Club 420 Sailing Guide

Cal Sailing Club

Overview

The Club 420 (C420) is a two-person, high-performance dinghy used for junior and collegiate sailing. It features a main, jib, and spinnaker, making it a great stepping stone toward more advanced racing dinghies. **The C420 is available to Junior members and above.** This guide covers how to prep the boat from yard storage, key sailing tips, and how to put the boat away properly.

One important distinction: the **i420 is lighter and more fragile than the C420** and is **available to Senior members and above only.** Handle i420s with extra care — they are not as robust as the club boats and damage is more costly.

Part 1: Prepping the Boat from Storage

Step 1: Initial Inspection

- **Check all three drain plugs** — one in the stern and one on each buoyancy tank — and make sure they are all in before you launch.
- Check that the **tennis ball transom drain** is closed before launching.
- Check that the **autobailer** is closed before launching.
- Check that the **rudder and tiller** are secure and the tiller extension is attached and free to move.
- Confirm an **anchor and paddle** are on board.
- **Do not step on the bow.** The bow is not reinforced and is not safe to stand on at the dock.

Step 2: Rigging the Jib

- Remove the **jib cover** first — lower it from the main halyard and set it aside.
- Starting from the tack, **unwrap the jib by hand** up the forestay, keeping the luff hanks attached as you go.
- Check that the jib halyard is properly tensioned — it should run through the pulley at the base of the mast on the port side and through the pulley on the halyard itself.
- To tension the jib: have the crew lean back on the forestay to rake the mast forward, then hoist and cleat the halyard. The forestay being slightly floppy is normal and expected.
- Run the **jib sheets** through the fairleads on each side, making sure they pass **inside the shrouds and trap wires.** Tie figure-8 stopper knots at the ends if not already done.

Step 3: Mainsail Setup

- Check that the **gooseneck is properly inserted** into the mast fitting.
- Confirm the foot of the sail is seated in the boom track and the **outhaul is tensioned** — proper outhaul tension helps keep the gooseneck seated securely.
- To hoist: pull the main halyard single purchase until the sail is most of the way up and the ring on the halyard is low enough to reach. Then wrap the halyard around the horn of the cleat, pass it through the loop in the halyard to create a 2-to-1 purchase, and haul the sail the rest of the way up before cleating off. This locks the halyard securely under load.
- Leave the **cunningham** loose for now.

Step 4: Spinnaker Setup

- Retrieve the **spinnaker from the yellow mesh bag** — spinnakers are stored in these bags hung near the other sails at the front of the yard, not left on the boat.
- Pack the spinnaker into the chute with the two clews accessible and the head on top.
- Attach the **spinnaker halyard** to the head, making sure it runs **under the jib sheet.** The boat has **toothbrushes** attached near the spinnaker exit — these help guide the halyard cleanly during a set, so make sure the halyard is routed through or past them correctly.
- Run the **guy and sheet** around the outside of the forestay on their respective sides. Set the guy in its fairlead at the shroud base and cleat it.
- Confirm the **uphaul/downhaul** on the pole is rigged and reachable from the cockpit.
- The **spinnaker pole** is stored in the boat — leave it there until you are ready to set the spinnaker on the water.

Step 5: Rig Tension Check

- The boat should have been stored with **rig tension released.** Before launching, re-tension the rig appropriately. A leeward shroud that goes slightly slack while sailing upwind is normal — if it is very floppy dockside, add some tension.
- Make sure jib tension is set **before hoisting the boat** if using a crane. Without proper jib tension, the mast rakes too far aft and can strike the crane during the lift.

Step 6: Hoisting with the Crane

- Clip the hoist carabiners onto the **rope loops at the shroud base** on each side of the boat.
- Double-check all three drain plugs are in before the boat goes in the water.
- **The jib should remain wrapped around the forestay** until the boat is in the water — unwrap it once you are afloat to reduce windage during the lift.

Part 2: Key Systems to Know

The Centerboard

The centerboard is held in position by **two cleats on the centerboard trunk** — one for the up position and one for the down position. To change position, lift the board slightly to release it from the cleat, move it to the desired position, and cleat it off. Do not jam or wedge it.

Once in the water, confirm the centerboard moves freely and cleats securely in both the up and down positions before heading out.

The Autobailer

The autobailer is a **metal fitting on the port side of the cockpit floor.** It drains water from the cockpit while the boat is moving:

- **Push down with your foot** to open it and drain water.
- **Pull up** to close it.

Always close the autobailer before coming to a stop — at low speeds it will let water in rather than drain it out. Do not leave the dock with it open.

The Bridle

The bridle controls the position of the mainsheet's sheeting block. **Adjust both sides equally** to raise or lower the block depending on conditions — tighter for lighter air, looser for more breeze. If you're unsure, leave it where it is.

The Forestay

A slightly floppy forestay is normal on a C420. It does not indicate a problem with the rig.

Part 3: Spinnaker Use

The symmetric spinnaker requires a sign-off. Only senior sailors and juniors who have completed the symmetric spinnaker qualification may fly the kite. If you haven't been signed off, sail without it until you are.

Hoisting

Communicate clearly before the hoist — skipper confirms heading and readiness before the crew starts. The crew should begin preparing the pole before the hoist by clipping on first the **guy into the outside claw of the pole,** then attaching the **topping lift to the middle of the pole,** and finally attaching the **inside claw to the mast** — work outside in to keep the order straight. Once the pole is set, the crew communicates this to the skipper.

The skipper pulls up the halyard from the aft end of the centerboard trunk. While the spinnaker is being raised, the crew pulls on the guy to bring the tack of the sail forward until it rests against the pole. The crew then puts the guy under the twing/fairlead, pulls the pole back to the optimum position for the heading, and cleats the guy. Once that's done, the crew sheets in the sail and you're off.

Sailing Angles

Don't sail dead downwind — it's slow. Sail angles around 140–160° and gybe to optimize VMG. Watch faster boats to calibrate your angles. Keep the pole squared back perpendicular to the wind — as you head up or bear away, adjust the guy to keep the pole square. **Never let the pole touch or press against the forestay,** as this can damage both the pole and the rig.

Gybing the Spinnaker

Before tripping the pole, make sure the guy is removed from the fairlead and cleat at the shroud. The crew trips the pole from the ring and the guy, but **leaves it attached to the hook at the front of the mast** — never bring the pole into the cockpit, as it's an injury waiting to happen. The skipper gybes the

main, then the crew re-attaches the pole to the new guy and ring. Timing and communication are everything — practice makes this smooth.

Dousing the Spinnaker

To douse, the crew first trips the pole from the ring and the guy, and removes the guy from the fairlead and cleat. The crew then gathers the foot of the sail, pulling it in hand over hand to keep it from going in the water. Once the foot is under control, the skipper trips the halyard and the crew stuffs the sail into the chute as it comes down. Keep the sheet and guy under control throughout to avoid wraps.

Part 4: Upwind Sailing Tips

Boat balance is everything. The C420 is sensitive to heel. Sail flat to slightly heeled to leeward in light air. In the summer breeze typical at our club, the crew should expect to be on the trapeze most of the time — if the breeze is consistently overpowering, consider reefing the main before heading out.

Jib trim: Most upwind trim comes from sheet tension. A slight curl in the luff tells you to ease or head up. Telltales on both sides should stream aft evenly.

Cunningham: Leave it off in light air. Apply tension as the breeze builds past 10–12 knots to flatten the main and move the draft forward.

Vang: Keep loose upwind so the leech can breathe. Tight vang upwind stalls the main.

Centerboard: All the way down upwind.

Crew weight: Sit close together near the shrouds — not too far forward (creates drag) or too far aft (lifts the bow and kills flow).

Part 5: Downwind Sailing Tips

Heel to windward in light air — this helps the sails fill by gravity and reduces wetted surface.

Vang: Tension before bearing away to prevent the boom from skying and the main from twisting off.

Centerboard: About halfway up running, ¾ up on a broad reach. Too much board down creates drag and causes the boat to round up.

Part 6: Capsize Recovery

Get to the centerboard quickly and use your weight to right the boat. As the boat comes up, **getting back in is easiest at the shrouds** — the transom is very high and difficult to climb over. Have the crew ready to scramble in over the windward rail as the boat rights.

Avoid letting the boat turtle (invert fully) — if it starts to go, push the bow into the wind.

Part 7: Emergency — Jib Stay Failure

If the forestay breaks while on the water, do not panic. You can sail back using the jib or spinnaker halyard as a temporary forestay:

- Attach the halyard to the bow fitting to support the mast forward.
- Rake the mast forward by tensioning the halyard as you would the jib.
- **Sail back to the dock under mainsail only.** Do not attempt to fly the jib or spinnaker.

Part 8: Putting the Boat Away

- **Release rig tension** before leaving the boat in the yard. Leaving the rig under tension stresses the hull and standing rigging as the boat heats and cools — over time this causes damage.
- **Wrap the jib around the forestay** by hand, working from the tack up. Keep it neat and snug.
- Hoist the **jib cover** using the main halyard and cleat it to protect the jib from UV and weather.
- **Remove the spinnaker,** place it in the yellow mesh bag, and hang it with the other spinnaker sails at the front of the yard.
- Lower and remove the mainsail if required, or flake and cover it on the boom.
- **Remove the tiller** and store it safely.
- **Open the drain plug and tennis ball transom drain** to allow any water to drain out during storage.
- Coil all sheets and leave the boat tidy for the next sailor.

Quick Pre-Launch Checklist

- ☐ All three drain plugs in (stern + both buoyancy tanks)
- ☐ Tennis ball transom drain closed
- ☐ Autobailer closed
- ☐ Rudder and tiller secured, extension attached
- ☐ Anchor and paddle on board
- ☐ Jib halyard tensioned (jib to remain wrapped around forestay until boat is in the water)
- ☐ Jib sheets through fairleads, inside shrouds and trap wires, with stopper knots
- ☐ Gooseneck inserted, outhaul tensioned
- ☐ Main halyard attached and sail hoisted (halyard locked through loop on cleat)
- ☐ Cunningham loose
- ☐ Spinnaker retrieved from yellow bag, packed, and sheets/guy rigged (if signed off)
- ☐ Spinnaker halyard attached, running under jib sheet, routed through toothbrushes
- ☐ Guy set in fairlead and cleated
- ☐ Spinnaker pole stowed in boat
- ☐ Hoist carabiners clipped to shroud base rope loops
- ☐ Jib unwrapped from forestay once afloat
- ☐ Centerboard cleats securely up and down (check once in the water)
- ☐ PFDs on