Horizon
Yacht Charters
British Virgin Islands

Information & operations manual for Nautitech 46 Flybridge 2023 'Time Bandit'

Welcome

Welcome to Horizon Yacht Charters and your Nautitech 46 Flybridge "Time Bandit". 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 in the British Virgin Islands.

This manual is here to guide you through the ins and outs 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 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 (Technical questions, damage reports and emergencies)*

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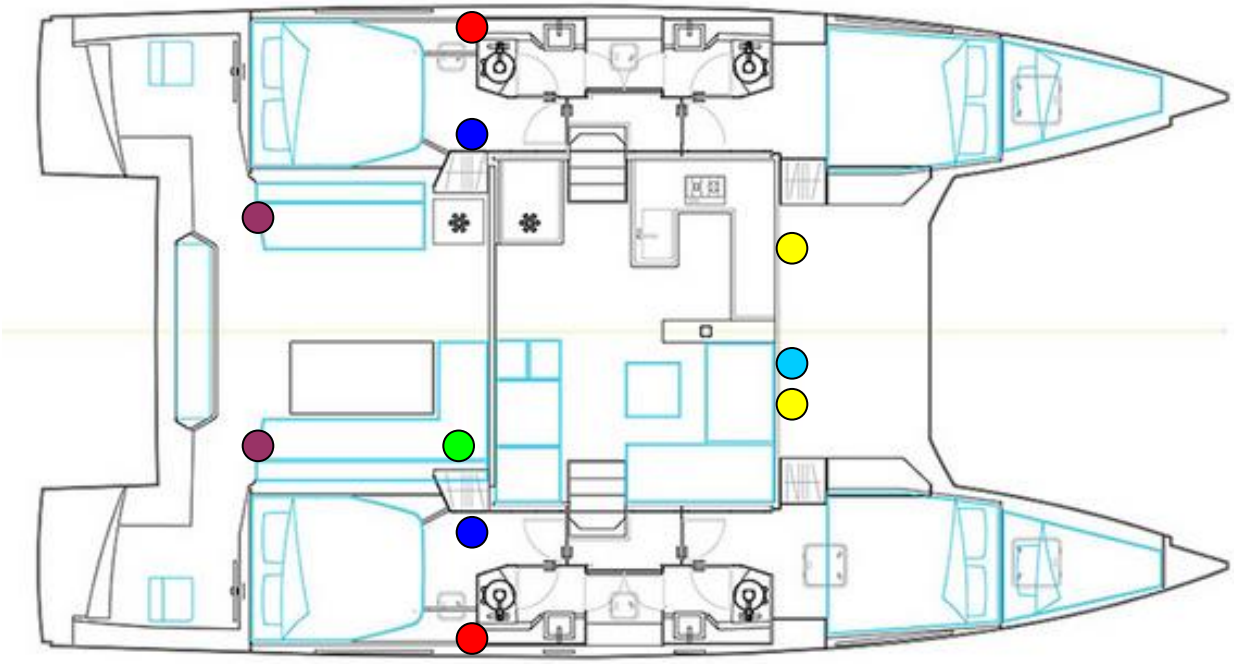
1. Yacht specifications



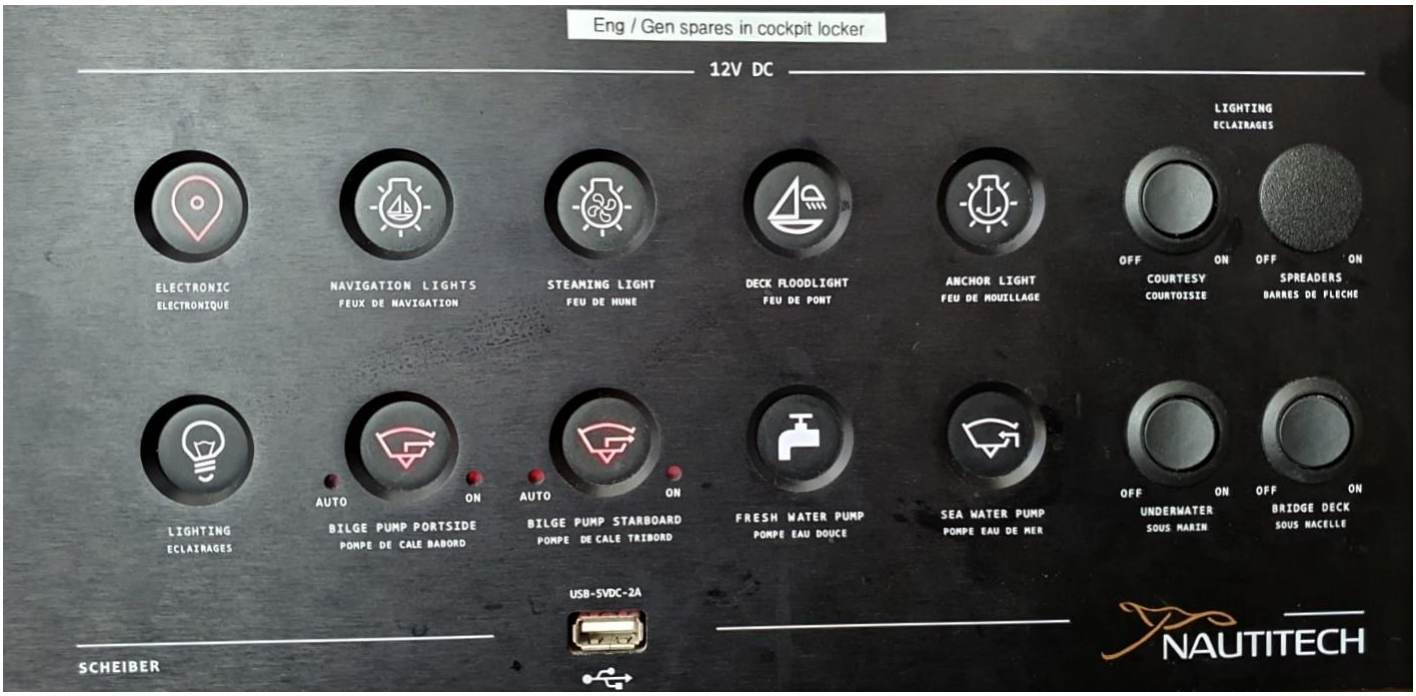
Length	45’
Beam	24’ 9”
Draft	4' 9”
Fuel	160 gallons total (2 x 80G)
Water	160 gallons total (2 x 80G)
Engine	2 x Volvo D2-50F
Generator	Northern Lights 9KW

Location of:

- Fresh water refills **(foredeck)**
- Diesel refills **(amidships)**
- Manual bilge pumps **(each cockpit locker)**
- Propane tank **(under stbd cockpit seat)**
- Windlass breaker **(stbd bow locker)**
- Diesel cut off valves **(under companionway floors)**

2. 12-volt panel

The following list corresponds with the photo below and tells you what each switch does.



Top row

Electronics (Navigation instruments)
Navigation lights
Steaming light
Deck light
Anchor light
Courtesy lights
Spreader lights

Bottom row

Lighting
Port bilge pump (set to auto, push to manually override)
Stbd bilge pump (set to auto, push to manually override)
Fresh water pump
Galley saltwater pump
Underwater lights

Switches flash when there is a fault. There are individual resettable fuses for each switch behind the 12V panel.

110v Breakers

The 110v breakers are in the stbd companionway cupboard

The 110-volt outlets will operate whilst you are plugged in to shore power or running the generator. If the outlets do not work, then ensure that the 110v breakers are in the 'On' position.

Selector switches for Generator / Shore Power are installed below these breakers.

3. Inverter / Charger

Warning: Leaving the Inverter turned on will severely deplete the house batteries. For that reason, it is better to run the engines at the same time. **If you have the Generator running, you do not need to use the Inverter.**

Battery Charger **Inverter**

(Both located under the port aft cabin berth)

Inverter remote control located at the Nav desk

To use the inverter:

1. Press the "on" button on the Inverter control panel. The red light on the panel will then illuminate.
2. All the 110V outlets are now live.

When finished, switch the inverter off and check that the light on the panel is no longer illuminated.

4. Engine start procedure

Time Bandit has twin electronic engine throttle controls on the flybridge. The operation of these will be demonstrated during your technical brief. DO NOT attempt to operate these until you have been shown the correct procedure.

You have two 50HP Volvo D2-50F engines and therefore two start panels. You must switch on both engines before getting underway.

- Make sure the throttle is in the neutral.
- Press the ON/OFF button 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 'On/Off button' once more to turn off the ignition.

Should you hear an engine alarm during operation, check which symbol appears on the tachometer and immediately shut down the engine-CALL HORIZON

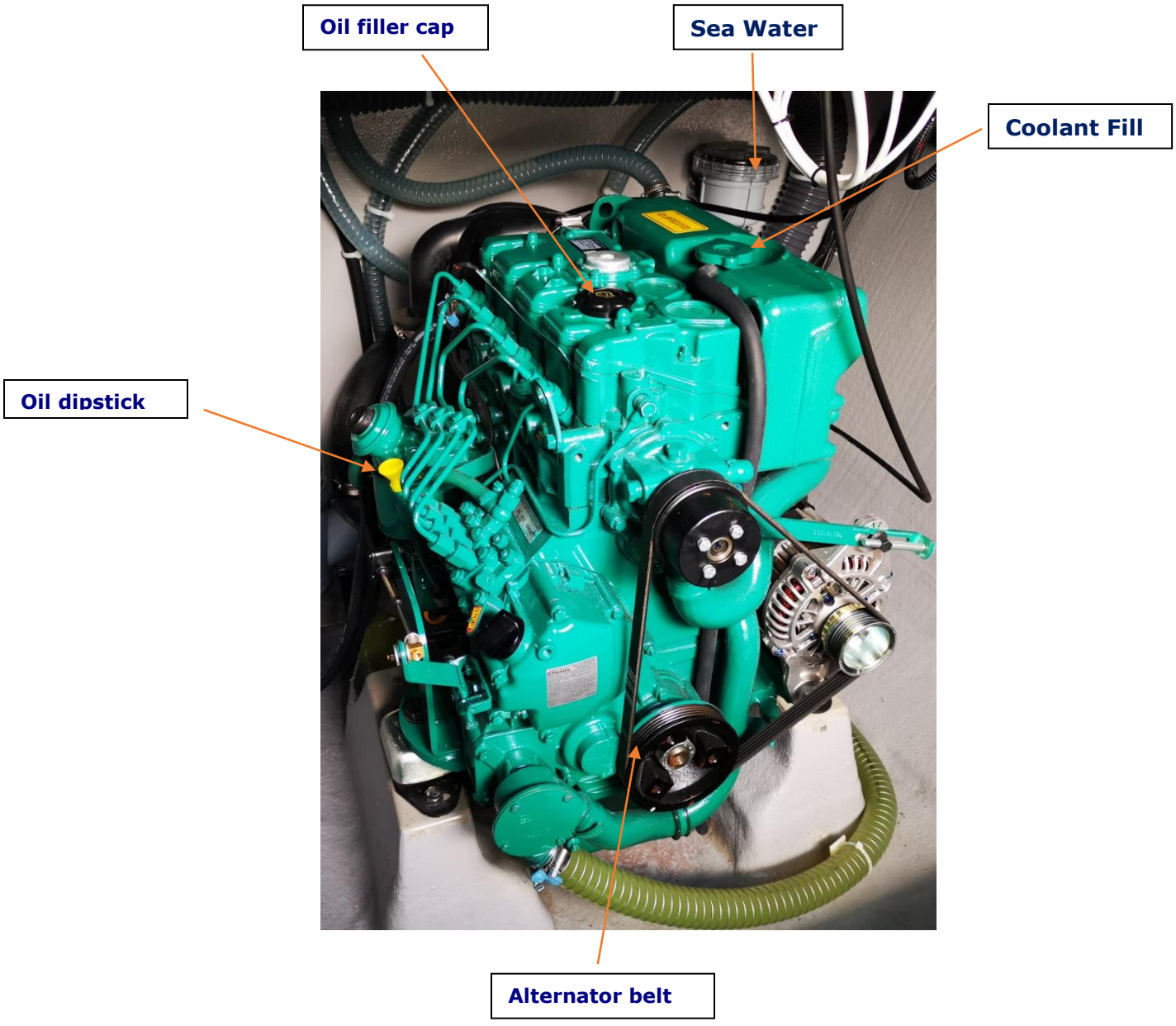
All our yacht engines run on diesel fuel. There are two diesel filler caps located on both starboard and port decks, which are clearly marked "DIESEL", DO NOT PUT WATER IN HERE.

5. Daily Engine Checks

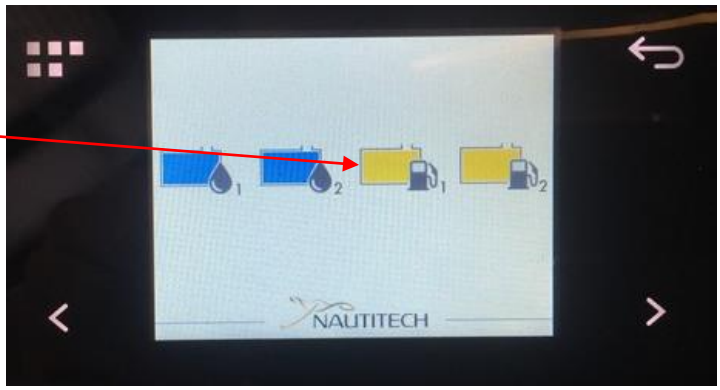
- Check the oil level using the grey dip stick located to the left-hand side of the engine. The level should be at least halfway between the empty and full marks. To add oil, open the oil filler cap on the top of the engine.
- To the right of the engine is the seawater filter, **do not** remove the cap.
- 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



Fuel and water gauges at the nav desk

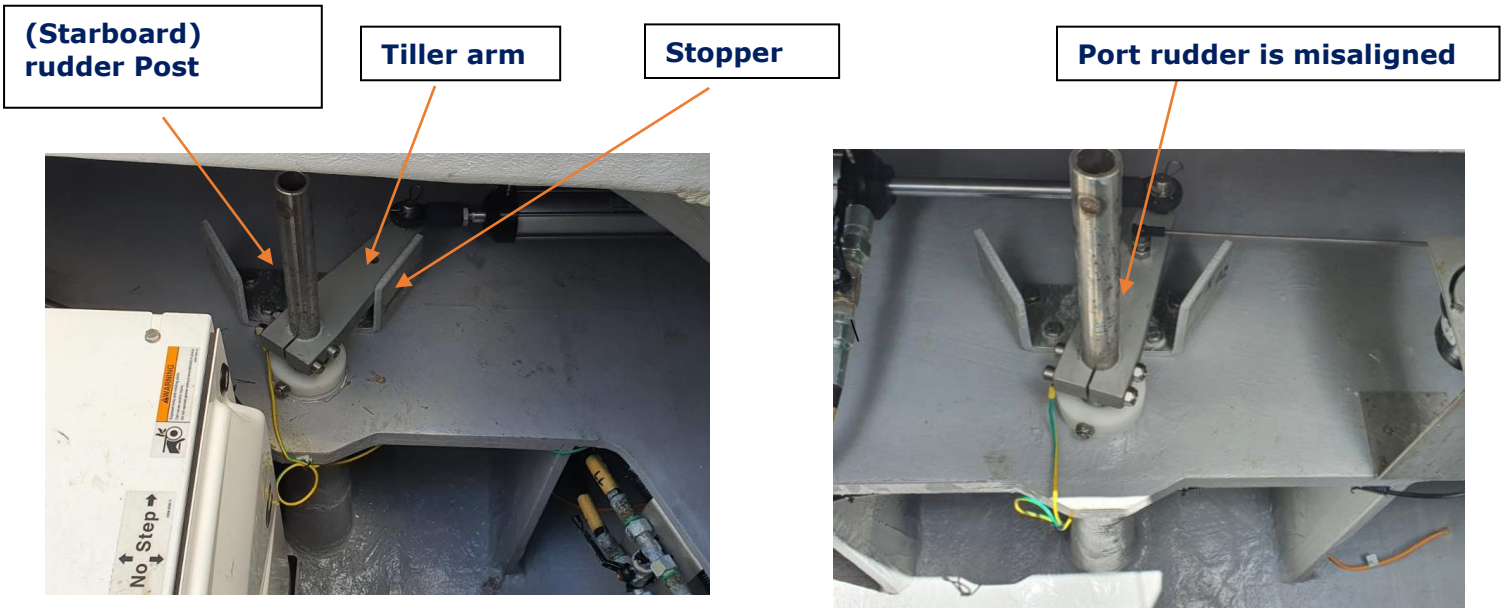


Rudder Misalignment

There is an anomaly with the hydraulic steering on (name of boat) Whilst sailing the rudders can get slightly out of alignment. Realigning them takes a couple minutes and we recommend that you check and realign the rudders each day before sailing. It can easily be done just prior to your morning engine checks so that the area is nice and cool and not heated by the engines.

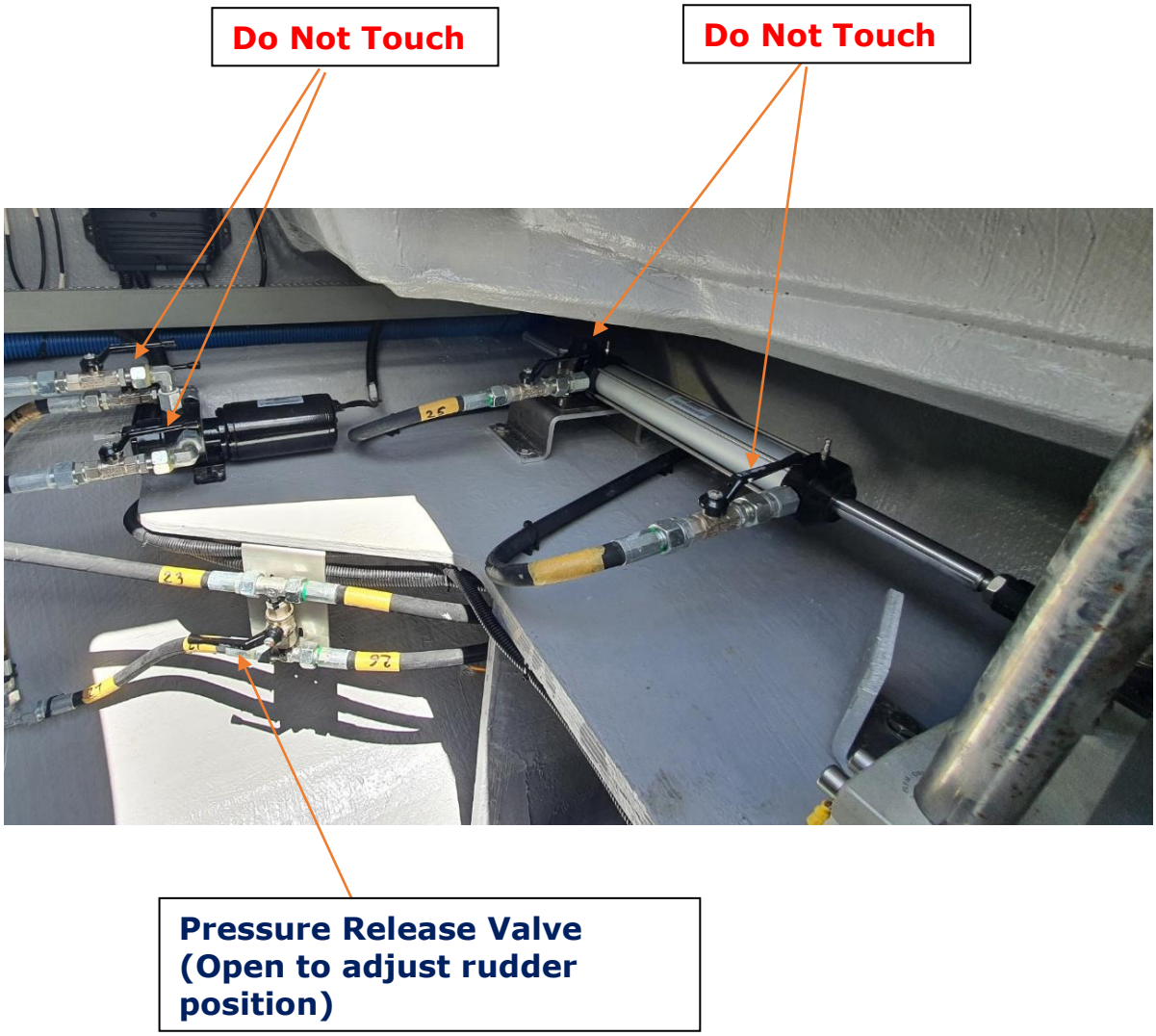
Rudder realignment

Turn the helm all the way port or starboard, open both engine compartments to check the position of the tiller arms. The rudder tiller arm that is not touching the stopper will need to be adjusted. If both rudders are touching the stoppers, then no realignment is needed.

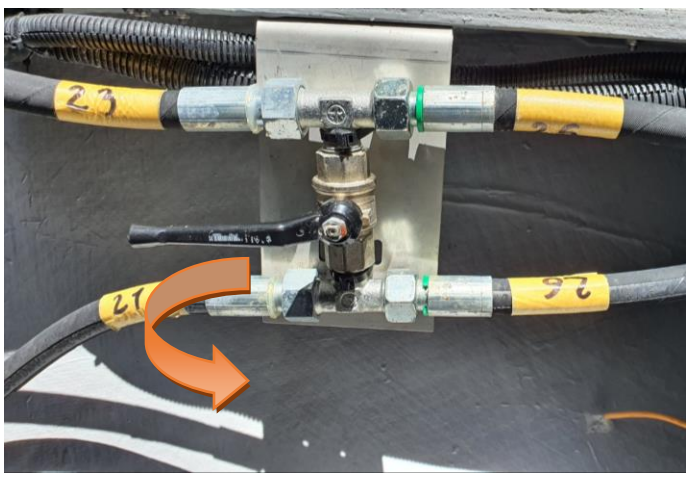


To set misaligned rudder, open the pressure release valve and push the rudder tiller arm under it is resting on the stropper. Once both tiller arms are in the same position close the pressure release valve. Have a crew member turn the helm all the way port or starboard and then back making sure both rudders are in synced.

The diagram below shows the location of the pressure release valve in the port engine compartment. The valve is in the same location on the starboard side (This is the only valve in the starboard engine compartment for the hydraulic system)



Pressure release valve (Closed Position)
open to adjust rudder.

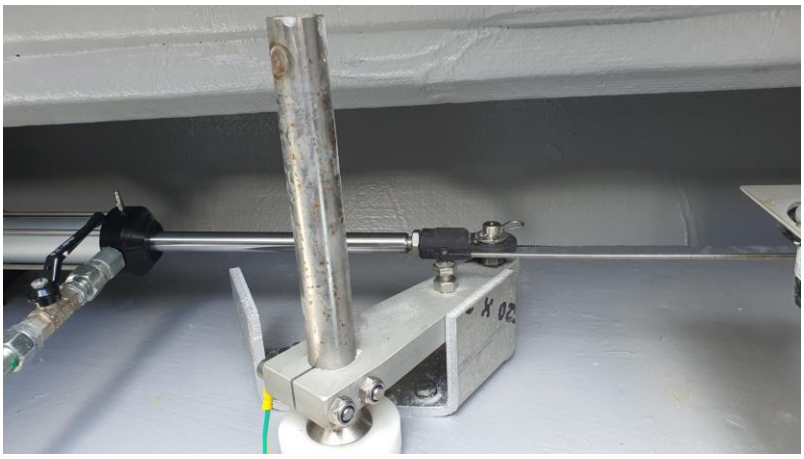


Pressure release valve Open Position. Please close after realignment.

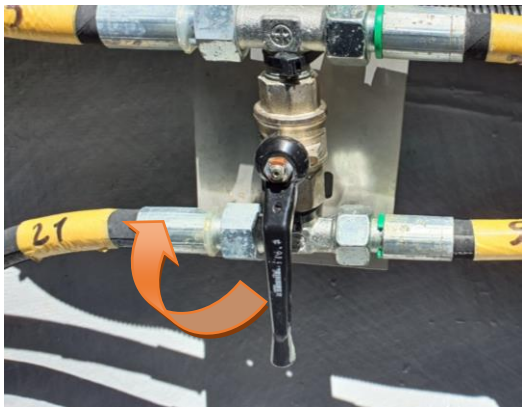
After opening the pressure release valve, push the tiller arm in the direction you want it to go. The tiller arm must touch the stopper, both tiller arms must be in the same position before closing pressure release valve.

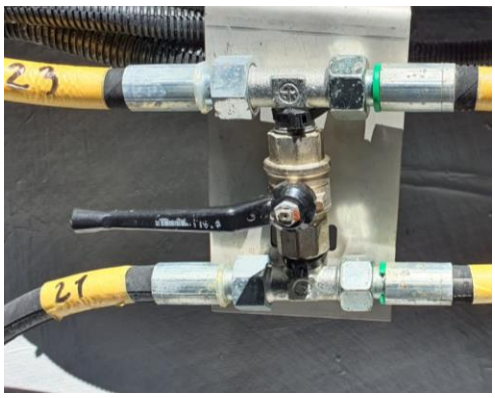
Close pressure release valve when both arms are in the same position.

Ensure tiller arm in resting on stopper



Close pressure release valve after adjusting the position of the tiller arm.





6. Generator

You must not run the generator when underway

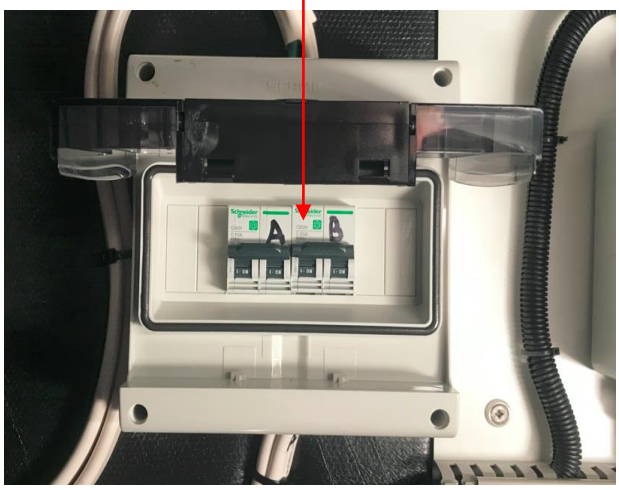
Selector switches for Generator / Shore Power are installed below these breakers.

Time Bandit is fitted with its own 9KW generator which will run the 110v outlets, the air conditioning and will also charge the batteries in place of the engines but at a lesser rate. **The generator is in the stbd eng room and the start panel is in the stbd companionway.**

On leaving the dock locate the 2 switches in the stbd companionway and turn them both to OFF. These switches should be turned to SHORE when on shore power and GEN when using the generator.

Shore power breakers under stbd aft cabin bunk

Generator breakers on bulkhead, fwd of generator in stbd eng room



Starting the generator

To start the generator:

- Make sure the 110v systems are off prior to starting the generator.
- Push down the upper toggle for 5 seconds (glow plug) and hold.
- While holding the top toggle down squeeze up on the lower toggle to engage the generator starter.
- As the generator starts you will see the oil pressure start to increase. Release both the toggles when the oil pressure reaches 58 psi.
- The generator should continue to run when you let go of the upper toggle.
- **Allow the generator to warm up for 5 minutes before applying any load.**
- Turn selector switches to GEN.
- Air conditioning units must be turned on five minutes apart.

It is critical when load is applied to the generator it be applied slowly. Air conditioning units must be turned on 5 minutes apart to avoid overloading the generator.

Stopping the generator

Stopping the generator

- **Allow the Generator to cool down for 5 mins under no load before shutting it down**

- Press down the Stop switch once. The generator will shut down.

Generator raw water strainer (starboard engine compartment behind generator):

Please do not run the generator when sargassum seaweed is present. The generator raw water strainer is in the generator compartment to the right of the genset and can pick up seaweed and other debris in the water. This can cause your generator to malfunction because of the lack of water flow.

Cleaning the raw water strainer:

1. Before you clean the strainer ensure the raw water intake valve is closed.
2. Remove the housing cover, this can be done with a filter wrench.
3. Remove and clean the strainer.
4. Refit strainer.
5. Prime the strainer by pouring water into it until it overflows.
6. Refit housing cover.
7. Open the raw water intake valve.
8. Start the generator
9. Make sure water is coming out of the exhaust.

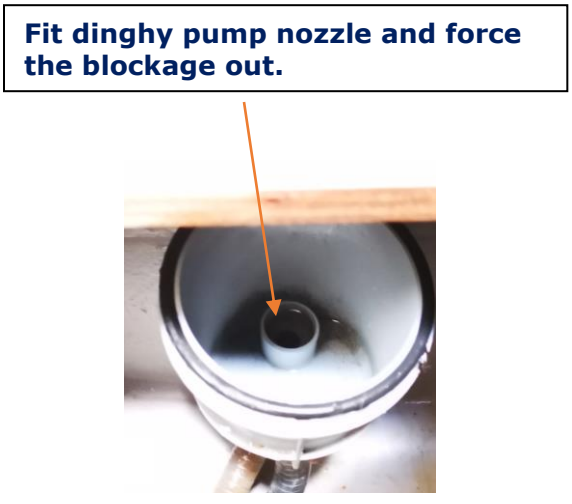
If you still have a problem running the generator after cleaning the strainer, check for water in the strainer. If there is no water in the strainer it means the raw water intake is blocked.

Clearing a blockage from the generator raw water intake:

1. Get the dinghy air pump.
2. Close the intake valve.
3. Remove cover and strainer from the housing.
4. Place the nozzle of the dinghy pump into the opening that is connected to the intake hose.
5. Open the intake valve.
6. Use the pressure of the dinghy pump to force the blockage out.
7. Once you have cleared the blockage, prime the strainer by pouring water into it until it overflows.
8. Refit housing cover and start generator.
9. Make sure water is coming from the generator exhaust.

If you are unable to open the strainer, remove the intake hose where it is connected to the strainer by undoing the hose clamps and use the dinghy pump to force out the blockage.

Please contact the manager on duty for further instructions.



7. Air conditioning

The 6 x air conditioning units will operate when the vessel is plugged in to shore power or when the generator is running. Each cabin has its own individual air con unit and there are 2 units located in the saloon. The owner cabin has an additional unit in the shower room.

The air conditioning units should be turned on **after** the generator has been running for 5 minutes (or once the boat is plugged into shore power) and the breakers should be shut **off** before stopping the generator or unplugging from shore power.
Ensure the companionway and all hatches are closed; otherwise, the compressors will freeze up.

Starting the air conditioning:

- Switch on the required units 5 minutes apart.
- Each of these units also has an individual control which allows users to alter the settings for the individual units.

Using the AC Cabin Controls:

Fan: Cycles through the different fan speeds

Temperature Indicator: Displays the inside, set point, outside, and water temperatures, as selected

Up: Raises the temperature set-point

Down: Lowers the temperature set-point

HCAC Modes:

- Cycles through the different modes
- Sends the display to sleep

Mode Icons: Indicates the current display mode

Control operation:

The four mode icons indicate the different modes of control: Cool, Moisture, Heat and Aux Heat.

Press the Mode icon to select a mode:

- Display icons illuminate to indicate the selected mode.
- The display locks into the last mode selected after five seconds of activity, they display the room temperature. The selected mode LED remains lit.
- After 10 seconds of inactivity, the display shows the room temperature and enters the IDLE state.
- OFF displays on the screen to indicate the off state.
- When the display is making a call for heating, cooling, aux heat, or humidity, the appropriate mode icon blinks for two seconds On and two seconds OFF.

Press any icon to wake up the control from the OFF or Idle state.

Press the mode icon for three seconds to initiate a SLEEP state:

- The display goes dark.
- Normal operation continues.

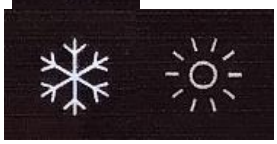
Press the mode icon for an additional three seconds to wake up the control.

Cool: The cool icon illuminates when the COOL mode is selected or when the unit is in an AUTOMATIC mode cooling cycle. Only the cooling system operates. If the ambient temperature drops below the set point, the system will not automatically switch to the HEAT mode.

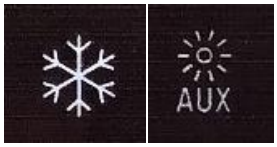
Moisture: This mode controls humidity during periods when the vessel is unoccupied and prevents the cabin temperature from dropping below the minimum default temperature setting.

Heat: Only the heating system operates. If the ambient temperature rises above the set point, the system will not automatically switch to COOL mode.

Aux Heat: The electric heating system is in operation. If the ambient temperature rises above the set point, the system will not automatically switch to COOL mode.



Automatic modes: Switches to cooling or heating as required to satisfy the temperature set-point. When Automatic mode is selected the system provides both heating and cooling, as required.



Air Conditioning Fault Codes:

ASF: Air Sensor Failure

FIL: Filter, indicates the filter needs to be cleaned or replaced.

HPF: High Pressure Fault, indicates high refrigerant pressure. The fault is not applicable in HEAT mode. Can also mean there is air in the lines and reducing your raw water flow, you will have to bleed the system if this is the case.

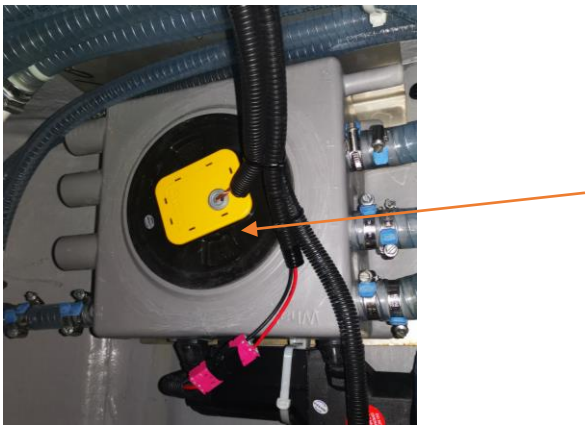
LAC: Low AC Voltage

LPF: Low Pressure Fault indicates low refrigerant pressure. The fault has a 10 min shut down delay.

PLF: Pump Sentry Fault, indicates high-water temperature in the condensing coil.

The air conditioning unit will operate when the vessel is plugged in to shore power or when the generator is running. Each cabin has its own individual air con unit and there is a 5th unit located in the saloon.

Load up the generator with one air conditioning unit every five minutes so that the generator does not overload. If all the air conditioning units fail to turn on, check the reset breaker on the left side of the generator



All AC units drain into automatic sump boxes, one in each hull; therefore, you will hear intermittent pump operation of the drain pump when running the Air conditioning

8. Instruments

Located at the Nav Desk and the Flybridge are a B&G Triton² digital display and autopilot controller, B&G Triton² Autopilot control and a B&G Zeus³ 3 Chartplotter.

B&G Triton² digital display and autopilot display

1. Pages key

- With no menu active:
- Press to scroll through the enabled data pages (Wind speed + Direction, depth, boat speed and autopilot)
- Press and hold to display a list of enabled pages from where you can directly select the page to display
- Menu and dialog operation: Press to return to previous menu level or to exit a dialog.

2. Arrow keys

Press to move up and down in menus and dialogs. Press to adjust a value.

3. Enter key

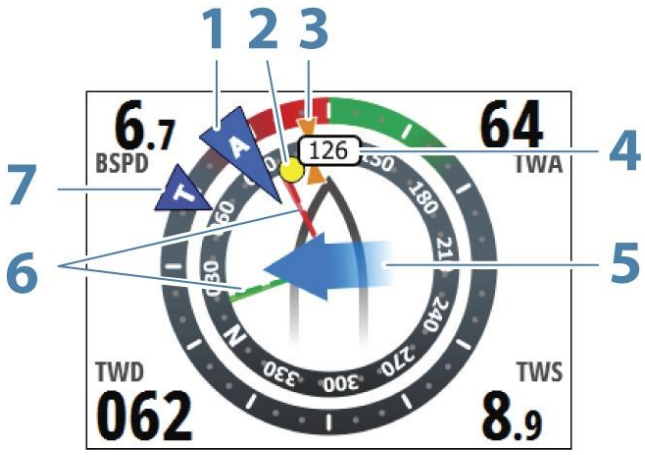
Press to select a menu option and to enter the next menu level.
Press to activate/deactivate a menu/dialog option.

4. MENU/Backlight key

Press once to display the page menu.
Double press to display the Settings menu.
Press and hold to display the Display setup dialog from where you can adjust the display backlight.

SailSteer page (Wind Speed and Direction)

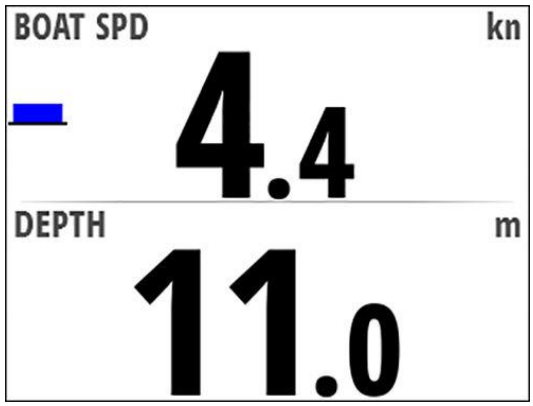
Core Sailing data displaying all key data relative to the yacht's bow for easy visualization.



1. Apparent wind *
2. Bearing to current waypoint *
3. COG (Course Over Ground) *
4. Vessel heading
5. Tide rate and relative direction *
6. Port (red) and Starboard (green) Laylines *
7. TWA (True Wind Angle) - Green if on TWA upwind or downwind. Blue if off target by 10º or more, or on a free leg. The indicator will fade from blue to green the closer you get to the exact angle

Speed/Depth page

Basic speed in knots and depth (Depth on Luna is in feet). Depth is read from under the keel.



Autopilot:

Safe operation with the autopilot

⚠ Warning: An autopilot is a useful navigational aid but DOES NOT replace a human navigator.

Note: You can disengage the autopilot at any time by pressing the **STBY** key on the Triton² Pilot controller.

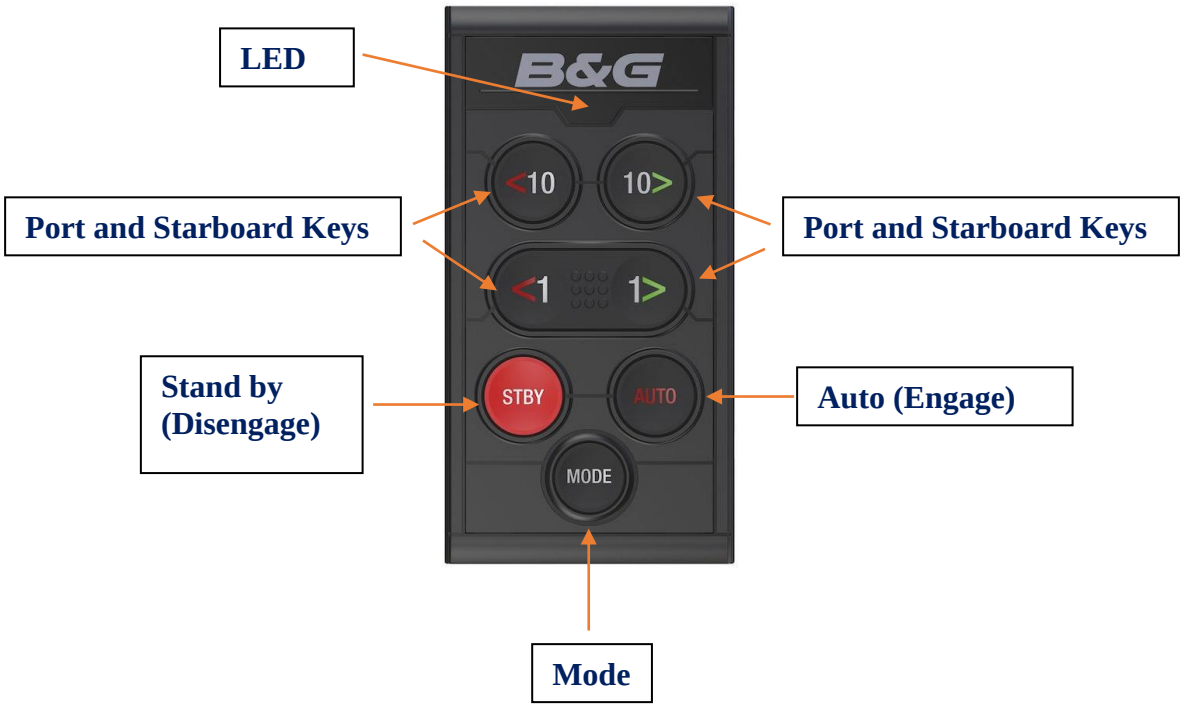
Do not use automatic steering when:

- In heavy traffic areas or in narrow waters
- In poor visibility or extreme sea conditions
- When in areas where use of an autopilot is prohibited by law

When using an autopilot:

- Do not leave the helm unattended
- Do not place any magnetic material or equipment near the heading sensor used by the autopilot system
- Verify at regular intervals the course and position of the vessel
- Always switch to Standby mode and reduce speed in due time to avoid hazardous situations

B&G Triton² Autopilot control



LED:
Mode and alarm indicator

Port and starboard keys:

In Standby mode: press to activate Non-Follow Up mode (NFU).
In AUTO mode:

- Press a key to change set heading 1° or 10° to port or starboard
- For boat type set to SAIL: Press and hold both port keys or both starboard keys to start a tack/gybe

In NoDrift mode:

- Press a key to change set heading 1° or 10° to port or starboard

In Wind mode:

- Press to change set wind angle 1° or 10° to port or starboard
- Press both 1° keys to start a tack/gybe

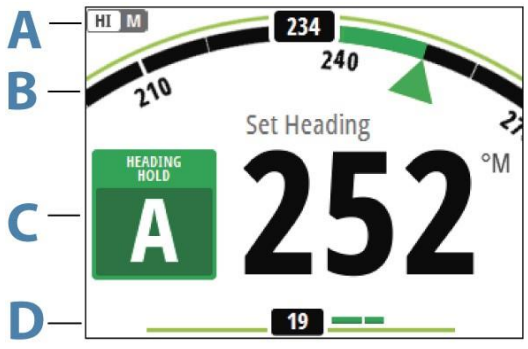
AUTO key:
Press to activate AUTO mode.

MODE key:

Note: Only used when the autopilot is in AUTO or NoDrift mode.
Press once to select mode:

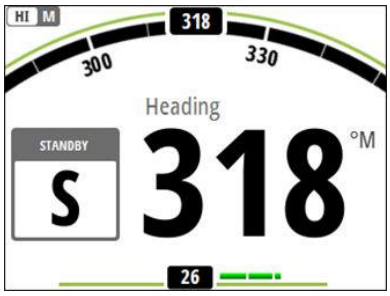
- For boat type set to SAIL: activates Wind mode (A)
- Press and hold to activate NAV mode (C)

STBY (Stand by) key):
Press to activate Standby mode.



A. Performance/Response/Profile mode
B. Heading indicator, analog and digital
C. Autopilot mode indication
D. Rudder indicator, analog and digital

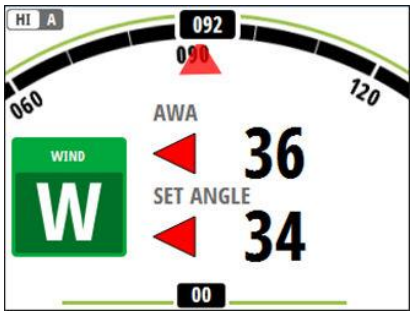
Autopilot modes



Standby mode:
Standby mode is used when you steer the boat at the helm.

- Switch to Standby mode by pressing the **STBY** key.

Note: If you press one of the port or starboard keys while in Standby mode, the autopilot will switch to Non-Follow Up mode.



Wind mode:

Note: Wind mode is only available when the boat type is set to SAIL. It is not possible to activate wind mode if wind information is missing.

When wind mode is engaged, the autopilot captures the current wind angle as steering reference and adjusts the heading of the boat to maintain this wind angle.

Prior to entering wind mode, the autopilot system must be operating in AUTO mode and with valid input from the wind transducer.

- Switch to Wind mode by pressing the MODE key when the autopilot is in AUTO mode.

The autopilot will now keep the boat on the set wind angle until a new mode is selected or a new wind angle is set.

⚠ Warning: In wind mode the autopilot steers to the apparent or true wind angle and not to a compass heading. Any wind shift could result in the vessel steering on an undesired course.

B&G Zeus³ Chartplotter

Trouble Shooting Nav Instruments:

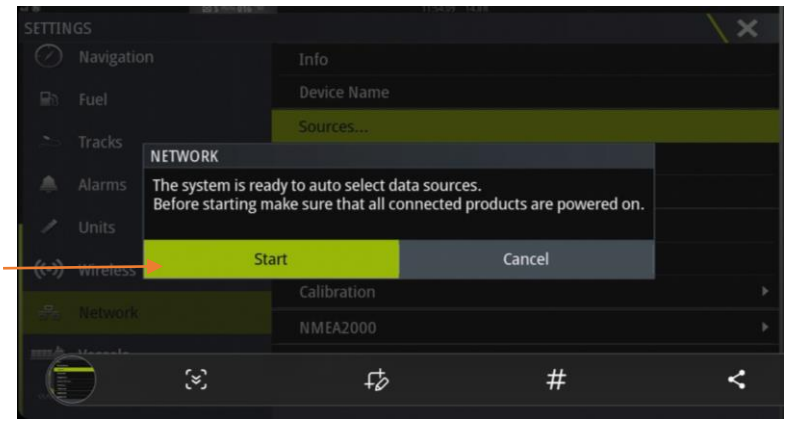
If you are no longer seeing data for specific sources (Depth, Windspeed, rudder position) on the chart plotter or the Triton digital display it means the data sources are no longer communicating with the system. This is an easy fix, just follow the steps below.

1. Select Settings.
2. Select Network.
3. Select Sources.
4. Hit Auto select.
5. Hit Start.

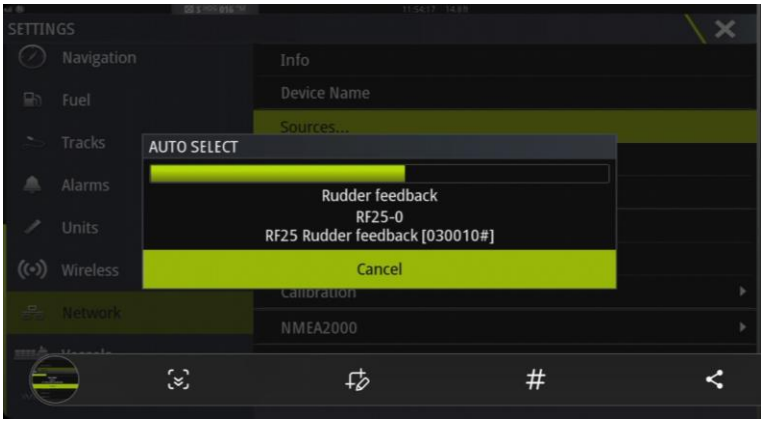
The system will then auto-select all the relevant data sources. Hit okay to complete.

Auto select

Start (System is ready to auto select data sources)



System auto selecting data sources



10. VHF Procedure

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 there is no response, 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

If 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 on 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 emergencies:
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 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 the 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).

Nav station electronics:

B&G H100 VHF Radio controller

B&G Triton² digital display and autopilot

B&G Triton² Autopilot control

B&G Zeus³ Chartplotter

Fusion Apollo RA770 stereo

Dial:

- Turn to adjust volume
- Press to switch between zones
- Press to move through the menus or adjust a setting

Source Icon:

- Press to change the source

Menu:

- Select to open a menu for the current source

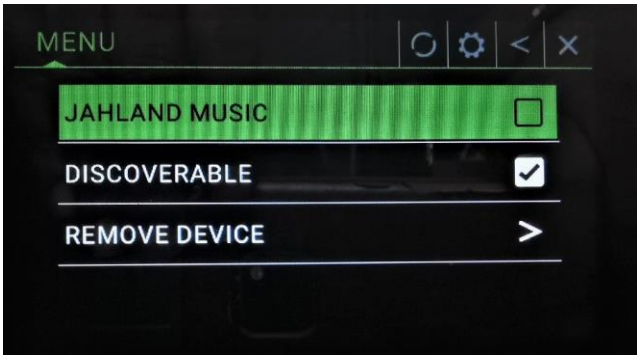
Source menu

Connecting to Bluetooth

1. Select BT (Bluetooth) from the source menu.

2. Select menu to open the Bluetooth menu/settings.

3. Select discoverable to make the stereo visible to your compatible Bluetooth device.



4. Enable Bluetooth on your compatible device.
5. On your device search for Bluetooth devices.
6. Select Time Bandit from your list of Bluetooth devices.
7. Follow the onscreen instructions on your device to pair and connect.

When pairing, your compatible Bluetooth device might ask you to confirm a code on the stereo. The stereo does not display code, but it does connect correctly when you confirm the message on your Bluetooth device.

10. Batteries

Keeping your house batteries charged is essential to ensuring your 12volt systems will work. Fridges, lights, fans, stereos, and Navigation instruments are some of the most important ones and of course using them draws power from your house batteries. If you conserve energy, you will not need to charge as often. If something is not being used, then turn it off. We often explain that 12-volt power is like water; you need to replace what you use. You can recharge your batteries with the auxiliary engine(s) or your 110-volt battery charger when running the generator or on shore power.

Engines:
Motoring to a destination will automatically charge your batteries. When anchored or moored you can run your engine(s) in neutral at 1400 RPMs to charge your batteries.

If your batteries get to 12.2 volts, then it is time to recharge your batteries. At 12.2 volts it should take about 1.5 hours of charging to get them back to a good charge. It is important that you recharge the batteries completely every day. This may take 2 or 3 charges per day. But you can break this up into more charges for shorter periods of time. Once you think you have charged enough or you just want to go for a sail, turn off the charging system. Wait about 15 minutes and then check the voltage of your house battery. A fully charged battery should come to rest around 12.8 volts. If the batteries do not get to this level, then they need more charging. Please note that you will see elevated voltage readings when charging and just after charging. The latter is why you should wait 15 minutes before checking your voltage after charging.

Time Bandit house battery bank is isolated from the engine and generator start batteries. The batteries are located under the port aft cabin berth. They do not require any checks whilst on charter.

Charging with shore power and generator:

Using the 110volt charger via generator or shore power will charge your batteries; Just check that the battery charger is turned on as this is not completely automatic. And check that you see your house battery has an elevated charge level, 13 volts or more whilst charging.

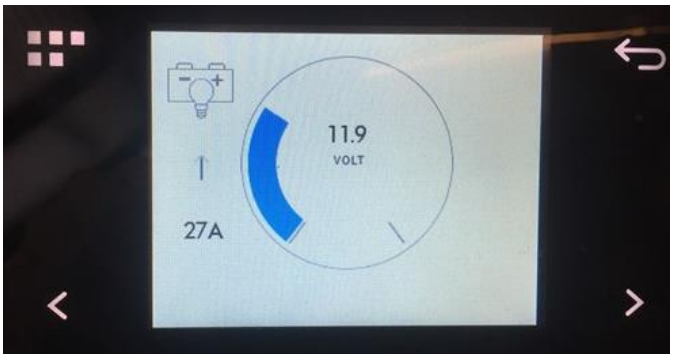
Generator not charging batteries:

- Check battery charger breakers are in the on position.
- Check transfer switches. Ensure transfer switches are turned to generator and not shore power.

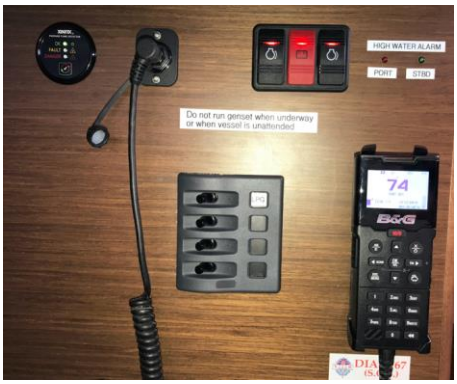
Not Receiving Power from Shore:

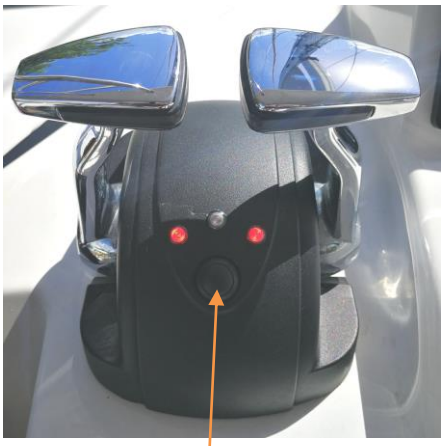
- Check the cable is plugged in all the way, you should be able to twist the cable clockwise on both ends.
- Check transfer switches. Ensure transfer switches are turned to Shore Power and not Generator.
- If you are still not receiving power from shore, move the shore cable to another pedestal and ensure the breakers on the pedestal are in the on position.

Battery Voltmeter by nav desk



Battery Switches below nav desk





Hold to disengage transmission.

11. Anchoring & the windlass

Setting your anchor:

Preparation:

- Establish a nonverbal communication system between helmsperson and windlass operator, as with the noise of the engine and wind, verbal communication proves difficult.
- Shorten the painter so that it cannot go under the yacht and wrap around the prop.

Location:

- Choose a clear area to anchor in and you can see the bottom. A white bottom is sand and perfect for anchoring. A brown or green bottom will be grass, rock, or coral. Only anchor in sand. The maximum depth would be 1/5 of your anchor rode. Remember the depth is set from the bottom of your keel so keel draft should be added to the reading of your depth gauge.
- Anchoring on a lee shore is not recommended and would recommend using both your primary and secondary anchor if you choose to anchor off a lee shore. (See below)

Action:

- Always have your engine revs increased to @ 1400 rpms before windlass operator touches the windlass remote. The windlass needs optimum energy to operate correctly.
- Minimum scope is 5:1. In heavy weather you may want to increase that, always ensuring your swing area is clear of any obstacles.
- Use the elements; approach from downwind or current, whichever prevails.
- Have the anchor ready to deploy. This may require you to slack the chain and manually push the anchor slightly overboard so that it will go deploy when you press down on the remote.
- Once the yacht is stationary use the electric windlass to drop the anchor to the sea floor. The elements will push you back and away from the anchor. Keep deploying chain until you have acquired the correct scope. Attach the snubbing line.
- Always attach the snubbing line before setting the anchor with the engine and whilst you are anchored. 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. You may need to hold slight tension on the snubbing line as you deploy more chain until the snubber takes the load of the anchorage. Engage reverse, slowly building up to 1500 rpm to really drive your anchor into the sand. Take transits as you set the anchor so that you know that the anchor is not dragging.
- It is always advisable to snorkel the anchor and ensure it is bedded in correctly and not just lying on its side or hooked on a rock.

Retrieving Primary Anchor:

Never use the windlass to pull the yacht to the anchor. The windlass operator should point in the direction of the anchor chain so that the helmsman can move slowly in that direction. As soon as there is some slack on the anchor chain the bowman tells the helmsman to put the engine in neutral and then increase RPMs. Bowman then retrieves all the slack chain. When the chain becomes taut then you repeat the process from the beginning. Ensure the anchor does not swing into the bow of the yacht.

Manual operation of the windlass

If you lose power to your windlass, start the engine and fast idle the engine at 1400rpms **in neutral**, to make sure you have enough battery voltage. Then make sure the windlass breaker has not tripped in the port aft cabin. If you still have no power, you can operate the windlass manually.

To drop the anchor, secure the windlass handle onto the centre hole on the side of the windlass (shown in the picture above).

Turn it counterclockwise to loosen the gypsy. Your anchor is now ready to drop.

Remove the safety line or safety pin to release the anchor, keeping hands and feet clear. Control the rate the chain pays out by tightening or loosening the gypsy with the handle. When you have put out enough chain – 5 to 8 times the water depth, turn the handle clockwise to tighten the gypsy. Increase revs to 1500 rpm, to set the anchor in reverse. If you drag, pay out more chain, and re-try 1500 rpm in reverse. When the anchor is set, fit the anchor bridle then release the more chain on the gypsy as above, so that the load is taken up on the bridle.

Windlass breaker in stbd bow locker

Electric Winches

There are X3 winches located at the flybridge, the winches can be operated manually or electrically. **Extreme care should be taken if using the winch electrically as accidental damage or injury can easily occur.**

Operating switches for single speed winches

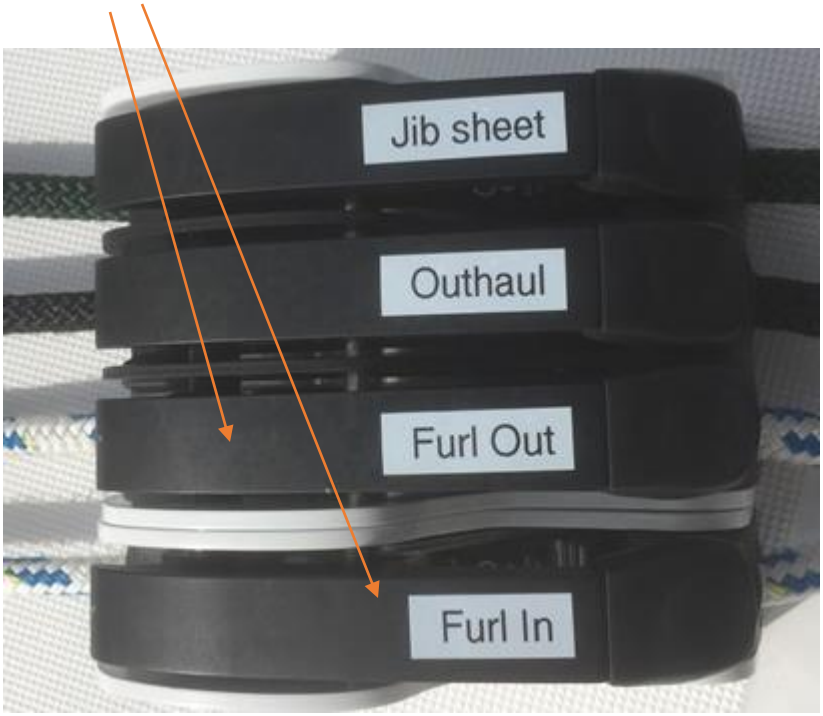
12. In-Mast furling mainsail

Unfurling the mainsail:

1. Ensure the lever on the reefing winch at the mast is in the free position.
2. Open the line clutches "Furl In" and "Furl Out". This is the endless line that goes around the winch at the mast. Take the "Furl out" side of the line and put one wrap around the winch. This will enable you to control the speed of pulling out the sail in breeze.
3. Check the outhaul clutch is closed.
4. Ensure the yacht is pointed into the wind and the boom is horizontal/perpendicular to the mast.
5. Open your mainsheet clutch and ease the mainsheet a foot or two.
6. Pull on the "Outhaul" whilst you ease the "Furl Out" line, always keeping an eye on the mainsail coming out of the slot in the mast and keeping tension on the "Furl Out" line *(the line can hop off the winch if this is not done)*. It is recommended you unfurl the sail by hand and not with an electric winch to reduce damage to the sail if something goes wrong.
7. When unfurling the main all the way, do not tension the outhaul so that the clew goes beyond the black marker near the end of the boom.

Do not open any clutch labeled "Do not touch" as it is the halyard. Releasing the halyard will make it difficult to furl and unfurl the sail.

"Furl in" and "Furl out" line clutches. *This is an endless line that runs through both clutches.*



Reefing winch lever. ***In the rachet position the sail can only go in the mast not out. This can be used to reef the main in heavy wind conditions.*** ***Release both clutches beforehand.***

Reefing winch. ***If the continuous line were to break this can be used to furl the sail back in. Just move the lever to rachet and use a winch handle to furl the sail.***

Furling or reefing line ***(endless line)***

Unfurling- Open the "Furl in" and "Furl out" clutches. Keep tension via X2 turns on the winch with the "Furl out" line.

Pull on the outhaul to unfurl mainsail always keeping an eye on the sail as it unfurls.

Black marker on boom, do not furl beyond this maker.

Reefing the mainsail:

Pull the main sail out as above. You can stop unfurling by pulling on both the "Furl In" and "Furl Out" simultaneously. This stops the winch which stops the sail.

1. Move the Lever to "Ratchet" position. This will keep the sail from coming out any further, but you can furl in, making it perfect for reefing and sailing in strong breeze.
2. To flatten the main in reefed position put the outhaul around the self-tailing winch, tension slightly then open the "Outhaul" clutch. You will then need to ease this as you reduce the sail size.
3. With both the "Furl In" and Furl Out" line clutches open start winching the furl in line while keeping tension on the "Furl Out" to keep the line in solid contact on the mast winch.
4. Once the desired sail area is achieved and achieved a good tension on the foot of the main, close the "Outhaul", "Furl In" and "Furl Out" clutches. Clear the winches needed for Mainsheets etc. and go have fun.

   If reefing in very strong winds, ensure the lever on the reefing winch is in the ratchet position. This way you have more control over the sail area.

Furling in the mainsail:

Turn the vessel slightly upwind and ease your mainsheet slightly so the boom is horizontal/perpendicular to the mast. Open the "Furl out" clutch for the endless looped line, pull on the "Furl In" line while keeping slight tension on the "Furl Out" so the line is securely turning the furling mast winch. Ease the "Outhaul" as you furl in the main. In higher breezes you may find it easier to put the winch in the "Ratchet" position so that it cannot mistakenly unfurl. Take note of the different color of the triangle of sail at the clew. Do Not furl this into the mast.

Troubleshooting:

Trouble unfurling the main:

1. Ensure that the lever on the reefing winch is on free and not rachet.
2. Pull on the Furl out and Outhaul at the same time. The Outhaul is pulling on the clew of the sail as the Furl out is turning the foil to let the sail out. If the sail is jamming as you pull it out, you will most likely see furled sail being pulled through the slot in the mast. If so, furl back in until the sail is no longer bulging out the slot. Pull on the "Furl out" first and the "Outhaul" second. Repeat this several times until you have 1/3 of the sail out and from there the sail should come out easier.

Furling line breaks while the sail is out:

1. Move the lever on the reefing winch to rachet.
2. Using a winch handle in the mast winch. Note this is a one speed winch. In the ratchet position it will only turn one way to enable you to furl the sail. Ease the outhaul as you furl in.

Never leave winch handle in reefing winch.

Furling line hops off the reefing winch:

1. Ensure the lever on reefing winch is in the free position.
2. This is just like putting a chain back on a bicycle.
3. Turn the winch with a winch handle to determine which way is better for you.
4. Using your thumb press part of the in between the winch drum and the body of the winch on either side of the winch. Turn the winch so that it is taking the line into that slot. You will need to continue to assist the line until it is completely back around the winch.

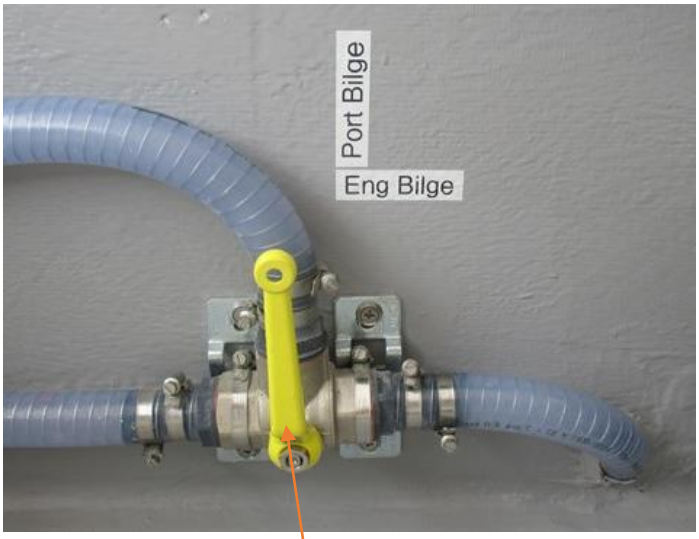
13. Picking up a mooring buoy

- 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 it in place to avoid the yacht sailing around the buoy.
- Next attach a second back up line to the mooring. Attach a line from the opposite bow cleat and if possible, attach it directly to the mooring buoy. 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**.

14. Bilge Pumps

Your yacht is equipped with a fully automatic bilge pump in each hull and in each engine compartment. A manual pump is in each of the cockpit lockers and diverter valves allow the pump to be used in either the hulls or engines compartments. Their use will be demonstrated to you during your brief. **The switches for these pumps are on the 12v panel and must be left in the 'Auto' position to function properly.**

Automatic bilge pump



Manual bilge pump diverter valve in cockpit lockers

15. Freshwater system

Time Bandit is equipped with two equal sized water tanks with a **total capacity of 160 gallons**.

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

To use the freshwater system, turn on the freshwater breaker on the 12v panel and open a faucet. When the tank runs out of water the pump will run at high speed and the faucet will start to cough air. If you hear the pump running continuously it is time to change over to the second tank. **The valves are in the stbd companionway locker. Note that both valves should remain in the open position. This allows the water maker to fill both tanks.**

Water tank valves

Water guage at nav desk

16. Watermaker

Time Bandit is equipped with a water maker unit from Rainman **which fills the Stbd water tank ONLY**. The unit is installed under the stbd fwd bunk The remote control, which is used to start and stop the unit, is in the fwd locker in the stbd fwd cabin.

IMPORTANT: The water maker will only function when the generator is running. Time Bandit has two 80-gallon freshwater tanks. The water maker will produce approximately 20 gallons of fresh water per hour. We recommend running the unit for two to three hours every other night when the generator is in use. You do not need to bring Time Bandit back with a full tank of fresh water as it is preferable to fill the water tank with shore water.

Using Control Panel

Salinity Sensor

The Rainman control panel has an integrated salinity sensor to indicate the water quality. It incorporates a salinity probe and related electronics to power a tri-colour LED to be green, yellow, or red.

Normal operating procedure is to have the product water three way valve set to “Divert” when you start your system. Pressurise the watermaker as per normal operating procedures. When the water quality LED turns

yellow or green, the product water has sufficiently low total dissolved solids (TDS) and the product water valve can be switched to “Tank”. At this point, product water is flowing into the vessel’s water tank.

LED colour:

- **Red** – High TDS – Consider not using the product water. It is expected that the LED will be red for at least a minute from when water is being made. This is to flush the stale product water or pickle solution out of the watermaker. If it stays red, there is a TDS issue to resolve. This may be related to worn RO membranes or a mechanical issue with your watermaker.
- **Yellow** – Medium TDS – Product water has slightly higher than normal TDS, but is within operating range. If the LED stays yellow for an extended period of time, there may be a minor mechanical issue or the RO membranes may be ageing. If this is due to the membranes ageing, consider changing them within the next year.
- **Green** – Good TDS – A normally operating system with young membranes and operating in seawater should reach green within two minutes of reaching full pressure. The system is operating within specification for water purification. It is not a comprehensive indicator that everything is perfect within your watermaker.
- **Off** – No TDS reading – Either extremely pure water is flowing through the system or no water at all is flowing. This may commonly indicate that the system has not been pressurised yet.

Tank Divert Valve

This three way valve controls the flow of product water. The system should always be started with the valve set to Test (Divert) when the water is being diverted overboard. After the water quality light changes from red to either green or yellow, the product water is sufficiently pure and the valve can be changed to send water to the vessel’s tank.

Fresh Water Flush Trigger

If the optional fresh water flush system is installed, the control panel adds some functionality. If the autoflush is not installed, the features described below sit without function.

The power switch on the control panel has more function than the simple on-off switch on the pressure supply unit (PSU). The switch itself is powered by 12-24VDC and it controls a relay located either in the PSU capacitor box or the compatibility kit.

ON – The PSU is powered and the motor will be running. At the same time, the autoflush timer box gets unpowered, so it is not possible for a flush cycle to initiate while making water.

OFF – The PSU is off and the autoflush is not enabled.

AUTOFLUSH – A flush cycle will be triggered and then the flush timer will be set for a seven day cycle.

The blue flush timer LED is effectively an extension of the blue LED in the flush timer box. It will not be illuminated during water making or when the system is off. When the control panel is switched to autoflush, the blue LED will be flashing to indicate the number of days remaining until the next flush cycle.

Low Pressure Gauge

This gauge is monitoring the pressure at the outlet of the prefilter. The actual reading of this gauge is not particularly important, so long as it reads at least 0.2 bar (2.5psi). This is the pressure required to feed the high pressure pump.

If the pressure drops below this level, it typically indicates one of three issues.

1. Prefilter is getting dirty and restricting flow.
2. Impeller is wearing and not providing sufficient pressure.
3. There is a blockage in the intake stream.

Watermaker and watermaker filters below starboard forward bunk.

17. Heads

Nothing is to be put down the head unless it has been digested first.

Blocked heads due to any other blockage other than mechanical failure are at your expense as per your charter contract. This includes the chase boat and the technicians fee.

Electric Heads:

- Before using it, ensure that there is enough water in the bowl.
- If the bowl is empty, hold the lower Flush Control Switch on Wet Bowl  position until the flushing pump is primed, and water enters the bowl.
- During use, pump as necessary to keep the contents of the bowl low enough for comfort.

- After use, hold the upper Flush Control Switch Flush/Rinse bowl  until the water in the bowl is clear (Flush for as long as possible so the waste travels all the way through the lines.
- When the water in the bowl is clear, hold the lower Flush Control Switch on the Dry Bowl side  until the bowl is empty. Always leave the bowl empty to minimize odor and spillage.

AFTER USE DRY BOWL (SHUT) () THE FLUSH CONTROL.

Holding Tanks

Each hull on Time Bandit has a fully operational holding tank which can be used by closing a valve on the waste seacock. The holding tank valves are behind the white access panel in each head/shower. These are located as shown below. Check that the holding tanks are empty before returning the vessel and please flush each one through to minimize residual odors.

Holding tank Discharge valve in each bilge.
Note the locking collar at the base of the handle which needs to be moved to turn the handle.

18. Showers

Your yacht has a hot & cold, fresh-water shower in each head and at the deck shower on the stbd transom. There is also an additional shower room in each hull.

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

To use the showers, the fresh-water pump must be activated on the 12V panel.

The head showers drain into a sump box which has an automatic float switch and pump, so the water will be pumped out automatically (ensure that the shower pump switch is selected on the 12V panel.

Shower sump box in each hull

Transom Shower

The valve on the left has two functions.

- By pushing the valve up or down you can turn on the water and adjust the water pressure.
- By turning the knob clockwise and counterclockwise you can change the temperature of the water. Be careful. The water can be very hot. Test before showering.

To use the shower head simply pull it out and press the lever 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 the stbd eng compartment) and that the water pressure valve is in the correct position.

19. Refrigeration

Time Bandit is fitted with a combined fridge / freezer unit, a separate freezer and a small fridge under the helm seat at the flybridge. All these are 12v systems. They are designed to run 24hrs a day if you wish. To ensure that they do 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 10 for charging instructions.
- Secondly, **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.

Each unit has an internal thermostat but no drain.

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 we cannot guarantee that items will remain frozen when placed in the fridge and that fruit, vegetables and other fresh produce may have a shortened shelf life.

20. Propane and stove

The propane tank locker is located under the stbd fwd cockpit seat.

To use:

- Press the 'LPG' switch below the nav desk.
- Push in and then turn the relevant stove knob 90 degrees anti-clockwise and light the burner with matches.
- Hold the knob in for 5-10 seconds, then release. Make sure that the flame goes all the way around. Reduce any wind that may hinder this.
- If you cannot get it to light, check the manual shut off on the propane tank.

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

Gas safety

All our yachts are fitted with propane detectors. On Time Bandit, the alarm and associated red light will be shown on the Xintex S-1 control shown above located under the nav desk. The propane 'sniffer' has been placed in the bilge (propane is heavier than air and so 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!!

If the alarm goes off, follow these steps:

- Press the lower button on the control panel.
- Close the valve on the propane tank.
- Check the stove and surrounding area for propane smell.
- If detected, open all 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.

21. 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.

Kuuma Propane Grill

Regulator

Propane canisters needed for Grill

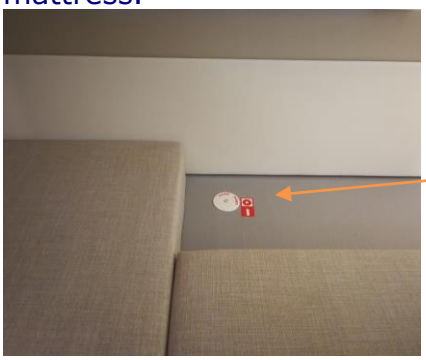
22. Fire Safety

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, automatic heat-operated fire extinguishers are installed in each compartment. There are also fire ports located under each aft cabin mattress.



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.
- 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 always protected 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 gone out and will not re-ignite.

23. Dinghy & Outboard

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

- Always tow your dinghy on a long line while motoring or 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 evening's 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 themselves and sample the local cocktails.

- 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 choking.

- 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 with a dinghy lock and cable. Always use them.**

- **Never take the dinghy onto a beach or anchor it off. If docking, always deploy the dinghy anchor from the stern 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 when in the dinghy.

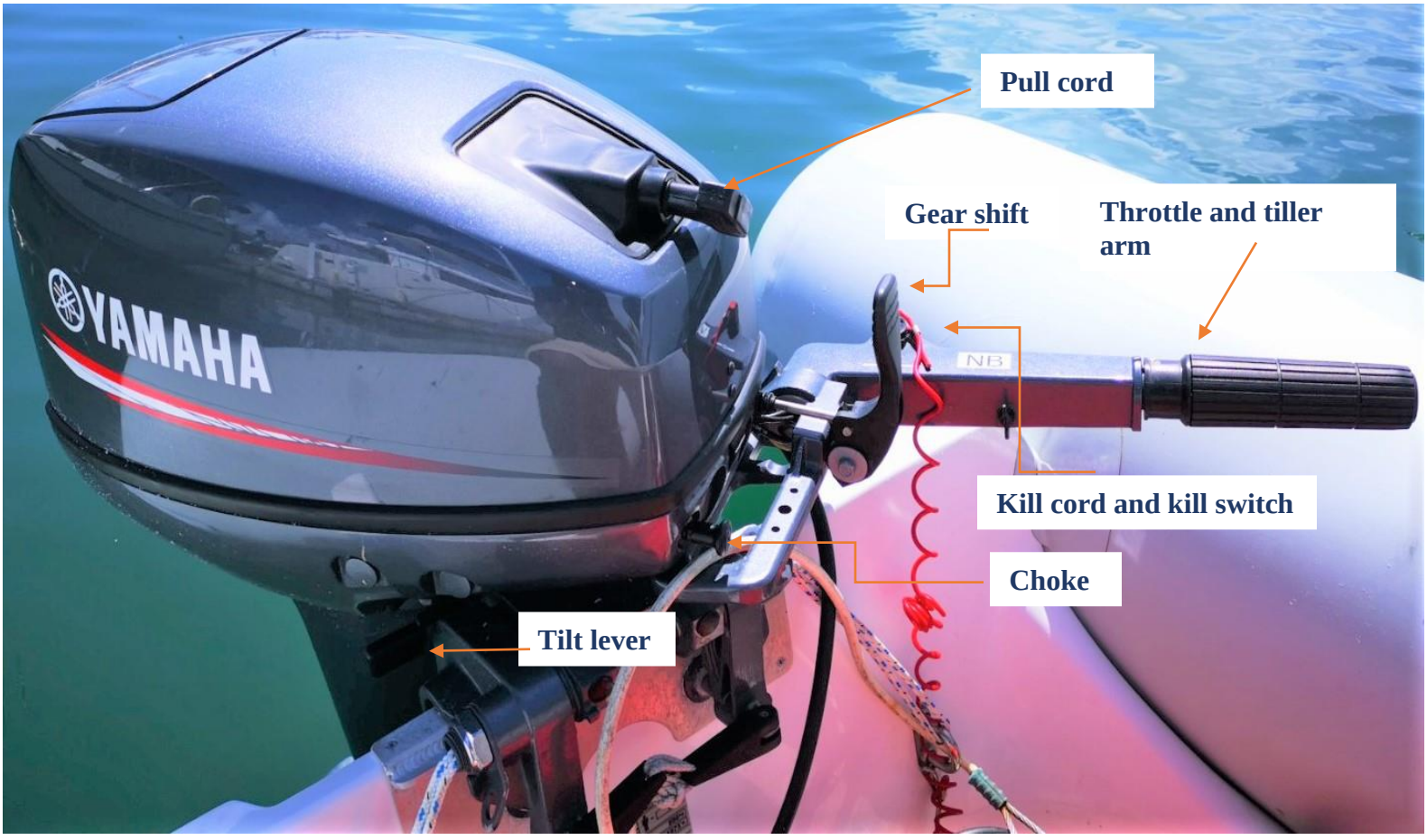
- GAS to OIL ratio

  1 US Gallon = 3 ounces (80ml)
  2 US Gallons = 6 ounces (160ml)
  3 US Gallons = 9 ounces (240ml)
  4 US Gallons = 12 ounces (320ml)
  5 US Gallons = 15 ounces (400ml)

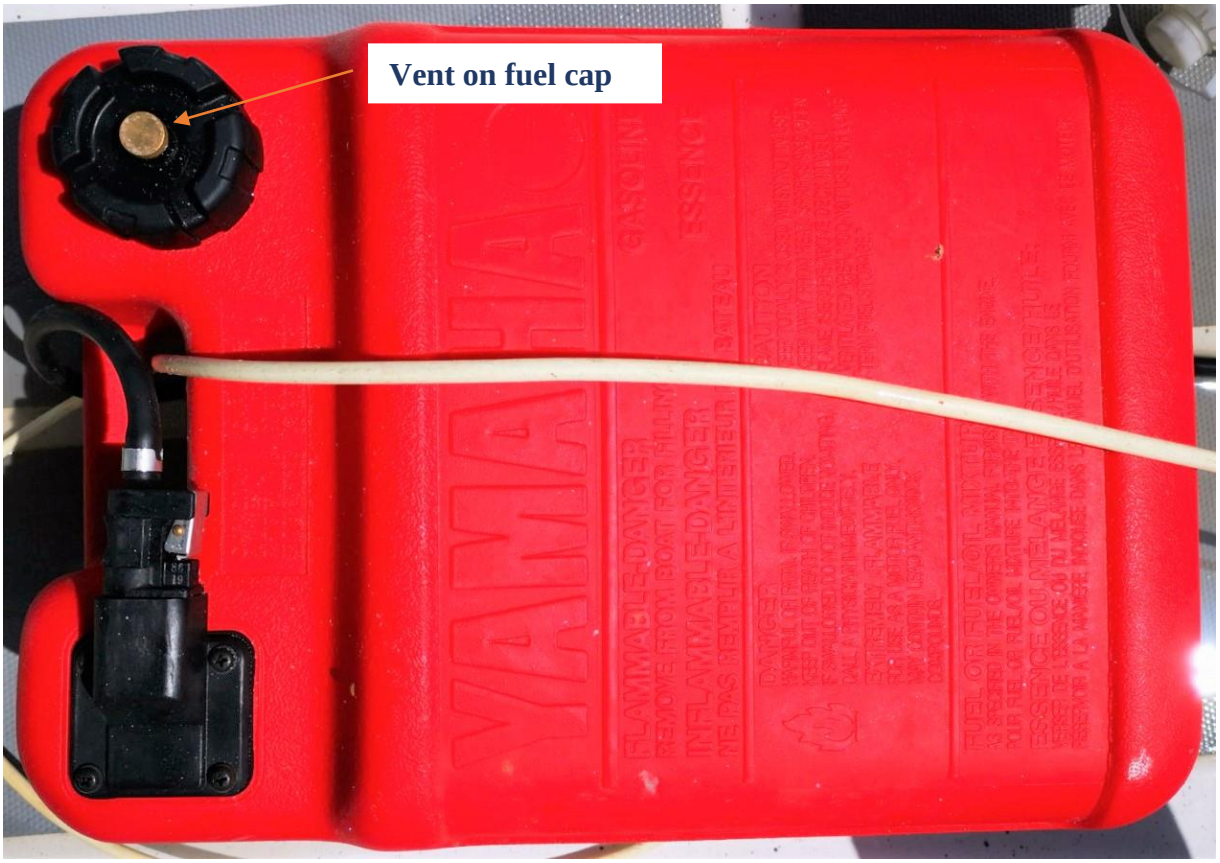
Outboard start procedure:

1. Place Kill cord under kill switch (Dinghy driver must always wear the kill cord).
2. Open vent on fuel tank cap (this vent can stay open, it allows air out but will not allow water to go in). **The fuel in the tank expands in this climate and if vent is left closed it can damage the tank and cause a fuel leak.**
3. Few pumps on fuel line bulb.
4. Make sure outboard is in neutral.
5. Add some revs using throttle on tiller handle.
6. Pull on start pull cord.
7. If the outboard does not start then pull choke and try again, as soon as the outboard start push choke back in.

Outboard



Fuel tank – INSTALLED IN BOW LOCKER



Dinghy Davit Lift:

- Refit the dinghy plug if it was removed to drain water from the dinghy while on the davits.
- Ensure the davit line is around a winch before opening the clutch to lower the dinghy.
- When lifting the dinghy, the davit line can go from the davits to the winch in the cockpit.
- Ensure the clutch is closed when lifting the dinghy.
- Secure the davit line so it cannot fall in the water.
- Secure both safety pelican hooks and a safety line to D-Ring at the stern of the dinghy.