Owner's Notes – Alta Levica

Dear Friends,

Welcome aboard *Alta Levica!*

The *Alta Levica* was named after my grandmother, Alta Levica Purdum, who was a seafaring woman of Irish descent. Her and my grandfather owned a small runabout (also named the Alta Levica) in Portland, Oregon which they used to explore the islands of the Willamette and Columbia Rivers in the late 1930s and early 1940s. If the stories and few photos are any indication, some of their best years were spent together exploring on their boat.

After a year of being chartered by San Juan Sailing, the vessel went south and cruised the same waters as my grandparents. Recently, we crossed the Columbia River Bar and returned *Alta Levica* to her home in the San Juan Islands. While there are many vessels in the 40' range, we feel the Meridian 368's clean design creates the perfect combination of comfort and size; large enough to have all of the features of larger yachts while still being small enough to sneak into that secret moorage.

Being on the water is one of those increasingly rare moments in life in which you can be 100% present. We've made many wonderful cruising memories in the San Juan Islands and points south…our hope is that you enjoy *Alta Levica* as much as we do. If something comes up, please feel free to give the team at San Juan Sailing and Yachting a call, you're in good hands.

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 and Yachting. We've tried not to overlook any detail in our effort to make her our ultimate motoryacht.

We wish you fair winds and wonderful memories. Thank you for being our guests!

Sincerely,

Adam and Katie Stites

Table of Contents

1. Specifications and Vessel Information

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

U.S. Customs Re-Entry Decal – Located next to the aft entry door, starboard side.

Vessel Official Number – 1188362 (same number as shown on the Coast Guard Certificate of Documentation found in Section 5 Documentation of the Charter Guest Reference Manual (white binder). Alta Levica's number is located inboard starboard floor joist, inside the engine room hatch. Look for 3" high characters.

Vessel MMSI Number - 368217830 (unique vessel ID programmed into the DSC function of the VHF radio and the AIS transponder)

Coast Guard Boarding Document – Refer to the Charter Guest Reference Manual (white binder), Section 5 Documentation. Explains what to expect if you are boarded by the Coast Guard and where to find the information/equipment they may ask to see as part of their safety inspection.

Specifications:

Year:	2006	Engines:	Cummins
Make/Model:	Meridian 368	Fuel: (2 tanks)	125 US Gal each, 250 total
LOA:	36' 6"	Water:	100 US Gal, 100 total
Beam:	13' 3"	Holding:	50 US Gal
Draft:	3' 5"	Heads:	Vacuflush (2)
Displacement:	18,000 lbs. (Dry)	Electronics:	Garmin

Staterooms	2 doubles
Stateroom 1 (fwd)	Headroom: 6'-1"; Berth: 88" x 70" (head), 40" x 70" (feet)
Single berth in Stateroom 1	Headroom (while in the berth): xx"; Berth: 28" x 76" (head), 28" x 76" (feet)
Stateroom 2 (aft)	Headroom: 6'-3"; Berth: 73" x 58" (head), 73" x 54" (feet)
Pilothouse	Headroom: varies 6'-1" to 6'-8"
Salon	Headroom: 6'-7"
Galley	Headroom: 7'-6"
Refrigerator	15" x 28" x 19" (W x H x D)
Freezer	7" x 22" x 19" (W x H x D)
Sunbridge	Headroom: 7'-0"
Flybridge	Headroom: 6'-4"

2. Nuances

There are a few things about *Alta Levica* that are not 'typical'. These are the things that may require special attention or where it may be best to deviate from customary operating procedures. We have listed them here because we believe they will help you understand the vessel and enjoy your time aboard.

Fuel Gauges

Fuel tends to settle to 7/8 full on the helm gauges a few minutes after refueling; please fill to the point where you sense fuel is about to backflow up the fill tube; pause; slowly try to fill some more and then stop when it sounds again like it will backflow. Following this same process will ensure you've replaced the fuel that you used during your charter.

Engine Tachometer

The starboard engine tach is temperamental; don't trust it. Instead, simply match the throttles mechanically and reference the port engine tach for setting cruise power.

Aft entry door

The aft entry door, accessed from the sunbridge, slides on rollers and is relatively heavy. Use care when opening and closing it. Please be sure it is latched fully shut or guarded fully open with the track lever so that it doesn't slam into either open or closed stop and do potential damage.

Tank Monitor

The tank monitor has two active sensors, the water tank and black water holding tank. The scroll up or down arrows always sequence in the order of tank 1 (water) to tank 2 (holding) to tank 3 (unused). Press the "M" button and the display will show the status of all three tanks on one composite screen.

VHF Radio

The Simrad VHF radio is implemented with the latest radio standards. You will find that several radio channels are now four digits, not two digits. For example, channel 80A is now displayed as 1080. It's the same channel as before, now just with a new designation.

Holding Tank Pumpout

The holding tank is located on the centerline in the bilge, between the two engines. The pumpout deck plate is accessed on the starboard side of the ship, just forward of the BBQ grill. Since the better access is to dock with a port side tie, it will require the skipper and crew to plan ahead when doing the pumpout process. The hose from the Squalicum Harbor pumpout dock can reach up the stairs, thru the flybridge and to the deck plate. The same is true for the portable carts that are available to roll up to the vessel when she's at her home slip. When using the portable carts, you will need to access a 30 Amp power cord to extend port from the typical dock power point to the pumpout cart positioned at the port stern of Alta Levica.

Catching a Mooring Ball

Alta Levica sits high above the water accept at the stern / swimstep. We've found that catching the ring on a mooring ball at the bow with a boat hook is quite challenging given the vertical height and sometimes unsuccessful because the line attached to the ring is not long enough or is fouled with enough marine growth to make it impossible to reach and attach the two mooring lines recommended by SJS&Y.

We've found it more successful to catch the ring at the port corner of the Swimstep. The helmsperson can see what's going on and work to keep the boat stationary while the first mate is catching the ring and attaching the two mooring lines. Then the 'trick' is to pass the lines to a second deck hand that is waiting at the port side of the sunbridge, just outside the port door. Using a boat hook to pass these lines works well, then the lines can we walked forward to attach to the bow cleats.

Keep in mind while all this is happening, don't let a loose end of the lines dangle in the water or the prop or stern thruster could snag a line and then it's a much bigger issue to resolve.

3. Emergency/Safety Equipment

Emergency/Safety Equipment Locations: For your safety and in case of an emergency, this is **Must Know** information.

Bilge Pumps (3). Rocker switches are located on the starboard switch panel at the helm. The normal "auto" position of these switches is to have them all in the auto position. Toggling any switch to the "manual" position will force that bilge pump to run no matter the float switch status. Pumps are located as follows: Bow – accessed thru a floor hatch just aft of the forward stateroom, Midship – access via the engine room and forward of the genset cabinet, Stern – accessed in the floor hatch of the aft stateroom.

Carbon Monoxide Detectors (3). Forward stateroom, port side ceiling above the closet; aft stateroom, on the ceiling, starboard forward corner; and in the salon, aft port corner on the ceiling.

Fire Extinguishers (4): in the forward stateroom, upper closet cabinet; in the galley adjacent the door to the forward head; in the aft stateroom, port forward closet; and on the sunbridge, adjacent the entry door to the salon.

First Aid Kit. In forward head vanity cabinet.

Folded Plastic Distress Flag. In emergency mesh bag, port side cabinet on stairway to the flybridge.

Flares (Pyrotechnic - 3). In emergency mesh bag port side cabinet on stairway to the flybridge.

Flashlights. Maglite flashlight, holder mounted in the galley, adjacent the forward head door. Smaller, personal LED flashlights are in each stateroom and in the general items basket in the starboard aft corner of the salon.

Horn, handheld. In emergency mesh bag, port side cabinet on stairway to the flybridge.

Horn, vessel. Activated from the dedicated switch at the helm station.

Lifesling, on the port railing just forward of the sunbridge access door. 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.

Type IV, throwable flotation device, a loose item kept on the flybridge seats

PFDs (3 foam vests, 6 inflatables). Located in the in the flybridge, port side seating area. NSO: please check for "green" visible at bottom of clear window of the vest before each cruise. That verifies the auto-inflate function is armed and ready to activate when immersed.

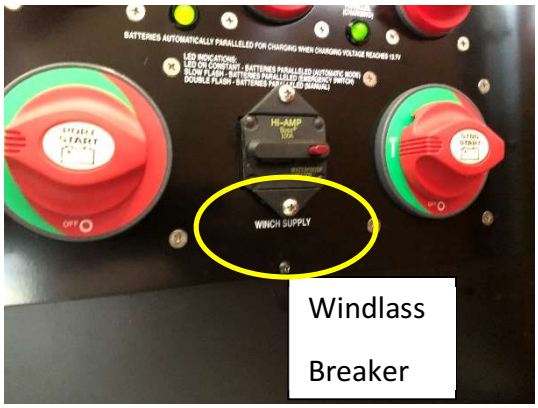
Tapered Plugs, Universal Foam Orange StaPlug. Adjacent to each thru-hull is a dedicated tapered plug. An extra foam StaPlug is in mesh bag, port side cabinet on stairway to the flybridge.

Tools and Spares. Engine room, forward, between the two engines. General spares and engine/genset spares in the forward bilge compartment, accessed in the floor hatch aft of the forward stateroom door. A binder and box of manuals for the installed systems is stowed in this bilge area too.

Windlass Clutch Release/Tighten Wrench (looks like a winch handle). In the bow deck locker, starboard of the windlass.

4. Anchors and Windlass

Highlights



- Windlass raise / lower foot switches are located on the deck adjacent to the windlass.
- Please do not use the windlass controller at the helm (far better to manage operations at the bow).
- Windlass breaker is in the Battery Management Panel, below the main circuit breaker panel. The breaker switch is centered between the starboard and port engine battery switches. If an overcurrent occurs and the breaker trips, reset the breaker by moving the black lever to the ON (horizontal) position.
- Windlass clutch release/tighten wrench is located inside the bow deck locker.
- The windlass does have a chain stop block, open or close that as needed.
- Primary Anchor: 300' chain, 15' nylon rope.
- The SJS/SJY standard for chain marking is 1 piece of yellow poly line at 25' intervals and 2 pieces of yellow poly line side by side at 100'. See photo of length marking scheme placard on right.

- Please use the anchor bridle while setting the anchor and to hold the anchor overnight. Attach the hook of the bridle over a link in the chain. Bridle is stored in the bow deck locker.

- There is a raw water washdown and fresh water washdown at the bow. It is preferable to use the salt water washdown for all anchor operations as there's unlimited supply of sea water. The coiled washdown hose will generally be attached to the saltwater spigot already so simply turn on the spigot and the washdown breaker on the DC electrical panel. Please turn OFF the washdown breaker when done and turn off the spigot. Stow the coil hose back in the deck locker at the bow.
- Secondary Anchor: 30' chain, 150' nylon rope. Stored down below in the forward part of the main salon, in the forward part of the bilge, accessed thru a floor hatch just aft of the forward stateroom cabin door.

Details

The scope normally used in the islands is 4 to 1, definitely not 7 to 1 (unless conditions call for it, i.e. sustained winds over 25 knots). Most of the anchorages are well protected and popular, so you will likely have someone anchored nearby. Most coves are 20'- 40' deep; so expect to pay out about 100'-180' of rode. After you have deployed the proper amount of anchor rode, attach the bridle to the chain and deploy further chain to transfer the anchor load to the bridle and the bow cleats. After you have paid out the suitable amount of rode, use 1-2 minutes of idle reverse by one engine only to set the anchor. Also, the tides can change water depth up to 12' in the San Juans so be aware of where you are in the cycle when choosing an anchorage and deciding how much rode to deploy.

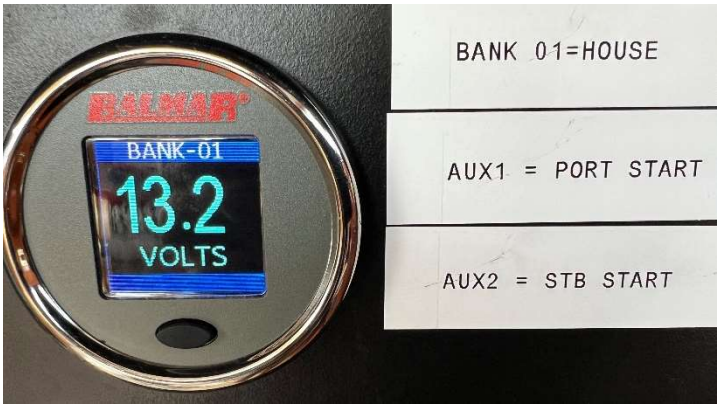
5. Barbecue

The Magma propane barbecue is mounted on the starboard rail just outside the starboard side door on the sunbridge. There is no propane solenoid as the associated tank is isolated below the rail mount and dedicated strictly to the BBQ only. To use the grill, turn ON the bottle valve, then use the blue regulator to manage the flow of propane gas and light the grill with the built-in ignitor or the butane lighters stowed in the galley.

Note that it is important to ensure the bottle valve and gas regulator are both turned OFF after every use, else you risk depleting the gas supply as the BBQ will bleed off gas if not turned off completely. The bottle is sufficient for at least two weeks of typical usage and the bottle is checked and topped off before each charter, FYI.

6. Batteries/Charging/Inverter

Highlights



- Please keep the house batteries above 12.2 Vdc as noted on the Balmar gauge on the AC/DC panel in the salon (see photo on right).
- When charging, battery voltage will read above 13.2 V.
- Ensure batteries are charging when connected to shore power – see details below in Battery Charging section.
- When underway the engine is automatically charging all batteries.
- At anchor or on a mooring ball, the house battery bank is ample enough to handle normal DC loads including lights, the fridge, and moderate use the entertainment system. Typically, we find that after a single night at anchor, the house batteries will need to be recharged. That can happen while being underway with the engines or running the generator for 3-5 hours per day.
- *Alta Levica* has a moderate size inverter that will generator AC power for a limited set of circuits. Those circuits power the entertainment system (TV, DVD player) and the outlet adjacent to the TV cabinet. All other outlets in the ship and the remaining AC circuits can only be powered with shore power connected or the generator running and on-line.

Details

Alta Levica has the following battery groups on board:

- Port and Starboard engine start battery banks. Note that the engine battery banks are upgraded in capacity to support the bow / stern thrusters. The starboard engine battery supports the stern thruster, the port engine battery supports the bow thruster.
- House (460 Amp-Hours in total, 230 Amp-Hours usable)

All batteries are charged automatically when connected to shore power, to generator power or while the engines are running. Each engine creates charging power from its respective alternator. A VSR (voltage sensing relay) will detect when such power is available and close to join the house batteries to the available engine alternator power. The VSR status is indicated by the two green LEDs on the Battery Management panel. When both engines are running, both VSR's will close and combine to charge all batteries in parallel.

Battery disconnect switches

The battery disconnect switches are all located at the Battery Management Panel, below the main circuit breaker panel. In general, all switches should be left ON for normal operations. Note that the engine and house battery banks can be "paralleled" using the black toggle switch, to enable engine starting with the assistance of the house battery bank. Open this switch as soon as engine starting is successful.

BATTERY CHARGER:

Alta Levica is equipped with a battery charger mounted aft center in the engine room. It's primary purpose is to charge the house battery bank while also topping off the engine / thruster battery banks.

When AC power is available either from shore power or from the generator and the battery charger circuit breaker is ON, the charger will engage and recharge all the batteries. You can monitor operation from the DC

voltmeter at the main circuit breaker panel by observing the voltage level. Typically, charging at bulk currents will be above 13.6 Vdc, Absorb charging will be at 14.6 Vdc and float charging will be at 13.4 Vdc.

Charging – Shore Power

- Connect the 30 Amp or 50A shore power cord to the receptacle in the port corner of the swimstep.
- Ensure the master AC Shore Power breaker in the port corner of the aft stateroom is ON.
- Select the shore power to feed the AC panel, legs one and two.
- Ensure the double GREEN breaker for the BATTERY CHARGER on the AC panel is ON.
- The battery charger will automatically start charging (after a 10 second startup delay) and indicate Bulk, Absorb or Float charging on the unit itself.

Charging – Generator

- Operation of the Generator is covered in a later section of these notes.
- Enable charging in a similar manner as described for shore power.

Charging – Engine

- All batteries are automatically being charged when the engines are running.
- This is the most efficient, fastest way to recharge the house batteries.

Inverter

- If 120V AC power is needed for the entertainment system (TV and DVD player), the Inverter can be turned ON. It is located in the lower portion of the entertainment cabinet, below the salon TV, and mounted on a shelf. The ON/OFF switch for the inverter is on the face of the device. Please remember to turn it OFF after each use as it will drain down the house batteries more quickly if left ON, even if none of the entertainment devices are turned ON.
- Reminder: the inverter powers select circuits only in the ship, those outlets, which are marked, are:
    - Power to the TV and DVD player
    - The outlet on the side of the entertainment cabinet
    - The outlet in the corner of the galley below the microwave
- NOTE: The inverter is capable of moderate power loads (less than 1000 Watts). The microwave is too large a load for the inverter and is therefore not wired to power the Microwave. To run the Microwave, you must use shore power or generator power.

7. Berths

Alta Levica has berths to sleep up to nine persons, it is most comfortable for four. Two in the forward stateroom, one on the bunk in the forward stateroom, two in the aft stateroom, two on the fold-out starboard couch and two smaller individuals on the dinette table when converted into a sleeping berth.

8. Bilge Pumps

Highlights

- 4 bilge pumps; one just aft of the bow thruster, another at the forward end of the engine room (ahead of the genset cabinet), another at the aft end of the engine room and a final one at the aft end of the aft stateroom.
- Pump switches located at the helm switch panel to starboard. Each switch is two positions: AUTO – ON. Auto is the normal, down position of each switch. Keep each bilge switch in AUTO normally. The indicator light will illuminate whenever a pump is active (auto or override ON).
- All pumps are wired directly to the batteries. They can't be accidentally turned off by a breaker.
- Each shower drains into a separate bilge box that has a float and small pump. When triggered, the shower box will pump water uphill and overboard into the seawater.

9. Dinghy, Outboard and Davit

Highlights

- The dinghy motor was recently upgraded to a 6 hp Mercury. Please note that some of the photos that follow in this section will still show the old Honda motor but all of the text and relevant procedures were updated to reflect the new Mercury.
- The dinghy is attached to the vessel using the popular davit system by Weaver. The Weaver davit is hydraulically operated and will easily lift the dinghy using the foot pedal and lower by opening the hydraulic system valve. **Please read the procedure below before attempting to lower the dinghy. There are a few nuances that require special attention.**
- Please keep the dinghy off rocks when beaching or shore combing.
- Mercury 6 HP outboard is four-stroke, do not add oil to the gas.
- The 3.5 Gallon external gas tank is stowed in the Swimstep locker when not in use. After launching the dinghy, place the external tank into the dinghy and connect the fuel hose to the motor. Replenish the gas used at the end of your charter.
- Do not use the internal gas tank on the top of the motor. See details below for correct orientation of the fuel valve lever.

Details

General Information:

The Weaver davit system allows the dinghy to be easily deployed and retrieved. See procedure below.

Alta Levica is equipped with a hard bottom dinghy and a 6 HP Mercury 4-stroke outboard motor. The dinghy is roomy (holds 4 adults) and the outboard is easy to operate. Given the size of the outboard, the dinghy does not require state registration numbers / sticker.

As owners, we would very much appreciate your special care when beaching the dinghy. Beaches in the San Juan Islands are seldom gentle, sandy beaches; most often they are rocky and covered by barnacles equipped with extra sharp rubber cutters. Here's what works best: launch a person off the dinghy bow as you approach shore; then offload everyone over the bow. Lift the dinghy above barnacle height and deposit it gently on the beach. We also secure the painter under a rock or to a log – a rising tide can leave you high, dry and dinghy less! And remember, as you get into shallow waters, tilt up the outboard to avoid rock dings / chips to the prop blades.

The outboard is a four-stroke motor, so do not add oil to the gasoline mixture. The 3.5 gal external fuel tank will be full at the start of your charter, please replenish the fuel used when your charter is complete. If San Juan Sailing and Yachting needs to replenish the fuel, there may be a refueling service charge in addition to the cost of the fuel.

Operating the Davit:

a) Requires two people to operate.

b) The davit system is comprised of the hydraulic pump, arm and motor bracket and the two shorter arms connected to the dinghy that act as the hinges.

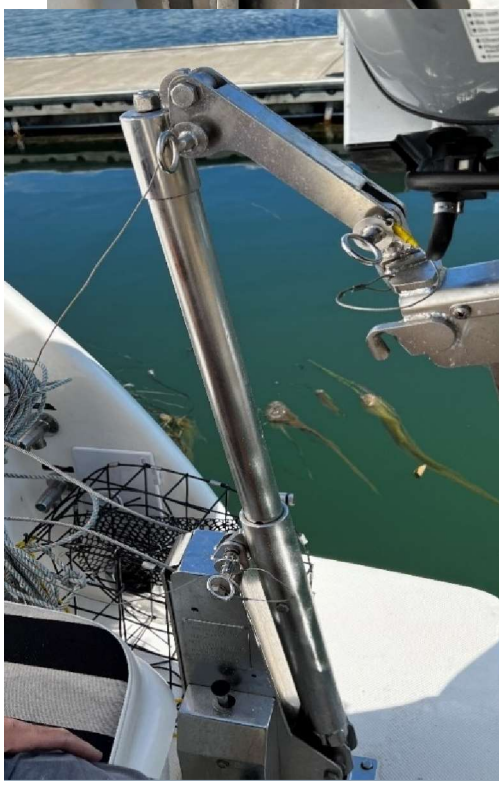
c) The dinghy motor needs to be tilted up at a 45degree angle to clear the dinghy tube while lowering or raising. See photo on right.

d) Untie the black and yellow swing preventer lines from Alta Levica – leave attached to the davit and dinghy (see photo above right – the black line is led from the lower section of the starboard hinge arm to the port cleat on the swimstep).

e) Make sure the hydraulic system valve is closed. Look for the black plastic knob at the top of the foot pump – see photo on right. Clockwise turn is closed.

f) Remove the two securing pins from the vertical davit arm. The pins have lock plates at their ends that need to be rotated to align with the pins so the pins can be removed. See photo above.

g) Open the hydraulic valve about one full turn and slowly begin to lower the dinghy. You may need to push the dinghy outward to start it lowering.



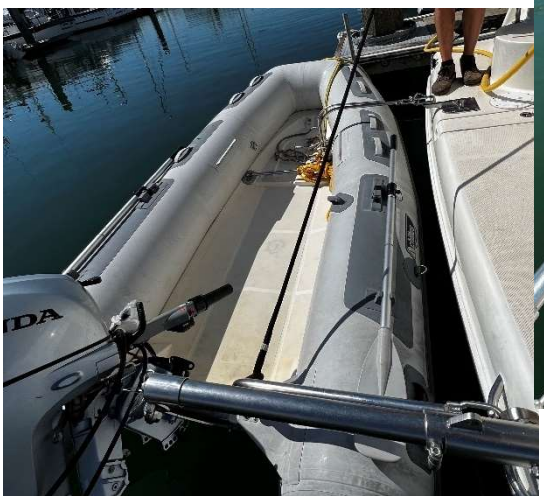
h) In order to get the motor bracket to slide over the aft side the dinghy transom you will need to have a second person pull on the black securing line which is tied to starboard hinge arm at the dinghy end. See photo on right. Stand on the port side of the swimstep and pull the starboard davit arm toward you.

i) Make sure the motor bracket has completely settled onto the dinghy transom. The slot on the starboard side of the motor bracket should slide over the bolt and wing nut on the transom. Close the hydraulic valve then step into the dinghy and tighten the wing nut to secure the motor bracket.

j) Remove the securing pin that connects the davit arm to the motor bracket.

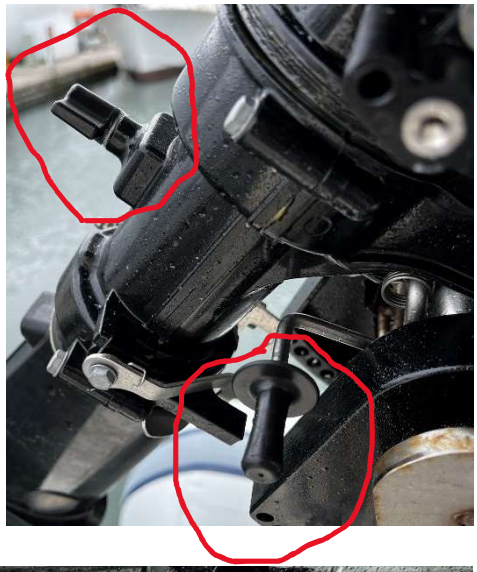
k) Step out of the dinghy and release the two hinge arms from the swimstep.

l) Step back into the dinghy and disconnect the two hinge arms. Store the arms in the swimstep storage box.



m) Reverse the above procedure to raise the dinghy back onto the davit. Make sure the hydraulic valve is closed then use the foot pump (see photo next to item "e" above) to raise the dinghy.

Operating the Motor:

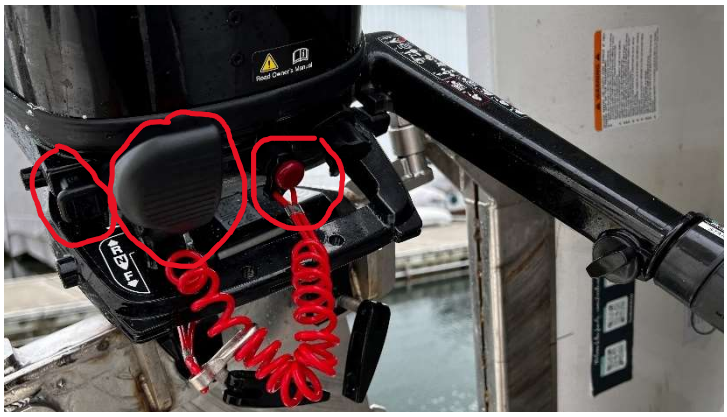


a) The steering friction screw is located on the back of the motor just below the cowling. Make sure it's tight enough to keep the motor from rotating while Alta Levica is underway with the dinghy raised on the davit. This should also be sufficient friction to keep the motor from freely turning while operating the dinghy. See Photo on right – look for the black "T" handle below the cowling.

b) The motor tilt lever handle is located on the starboard side of the motor bracket. See photo on right.

c) Our motor has two gas tanks; one internal tank mounted on the top of the motor and one external 3.5 gal portable external tank with attached quick-connect fuel hose. The tank/hose are stored in the swim step locker when not in use. **Please only use the EXTERNAL 3.5 gal tank.** Before using the external tank, check that the fuel valve lever for the internal tank is closed (see photo on right – the valve lever is located on the port side of the motor at the bottom edge of the cowling) and the vent screw on the gas cap on top of the motor is closed (turned clockwise).

d) **Starting the motor** - After the dinghy is launched, completely detached from the davit, secured to Alta Levica, and the 3.5 gal external gas tank is placed in the dinghy and connected to the motor, the motor can be started as follows (see photo on right):

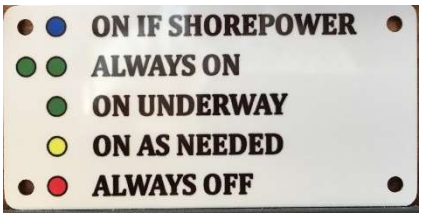


- Pull out the choke (front of motor, starboard side).
- Ensure gear shift paddle is in neutral position (vertical).
- Ensure the black ignition clip is clipped onto the red ignition button (front, center on motor) and the snap hook on the opposite end of the red lanyard is clipped onto a belt loop of the operator.
- Twist the throttle handle to the "Start" position.
- Squeeze the black bulb on the gas hose until firm.
- After ensuring that your arm will not hit any object or person, pull the start cord quickly. The motor should start with one to three pulls.
- As the motor warms up, ease the choke knob back in until the motor runs smoothly at idle.

e) **Stopping the motor** – Push in the red ignition button or pull the black ignition clip off of the button.

10. Electrical

Highlights



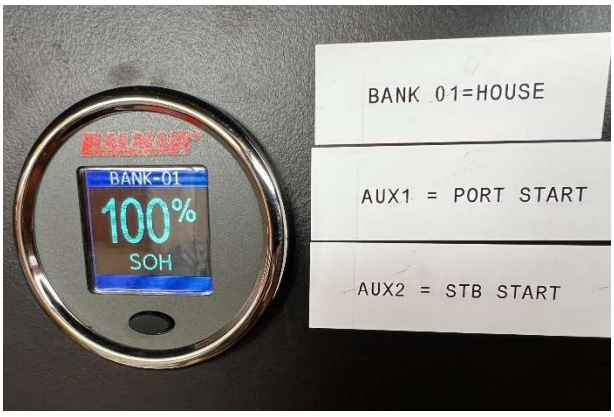
- The AC and DC circuit breakers are located on the aft wall of the salon, in cabinets adjacent to the TV/entertainment center. The breakers are labeled using the color dot convention as shown:

- There is a primary shore power breaker that is in the aft stateroom, the port corner closet. It should always be in the ON position. If the shore side breaker is ON yet there is no power indicated at the main breaker panel, this is the place to check next.
- Main AC breakers for selection of either shore power or generator power are located on the AC half of the breaker panel. The AC panel is segregated into two halves and can either be combined when 30 Amp shore power is connected or fed by the two power legs of a 50 Amp shore power service. Review this with your checkout skipper at the beginning of your charter.
- Main House DC breaker located on the Battery Management Panel, the "Interior Main" circuit breaker.
- There is a collection of AC Outlets throughout the vessel, split between four circuits and controlled by four breakers on the AC electrical panel.

Details

DC Panel

The DC breakers are organized in two columns with master breakers for the ship interior and flybridge controlled at the Battery Management Panel. Per the marking convention, the individual breakers should be managed depending on the planned operations of the vessel. Note the three-position rotary switch below the DC voltmeter, allowing you to monitor the DC voltage of all the battery banks of the ship. There is no current meter to monitor the usage amount.



Please keep the house batteries above 12.2 Vdc as noted on the Balmar gauge on the AC/DC panel in the salon (see photo on right).

AC Panel

The AC breakers are organized in two columns with a two feed circuits. Depending on the shore power connected, you will either enable the two circuits to be isolated and fed by the shore power directly or

combined and fed by a single shore power source. Review this with your checkout skipper prior to the start of your charter.

11. Electronics/Instruments

CHART PLOTTER:

Highlights

- *Alta Levica* is equipped with a modern Garmin chartplotter with a touchscreen interface. It These are powered by the Electronics switch at the helm switch panel.
- After power is applied, the system will return to the last formats / settings selected. The most popular selections for screen formats are accessed by selecting Home, then Favorites, then chose the desired app for use.
- Please refrain from changing settings beyond the typical functions like chart orientation, radar overlay, AIS overlay and range.
- For a more complete orientation of how to operate and get the most value from a Garmin chartplotter, we recommend downloading the user manual for the Garmin GPSMAP 943 plotter. The manual is also loaded into memory of the plotters if you wish to review something while onboard.

Commonly Used Chartplotter Selections:

- **Chart Orientation:** subject to your preference, we recommend either Heading Up or North Up.
  - From the Nav Chart presentation: select Menu / Settings / Orientation
- **Display Brightness:**
  - From any displayed page: momentarily touch the ON/OFF soft button, a menu will pop up that includes a selection for Backlight setting.
- **COG Vector:**
  - From the Nav Chart presentation: select Menu / Layers / My Vessel / Heading Line
  - Note that the Heading Line can be actual magnetic heading or GPS Course Over Ground which Garmin characterizes as another form of ship's heading. GPS Heading is what we recommend. Also note that COG is not displayed when a radar overlay is active.

- **Radar Overlay:**
  - From the Nav chart presentation: select Menu / Layers / Radar
  - A radar Off/On button will now appear on the upper corner of the display to toggle the radar scanner on and off.

- **Tides and Currents:**
  - From the Nav Chart presentation: select Info / Tides & Currents / then select Tides or Currents
- **Auto Routing:**
  This is a popular feature on modern chartplotters. While we use it, we also urge a dose of caution in trusting a computer to create a risk-free route. It is a computer and not an intelligent individual that can reason and judge nuances of real time conditions. We recommend using it for planning a route but NOT engaging the autopilot to follow the route. Rather, use the autopilot Heading Hold and allow your own judgment to stay relatively close to the route while not following every micro turn that may be generated from digital map data.
  - Pan / Zoom to find your intended destination, then place a point at that location with a momentary tap of the screen
  - Select Auto Guidance from the pop-up menu bar at the top of the screen
  - Pan / Zoom to review the generated route
  - Select Adjust Path to make changes to the route by momentarily taping on the path at the point of concern, then touch and drag the icon to a better location on the chart. Use this same practice for all points of concern along the route
  - Select Done when all adjustments have been made
  - Select Start Navigation
  - Select NO for engage the autopilot on the chartplotter.
  - When appropriate, select Engage at the autopilot controller, this will engage Heading Hold, then use the soft keys to nudge the selected heading to Port or Starboard to keep the vessel tracking relatively close to the planned route. Remember that Standby will disengage the autopilot!
- **Port and Starboard Plotter Presentations:**
  - Underway:
    - Port Plotter: Chart Nav, Range @ 4nm or 6nm; occasionally select Engines to monitor the engine parameters
    - Starboard Plotter: Chart Nav, Range @ 0.2nm or less
  - Docking:
    - Port Plotter: Video and the best camera view for the intended maneuvering
    - Starboard Plotter: Chart Nav, Range @ very close in, use what makes sense

Multi-function Instrument:

Highlights

- *Alta Levica* is equipped with a multi-function instrument mounted at the helm console.
- Several screen formats have been programmed, the most useful is the windvane, providing both apparent and true wind, use it underway and whenever docking to assess the environment.

A.I.S. (Automatic Identification System):

Highlights

- *Alta Levica* 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). *Alta Levica* is transmitting her position whenever the Electronics Switch is ON.
- The chart plotter is interfaced to the AIS Unit and shows the positions of vessels with AIS as triangles. Make sure the AIS overlay is turned ON in the settings menu. From the Nav Chart page, follow the path of Menu / Layers / Other Vessels / AIS. Note that the selection of AIS is for the ON/OFF function which is the left half of the selection. The right chevron portion of the button takes you to a further submenu that we recommend leave it as is.
- AIS information supplements marine radar, which continues to be the primary method of collision avoidance for water transport, radar will 'see' all objects, not just the ones with AIS transponders.
- AIS requires each vessel to have a 9 digit MMSI (Maritime Mobile Service Identity) number to transmit position and data.

Details

AIS vessels appear on the chart plotter screen as triangles (must have AIS overlay turned ON – see above Quick Notes for how-to). 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 which allows large commercial vessels to easily see you and your direction/speed. They may try to contact you via VHF channel 16 to verify your course intent. In addition AIS allows San Juan Sailing/Yachting to provide faster assistance in case of unplanned maintenance issues as well as alert San Juan Sailing/Yachting of *Alta Levica's* return approach. Vessels with AIS can be viewed in real-time through mobile device apps and websites like www.marinetraffic.com that will reveal vessel name, course, speed, track, and other information.

AUTOPILOT:

Highlights

- The autopilot is powered by a dedicated switch at the helm.
- The autopilot provides the source for ship's magnetic heading.
- To engage the autopilot, press "Engage" soft key on the dedicated controller or the touch screen selection on the chartplotter.
- To disengage the autopilot, press "STBY" on the dedicated controller or on the chartplotter.
- CAUTION: When the autopilot is engaged, it acts as a separate 'helmsperson' and will continue to steer the ship until turned back to "STBY". If you need to take control for avoidance of traffic or debris in the water, docking, anchoring, etc., remember to first select "STBY" or the autopilot will counteract any steering commands made by the skipper.
- CAUTION: auto-routing is a very popular feature of modern chartplotters, it appears to take care of all the worries on setting up a safe route to your destination. However, due to the nature of the digital navigation data used by the chartplotter, an auto-route typically has several unexpected changes in direction that a mariner would normally not make when planning a route. Tracking them explicitly can result in abrupt changes in course that may be startling and could prove unwise. We therefore strongly recommend that you use Head Hold, NOT Route Tracking as the primary means whenever engaging the autopilot. Select a heading that follows the track line and nudge the heading to starboard or port a couple degrees to maintain a reasonably close track to the route while also avoiding sudden, unnecessary route changes that are artifacts of digital computation of a route.

VHF RADIOS:

Highlights

- VHF base unit is mounted at the helm and the mic is mounted adjacent to the radio.
- The VHF has been programmed with the ship's MMSI identifier. This ID will be transmitted to the Coast Guard if you activate the DSC (Digital Selective Calling) emergency call function.
- Newer VHF radios such as the one on this vessel has several channel numbers that are now four digits, not two digits. This reflects a new standard. All affected channels will be in a format of 10xx, for example, channel 80A is now channel 1080. You can still operate the same as before, just the naming has changed for this new standard.

12. Engines and Operating Under Power

Highlights

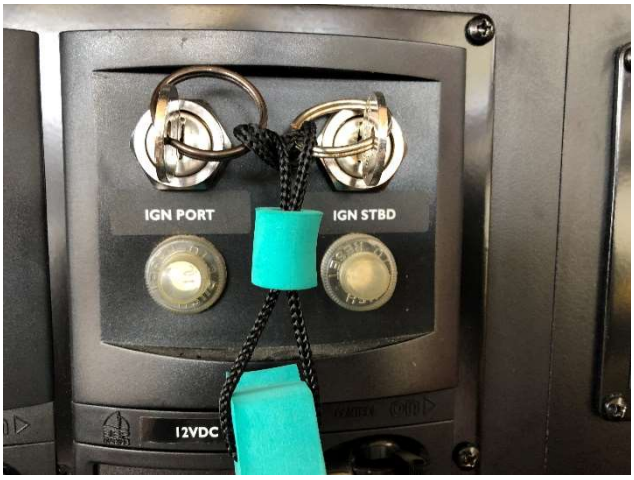
- Main engine room access is through large floor hatch in the salon.
- Engine room lights are controlled at the electrical breaker panel.
- The Maintenance Pro for the ship will check oil and coolant levels, belt tension and debris in raw water strainer after each charter. The Charter Guest is NOT required to perform these checks unless engine trouble is suspected. We do ask that you conduct a daily visual check of the engine room to look for any signs of fluid leakage or something amiss. If there is a concern, use the emergency contact list in the Charter Guest Reference Manual to seek advice. If on multiple week charter, then please check engine vitals weekly. Ask your checkout skipper how to do that process.
- Raw water strainers are in the engine room, forward of each engine.
- Economy cruise is 8 kts @ 1400 RPM using approximately 5.5 gph
  - Trim tabs all the way bow up
- Fast cruise is 15 kts @ 2250 RPM using approximately 16 gph
  - Trim tabs all the way bow down
- Normal engine temp is 180-190 F, oil pressure is 30-65 psi.

Details

Prep for Engine Starts

a. Check fuel tank levels on the tank gauges at the helm.
b. Check around outside of vessel for loose lines in water.
c. Close the salon door to keep engine exhaust out.

Starting



a. Confirm Shifters in neutral, Throttles at idle, an engine will not crank over if the Shifter is out of the neutral detent.
b. Turn ON the engine keys at the electrical breaker panel. Note that the low oil pressure warning sounder will begin to screech prior to engine start.
c. Check the status of the preheat lights at the helm. Wait for the light to extinguish prior to engaging the engine starter.
d. Once ready, advance the Throttle slightly (about an inch of movement of the throttle ball itself), start an engine by pressing the Start toggle switch until you hear the engine begin to run, then release the button. Adjust the Throttle to idle at 900 rpm. Start the one engine at a time, the order doesn't matter. Wait a short period between starts for the first engine to stabilize.

e. After each engine start, check for cooling water flowing at the engine exhaust ports at the aft corners of the ship.

f. Warm-up of the engine requires no more than a couple of minutes. After a couple of minutes, lower the Throttles to the idle stop. We recommend not having a prolonged idle period as it is not efficient and is not necessary for the health of the engine. A better practice is to start and depart within 3-4 minutes.
g. On very cold mornings when the engine is completely cold soaked, you can increase the idle speed with the Throttles, say 1000-1200 rpm, to help warm up the engines.
h. A recommended practice is to prepare the ship for departure ensuring all port lights are closed, gear is stowed, circuit breakers are in the appropriate selection, then start the engines. Monitor for a couple of minutes and then depart the dock or anchorage at a slow speed. Keep engine RPM's below 1400 until the engine coolant temperature has reached at least 160 F.

Shut Down

a. Gear Shifters in neutral. Allow the engines to cool by idling for 3-5 minutes.
b. Press and hold the STOP toggle switch until each engine shuts down.
c. Then turn OFF the engine keys at the electrical breaker panel.

13. Entertainment Systems

Stereo Radio / Media (smartphone) Player – Built in at the entertainment center in the salon is a Fusion entertainment hub. It is capable of tuning over the air AM/FM radio stations, streaming media from a smart device via Bluetooth, or playing the audio content from the TV or DVD player via the AUX port.

Consult the manual for the system to determine how to change modes, the manual is in a pocket on the inside of the entertainment cabinet door.

14. Fuel Tanks and System

Highlights

- *Alta Levica* has two 125 gallon fuel tanks, each engine draws from its adjacent tank. For nearly all operations, the skipper need do nothing to manage fuel usage from one tank versus the other. Loading of crew and gear can create a list to the vessel and that will influence an imbalance between the two tanks. Generally, it will be minor. If needed, there is a fuel transfer pump that can be activated at the helm while monitoring the fuel level with the helm gauges.
- Individual tank level can be checked at the fuel gauges at the helm instrument panel. **Note that the tanks are full at the 7/8 mark on the gauges.**
- Note that fuel gauges are not super accurate when approaching less than ¼ tank. Please maintain at least ¼ tank on the fuel gauges.
- Filler deck caps are on each side of the vessel combing, just outboard of the sunbridge doors. The tank vents are located on the hull just below the rub rail.
- During refueling, have an idea how much fuel you will be adding based on the fuel gauges. **Note that the tanks are full at the 7/8 mark on the gauges.** Then have a crew member assist with tracking the

amount of fuel delivered during the process. Listen carefully for a change in pitch sound as the air escapes up the fill tube. Pause when it changes, then fuel as slowly as possible and stop the second you hear that sound again.

Details

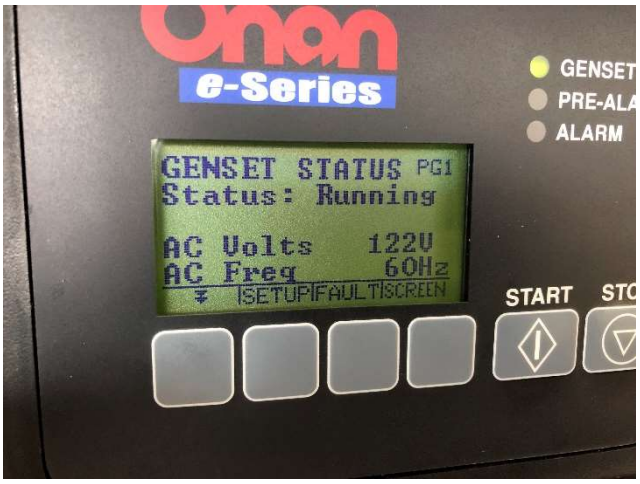
Primary Fuel Filters

- Located in the engine room, adjacent each fuel tank, port and starboard. And the generator has its own filter, also adjacent the starboard tank.
- Spare filters are kept in the forward bilge compartment, accessed from a hatch in the floor aft of the forward stateroom door.

15. Generator

Alta Levica has a 9 KW Onan generator. It draws fuel from the starboard tank. It is sufficient to power all AC loads of the vessel. You will likely need to use it regularly as primary systems like the heat/air conditioning, the stove, the oven and the microwave all require power from a capable source like the generator, or from shore power. In a vessel like this, it is common to run the generator shortly after getting up in the morning, shut it off after breakfast, run it underway or at anchor if heating or air conditioning is desired, shut off if not needed, run again for any heavy meal prep and shut down and allow the ship to 'coast' with just battery power overnight.

Starting the Generator:



- First, check that the generator fluids are topped off and the raw water intake is open, sea strainer is clear.
- At the generator cabinet, forward in the main engine room, make sure the white toggle switch is ON and the main DC breaker is ON.
- At the AC electrical breaker panel, be sure Gen Power AC breaker is OFF.
- The generator control / status panel is at the top of the main circuit breaker panel.
- To start the generator: momentarily tap the STOP button to wake up the panel and allow it time to establish the data connection to the generator. Once ready, press and hold the START button. Keep it depressed until you hear the generator is running, then release the START button.
- Let the generator warm up for about two minutes, then at the AC breaker panel, move the sliding protector down and activate the generator AC breaker. The ship now has AC power just like when you are plugged into shore power, select the necessary systems to operate.

Stopping the Generator:

- First remove the electrical load by opening the main generator AC breaker.
- Let the generator idle for 2 minutes before shutting it down.
- At the generator control panel, momentarily press STOP button to stop the generator.

16. Heads and Holding Tank

Highlights

- Only what has been eaten first goes in the toilet.
- The toilet is a Vacuflush system and uses an electric powered vacuum generator to create a negative pressue to evacuate the toilet bowl.
- The pedal adjacent to the bowl has three positions and is at rest in the center position. Press down on the pedal will flush the contents of the bowl with a 'whoosh' sound as the vacuum pressure evacuates the bowl. The bowl will fill with a small amount of fresh water when you release the pedal to its resting position. Lift the pedal up to add more water to the bowl to help evacuate sold contents.
- The output of the toilet goes directly into the holding tank, there is no Y-valve.
- The holding tank level gauge is selection two on the tank monitor panel (located at the top of the breaker panel).
- The holding tank capacity is 50 gallons. Please empty BEFORE it's ¾ full as a good practice.
- Emptying the holding tank – see detailed instructions below.

- Once per day, add a half cap full of No-Flex Digester to the bowl and flush it down the head. It will help break down the solids and keep odors to a minimum.

Details

Please do not put anything in the toilet that has not been eaten first. Experienced sailors deposit toilet paper in Ziploc baggies and put the baggies in the wastebasket, not down the toilet. Paper, feminine products and wipe cloths are all sources that will clog to inner workings of the toilet and vacuflush pump. Follow this process and you will have no problems with the operation of the head.

Proper protocol for emptying the holding tank is discussed in the Safety Briefing video. The charter guest reference manual has a tab depicting where all the pumpout stations are in the San Juan Islands. Our one plea is this: please do not over fill the holding tank as leaking sewage is most unpleasant! Thank you.

Please note that in our regional U.S. waters, it is illegal to discharge holding tanks overboard. While in Canadian waters outside of bays and harbors, overboard discharge is allowed.

Emptying the Holding Tank:

There are two ways to empty the holding tank:

1. Pump out at a Shore Facility.
2. Where legal, discharge overboard using the macerator pump.

Pumpout at Shore Facility or Pumpout Barge/Vessel

- Open the deck cap and pump out on the starboard combing adjacent the starboard sunbridge door.
- Deck cap key is in salon in a small basket forward on the starboard side window shelf.
- Use the shore pumpout system to suck all contents out of the holding tank.
- Best practice is to then fill 5 gallons of fresh water back into the holding tank, then suck that contents back out (to essentially flush the tank).

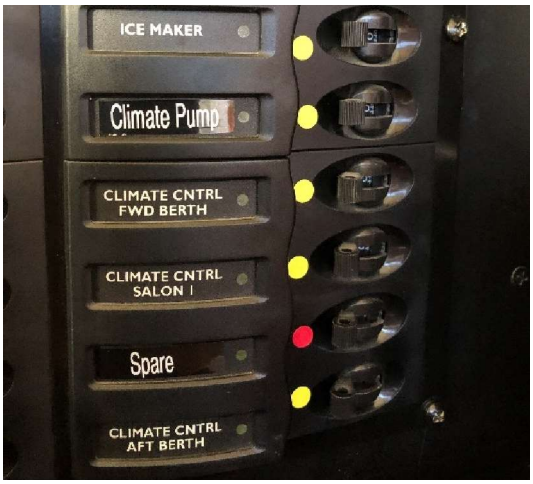
Discharging the Holding Tank Overboard

- Open the macerator thru-hull valve in the engine room.
- Turn on the macerator circuit breaker at the electrical panel.
- Set a countdown timer on a smartphone for 15 minutes for a near full tank, 10 minutes for a partially full tank.
- When the timer runs out, turn OFF the macerator breaker, and close the thru-hull valve in the engine room.

17. Heating & Air Conditioning

Highlights

- *Alta Levica* is equipped with a reverse cycling heat pump system. It can either cool or heat the interior spaces of the ship.
- There are three zones to the system, each with separate thermostat / mode controls: forward stateroom, aft stateroom and the salon.
- The system requires significant AC power, so it will function only when plugged into shore power or when the generator is powering the AC circuits of the ship.



- To operate, turn on the CLIMATE PUMP on the AC breaker panel, then turn ON the climate zone circuit breakers that you wish to have active. At each active zone, find the control panel, select the AUTO functions for the fan and mode selections, then use the UP and DOWN arrows to command the desired zone temperature.
- NOTE: it is possible to be heating in one zone and cooling in another zone simply by selecting the desired temperature and setting the mode to AUTO.

18. Lighting

Highlights

- Ensure all the lighting circuit breakers at the electrical panel are ON (except the engine room lights and the courtesy lights breakers).
- Lighting switches are on cabinet faces or bulkheads in each living area to control lighting as desired.

19. Refrigerator/Freezer/Ice Maker

Highlights

- The refrigerator/freezer is able to run on either DC or AC power. There is a "Refrigerator" breaker on both the AC and DC panels. Leave both ON at all times and the frig/freezer will use whichever one is available with a bias to AC power when both are available.
- Set the temp controller in the frig for 3 for moderate food storage and 6 for very full storage.
- Best way to ensure cool / cold temps is to minimize the time the doors to the frig / freezer are open.
- The ice maker is located on the flybridge, starboard side. The ice maker mechanism was not functioning when we acquired *Alta Levica* and we've found it more useful to simply use this appliance as an auxiliary freezer. It requires significant AC power and will only function when shore power or generator power is available and Ice Maker AC breaker is on. Best practice is to have it chilling when AC power is available, then let it coast when AC power is no longer available and restrict the times you open the door to help hold in the cold. Given that the ship requires AC power for the heating / air conditioning and the galley appliances, it will regularly see AC power and keep up the freeze cycle quite well.

20. Search Light

Highlights

- A very bright search light is provided at the bow, the control panel for it is on the starboard face of the helm, just below switch panel.
- The toggle switch turns on the light and enables the joystick to articulate the light up / down and swivel it left / right.
- Park the light facing aft when not in use

the

21. Shower Sumps

Highlights

- Ensure the Fresh Water Pump breaker at the electrical panel is ON.
- Each shower drains into a dedicated bilge sump. The sump has its own pump and float switch that will pump the water overboard as needed.
- Please try to aim the shower head away from the door to keep water from dripping onto the floor outside the shower. If some water does escape, please mop up after showering.

Details

There is also a fresh water shower fixture at the starboard corner of the swimstep. This shower has control valves for mixing the desire balance of hot and cold water. It is useful for rinsing off saltwater after a dip in the ocean or washing off shoes after returning from the beach. Remember to close the valves when done using the shower.

22. Stove, Oven & Microwave

Highlights

- The stove, oven and microwave all run on AC electric power. None of these devices can be run from the inverter, only shore or generator power will work.
- Stove and Oven: On the DC panel, flip on the COOK TOP breaker and on the AC panel, flip on the STOVE and OVEN breakers.
- Microwave: On the AC panel, flip on the OULETS breakers.

23. Thrusters (Bow and Stern)

Highlights

- Bow and stern thruster controllers (joysticks) are at the helm. Press and hold both ON buttons until the amber light turns ON.
- Thruster controller will turn off after 8-10 minutes of no use.
- Thrusters can only be used in short (3-6 second) bursts. Prolonged use will overheat the thruster motor and may cause a thermal protection circuit to disable them until they cool off.
- Bow thruster and stern thruster are fused in the engine room.

24. Wash Down (Sea Water)

Highlights

- There is a seawater deck wash down hose and spigot stowed in the deck locker at the bow. Both fresh and saltwater spigots are present, we recommend always using the saltwater spigot.

- When preparing to raise the anchor, ensure the hose is attached to the saltwater spigot, then turn on the Washdown breaker at the DC electrical panel.
- Seawater should pressurize the hose and enable you to stand at the bow and use the spray nozzle to clean the anchor and chain as it comes out of the water. It is best to spray water on the chain before it gets to the roller so that mud and other debris wash back into the sea and not onto the deck or in the chain locker.
- Remember to turn OFF the Washdown breaker when done.

25. Water (Potable)

Highlights

- The fresh water pump breaker is located on the DC electrical panel. Please turn this breaker off when away from the boat. The pump will burn up if air gets into the pump due to an empty/nearly empty tank or if a partially open faucet somewhere on the ship slowly uses up all the water, or if a broken line/loose hose fitting. Monitor your water usage and the tank level, listen for signs that the pump is running without a known reason.
- Please use care to fill the water tank using only a hose and water source known to be of good quality. Let the water run thru the hose for 30 seconds to clear the hose, then proceed to fill the tanks.
- The ship's fresh water hose is kept in the Swimstep dock box, please use it and flush water thru it before each use.
- Key for water deck fill caps is in the salon basket on the forward starboard window shelf or on a float in the Swimstep dockbox.
- Level gauge is located at the top center of the electrical panel, Tank 1. There is just a single tank.

Details

Water Heater

Hot water is produced in two ways:

a) Connected to shore power or
b) While using the generator to power the ship.

There is no connection to either engine to generate hot water while underway.

Fresh Water Shower and Washdown in Cockpit

These functions will be active whenever the fresh water pump breaker is ON at the DC electrical panel.

Fresh Water Spigot at the Bow

At the bow, in the deck locker adjacent the windlass, there is a fresh water spigot. We don't recommend using this for the anchor washdown due to the limited supply of the fresh water tank.

26. Windshield Sunscreen

Highlights

- To help manage the sun load and uV damage that can occur, there is a semi-opaque sunshield that snaps in place for the large forward-facing windows of the salon. We recommend keeping that sunshield in place most of the time or when very gray days, remove it, roll it relatively tight and stow it in the engine room between the engines. Please avoid stepping on it when it is stowed in the engine room.

We hope this information helps. Have a great time!!
