



**Information & operations manual for
Bavaria 41 2015
'Pau Hana'**

Welcome



Welcome to Horizon Yacht Charters and your Bavaria 41 "Pau Hana". We hope you had a pleasant journey and are looking forward to a fantastic holiday and some of the finest sailing in the world here.

This manual is here to guide you through the in's and out's of your yacht. Please take the time to read this manual and don't hesitate to ask any of our professional, friendly staff if you have any questions.

All of the yachts in the Horizon fleet are maintained to the highest standards so that you may enjoy a trouble free vacation, on a beautiful yacht. Please remember that these yachts are all privately owned and we ask that you care for it like it was your own.

Best wishes for a great vacation,

Sylvia and Andrew
Directors

Office Hours:

Monday – Sunday 08:30 – 17:30

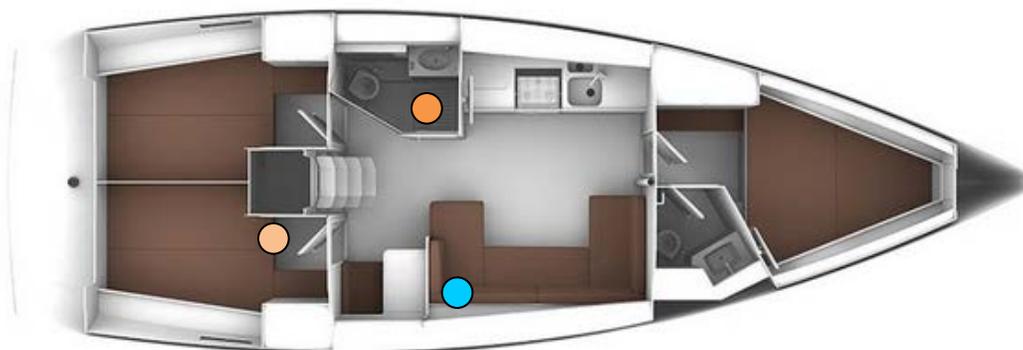
Telephone: (284) 494 8787

Duty Manager: (284)542 8788 (*Emergencies Only outside office hours*)

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1. Yacht Specifications



Length	40' 6"
Beam	13'
Draft	5' 5"
Fuel	56 gallons
Water	96 gallons
Engine	40 hp Volvo-Penta D2-40

Location of:

- Fresh water refill (port transom & bow)
- Diesel refill (starboard transom)
- Manual bilge pump (stbd helm)
- Propane tank (port helm)
- Windlass breaker (behind stbd saloon back rest)
- Emergency fuel shut-off (stbd aft cabin below bunk)
- Water tank change over valve

2. The 12 volt panel

Use the up and down switches to toggle through your water tank gauge and your battery voltage.

The following functions are available on the 12v panel.

Top row functions from left to right:

- Compass light
- Navigation instruments
- Stereo system
- Anchor windlass
- Primary bilge pump override

Middle row functions from left to right:

- Fresh water pump
- Shower drain
- Panel light
- Not in use
- Fridge

Bottom row functions:

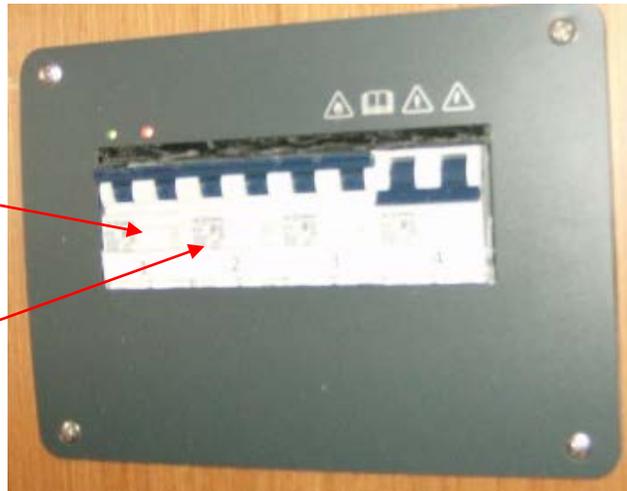
- F1 – Cockpit light
- F2 – Propane
- F3 – USB sockets
- F4 – Secondary bilge pump
- F5 – Not in use



110v breakers

Water heater breaker, leave this **off**

110 volt breakers, ensure these are on when using the 110v outlets



The 110 volt outlets will operate whilst you are plugged in to shore power. Pau Hana is equipped with an 1800W power inverter that enables you to have access to two dedicated outlets while away from the dock. See Section 4 Inverter for details.

Engine battery switch



The house battery switch is located under the chart table, next to the inverter



3. Inverter

Pau Hana is equipped with a built in 1800 watt power inverter that allows you to have access to 110v power when you are not connected to shore power. The inverter is located under the chart table.

To avoid additional drain on your batteries while operating electrical appliances, the engine should be turned on and revved up to 1400 rpm.

On switch

Inverter turns on these outlets ONLY



4. Engine start procedures.

- Make sure engine is in neutral.
- Press the ignition switch then press the start button until you hear the engine running.
- When the engine is running check to make sure you have water coming out of the exhaust.
- To stop the engine press the stop button until the engine has stopped.
- An alarm will sound after you stop the engine. Press the ignition once more to turn off the ignition

MAXIMUM ENGINE REVS ARE 2200 RPM



Should you hear an engine alarm during operation, check the tachometer to identify the reason for the alarm (over heating/oil pressure etc) immediately shut down the engine-**CALL HORIZON**

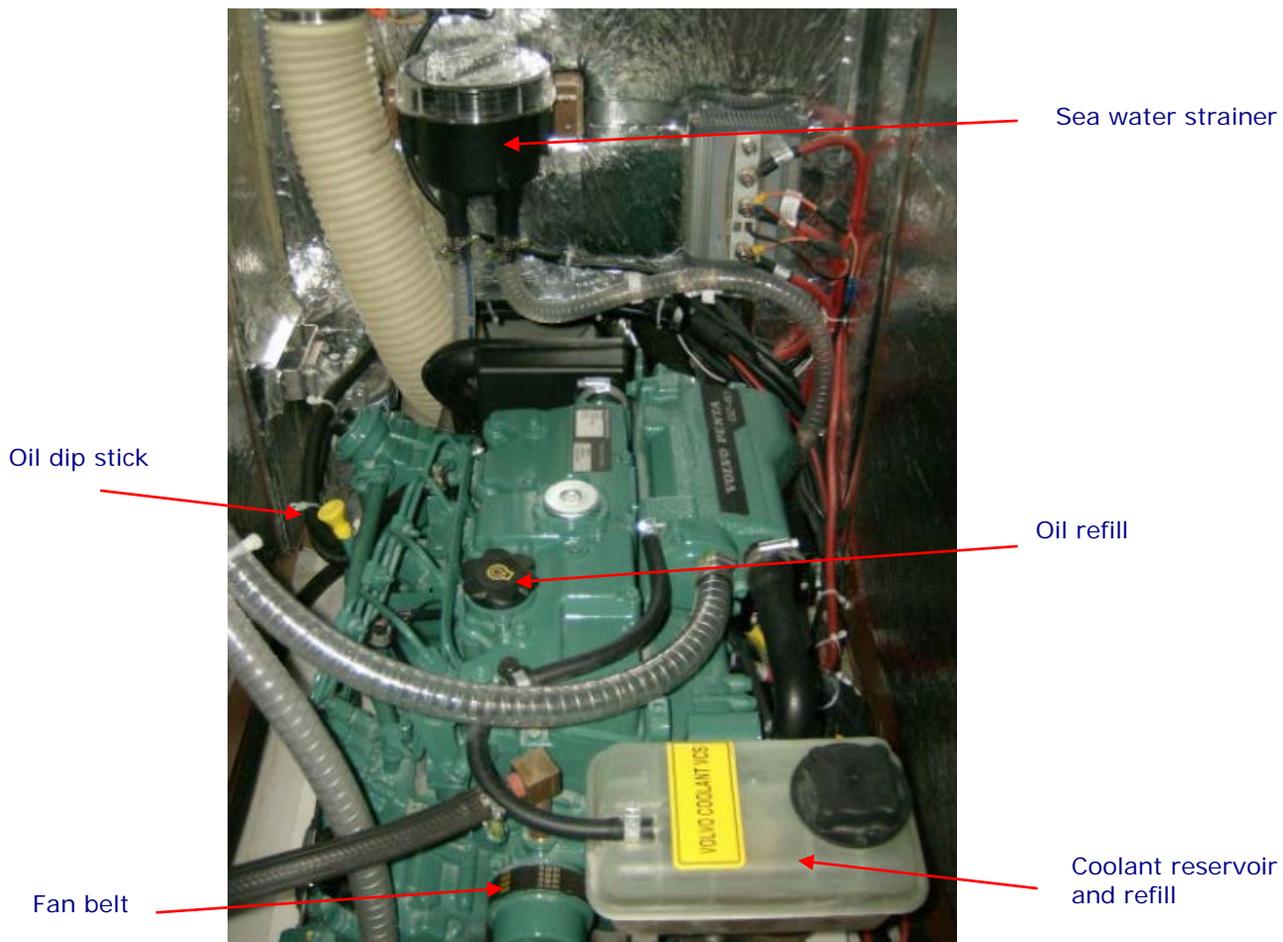
All our yacht engines run with diesel fuel. There is a diesel filler cap above the Engine start panel which is clearly marked "DIESEL".... **DO NOT PUT WATER IN HERE.**

5. Daily Engine Checks

- Check the oil level using the yellow dip stick located to the left rear of the engine. The level should be at least halfway between the empty and full marks. To add oil open the oil filler cap on the top of the engine.
- To the rear of the engine is the seawater filter.
- To the front right of the engine is the engine coolant reservoir. The coolant level should be between the maximum and minimum lines.
- Check for any engine leaks or bilge water below engine.
- Check the belt for any damage and correct tension.

KEEP HANDS CLEAR OF ALL MOVING PARTS.

ANY PROBLEMS CALL HORIZON



6. Instruments

Pau Hana is equipped with the following instruments on board:

Located at each helm is a Garmin GMI 20 multi data. The stbd helm also has a Garmin GHC 20 auto pilot. A Garmin GPSmap 820 is mounted at the aft end of the cockpit table.

Garmin GMI 20



Garmin GMI 20



Garmin GHC 20



Garmin GPSmap820



7. VHF Procedures

Using the VHF radio:

Familiarize yourself with the method for switching channels, and with the squelch and volume controls on your radio. Most radios have a button to instantly select Channel 16 – ensure you understand how this operates or you could end up speaking on Ch. 16 when you think you are on some other channel.

1. Make sure the radio is switched on, volume quite high, power to high unless the station you are calling is very close.
2. Squelch up until loud hissing, and then back a little until the noise *just* stops.
3. Select the channel for calling (Channel 16, unless specified otherwise).
4. Press switch on microphone when speaking. Release immediately.

If no response then wait two minutes and repeat the call. If still no response, wait a further two minutes before trying again. If calling on Channel 16, it is very important to switch to a working channel after the contact is established. Do not use Channel 16 for your conversations – this channel is for hailing and distress only.

Channels to use:

- 16 Hailing and Distress
- 74 Contact Horizon Yacht Charters (when in range)
- 12 Yacht Charter Companies working channel – assigned for yacht breakdown servicing and emergency only
- 68 Marinas and Yacht Clubs – for lunch/dinner reservations etc
- 06 Ship to Ship – along with Channel 68 and 77 can be used for contact between boats
CH/WX 06 for local marine forecast

In the event that your vessel is involved in a non-life threatening incident with an object or with another vessel, it is important that you contact the Horizon Office immediately at 494 8787 or 542 8788. Please remember to get as much information as possible about your location, the other vessel's description and what damage has been done to your vessel so that we can best assist you.

Failure to report any accidents or incidents in a timely manner may result in nullification of your hull damage insurance.

Types of emergency:

In the unlikely event that you are involved in an emergency stay calm and follow these steps. You will also have an Emergency Procedure card next to your VHF.

Distress: "MAYDAY, MAYDAY, MAYDAY." This is an International Distress signal and an imperative call for assistance. It is used only when a life or vessel is considered to be in grave and imminent danger.

Mayday Relay: used to summon help for a vessel which is either too far offshore to contact the coastguard directly, without radio capabilities or whose radio has been damaged or destroyed.

Urgency: "PAN-PAN, PAN-PAN, PAN-PAN" This is the International Urgency Signal and is used when a vessel or person is in some jeopardy but is not considered to be in grave and imminent danger.

Medical emergency: "PAN-PAN MEDICO, PAN-PAN MEDICO, PAN-PAN MEDICO" (Pronounced med-ick-oh). This is an International Urgency Signal that should be used when medical advice is needed.

Safety: "SECURITE, SECURITE, SECURITE" (Pronounced Say-cure-it-tay). This is an International Safety Signal and is a message about some aspect of navigational safety or a weather warning.

How to issue an emergency message

Select Channel 16 and press transmit button on handset

Say slowly and clearly 'MAYDAY, MAYDAY, MAYDAY, CALLING ALL STATIONS

This is.... (vessel name)....' and repeat vessel name 3 times

Give position – vessel's position in degrees of latitude and longitude or nautical miles from, and bearing to, a navigational landmark

Describe emergency – list the problem, the type of assistance needed; number of passengers aboard (boat length, hull colour and type is also useful)

Wait 1 minute for a response, repeat message

ALTERNATIVELY: Dial either 767(SOS) or 999 from any BVI cell phone or call 494-HELP (4357)

8. Batteries / Battery switches

The systems on your yacht are all 12volt. The batteries will need to be recharged as often as you deplete them. Conserving power will result in less time needed for charging, so turn off systems that are not being used.

Your batteries will charge when the engine is running at 1400rpms or more, whether sitting at a mooring or motoring to a destination. Check the battery levels and make note of them before charging.

Run the engine at 1400rpms or more for a **minimum of 1- 1 1/2hrs twice daily**.

Shut the motor off. Wait 15 minutes before checking the battery levels, (directly after turning off the motor they will remain in an excited state for about 10 minutes).

The House system should come to rest at 12.8 v. and then slowly get lower. When the system gets to 12.2 you should start planning to re-charge the batteries soon.

Pau Hana has two battery systems which are isolated from each other. The house batteries have a capacity of 430Ahrs. The batteries are located under the stbd salon cushions.

The DC main breaker is located under the chart table and the starter battery breaker is located on the port side of the companion way.



House battery switch



Engine battery switch

9. Anchoring & the windlass

Setting your anchor:

Preparation:

- Establish a non verbal communication system from bow to stern, as with the noise of the engine and wind, verbal communication proves difficult.
- Tie the dinghy painter close to the boat at the bow or amidships to avoid wrapping it around the prop.

Location:

- Choose a clear area to anchor in, normally in 12 to 15 feet. A white bottom is sand and perfect for anchoring. A brown or green bottom will be grass, rock or coral. **Only anchor in sand.**
- Make sure that you are not on a lee shore; i.e. that the land mass is protecting you from the elements and that you are not being pushed onto the shore. **A lee shore is the most dangerous place to anchor your yacht.**

Action:

- Manually lift the anchor over the bow roller and feed the chain so the anchor is just above the water surface.
- Use the elements; approach from down wind or current, whichever prevails.
- Once the yacht is stationary use the electric windlass to drop the anchor. The elements will push you back and away from the anchor.
- Minimum scope is 5:1. In heavy weather you may want to increase that, always ensuring your swing area is clear of any obstacles.
- Engage reverse, slowly building up to 1500 rpm to really drive your hook into the sand.
- Once set, put the engine in neutral and allow the yacht to settle, take transits around the bay to ensure you are not dragging, it is always advisable to snorkel the anchor and ensure it is bedded in correctly and not just lying on its side.

Attaching the snubbing line:

- Once you are happy that the anchor is set you must attach the snubbing line. The snubbing line protects the windlass and it is important that you attach the snubber every time you set the anchor.
- Attach the hook around the chain link (the hook is too big to go through the link) and cleat off the bitter end of the line to a bow cleat. Pay out enough chain so that the snubbing line becomes taut.
- If the hook falls off the chain it means that there is not enough tension on the line. In this case re-attach the hook and pay out more chain until the line is once again taut.

Setting a secondary anchor:

- If a second anchor is required, e.g. you are anchoring in a mooring field and need to control your swing room, deploy the primary as above and attach the secondary at the bow. Drive the boat forward at a 45 degree angle to the primary. Once in line with the primary deploy the secondary and allow the elements to push you back. Increase astern to 1500 rpm to drive in the secondary. Snorkel over the anchor to ensure a good hold.

There is a high amperage fuse that will blow if the windlass gets overloaded. **The fuse is located on the starboard side of the salon, behind the back rest of the salon cushion.** There are two large fuses next to each other; the anchor windlass fuse is the smaller of the two and is 100 amps.

You can tell if the fuse is blown by the tab that pops up. Compare the fuse you have removed with the one in the chart table. To replace, first turn windlass switch off on the 12v panel, pull the blown fuse straight out and replace with the new one that is located in the chart table.

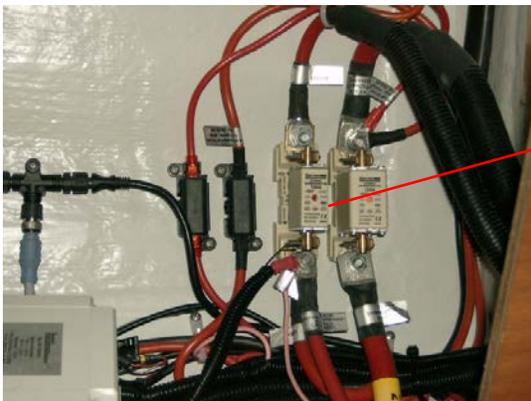
If you have any doubts or concerns, please call Horizon first. Before replacing the fuse, however, ensure that the windlass breaker on the 12v panel is switched on, and that the green light is not illuminated. If it is illuminated, this indicates that the fuse is NOT blown, and that the yacht battery power is too low to run the windlass. Please run the engine @1500 rpm for 15 min, and try again. If the windlass still refuses to operate, please call horizon.

Note:

The windlass remote control on Pau Hana is detachable and should only be used when operating the windlass. When the windlass is not in use, the remote should be detached and stowed below at the chart table. The cap for the deck fitting should also be screwed on tight when the windlass remote is not in use to prevent any water ingress.



Remote control plugs in here



Manual operation of the windlass

If you lose power to your windlass, start the engine and give it some revs, to make sure you have not just got a low battery voltage. Then make sure the windlass breaker with the anchor icon is in the 'on' position on the 12 volt panel. If there is still no power, check the location of the windlass fuse in this manual, and replace it with the spare in your navigation table. If you still have no power, you can operate the windlass manually.

To drop the anchor, insert the windlass handle into the star fitting on the top of the windlass.

Continue to pull back on the windlass handle, so that the brake cap loosens.

Your anchor is now ready to drop.

Remove the safety line or safety pin, and push the anchor over the bow, keeping hands and feet clear. Control the rate the chain pays out by tightening or loosening the brake with the windlass handle.

When you have paid out sufficient chain – 5 to 8 times the water depth, push the handle forward to tighten the brake. Increase revs to 1500 rpm, to set the anchor. If you drag, pay out more chain, and re-try 1500 rpm in reverse. When the anchor is set, fit the snubbing line, and cleat it off, then release the chain on the gypsy as above, so that the load is taken up on the snubbing line.

Your boat briefer will demonstrate how to manually retrieve the anchor

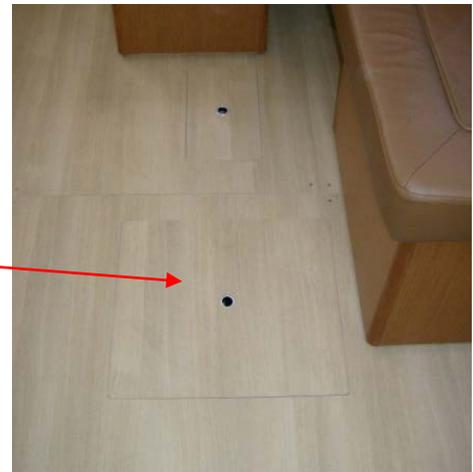
10. Picking up a mooring buoy

- Ensure the dinghy painter is tied off short on the bow or amidships and is clear of the prop.
- Approach the mooring buoy, keeping the bow into the wind or current, whichever prevails.
- Have a crew member on the bow to pick up the mooring pennant with the boat hook.
- The bowman will direct the helmsman to the mooring, using the already established non verbal communication system. Once at the mooring, inspect the buoy and pennant for any signs of wear and tear; if you are unsure about a mooring buoy's integrity, choose another location to moor up.
- The bowman should ready a line to a bow cleat to slip through the eye of the mooring pennant. This line is then shortened and brought back to the same cleat.
- Once set your mooring buoy will be attached either on the port or starboard cleat and the yacht will be head to wind. Remember to centralize the wheel and lock in place to avoid the yacht sailing around the buoy.
- Next attach a second back up line directly to the mooring ball. There will be a metal ring at the top of the ball or a shackle just under the ball. Attach a line from the opposite bow cleat and if possible run the line through the ring or shackle and back to the cleat. It is always easier to do this from the dinghy. Do not try to make the lines of equal length, the first line should be taking all the weight of the boat.
- To depart, release the back up line first. Slowly motor the boat forward to create slack, release the line from the cleat and allow the pennant to slip from the line into the water. Fall back with the wind or current, and be careful not to foul your prop on the pennant.
- **Remember to tie your dinghy away from the stern whenever you are maneuvering in close quarters.**

11. Bilge Pumps

Your yacht is equipped with one manual and two electric bilge pumps. The primary electric pump is automatic. In an emergency, the secondary bilge pump can be operated by pressing F4 on the 12V panel. The manual pump is located in the cockpit and the handle will be pointed out to you during your briefing.

Automatic bilge pump



Manual bilge pump with integrated handle

12. Fresh water system

Pau Hana has a water capacity of 96 gallons shared between two tanks.

Before filling the tank let the water run from the hose for a while before placing the end into the filler that is located on the transom and the bow. Please ensure that the correct fillers are used, NOT the holding tanks or the diesel fill.

To use the fresh water system, turn on the fresh water breaker on the 12v panel and open a faucet. When a tank runs out of water, the pump will run at high speed and the faucet will start to cough air. As soon as you hear the pump running continuously, check to see if anyone is using water. If not, switch off the pump immediately to prevent the pump from drawing more air into the system or the pump overheating.

Use the menu key on the 12v panel to confirm if your tank is empty.

Menu Key



Water tank change over valve



To switch tanks:

- Switch off water pump
- Select the next full tank: **the lever is located under the sink in the aft head.**
- The lever is not 'on' or 'off' – it has two positions (horizontal and vertical) that select one or other tank. After selecting required tank:
- Switch on water pump.
- Open cold water faucet at galley and purge system of air, approx. 45 seconds
- Turn off faucet, pump will continue to run until adequate pressure has built up to operate pressure switch to cut the pump out.
- If pump does not cut out, it may be necessary to repeat the purging process and open other faucets
- If you have any problems, call Horizon.

13. Heads

- Nothing is to be put down the head unless it has been digested first.
- Prior to use, move the lever to wet bowl to add water - 4/6 pumps.
- Pump out waste in the wet bowl position; this must be done when you are more than 1000 yards off shore.
- After the bowl has been cleared of its contents, an additional 20 – 25 pulls on 'wet' bowl will flush the bowl and pipes and will keep your heads smelling fresh.
- Move lever back to dry bowl and pump the bowl and pipes dry, the lever must be left in dry bowl as leaving it in wet bowl will allow water ingress.
- Wherever possible please use the heads ashore as this keeps our waters nice and clean.
- **Blocked heads will be cleared at a cost to you of \$150.00 sewage fee, plus a technician's fee of \$75 per hour and the call out fee.**



14. Showers

Your yacht has a hot & cold, fresh-water shower in each head and on the transom.

If the engine has been running, the hot water can be very hot – be cautious!

In order to use the showers, the fresh-water pump must be activated on the 12V panel. There is also a shower-drain switch on the 12v panel. Switch this on also.

The shower water drains into a sump with a float switch and is automatically expelled.

Transom Shower

The lower valve in the picture has two functions:

- By turning the knob clockwise and counter clockwise you can adjust the temperature of the water. Be careful. The water can be very hot. Test before showering.
- By pushing the valve from side to side you can change the water pressure. In this picture you would move it to the left and right.

To use the shower head simply pull it out and press the button on the back. If no water comes out make sure that the 12V water switch is on, that the shower hose is not kinked (access from aft cabin, same side as shower) and that the water pressure valve is in the correct position.



15. Refrigeration

Pau Hana has a 12v refrigerator and separate 12V freezer. This system is designed to run 24hrs a day if you wish. To ensure that it does not fail there are two things you should do.

- Firstly, keep your batteries charged. If the level goes below 12v the system will malfunction. Refer to section 12 for charging instructions.
- Secondly, do not puncture the cold plate in your fridge! Do not chip at the ice or use any other sharp items in the fridge. If something is frozen to the side of the fridge do not force it away. Pour warm water on it if you need to melt the ice.

There is a thermostat in the fridge. It is a white dial with numbers on it going from 1-7. Putting 7 at the apex of the dial is the coldest setting. Keep it on this setting until it is too cold. Then you can turn the system down or off if you wish. Or if it is not cold enough...augment the system with ice.

Ask one of our staff for a deck cooler if you would like one for storing your drinks. It will keep the drinks cooler and the refrigeration colder, as people will not be going in it every 5 minutes for a drink.

Please note that we are in the tropics and items that are frozen placed in the fridge will not stay frozen since this is not a freezer but only a fridge and that fruit, vegetables and other fresh produce may have a shortened shelf life.

Neither the fridge nor freezer have drains.

12V fridge



12V freezer



16. Propane and stove

The propane tank locker is located in the cockpit at the helm seat on the port side.



To use:

- Press the F2 switch on the 12V panel. This opens the solenoid on the propane tank.
- To light the stove, push the knob in, turn the relevant knob 90 degrees counter-clockwise, and light the burner (to light oven put the flame in the tube that is inside/center bottom).
- Hold the knob in for 10-15 seconds, then release. Make sure that the flame goes all the way around. Reduce any wind that may hinder this.
- If you cannot get the burner lit, check the manual shut offs - there are two. One on the propane tank and one in the galley in the cupboard. Make sure these are both open and try again.

The 12v solenoid system is USCG approved device. You do not need to shut any manual valves off unless you wish.

Pau Hana is fitted with a Xintex S-1 Propane detector and Control System. This device will detect propane and any other noxious gas or fume. The propane 'sniffer' has been placed in the bilge (propane is heavier than oxygen and will sink into the bilge). The detectors are sensitive to several types of gas and will trigger the alarm. The alarm can also be triggered if there is moisture in the bilge. If the alarm sounds it does not necessarily mean that the propane system is leaking, so don't panic!!

In the event that the alarm goes off follow these steps:

- Close the valve on the propane tank.
- Check the stove and surrounding area for propane smell.
- If detected, open up the bilges and hatches. Point the boat downwind and use the manual bilge pump to pump out the bilges.
- Call Horizon immediately

Under no circumstances should you use the electrical bilge pumps or any other electrical system if you suspect a gas leak.

17. BBQ

- When using the BBQ, tie your dinghy off at the side of the yacht, not off the stern
- Never use the BBQ while sailing
- Never use the BBQ on a dock
- Never change propane tanks when using the BBQ
- Make sure someone is always tending the BBQ when hot
- Call us if you have too much food



18. Fire Safety

Prevention is the best answer to fire safety.

- Always switch off the safety solenoid when stove is not in use
- Never leave the stove or oven burning unattended.
- Never change propane tanks whilst barbequing.
- Never smoke below decks.
- Never smoke when changing propane tanks.
- Safely store any flammable liquids (for example charcoal lighter fuel).
- Keep matches away from children.



Engine compartment fire:

In the event of a fire in the engine compartment use the fire extinguisher positioned closest to the companionway hatch steps and position the mouth of the extinguisher to the fire hole.

- Pull the yellow key out
- Press down on the red button until all the contents of the extinguisher have been discharged.
- Do not open the engine compartment even if you think the fire has been extinguished, dying embers can easily be re-ignited by a fresh supply of oxygen (air).

Open fire:

- Pull out the yellow safety tab.
 - Point the extinguisher at the base of the fire and press down on the red button to discharge contents.
- Generously cover the base of the fire and surrounding area to ensure the fire is under control and cannot spread. Continue discharging extinguisher until the fire is out.



Galley fire:

- Take the fire blanket out of its container. Read the instructions for use carefully.
- Ensure hands and limbs are protected from the fire by the blanket.
- Carefully lay the blanket over the fire, laying the blanket away from you and keeping yourself protected at all times from the flames.
- Once in place leave the blanket until all heat has gone from the scene of the fire, this way you can be sure that the fire has definitely gone out and will not re-ignite.



Smoke alarm:

- There is a battery operated smoke alarm mounted in the salon. This alarm will be triggered by smoke caused by cooking or burnt toast. Opening a hatch to allow ventilation will minimize triggering the alarm. For safety purposes, the 9v battery should not be removed from the smoke alarm.

19. Dinghy & Outboard

The driver of the dinghy must be over 18, and must at all times be wearing the kill cord. Never operate the dinghy under the influence of alcohol or drugs.

- Always tow your dinghy on a short line while motoring and a long line while sailing, always tow with the engine leg up as it gives you an extra half knot.
- Most of the time it is fine to leave the outboard on the dinghy, but if conditions are very rough, the outboard needs to be mounted on the push-pit.
- When going ashore for an evenings entertainment allocate a dinghy captain, someone who will bring the whole crew back to the boat safely, allowing the rest of the crew to enjoy various local cocktails and concoctions.
- To start the engine, lower the motor into the water using the lever on the starboard side of the engine. The lever position corresponds to the motor position, up and fwd for towing and back and down for driving. Check you are in neutral and **the safety cord is in place**. For starting an engine that has been at rest for 3 or more hrs use the choke. Pull the choke out, and set a few revs with the throttle. Do not twist the throttle trying to prime the engine. You will only flood it. Face the engine and pull the start cord and push the choke back in as soon as it runs. If it runs for a second but cuts out, try again without the choke.
- To stop the engine, press the button on top of the kill cord, or pull the kill cord out.
- Keep the kill cord with you to prevent anyone from borrowing it. You have been provided a dinghy lock and cable. Use them.
- Do not drag the dinghy onto a beach; anchor it off or put it on a dock with a stern anchor to prevent damage from going under or hitting the dock.
- Do not speed in and around other yachts, speeding fines have been introduced.
- At night an all round white light must be displayed along with red & green side lights, and it is always a good idea to have a flashlight with you, to show the way, and warn other vessels of your presence.
- Wear the life preservers provided in the cockpit lockers when in the dinghy.

Outboard Engine - 15HP Yamaha Enduro 2 stroke



Gear shift

Locking cable

Pull cord

Throttle

Choke

Stop button

Kill cord

Fuel tank



Security cable

Fuel cap w/ air vent

Fuel line

20. Swim Ladder

Pau Hana is equipped with a retractable transom that also doubles as a transom seat when the transom is closed. There is a removable swim ladder that is stowed in the port cockpit locker. While under sail, the transom should remain closed and secure. After you have gotten to your anchorage feel free to deploy the transom for easy access to your dinghy, swimming or snorkeling. There is a lanyard attached to the swim ladder that enables you to secure the ladder while in use.

Always use the safety lanyard while using the swim ladder to prevent losing the ladder overboard.

