

CBI Harbor Trip Crew Class Notes

The CBI harbor trip "Crew" rating is earned by CBI members who have been trained to assist harbor trip skippers in equipping boats with special harbor trip equipment, lowering and raising masts, reefing sails, operating boats in tow, anchoring boats, and observing emergency and safety procedures. The "Solo" sailing rating is the minimum prerequisite for the "Crew" rating; the "Crew" rating is among the prerequisites for the harbor trip "Skipper" rating. In addition to the material taught during "Crew" class, you should also be familiar with the harbor trip "FAQ" handout.

1. **Preparing Boats** - On the day of a harbor trip, arrive at CBI by 8:15am to help prepare your boat for the trip. This includes tying boats up to the dock, pumping out your boat, lowering the mast, and placing aboard all of the equipment necessary for the trip. **Distribute any items that are numbered (sails, charts, waterproof kit bags, radios) to the hull with the same number!**
2. **Pumping Out Boats** - If there is enough water in your boat that it can be pumped, pump it out. Extra water in the bilges may slosh up onto your daypacks and food stored under the foredeck. Use the built-in manual pump.
3. **What's the special harbor trip equipment?**
 - a. Waterproof chart of Boston Harbor (in zip-close bag).
 - b. Waterproof yellow kit bag - take care of it and bring it back; have ready to collect (with original contents) on your return.
 - (1) First aid kit – If you use something from kit, check that it still has the minimum contents as shown on its label. If not, exchange it at the dockhouse after the trip for a full kit.
 - (2) Mouth-blown horn - For signaling in fog or emergency. (See Section 11 below.)
 - (3) Laminated information sheet - summarizes rules of the road, signals, and aids to navigation.
 - (4) Laminated radio operating procedures sheet.
 - (5) Laminated article about anchoring under sail.
 - (6) Tool pouch with two pair of pliers, screwdriver, maybe extra clevis or cotter pins, cotter rings, telltale yarn.
 - c. Other Boat Gear
 - (1) Anchor with at least 150 ft. of rode (anchor line), in an anchor bag.
 - (2) Two fenders with line, to protect side of boat when needed.
 - (3) Floating Cushion - in addition to one lifejacket per person, Coast Guard requires one throwable "personal flotation device" per boat over 15' long. Our floating cushions meet the requirement. We usually have enough so that you can take two per boat if you wish a little extra tush-cushioning.
 - (4) Rope bridle, for tying boats together. (Including for the last boat in line. It may not be last when we return to CBI.)
 - (5) Extra bits of small line for tying up halyards and forestay after lowering masts, tying up to a dock or another boat, or whatever.
 - (6) Mast crutch. Holds up end of lowered mast. Keeps mast from crushing cabin top.
 - (7) Combination paddle/boathook. Fend off lock walls, other boats with boathook end.
 - d. Handheld Marine VHF Radio (given out to skippers at meeting just before trip departure). **Tie this to the boat via its tether and store it in its holster immediately on returning to boat, or attach lanyard to skipper.**
4. **What normal sailing equipment should be aboard?**
 - a. Sails - main and jib. (Double-check that you really have Rhodes 19 sails). For strong winds, follow launch captain's instructions (maybe reef Rhodes mainsail or take or use Mercury mainsail). Matching the sail number to the hull number really helps the launch captain keep track of the fleet when we are out in the harbor.
 - b. Spinnaker - Your boat may take a spinnaker if someone aboard has a CBI spinnaker rating and if launch captain says OK. Your skipper should check that your boat's spinnaker rigging is complete.
 - c. Lifejackets - at least one per sailor. Lifejackets are in special containers on each boat. Don't use these except in an emergency. Keep the container immediately available and uncrushed. If you wish to wear a lifejacket while sailing (always a good idea), or if lifejackets are required for a particular trip, take one from the lifejacket bins in the sail bay (they're much more comfortable than the ones on the boat).
5. **Lowering Masts** - The Rhodes 19 masts have to be lowered so that the boats can fit under bridges that we pass on the way to the harbor. Lower masts at the dock before tying boats together. **NOTE: Whenever you remove a piece of hardware to disconnect something, secure it immediately back in its place so you don't lose it!**
 - a. Before lowering mast, rig the mainsail, including the reefing line, then furl it on the boom. This will assure that you have an undamaged sail and rigging hardware and will speed up the mast raising/sailing away process in Charlestown.

- b. Insert a mast crutch into the bracket on the transom.
- c. Fully loosen the boom vang and mainsheet and disconnect the vang by unscrewing one of its shackles (at mast or boom; don't unscrew pins which are holding blocks together). This avoids damage to the cabin rooftop when you lower the mast.
- d. Undo the main halyard, which is holding up the aft end of the boom. Secure the main halyard to the mast so it doesn't get lost. Take up slack and cleat.
- e. Disconnect the boom from the mast by removing the clevis pin/cotter ring (ring-ding), or bolt/nut at the horizontal point close to where it attaches to the mast. If there is a bolt/nut combination, you may need two wrenches or pliers to undo it. **NOTE: The boom must come off or you will break the gooseneck when you lower the mast!** Keep the boom from rotating while you are handling it; otherwise, the mainsheet may foul.
- f. Stow the boom forward, safely out of the way under the foredeck, clear of the mast jack.
- g. Grasp the mast jack arms at the base of mast, under the foredeck. Considerable effort may be required to start the jack moving, but do not use any tools, only hands. Turn the arms counterclockwise to lower the mast until you feel that motion has stopped. Don't force it. Lowering the jack will relax all of the mast stays. **Except for the forestay (see below), do not touch or adjust any of the stays or turnbuckles.**
- h. Attach the jib halyard shackle to the deck shackle at the bow. Remove slack from the halyard and cleat it to hold the mast up while you undo the forestay. Don't tighten if the forestay is already slack.
- i. Detach the forestay by removing the pin holding it to the deck at the bow. Secure it loosely to the mast. **NOTE: Be aware that when the forestay is detached, the only thing holding the mast up in the fore and aft direction is the jib halyard.**
- j. Other sailors should stand on the cockpit seats, ready to catch the mast. Disconnect the jib halyard shackle from the deck shackle and lower the mast, controlling it from the foredeck with the cleated jib halyard. To keep best control, stay as close to the bow as possible; try not to move toward the mast. As the foredeck person lowers the mast, the cockpit crew catches the mast and "walks" it down into the mast crutch. The mast is heavy and the person on the foredeck may not be able to hold it once it starts tilting.
- k. When the mast is in the crutch, pull in the backstay and secure all loose lines with a bit of rope. Tie the mast into the crutch with the line attached to the crutch.

6. Towing

- a. Tie the boats to one another in the order directed. Use a bridle to provide enough space between boats. While at the dock, keep bridle under light hand tension so it doesn't foul under your rudder.
- b. Attach the short line of the bridle to your stern cleats. Pass the long bridle line back to crew on the boat aft of you.
- c. Run your painter through one bow chock, through the loop in the center of the bridle from the boat forward of you, back through your other bow chock, then cleat it to your bow cleat.
- d. Always steer any boats under tow. Normally, keep your tiller centered but make small corrections to aim your bow at the center of the stern of the boat in front of you. During circles and turns, steer to the *outside* of the curve enough to keep tension on the topline.
- e. Locks at the Charles River Dam
 - (1) Steer your boat to the side of the lock as directed by the launch captain. Hang your fenders over that side of the boat. Clip or tie fenders to the pad eyes (metal loops screwed to the deck) on the side decks.
 - (2) Grab onto the ropes hanging from the sides of the lock to keep your boat from banging into the one in front. Use your boathook to flip the ropes toward you so you can grab them.
 - (3) Fend off to keep your boat from bumping into lock walls or the boat in front or behind. Watch for swinging masts and keep your head down. Try to keep the boats in a straight line so they don't pile up in a mess. Other boats will also be going through the locks; give them room.
 - (4) While stopped in the lock, hold your boat against the side of the lock with a loop of line around a cleat on the lock float (if there is one), but don't cleat the line. There may not be time to uncleat when the tow starts up again.
 - (5) **IMPORTANT SAFETY STUFF: NEVER** fend off with your hands or feet. This is a great way to get hurt. Don't climb up on the floats along the lock walls. When the lock doors open, the tow will start up with a jerk. Don't be caught off balance!

7. Raising Masts and Sailing - We raise masts after passing under the Charlestown Bridge, just below the locks, when the launch captain gives the OK. The launch captain may judge that it is safe to raise all masts simultaneously. If so, be extra careful that the tow line remains taut and that the boats don't drift together. If not, raise the masts one boat at a time, starting with the boat nearest to the launch.

- a. **IMPORTANT:** Before you begin, make sure your backstay is still connected to avoid dismasting.

- b. One crewmember grabs the end of the jib halyard.
- c. Two or more crew stand on the seats, grab the mast, and raise it while the person with the halyard pulls toward the bow. Keep an eye on the mast crutch; a line or the mast may snag it and try to lift it out of the boat (but it floats and can be recovered).
- d. When the mast is up, attach the jib halyard to the jib foredeck shackle, then tighten and cleat the halyard. A crewmember should push the mast forward during this step.
- e. Attach the forestay to the forward-most hole in the foredeck fitting, then relax the jib halyard.
- f. Choose someone strong to grasp the mast jack arms and raise the jack by rotating the arms clockwise. Raise the jack just as tight as possible using hands only; don't use any tools. If the stays won't tighten, the main halyard or some other line may be cleated the too tightly. Loosen it or them.
- g. Re-attach the boom and vang.
- h. The mainsail should already be on the boom; if not, bend it on now including its reefing line and bend on the jib, but don't raise the sails yet.
- i. Remove and stow the mast crutch.
- j. If the towline is headed to windward, the last boat in the tow raises a sail (preferably mainsail, but whichever sail can be raised fastest) and leaves the tow first by casting off from the towing bridle, which stays with the boat ahead.
- k. As soon as you are the last boat, quickly pull in your stern bridle, raise a sail, cast off from the bridle ahead of you, and leave the tow.
- l. If the towline is running downwind, cast off without raising sails, turn your boat into the wind, then raise sails.

8. Reefing mainsail

- a. Jiffy reefing lines are stored in a tote bag tied to the far side of the sail storage shelves (toward the Harbor Trip Committee camping equipment locker) The lines are blue with a white fleck, 17 feet long. Leave the line bag tied to the shelves; just take the lines out as needed. Coil and return them to the bag after each trip.
- b. Any time there's any thought that high winds might be encountered, rig the reefing line at the dock. Cleat it to the port outhaul cleat, then run line through the leech (aft) reefing cringle (grommet) on the sail, through center of the starboard outhaul cleat (used as a fairlead), then run it forward and cleat it on the cleat on the starboard side of the boom near the mast. The line is long enough that it can be rigged without interfering with a fully raised mainsail. The jiffy reefing line can be rigged underway, but it's difficult.
- c. To reef:
 - (1) Start with boat at dock, head to wind, or underway, with boat on a close-hauled course. (Maintain heading to windward using jib; if jib is down and if there is danger of running aground or ashore while reefing, anchor the boat.)
 - (2) Raise mainsail at dock until luff (forward) reefing cringle is visible. Don't confuse it with the Cunningham cringle, which is lower on the luff. If underway, lower mainsail until luff reefing cringle is at boom, taking care that the boom doesn't hit anyone. If the boom is swinging wildly, lower it onto the port side deck.
 - (3) Run Cunningham through luff reefing cringle, pull cringle down tight to the boom, then cleat Cunningham as usual.
 - (4) Pull jiffy reefing line moderately hard to pull leech reef point aft and down, then cleat it.
 - (5) Loosen vang and mainsheet, then raise the mainsail, putting normal strong tension on the halyard.
 - (6) Adjust the jiffy reefing line. Loosen if necessary to allow the luff of the mainsail to be raised fully. After the mainsail is raised, tighten the reefing line hard and cleat it.

9. Anchor Care and Handling - Harbor Trip anchor assemblies each consist of an anchor attached to a short length of chain, then to nylon anchor line to make the anchor rode (chain plus line) at least 150 ft long. The rodes have markers at intervals to show the distance in feet from the marker to the anchor. At the end of the rode, it is spliced to a spherical float. A six-foot security line is also attached to the float. For convenience in handling all of this, there is an anchor bag for each assembly. The anchor bag is held captive: the anchor and most of the rode go into the bag, but the end goes out to the float through a grommet in the side of the bag. Neither the float nor the anchor can fit through the grommet, thus keeping the anchor bag in its place. Here's how to deal with the assembly:

- a. The anchor bag is strong synthetic cloth, but it's just cloth. The anchor has sharp flukes to dig into the mud and a rigid rod (the "stock") that sticks out the sides. Can you cause these to tear through the bag? Yes! Can you shred the bag by dropping or dragging it or shoving it roughly into the area under the Rhodes 19 deck? Certainly! Please help us prolong the life of the bags by carrying them, not dragging. It's okay to grab a bag by the fabric at the top; you don't have to carry it from underneath. Place them down on the dock or on the boat and store them deliberately and

carefully, not carelessly.

- b. During the trip, get the anchor bag out early. Take the float and security line out of the bag and pull out enough rode so that you can tie the security line around the mast. Use a knot similar to the CBI dock tie up knot or any other secure knot that you know (a turn and two half hitches or a bowline would be good). Cleat the rode on the foredeck, also. Be sure that all anchor lines pass *under* the jib sheets.
- c. During the final approach to the island, the skipper will probably ask that the jib be lowered. The crewmember at the forward end of the cockpit bench should then take care of the anchor bag. The crewmember who will be lowering the anchor can then carry the anchor and chain onto the foredeck, again passing them *under* the jib sheets. The rode will trail behind to the anchor bag in the cockpit.
- d. When your skipper stops the boat in the anchorage location and instructs you to lower the anchor, pay out the anchor line hand-over-hand as quickly as you can but don't just drop it. The skipper may ask you to stop temporarily when the anchor hits the bottom (you will be able to feel the reduced pull on the line) and estimate the distance from the deck to the bottom, using the nearest rode marker you can see. The skipper should tell you how much rode to use, about 5 to 7 times the distance from the deck to the bottom. (A *scope* of about 5:1 to 7:1.) As you lower the anchor, the rode should feed out of the bag smoothly. The crewmember by the anchor bag should make sure that is happening and straighten out any kinks that occur.
- e. Once you are head to wind, the boat will drift backward, especially in high winds. Backwind the main (push the boom forward) to drive the anchor into the bottom.
- f. Check to see that the anchor is dug in; give it a tug. The skipper will check to be sure that you are not moving.
- g. Drop the main and furl it. Furl and secure the jib on deck. Secure the tiller (with the bungee loop provided or take a turn around the tiller with the mainsheet). The skipper should check again that you are not moving.

10. Getting under way again

- a. Ask the skipper which tack the boat will be leaving on.
- b. Be ready to pull the anchor up over the port bow if the boat is leaving on port tack; over the starboard bow if on starboard tack. (But not until the skipper asks you to.) This helps turn the boat onto the desired tack.
- c. After the crew raises the main, and when the skipper gives the command, pull on the rode just until the anchor is right below the boat, still on the bottom, then stop. Shout "Straight up and down" and wait for the skipper's further instructions. (The skipper should tack upwind if you can't pull the boat forward by hand.)
- d. When the boat is on the desired tack, the skipper shouts, "Weigh anchor". Then you pull up the anchor.
- e. When the anchor is free of the bottom, shout, "Anchor aweigh".
- f. If the anchor is snagged, the skipper should sail over it so you can pull from the opposite direction. If you still can't raise it, ask the launch for help. If the launch isn't available and you must abandon the anchor, be sure the buoy is firmly spliced to the end of the rode and let the launch know as soon as possible where you left the anchor. If there is no buoy, tie one of the lifejackets to the end of the rode. Anchors and rodes are costly and can usually be retrieved if the end of the rode is floating and visible, but not if the end of the rode has simply been dropped overboard without flotation.
- g. When the boat is sailing, slosh the anchor up and down to wash the mud off before bringing it aboard.
- h. *Early* on the return trip, put the anchor assembly back into its bag. Feed the rode hand over hand back into the anchor bag. Don't bunch the rode up and just stuff it into the bag; also, don't coil the rode. (Not *too* sloppy, not *too* unnecessarily neat.) Finish by placing the chain into the bag, followed by the anchor, large end down, then put the float and security line in last. The anchor assembly is then ready to hand in at the end of the trip or can be deployed in an emergency or if directed by the launch captain. Stow the anchor bag carefully out of the way.
- i. At the end of a trip, carry your anchor in its bag back to the Sail Loft and place it carefully on one of the storage shelves from which it came. When all of the anchors are back, a Harbor Trip Committee member will run a security cable through each bag and padlock it, so we'll be sure to have anchors for the next trip.

11. In an emergency

- a. Fog: If sailing in fog, sound one long and two short blasts on your horn at least every two minutes. If under tow in fog (more likely), the launch should sound one long and two short blasts, followed by one long and three short blasts by the last boat in the tow.
- b. **DANGER SIGNAL: five short blasts!** (Means, "I fail to understand your intentions.") Whenever you hear this, look around to be sure that it's not directed at you. You must stay out of the way of large ships. (They discuss collision avoidance on VHF Channel 13.)
- c. If your boat needs help, call and talk to the Safety Launch or other CBI sailboats on VHF Channel 72. If the launch doesn't answer on 72, call it on 16, then switch to Channel 72 to talk after it answers. In a life-threatening emergency (including loss of boat), call the US Coast Guard on Channel 16, or make a MAYDAY call on 16, then listen on 16 for

instructions. All radio use should be as directed by your boat skipper.

- d. If your boat needs help and the radio doesn't work, try to attract the attention of another boat by:
 - (1) Sounding your fog signal as continuously as you can, and/or
 - (2) Standing up, extending your arms to the side, and slowly and repeatedly raising and lowering your arms. Hold a lifejacket in each hand to make your signal more visible.
- e. If the problem is that the skipper has fallen overboard and no one on the boat knows how to execute a crew overboard procedure:
 - (1) Whoever first sees the fall overboard shouts "Crew Overboard" and points continuously at the person in the water. If you can, toss the throw cushion to the person in the water.
 - (2) Others stop the boat by loosening all sheets and letting the sails luff.
 - (3) Let the jib continue to luff and use whatever sailing skills you have to bring the boat to the person in the water, stopping with all sails luffing.

12. Returning to CBI

- a. Get your waterproof bag ready to hand back as you head toward the dock. Make sure everything is in it.
- b. When you are tied up at the dock, raise the mast and re-attach the boom and vang.
- c. Detach the radio from its tether or from the skipper and return it to the Harbor Trip locker before returning anything else.
- d. Remove and store sails. Flake (z-fold) Rhodes main and jib.
- e. Carry your anchor in its bag back to the Sail Loft and place it carefully on one of the storage shelves from which it came. When all of the anchors are back, a Harbor Trip Committee member will run a security cable through each bag and padlock it, so we'll be sure to have anchors for the next trip.
- f. Put everything else also back where you got it. If you don't know where, ask a Harbor Trip Committee member or the person at the Harbor Trip locker (who would be grateful for any help you can give).
- g. Take all your stuff out of the boats, including trash; double-check carefully. Leave the boats in "ready-to-sail" condition for the next day's CBI members.

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