by pressing the "up" switch, 2'-3' at a time. Important for the initial chain retrieved. Last 50' can stack under windlass ok.
- 8) As the length of rode remaining approaches the water depth, the sound of the windlass laboring alerts us to immediately stop. Sometimes a brief pause will cause the anchor to break free, given the 90 degree angle of pull. A brief tap on the button, if laboring, says to break out the anchor with the engine in idle forward, not with the windlass.
- 9) To nest the anchor without chipping the hull, the anchor may need to be swiveled. We use the windlass to bring the anchor shank up and over the bow roller in one continuous motion, then nest the anchor by hand.
- 10) After nesting, with a **slight** *slack in the chain*; we secure the anchor once again with the lsnubber on the windlass-mounted cleat. As noted, the chain is only "un-snubbed" when it is moving in or out.
- 11) Reminder: cover the windlass switches before closing the anchor locker lid.
- 12) Turn off the Windlass circuit breaker panel to avoid burning out the pump!
- 13) Put the rubber caps down on the footswitch when done.
- 14) Turn breaker switch off.
- 15) SECURE ANCHOR ON BOW WHILE UNDERWAY:

While underway make sure to secure the anchor on the bowsprit using the chain lock and hooking a snubber or anchor bridle to the anchor chain and cleating the snubber line or bridle to a bow cleat. When using the anchor chain lock to secure the anchor to the bow, be sure to insert the pin through the anchor chain lock over the cam to prevent the lock from popping open. If the anchor is not properly secured on the bowsprit while underway it can fall off the bow and cause serious damage to the boat.

# 7. Electrical

## **Highlights**

<ul> <li>The AC and DC panel breakers use a color dot code scheme shown on right:</li> </ul>	ON IF SHOREPOWER     ALWAYS ON
<ul> <li>The electrical panel is located just above the port salon settee behind two cabinet doors.</li> </ul>	ON UNDERWAY     ON AS NEEDED
<ul> <li>Primary shore power breaker is located to the upper left of the panel. The main DC breaker located on house DC panel just under the port salon settee.</li> </ul>	• ALWAYS OFF •
• The port and starboard outlets breakers on the upper left of the AC side of the electrical panel.	
<ul> <li>Never turn off the batteries at the battery control panel below the aft end of the port salon settee - always leave the battery switches on (correct position denoted by the green dots)</li> </ul>	

#### Switches and Controls on the Electrical Panel

The electrical panel is in the main salon on the port side behind two cabinet doors. Here are some things to note:



- **Shore Power**: The AC circuit breakers are along the left side of the panel. There is a "SHORE MAIN 30 AMPS" breaker to turn on AC power after the shore power has been connected. When the AC is ON, an orange LED light is illuminated in the upper left-hand corner of the panel.
- **Water Heater**: Activate the electric hot water heater when you are on shore power (when the engine is running it heats the water through the heat exchanger).
- **Battery Charger**: Turn ON the battery charger switch whenever you are connected to shore power. It <u>must</u> be "ON" to charge the batteries while on shore power.

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- AC Outlets: Activate this switch to turn ON the AC electrical outlets located throughout the boat, run the microwave oven, the TV, and the electrical outlets. NOTE: there are an "OUTLETS PORT" and an "OUTLETS STBD" breakers for the AC outlets.
- Water Pressure: The 12VDC water pump makes a sound when running to pressurize the system. If you don't hear the pump start when you turn it ON at the panel, it means that the system is at working pressure you should hear the pump start again after you use some fresh water. Note that the marine toilets use raw water and do not impact the fresh water supply. Shower, sinks, and cockpit shower use the fresh water supply.

**OPERATING TIP**: When underway and if no one is below decks, we turn the water pump OFF.

- **Cabin Lights**: There are a "CABIN LIGHTS PORT" and a "CABIN LIGHTS STBD" breakers to power the LED cabin lights. They must be "ON" before you can turn on any lights on the boat, except a curtesy light on the starboard side of the companion way.
- Icebox Units: We usually leave the left and right icebox (fridge) breakers "ON" whenever we're on the boat. If the house battery charge level drops below 12.3VDC and you aren't planning to run the engine/ connect to shore power, turn the fridge off. Your provisions will stay cold overnight.
- **Electronics**: Turn this breaker "ON" to activate the B&G electronics, instrumentation, and multifunction display in the cockpit. This switch also provides power for the radar, depth sounder and knotmeter.
- Navigation Electronics: Turn this breaker "ON" to activate the B&G chart plotter on the starboard salon.
- VHF: Turn this breaker "ON" to activate the B&G VHF radio base unit and the handheld VHF charger at the nav station.
- Anchor, Running, and Bow Lights: When anchored or mooring, turn on the <u>Anchor Light</u> at dusk (located at the top of the mast). Fair Winds' anchor light is not visible form the boat deck due to the shape of the masthead. Check the anchor light function from the dock before leaving the harbor. The anchor light is LED and not likely to burn out. When motoring at night, turn on the mast-mounted <u>Running Lights</u>. Turn on the deck <u>Foredeck Light</u> if you must go forward on deck at night.
- **Bilge Pump**: This switch is on the battery panel (not the main electrical panel). Always leave the bilge pump setting in "Auto." Test the pump daily by switching to manual and listening for the pump to run, then return it to the "Auto" setting.

## <u>Details</u>

## Power Management

• *Fair Winds* has three AGM Group 31 house batteries that provide 300 A-hr of capacity. However, there is also has a lot of electronic systems requiring power to operate (a system that draws 10 A operating for 30 hours requires 300 A-hr of capacity). The systems that draw the most current may not always be obvious, as shown by the chart on the next page. Note that the current draw rating in the chart

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assumes the device is operating in maximum power mode (e.g. the stereo is running and volume is at maximum, the compressors on the refrigerator and freezer are operating, etc...). If you plan to be away from shore power for extended periods, think carefully about battery management and monitor battery charge closely.

- Fair Winds' house batteries can be charged while motoring or while connected to shore power. However, depending on the state of charge in the house batteries, in can take more than 3 hours under power or more than 10 hours on shore power to fully charge the batteries. If charging the batteries with the alternator while the engine is running, the engine must be turning at least 1200 RPM. The output of the alternator is not optimum at lower RPM, and consequently, the batteries will not charge effectively if the engine is just idling.
- Battery charge (both engine start and house batteries) can be checked with the voltmeter and toggle switches on the electrical panel.
- Fully charged batteries will indicate about 12.9 Volts when the battery charger is not operating a battery showing less than 12.3 Volts should be charged to ensure maximum performance (12.1 Volts is about 50% charge). The battery charger automatically senses the state of charge and regulates the charging current to prevent overcharging the batteries.



#### **Current Draw by Device (Amps)**

- The battery charger only charges the house and thruster batteries. The engine start battery is only charged by the alternator – if the engine start battery is depleted and will not start the engine, press the "Momentary Parallel" switch on the engine control panel while cranking the engine to draw power from the house batteries.
- While operating on battery power, the inverter is engaged by turning on the Xantrex inverter switch on the left side of the nav station and the "OUTLETS PORT" and/or "OUTLETS STBD" breakers on the AC panel.

## *Fair Winds Owners' Notes* Smart TV

- Power to the TV behind the starboard salon settee is provided by turning on the "OUTLETS STBD" breaker on the AC panel (if not connected to shore power, the inverter will provide power to the TV).
- The smart TV has some videos on the main menu that demonstrate how to use various functions.
- The TV has a digital antenna for watching broadcast television but choices are pretty limited in the Bellingham area.
- The TV accepts input from a laptop computer (HDMI1) or iPad (HDMI2) via the HDMI ports and Audio In ports (if your device does not send audio via the HDMI cable) on the back.
- Switch between TV inputs using the "Source" button on the remote.

## <u>Stereo</u>

- Power to the stereo is provided by the "Stereo" breaker on the DC panel.
- If the stereo is powered off when the breaker is closed, press the **red** "I" button on the bottom top left of the stereo to turn it on.
- Adjust volume with the round knob on the stereo.
- There are speakers in the salon and the cockpit.
- The stereo provides normal AM/FM reception but you can also pair your device to stream media.
- Listening to an iPod or iPhone:
  - Press the source (white arrow) button on the stereo to see the source input selections, then use the large knob on the left to scroll and select "BT" for Blue Tooth.
  - Then press the page button just to the left of the source button. This will allow you to pair your phone of tablet to the stereo.
- The stereo may be controlled from the B&G Zeus<sup>2</sup> 12" touchscreen multi-function display (MFD) using the "Audio" tab on the left of the display.
- You can control the Fusion stereo from your device using the Fusion Link App.
  - o https://apps.apple.com/us/app/fusion-link/id520377783



# 8. Electronics/Instruments

## **Chartplotter**

## <u>Highlights</u>

*Fair Winds*' electronic systems begin with the B&G Zeus<sup>2</sup> 12" touchscreen multi-function display (MFD), which is housed in a waterproof enclosure mounted at the helm.<sup>1</sup> The system rotates and tilts, so it's accessible from either helm. To activate the MFD and the other electronic systems on the boat, turn on the Navigation Instruments switch on the DC electrical panel in the main cabin.

Zeus<sup>2</sup> include:

- Chartplotter with Navionics<sup>™</sup> charts for US and Canadian Pacific Northwest waters
- GPS navigation
- Magnetic compass
- Autopilot with multiple navigation modes
- B&G's patented "SailSteer" system (you're going to love this!)
- Broadband 4G<sup>™</sup> Radar
- Marine Automatic Identification System (AIS) transponder and receiver
- Depth sounder
- Knotmeter
- Masthead wind sensor (speed and direction used in the calculation of true and apparent winds)
- Rudder angle
- Waypoints, routing and tracking
- Tides and currents (direction, rates, timing)
- Alarms (e.g., shallow depth warning)



*Zeus<sup>2</sup> application selection panel.* 

Instrumentation and navigation systems interfaced:

- FUSION audio system (controls selection of entertainment audio source and volume levels for the cockpit speakers; includes Bluetooth and USB connections for audio sources)
- GoFree<sup>™</sup> Wi-Fi-1 gateway (mirrors the Zeus<sup>2</sup> displays from anywhere on the boat using an iPad or Android tablet running the GoFree<sup>™</sup> app)

<sup>&</sup>lt;sup>1</sup> The operating manual for the Zeus is kept at the Nav station table in the aft cabin.

## <u>Details</u>

**SAFETY REMINDER** – Chartplotter depths are shown in feet (paper charts use fathoms, 1 fathom = 6 ft.). Starting at the 60-foot contour line (10 fathoms), depths are presented in blue. Start zooming-in the display when motoring or sailing inside the 10-fathom limit, giving you maximum detail.

#### **Basic Operations**



#### **System Controls dialog**

The System Controls dialog provides quick access to basic system settings. You display the dialog by making a short press on the **Power** key. The icons displayed on the dialog can vary. For example, the adjust splits option is only available if you are viewing a split page when you open the **System Controls** dialog.

## **Activating functions**

Select the icon of the function you want to set or toggle on or off. For those functions that toggle on and off, a highlighted icon indicates the function is activated, as shown in the Instrument bar icon above.



MOB (Man Over Board) mark

Vessel with extension lines

10 Range rings interval (optional)

Waypoint with Laylines

North indicator

Route

Track

Grid lines

Range rings

Chart range scale

Activate the Zeus<sup>2</sup> by pressing the **Power** button. Tap "**Accept**" at the license acceptance screen and the display will then show the page(s) last used, typically the Chart application. Most pages have a **Menu** to select functions and change settings. The green Menu button is located in the upper right-hand corner of a page. Tap

1 2

3

4

5

6

7

8 9



Chart page layout.

it once to open a menu, tap it again to close.

- Press the MFD's **Home** button (above the rotary control knob) to call up the application selection panel.
- Select **Charts** if they are not already displayed. The standard chart panel is shown in the diagram above. By default, the boat's position is displayed at the center of the chart with North up (towards the top of page). These defaults may have been changed by the last user, or you may want to use different settings. Several options are available (see below).

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- **Pan and Zoom** the display by swiping/pinching with your fingers, just like smart devices, or rotate the control knob to zoom in/out.<sup>2</sup> Also, you can use the Rotary knob on the panel.
- Tap on the Chart to position the cursor at a location. Select **Clear Cursor** to remove the cursor.
- To access the **Systems Control** dialog panel, tap the **Power** button quickly (works on any page). From the dialog panel, you can adjust screen brightness, adjust split screen displays, change what's shown on the instrument display bar, access system settings, turn the system off, etc.
- You can display multiple pages at a time. Press the **Home** key to get to the Apps page, press and hold the **Charts** icon to display the multi-screen presentations available.
- We like to see where we are going on the Chart display (not just where we are) and then we switch from the default "North Up" display to "Heading Up" or "Course Up." Extension lines from the boat's icon show you which is which blue is your heading, dark red is your course over ground (COG) (sailing laylines are shown in green and red). To change this display option, tap the Menu key in the upper left of the Chart display and select the Orientation menu item.

**SAFETY REMINDER** – Your heading and COG <u>will often be different</u> owing to the tidal currents in the Islands (20°-30° separation can and does happen). Monitor your COG when navigating to make sure you end up to where you wanted to go!

**OPERATING TIP:** If you turn off the Zeus<sup>2</sup> you may start hearing beeps a short time later. That will be an indicator from the B&G helm repeater that it has lost GPS data. You can cancel the warning, turn the whole thing off at the electrical panel, or re-start the Zeus<sup>2</sup>.

## <u>Autopilot</u>

Steer to the heading of your choice and press the **STBY/Auto** button, either the button on the autopilot control panel at the helm, or the **STBY/Auto** button on the MFD display. The system will switch to auto-helm and maintain the selected heading. Monitor the dark red (COG) and blue (heading) extension lines.

- To return to manual steering, just press the **STBY/Auto** button again.
- While using autopilot you can adjust your course left or right in 1° or 10° increments by using the buttons on the autopilot control panel or MFD display. Tap a button one time to change your heading by the indicated angle.

**SAFETY REMINDER** – An autopilot is a useful navigational aid but does not replace a human navigator. "Keep your head on a swivel" is still the best advice.

 $<sup>^{2}</sup>$  To select any item shown on the Zeus MFD, tap the item on the screen or select it with the rotary knob and press the knob button to activate it.

## Fair Winds Owners' Notes SailSteer

The SailSteer panel provides a composite view of key data while you are sailing. Press the **Home** key to access the Apps panel and select SailSteer. All data are displayed relative to the yacht's bow, providing an image of important sailing data. The SailSteer display can be shown as a full screen panel, in a multi-panel page, and/or as an overlay on the Chart panel. SailSteer panel layout:



## <u>Radar</u>

*Fair Winds'* B&G 4G radar is a key piece of safety equipment when fog or nighttime conditions limit your visual range while underway. This is not normally a problem during the summer sailing months, which boast long days and clear skies. But weather conditions can change quickly in the Pacific Northwest and the radar can help you navigate to a safe harbor when needed.

## Radar overlay

You can overlay the Radar image on the Chart. This can help you to easily interpret the radar image by correlating the radar targets with charted objects.

When the radar overlay is selected, basic radar operational functions are available from the Chart panel's menu.

## Selecting radar overlay source on chart panels

To select the radar source of the radar overlay displayed on the chart panel, use the **Radar options** and then **Source** chart panel menu options to select the radar source.

For chart pages with more than one chart with radar overlay, it is possible to set up different radars sources for each chart panel. Activate one of the chart panels and then select one of the available radars in the radar source menu option. Repeat the process for the second chart panel with radar overlay, and select an alternative radar for this panel.

The radar's operational modes are controlled from the Zeus<sup>2</sup> unit:

- **Off:** The power to the radar scanner is turned off.
- **Standby:** The power to the radar scanner is on, but the radar is not transmitting.
- **Transmit:** The scanner is on and transmitting. Detected targets are drawn on the radar PPI (Plan Position Indicator).
- The diagram below shows the features of the radar display:



**SAFETY REMINDER**: If you wake at moorage and fog is present please don't depart until visibility is at least ½ mile. Ferries and shipping traffic travel quickly here (18 knots+). The basic rule in the Islands is "if in doubt, don't go out!" Enjoy a breakfast, read a book, or watch a movie. You're on vacation!

## Waypoints

A waypoint is a user generated mark positioned on a chart, on a radar image or on the Echosounder image. Each waypoint has an exact position with latitude and longitude coordinates. A waypoint positioned on the Echosounder image has a depth value, in addition to position information. A waypoint is used to mark a position you later may want to return to. Two or more waypoints can also be combined to create a route.

#### Saving waypoints

You can save a waypoint at a selected location by positioning the cursor on the panel, and then selecting the new waypoint option in the menu. In the Chart and Nav panels, you can save a waypoint at the vessel position, when the cursor is not active, by selecting the new waypoint option in the menu.

If your unit has a **MARK** key, you can press this key to immediately save a waypoint. If the cursor is active, the waypoint is saved at the cursor position. If the cursor is not active, the waypoint is saved at your vessel's position.

#### Delete a waypoint

You can delete a waypoint from the **Edit Waypoint** dialog or by selecting the **Delete** menu option when the waypoint is activated. You can also delete waypoints from the Waypoints tool on the **Home** page.

New Waypoint at Cursor	×
028	
N 59°28.248' E 010°29.509'	
More options	🗱 • 📀 •
Save	Cancel

## **Touchscreen operation**

Basic touchscreen operation on the different panels is shown in the table below. The panel sections in this manual have more information about panel specific touchscreen operation.

lcon	Description
Xx }	<ul> <li>Tap to:</li> <li>Activate a panel on a multi-panel page</li> <li>Position the cursor on a panel</li> <li>Select a menu and a dialog item</li> <li>Toggle a checkbox option on or off</li> <li>Show basic information for a selected item</li> </ul>
<b>N</b> O35	<ul> <li>Press and hold:</li> <li>On any panel with a cursor to activate the cursor assist feature</li> <li>On a panel button to see available split screen options</li> <li>On a favorite button to enter edit mode</li> </ul>
	Scroll through a list of available options without activating any option.
h	Flick to quickly scroll through e.g. the waypoint list. Tap the screen to stop the scrolling.
A.	Pan to position a chart or Echosounder image on the panel.
N	Pinch to zoom out on the chart or on an image.
<>>	Spread to zoom in on the chart or on an image.

# *Fair Winds Owners' Notes* Panning the chart

You can move the chart in any direction by dragging your finger on the screen.

Select the **Clear cursor** menu option or press the **X** key to remove the cursor and cursor window from the panel. This also centers the chart to the vessel position.

## Depth Sounder and Knotmeter

To activate the depth sounder and knotmeter, first turn on the Navigation Instruments switch on the electrical panel. Note: the depth sounder won't give accurate readings beyond about 400' of water depth. Currents, water temperature, schooling fish, seaweed, etc. can cause inaccurate readings as the transducer tries to get a return signal in deeper waters. Use the depth sounder as an aid to navigation in shallow water.

**SAFETY REMINDER** – Rocks are the greatest navigational and safety hazard in the islands, but they are all clearly marked on the charts. Zoom in the Chartplotter as you approach the 60-foot (10-fathom) contour line, so you can quickly see all obstacles.

The knotmeter shows boat speed through the water in knots. Remember that boat speed and speed over ground (SOG) can be noticeably different in the Islands due to currents created by the tidal ranges. During new and full moons you'll see currents exceeding 4 knots, which can impact your navigation.

**OPEATING TIP**: Currents (direction and velocity) are presented on the Zeus<sup>2</sup> Chart display. Cycle through the displays by pressing the left-most page key until the current display screen is shown.

**SAFETY REMINDER** – If the digital knotmeter shows a reading of 0.0 knots while underway, the impeller may be clogged with eelgrass, which eventually floats off. If it's stubborn, try removing it by traveling briefly in reverse. But if the knotmeter is temporarily "out of service," use the speed over ground (SOG) data provided by the GPS navigation system.

## Wind Sensors

Wind speed and wind direction sensors are located at the top of the mast. True and apparent winds are reported by the Zeus MFD and the Triton repeater located at the port helm.

## AIS (Automatic Identification System):

## <u>Highlights</u>

- *Fair Winds name* transmits her position and data via an AIS signal as well as receives AIS signals from other vessels equipped with AIS transmitters (Commercial vessels are required to have AIS, recreational vessels are optional).
- The AIS is on the same breaker switch as the VHF base unit radio and must be ON to send and receive AIS data. The chart plotter is tied to the AIS and shows AIS vessel positions as triangles.

- AIS information supplements marine radar, which continues to be the primary method of collision avoidance for water transport.
- AIS requires each vessel to have a 9 digit MMSI (Maritime Mobile Service Identity) number to transmit position and data. *Fair Winds'* MMSI number is **367402110**.

#### <u>Details</u>

AlS vessels appear on the chart plotter screen as triangles. The triangle points in the direction that the vessel is moving and if you touch the screen over the triangle the system will give you additional information (such as name, size, speed, bearing, etc.) about the vessel. The system also transmits this same type of information about *Vessel name* to other vessels with AIS.

The AIS is an added safety feature for coordinating search and rescue and also allows San Juan Sailing/Yachting to provide faster assistance in case of unplanned maintenance issues as well as alert San Juan Sailing of *Vessel name*'s return approach. Vessels with AIS can be viewed in real-time through mobile device apps and websites like <u>www.marinetraffic.com</u> that will reveal vessel name, course, speed, track, and other information.

#### VHF Radio Communications

The B&G VHF marine radio is located at the Nav station in the aft cabin. The microphone for the radio is attached to the radio. Turn on the unit using the knob in the upper right corner, which also adjusts the volume (squelch is adjusted with the knob in the lower right corner; the 3<sup>rd</sup> knob changes channels). **Channel 16** is the default setting (international calling and distress channel). Leave the radio tuned to **Channel 16** in case an emergency broadcast or request for assistance is issued by US Coast Guard (USCG). If you need to speak with another vessel, hail them on **Channel 16** then direct them to move to another channel for further communications, e.g., **Channel 78A** (ship-to-ship).



The VHF radio communications system includes a remote B&G handheld unit that is stowed in a charging cradle next to the main unit. The wireless remote charging cradle shares the VHF breaker and must be on to charge the wireless remote. The wireless remote is slaved to the primary VHF radio and will <u>only</u> work on or near the boat with the primary VHF radio "ON." If you are not using the VHF (and don't want to hear radio chatter) but want to charge the remote simply turn off the VHF at the Base unit while leaving the breaker on. We usually have the remote at the helm to quickly communicate with the Coast Guard or other boats. Please don't take the remote with you when leaving the boat; you'll quickly be out of its effective range. Rather, take the portable VHF radio when going ashore to communicate with crewmates on the boat or call for assistance (a good safety idea).

(Updated January 2023)

Note: The VHF breaker on the DC electrical panel must be "ON" to power the handheld charger (see the handheld repeater located at the Nav Station pictured on the right).



Before anchoring each night and before departing each morning, listen local marine weather conditions and forecasts are typically available on **Channel 4** (NOAA Marine WX) and **Channel 2** (Canadian WX Service). Listen for the report on "Inland waters of western Washington" which covers the San Juan Islands and the Canadian Gulf Islands. You will also hear "Strait of Juan de Fuca" (south of the San Juan's), "Georgia Strait" (north), and "Rosario Strait" (runs through the eastern part of the San Juans). In Canadian waters, listen to the Canadian weather station, which also transmits warnings of military area activity, such as area Whiskey Golf (WG) outside of Nanaimo.

#### VHF Radio Channels

Here's a list of commonly used radio channels:

- Channels 2 & 4: Weather (CH4 = San Juan Islands | CH2 = Gulf Islands)
- Channel 05A: Seattle Vessel Transit System (VTS) interesting to monitor
- Channel 16<sup>3</sup>: USCG primary channel international distress, safety and ship hailing
- Channel 66A: Friday Harbor Marina
- **Channels 71, 73**: Where you may hear the whale watching boats speaking with each other
- Channels 78A, 79A, 80A: Ship-to-ship working channels
- Channel 78A: Roche Harbor Marina, Deer Harbor Marina, Rosaria Resort Marina
- Channel 80A: San Juan Sailing during normal business hours

Fair Wind's FCC call sign is S/V Fair Winds.

**SAFETY REMINDER**: If you need to declare an emergency, here is the protocol to use:

- Lift the red cover labeled **DISTRESS** and press and hold the **Distress** button on the radio until it beeps (this will send your information to the USCG).
- Call the USCG on **Channel 16** with the following information:

"MAYDAY, MAYDAY, MAYDAY, this is sailing vessel *Fair Winds*. [Repeat the MAYDAY call 3 times]. We are located at \_\_\_\_\_\_ degrees latitude, \_\_\_\_\_ degrees longitude. We are <u>state nature of emergency – on fire,</u> <u>grounded, sinking, medical condition requiring immediate assistance, etc</u>. We have <u>number of people</u> aboard. We are a 41-foot Beneteau monohull sailing vessel with white hull <u>and white sails</u> [if under sail] currently <u>motoring / under sail / anchored /moored</u> [state whichever applies].

<sup>&</sup>lt;sup>3</sup> You can hail another vessel on CH16 but tell them to switch to a ship-to-ship working channel, e.g., CH 78, 79, 80

If the situation is not immediately life threatening and you want to request assistance or send an urgent message, e.g., you need a tow, then use the phrase **PAN – PAN** instead of "MAYDAY."

## WiFi

We have added the optional B&G Wi-Fi system to *Fair Winds*. You can connect your Apple (iPhone or iPad) or Android tablet/phone to the B&G Zeus<sup>2</sup> and use the "Link: Connect Your Boat" application to monitor the Zeus<sup>2</sup> MFD from anywhere on the boat. To use the FairWinds B&G Wi-Fi network:

- Download and install the "Link: Connect Your Boat" application from the Apple or Google Play App Store.
- Connect your device to the B&G network using the WiFi information:

Network Name: Fair Winds B&G

- Wi-Fi Network Password: 9542534005 (phone number for maintenance professional).
- Start the Link app.
- Select "FairWinds" from inside the app to bring up the app user interface to see what is displayed and interact with the MFD (FairWinds-T7 is the repeater in the salon).

**SAFETY REMINDER**: The Link app is a valuable tool that allows you to use a mobile device as a "repeater" for the MFD. But be aware that it acts as a remote control for the MFD – changes made to the display in the app will be mirrored on the MFD's display, e.g., pan/zoom, change screens, etc. The one exception is that if you have autopilot controls displayed on the MFD the app will not allow you to steer or navigate the boat remotely.

## <u>iPad</u>

Located at the Nav Station in the Aft Statement. This iPad has some of the useful manuals for various systems such as the diesel heater as well as some sailing apps such as Windy and iNavX. The code is the same as the door lock.



# 9. Batteries/Charging/Inverter

## <u>Highlights</u>

- Please keep batteries above 12.2 volts at all times.
- We check the house bank voltage first thing in the morning and just before retiring for the night, and if it is close to 12.2 volts, we charge the batteries with shore power or the engine. Typically, refrigeration can be kept on overnight but if the battery voltage is below 12.3 volts please turn the refrigeration breaker off on the DC panel for the night. Then you can charge the batteries first thing in the morning and turn the refrigeration back on. It will usually hold the cold for the night.
- To ensure batteries are charging when connected to shore power (see photos next page):
- At the Left of the AC panel, SHORE POWER breaker ON (right position). Ensure the battery charger circuit breaker is ON (right position).
- When underway with engine power the batteries are automatically charging.
- At anchor, batteries can be charged with engine in neutral at 1200 RPM.

#### **Details**

*Fair Winds'* battery system has been upgraded to include three (3) high capacity group 31 AGM batteries and one (1) group 27 dual propose for starting the engine. The battery bank and battery switches are in the salon on the side settee, with the batteries located under the berth. Under normal operations all battery switches should be set to "ON."



The voltage readouts for the batteries are on gauge readout on the electrical panel in the main cabin, depress the "Battery Test" switch left for the Engine battery and right for the house battery bank. Note that **12.9 volts** at rest (no load) is **fully charged** while **11.8 volts** is **empty**, *which is not good*; don't let the batteries fall below 12.3V without recharging. If the battery level drops to 12.3V, run the engine for about an hour at 1200 RPM to re-charge the batteries. We monitor the voltage readouts regularly when running on battery power to ensure we don't draw the batteries down too far and we <u>always</u> check them before turning in at night. With proper

#### (Updated January 2023)

power management, expect to use ~60-100 AH overnight<sup>4</sup>. The panel has an analog meter provides a readout of the current amperage draw. If the charge level drops to 12.1V and you can't recharge, turn off as many systems as possible, for example, the fridge (draws about 4 amps; it will keep food cold overnight).



Battery switch panel just below the port settee

Bilge pump alarm, counter, and Engine Battery switch (left) House Batteries switch (right)

**SAFETY REMINDER** – Never turn off the batteries when the engine is running, as this will seriously damage the electrical system. If you have small children on board, the nice big red & black switches can look like something fun to play with. *Please make sure no one touches them while the engine is running*.

#### Charging

When the engine is running you'll be automatically charging the batteries. When on shore power, you charge the batteries by setting the battery charging switch on the electrical panel (left-hand side) to "ON." We highly recommend charging the batteries whenever you're on shore power.

#### Shore Power

*Fair Winds* is equipped with a 30 amp 50-ft. shore power cable (new in 2020) that attaches in the cockpit below the starboard helm seat. There also is a 25 ft. extension cord stored in the aft port locker. Connecting:

- Ensure all breakers on the AC panel are in the off position
- Ensure the breaker on shore is in the off position (if there is one)
- Connect the shore power cable onboard *Fair Winds* first and then connect on shore
- Turn on the breaker on shore (if there is one)
- If there is a polarity problem, the red "Reverse Polarity" light will illuminate on the AC panel
- Poor contact at the plug on shore can cause an audible alarm and the "Ground Wire" light above and left of the breaker panel will glow red. This can usually be remedied by tying the plug tight against the shore receptacle with a short length of small diameter line.
- If the connection is good, slowly turn on the "Shore Main" breaker on the AC panel
- The AC voltmeter will show approximately 120VAC if all is working properly
- Turn on the "Battery Charger" breaker on the AC panel

• You may turn on the "Water Heater" breaker on the AC panel if you wish to provide electrical heat to the water heater - this will ensure you have hot water available any time while you are connected to shore power

**SAFETY REMINDER** - First attach the power cable to the boat then to the shore power junction box. To disconnect shore power, reverse the process – detach the cable from the shore power junction box first then disconnect it at the boat.

#### <u>Inverter</u>

*Fair Winds* is equipped with a Xantrex (1800 watts) inverter that provides AC power for the electrical outlets when you are operating on battery power.

#### Best practices

- The entertainment system draws minimal power so enjoy a favorite movie while at anchor (but please also watch the battery voltage as well).
- We **don't** recommend the inverter to run appliances that draw lots of power (hair driers are notorious).
- The galley microwave is efficient but we **don't** recommend using the microwave with the inverter. Please only use the microwave on shower power.
- The ON/OFF switch (labeled "0" & "I") and volt meter for the inverter is located on the unit (see the yellow box in the picture to the right).
- When running on batteries, turn on the inverter at the unit and flip the AC outlet switch on the panel to "ON."
- The Inverter break switch located on the electrical panel in the main cabin must be left in the "ON" position at all times.
- *Turn off* the inverter at the unit when not in use to minimize drain on the battery.

 There is an additional safety breaker (labeled "0" & "I") located in under the seat cushion (see the small black box labeled Inverter pictured on the right). This breaker will sometimes need to be reset if you do not turn of the main A/C break when disconnecting from shore power.



## AC Outlets

- AC outlets are available in each cabin. Use these for charging phones, operating electrical appliances, etc.
- The two breakers labeled "Outlets Port" and "Outlets Stbd" will enable the respective AC outlets onboard *Fair Winds* 
  - ✓ When on shore power these breakers will enable AC power at the outlets
  - ✓ When on battery power these breakers will enable AC at the outlets when the inverter is turned on at the AC side of the electrical panel (the amber lights next to the breakers will not illuminate when running on the inverter but AC power will be available at the outlets)

# 10. Fuel

## **Highlights**

- The fuel gauge is on the tank under the teak access panel at the foot of the companionway steps.
- Fuel fill is portside midship.
- Fuel tank is located midship under cabin sole. Consumption rates are listed in **Section 15 Engine** above.
- The tank holds 75 gallons (283 liters).

#### **Details**

#### Fueling:

Please fill very carefully because it is difficult to tell when the tank is full. You need to put your ear to the tank, not fill "too fast", and be prepared to stop immediately when the pitch rises.

In the cockpit locker, we have rubber fueling gloves. The attendant will give you absorbent pads. Before fueling, we build a fuel absorbent dam fore and aft in case of overfill (reaching for the pads after the spill is too late).

# 11. Head and Holding Tank

## **Highlights**

- Only what has been eaten goes in the toilet.
- Holding tank for the black water is 55 gallons and is not accessible.
- Grey water from the 2 sinks and the shower is discharged straight overboard and does not drain into the holding tank.

## <u>Details</u>

Please do not put anything in the toilet that has not been eaten. Experienced sailors deposit toilet paper in a wastebasket in Ziploc baggies, not down the toilet because paper tends to clog the hoses.

**Please add a ½ capfull of the "No Flex" marine toilet treatment to the toilet bowl daily**. Add water to the bowl, add the treatment and flush the toilet. There is a container of "No Flex" that can be found cabinet under the sink in the head.

San Juan Sailing staff will discuss holding tanks and pump outs on your arrival. Our one plea is this: please don't over fill the holding tank as leaking sewage is most unpleasant! Thank you.

Please note that in U.S. waters it is illegal to discharge holding tanks overboard within 3 nm of the shore. While in Canadian waters outside of bays and harbors overboard discharge is allowed.

Both the **black** water (55 gal) and the potable water tank (160 gal) levels can be accessed by the Acu-Gage meter located on the side of the cabinet in the aft cabin. Touch one of the arrow keys to toggle between the 2 tank levels. There is a high and low level indicator light in the upper left corner of the meter panel. This panel draws very little power and may be left "ON" all the time.



1.	Pumpi a.	ng out at a <b>Shore Facility</b> The necessary valves and through-hulls are all located together under the cabin sole in the forward stateroom. See photos on right and below.	<pre>&lt; Macerator Seacock - in open position</pre>	
	b.	Note there are two plastic black-bodied Y-valves with grey handles: The Y-valve furthest outboard (hard to see without getting your head down into the bilge) is not used – it directs waste from the toilet to either the holding tank or directly overboard – should ALWAYS be positioned to the holding tank.	Macerator pump and switch Overboard Seacock – in closed position	
	c.	The Y-valve near vessel's centerline that's easy to see and is well labeled, directs waste from the holding tank to the Deck pumpout hose or to the Macerator hose. Check that the valve handle is set to direct flow to the Deck hose. The valve handle lock-out end should cover the Macerator hose small white arrow (see photo on right).	Y-valve set to Deck hose PUMPOUT RIDENT - PF	
	d.	The deck cap tool is stowed in the chart table. The Waste cap is located on the port deck near the shrouds.	DISTRICT POR	

## (Updated January 2023)

- 2. <u>Pumping **Overboard Using the Macerator**</u> (only where legal!)
  - a. Refer to items a) and b) in section 1 above.
  - b. The Y-valve near vessel's centerline that's easy to see, directs waste from the holding tank to the Deck pumpout hose or to the Macerator hose. See photo on right. Check that the valve handle is set to direct flow to the Macerator hose. The valve handle lock-out end should cover the Deck hose small white arrow.
  - c. Check that the macerator through-hull yellow-handled valve is open (normally left open). The handle is parallel to the valve body when open. See photo above.
  - d. The Macerator pump circuit is activated by flipping on the Macerator breaker on the DC panel at the nav station, then to turn on the pump, flip on a second switch located above the macerator pump (see photo above).
  - e. Listen to the pitch of the macerator pump. When the pitch rises, the tank is empty and the macerator pump should be turned off. Turn off the breaker on the DC panel as well.
  - f. Rotate the Y-valve handle back to the Deck hose position.



## <u>Head</u>

- Turn two-position value to "Flush" and pump the handle using full, slow strokes to add water to the bowl. Turn value to "Dry". Use the head. Turn value to "Flush" and pump the handle 3-4 times to flush the waste into the holding tank.
- When using the toilet, gentlemen please be seated it's safer in a seaway and keeps the head much cleaner under all conditions.
- Turn the valve back to "Dry" and pump until the water level is at the bottom of the bowl. Leave the valve in the "Dry" position when not in use to avoid sloshing or siphoning water while underway and heeled.
- Adding vegetable oil (provided) every 1-2 days (1-2 table spoons) in the towel bowl will help maintain the valve and make it easier to pump.

# 12. Sails and Rigging

## **Highlights**

- Cutter rigged with in-mast furling main, 110% furling jib, and self-tacking staysail.
- All lines lead aft (except halyards).
- Single line reefing from cockpit.
- Sails best when kept under 20 degrees of heel.

## **Details**

## <u>General</u>

- ✓ Hatches and portlights must be closed while underway.
- ✓ Clutches must be flipped up and rotated *all the way forward* to release the lines.
- ✓ There are winch handles stowed in the port locker (please don't drop the winch handles because they will damage the gelcoat).
- ✓ The engine should be left in neutral while sailing; the propeller will freewheel and may produce an audible sound when sailing at speeds of 5 knots or greater.
- ✓ The main is best unfurled while luffing or just slightly off the wind (starboard tack), you can then fall off and unfurl the headsails.
- ✓ Maintain slight tension on the lines when unfurling to deploy the sail in a controlled fashion and minimize unnecessary "belly" in the sail.
- ✓ The staysail is small enough that winch handles are not normally required for unfurling or furling.
- ✓ We generally unfurl the main first, the jib second, and the staysail (less than 15 kts wind) last.

## Mainsail: [in-mast furling main]

**OPERATING TIP**: The main favors unfurling and furling from the mast with the sail to port (starboard beam reach). The sail is easier to deploy, retract and less likely to jam.

**Unfurling the Mainsail** Uncoil and prepare outhaul, furling line, and mainsheet.

- Open the clutch for the outhaul and furling line, then ease the mainsheet and boom vang. Take 3 turns around of the outhaul around the winch and have a winch handle handy to deploy the sail.
- Deploy the sail by pulling smoothly on the outhaul, using the winch handle as necessary, keeping light tension on the furling line. Once the sail is about 1/3 of the way deployed it will be easier to unfurl.

Outhaul (gray and blue) Inhaul Furling line (red w/ white strips) Mainsheet (white w/ blue & black strips) Boom vang (white with red flecks)

- Carefully watch the sail to avoid wrinkles in the sail as it leaves the mast (usually at the head of the main). If wrinkling starts pull on the outhaul a 1-2 feet and start again.
- Continue to unfurl the main until the aft end of the outhaul sliding "car" stops at the aft end of the boom. The foot of the sail should be taught.
- Close the clutches for the outhaul and main furling lines. Re-tension the boom vang as wind conditions dictate. Sheet-in with the mainsheet and bear off when you are ready. Put the engine in Idle Forward and keep it there until the sail(s) are deployed.

#### **Reefing the Mainsail**

- Reefing the mainsail is much the same of unfurling but in reverse. The mainsail must be free any tension to avoid difficulty taking in the sail. Note the two vertical black reefing marks at the foot of the sail near the mast.
- Initially watch the sail carefully to avoid wrinkles in the sail as it enters the mast (usually at the head of the main). If wrinkling starts pull on the outhaul a 1-2 feet and start again.



Mainsail reef marks

**OPERATING TIP**: The headsails can be furled on any point of sail (if on a broad-reach then the mail sail will blanket the headsails and take the tension away)

- Take a couple wraps of the sheets around the headsails after furling
- Cleat the staysail furling line and outhaul after furling
- Take 2-3 wraps of the jib sheets on the winches and put them in the self-tailor after furling to keep the sheets from flying

#### Heavy weather sailing

- We generally furl the staysail completely first above (15-18 knots), then reef the mainsail, and then the jib. If there is still too much sail then completely furl in the jib and then unfurl the staysail.
- Shorten sail when the boat begins to feel overpowered (in general, if you're thinking you might need to reef, you probably should).
- We have sailed Fair Winds in steady winds up to 18-20 knots without shortening sail but reefing earlier may improve your ride, especially if you feel uncomfortable.
- The moderate draft full-foil keel will provide better tracking and less leeway if the boat is more upright, so if there is excessive heel on the boat (more than 10°-15°) reducing sail will improve handling

performance without sacrificing speed.

> Use the helm to judge the balance of the boat.

## Spinnaker:

- If you are *well-experienced* in handling a cruising spinnaker, you are welcome to use this in appropriate conditions. It is a large sail suitable for breezes under 12 knots (if you see any white caps then don't deploy the spinnaker).
- It is stowed with its sheet and snatch block a specially made sail bag. The sail bag are stored by San Juan Sailing so ask for them during check out. The spinnaker is enclosed in a sock with a fiberglass "mouth" for ease of employment and dousing. To jibe, douse the sail, complete the jibe, carry the sheet around the forestay to the opposite side of the boat and open the sock. The sail bag also includes an ATN tacker that is wrapped around the Jib after the Jib is completely furled in.
- As you may know, the spinnaker is the most vulnerable of sails. Thank you for your care!

# 13. Refrigeration and Freezer

## **Highlights**

- Circuit breakers are located on the DC electrical panel.
- Check to be sure there is sufficient battery power to operate the refrigeration equipment all night.



## <u>Details</u>

- Power to the two refrigerator/freezer compartments is provided by the "ICEBOX LEFT" and "ICEBOX RIGHT" breakers on the DC electrical panel.
- To open the refrigerator/freezer lids, push down on the latches to release tension, and then turn the latch. The gas struts will then raise the lids and hold them in an upright position. When closing, push down on the latches to release tension then rotate to the closed position.
- To set the temperature in either refrigerator compartment, use the digital control panel in the galley:
  - Hold for two seconds and then release the "SEL" button until "St-1" appears in the display.
  - Use the up or down arrows to adjust the setpoint.
  - Press the "SEL" button again to return to the temperature display.
  - The inboard compartment (right side as you're looking at it) works best as a freezer a setpoint of 25°F is recommended.
  - Both compartments may be configured as a refrigerator if a freezer is not needed a setpoint of 42°F is recommended.

- The refrigerator and freezer will default to the last setpoint when powered on, so if the temperatures are acceptable, there is no need to reset them.
- The refrigerator will be colder than the setpoint next to the cold plates keep this in mind when stowing liquids to keep them from freezing.
- If you need to drain either compartment, turn on the "Ice Box Drain" breaker on the DC panel and activate the drain switch on the counter above the refrigerator – be sure to turn off the pump after the water is drained from the compartments.

**OPERATING TIP:** Run both units in the "refrigerator mode" with a setpoint of 42°F will create a lower drain on the battery bank. This is decrease the need to run the engine to recharge the batteries while at anchor.

## 14. Heater

#### <u>Highlights</u>

- Wallas forced air, turn thermostat knob to 2 when starting.
- The heater works great but the fan can be a bit noisy and wakes light sleepers
- The cube electric heater is for marina use. Stowed under the starboard settee.

#### <u>Details</u>

The Wallas thermostatically controlled forced air heating system draws from the main diesel fuel tank. We use the heater on cool evenings or to take the chill off in the morning.

The thermostat (black control panel) is near the starboard settee on the hanging cabinet. Press and hold the heater power button for 2 seconds. A yellow heating light will indicate the heating is on. A red light comes on when the combustion is stabilized. The whole process takes about 11 minutes. Start with the temperature control knob at about 2 and adjust as needed.

We normally turn off the heater at night by holding the heater power button for 2 seconds. This will allow both to sleep cool and to avoid the clicking sound of its electric fuel pump.

- **Please don't** press any buttons when the heater is in the middle of a cycle, the unit may get out of sequence and lock up.
- *Please don't* use the ventilation button, it is just for circulating air and not used for heating.

If the heater has locked itself, you must determine the cause for the locking before releasing it. Releasing the lock:

- 1. When the lights are blinking, switch off the main power (use the bilge pump breaker that shares power with the heater located with the battery rotary switches).
- 2. Switch the power back on.
- 3. Press the power switch (3) for at least 2 seconds. (*The yellow heating indicator (9) will light for 1-3 seconds.*)
- 4. Press the power switch (3) again for at least 2 seconds. (The heater is turned off. Power indicator light (4) will shut down.)

5. Restart the heater normally.



# 15. Dinghy and outboard

## **Highlights**

- 10' aluminum hulled dinghy (new in 2020), 2.3hp Honda outboard (new in 2020).
- Tow the dinghy at least 6' off the stern using the starboard cleat. Use a proper cleat hitch and for peace of mind tie off the painter's bitter end to base of the stern pulpit. In very rough conditions, towing the dinghy from the low side makes it unlikely the dinghy will flip in the wind and waves.
- Don't tow with outboard attached to dinghy or leave on the dinghy overnight.
- Dinghy air pump is stowed in the front locker on the dinghy.
- The spare 1 gal orange gas can is filled 2/3 full (for expansion in hot weather) by our staff. We will top it off when you return the boat ... no charge. We stow it in the dinghy tied to the transom. For safety, please leave the gas can in the dinghy but *never* store gasoline in a compartment on board *Fair Winds*.

#### <u>Details</u>

#### Towing the Dinghy

Always remove the outboard motor dinghy before towing. We leave the **red** spare gas can for the outboard engine in the dingy, tied off to the transom. To keep the dinghy away from engine exhaust, tie the painter off

at the starboard stern cleat with a standard cleat knot, then attach the bitter end to the stern rail using a rolling hitch or similar secure knot.

- Tie the dinghy off above the turnbuckle on the port backstay (a clove hitch and a half hitch or two works well) and be sure to tie off or cleat the bitter end of the dinghy painter. Check the dinghy periodically while underway to make sure she's towing well.
- The dinghy painter is polypropylene and will float but ensure that it is not in the water before starting *Fair Winds'* engine to ensure it does not get wrapped around the propeller shaft.
- We use a short line at the aft end of the dinghy to tie her off to *Fair Winds'* when boarding so she lies off the swim step. This will make it easy to boarded from the swim step and makes installing or removing the outboard also. However, do not tow the dinghy in this position.

**OPERATING TIP:** Leave the self-bailing valve (located in the stern) open when towing to let any accumulated water drain out. Close it when ready to use the dinghy.

## Preparing the Outboard

- ✓ Unlock the outboard (combination is listed on your charter packet) and reattach the lock nearby on the stern rail.
- ✓ Carefully loosen the mounting screws on the outboard bracket, on the port stern rail, keeping one hand on the outboard handle at all times or tie the motor off to a dock line attached to *Fair Winds*.
- ✓ Transferring the outboard to the dinghy is <u>best</u> accomplished by having one crew member in the dinghy to receive the outboard from another crew member on deck, rather than a single crew member trying to get off the boat and onto the dinghy with outboard in hand. Although the outboard is relatively light, it should be handled carefully.



Outboard engine controls.

- 1. Fuel lever (at back)
- 2. Choke
- 3. Air vent (on top)
- 4. Kill switch with clip
- 5. Throttle
- 6. Pull chord
- 7. Tilt lever
- 8. Safety line (tied to rail)

## Starting the Outboard

- 1. Open the fuel valve by pushing the fuel valve lever (starboard aft corner of the outboard) aft to the ON position.
- 2. Pull the choke all the way out (starboard forward corner of the outboard).

- 3. Open the air vent on the top of the fuel cap (top of outboard) by turning the indicator half way between ON and OFF. We have discovered that turning the indicator all the way to ON will sometimes cause the valve to close.
- 4. Make sure the black U-shaped kill clip (attached to the red or gray lanyard) is clipped into the red shutoff knob (port forward corner of the outboard).
- 5. Turn the throttle handle to the start position. There is a friction thumb screw that can be tightened to hold the throttle in the start position.
- 6. **NOTE:** The motor has a centrifugal clutch (no gear shift) the propeller will spin when the RPM is above idle. Please make sure the dinghy is securely tied to *Fair Winds* as the dinghy will surge forward when the motor first starts up at the starting RPM then will stop when you turn the throttle back to idle RPM after warmed up (about 10 seconds).
- 7. Pull the starter cord quickly then repeat a few times if needed until the motor starts. (You shouldn't have to pull it more than 5 times.)
- 8. Slowly push the choke back in shortly after the engine starts (after about 5 or 10 seconds). If the motor starts to run rough then ease the choke back out for another 5 seconds and then try pushing back in. Turn the throttle back to idle.

#### While Outboard Is Running

- Keep the **red** lanyard kill clip connected to your belt or PFD while operating.
- The motor has a centrifugal clutch (no gear shift) the propeller will spin when the RPM is above idle just throttle up to go forward and throttle down to stop. If you want to go in reverse just swivel the outboard around 180 degrees and throttle up.
- Note that you will only have steerage when the propeller is driving the boat (throttle above idle RPM).

## Arriving at the Beach

- Before you hit the beach and while still in a few feet of water, stop the motor by pushing in the red shut-off knob (where the kill clip is clipped in) or just pull the red lanyard until the clip pops off. Close the fuel valve and vent lever (the motor will leak fuel when tilted if these are not closed. Also, the carburetor will be flooded making it hard to restart the motor).
- Tilt the motor out of the water by pulling the motor head forward until it stops you should here a "click" as the tilt support locks in place. Note that the motor is held in the lowered position by friction from large a rubber clip that grips the shaft. Very little force is needed to pull the motor shaft out of the clip.
- To tilt the outboard back in the water, first pull on the motor head slightly to take the strain off the tilt lock, then release the tilt lock by lifting up the black handled lever below the motor head (on the starboard side of the shaft).
- Please do not drag the dinghy up the beach over sharp rocks and barnacles.
- Secure the painter to ensure the dinghy doesn't float away on a rising tide.

#### When Outboard Is Not In Use

- ✓ Put the outboard back on the outboard mount on *Fair Winds* port stern rail and tighten both bracket screws.
- ✓ Put the combination lock back on the bracket screws.

- ✓ Close the fuel valve and fuel cap vent.
- ✓ Put the blue Honda cover back on the motor head.

#### Outboard Troubleshooting

- If the motor won't start, review steps 1-8 above to make sure you've correctly done all 8 steps.
- A faulty Spark Plug is often the problem. There is a blue "Honda Outboard Tools" kit containing a spare spark plug and spark plug wrench in the "Engine Spares" box. If you use the spare spark plug, notify your check-in skipper upon your return so a new one can be placed aboard for future guests.
- If the motor is running fine and suddenly quits then it is often because the fuel cap vent is closed.
- If the motor is running fine but the propeller won't spin with the RPM above idle then the shear pin is probably broken. Put the motor back on the stern rail bracket, take the cotter pin out to remove the propeller and replace the broken shear pin. A spare pin is located the forward underside the motor head.

#### Inflating the Dinghy

- ✓ If the dinghy needs inflation, the foot pump is in the starboard cockpit lazarette. The dinghy has three
   (3) baffles, each with an inflation valve located on the inside of the boat, plus an inflatable keel. The
   keel's inflation valve is in an opening in the bow floor board. Use the black adapter to inflate the main
   baffles. Use the grey adapter to inflate the keel.
- ✓ The foot pump is held closed with a locking clasp. Release the clasp, insert the appropriate inflation nozzle onto the valve and give a ¼ turn to lock it in place. Inflate the baffle or keel with the foot pump until it is firm. When done, carefully detach the inflation hose. If the valve is still open, press it once to close it.
- ✓ If you need to make a repair, the repair kit and instructions can be found in in the tools and spare parts storage compartment *located behind the starboard salon seatback*.

# **16.** Dodger, Bimini and Enclosure Panels

## <u>Highlights</u>

- Bimini stays in place and has windows cut into the overhead to facilitate sail trim. The dodger panels with the clear windows should stay in place (to prevent damage).
- Hint: <u>Please don't wipe clear windows.</u> if we get early morning dew fogging our dodger glass, or salt crystals from spray, we rinse off with a pan of fresh water from the galley (salt crystals may need a second splash). By the way, if you or your guests use *aerosol sunscreen, please apply well away* from the dodger. Sunscreen will destroy the clear windows.

# 17. Propane

## <u>Highlights</u>

- We have two aluminum propane tanks:
  - One in a locker on the starboard side cockpit, which feeds the stove in the galley. Each tank normally lasts 4 weeks and the San Juan Sailing staff checks the tanks weekly so to assure the propane doesn't run out.
  - One is permanently plumbed to the BBQ grill on the aft starboard rail, which is not connected to the solenoid in the galley.

#### <u>Details</u>

## Using Propane:

- "LP GAS" solenoid circuit breaker is **RED** breaker located on the electrical panel. Insure that breaker is "ON".
- The Propane Control switch is located on the galley cabinet near the sinks (see picture to the right).
- Open the propane tank in the propane storage locker located in the starboard locker.



**SAFETY REMINDER:** Propane is heavier than air. If leak is detected, extinguish all flames and ventilate the bilges. For safety, we turn off the solenoid after stove use.

## 18. Stove and Oven

## <u>Highlights</u>

- 4 burners, depress knob, turn left, use hand sparker
- Solenoid valve switch is located on the main electrical panel
- Stove off, then solenoid off
- Microwave for brief use only

#### <u>Details</u>

- The four burner gimbaled Force 10 propane stove must have the propane solenoid switch on to operate (on the main electrical panel port side).
- We suggest that whenever you turn off the stove burner, you shut off the propane solenoid, which, for safety, shuts off the propane flow in the cockpit.
- To light a stove burner, *depress* the knob, turn ¼ turn to the left and light with the provided sparker. Note you don't need a flame...just the spark. Hold for a few seconds to heat the safety "thermocouple", then release. Turn the knob to the *left*, counterclockwise, to go from "high" to "simmer".
- To light the oven, set the knob to the desired temperature. Open the oven door. While kneeling, depress the blue cylindrical button on the stove panel. This bypasses the thermocouple and allows propane to flow to the oven burner. Ignite the burner with the sparker. Keep the blue button depressed for about 30 seconds before slowly releasing, watching the pilot to make sure it remains lit.
- The stove may be locked in place or unlocked to allow the gimbals to keep the stove level when the boat is heeled. If using the stove in gimbaled mode while underway, there are pot fiddles stowed in the drawer beneath the refrigerator.
- If using the broiler burner in the oven, do not cook food more than 20 minutes and check it often.
- The microwave oven is in the galley above and forward of the stove. The microwave requires AC power.
  - $\circ$   $\;$  The microwave should only be powered with shore power.
  - Please **don't** use the microwave with the inverter.

#### Troubleshooting the stove:

- $\checkmark$  If the stove won't start, check to see if the propane valve is full open.
- $\checkmark$  Is the solenoid is on.
- ✓ Is the stove knob is first pushed in, then left to the "ignite" position and after flame and is held until the thermocouple heats.



# 19. Barbecue

## **Highlights**

- In-line valve in propane locker
- Please clean grill when finished

## **Details**

The propane stainless steel Magma BBQ is mounted on the stern rail and is permanently connected to the stern rail propane tank.

- To use the BBQ, there is *no need to turn on* the propane solenoid switch in the salon.
- We open the handle on top of the propane tank on the stern rail.
- Open the BBQ lid and use the lighting stick (from the galley) to ignite.
- Please find the BBQ cleaning brush attached with a SS lanyard for convenient cleaning when the BBQ cools. Best I've found is a good salt water wipe down and the burn with the BBQ empty to cook off the residue; try it.
- Please remember to turn off the valve at the BBQ after use and the valve at the tank as well (as an extra precaution), it *may drain out* all the propane!
- P.S. Wind isn't a friend of the BBQ. Please be careful about drips etc. and make sure to clean up anything on the fiberglass or teak.

# 20. Berths and Bedding

*Fair Winds* has two staterooms, one forward and one aft. Both staterooms have queen-size island berths with comfortable inner spring and pillow top mattresses. Both berths lift on gas-assisted struts to reveal spacious storage areas underneath that are perfect for soft luggage or larger items. All hatches come equipped with sliding pull-out covers and sliding pull-out screens.

Forward Stateroom
The forward cabin has a real queen-size island bed making it a
comfort to sleep in as well as ample room in the cabin for dressing.
Your head is at the bow and feet pointed toward the stern (no more
pivoting around to get out of a V-berth). The forward stateroom has
a private door linking to the head for additional privacy and
convenience. The forward stateroom has a hanging locker and two
lockers with shelves. Each berth has fans for those occasional warm
nights in the Pacific Northwest. There are ample sources of lighting
in each berth and individual controls for reading lights.

## (Updated January 2023)

#### <u>Aft Stateroom</u>

The aft cabin has a real queen-size island bed making it a comfort to sleep in as well as ample room in the cabin for dressing. There is ample reading lights and 2 hatches, one over the bed and one over the Nav station.

## Main Salon (port side)

The salon features a table that folds up against the forward bulkhead when not in use, leaving a lot of open space. When needed, the table can be lowered to seat four with one leaf open or seven with both leaves open. All hatches are fitted with OceanAir sun shades and screens. There is ample storage space behind and beneath each of the settees. *Fair Winds* is equipped with a 24" LED Smart television. There is Fusion MS-RA70NSX AM/FM/BT stereo with speakers in both the salon and cockpit.

The port settee converts into a berth for a total capacity of seven guests, if needed:

- The table must be stowed in the vertical position before the salon berth can be deployed
- Remove the port settee cushions
- Remove the pin in the inboard center of the settee top
- Lift the settee top and slide it inboard along the rail mounted to the forward salon bulkhead
- Settle the aft end of the settee top on the shelf inboard of the aft end of the settee
- Replace the pin in the outboard hole of the settee top to hold it in place
- Use the cushions (including the two forward seat backs) to make up the berth
- There is an additional triangular piece of cushion stowed behind the starboard salon settee that fills the last gap

#### Aft Stateroom door

The door has a latch.

The latch knob (see picture to the right) must be in the position as pictured or the door will not close completely and therefore will not lock in the open position.





# 21. Shower and Sump Pump

## <u>Highlights</u>

- Separate shower stall in forward head
- Shower sump pump circuit breakers on the electrical panel
- 6 gallon hot water tank
- Transom shower with mixing valve



## **Details**

- The forward shower stall is a separate area incorporated into the forward head. There is also Corain countertop and a sink vanity mirror. Both the shower and sink drain to the sump pump below the sole at the forward end of the salon. The sump will quickly overflow it the sump pump is not turned on or is not operating properly. Due to 6 gallon tank if you have 2 or more taking showers consider taking a Navy shower (wet, water off, soap up, water on for rinse, then water off).
- The water heater will get the water hot after about 20 minutes on shore power or about 20 minutes of running the engine under load (the engine running at idle will not effectively heat water). The water will stay hot at least six hours after the engine is shut off or shore power is disconnected.
- Before showering or using the sink in the head, turn on the "Sump Pump" breaker on the DC panel to pump the water out of the shower sump. If the shower sump pump is running continuously when the water in the head is not running, or if the sump pump does not run, the pump strainer may need to be cleaned. The pump is located under the sole access plate just to starboard of the door to the head in the forward part of the salon. If cleaning the strainer doesn't fix the problem, pull the pump out of the outlet hose socket to relieve the back pressure. After plugging the pump back into the outlet hose socket, it will often work properly.
- Wipe down the shower stall doors after use and/or use the squeegee to remove the water from the doors to prevent buildup
- The transom shower features both hot and cold water. To operate, pull the spray handle/nozzle toward you. Then depress the spring loaded top of the shower head for spray. Turn the T handle left or right to adjust temperature.

# 22. Entertainment Systems

## <u>Highlights</u>

- **FUSION audio system**: AM/FM radio, wired and wireless (Bluetooth) connections for audio players (e.g., iPod), and VHF monitoring. Speakers are in the main cabin and in the cockpit. The audio system can be controlled from the FUSION unit in the main cabin and from the B&G Zeus<sup>2</sup> navigation system located between the helms.
- **TV**: LED HD SMART TV with built-in Wi-Fi.
- **Remote**: Remote for the TV are stored in the cabinet forward of the TV.
- **Other video sources**: Connect PC or other video source to TV with HDMI cable (provided).

#### FUSION Audio System

The FUSION unit is located next to the VHF radio near the Nav station. The system includes AM/FM radio, VHF audio (to monitor radio transmissions using the cabin and cockpit speakers) and wired (USB) and wireless (Bluetooth) connections for audio sources such as iPods.

**OPERATING TIP:** If using Bluetooth to connect an audio source, the FUSION unit will appear as **MS-205** in the list of available BT connections shown on your device.

To connect an iPod or other portable music player using the USB port, unscrew the cap from the USB connector to the right of the FUSION unit and plug in your device using your own cable. Use the menu on the front panel of the FUSION unit to select your audio source. You can also control the FUSION unit from the Zeus<sup>2</sup> MFD in the cockpit – you can adjust the volume, select radio channels, and select tracks from your audio devices.

## <u>TV</u>

The LED "SMART" TV gives access to online video services like NetFlix and Amazon Prime Video with a valid subscription. You'll need an internet connection to access online video services. We use a wireless hotspot from our cellular provider successfully in many places in the Islands, but coverage can be spotty. Wi-Fi is available in some of the marinas in the Islands (e.g., Bellingham, Roche Harbor, Deer Harbor). To connect the TV to a Wi-Fi hotspot:

- Activate your wireless hotspot.
- Turn on the TV with the remote.
- Press the Menu button on the remote.

- Select "Network" then select "Network Settings."
- Select "Network Type Wireless."
- Select your wireless hotspot device from the list of wireless networks.
- Enter your network passcode, if required (use the remote to interact with the onscreen keyboard; select "Done" when ready to complete passcode entry).
- From the TV Menu select "Smart Hub" then "Open Smart Hub" and choose your video source Netflix, Amazon, Hulu, etc. Login to the service with your credentials.

#### Other Video Sources

You can connect your own playback device to the TV using a standard HDMI cable. There is a HDMI port on the right-hand side of the TV. There is a 6 ft. HDMI cable onboard, which can be used to connect a PC to the TV, for example. We've left it plugged into the TV and draped over the top. It's connected to the **HDMI-1** port on the TV.

# 23. Lighting

#### <u>Highlights</u>

- Turn on the "CABIN LIGHTS PORT" and "CABIN LIGHTS STBD" breakers on the main electrical panel just above the port salon settee.
- The main Salon light switch (sliver knob) is located on the inboard face of the galley cabinet near the propane control switch (see picture on the right).
- Stateroom light switches are on the individual light fixtures.



## <u>Details</u>

- The overhead lights in the salon and forward stateroom
  - The salon switch is above the Propane Control switch inboard of the galley sinks.

• The forward stateroom dimmer switch is located on the forward side of the hanging locker to starboard.

- There are LED reading lights along the side of the cabin in the salon and both staterooms each is controlled independently by a knob on the bottom of the mount.
- The aft stateroom and Nav station have lights that are switched on and off with a sliding swtich.
- The head has three lights that are operated by sliding the clear cover for the fixture.
- The refrigerator has a light that is illuminated by pull switch on the countertop above the freezer.

- On the starboard side of the companionway, there is a switch that controls the courtesy entry lights these are wired directly to the battery and provide light when entering the boat at night (including inside the electrical panel cabinet) even if the cabin light breakers are switched off.
- There are flashlights mounted next to the companion ladder and against the forward bulkhead of the salon on the starboard side.
- There are deck lights mounted on the mast that are operated from the DC electrical panel.
- When anchoring, turn on the "Anchor Light" breaker on the DC panel for the all-round white anchor light at the masthead. Fair Winds' anchor light is not visible form the boat deck due to the shape of the masthead. Check the anchor light function from the dock before leaving the harbor. The anchor light is LED and not likely to burn out.

There are dome lights in each of the two cockpit lazarettes, in the engine compartment, and in the bilge – they are operated by a switch on the side of each light fixture. Please remember to turn these dome lights off when closing the compartments.

# 24. Water

## <u>Highlights</u>

- In line carbon filter yields bottled water quality in galley
- One 160 gallon water tank located in the middle of salon under the cabin sole
- Deck fill is located on the port side.

## <u>Details</u>

One water tank is under the cabin sole in the salon area.

Hot water is produced by two methods:

- 1. Engine: It takes about an hour under solid load to heat the 6 gallon hot water tank. (Running the engine at idle won't heat the water quickly.)
- 2. Shore power: If hooked up, turn on the "hot water" circuit breaker on the 120VAC side of the electrical panel above the port salon settee.

## (Updated January 2023)

## *Fair Winds Owners' Notes* **25. Bilge Pump**

## <u>Highlights</u>

- Electric Bilge Pump: Has an automatic float switch. The pump is located under a cover in the center in the salon. This is also where to check the strainer on the pump inlet for any clogging debris and remove if needed. The switch for the electric bilge pump is located on the battery switch panel on the portside salon area.
- Emergency Bilge Pump (manually operated): An auxiliary hand-operated bilge pump is in the cockpit on the aft starboard side near the wheel. It is generally used only in emergency conditions. The handle for the manual bilge pump is in the starboard cockpit locker with the winch handles.



## **Details**

- 1. <u>Emergency Hand Bilge Pump</u> This hand operated pump is located in the starboard cockpit locker near the Manual Bilge Pump.
- <u>Electric Bilge Pump</u> Has an automatic float switch. The pump is located under cabin sole in the center salon area. Note: the circuit breaker labeled "DC BILGE PUMP ON AUTO" must be "AUTO" at all times for the float switch to work (located on the battery switch panel see photo above). If pump fails to empty bilge, we check the strainer under the nav table, in case it may have become clogged with debris.
  - You may occasionally hear the pump operate due to condensation and water from the shaft seal accumulating in the bilge. If you hear the bilge pump running a lot, you need to check the for leaks. One source to check for a leak is the lid on the seagrass trap for the sea water engine cooling water, located under the inboard side of the mattress in the aft stateroom. The trap can leak if the top cover is not seated properly.
  - Please visually inspect the bilge each day, which is accessed by lifting the floorboard in front of the main salon table. The refrigerator drains directly overboard and not into the bilge, so no water is from melting ice or refrigerator condensation would cause water in the bilge. The intake tube is at the lowest point in the bilge.

# 26. Spares and Tools

#### Common spares:

- ✓ Location: behind starboard settee cushion
- ✓ Contents: oil absorbent pads, fuel filters, oil filter, impeller.

<u>Heavy Duty spares:</u> Location: under forward stateroom mattress, forward end.

Contents: spare float switch, spare electric bilge pump, spare domestic water pressure pump(s), spare engine starter, Yanmar tool set, battery jumper cables, bag with spare oil and fuel filters, light bulbs, outboard tools, toilet one-way check valves.

<u>Tools</u>: behind the starboard salon seat.

## 27. Storage

The amount of storage is one of the appealing factors of this model. We found these of greatest use:

#### Food:

- a) Behind settee cushions there is some stowage, both port and starboard.
- b) Under the starboard settees cushions.
- c) Above galley counter cabinets. We store quite a bit of food in the cabinets in the galley.

Note: you might want to check that the wood cutting board above the refrigerator is behind the fiddles before you heel to starboard. Yes, this is the voice of experience ;-)

- <u>Clothes:</u> Each stateroom has a locker that we find more than adequate.
- <u>Tools</u>: Behind the starboard salon seat.
- <u>Fenders</u>: We store them in the sail locker forward. *Hint*: when lowering them into the locker, droop the fender line over the top rung of the ladder; making for easy retrieval. A fifth light white fender is ideal for the "rover" or when backed into a slip.
- <u>Dock Lines</u>: In the port cockpit locker.
- <u>Cooking utensils</u>: In the forward galley under-counter cabinet.

We hope this information helps. Have an awesome time!!

