NOTES FROM THE OWNER

Magic Morning

To Our Charter Guests,

Welcome aboard and thank you for chartering Magic Morning. Congratulations, you have made a great choice. All Selene Yachts are well known for their superior quality construction and high end amenities. Magic Morning is a Selene 47 Pilot House Trawler with a total length of 51’-10”. She is loaded with options to guarantee you a comfortable, enjoyable and easy to handle cruise. You will love her spacious floor plan, large galley, standing room berths with private heads and separate showers. We hope you find Magic Morning as comfortable, easy and joyful to cruise the San Juan, Gulf Islands and Canada as we do. It is a pleasure to share her with you.

These Owner Notes are meant to be a practical resource for the operation of this vessel. Please read and study them carefully as they will ensure you a more pleasant and joyful cruise. Let us know about your experience cruising Magic Morning and any comments or suggestions you may have to make your experience more enjoyable. Feel free to call or contact me via my email address below. We wish you fair weather and hope you make many wonderful memories. Thank you for being our guests.

Bruce and Laurie Georgen

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Last updated 5/28/19
**Specification:**

2006 Selene 47 Pilot House

LOA: 51 ft 10 in  
LWL: 44 ft 3 in  
Beam: 15 ft 7 in  
Bridge Clearance: 26 ft 3 in  
Maximum Draft: 5 ft 6 in

Engine: Single 330 HP Cummins  
Cruise: 8-9 Knots, Top Speed 11 Knots

Number Of Cabins- 2: Both Standing Head Room  
Number Of Heads- 2: Both Separate Enclosed Showers and Doors  
Galley: Refrigerator/Freezer, Trash Compactor, Granite Counter Tops, Gas Oven, Gas Range, Full Size Microwave, Lynx BBQ  
Commissary: Deep Freezer, Pantry, Wine Rack, Extra storage  
Washer and Dryer: Bosch washer, Bosch dryer both separate units

Fuel Tank: 1100 Gal  
Fresh Water Tank: 300 Gal  
Holding Tank: 60 Gal  
Electrical Circuit: 120V 30A and 230V 50A  
Windlass: Electric Muir Cheetah  
Dingy and Davit: 11' hard body Bullfrog, Furuno GPS plotter/sounder, steering column, 30HP Honda and a Steelhead hydraulic davit system
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- **Mayday:** Push RED distress button on VHF radio to transmit your boat ID and GPS location
- **First Aid Kit:** Located in the Master Head
- **Flares:** Located in the Pilot House foot locker white mesh bag
- **Auto Inflation PFDs:** (4) Located in the Flybridge bench seat and or Dinghy
- **PFDs:** (5) Located in the Lazarette
- **Bilge Pump:** Manual pump and handle in cabinet left side on stairs to berths
- **Sump Pumps:** (4) Auto operating but can be switched to manual in an emergency
- **Fire Extinguishers:** (4) M. Berth, Main Hall, Pilot House and Salon Cabinet
- **Life Sling:** located on the railing port side of Flybridge
- **Boat System Manuals:** located in a file box in the Pilot House center cabinet

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EMERGENCY EQUIPMENT & PROCEDURES

A. If someone is hurt or you are in danger, call the Coast Guard on Ch. 16 immediately.
B. If you hit something and no one is in danger, call San Juan Yachting at 800-677-7245
C. If you are boarded by the Coast Guard, be prepared to show them where the PFD’s are located for each person on board. The Coast Guard requires every person in a dinghy to wear a PFD.
D. If you strike a rock, log or run a-ground:
   a. Immediately look for water inside the boat. Look in all 4-bulge pump sumps. Look where hull contact took place.
   b. If you are sure no water is entering the hull and no one is in danger, call San Juan Yachting at 800-677-7245 right away. Describe the incident and determine if you should proceed to the nearest harbor where a professional diver can inspect the hulls, props and rudders before proceeding on your trip.
E. If you have a water leak determine the source of water. Wood plugs are located in the mesh bag stored in the Pilot House port foot locker and plastic rubbermaid container STBD side forward engine room. Confirm the bilge pumps are running — they turn ON automatically.
F. If the leak is serious and you are in danger, get your crew on deck and into life jackets. Grab the mesh bag with flares and the portable VHF radio. Get ready to launch the dinghy.
G. MAYDAY! Boat In Distress:
   a. Use MAYDAY if loss of life or vessel appears imminent.
   b. Push RED distress button at the main VHF radio. It will transmit the boat’s ID and exact GPS location. Then, call the Coast Guard on CH 16 for assistance.
   c. Use PAN PAN if the situation does NOT appear life threatening.

TIP: Direct communication with the Coast Guard on Ch. 16 is most effective. Be prepared to provide: type of boat, situation, location (GPS coordinates), # of people onboard, and any injuries.

H. MAN OVERBOARD!
   a. Immediately throw a Type III PFD or flotation cushion to the person and assign one crew member to spot and point at the overboard person.
   b. Push and HOLD the MOB button on the chart plotter for 2 seconds to mark where crew went overboard. A reminder alarm will sound every 10 seconds. (To stop the MOB alarm sound and remove the MOB mark on the chart plotter, push and hold the MOB button again for 2 seconds.)
   c. Safely motor back to the person in the water; use the Life Sling system on the stern to retrieve them at the stern transom steps. (Be sure to put the engines in NEUTRAL when rescuing a person at the stern steps.)
1. **BOAT NUANCES**

   A. **MANEUVERING:** Magic Morning is a heavy vessel with a full displacement hull that rides well in smooth and rough water. Input to the rudder and throttle will have a delayed response. Be prepared to think “out in front” of the boat and anticipating a slow reaction to your input. When docking or maneuvering in tight spaces the rudder and throttle inputs can have a 5-10 second delay in responding, depending on your speed (not factoring any current or wind). If you are 25 feet away from the dock you should already be in neutral and allow the vessel to slowly come to rest. Always use short burst inputs to the throttle and then back to neutral. There is no noticeable prop walk.

   B. **ECONOMIC CRUISE SPEED:** 8-9 knots @ 1600-1800 RPMs and 3-4 GPH

   C. **RPM:** DO NOT run engine over 2600 RPM for more than 15 minutes at a time.

   D. **ELECTRIC PANEL AC/DC DISPLAYS:** Use the electric panel DC and AC displays to monitor your amp usage on the house batteries when at anchor or not plugged into shore power. If the house batteries drop below 11.5 standing voltage the inverter will fault and stop inverting. You will have to start the generator to charge the batteries and regain any AC power.

   E. **MAGNUM BATTERY CONTROLLER:** The charging button for the Magnum battery charger/controller should always be left ON. The inverter is only turned on when AC power is required.

   F. **MAIN ENGINE VOLT METER:** The main engine volt meter will typically only read 12 volts but the alternator has been tested and is charging at 14V, so don’t be alarmed it is only showing 12V.

   G. **DEPTH SOUNDER:** The depth sounder breaker #41 is labeled FISHFINDER and reads water depth from the water line.

   H. **MASTER PLOTTER:** The breaker #34 for the master plotter is labeled “RADAR”. Please do not change the master plotter settings and configurations.

   I. **AUTO PILOT:** The auto pilot alarm will sound every time you turn off the master plotter. To silence the alarm press the on/off button on the auto pilot hand held once, then press and hold it again for 3 seconds.

   J. **AIS:** the AIS data comes from the Flybridge plotter and it must be on to display any AIS information. If the Flybridge plotter is turned off the boat’s information is still broadcasted but you will not see any data from it on your plotters.

   K. **RAFTING:** when rafting with other boats keep the fenders below the teak handrail to avoid contact with wood and rubbing off the varnish.

2. **ANCHORS, WINDLASS & STERN LINE**

   A. **ANCHOR:** The Primary anchor is a 40 KG plow type Bruce Lewmar with 300 ft of 3/8" chain. The anchor chain is marked with a 10' yellow paint mark at 100' and a 5' yellow paint mark every 50' thereafter. The spare anchor has 200' of 3/8" chain and is not marked.

   B. **STERN TIE LINE:** There is a 600' stern tie line on a reel in the Lazarette. Hang the stern line reel on the swim step towel bar and use the attached velcro straps to secure it. See the picture next page.

   **NOTE:** There are other miscellaneous lines including a spare DOCK LINE and carabiner fasteners in the port side bow anchor locker and flybridge bench seat. Please do not cut any of these lines.
C. **WINDLASS:** The windlass BREAKER #19 is located on the DC power electric panel in Pilot House, and there is a second TOGGLE switch located on the starboard side of the electric panel and BOTH must be on to operate the windlass. Use the windlass and deploy the anchor while the engine is running. The anchor can be deployed while standing at the bow of the anchor deck, Flybridge or in the Pilot House. There is both a salt and fresh water deck wash down hose and sprayer for washing the chain and anchor located forward in the STBD side anchor locker. The salt water deck wash pump breaker (#23) is on the DC 12V electric panel.

**NOTE:** Use the Salt Water Deck Wash Pump to wash the anchor and chain when returning them to the boat. Because the Salt Water Deck Wash Pump has no pressure tank the water stream will pulsate and not have the same pressure you experience with the fresh water pump and this is normal. Use the boat hook (located on the STBRD exterior salon wall) to knock off large chunks of clay and mud before attempting to wash the anchor. Leaving the anchor breaker on at all times aids in quick deployment in case of an engine failure or other emergency.

D. **SETTING THE ANCHOR:** The typical Pacific Northwest scope for anchoring in the San Juan and Gulf Islands is 4-to-1. After deploying the suitable amount of rode using the foot pedals at the bow or the Pilot House toggle switch, set the anchor by placing the boat in reverse at “idle” speed for a few minutes to test the hold and insure the anchor has set.

E. **SETTING THE SNUBBER LINE:** Always use the snubber line while anchoring to release tension on the windlass. After setting the anchor you’ll find the snubby line located in the left bow anchor locker. The snubby line has pre-tied loops on each end of the line ready to hook each bow cleat. Starting from the outside run the looped ends of the snubber line through the cleat port holes and slip the loops over the cleat ties. Fasten the center hook of the snubber line to the chain and lower it to just above the water line using the foot pedals for the windlass. If done correctly there should always be some slack in the chain so the snubber line is taking the tension off the chain and windlass.
F. TIDES: Check your tide tables to determine your current level of tide and how much it will drop overnight from its current level so you don't ground during the night in an ebbing tide. The Depth Finder is set to read from the WATER LINE. The draft of the boat is 5’-6”. Take care to do the proper math calculations to determine your keel-to-bottom distance.

Example: If the depth reads 20’ and the draft of the boat is 5’-6” (20’ - 5’-6” = 14’-4”) you will have a clearance from keel to bottom of 14’-4”. If you are in a 9’ high tide (14’-4” you will only have 5’-4” clearance at low tide.

G. RETRIEVING THE ANCHOR: When retrieving the anchor use the boat’s power and forward motion to lift the anchor out of the mud and not the windlass. Do not use the windlass to pull the boat to the anchor. This can put too much load on the windlass and damage it. Use the windlass only to take up the slack in the chain and raise the anchor back to the boat. You will need to do this while standing at the bow and not from the Pilot House, so you can observe the chain tension and be listening to the load on the windlass motor.

NOTE: Remember to turn on the anchor light at night while at anchor. The navigation light breaker #11 will need to be on for the anchor light. Don’t forget to turn the anchor light off in the morning.
3. **A/C- CRUISE AIR CONDITIONING**

A. **OPERATION OF THE A/C**: Use the A/C Cruisair Air heat pump only to air condition (cool) the boat. Always use the Diesel Hurricane hydronic heater for heating. (See “Heaters” in the Table of Contents). To operate the A/C, the Main 50 AMP breaker and circuit breakers #2 Salon, #3 Berths, #4 Pump, all located on the 230V power electrical panel must be on. The A/C operates on 230V only and cannot be used unless you are connected to 230V 50A shore power. Do not run the generator to operate the A/C. The controls for the A/C are located in the Pilot House, Salon, Master and Guest berth.

![](A/C Cruisair Heat Pump Temperature And Fan Speed Controls)

4. **BARBECUE**

A. **BBQ OPERATION**: The propane tank and valve for the BBQ are located in the left side door of the BBQ cabinet (the BBQ propane tank is independent from and is not connected to the solenoid switch in the galley). Open the propane tank valve and turn the grill gas knob on using the Bic BBQ lighter stick to ignite the grill. Turn off the propane tank valve after use and please use the wire brush and pad to clean the grill.
5. BATTERIES, CHARGER AND INVERTER

A. BATTERIES: There are 11- batteries on this boat:
   a. One 200 amp hour engine start battery located in the engine room
   b. One 100 amp hour generator start battery located in the engine room
   c. Two 200 amp hour bow thruster batteries located in the bow
   d. Two 200 amp hour stern thruster batteries located in the stern lazarette
   e. Five 200 amp hour house batteries located in the stern lazarette on the port side

B. MAGNUM BATTERY CHARGER: The charger button (pictured below) needs to be ON all at times. The inverter button is on only when AC power is required. The battery charging breaker #17 labeled "Battery Charger I- 30A" is located on the AC 120V power electric panel and should ALWAYS be left ON. The breaker #18 labeled "Battery Charger II- 80A" is NOT used and should ALWAYS be switched OFF. When plugged into shore power always check to ensure the charging button is ON and the batteries are charging on the Magnum charger main display.

C. AC & DC VOLTAGE/AMPERAGE USE DISPLAY METERS: There are four amperage use display meters for battery monitoring all located in a row across the top of the electric panel (see: diagram of Electric Panel). It is important to monitor these display meters to properly manage battery use while at anchor and not plugged into shore power. When you see the battery voltage meter reading below 12V start the generator to charge the batteries. It can take 3 hours to fully charge the house batteries.
D. **INVERTER:** When you are at anchor or not plugged into shore power, AC power is made available only when the inverter breaker #22 on the 120V AC panel is ON and the inverter button on the Magnum Battery controller is ON. Always turn the inverter button OFF when no AC power is required. The inverter will continue to draw power from the house batteries when left on even when no AC power is being required.

E. **INVERTER FAULTING:** While at anchor and not plugged into shore power if the house batteries’ standing voltage drops below 11.5V the Magnum battery controller will fault and stop inverting. You will have to start the generator or plug into shore power and recharge the batteries to resume inverting and restore AC power. Fully recharging the house batteries can take 2-3 hours.

**NOTE:** While at anchor and not connected to shore power or running the generator, the use of the microwave oven, the toaster, hair dryers or plug-in electric heaters should always be avoided. Using these appliances while not connected to shore power or running the generator will rapidly drain the house batteries and may cause the MAIN HOUSE panel breakers to pop (these appliances draw too much power and should always be avoided when not running the generator or plugged into power). If the Main House breakers pop you will need to locate and reset them.

**IMPORTANT:** While at anchor or not connected to shore power and battery voltage drops below 12V start the generator to charge batteries to their full capacity (this can take 2-3 hours). Turn OFF the inverter and check voltage amp hour and battery status each night before retiring.

**NOTE:** The five 200 amp hour house batteries are isolated from the engine start battery. In the event your engine start battery loses its charge you can start the engine by combining the house batteries with the engine battery. A switch for this is located under the settee seat in the salon (see next diagram).
6. **BERTHS**

A. **SLEEPING ARRANGEMENTS:** There are two staterooms and 6 possible berths on board.

   a. 2- berths in the Master Cabin  
   b. 2- berths in the Guest Cabin  
   c. 1- berth in the Pilot House  
   d. 1- large convertible berth in the Salon Settee

Each berth has a duvet comforter. Converting the Salon Settee into a berth requires sliding the dining table out away from the settee. It is easiest to first fold up the ends of the dining table and slide it out, then reach under the front of the settee cushion along the rail and pull it all the way out. There are two drop down legs on hinges that fold down. The extra cushion is usually stored on the Pilot House berth.

7. **BILGE PUMPS**

A. **BILGE PUMP OPERATION:** There are 4- bilge pumps located in the bow, mid, engine room and the commissary (stem) of the boat. The bilge pump toggle switches are located above the electrical panel, overhead at eye level, and should always be left in the AUTO position. The pumps may be turned on manually with the toggle switch (or at the pump itself) as required. At no time should the bilge pumps be left in the on position.
NOTE: There are rubber pads installed behind the bilge pump switches to prevent them from being switched on inadvertently. To manually turn on the bilge pump you will need to remove these rubber pads.

Toggle Switches Above Electric Panel/Eye Level

NOTE: There is an emergency hand operated bilge pump and handle for the engine room bilge located in the cabinet on the starboard side of the staircase going down to the cabin berths. To operate the manual bilge pump you must open the ball valves in the cabinet to the right of the manual bilge pump.

8. CANVAS, SEAT CUSHIONS, PILOT HOUSE WINDOW COVERINGS

A. CANVAS COVERINGS: The canvas coverings on board are as follows:

   a. Dinghy control panel canvas cover
   b. Dinghy complete canvas cover that includes the motor
   c. Flybridge navigation control canvas cover
   d. Flybridge 2-captain’s seat canvas covers
   e. BBQ canvas cover
   f. Pilot House 5-window covers

NOTE: The Dinghy and Flybridge Canvas coverings are all stored in the Flybridge Salon Seat lockers when not in use. The 5-Pilot House canvas window covers are stored in one of the Portuguese cabinet lockers when not in use.
B. **SEAT CUSHIONS:**

a. Flybridge settee 6-seat and back rest cushions  
b. Flybridge bench seat  
c. Portuguese 3-seat cushions

**NOTE:** In rough seas or wind the 3-Portuguese seat cushions should be stored away in one of the Portuguese storage cabinet lockers to prevent their loss overboard.

9. **COMMISSARY, DEEP FREEZER, STORAGE**

A. **COMMISSARY:** There is a large Commissary containing a pantry, wine rack, deep freezer (AC 120 volt breaker #5) and cabinet storage located at the stern end of the Salon beneath the floor. Lift the trap door in front of the stern entry door to access the Commissary. This is a great place to stow suitcases, bottled water, extra food items and anything else you may want to keep frozen, out of the way and out of sight.

![Commissary: Deep Freezer and Storage](image)

B. **DEEP FREEZER:** While underway the deep freezer operates only when plugged into 120V shore power or the generator is running (freezer will not operate on the inverter or while underway). To operate the deep freezer turn on breaker #5 on the 120V AC electric panel. Setting the temperature control to setting #5 will cool the freezer to 0 degrees Fahrenheit. When the freezer is not running the temperature will rise 10-15 degrees every 24 hours. When at anchor it will be necessary to run the generator at least every 48 hours to keep your stores frozen. While anchoring you will normally run the generator to charge the batteries at least every day for a few hours anyway.
NOTE: Run the deep freezer only when necessary. On short trips the refrigerator freezer is more convenient and normally sufficient to keep all your necessary foods frozen.

10. DINGHY, DAVIT, WINCH AND BOOM

A. DINGHY: The dinghy is an 11' hard body “Bullfrog” that seats four people. It’s equipped with a 30 HP Honda, a Furuno GPS plotter and sounder (no maps). Two keys for the dinghy are kept in the top port drawer in the Pilot House. To deploy the dingy use the Davit system (DC panel breaker #47), or the Winch (DC Panel Breaker #45). Stored in the flybridge bench seat is a battery charger, motor oil, spare spark plug and prop for the dinghy (a spare stern hull plug is in the mesh bag in the dingy).

B. DAVIT SYSTEM: Turn on breaker #47 on the 12V DC electric panel. When using the Davit system the Dinghy can only be lowered and raised on the STBD side of the boat (the Davit system is the best way to deploy the dinghy, only use the Winch and Boom to lower the dinghy if there is an issue with the Davit system). The controls and cable for the Davit system are located in the flybridge bench seat. The Davit’s control cable will need to be attached to the column of the Davit system. Ensure the control cable is snugly attached to the Davit with the retaining collar screw ring.
NOTE: Gas Tank for the dinghy is located under the dinghy seat.

NOTE: Never leave Davit breaker on when not in use. Always turn off the breaker to release pressure in the system when not in use.

NOTE: When finished with the Davit system always leave the boom in a horizontal resting position for proper lubrication.

C. DEPLOYING THE DINGHY: Before deploying the dinghy first always insert the stern plug in the hull and insert the key. When using the Davit System the Dinghy can only be lowered and raised on the STBRD side of the boat.

a. Turn on breaker #47 on the DC electric panel  
b. Insert the stern plug in the hull and key in the control panel  
c. Position the boom of the Davit and attach the hook to the dinghy ring and lines made for this purpose (see diagram above)  
d. Undo the 3-buckle straps securing the dinghy to the boat deck and place the straps in a safe location so they are not lost.  
e. Position a helper below with a line ready to receive the dinghy  
f. Use the controller joy stick to lift the dinghy straight up first then maneuvering it while extending the boom and positioning it to the STBD side for lowering into the water.

While raising and lowering the dinghy take care to press only one function on the joy stick controller at a time. Do not bang and damage the side of the boat with the dinghy or cable hook while lowering or raising the dinghy. You will need to position a helper below on the lazarette deck with a line attached to the dinghy to help you guide the dinghy to the water without banging it against the boat.
D. **STARTING THE DINGHY MOTOR:** To start and operate the dinghy you will need to turn on the battery switch on top of the dinghy battery case and have the key inserted. Before starting the engine make sure the bilge pump is operating by flipping the bilge pump switch located on the engine control panel. Ensure the engine “kill” clip is inserted into its retainer ring and the gas tank vent is open. The gas tank is located under the dinghy seat. Next, give the gas primer a few squeezes until you feel pressure in the line and have primed the engine. Follow the procedure outlined below:

   a. Turn on battery switch on top of the battery case
   b. Insert stern hull plug and key in the control panel
   c. Test and ensure bilge pump is working
   d. Ensure engine kill clip is inserted in its retainer ring
   f. Check the gas tank vent under the seat is open
   g. Squeeze the gas primer bulb to prime the engine if cold
   h. Engage the ignition key and start motor

**NOTE:** Do not engage the starter for more than 10 seconds at a time. If the motor does not start allow the starter to cool for one minute and repeat these steps.

**NOTE:** There is a tow line and carabiner for towing the dinghy located under the control panel of the dinghy or in the flybridge bench seat. Only tow the dinghy with the motor raised and resting on its support tab with about 15–25 feet of line.

E. **WINCH AND BOOM:** (If needed) Turn on breaker #45 on the 12V DC panel. You will find the control for the winch and boom in the flybridge bench seat. Follow the same procedure outlined in section C for deploying the dinghy using the davit system. The winch and boom have only two control functions, one for the winch and one for raising and lowering the boom. The boom will need to be manually swung side to side. You can raise and lower the dinghy on either the starboard or port side.

**NOTE:** Use the winch and boom to raise the dinghy only if there is an issue with the davit system.

F. **RETURNING DINGHY TO THE BOAT:** First raise the motor and support it on its resting tab so it does not make contact with the boat when returning the dinghy in its cradle. The motor’s keel will make contact with and damage the boat’s deck if not raised and set on its support tab. Raise the dinghy back to its cradle doing essentially what you did to lower it but in a reverse order, taking care to position it properly back onto the 4-cradle support legs.
While lowering the dinghy to its cradle watch that the paddles on the 4-stands supporting the dinghy are flat, line up with the dinghy hull, and centered in the proper positions. For the proper location of the dinghy on the support pads the stern support paddles need to line up with the rear wall of the dinghy (see photos below).

Refasten the 3-buckle straps securing the dinghy to the boat. Return the Davit system to the horizontal position next to the dinghy to ensure proper lubrication of the boom. Examine all the photos and follow the outline below:

a. Raise the motor and secure it on the resting tab.
b. Attach the davit’s winch cable hook to the dinghy’s lifting ring
c. Position a helper on the lazarette deck to help guide the dinghy as you lift it
d. Raise the dinghy carefully using the davit (or winch) controls
e. Position & center the dinghy over the 4-support paddles lowering it when lined up correctly
   (For correct position the back bulkhead needs to be in line with the rear support paddles)
f. Fasten the 3-straps securing the dinghy to the deck
g. Remove the stern hull plug and turn off battery switch

NOTE: When returning to Bellingham don’t forget to top off the dinghy gas tank while refueling the boat. The Dinghy gas tank can be removed from under the seat and filled at the dock.
11. ELECTRIC PANEL AND POWER CORDS

A. COLOR CODED BREAKER SYSTEM: For your convenience all the breakers are color dot coded to assist you in setting the breakers in their correct positions:

a. **ON** - always while on board
b. **ON** - while underway
c. **ON** - as needed
d. **OFF** - always

Example: Colored Breaker Dot System

- **House Power Selector**
  - Always In This Position
- **Shore Power AMP Selector**
- **The Two Anchor Windless Breakers**
B. **AC POWER SUPPLY/SWITCH SELECTORS:**

a. **House Power Selector Switch:** The "House Power" switch is used to select the correct source of the power you are using to power the boat. This can be:

1. FWD SHORE power
2. AFT SHORE power
3. GEN (generator) power

b. **Air Condition Power Switch:** The "Air Con. Power" switch is always left in the HOUSE position all the time.

C. **POWER CORDS:** There is a 30Amp and a 50Amp power cord and a 30A/50A pigtail adaptor located in the lazarette. If using the 30A power cord it will require the 30A/50A pigtail adaptor to plug into the boats 50A receptacles. All the power cords plugging into the boat (male ends) use only to the AFT or FWD "SHORE" Power and not the AFT or FWD "AIR" Shore Power. See picture below.

![Select The Power Source](image1.png) ![Always Left In House Position](image2.png)

Always use Aft or Forward SHORE Power

Aft and Forward Shore AIR Power not used

Cable Shore Power not used

This is the AFT Shore Power shown
This is the FORWARD Shore Power shown

D. SHORE POWER AMP SELECTOR: When plugging into a power source you will need to select the correct position on the SHORE POWER AMP SELECTOR. This switch will need to be set to the 50A position when plugging into a 50A power source, or the 30A position when plugging into 30A powered source.

SHORE POWER AMP SELECTOR

NOTE: When using the generator to power the boat the “Shore Power Amp Selector” switch will need to be set in the 50A position

A. MAIN HOUSE BREAKERS: There are two Main House Power breakers located both aft in the Lazarette and forward in the Master Berth upper starboard cabinet. They may occasionally pop and you will need to locate and reset them. This can happen if you are using a hair dryer, MW oven, or toaster while at anchor. It is best to not use these items while at anchor as they can draw too many amps to operate and will drain your battery power in a hurry.
12. ELECTRONICS AND NAVIGATION

There are two 12” Raymarine plotter screens in the pilot house and one 8” plotter screen on the Flybridge. The starboard Pilot House 12” plotter is the Master (please do not change the Master plotter screen setup and settings). The AIS is coupled to the 8” plotter on the flybridge and must be on to share and display AIS information on any plotter screen. (However, the AIS will always broadcast your boat’s ID information even if the 8” screen in the Flybridge is off).

A. NAVIGATION EQUIPMENT LIST:

1. FloScan (KNTS/RPM/GPH)
2. Two VHF- ICOM DSC VHS Radios
3. Depth Finder- Raymarine ST70 (SET TO READ DEPTH FROM WATER LEVEL)
4. Wind Speed and Direction- Raymarine ST70
5. Auto Pilot- Raymarine ST70
6. Radar- Raymarine E-120
7. Plotter- Raymarine E-120
8. GPS- Raymarine
9. Magnetic Compass- Danforth 4.5
10. Three- AC 120V USB port charging locations in the Salon, Pilot House and Master Birth, and a DC 12V USB charging port located in the Pilot House and Flybridge
12. Maptech book and chart plotting tools located Pilot House center drawer foot locker
Wiper And Window Washer Controls

Window Defroster

Lights switches For Navigation, Flybridge, Anchor, And Windlass Anchor Chain Control

Wema Gauge For Water and Fuel Levels

Master Plotter

This Battery Charger Not Used

Engine Ignition Key

Thrusters

Diesel Heater Thermostat/Fan And ON/OFF Toggle Switch

Auto Pilot Display and Auto Pilot Handheld Control

Magnum Battery Charger/Controller

VHF Radio

Generator Controls
13. EMERGENCY AND SAFETY PROCEDURE

**Mayday:** Push RED distress button on VHF radio to transmit your boat ID and GPS location

**First Aid Kit:** Located in the Master Head

**Flares:** Located in the Pilot House foot locker white mesh bag

**Auto Inflation PFDs:** (4) Located in the Flybridge bench seat and or Dinghy

**PFDs:** (5) Located in the Lazarette

**Bilge Pump:** Manual pump and handle in cabinet left side on stairs to berths

**Sump Pumps:** Auto operating but can be switched to manual in an emergency

**Fire Extinguishers(4):** M. Berth, Main Hall, Pilot House and Salon Cabinet

**Life Sling:** located on the railing port side of Flybridge

**Boat System Manuals:** located in a file box in the Pilot House center cabinet

A. If someone is hurt or you are in danger, call the Coast Guard on Ch. 16 immediately.

B. If you hit something and no one is in danger, call San Juan Yachting at 800-677-7245

C. If you are boarded by the Coast Guard, be prepared to show them where the PFD’s are located for each person on board. The Coast Guard requires every person in a dinghy to wear a PFD.

D. If you strike a rock, log or run-a-ground:

   a. Immediately look for water inside the boat. Look in all 4-bulge pump sumps. Look where hull contact took place.
   b. If you are sure no water is entering the hull and no one is in danger, call San Juan Yachting at 800-677-7245 right away. Describe the incident and determine if you should proceed to the nearest harbor where a professional diver can inspect the hulls, props and rudders before proceeding on your trip.

E. If you have a water leak determine the source of water. Wood plugs are located in the mesh bag stored in the Pilot House port foot locker and plastic rubbermaid container STBD side forward engine room. Confirm the bilge pumps are running — they turn ON automatically.

F. If the leak is serious and you are in danger, get your crew on deck and into life jackets. Grab the mesh bag with flares and the portable VHF radio. Get ready to launch the dinghy.

G. **MAYDAY!** Boat In Distress:

   a. Use MAYDAY if loss of life or vessel appears imminent.
   b. Push RED distress button at the main VHF radio. It will transmit the boat’s ID and exact GPS location. Then, call the Coast Guard on CH 16 for assistance.
   c. Use PAN PAN if the situation does NOT appear life threatening.
TIP: Direct communication with the Coast Guard on Ch. 16 is most effective. Be prepared to provide: type of boat, situation, location (GPS coordinates), # of people onboard, and any injuries.

H. MAN OVERBOARD!
   a. Immediately throw a Type III PFD or flotation cushion to the person and assign one crew member to spot and point at the overboard person.
   b. Push and HOLD the MOB button on the chart plotter for 2 seconds to mark where crew went overboard. A reminder alarm will sound every 10 seconds. (To stop the MOB alarm sound and remove the MOB mark on the chart plotter, push and hold the MOB button again for 2 seconds.)
   c. Safely motor back to the person in the water; use the Life Sling system on the stern to retrieve them at the stern transom steps. (Be sure to put the engines in NEUTRAL when rescuing a person at the stern steps)

14. ENGINE OPERATION AND STARTING

   A. MAINTENANCE: Magic Morning is maintained by a Maintenance Mechanic Professional. The oil levels, coolant levels, sea water intake strainers, belts, etc., are all checked and monitored weekly. It is not normally necessary for you to monitor these parameters during your charter. However, at the beginning of each day’s cruise you should look around in the engine room for evidence of oil or coolant leaks or any items or machinery that appears to need attention or maintenance. If in doubt call San Juan Yachting @ (800) 677-7245.

   NOTE: There are spare fuel filters, belts, oils, coolants, plugs, impellers (for the engine, generator sea water strainer pumps) and other related spare items located in a marked clear Rubbermaid container inside the engine room.

   B. THINGS YOU CAN DO: Check the diapers under the engine for signs of excessive oil leaking, coolant or water. A few drops of oil on the pads is normal. The correct coolant level is marked on both the engine coolant reservoir located on the forward engine room wall and the generator coolant reservoir located inside the generator box (you will need to remove the left side generator cover to inspect the generator coolant or oil levels). The coolant level in the reservoir will rise as the engine heats up. There is extra coolant located in the engine room.

   C. FUEL (AND WATER) TANKS: A Wema gauge located in the Pilot House shows fuel and water tank levels. The diesel fuel tanks hold 1100 gallons (550 each) and it is not possible for you to use enough fuel
during a few weeks cruising the San Juans and Gulf Islands to have to monitor your fuel levels. There are also very convenient sight gauge columns for both starboard and port fuel tanks in the engine room. You will need a magnet to run up and down the column to calibrate the Gauge.

a. The WEMA fuel/water gauge will give you an accurate reading for the level of the 300 gallon fresh water tank:
   1. Turn ON Nautical Instrument breaker #40 on the 12V DC panel
   2. Water tank level: select position #1
   3. Fuel tank level Port side: select position #2
   4. Fuel tank level Starboard side: select position #3

D. FUEL TANK VALVES: On the forward engine room wall and various places throughout the engine room you will see an arrangement of fuel valves for the main engine, generator and fuel polishing system. Do NOT change the position of these fuel valves. These fuel valves are for performing maintenance only.
E. STARTING THE ENGINE: The ignition key is located in the top drawer port side of the Pilot House or may already be in the ignition. Normal operating temperature is 180 deg. F.

a. Turn on the Engine Ignition breaker #12 located on the DC Power 12 Volt electric panel
b. Ensure the gearshift is set in neutral and the throttle at idle
c. Turn the ignition switch on to power up the panel and wait 15-seconds for the Pre-heat before engaging the starter ignition button (*do not engage starter more than 20 seconds, if engine doesn’t start wait one minute for starter to cool*)
d. After the engine starts increase engine to 800 RPM to silence the low voltage alarm.
f. After the engine has started step out the starboard Pilot House door and look at the stern to see if water is bubbling out the exhaust. If no water is visible shut down the engine and check the raw sea water strainer or Call San Juan Yachting @ (800) 677-7245.

NOTE: Warm up the engine at 800 RPM for 10-15 minutes until you see the temperature begin to rise and before getting underway. Normal operating temperature is 180 deg. The low voltage alarm may beep at engine speeds below 800 RPM until the engine has warmed sufficiently.

F. PREPARING FOR DEPARTURE: While the engine is warming up use this time to prepare the boat for departure. Remember to disconnect shore power.

a. After starting the engine turn ON the navigation breakers:

1. #34 RADAR (Master Plotter)
2. #35 AUTO PILOT
3. #36 CHART PLOTTER
4. #41 FISH-FINDER (depth sounder set to read from water level)
5. #37 and #38 Both VHS RADIOS
6. #40 NAUTICAL INSTRUMENTS
7. (Optional, blower is noisy) #26 ENGINE ROOM BLOWER

b. Disconnect shore power cord and return electric cord(s) to the lazarette locker
c. If you haven’t already, check weather, winds, tides and your charted course
d. If departing from anchoring wait for the engine to warm before lifting the anchor
e. Close all Berth and Head windows below deck
f. Check the boat for any loose items, inside and out, secure them, and lock cabinet doors
g. Prepare the dock lines and fenders for departure
h. Close the lazarette, port and starboard deck gates
i. You and your first mate put on the Eartech wireless headset for seamless communication
j. Test thrusters for operation (see Table of Contents for Thruster operation)
k. Depart and have a great day!

G. **ECONOMIC POWER SETTINGS AND FUEL BURN:** Economic cruise speeds are optimized at between 1400-1800 RPM. We recommend these power settings. Listed are the fuel consumption and speed at different engine power cruise settings measured by the floScan: (power settings may change with winds, tides and currents)

<table>
<thead>
<tr>
<th>RPM (floScan)</th>
<th>Speed Knots</th>
<th>Fuel Gal/Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500</td>
<td>7</td>
<td>1.5</td>
</tr>
<tr>
<td>1600</td>
<td>8</td>
<td>3.0</td>
</tr>
<tr>
<td>1800</td>
<td>9</td>
<td>4.0</td>
</tr>
<tr>
<td>2000</td>
<td>9</td>
<td>5.0</td>
</tr>
<tr>
<td>2200</td>
<td>9.6</td>
<td>7.5</td>
</tr>
<tr>
<td>2400</td>
<td>10.3</td>
<td>12.5</td>
</tr>
<tr>
<td>2600</td>
<td>11</td>
<td>16.0</td>
</tr>
</tbody>
</table>

**NOTE:** Do not run the engine above 2000 RPM for extended periods of time.

**CAUTION:** If you experience a high temperature alarm, shut down the engine immediately. It is most likely eelgrass plugging the raw water strainer and you will need to clean the strainer. If you are unfamiliar with this process you should call San Juan Yachting @ (800) 677-7245 for assistance. There are other reasons you may experience high temperatures or loss of oil pressure. Always shut down the engine immediately and call SJY for assistance.

H. **SHUTTING DOWN ENGINE:** When you are ready to shut down the engine allow a few minutes at idle to cool the engine. If you are mooring to a dock or anchoring you have probably already accomplished this.

a. Put the engine in neutral and in idle gear before turning off the engine
b. After turning off the engine, turn off navigation breakers:
   1. #34 RADAR (Master Plotter)
   2. #35 AUTO PILOT
   3. #36 CHART PLOTTER
   4. #41 FISH-FINDER (depth sounder)
   5. #37 and #38 Both VHS RADIOS
   6. #40 NAUTICAL INSTRUMENTS (optional)
   7. #26 ENGINE ROOM BLOWER (if used, blower is noisy)

c. Turn off AUTO PILOT handheld by pressing the ON/OFF button once to silence the alarm and press and hold it again for 3 seconds to turn it off
d. If docking, connect shore power and verify batteries are charging
e. If docking at a harbor (not on your return to Bellingham) rinse the salt water from the hull and fenders to prevent scratching the fiberglass from the boats action
I. **HANDHELD AUTO PILOT:** The Auto Pilot handheld will sound an alarm every time the Master Plotter is turned off. Press the ON/OFF button once to silence the alarm then press and hold it again for 3-seconds to turn off the Auto Pilot handheld. Don’t forget to plug it back in to charge so it is ready to use again next time.

![Image of Auto Pilot handheld]

**PRESS THE ON/OFF BUTTON ONCE TO SILENCE THE ALARM AND PRESS IT AGAIN AND HOLD IT FOR 3-_SECONDS TO TURN OFF AUTO PILOT HANDHELD**

15. **ENTERTAINMENT SYSTEM**

**NOTE:** To operate the entertainment system turn on breaker #18 12V DC electric panel. The stereo system is plugged into a GFI receptacle locate under the kitchen sink. If there is no power to the stereo system and the DC 12V electric panel breaker is on, check and reset the GFI receptacle under the kitchen sink.

A. **WIFI:** The Verizon Mifi WIFI (password: eb915e8a) only works if there is a Verizon cellular network service available. The WIFI box is located just inside the engine room door at eye level right side. Make sure it is on if you cannot detect the WIFI signal.

A. **BOSE BLUETOOTH SPEAKER BAR:** Use the Bose bluetooth speaker bar’s remote control to operate the speaker for better quality sound when watching TV or streaming music from your phone or other personal device. There is another portable Eco bluetooth speaker in the Pilot House that can be carried up to the Flybridge or anywhere on the boat.

B. **SONY SMART TV:** Use the menu on the smart TV’s remote control to navigate the operation of the smart TV. There is a manual for the TV under the Pilot House helm cabinet in a file box with other boat system manuals. The WIFI must be on to utilize the smart feature on the TV (see WIFI), or any cellular service using your phone or other personal devise’s hotspot feature.
C. **SONY DVD PLAYER:** Use the Sony DVD player located in the right side cabinet under the TV to play a DVD. The door must be open for the remote control to work. Turn on and utilize the Bose bluetooth speaker for better sound quality.

D. **BOSE FM RADIO/CD PLAYER AND SURROUND SYSTEM:** The Bose surround system has separate remote controls for the Pilot House, Salon and Master Berth. The Bose surround system does not work with the smart TV or DVD player. Use the Bose Bluetooth speaker for these devices.

16. **FUEL TANKS AND FRESH WATER TANK**

A. **FUEL TANKS:** The two diesel fuel tanks hold 550 gallons each totaling 1100 gallons (It is not possible for you to use enough fuel in a 1-2 week cruise to worry about your fuel tank levels). The filler ports for each tank are labeled and located on both the port and starboard sides of the stern lazarette deck. Please clean up any spills to prevent staining the deck, including the tank vents located on both Port and Starboard steps leading up to the Pilot House doors. Please place a pad below both tank vents.

NOTE: Be sure you fill both Port and Starboard fuel tanks on your return to Bellingham, as well as the dinghy gas tank if used.

B. **WEMA GAUGE:** The Wema gauge will give you an accurate reading for the level of the fuel tanks and the 300 gallon fresh water tank. The selector knob must be set to the #1 position to read the fresh water tank and position #2 and #3 for both the Port and Starboard fuel tanks.

NOTE: The Wema Gauge works only if the nautical instrument breaker #40 of the 12V DC panel is on.
B. **ENGINE ROOM SIGHT GUAGE:** There is a Starboard and Port sight tube fuel gauge in the engine room. These sight gauges will require a magnet (look for one attached to the forward engine belt protective cover) to recalibrate the flap markers inside the sight tubes. The white flap markers will be black at the fuel level.

![ENGINE ROOM SIGHT GUAGE IS SHOWS BLACK AT FUEL LEVEL](image)

**ENGINE ROOM SIGHT GUAGE IS SHOWS BLACK AT FUEL LEVEL**

**MAGNET USED TO RECALIBRATE FLAP MARKERS**

17. **GALLEY: RANGE, OVEN, MW, REFRIGERATOR, ICE MAKER, TRASH COMPACTOR, DEEP FREEZER, TOASTER, COFFEE MAKER, WATER HEATER**

**NOTE:** Breakers for all the appliances are located on the 120V AC panel and are clearly marked. There is an additional breaker for the refrigerator on the 12V DC panel and both should be on at all times.

**NOTE:** The Magnum battery controller *inverter* must be on to operate any AC 120V appliances while not plugged into shore power or running the *generator*.

A. **RANGE/OVEN:** To operation the range or oven turn ON the solenoid gas valve by pressing the ON/OFF button on the solenoid control located to the left of the range on the backsplash wall. Remember to turn OFF the control after you are finished cooking. The ignition source for the range/oven is a AA battery located under the range, accessible from the front. Spare batteries are located in the Pilot House foot lockers.
B. **MICROWAVE OVEN:** The microwave oven (and toaster) should only be used when plugged into 120V AC shore power or the generator is operating. Operating these appliances with the inverter while not plugged into shore power or running the generator will drain the house batteries quickly and may pop the main house breakers located both fore and aft. (For locating the Main House Breakers see #11 Electrical Panel/Main House Breakers).

C. **PROPANE TANK LOCATION:** There are 3-propane tanks located in the center Portuguese deck seat locker. Two are in-line with a switch valve and one is a spare.

D. **REFRIGERATOR AND DEEP FREEZER:** The refrigerator is operated by AC and DC power and will automatically switch to the correct power source providing both the refrigerator AC and DC breakers are ON. Setting the refrigerator dial between 4-5 works best. 4 if the refer is more packed and 5 if not. The Deep Freezer will only operate while plugged into shore power or the generator is running (See #9 Commissary/Deep Freezer for information about the Deep Freezer).

E. **TRASH COMPACTOR:** The trash compactor will only run if you are plugged into 120V AC power or the generator is operating. It will not operate using the inverter. The trash compactor will compact and contain all your NON-ORGANIC trash for a week before emptying. **Do not put organics into the trash compactor.** The trash compactor bags are located in the cabinet on the starboard side of the stairs leading to the lower berths.

F. **ICE MAKER:** The ice maker will only work if you are plugged into 120V AC power or the generator is operating. It will not operate using the inverter. The ice maker will make ice from the fresh water tank and is located in the cabinet on the port side of the staircase leading up to the Pilot House.
G. **COFFEE MAKER:** The coffee maker will operate off the inverter but is not recommended. You should be plugged into shore power or running the generator. Running the generator every morning for a few hours while you are at anchor is common practice and a good time to be brewing your coffee.

H. **WATER HEATER:** The water heater does not operate off the inverter and will only operate if plugged into shore power or running the generator.

**NOTE:** The water heater, ice maker, trash compactor, washer/dryer and A/C will not operate off the inverter or without shore power or generator.

**NOTE:** When not plugged into shore power or running the generator the microwave, toaster, electric coffee maker, electric space heaters and hair dryers should not be used. When not plugged into shore power using these appliances will drain the house batteries and can cause a Main House breaker to pop (See #11 Electrical Panel/Main House Breakers) or the Magnum Inverter to fault if house batteries drop below 11.5V. If the inverter faults, no AC power will be available until you run the generator or plug into 120V AC shore power. If the house batteries drop below 12V start the generator for 2-3 hours to fully recharge the batteries.

18. **GENERATOR**

A. **GENERATOR OPERATION:** The 12 KW Northern Lights Generator produces 240V AC power and can run every appliance on the boat including the air conditioning, washer and dryer, water heater, ice maker and trash compactor. Normal operating temperature is 180F.

To operate the generator:

a. Set HOUSE POWER selector Switch to the generator (as shown in diagram below)

b. Set SHORE POWER AMP selector switch to 50A (as shown in diagram below)

c. Hold down the pre-heat switch for 10-seconds then press up on the starter switch while continuing to hold down the pre-heat at the same time. (See diagram on page 22 “Generator Controls” for the location of the generator control switches)

d. After the generator starts you can release the pre-heat switch after a few seconds. If the generator doesn't start repeat this procedure
19. **HEAD PHONES (WIRELESS EARTECH HEADPHONES)**

A. **EARTech WIRELESS HEADPHONES:** The wireless Eartec headset and charger is located in the port side Pilot House cabinet locker. For your convenience use this headset for seamless wireless communication between the Pilot and your onboard assistant. Always use the lanyard and carabiner to secure the headset to your person and prevent loss overboard.

20. **HOLDING TANK AND MACERATOR**

A. **HOLDING TANK AND HEADS:** Magic Morning has a 60 gallon holding tank. The Tecma Heads are operated by first pushing the fill button to fill the bowl. After doing your business, press the flush button and wait a few seconds for it to flush. There is a gauge above the Master Berth head that tells you if the tank is empty, low, mid or full.
NOTE: Do NOT flush sanitation wipes, tissue or paper towels down the toilet. Use ONLY marine toilet paper supplied with the boat and no products you bring from home. Be conservative with the amount of toilet paper you use. PLEASE inform all your guests of these rules.

NOTE: When the gauge is orange reading “Mid” it is a good idea to start thinking about looking for a pump-out station or using the macerator to empty the tank. When the gauge is red reading “Full” you must stop using the head until the holding tank is emptied. Overflowing the holding tank can plug the vent and you will not be happy with the consequences.

B. PUMP-OUT STATION AND PROCEDURE: The pump-out station for the holding tank is located on the Portuguese deck just forward of the Pilot House starboard door. In the starboard Portuguese bench seat locate the 16” long by 2” wide clear plastic rubber pipe with blue stripes and the latex gloves. Screw the threaded end of the pipe into the discharge port and attach the other end to the pump out station handle. This takes two people, one to watch and hold the tube and the other to operate the pump switch on the dock. When the tank is empty, if possible, fill it with 10-15 gallons of fresh water and pump it out again until the water runs clear in the sight tube.
C. **MACERATOR, PUMP:** In legal waters you can discharge the holding tank overboard using the macerator pump. To discharge overboard the macerator discharge valve must be OPEN. Do NOT run the macerator with the valve closed. The macerator discharge valve and timer are located in the trap door in the floor outside the guest head. Access this door and open the macerator valve (the valve is labeled). If the tank is full set the timer for 10-minutes.

a. Open macerator breaker #21 on the 12V DC panel (it has a locking cover)
b. Access macerator in floor outside guest head
c. Open the Macerator check valve
d. Set the Macerator timer for 10-minutes
f. After 10-minutes check the Master head gauge is now green (empty)
g. Close the Macerator check valve
h. Turn off the breaker #21 and close the locking cover

**NOTE:** The through hull for the macerator pump is located in the floor under the guest vanity being not easily accessible and for this reason is always left open. Use the macerator check valve to open and close the macerator for discharge overboard.

21. **HEATERS (ELECTRIC SPACE HEATERS, DIESEL HEATER, A/C HEAT PUMP)**

A. **ELECTRIC SPACE HEATERS:** When plugged into shore power we recommend using the two electric space heaters, located in the cabinet below the washing machine, to heat the boat and not the diesel heater. The electric heaters have a thermostat and do a great job keeping the cabins comfortable and save wear and tear on the boats diesel heater system.

**CAUTION:** When not plugged into shore power don’t use the electric heaters.
SPACE HEATERS

B. DIESEL HEATER: The Hurricane Hydronic Diesel Heater can operate on DC 12V power and is the most economical way to heat the boat when not plugged into shore power. The heater will initially draw about 12-15 amp to heat the fluid then drops to 3-4 amps thereafter. Monitoring the batteries is necessary while at anchor and not plugged into shore power while using the diesel heater:

a. Turn ON breaker #46 (labeled HEATER) on the 12V DC panel
b. Turn ON the ITR on/off toggle switch (located in the Pilot House port side)
c. Set the independent Thermostats and fan speeds for the Berths, Salon and Pilot House

NOTE: When the heater is no longer required turn OFF the ITR ON/OFF toggle switch and the HEATER breaker(#46). Turning off the ITR heater toggle switch only will NOT turn off the heater.

C. A/C HEAT PUMP: You must be plugged into 240V 50A shore power to operate the A/C Heat Pump. The Cruisair A/C Heat Pump runs off the 230V panel and will heat or cool the boat. It is more economical to heat the boat using the space heaters or the diesel heater if at anchor. To use the A/C:

a. For Salon: turn on breaker #2 and breaker #4 (pump) on the 50A 230V panel
b. For Berths: turn on breaker #3 and breaker #4 (pump) on the 50A 230V panel
c. Adjust thermostat and fan speeds on the controls
22. **INVERTER**

A. **INVERTER OPERATION:** When at anchor and not plugged into shore the AC power is enabled only when the INVERTER button on the Magnum battery controller is ON and the inverter breaker #22 on the AC 120V electric panel is ON. Although the CHARGER button on the Magnum Battery controller should always be left ON, the INVERTER button should always be left OFF unless AC power is required. The Inverter will still draw power from the batteries if left ON even when no AC power is being required.

When at anchor it is good practice to turn the inverter OFF at night because it will still continue to draw power from the house batteries even when it is in standby mode. While using the inverter you will need to monitor the Volt/Amp Display Use Meters located in a row on top of the electrical panel (see #5 Batteries, Charger and Inverter). When the house batteries drop below 12V start the generator and fully charge the batteries. This may take an hour or two.

CAUTION: If the batteries are allowed to drop below 11.5V the inverter will fault and stop inverting at which point you will have to start the generator to restore AC power.
23. KAYAKS

A. LOWERING THE KAYAKS: Kayaks can be lowered using a line attached to each handle of the kayak and the davit system. A line attached to the kayaks is already made for this purpose. Attach the loops in the end of the line to each kayak handle and the winch hook to the center loop (see #10 Dinghy and Davit System for operation of the Davit system).

ATTACH THIS CENTER LOOP TO THE HOOK ON THE DAVIT SYSTEM

24. LIGHTING

A. All interior, exterior and navigation light breakers are located on the DC Power 12 Volt panel and are labeled. There are toggle switches that will need to be on in addition to the panel breakers for some of the lights. Spare light bulbs and batteries are located in the Pilot House Port foot locker.

All interior and exterior lighting is LED with the exception of the rope night mood lighting for the lower berths and salon. This lighting will draw 4-5 amps and can drain the batteries at a faster pace. It is best to not leave this mood lighting on all night while at anchor.

25. MACERATOR (SEE #20 HOLDING TANK AND MACERATOR)

26. NAVIGATION (SEE #12 ELECTRONICS AND NAVIGATION)

27. SAN JUAN YACHTING

A. CONTACT NUMBERS FOR HELP AND ASSISTANCE:

San Juan Yachting: (360) 671-4300, 1-(800)) 677-7245
28. SHOWERS

A. WATER HEATER: When not plugged into AC 120V shore power, the water heater will operate only when the generator is running or the boat is underway. Turn on the water heater breaker #2 is on the AC 120V electric panel. The fresh water holding tank holds 300 gallons and a Wema gauge (see: Fuel and Fresh Water Tanks #16) in the Pilot House will read its level.

When at anchor, limit shower times to save water in the fresh water tank. Get wet, turn the water off, lather up and rinse off. The shower discharge water is automatically pumped overboard. There is an outside hot and cold shower spray located on the lazarette deck at the stern of the boat.

29. THRUSTERS

A. BOW AND STERN THRUSTER OPERATION: The thruster control joy sticks are located just to the right of the throttle and gear shift at the Pilot House helm.
   a. Turn on breaker #24 on the 12V DC electric panel
   b. Push both ON buttons on the thruster control together at the same time
   c. Test bow and stern thrusters for operation by goosing each joy stick
   d. Thrusters will remain on for 5-minutes and turn OFF automatically if not used

NOTE: Limit thruster use to short bursts of less than 5-10 seconds at a time. It is best not to depend on the thrusters to steer the boat but to use them as an assist to the rudder and engine while docking. Overheating the thrusters will cause the internal breaker to pop and a cooling off period to follow.

NOTE: There is a large red palm size button located on the starboard side toe kick of the Master Birth bed. This button can be inadvertently kicked in and it will disable the bow thrusters. If this happens you will need to locate this button and pull it back out to restore use of the bow thrusters.

30. TOOLS, SPARES AND SUPPLIES

A. PILOT HOUSE: There is a tool bag located in the Pilot House foot lockers containing pliers, screw drivers, duct tape, electrical tape, hacksaw, hammer, tape measure, wire cutters, flares, hull plugs, light bulbs, batteries, zip ties, lubricants, fuses, wire, wire fasteners and an assortments of other miscellaneous tools and supplies.

B. ENGINE ROOM: There is a more complete tool box in the engine room along with spare oil, engine coolants, impellers, belts, oil and fuel filters, oil diaper pads, more hull plugs, fresh water pump. Look in marked clear Rubbermaid containers in the engine room.
C. **COMMISSARY AND LAZARETTE:** Shop vac, air compressor, crab cooking pot.
D. **CRAB POD:** Crab pod is in the STBD Portuguese cabinet locker
E. **SPARE DOCK LINE:** Port anchor locker

31. **WASHER AND DRYER**

A. **WASHER AND DRYER OPERATION:** The washer and dryer will only operate if you are connected to 120V or 230V AC power or the generator is running. The W/D operate off the 230V 50A electric panel but when plugged into a 120V 30A power source the ISO transformer will step up the voltage to provide 230V and operate all the 230V appliances but only at 30A capacity.

   a. Turn on breakers #5 (washer) and #6 (dryer) on the 230V 50A panel

The washing machine is located in the port side cabinet at the bottom of the staircase leading to the lower berths. The dryer is located in the Guest berth floor to ceiling cabinet. Washing detergent pods are in the cabinet below the washing machine along with the other cleaning supplies.

NOTE: There is a hanging clothes line and pins located in the Master Berth shower and the Flybridge bench seat storage locker.

32. **WATER TANK**

A. **FILLING THE WATER TANK:** The water tank filler neck is located on the port side of the Portuguese deck. Hoses are in the Portuguese port side seat locker. The Wema gauge will read its level.

33. **WINCH AND BOOM**

A. **WINCH AND BOOM OPERATION:** Always use the Davit system to raise and lower the dinghy. In the event you experience a failure of the Steelhead davit system, the winch and boom may be used to lower and raise the dinghy.

   a. Turn ON breaker #45 on the 12V DC panel
   b. Locate Winch and Boom control located in the Flybridge bench seat
   c. Turn OFF breaker #45 on the 12V DC panel when done

34. **WIFI AND SMART TV (Verizon guest WIFI password eb915e8a)**

NEW FOR 2018: WIFI, Smart TV and Bose Bluetooth speaker. WIFI is available wherever there is a verizon cell phone signal. The boat WIFI operates off Verizon signal but the Smart TV can use any cell carrier signal and hot spot created with your phone or other devise.
**Note:** the WIFI router is located inside engine room door right side eye level and occasionally may turn itself off and needs to be rebooted.