



FRASER ISLAND
BOAT CHARTERS

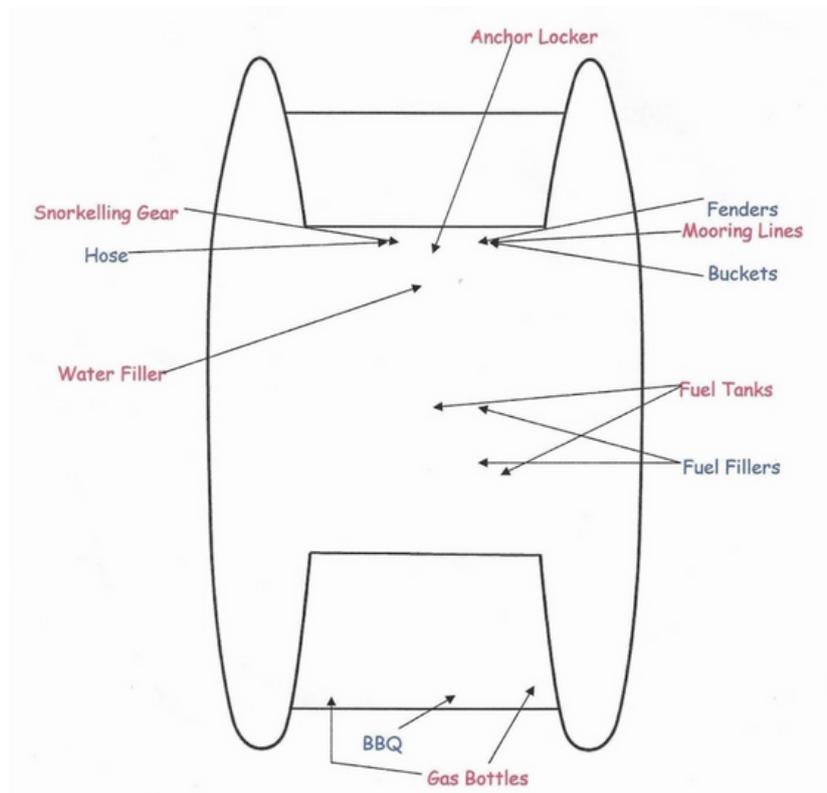
Technical Manual
Indigo



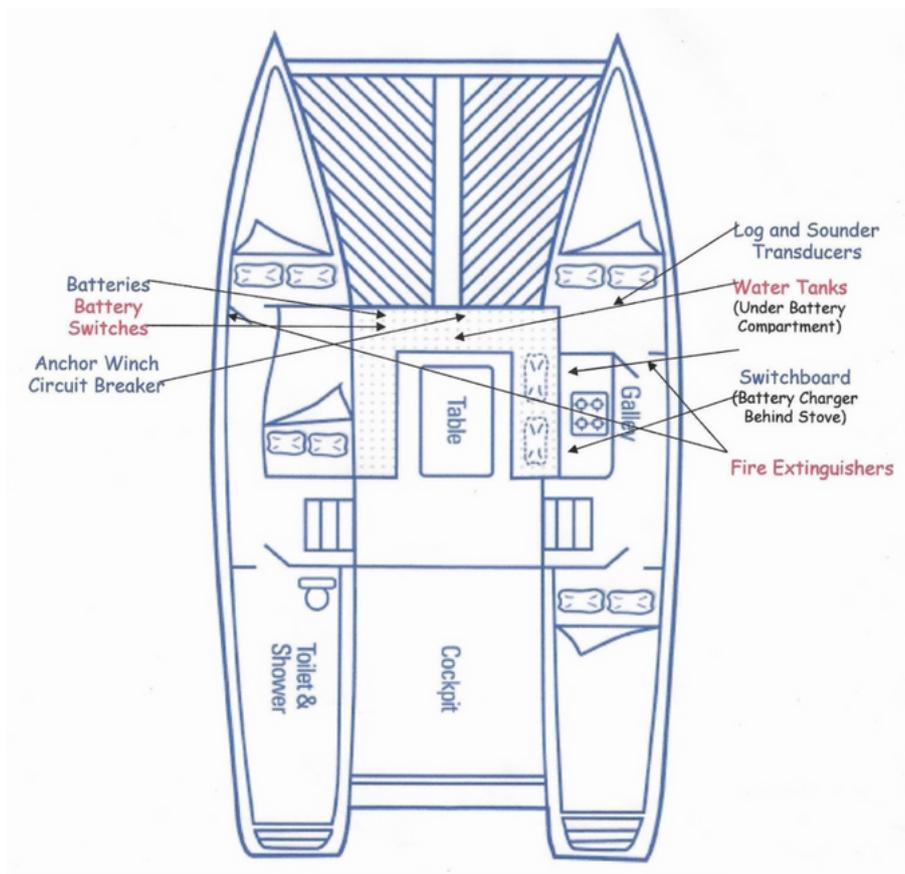
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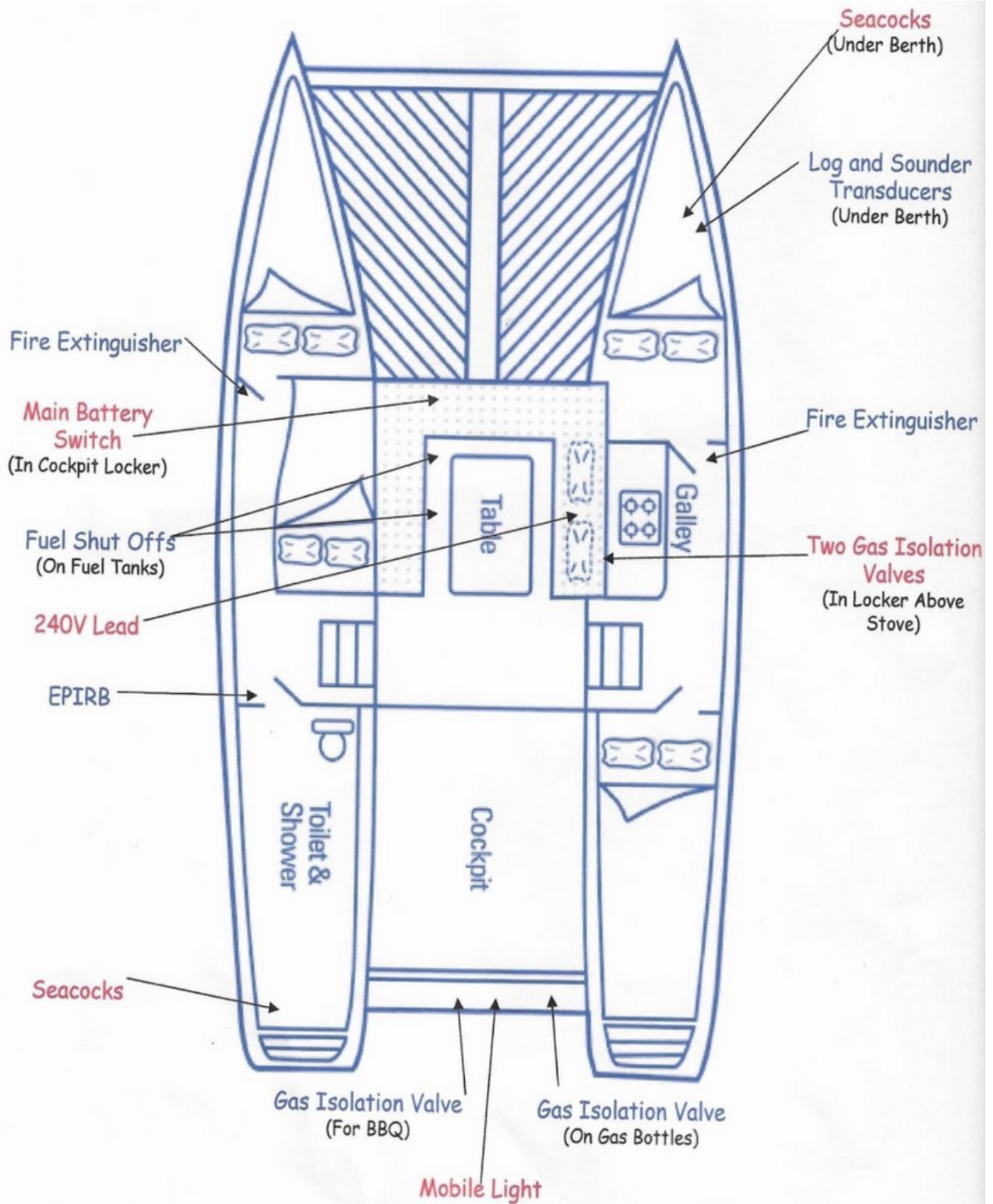
ABOVE DECK LAYOUT



BELOW DECK LAYOUT



SAFETY EQUIPMENT LOCATION



LIFEJACKETS

Indigo accommodates up to 14 persons and is equipped with 14 personal flotation devices (PFDs). These are located in the compartments under the seating in the main saloon.

LIFEBUOY

Indigo is equipped with 7 lifebuoys 1 with a light and buoyant lines. The lifebuoys are located on the guard rail at the stern of the yacht immediately behind the helmsman's position in the cockpit. This equipment is only to be used in emergency situations to assist with the recovery of a person from the water or help a person to remain afloat in any other emergency situation while awaiting assistance/recovery.

ELECTRICAL SYSTEM

Indigo has ample power with an easy to use 12 volt system with separate power supply for the house and engines. The batteries are situated in the forward lockers in the cockpit. These batteries are recharged by the solar panels.

Any power you use has to be replaced and you should monitor your house battery condition to ensure it is kept charged. Heavy power consumption will require you to replace the power used by running your engines for longer periods.

The battery switches should not be touched unless instructed to do so by base. A house battery monitor is fitted to assist you to manage the battery supply.

NOTE: If using the engines to charge the batteries, run above idle at about quarter revs.

BATTERY MONITOR

The Battery Monitor is situated on the display panel in the galley. It shows how much power is left in your house battery. It is recommend to run the engines if voltage gets below 12.5V. To check the battery voltage pressure the SEL button until the V is lite green. To see how much power is going in or out of the battery press the SEL button until AMP is lite green.

Any power you use has to be replaced and you should monitor your house battery condition to ensure it is kept charged. Heavy power consumption will require heavy power charging by either running the engines, reducing power consumption or plugging into shore power at the Great Sandy Straits Marina.

AM/FM RADIO AND CD PLAYER

To operate, ensure the stereo switch is on at the electrical panel label DC outlets/Stereo. The CD Player is not compatible for CDs in MP3 format.

VHF RADIO

Indigo is equipped with a GME VHF radio.

- To operate, turn circuit breaker on at panel labelled VHF
- Turn radio on, select channel, and adjust squelch to stop static.
- When talking to another vessel use channel 73
- Detailed instructions are on the Fraser Island Boat Charter's radio instruction sheet.

Indigo's radio has an emergency power supply. If your batteries are flat, on the outside of switchboard change the selector on the top right to EMERGENCY.

NAVIGATION INSTRUMENTS

Indigo is equipped with three instruments that give you boat speed, depth of water and wind speed and direction. Do not adjust these instruments as damage can occur to sensitive electronics if used incorrectly. Note: Never solely rely on the sounder when moving in shallow water or when anchoring. The depth reading on the sounder is depth under the keel.

ENGINES

Indigo is powered by twin Yamaha 9.9HP outboards and cruises at approximately 6 knots. Two 60 litre fuel tanks give a cruising range of 30 hours.

TO START ENGINES

- Select neutral with gear lever in central position.
- Pump fuel bulb in engine bay until firm.
- Pull the Choke lever out
- Turn the ignition key clockwise to on.
- Once the motor is running press the choke lever back in.

If the engine is not starting ensure the gear lever is in neutral as engine will not start if it is in gear.

TO STOP ENGINES

- Select Neutral.
- Turn the ignition key off.

TO ENGAGE GEARS

- Push forward to engage forward gear and pull back control to engage reverse.
- Always pause at neutral for a second when changing gears.
- To disengage gears for running motors at fast idle for battery charging – press the black button at the base of the gear lever in and move lever forward.
- Checking of oil in engines is necessary during your charter
- Please ensure you check the engine oil each morning before operating the motors
- Add oil if level is below ½ on the dipstick.
- It is a good idea to check there is adequate cooling water coming from the engine exhaust (tell-tale) after starting.

IF AN ENGINE ALARM SOUNDS OR A LOW OIL LIGHT GLOWS WHILE ENGINE IS STILL RUNNING

- Stop the engine.
- Call Fraser Island Boat Charters for advice and assistance.

ENGINE EXHAUST

Please be aware that engines do produce a carbon monoxide that can be harmful if not monitored correctly. To minimise risk, ensure that the engine hatches are closed at all times. Carbon Monoxide detectors are fitted throughout the vessel, if this is detected, ensure that all engines are turned off and aired out until carbon monoxide gas dissipates.

STEERING THE VESSEL

There are two steering helms on Indigo. The steering helm on the starboard side has engine controls and steering, this is the main steering position. The helm on the port side has only steering capabilities and is mainly to be used when sailing. When steering the vessel ensure you have a clear line of vision in the direction of travel and ensure that all window sun protection is removed when underway. If a clear line of vision is not met ensure a crew member is on the lookout at all times. Ensure you are using all modes of navigation at all times ie: GPS and vision and be aware of any obstacles.

WINDLASS (ANCHOR WINCH)

Indigo is fitted with an electric anchor winch, 60 metres of chain and a CQR type anchor. The winch raises the anchor when the UP foot switch is pressed. Always run the engines when using the winch.

The circuit breaker is located in the starboard forward cockpit locker adjacent to the batteries and should be in the ON position. If the winch is overloaded the circuit breaker will trip. Push the switch up to reset.

When approaching the area you are going to anchor, position the vessel so that its down wind of the anchorage and approach with the wind directly on the bow. Station a crew member on the bow to monitor that the anchor is going down correctly

The helmsman should take directions from the crew member when approaching the anchorage.

Remember to have the dinghy on the davits or alongside during this manoeuvre to ensure you do not run over the painter line.

TO LOWER THE ANCHOR

1. Select your location and check water depth and tidal movement. Stop the vessel with the bow into the wind.
2. Attempt to anchor in 7m to 10m of water where possible
3. Always put out 5 times the length of chain as the depth of water. Ie in 5m of water put out at least 25m of chain.
4. Releasing the safety rope on the anchor chain
5. Press the down button on the control at the helm
6. When the required length of chain and rope is released allow the vessel to lay into the wind while keeping the engines in neutral. Attached the bridle and let out a little bit more chain so the strain is on the bridle.
7. After about 10 minutes check to ensure your position is the same and the anchor is holding.
8. If the anchor doesn't hold let out a further 10 meters and try again.

ANCHOR DRAG ALARM

To Set Anchor Drag Alarm

1. Select settings > Alarms > Navigation > Anchor Drag.
2. Select Alarm to turn on Alarm.
3. Select Set Radius and select distance (keep at 50 Meters).
4. Select Back.
5. Make sure to turn anchor drag alarm off when leaving anchorage area

TO LIFT THE ANCHOR

1. Open anchor locker hatch and arrange the chain as it is retrieved to prevent it stacking up under the winch.
2. Motor very slowly forward, release the bridle and operate the foot switch to retrieve the anchor. Don't run over the chain and make sure the chain comes up vertically. Keep the skipper informed so the vessel moves ahead only as fast as the chain is retrieved.
3. The windlass is designed to lift the weight of the chain and anchor only. Do not overload it by pulling the boat forward.

CAUTION

- If the anchor is snagged in rocks or coral and you try to break it free don't let this load go through the winch. Use the bridle to secure the chain to the main bollard.
- **NEVER** engage the foot switch while the handle is in the gypsy clutch.
- Always leave the chain slightly loose and don't snub the anchor hard onto the roller to avoid overloading the windlass.

WARNING

When using a windlass, it is important to keep your fingers and toes well away from the teeth of the windlass and the chain as it passes over the bow roller, as accidentally trapping them could cause serious injury.

EMERGENCY MANUAL ANCHORING ONLY

TO RELEASE CHAIN

Carefully release the gypsy by turning it anti-clockwise with the winch handle.

As soon as the gypsy is free the chain will run out so do this slowly.

Do not touch the switches and keep your fingers away from the winch. If the gypsy does not release it might need a gentle tap to break it free. You could also manually pull the anchor forward and lower it into the water for a few metres.

- Check the chain markers to ensure you let out five times the depth of water in the chain (15 metres would be your maximum depth to allow safe and secure anchoring.)
- When the anchor is set, attached the bridle and let out the chain so it takes the load.

MOORING PROCEDURES

PUBLIC MOORINGS

When approaching a public mooring, position the vessel so that its down wind of the mooring and approach with the wind directly on the bow. Station a crew member on the bow to monitor and pick up the mooring rope.

The helmsman should take directions from the crew member when approaching the mooring buoy.

Remember to have the dinghy on the davits or alongside during this manoeuvre to ensure you do not run over the tow line.

REFRIGERATION, STOVE AND BBQ

REFRIGERATION

Indigo has a 12 volt electrical fridge, a freezer and a deck esky. To operate the fridge, ensure the switch in the cupboard next to the fridge is on. This switch should be left on at all times unless different instructions are issued by the team at Fraser Island Boat Charters. When the Green light is lit the compressor is running, when the orange light is lit the compressor is in standby mode which mean the fridge is at optimal temperature.

STOVE AND BBQ

Indigo has a gas stove with grill, a separate oven and a deck BBQ, all supplied from a gas bottle on the transom rail on the starboard side. As a safety precaution the gas supply should always be turned off at the bottle when not in use. There is a green selector valve to select the gas bottle you wish to use. If one is empty use the other.

To light the BBQ, turn on the gas bottle valve, turn on the inline valve and insert the igniter and flick. The valve opens fully as soon as it starts to turn. Turn it fully anti-clockwise for low heat.

Please do not scratch the Teflon plate or overheat it by setting BBQ at high without food on it.

OPERATING THE 2-BURNER GAS STOVE

TO LIGHT BURNERS

- Press the burner control knob in and turn. Light burner with the flint gun and hold in for 10 seconds after the burner is lit. If the burner goes out – repeat the procedure.

The lighting procedure for the oven is the same as above for the stove.

HOT WATER SERVICE

Indigo is supplied with a gas hot water service in the compartment behind the port aft bathroom.

1. Turn on the gas bottle.
2. Select the on position on the switch in the bathroom above the toilet labelled hot water to on
3. Turn the hot water tap on then back off again to engage the hot water system
4. Enjoy

LPG BOTTLE

The bottle has enough gas to easily last your charter and refilling it in mid charter is not necessary. A spare bottle is supplied on the transom.

FRESH WATER

Indigo has one 400 litre freshwater tank. There is one freshwater pump to operate the system. Please make sure the pump turns off when taps are off. Turn the WATER PUMP switch OFF at the main electrical panel at night. The deck filler cap is located just forward of the mast.

SHOWERS

Indigo has two showers, one in the port bathroom and a deck shower on the transom.

DECK SHOWER

To operate ensure the WATER PUMP switch is on at the switchboard. When finished – turn everything off again.

INTERNAL SHOWER

Before using the internal shower ensure the FRESH WATER PUMP switch is on at the switchboard. The shower water drains into a small sump in the floor which contains an electric pump. There is a silver pull switch located above the basin. To drain the shower water pull this switch during your shower.

TOILET AND HOLDING TANK

Indigo has an electric MACERATING toilet which is permanently connected to a holding tank. Toilet waste is treated by maceration when you flush it. It is then held in a holding tank and pumped out at the Hervey Bay Fuel Wharf.

When you are in the marina or marine park you must not discharge the toilet or holding tank into the ocean. To comply with government regulations the large valve located in the aft locker behind the toilet must always be closed to prevent waste from being discharged. This tank will be emptied at the marina discharge point.

Only human waste and toilet paper can be put in the toilet

The following **MUST MUST NOT** be placed in the toilet

- Sanitary pads, tampons or panty liners etc
- Baby wipes
- Washing cloths etc

TOILET

Only place things you have eaten and toilet paper in the toilet as everything else will block and the system and make the toilet unusable for the rest of your trip. Ensure all crew-members know how to use the toilet properly because a blocked toilet can spoil your holiday! **DO NOT** place the following in the toilet

- Wipes
- Paper towel
- Sanity items
- Rubbish etc

Do not place too much toilet paper in the toilet at once. Press the flush button if the toilet has excess toilet paper.

OPERATION

Press the press button once or until the toilet is empty.

If the toilet is blocked during charter as a result of misuse, there will be a \$500 charge to get the blockage cleaned out.

BILGE PUMPS

There are 3 manual pumps onboard Indigo. One in each aft cabin and one under the port bow locker seat. High level water alarms are located in each aft compartment. If these sound the water can be pumped out using the appropriate pump. Any other water can be removed by the cockpit pump using its long hose to reach the area required.

MANOEUVRING

When moving in or a confined anchorage at slow speed you will have to use your engines to steer.

Indigo will turn on its own length with one engine in forward and one in reverse.

When engaging reverse PAUSE before using revs so reverse lock engages properly.

Be careful you don't overload the steering when trying to turn in a small area. Use the engines instead.

Always ensure the tender is alongside and secured fore and aft when manoeuvring. Or if moving astern trail it from the bow. Or use davits if available.

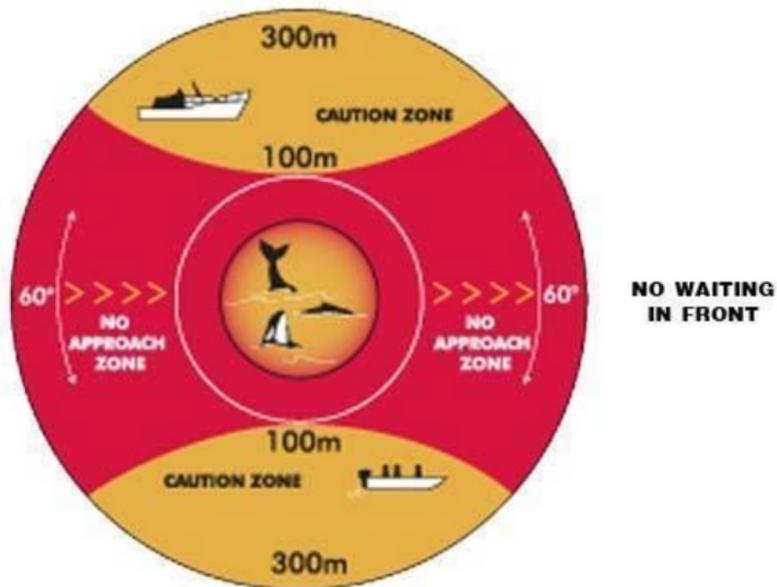
The best place to learn how your vessel manoeuvres is when you have plenty of space at an anchorage. Familiarise yourself there before entering an anchorage. Engage reverse and test the vessel's response when speed is below 2 to 3 knots.

BEST ENVIRONMENTAL PRACTICES

Best Environmental Practices are designed to complement, rather than duplicate, legal requirements and detail environmentally responsible behaviour.

When boating around whales and dolphins

- Post a lookout to keep an eye out for whales if they are suspected in the vicinity. (Ensure a adult is on lookout at all times from July to November)
- Use radio communications to manage vessel numbers around the whale, if there are other vessels nearby. Only 3 vessels can be around 1 pod of whales at any time.
- Be respectful to commercial vessel as they only have limited amount of time to see them. Enjoy from 300m while other boats are in the area
- Do not approach or disturb mothers and calves - never place a boat between them.
- Always move in a parallel direction to the whale or dolphin.
- Do not use engine sound or speed to attempt to influence the behaviour of a whale.
- When you're leaving an area where whales were present, turn the motor on, post a lookout, and move off slowly. Slow down to minimise the risk of collision where whales have been sighted.
- If your boat accidentally strikes a whale, ensure that your passengers and vessel are safe, note your location and continue on your previous course - do not follow the whale.
- Report any boat strikes and reassure your passengers that the relevant authorities have been contacted to assist the whale.
- Report sick, injured, stranded or dead whales or dolphins to relevant authorities.



WHEN OPERATING A VESSEL

- A vessel must not approach closer than 100 metres of a whale, If your vessel is closer than 300 metres of a whale or it must be operated at a constant slow speed, if closer than 50 metres of a dolphin the vessel must not change course or speed suddenly
- If there are three vessels within 300 metres of a whale, all additional vessels must remain outside a 300 metres radius from the whale
- If a whale approaches close to your vessel, take all precautions to avoid a collision, either slow down and place the engines in neutral and let the animal pass

WHEN VIEWING WHALES AND DOLPHINS

- Appoint a look out to monitor the whale's behaviour and movements.
- Avoid making sudden noise, speed or direction changes.
- Be quiet when you are near a whale, within the 300 meter caution zone.
- Let the whale control the situation - do not try to round up or herd.
- Move away immediately if the whales suddenly change behaviour and appear agitated. Behaviours that indicate that boats should move away include: Bumping the vessel, Rapid changes in swimming direction or speed, Erratic behaviour, Escape behaviour such as prolonged deep dives and Tail slapping or swishing.
- Brief people on whale biology, ecology, behaviour and conservation in onboard interpretation programs.
- Brief people s on the rules of whale watching – explain reasons behind such regulations and to avoid flash photography.

SPECIAL INTEREST WHALES

White whales or albino humpback whales are subject to additional management protection with a Declaration of Animals of Special interest. The minimum approach distances for all albino whales in 2010 migration season is 500 metres. Aircraft are not to approach closer than 2000 feet or 600 meters of the white whales.

The maximum penalty for breaching the conditions of the Special Declaration is \$16,500.

SAILING

Indigo has a roller furling headsail and a slab reef mainsail. Always head into the wind when raising or lowering the mainsail.

Headsail When furling the headsail head off the wind to stop the sail from flogging on the rigging.

1. Release furling line at cockpit.
2. Pull sheet rope to unfurl sail.
3. Lock off furling rope if you want to reduce sail.
4. To furl sail away – slowly release tension on sheet rope and pull the smaller furling rope.
5. Lock off cleat when sail is fully rolled in.

Never use a winch on furling lines as damage to the forestay may result. Never release tension on mast headsail halyard which is secured with plastic ties. This is only released when removing the sail for maintenance. It is not necessary to reduce the headsail area until winds exceed 25 knots. Close hatches when sailing to avoid damage if a rope catches on hatch.

MAINSAIL

Indigo's mainsail should be reduced to the first reef point when winds reach a constant 15 knots and the second reef point at 20 knots on the wind instrument. Do not use the mainsail if the winds exceed 25 knots. In heavy weather conditions it is best to motor or motor/sail with a minimum amount of headsail.

TO RAISE THE MAINSAIL

1. Unzip the mainsail cover.
2. Move vessel slowly into the wind by using the motors.
3. Release the mainsail sheet rope in the cockpit.
4. Release the tension on the halyard on the mast and unclip it take care you don't let it go.
5. Attach the halyard to the mainsail.
6. Raise the mainsail by pulling the mainsail halyard by hand. Before using the winch make sure the sail is not jammed in the track or the top of the lazy jacks.

TO REEF THE MAINSAIL

1. Before raising the sail, hook the stainless steel rings at the end of the reefing tapes on to the hooks on the Boom.
2. Pull the reefing line at the back of the sail to tension the back of the sail, using the winch if necessary.

TO LOWER THE MAINSAIL

1. Steer vessel into the wind and release mainsheet. Release the halyard and control the drop of the mainsail. Most of the mainsail should fall into the cover and the rest can be gathered in by hand and placed neatly in the sail bag. Using the motor will assist you in steering into the wind.
2. Zip of the sail bag

TENDER AND OUTBOARD

Indigo has a Swift tender powered by a 6hp Johnson Outboard.

TO START MOTOR

- Lift motor slightly and release tilt lock peg on the rear starboard side of the motor and lower outboard into the water.
- Prime the squeeze bulb in fuel line if necessary until it is firm.
- To start ensure the choke is out
- Ensure gear lever is in the central or neutral position.
- Twist throttle handle 10 degrees to low throttle setting.
- Pull starter cord.
- To engage gears, move gear lever forward or back at low idle revs. (The propeller bush may fail if engaged at high revs.)
- Once the motor is running ensure to press the choke back in

To stop outboard press red button on the outboard throttle. Always have tender alongside for easy access when manoeuvring or anchoring. Have the tender behind the vessel at full length ONLY when underway.

Outboard - The Johnson outboard has a rubber bushed propeller which will shear if the propeller hits a rock or coral. You should therefore exercise due caution when operating in shallow water. It is best to stop the outboard, tilt it up and proceed with the paddles.

Tender - The inflatable is also a life raft for Indigo. It has three separate compartments, one in each side and one across the front, with air filler caps should they require refilling. The air pump is under the saloon seat. Do not over inflate. If the hulls are inflated with cold air at night they will expand in the heat of the day. If your tender deflates contact Base because further use will puncture the compartment and cause further damage.

CHARTER YACHT OPERATING AREA

Limits of the charter yacht operating area The charter yacht operating area is within the partially smooth waters and specified safe anchorages between the coastline off Inskip Point and the western coastline Rooneys Point to the Fairway Beacon to the Burrum River. The charter yacht operating area and geographical boundaries/limits of operation are defined in the chart on the last page of this manual. A laminated/ framed copy of the chart provided on each boat. It is the skipper's responsibility to ensure the operation of the charter yacht is at all times confined to the waters that fall within the boundaries/limits of operation. If uncertain of the charter yacht's position relative to these limits of operation make immediate radio contact with the base station to seek further clarification.

CHARTER YACHT OPERATIONS

The nominated skipper is to ensure the charter yacht is only navigated between sunrise and one hour before sunset. Mooring must be within a specified safe anchorage.

NOMINATED SKIPPERS AND PERSONS IN CHARGE

Nominated skippers and persons in charge of a vessel at any time must comply with State law regarding blood alcohol levels. (ie. less than .05%)

DIRECT RADIO COMMUNICATIONS WITH EMERGENCY RESPONSE AGENCIES

The nominated skipper may use the VHF radio to liaise directly with emergency response agencies in accordance with the emergency plans section of this manual.

The use of the radio in this way is confined to the following situations:

- the nature of the emergency warrants immediate communication with emergency response agencies to ensure the safety and well-being of those aboard.
- if circumstances allow it, the base station is also contacted to alert the company to the situation.

EMERGENCY POWER SUPPLY

Indigo is equipped with an emergency power installation capable of powering essential safety systems for a period of three hours. This includes the following:

- fire detection system
 - communications equipment
 - electronic navigational aids, navigation lights and sound signals
 - emergency lighting
 - submersible bilge pumps
- The emergency electrical installation is powered by a separate battery and a change-over switch is located at the electrical switchboard in the Galley

BOARDING LADDER

A stainless steel boarding ladder is installed at the stern of the charter yacht on the duckboard. The boarding ladder and duck board also allows entry and exit the water safely.