



**NEW ENGLAND
SAILING CENTER**

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Seawind 40 DC al Coda
Operator's Manual

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1. Dinghy and Outboard

The Takacat dinghy is very light and surprisingly stable. When on the davits underway, it can make an annoying squeaking noise through wakes rubbing on the back bracket. This is generally ok for short distances, and the davits are sufficient with the motor on. For multi-day trips, I remove the motor from the dinghy, mount it on the motor mount starboard rear and lash the dinghy down to the back bench supports. The best way that I have found to lash down the dinghy is to run two lines from the D-rings on the Takacat to the back bench supports into two triangles. When I use the dinghy, I tie the two lashing lines together with a sheet bend and tie the line to the underside d-rings on the bow as a dock line.

- If the Takacat becomes soft, there is a 12 v air pump in the salon locker under the wooden bench table. With a bit of boat yoga, you can fill the dinghy on the davits:
 - Open the starboard helm window.
 - Using the round 12v plug inside the window, plug in the air pump; the cord is long enough to set the pump on the back bench.
 - There is a metal plate on the inside port rib of the Takacat listing the recommended air pressure for the ribs and the floor. Set the maximum pressure on the 12 v pump by pressing the up and down rubber buttons.
 - The appropriate nozzle should be on the air hose. Open the air inlet cover and lock in the hose by lining up the slot and twisting. If an excessive amount of air is released, remove the hose, and manipulate the center of the air valve in and out until it seems to snap in place when released, then reattach the hose. The valves tend to get stuck in the open position.

The E-Propulsion motor is light, quiet, and strong enough to push the dinghy up to three knots with five-six people. Operating time depends on speed, and an estimate is displayed on the handle display. For general use, the battery will last multiple days before it needs to be charged.

Charging the battery: the E-Propulsion Battery charger is 110v brick style with a round end with a blue ring. Charging time is usually under six hours. To remove the battery from the motor, disconnect the power cord on top, lift from the rear handle, and open the small blue latch in front of the power cord. To charge, attach the round blue-ended cord to the small round socket at the handle end of the battery. The red lightning bolt indicates charging. The blue lightning bolt indicates charging is complete.

Operating the motor: The battery clicks into the motor top. Attach the motor power cord to the larger socket on the battery. Place the blue magnetic key on top of the handle slot. Press the power button on the handle. The display will illuminate. Twist the handle and go. If the display is on and the motor does not operate, ensure the magnetic key has securely snapped in place.

2. Living on the boat

Electricity

DC al Coda has a 12-v 800 amp hours Lithium Ion battery pack, 1kw of solar power, and high output alternators on both engines. To the left of the navigation desk is a switch panel and Mastervolt display screen. An additional circuit breaker panel is under the salon bench before the navigation desk. The Mastervolt display screen provides the status of the 12-volt system:

- Battery capacity percentage
- Current drain on the house battery bank
- The output of the solar panels
- The output of the alternators

Negative amps and time left indicate battery bank usage.

Shore Power

DC al Coda needs a 30 amp 110/120 v service. The primary shore power cable is located in the locker under the starboard helm chair, along with an adapter. An additional extension cord is under the salon bench in the starboard corner. The shore power input socket is on the port side under the wheel. Plug both ends of the power cable in, turn on dock power, and switch on shore power at the electrical panel. The shore power meter should light up and move from 0 to 110v or above. You must also turn on the shore power charger/inverter switch.

Air Conditioning

DC al Coda's Air Conditioning unit can heat or cool the air on shore power or battery. The power switch for the A/C unit is at the Navigation Desk Panel. The 120v outlet switch also needs to be turned on. The A/C Control panel is under the cabinet in the galley above the freezer. The control panel is in centigrade: 23 C is 73.4 F. The unit has multiple operating modes. The most useful are Auto and Sleep (indicated by the 1/4 moon icon). Auto attempts to reach the desired temp most efficiently but can be loud. The sleep mode keeps the unit quiet and uses the least power. There are four air outputs: two in the salon and one in each forward cabin-- be sure to remove items that may be lying on top of the salon registers. The rear starboard cabin does not have an outlet. Leaving the door open and using the fan will generally equalize the temp in the rear cabin.

The A/C unit is the biggest consumer of electricity on the boat. Generally, I like to have the house battery at 80% or better to run the unit overnight. Depending on the outside temperature, you should be able to keep the interior temperature at 23 C from 10 pm - 8 am while consuming less than 50% of the battery capacity. Make sure you close up the boat while operating the unit. If you wake up in the morning and the house batteries are below 20%, run one of the engines until the batteries return to 40%. Charging to 40% should happen in less than an hour, and if you run the port engine, you get the side benefit of a hot shower. The solar panels will top off the batteries from 30% by dusk on a sunny day. If you run the A/C unit on shore power, ensure the inverter/charger switch is on; otherwise, the unit will drain the house battery.

Hot Water

There are two ways to make hot water on the boat: run the port side engine, or use shore power and the electric water heater. Running the engine for 30 minutes will heat the five-gal (maybe smaller) tank to temperature. The insulated hot water tank should keep the water hot overnight. So if you run the port engine navigating to the dock or anchor, you should have hot water in the morning.

Water Maker

The Spectra water maker uses very little power but makes only four gals of water per hour. The control panel is at the navigation desk. Tap the screen to illuminate. Depending on how the unit was left, hit start and then fill tank or menu, start, fill tank. The system is highly automated and will start filling the tank after a few minutes when the water is safe. To minimize the noise, close the port head door. The unit will automatically flush itself after you hit stop. The unit needs to run for about 20 minutes to make enough water to flush itself. If the display indicates the filters need to be replaced, the spares are in the locker behind the navigation desk on the upper left shelf.

Cooking

The galley has a propane stove, microwave oven, electric kettle, and toaster. The location of the primary propane tank is the port side transom. The propane system has three valves: at the tank, a solenoid shut-off valve in the galley located above the freezer, and the flame height valves on the stove. To use the stove, ensure the tank valve is open, the solenoid switch is on (indicated by red light) and turn the burner to flame setting while pressing down, depress the lightning bolt button for electric start. Continue pressing the knob for five seconds to ensure the blow-out safety system is warm enough for continued operation. Adjust burner temp as needed. For the oven, remove all the cookware to see the burner flame, open the oven valve above the door handle, and depress the lightning button for an electric start. Please be aware that there is no indication of oven temperature, and the oven seems to operate at one temperature

regardless of the valve setting. A grill lighter is in the drawer below the refrigerator if the electric start does not work. The microwave is modest in size and power. For most situations, use the longer directions timings. The electric kettle efficiently heats water at a variety of temperatures. The toaster makes two pieces of toast. The inverter will only support using one of the electrical appliances at a time. If you accidentally use more than one at a time, the 120v switch will trip. To reset, turn the switch back on.

Refrigerator and Freezer

The refrigerator on/off switch is on the navigation desk switch panel. The unit is very power efficient and can hold about two bags of groceries.

The freezer on/off switch is on the navigation desk switch panel. The unit is about the same capacity as the refrigerator.

Cooking Equipment

There are complete flatware, dishware, cups, and glasses for six. There are also serving bowls and plates, cooking knives, spatulas, spoons, measuring cups, pots, skillets, cutting boards, storage containers, etc. There should be a variety of dry herbs, salt and pepper, oils, sugar, coffee, and tea on board.

Coffee

An Aeropress with filters and French Press are on board. If you are unfamiliar with Aeropress, it makes a tasty cup of coffee for one in a few minutes. Open the filter cap, pull the plunger almost to the top, invert on the counter, measure one scoop of fine ground coffee into the cylinder, fill with 200-degree water halfway or more, insert a paper filter in the cap, wet filter, attach the cap to inverted base, agitate to mix coffee and water, wait a minute, place inverted mug on top of Aeropress, flip Aeropress and mug and press down on plunger. Take Aeropress to the trash can, open the filter cap, pop out coffee, and filter into the can. Add hot water to mug for desired strength.

Music

There are two JBL Extreme 3 Bluetooth speakers on board. To connect your device, press the Bluetooth button on top of the speaker and then join from your device. To link both speakers together, click the link button on both speakers. The speakers are waterproof. Two USB C chargers are in the locker under the salon end table.

Tri-fold Doors

One of the best features of the boat is the tri-fold cockpit doors. The doors stow in the cockpit roof for a large indoor/outdoor living area. The roof shades the cockpit and keeps the area dry under most conditions. To stow the doors:

- Open the port door until it is flat against the center door.
- Attach the port door to the center door using the elastic loop in the upper right corner.
- Open the starboard door from the inside until it is flat against the port door.
- Attach the starboard door to the port door using the elastic loop on the upper left.
- Open the door halyard block on the port side.
- Disconnect the metal door bracket from the ceiling.
- Bring the bracket and halyard to the base of the door.
- Wrap the other end of the door halyard around the electric winch.
- From inside the door, release the two bottom latches, and using your backside, press outward, attach the bracket, and use the electric winch to raise the door until it touches the ceiling gently.
- Pull down the metal bar to lock the door in place.
- Close door halyard block
- Clean up line

Preparing to leave

- Check the fuel level of both tanks
- Check engine oil
 - The dipstick will initially be clean, reinsert fully and pull out for level.
- Check Sail Drive oil
 - Behind the engines are the sail drives.
 - Unscrew the oil cap for level. (You may need pliers)
- Visually check the Dacor Fuel filter/water separator.
- Visually check the coolant level.
- The left locker behind the navigation desk contains spares, fluids, and tools.
- Open the main sail bag
- Attach the main halyard to the mainsail
 - check to ensure that the halyard is clear of the lazy jacks
 - check to ensure there are no twists in the halyard.
- Switch on instruments and accessories on the switch panel.
- Turn on the VHF radio
- Turn on the Chart Plotter.
- Close hatches
- Remove and store helm windows
- Turn on both engines.
- Center rudder, using the autopilot display or heading display.

4. Low-Speed Maneuvering

DC al Coda, like most catamarans, is very easy to maneuver at low speeds using both engines. If you are unfamiliar, the rudders lose control of the boat at low speeds below 2 knots. However, you can twist the boat in either direction using the engines, quickly spinning the boat in a tight circle by going forward on one engine and reverse on the other. Be careful to center the wheel when reversing by putting a foot or knee on the wheel. Occasionally when reversing, the rudders can go hard over and block one engine creating unpredictable behavior. If this happens, breathe, go to neutral on the throttles, center the wheel, and try again.

5. Sailing

Raising the sails

DC al Coda has a large mainsail and will round up without a foresail.

Raising the Main

- Find a clear area free of other boats
- Motor bow into the wind at 2 - 3 knots
- Open the mainsail halyard block
- Slack the main sheet
- Wrap the halyard around the electric winch
- Engage the autopilot heading hold
- Raise the mainsail and watch the leech, ensuring it is not caught in the lazy jacks or topping lift.
- When the mainsail is up, close the block.
- Ease the topping lift
- Snug main sheet
- Move to the starboard side to deploy the jib

Deploying the jib

- Unwrap the jib furling line from the starboard lifeline
- Open the jib furling block on the starboard toe rail.
- Wrap the jib sheet around a winch and pull out the sail.
- Snug the sheet.
- Return to the helm
- Put autopilot on standby
- Steer to your first tack.

- Trim sails appropriately

Trimming the Mainsail

The main sheet acts like a boomvang on a monohull; once you like the sail's shape, lock the sheet and use the traveler to position the sail. With the shrouds racked back, there is very little room to ease the main sheet without putting the sail on the shrouds.

Trimming the Jib

The jib is an ugly sail at any point of sail other than close hauled. Use the traveler to bring the jib to the center when close hauled. Play the traveler out until a beam reaches, then use the jib sheet.

Tacking and Jibing

Center the main traveler and come about; the self-tacking jib will follow.

Heaving To

A) There are locks on the jib track that will keep the jib on one side. With the jib locked, tack backing the jib, and the main traveler to the opposite side for a traditional heave to.

B) With the jib furled, bring the traveler to one side and lock the wheel in the opposite direction (this results in a controlled drift to leeward).

6. Anchoring

DC al Coda has 164 feet of chain marked in thirty feet increments: red, white, blue, red/white, and white/blue. There are up-and-down foot switches for the windless on the bow and an up/down above the port side helm.

Deploying the Anchor

- Approach the anchor spot from leeward.
- Open forward hatches to increase visibility and improve voice communication.
- If available, have someone at the bow and someone at the helm.
- Remove the bridle from the anchor chain and secure it away from the chain path.
- When in position, stop the boat, lower the anchor to depth
- Reverse while deploying out chain to 5 times the depth.
- Reverse at 1,500 rpm to set the anchor.
- The boat will hold in place when the anchor is set and move forward when the throttle is returned to neutral.
- Attach the bridle to the chain, and lower the chain until the bridle forms a triangle below or in front of the boat.
- Do a second test of the anchor by reversing at 2,000 rpm.
- Turn off engines, and enjoy your anchor beverage.

Raising the Anchor

- Turn on engines
- Open forward salon windows
- Use windlass to bring in chain and bridle.
- Remove bridle
- Have someone on the bow point to the chain.
- Use engines to creep up on the chain and create slack
- Operate windlass until the anchor is secure
- Be careful with the last couple of feet of chain.
- Ease the anchor onto the boat
- Secure the bridle on deck cleat or back on the anchor chain

7. Bowsprit

The bowsprit is the most challenging piece of equipment on the boat to use. Ideally, I would rig it at anchor or on a mooring ball. If underway, I would only consider using it with two experienced sailors on board. To deploy:

1. Stage the sail you want to rig (screecher or spinnaker).
2. Attach the halyard to the head, and attach tack to the bowsprit.
3. Unwrap the preventer line and push out the bowsprit. The preventer line should prevent the bowsprit from entering the water, but a rogue wave will take it straight down if you are underway.
4. Tug on the downhaul to make sure it is tight.
5. Haul the sail.

For the screecher, you can run the sheets through the Genoa tracks inside the shrouds or run the sheets outside the shrouds to the rear spring blocks. The furling line is a loop. A block on the furling line should be attached to the fitting on the port bow pulpit. The furling line is long enough to reach the port side helm station. The Genoa tracks will allow you to sail 50 degrees off the wind. Using the outside blocks optimizes for a broad reach but limits upwind to roughly 70 degrees. The boat is the happiest with the screecher. The screecher creates lift and reduces the boat's tendency to hobby horse with the jib or under power. The screecher is good to 18 knots. Furling the screecher in higher winds is very difficult. Furling and unfurling require controlling the furling line and the sheet. While straightforward, it is easier with two people. Pull on the sheet and ease out the furling line to unfurl the screecher. Furling is the opposite and slightly more complicated because you want to keep some drag on the sheet while pulling on the furling line to get a nice wrap. Having the sheet wrap around the screecher several times makes getting the sail back in the bag easier. The screecher is a flat triangular sail that is easy to trim.

Tacking or jibing the screecher requires furling.

The asymmetric spinnaker is in a sock. The most challenging part of rigging the spinnaker is running the sheets. Run the sheets outside the shrouds, above the lifelines, to the rear spring blocks. Review the sheets again after you have them rigged to ensure they are clear of each other and any rigging. Many long lines are involved, and it is easy to miss a potential problem. The dousing line for the spinnaker line is a loop. Put the loop on an end of the main cleat and pull on the line to release the sail. At the same time, someone else should be trimming the sheet in the cockpit. Tie the line off when done. Using the cleat makes it easier on your joints and easier to control the line from ripping out of your hands. Ease off the sheet and pull on the dousing line to douse the spinnaker. In higher winds, it may be necessary to sail downwind to have the main cast a wind shadow on the spinnaker to release pressure.

8. Performance Expectations

In flat water, under jib and main, DC al Coda will do half-wind speed up to 15 knots of wind speed on any point of sail from close hauled to a broad reach. I've experienced consistent speeds over 7 - 10 knots with winds over 20 or the screecher or spinnaker up. In flat water, sailing up to a 40-degree wind angle is comfortable. In bumpy seas, 50 degrees is practical. Sailing deeper than 160 degrees is slow. The boat pitches up and down more than you would expect with jib and main or under power. The bow tends to get wetter than you would expect for its size due to its lower profile. Windage is also less of a problem.

9. Where things are

Port side forward locker: two white fenders and two large blow-up fenders.

Center forward locker: window screens, old dingy floor (can be used as a SUP), short boat hook.

Starboard forward locker: fresh water rinse down hose, shore hose, dingy bag, manual bilge pump

Center locker in front of mast: this is the largest locker on the boat. Screecher, Spinnaker, Magma Grill, small fender.

Starboard Helm Seat Locker: shore power cord, power adapter, dock lines, cleaning equipment.

Interior

Port Bow Locker: life preservers

Port Left Outside Locker: this is the tool shed, tools, spares, and fluids.

Port side electrical locker: most of the Mastervolt equipment and a blue box of manuals

Cabinet over navigation desk: safety equipment, first aid

Salon corner table locker: boson chair, chargers, clothes pins, 12 volt air pump

Moving around the salon bench clockwise:

Fuse panel

Sealed Electrical

House Battery Banks

Water Tank

Fresh Water pump, spare shore power cord, air conditioner condenser unit, spare hatch gaskets, manual air pump

Paper products

Starboard Bow locker: toilet plunger.