

OPERATION MANUAL

Blew By U



Welcome aboard!

We are happy you have chosen Blew By U for your vacation. We are sure you will enjoy cruising the lovely islands of the Pacific Northwest.

We trust this manual will help you become familiar with the boat. Please remember this is a non-smoking vessel. Always smoke outside. If you have questions about the boat or about places to visit, please do not hesitate to ask the AYC staff.

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Boat Operation

DAILY INSPECTION

Remember your “**WOBBS**” every morning: **W**ater (Coolant), **O**il, **B**ilges (Inspect and Pump-out), **B**elts and **S**ea Strainer.

Check the level of COOLANT in the expansion tank. It can be accessed through a small hatch in the Starboard aft cabin, behind the door. If the coolant level is close to the lower limit, add the pre-mixed Yanmar-brand coolant that should be under the berth in the Port aft cabin. Do not dilute! If the coolant level was below the lower limit, also check, and replenish as needed, the coolant in the tank mounted on top of the engine.

Check the level of OIL in each engine with the dipstick located on the Starboard side of the engine. A pair of etch marks on the dipstick indicates the proper oil range. Due to a bend in the dipstick tube, oil may not evenly coat one side of the dipstick. Use the evenly coated side to make your reading. Do not overfill! Make sure the dipstick is firmly put back in! Check the oil with a paper towel or a rag, never the dish towel!

Check the general condition of the BELTS, HOSES, and FUEL LINES. As you move around the engine. The front of the engine is accessed by lifting the companion way steps. Be careful as this hatch is very heavy. There is a rod for propping the hatch open on the Port side of the hatch.

Ensure the valve on the RAW WATER THRU-HULL is in the ‘open’ position (lever in-line with valve). The thru-hull is located between the front of the engine and the engine start battery.

Observe the glass of the RAW WATER STRAINER for debris. It can be accessed through the hatch in the Port aft cabin. The strainer is on a bulkhead aft of the engine. If necessary, close the seacock, open the strainer cover, clean the strainer, and reassemble. Be careful to seat the O ring properly or you will have a leak. REOPEN THE THRU-HULL!

Check the BILGE for excess water. Just forward of the center island, lift the small access panel and dust pan in the sole to access the bilge well and automatic bilge pump.

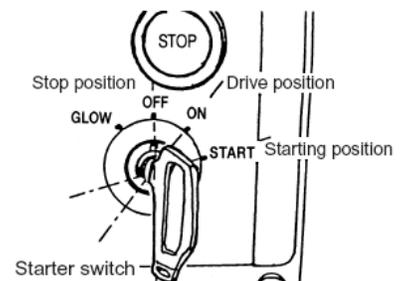
ENGINE

Blew By U has a 100 horsepower Yanmar diesel engine, which drives a three-bladed propeller through a reversible transmission. All engine controls and indicators are located outboard of the Starboard helm.

Starting

Set all the BATTERY SELECTOR SWITCHES to ON (vertical position). The switches are located in the Starboard aft cabin.

Place shift lever in neutral (straight up in center). Insert the engine key and turn to the ON position. Verify the oil and temperature alarms sound. If OK, turn the key to the START position. Release the key when the engine has started. Verify the alarms are now off, and then check over the Port stern quarter for water exiting with the exhaust.



Push **in** the NEUTRAL button on the throttle lever to keep the engine in neutral and advance the throttle to about 1000 RPM. Allow the engine to warm up for five minutes before putting under load (other than low speed maneuvering such as raising the anchor).

Do not crank the engine for more than 15 seconds at a time. If the engine does not start the first time, **wait** for about 15 seconds before trying again. If the air temperature is around freezing or below, turn the key to GLOW for 5 to 20 seconds before starting. Also, ask yourself why you are going sailing when it is freezing out.

Operation

Once the engine is warmed up, move the throttle to the straight up NEUTRAL position, the NEUTRAL button should pop back out. Then, move the throttle forward for forward motion, or back for reverse. When shifting between forward and reverse, always pause in neutral and allow the engine to slow to idle speed (less than 1000 rpm).

Normal cruising speed is 2700 to 2800 RPM. The engine will propel the vessel to 9 knots in calm water at 2800 RPM. For fuel economy, 2400 RPM is recommended.

Using higher throttle settings will produce very little increase in forward speed but will greatly increase fuel and oil consumption and the wear on the engine. For this reason, we ask that you limit the use of higher power settings to real emergency situations. Never operate over 3700 RPM.

Extended low speed operation such as for battery charging can also be hard on the engine as this leads to internal carbon built up. Therefore, when operating the engine at low speed for long periods of time, race the engine once every 2 hours as follows. Push in the NEUTRAL button on the throttle lever to hold the engine in neutral and vary the engine speed from high to low about 5 times.

This boat has a definite prop walk to Port in reverse with not much noticeable affect in forward. When in reverse, be careful to keep a firm grip on the wheel. And use only low RPM.

Shutdown

Prior to shutting down, be sure to race the engine. Then allow the engine to cool down for at least five minutes at low speed (1500 rpm or lower). Usually this is about the amount of time it takes to secure your lines and plug into shore power. Push the black engine stop button located just above the key. This cuts off the fuel supply to the engine. Alarms should sound until the key is switched off. Switch off the key after engine has completely stopped. **NEVER TURN THE KEY TO OFF WHILE THE ENGINE IS RUNNING!** You will do serious alternator damage. The key should always remain ON until the engine has stopped.

Emergency Fuel Shutoff valves are located on top of the fuel tanks under the berth in each aft cabin.

When sailing, leave the shifter in the NEUTRAL position per Yanmar's recommendation.

Getting Underway

To disconnect shore power, first turn off the four AC POWER CIRCUIT BREAKERS on the ELECTRICAL PANEL. Then, disconnect the shore receptacle on the dock, coil the cord and hang in Starboard cockpit locker (ship side end of cord does not disconnect). To reconnect shore power, carefully route the cord through the slot on the aft edge of the cockpit locker so that when closed the cord will not be pinched. Run the cord ashore and plug in, turn on shore breaker, and then turn on ship's four AC breakers. Watch for reverse polarity.

Close the PORTHOLES and DECK HATCHES. Assign one crew member to be in charge of securing ports and assign one to be in charge of the dinghy if towing. Shorten the towline on all close-quartering maneuvers. Once outside the marina, idle the engine while crew brings in fenders and lines. Fenders will need to be stored in multiple places. The best places include a) in the aft locker on the Starboard side of the swim step, b) under the hinged deck forward the step-through transom is attached to, c) tied to the stern railing, and d) in cockpit lockers.

Docking

Have your crew make ready the lines and fenders and give clear instructions on how you will be docking. Have bow, stern, and spring lines ready. With Blew By U's five feet of freeboard, it is a long step down to a low dock. Therefore, using the mesh boarding step is highly recommended. Usually, it is best to rig the mesh step between the shroud chainplate and the stanchion just forward. Crew can hold onto the shroud while on the step. Lead mooring lines to the step, so that crew members can easily get off and secure them. Remember that a mid ship line often works well to stop the boat without turning the bow into the dock.

Prior to docking, assign roles to all crew. Have your best communicator mid ships to give you distances from the dock. It is often hard to judge how close the dock is. Calling out distances (i.e. 20 feet, 10 feet, 4 feet etc.) will only add to a successful docking. Have one crew member with a loose fender assigned to "save the day" should the boat be just about to bump something. Another crew member with a boat hook can be useful, but will not be very effective if there is any speed on, due to the Blew By U's heavy displacement.

This boat has a definite prop walk to Port in reverse which can work to your advantage. If there is a wind, take into account that the bow will noticeably tend to fall off to downwind. If you find you are too far off the dock, **BACK OFF** and do it again. **THERE WILL BE NO HEROIC JUMPING OF CREW MEMBERS!** Disaster will hit if you loose someone overboard.

Fueling Up

You will need to fuel up before returning to your slip at the end of your charter. Before pumping, have an oil/fuel sorbs handy to soak up spilled fuel. You should have a rough idea of the number of gallons you will need by the engine hour indicator. Your vessel uses 1.5 gal/hr approximately. Each fuel tank holds 56 gallons of diesel fuel.

The fuel deck fills are located just forward of the transom with Tank #1 to Port and Tank #2 to Starboard. **CHECK THAT YOU HAVE THE CORRECT DECK OPENING! Use only DIESEL!** Do not add water or pump-out at the same time you are fueling. Your deck fitting key is located in the Navigation table.

Station one person below at the Nav station to read the fuel gauge. They will have to repeatedly press the multifunction selector to display the tank being filled. They should call out progress as the tank fills. Stop filling as soon as the gauge indicates FULL. **DO NOT OVERFILL.** Place the DIESEL nozzle into the tank opening, pump slowly and evenly, and note the sound of the fuel flow. Pumping too fast may not allow enough time for air to escape, which may result in spouting from the tank opening. As the tank fills, the sound will rise in pitch or gurgle. Pay attention to the TANK

OVERFLOW VENT on the outside of the hull opposite the tank opening. The sound may indicate that the tank is nearly full. When sound or the gauge indicate nearly full, proceed carefully, and be prepared to catch spilled fuel. Spillage may result in a nasty fine from law enforcement. Replace deck caps.

Caution -- Clean up splatter and spillage immediately for environmental and health reasons. Wash hands with soap and water thoroughly.

The control for switching fuel tanks is in the Starboard Aft cabin. Look for a chrome T-handle in a cubby hole to the right when you enter the cabin. With the T-handle down, Tank #1 is selected. Pulled up, Tank #2 is selected.

BOAT SYSTEMS

Electrical Systems

The electrical system is divided into two distribution systems: 110-volt AC and 12-volt DC.

The system is controlled from the located Navigations station, and the BATTERY SWITCHES on the forward edge of the berth in the Starboard Aft cabin.

A multifunction indicator located on DC (right) side of the ELECTRICAL PANEL is used to monitor the batteries, fuel tanks and freshwater tanks. Press the button adjacent to the symbol for the system you wish to check. Press the same button again to advance to the next item in the system, e.g. Tank #2. Normally, the system will default to showing the house battery voltage.

Most breakers are labeled by colored dots. Green signifies “usually on”. Red is “usually off”. Yellow signifies electronics or items to use cautiously. Blue is "leave on" while on shore power. No dots are breakers signify irregular use or use with discretion.



When not connected to shore power, batteries are providing all power. Therefore, turn off electrical devices that are not needed and monitor the use of onboard electricity carefully.

110-Volt AC System

SHORE POWER supports the water heater and receptacles on board, as well as the battery charger.

To connect to shore power, ensure that all four AC POWER CIRCUIT BREAKERS are OFF, then carefully route the SHORE POWER CORD through the slot on the aft edge of the Starboard cockpit locker so that when closed the cord will not be pinched. Run the cord ashore. Cords coming off the bow can be wrapped loosely around the bow line. Check the power rating/plug size of the nearest dock receptacle (that is 50, 30, 20, or 15 amp). If the receptacle is other than a 30 amp, add the appropriate CORD ADAPTER located at left knee while sitting at Nav table. Plug in the cord after adding any needed adaptor and turn ON the dockside breakers (some dock boxes require all service breakers to be ON although only one is used).

At the ELECTRICAL PANEL, check for reverse polarity. Turn ON the four AC CURCUIT BREAKERS or just those desired. If you are not getting power, a) check the circuit breakers on the dock and in the Starboard cockpit locker and b) RESET the Ground Fault Interrupter (GFI) located on the AC outlet in the galley.

12-volt DC System

House Battery Bank & Switch

Two battery banks support 12-volt DC power: Battery #1, the house battery, and Battery #2, the engine start battery.

The BATTERY SWITCHES are located in the Starboard Aft cabin. Normally, leave the SWITCHES in the VERTICAL position (battery ON). The WINDLASS CIRCUIT BREAKER is located to the right of the battery switches and should normally be OFF.

Your 12 volt panel shows all the systems supported by your batteries. Primarily you will be turning on the breakers for your navigation instruments and lights, water pressure, electronics, stove propane, etc. Interior lights are also powered from a circuit breaker on this panel but have individual switches at each fixture. A master switch for the main saloon lights is on the headliner by the companion way. This switch does not control lights in the cabins and heads. The BILGE PUMP should always be left on. The breaker for the STOVE propane should always be turned off after every use.

The HOUSE BATTERY BANK provides power for all DC systems. When disconnected from shore power, all 12-volt devices and 110-volt devices drain the house battery.

Batteries are charged by the engine ALTERNATOR while underway and by the BATTERY CHARGER when connected to shore power.

Battery systems will lose their charge while ANCHORED or MOORED. Avoid this by using power sparingly at anchor. Turn the refrigeration off at night. Use only one or two lights at a time. Turn off systems not in use such as instruments, VHF, stereo, etc. If you do not need the cabin heater, turn it off. If you stay moored for more than a day, run your engines just above idle to recharge your batteries. WATCH YOUR VOLTAGE!

Voltage (Wet Cell Battery)	Battery State
12.65 volts	100%
12.47 volts	75%
12.25 volts	50%
11.95 volts	25%
11.70 volts	0%

There are two 12 volt auxiliary plugs – one located on the electrical panel and the other on the front of the table in the cockpit. Both of these operate using battery power alone. The AC electrical outlets will not work under the DC battery system only when connected to shore power.

Note -- Do not change the position of the battery switches while the engines are running or the alternator diodes will be damaged. Change positions with the engines off.

SANITATION SYSTEM

Marine Toilet

It is important that every member of the crew be informed on the proper use of the MARINE TOILET. The valves, openings, and pumps are small and may clog easily. **If the toilet clogs, it is YOUR RESPONSIBILITY!** Always pump the head for a child so you can make sure nothing foreign is being flushed.

Caution – Never put paper towels, tampons, Kleenex, sanitary napkins, household toilet paper, food, etc into the marine toilet. Use only the special dissolving marine toilet tissue provided by AYC.

To use the toilet, move the PUMP LEVER to the ‘left’ (wet bowl). Lift the PUMP HANDLE 3 to 5 times to wet the bowl. After using the toilet, lift the PUMP HANDLE and pump to flush. Pump twenty times or more to flush sufficiently move effluent through the hoses to the holding tank; heavy effluent may clog hoses and contribute to odors. Then, move the PUMP LEVER to the ‘right’ (dry bowl). Pump to remove water from the bowl and prevent splashing while underway. Clean the toilet as necessary. When used for liquid waste, you may want to conserve holding tank capacity by reducing the flushing (but not less than six pumps) and skipping the pre-use bowl wetting.

Holding Tank Treatment is supplied and a small amount should be added to the toilet with each use. This will help breakdown waste and prevent odors. Should the toilet pump handle squeak or stick, it needs to be lubricated. Put a couple of squirts of the supplied ‘pump lube’ into the toilet. Pump the toilet dry slowly, to draw the lube into the pump unit.

The TOILET TRU-HULLS are located under the head sinks should you need to shut off the inlet water to the toilet.

Holding Tanks

Each stateroom’s head has a dedicated sanitation HOLDING TANK that holds approximately 20 gallons. Be aware of the rate of waste production (about 1 gallon per flush). With an overfilled tank, it is possible to break a hose, clog a vent, or burst the tank. The result will be indescribable catastrophe and an EXPENSIVE FIX to you. Empty the tank every other day to avoid this problem.

The HOLDING TANK is located behind the large wood access panel behind the toilet. The level may be checked with the “watermelon” test by thumping it or a visually with a flashlight (you may need cover portlight with a towel to completely darken the head).

The holding tank is emptied in one of two ways:

- 1) At the Marine Pump out Station, remove the WASTE CAP located on deck above each head. Double-check your deck fitting! Insert the pump-out nozzle into the waste opening. Turn on pump and open valve located on handle. When pumping is finished, close lever on handle and turn off pump. Remove from deck fitting and replace the cap.

If there is a fresh water hose on the dock, rinse each tank by adding 2 minutes of water into the tank. Then re-pump to leave the tank rinsed for the next charter. This also eliminates head odors.

2) While in Canadian waters, the tank's contents can be discharged overboard.

Each holding tank has an OVERBOARD THRU-HULL located under the sink in the head. Discharge is gravity fed, so just open the seacock for a minute or so to empty and reclose. The head in the crew quarters does not have a holding tank, so can legally be used only in Canadian waters.

WATER SYSTEMS

Fresh Water Tanks

The FRESH WATER tanks hold 246 gallons in three tanks. Observe the water level by checking the multifunction gauge on the ELECTRICAL PANEL. Be mindful of the amount of water you use while washing dishes and taking showers. Waste water from the sinks and showers drains overboard through various thru-hulls located under the sinks.

To refill the tank, remove the WATER CAPS located on the Starboard deck. The fill for Tank #1 is forward and Tanks #2 and #3 amidships (#2 is farthest aft). Attach the hose to the dock spigot and let run for a minute before inserting into deck fitting. Avoid flushing debris from the deck into the tank opening. DO NOT fill water and diesel at the same time!

Water tanks are selected by two red-handled valves under the galley sink. The valve to the upper right has settings labeled F and M. The valve to the lower left has settings labeled P and S. Set the valves as shown in the table to the right to select the desired tank.

For Tank	Valve Settings	
	Lower Left	Upper Right
1	P or S	F
2	P	M
3	S	M

Fresh Water Pressure Pump

The WATER PRESSURE PUMP is located under the galley sink. Activate pump at the DC panel by turning on the breaker. If the water pump continues to run, you are either out of water or might have an air lock and need to bleed the system by opening up a faucet. If you run out of water SHUT OFF YOUR HOT WATER HEATER on the AC panel. Serious damage can occur!

Hot Water Tank

The HOT WATER HEATER has a six gallon capacity tank and heats when connected to shore power or off the heat exchanger when the engine is running. To use in the AC mode, flip on the water heater circuit breaker on the AC electrical panel. Do not use the water heater if the water tank level is very low.

Showers

Before taking a SHOWER, make sure water pressure and shower sump breakers are on. To activate the hand-held wand, remove from counter top, turn on tap and press the button on top of the wand to

select the shower spray pattern. Take only very short “boat” showers (turning off water between soaping up and rinsing). To keep shower tidy wipe down the shower area and the floor outside if any water has seeped under the door. Check for accumulation of hair in the shower and sink drains. An additional FRESH WATER SHOWER is located in the cockpit adjacent to the swim platform. Ensure that the faucets and nozzle are completely off after use.

GALLEY

Propane Stove/Oven

The boat is equipped a low-pressure propane system for cooking.

Your propane stove is activated by the following steps:

- 1) Turn on the propane tank located in the propane locker above port side of the swim platform.
- 2) Turn on the DC breaker labeled STOVE to open the solenoid valve.
- 3) Turn on the gas at the stove (turn and press in knob) and light burner with match, lighter or spark. You might need to hold the knob in for a few seconds while the thermo coupler warms up.

When finished cooking turn off the switch and close the valve at the tank.

Refrigeration

The REFRIGERATOR is just aft of the stove and the FREEZER at the aft end of the center island. Both operate on 12-volt power. Monitor the use of the refrigerator when the engines are not charging the 12-volt battery system. There is a breaker on the DC panel that controls both units and a temperature control inside each unit. AYC will supplement you with 2 bags of ice. **The refrigeration needs to be turned OFF at night** when anchored or moored to prevent drainage of the battery. The freezer is designed for low power consumption so does not go to very low temperatures. You should not expect it keep ice cream or make ice. To drain water from the bottom of the refrigerator, press the switch near the bottom of the stove. Any water in the freezer drains into the bilge.

HEATING

Forced-Air Diesel Furnace (DC)

The FORCED-AIR FURNACE provides heat in the same way as a household furnace. Turn on and off with the TOGGLE SWITCH located just forward of the Nav station (visible from the settee). Should you ever open the house battery switch to turn off DC power on the boat, first turn off the furnace and allow several minutes for it to fully shutdown. Set the THERMOSTAT to the desired temperature with the up and down arrows. Lower the setting at night by pressing the ‘moon’ button. Return to normal by pressing the ‘sun’ button.

Check the furnace EXHAUST located on the Port side of the transom for any obstruction such as fenders or lines hung from the stern railing. Do not block this opening when operating the furnace. Heat will damage fiberglass or rubber. The furnace runs on fuel from diesel Tank #2. Do not operate the furnace if Tank #2 low on fuel as the furnace pump may suck air and have to be re-primed.

Space Heaters (AC)

A 120-volt SPACE HEATER is available for use when connected to shore power.

ELECTRONICS

All electronic manuals are located under the Navigation station seat. All Navigation instruments are turned on and off with the Nav Instruments switch.

VHF Radio

The VHF radio is located in the Nav station. Turn it on with the volume control knob. Monitor channel 16 at all times.

Depth Sounder

The depth sounder function is provided by a Raymarine ST60 Tridata system. Additional functions are boat speed and water temperature. The instrument is located at the Starboard helm. The sounder should provide reliable readings in shallow waters. If in doubt, switch it off, and then turn it back on to reset sounder. If your reading is blinking, it is a FALSE reading. False readings can occur in depths of more than 200 feet or in areas of strong currents or tides.

Global Positioning System (GPS) Chartplotter

A fixed mount Raymarine RC 435 GPS Chartplotter is on the aft side of the cockpit table. Ascertain that your breaker is on and then press and hold the red color POWER button to activate. Refer to the manual for more information.

GPS is considered a navigation aid. Do not rely on it. Compasses, charts, and dividers are the tools to plot position, course, and speed.

Autopilot

A Raymarine ST6001 Plus Autopilot is located at the Port helm. This system should be used with caution. Automatic course control makes it easier to sail a boat, but it is NOT a substitute for good seamanship. ALWAYS maintain a permanent watch by the helm. Also, the autopilot does not have wind information, so the watch must note any wind changes and may need to take action to avoid an accidental gybe.

ENTERTAINMENT

AM/FM Stereo Radio/CD Player

The VDO Dayton Radio/CD player is located at the Nav Station. It operates like a normal car radio. There are two speakers (stereo) in the salon and two more in the cockpit. FADE controls the distribution of the salon and cockpit speakers. BALANCE controls the sound distribution in the left and right speakers.

The CD player is behind the faceplate which hinged down and is accessed by pressing the button on the upper left corner.

This vessel is not equipped with a TV/DVD. Several interactive games are provided for light hearted socializing.

ANCHORING/MOORING

The primary WORKING ANCHOR is a 25 KG plow with 150 ft of chain and 250 ft of nylon rode passed through the deck from the ANCHOR LOCKER. A hatch in the foredeck provides access to the chain locker. Secure the hatch open by hooking the attached shock cord to the lifeline.

Before lowering or raising the anchor, start the engine and turn ON the WINDLASS CIRCUIT BREAKER in the Starboard aft cabin. The windlass is controlled by a handheld remote wired into the chain locker. Allow the windlass to stop fully when reversing directions (UP to DOWN or vice versa). When lowering the anchor, let out sufficient ANCHOR RODE (chain and nylon line) before setting the anchor. Marks are placed every 25 feet on the chain and nylon rode, count the marks as the rode is let out. Extra marks are placed just before the bitter end is reached. If the anchorage is crowded put down at least a 3 to 1 scope (60 feet for 20 feet of water), back the anchor in with a short burst from the engine. Then let out additional scope dependent upon conditions.

When raising anchor, motor forward gently. As the boat moves toward the anchor, the foredeck person should press the UP control to take up slack line, rather than pulling tight line. Once over the anchor, coordinate with the helmsperson to remain steady above the anchor as it is raised. Give the windlass short rests as you are pulling it up. The windlass uses a large amount of electrical power; so ALWAYS operate the windlass with the engine running and use a fast idle (1000 rpm) when not in gear for any extended time. As the anchor breaks the surface of the water, be careful not to allow it to swing against the hull. When the anchor shaft reaches the roller, if the plow head is not facing more aft than forward, stop the windlass, lower the anchor slightly, and try again. Several tries may be needed before the anchor comes up oriented 'right way around'.

When the anchor is up, turn OFF the WINDLASS CIRCUIT BREAKER. If the windlass will not operate electrically, refer to the manual as to how to operate by hand.

The SPARE ANCHOR is a 20 KG Danforth-style and normally stowed in the Port cockpit locker. A short chain is attached to the anchor and the 250 ft SPARE ANCHOR RODE in a red nylon bag is normally located in the same locker. Before use, attach one end of the rode securely to the chain shackle and the other to a cleat on the boat.

Mooring Cans

Blew By U exceeds the maximum length vessel allowed to use Washington State Park MOORING CANS. When visiting state parks, you should plan on anchoring out.

Should you use Mooring cans elsewhere, they usually have a metal triangle at the top upon which is a metal ring. The metal ring is attached to the chain which secures your boat. IT IS VERY HEAVY. The strongest member of your crew should be picked for this job.

Come up to the CAN into the wind as you would for anchoring. Have crew members on the bow, one with a boat hook and one with a mooring line secured like a bow line. As you are coming slowly up to the can have the crew holding the boat hook point at the can with the hook so the skipper always knows where it is. Hook the can and bring the ring up to the boat to allow the second crew to thread the ring with the line. Release the hold with the boat hook. If your mooring line is led out the starboard chock bring the end of the line back through the port side. You will essentially create a bridle with about 10 feet of slack from the chock to the can.

SAILS AND RIGGING

The main sail stows on the boom inside a Doyle Cradle Cover (StackPack) supported by lazy jacks. Fully open the zipper that runs the length of the boom before you get underway so the main will be ready to raise. When raising, go head to wind and watch to make sure that the battens are not being blown to one side and catching on the lazy jacks. If a batten does catch, lower slightly and try again. The lazy jacks should not need to be adjusted when the sail is raised or lowered.

There are three jiffy reefs with lines led to the cockpit. To put in a reef, first go head to wind, tighten the topping lift if loosened, and lower the sail as needed. Then, tighten both luff and clew reefing lines to hold both cringles for the desired reef at just above the boom. Finally, tighten the halyard and check the set of the sail. Should the third reef ever be required, crew will need to go forward and hook the luff cringle onto the hook on the boom.

When lowering the main sail, first go head to wind, tighten the topping lift if loosened, and lower the sail watching that it falls into the cradle cover. In shifting winds, crew may need to help flake the sail. Once secure for the day, use the boathook to snare the main halyard and secure it with the Velcro attached to the second lazy jack.

Blew By U has a 110% roller furling jib. The furling line is led to the port side of the cockpit. To unfurl the headsail, (a) uncleat the furling line, (b) wrap what will be the leeward sheet around the winch, and (c) pull the sheet in while maintaining slight tension on the furling line so that the line rolls onto the furling drum neatly. Reef the sail by stopping with the sail partially unfurled or take in on the furling line if the sail has been fully unfurled.

To furl the jib, apply slight tension on the jib sheet while pulling on the furling line until the sail is furled and the sheet wraps around it three times.

Jib sheets, reef lines, mainsheet, halyards, and soft boom vang are all operated from the cockpit. There is no solid boom vang, no whisker pole, and no spinnaker setup. With 1184 sq ft of total sail area, Blew By U can quickly become overpowered. It is important to reef early. Always consider reefing when first raising sail and later shaking it out if more power is needed. Also, note that wind strength varies greatly between and behind islands. So don't get caught by surprise.

Troubleshooting:

1. *Mainsail resists being raised.* Check all lines. All five reefing lines should be pulled loose and flopping. The boom vang should be loose. The battens should not be stuck on the lazy jacks. If they are, lower the sail and be sure to be head to wind on raising the sail again.
2. *Furling line gets stuck* partway through the furling process. This is usually due to not applying proper tension on lines in furling and unfurling process. Try letting the sail out and repeating the process. Be sure you are headed into the wind to reduce pressure on the rig. If this fails you could have an over-ride by turning the furling drum by hand.
3. *Unable to point with reef in place.* Probably have not snugged the reef line sufficiently. Repeat process and be sure lines are snug before raising the halyard.
4. *There are so many other problems – but that’s what being a sailor is all about!*

BARBECUE

The BARBECUE is attached to the starboard stern rail. Attach a PROPANE BOTTLE to the REGULATOR found in the Nav table, invert and then insert in the barbecue. Carefully light the unit, preferably with a long-stem butane lighter (works better than built-in igniter). The barbecue generates a lot of heat and cooks hot and fast. After use, please wipe off any grease with a paper towel to prevent grease and dirt soiling the boat..

Note: Propane bottles are not stocked by AYC. You will need to purchase one if extras are not found on board.

*Caution -- For safety reasons, do not store an opened propane bottle within the salon or engine compartment. Chances are these will leak slightly once opened and propane gas could settle into low spaces. **Store these bottles in the in the propane locker above the port side of the swim platform. Ensure gasoline and flammable materials are not near the barbecue.***

DINGHY

Your 11’ Aquapro aluminum bottom DINGHY has a rated capacity of 1386 pounds (motor, equipment, and six people). Underway, monitor your dinghy and adjust the length of the tow rope if needed. Assign one responsible individual to keep an eye on the tow rope whenever the Blew By U is being rapidly slowed down or maneuvered at slow speed. At slow speeds, take in all the slack in the line to prevent a wrap around the prop.

While the large inflatable tubes on this dinghy make it very stable, use EXTREME CAUTION when rowing or motoring to shore. Choose an area free of any large rocks that might cause harm in beaching. Lift up on the dinghy to bring it up to higher ground. NEVER drag it! Secure it when leaving as the tides come up very quickly. You may need to take with you, the small anchor and one of the extra lines that are in the cockpit lockers. A plastic crate is secured to the bottom of the dinghy. It contains an air pump, bailer and patch kit. Add a floating cushion (Type IV PFD) and the crate becomes a comfortable rowing seat. A hand pump located in one of the cockpit lockers can quickly remove any water that has collected in the bilge.

CRABBING/FISHING

A Stow-B-Low Crab Pod is stored in a cockpit locker in a long black bag along with a float and line. This revolutionary folding crab pot is quickly deployed by holding up of the deck by the top hub, unhooking the deployment rod, letting the shock cord guide the rod into the top hub, pressing down the rod firmly and sliding in the latch. Simply reverse to stow (after emptying and rinsing pot with the swim deck shower). Always check for tangles, etc. before deploying and stowing. Please review the instruction manual before using the first time. Zip ties are provided to secure your bait. Attach the 100' sinking line and floating float and remember to secure the float end of the line before lowering in case the water is actually deeper than the line is long!

AVOIDING AND DEALING WITH TROUBLE

SAFETY should be paramount in your daily cruising. A MAN OVERBOARD DRILL should be discussed and perhaps even practiced with a life jacket. Remember your lifejackets are stowed in the Port cockpit locker and below the sole next to the Nav station. A few should always be out and ready. Throwable floating cushions (Type IV PFD's) are stored in the Starboard cockpit locker. A horseshoe buoy and a Lifesling are located on the Port stern rail. The GPS Chartplotter has a MOB function. Press and hold the GOTO button for two seconds to activate and mark a position. Your flares and other safety equipment are located at the Nav station.

Blew By U is equipped with an AUTOMATIC BILGE PUMP. The control switch is located on the electrical panel. Normally, the switch will be left in the AUTO position. You may occasionally hear the pump operate due to condensation and seepage accumulating in the bilge.

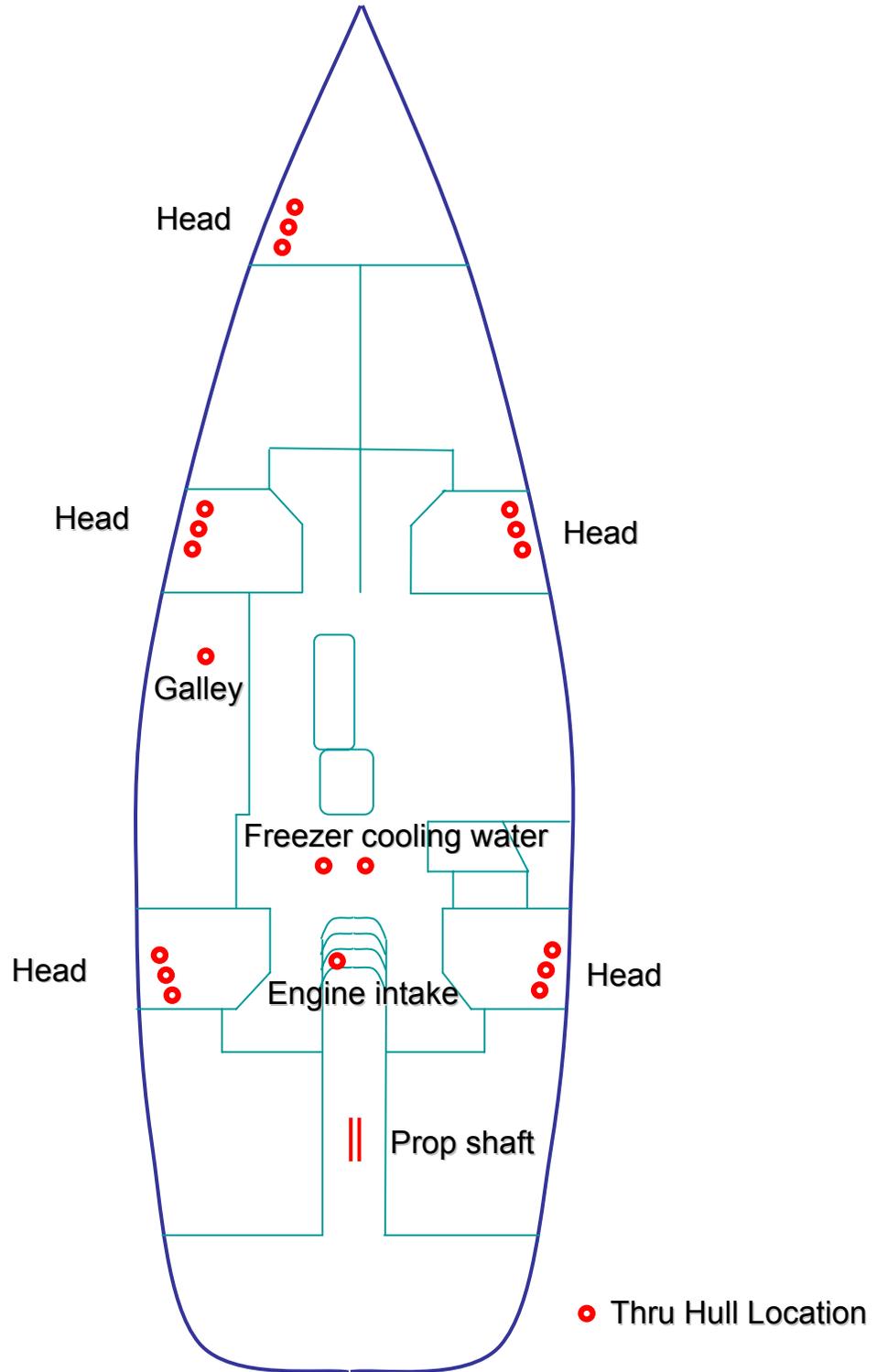
An AUXILIARY HAND-OPERATED BILGE PUMP is next to the Port helm. To use, pull up on the integrated handle to slide it out and then pump with side-to-side motion. This is used only in emergency situations.

An extensive tool kit is stowed under the Nav station seat. And SPARE PARTS and MAINTENANCE SUPPLIES are stowed under the berth in the Port aft cabin. An ENGINE SPARES box includes fuel filters, oil filter, raw water impeller and gasket, and other small parts. A SPARES box contains miscellaneous parts that may be of use. A spare propeller nut is included, but not a spare propeller. A tub contains fluids including engine oil, transmission fluid, engine coolant, and battery water. A DITTY BAG has needles, thread and sail tape. Miscellaneous supplies include WD-40, zip-ties and light lines. Also in the same area are a mask and snorkel, a spare TOILET pump assembly and a spare FRESHWATER PUMP. Hopefully, you won't need any of these, but they are there just in case.

For details on the various systems, please refer to manufacturer's manuals under the Nav stations seat.

May You Enjoy Fair Winds and Calm Seas

THRU-HULL LOCATIONS



APPENDIX

Quick Reference Cards

Raymarine ST6001 Plus Autopilot

Raymarine ST60 TriData

Raymarine RC435 Chartplotter

ST6001+ Control Unit Quick Reference Guide

Basic operation

Auto mode

Entering Auto mode (Engaging the autopilot)

Returning to standby (Disengaging the autopilot)

Making course changes

Course changes to port: -1 or -10

Course changes to starboard: +1 or +10

Course changes to starboard

Returning to previous locked heading

LAST HDG? 128°

1 sec

then auto to accept heading

Using AutoTack

AutoTack to port and AutoTack to starboard

Default AutoTack = 100'

Track mode

Entering Track mode (from Auto or Wind Vane mode)

to enter Track mode

then track to accept new heading

Exiting Track mode Press standby or auto

Wind Vane mode

Entering Wind Vane mode

and auto

Exiting Wind Vane mode Press standby or auto

Compass calibration

- Enter Seatriral Calibration**
- Complete the compass deviation correction**

COMPASS SWING OFF

TURN BOAT

Start turning boat (see below)

COMPASS SWING On

Autopilot heading ALIGN HDG 023°

DEVIATION 3°

Keep turning the boat until you see the DEVIATION screen

Turn boat in slow circles so:

 - boat's speed stays below 2 knots
 - each circle takes at least 2 minutes
 Minimum of 2 circles
- Align the autopilot heading**

a Coarse adjustment: if COG is available from GPS, press to set autopilot heading to COG value, then fine tune manually (see below).

b Fine adjustment: if COG is not available (or after setting heading to COG), align autopilot heading manually:

Adjust the autopilot heading so it shows the same value as the boat's steering compass

4 Save changes

To:

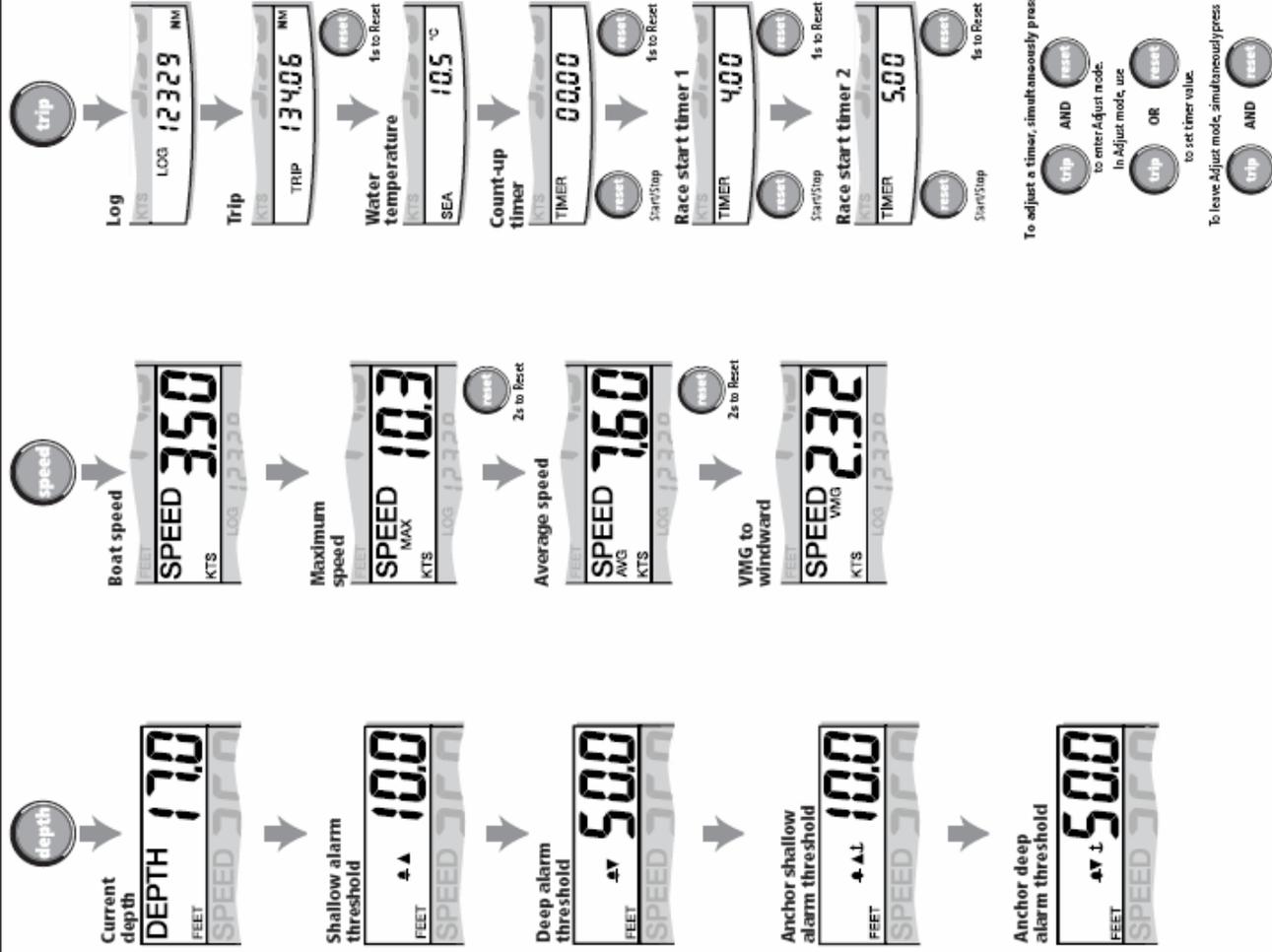
 - save deviation correction
 - save heading alignment
 - return to STANDBY mode

ST60 Setup & Operation Cue Card **TRIDATA**

Introduction

This cue card provides a quick reference guide to the operation and calibration features of the ST290 Tridata instrument. Unless stated otherwise, all key presses are momentary.

Operation



ST60 Setup & Operation Cue Card **TRIDATA**

Illumination

Enter Illumination Mode

●○○○ Hold down for 1 second

Adjust

●○○○ Press repeatedly to cycle through settings

Alarms

Switch On/Off

○○○● Hold down for 2 seconds

Enter & Exit Adjust Mode

○○○● Momentary while alarm value is displayed

Adjust

○○▲▼ ^ Increase value ▼ Decrease value

Calibration

User Calibration

- Depth
- Depth Units
- Depth Offset
- Shallow Alarm Lock
- Speed
- Speed Units
- Speed Resolution
- Log Units
- Speed Calibration (SOG or manual)
- Temperature Units
- Temperature Calibration
- Time Beep (On/Off)

User Calibration Mode

●○○○ 2 seconds

Intermediate Calibration

- Software Version
- Master/Repeater Selection (manual setting)
- Speed Calibration (auto)
- Dealer Calibration
- User Calibration (On/Off)
- Speed Response (Fast/Slow)
- Depth Response (Fast/Slow)
- Boatshow Mode (On/Off)
- Factory Defaults (On/Off)

Intermediate Calibration Mode

●○○○ 4 seconds

Exit Calibration Mode & Save Changes

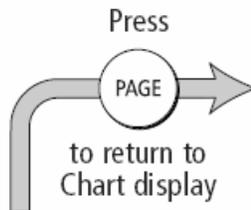
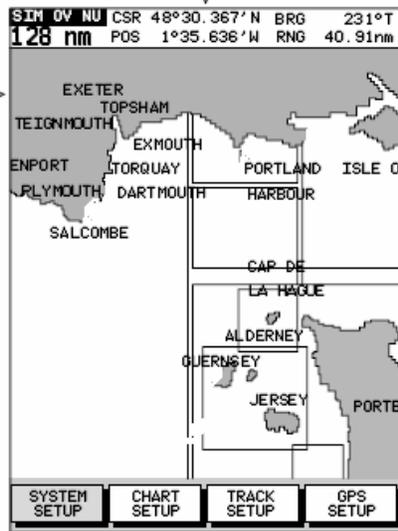
●○○○ 2 seconds

Dealer Calibration Mode

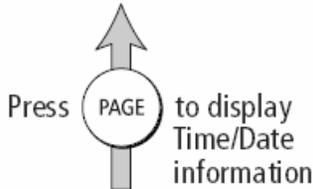
●○○○ then ○○○○ 12 seconds

Display Modes

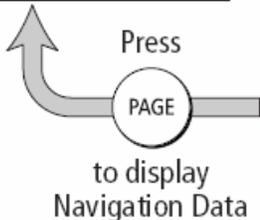
From Chart Display
Press PAGE to display Set Up functions



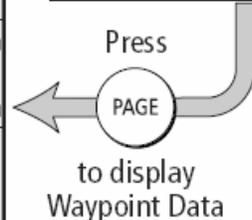
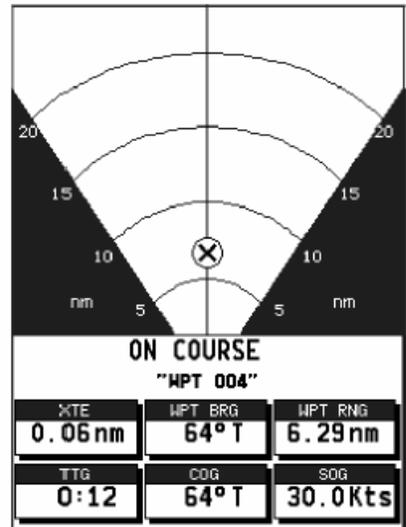
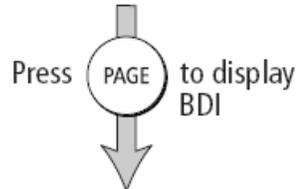
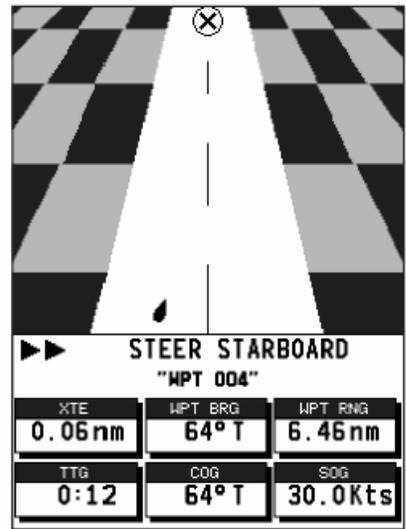
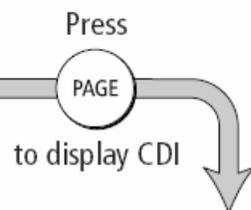
SUNRISE	5:05
SUNSET	21:14 TODAY
AT POSITION (VESSEL)	
50°46.349' N	
001°10.411' W	
TIME	2:18
DATE	13/ 7/99
ETA (WAYPOINT)	3:03 13/ 7/99
TTG (WAYPOINT)	0:44
ETA (ROUTE)	3:44 13/ 7/99
TTG (ROUTE)	1:25
STEER STARBOARD	
>	



POSITION	
50°46.338' N	
1°10.391' W	
COG 313° T	
SOG 5.0 Kts	
WAYPOINT "HILLHEAD"	
BRG 313° T	GPS FIX OK
RNG 3.74 nm	TIME 2:18 13/ 7/99
STEER STARBOARD	
>	



ROUTE	
"CURRENT"	
WAYPOINT 01	
"HILLHEAD"	
BRG 313° T	
RNG 3.76 nm	
COG 313° T	TIME 2:17 13/ 7/99
SOG 5.0 Kts	TTG 0:45
XTE 0.02 nm	ETA 3:03 13/ 7/99
STEER STARBOARD	
>	



Note: In any display mode, press GOTO to return to chart display

Chart Display

Chart Range

SIM OV NU CSR 48°30.367'N BRG 231°T
1 nm POS 1°35.636'W RNG 40.91nm

Status Bar

Tide Current

Port Services

Chart Boundary -

Indicates further detail is available inside. Shown when using Navionics® Nav-chart card.

Tide Height

Waypoint



Cursor

Vessel's Position



Buoy

Primary Function Bar

Press ENTER to display
 Press CLEAR to remove

FIND SHIP ROUTES WAYPOINTS MORE...

Waypoint List

Press **ENTER** to display Primary Function Bar

Select **WAYPOINTS**

Select **WAYPOINT LIST**

SIM OV NU CSR 48°30.367'N BRG 231°T
128 nm POS 1°35.636'W RNG 40.91nm

WAYPOINT LIST	
SYMBOL	NAME
	WPT 001
	WPT 002
	WPT 003
	WPT 004
	WPT 005
POSITION	50°21.966'N 001°20.368'W
BRG 186° T	RNG 21.0 nm
DATE 13/10/99	TIME 15:30

GOTO WAYPOINT EDIT WAYPOINT MAKE NEW WAYPOINT WPT/ROUTE TRANSFER

Route List

Press **ENTER** to display Primary Function Bar

Select **ROUTES**, then select **MORE** and press **ENTER**

Select **ROUTE LIST** and press **ENTER**

SIM OV NU CSR 48°30.367'N BRG 231°T
128 nm POS 1°35.636'W RNG 40.91nm

ROUTE LIST	
1	ROUTE 01
2	-
3	-
4	-
5	-

SHOW ROUTE ERASE ROUTE NAME ROUTE