

Sonar boat handling and speed thoughts –

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*Link to the Sonar Dock Talk I did at the 2023 U.S. Youth Match Racing Championship in Sheboygan, WI, in June 2023:*

[https://drive.google.com/file/d/1sRO7pAjxK9sVhEpxVs9FD4ksF\\_FfXAH1/view?usp=drive\\_link](https://drive.google.com/file/d/1sRO7pAjxK9sVhEpxVs9FD4ksF_FfXAH1/view?usp=drive_link)

**Set-up things to do:**

- tape hooks that hold spinnaker hatches down – tape over ANYTHING that can catch anything!
- Tape the jib sheet cleat base around the base and into the companionway so that lines can't get caught under the base.
- use spinnaker hatches (side lazarettes) for storing chute (for first set? For both sets?) It is cleaner to set out of the lazarette. If you have 3 total, it is easier to drop and stuff the spinnaker down below (see notes on Drops for tips), which means the second set will be from down below.
- wrap a bunch of electrical tape around the starboard upper shroud near the turnbuckle and tape the halyard before the race; and around the port upper shroud and tape the topping lift before the race (pole on the port foredeck).
- Tie bowlines to chutes if sheets are tapered.
- Pull foreguy down to deck (do not use the foreguy, which is the line usually attached under the spinnaker pole).
- Tape all hooks and shackles (topping lift, foreguy even though not in use, halyard shackles (with a tab), jib tack, etc., etc.).
- light air, see if twings are long enough to run aft and pinch into turning block eye strap.
- Pole stored on deck in breeze is better as it allows the dangle from the windward rail when approaching windward mark on starboard. But in the drops, putting pole on windward side of boom (NEVER LEEWARD SIDE) is faster in the rushed drops.
- be sure there is a line or strap around the end of the tiller and the rudder head. Otherwise, the tiller pops straight up when you turn quickly.

### **Boatspeed thoughts:**

- Upwind set-up (keep the boat powered up for start, mark exit and possible tacking duel right out of mark):
- In pre-start, pre-set backstay so it is just snug when going upwind, so it isn't swinging around in pre-start and catching the boom on gybes.

### **General rules:**

- no backstay tension until overpowered, but take up slack because leech gets caught on backstay. Also, need enough backstay to keep forestay from pumping in and out (if can't trim mainsheet hard enough to accomplish that).
- keep jib halyard on the loose side (some wrinkles); always raise jib with some jib halyard fine tune on, so you can ease halyard tension easily during beat if needed.
- Traveler all the way up so boom is centered. As get overpowered, ease traveler down until on centerline. Add more backstay to depower. If backstay is on, consider easing traveler below centerline, or easing sheet (whichever is more appropriate for the water and tactical situation) – flat water, keep leech tension and play traveler; chop – keep traveler centered or above and play mainsheet (twist is fast).
- Tighten outhaul enough to flatten foot (remove lens foot)
- No vang upwind, but when trimmed close-hauled, take up the slack which is perfect for downwind
- Some like to burp the jib in the big puffs. In flat water, I prefer to feather up in the puffs and keep the jib in. I'm OK burping in big waves because you need to keep the bow down.
- Crew weight all the way forward all the time (unless hiking), and skipper up next to traveler bar.
- Jib car lead – play the lead as appropriate for the sails and conditions, keeping the jib on the slightly full side down low for best acceleration out of maneuvers, unless over 10 knots, then flatten foot.
- As you get overpowered, tighten the outhaul and downhaul, go to max backstay (just before inversion wrinkles appear on main – diagonal wrinkles from mast to clew), a little extra vang tension (not much). You can also move your jib lead back a hole or so, especially in flatter water.

### **On tacks:**

- **BIG ROLL** in light air. Hiking before sails fill in heavier air.
- tack traveler at the moment the boat is head to wind – ease main 6" or so, then trim – this keeps the leech from getting hooked on backstay. **BE SURE TO LOOK UP AFTER EVERY TACK!**
- come out slightly below close-hauled ("fat") with main and jib eased slightly for quicker acceleration
- Jib back? No
- be sure traveler is cleated on both sides before bearing away at windward mark in breeze.
- check that when you pull the jib halyard fine-tune, it doesn't lift the angle of the halyard such that it pops out of the halyard cleat. If so, wrap the halyard tail around something as a back-up.

### **Thoughts for spinnaker work:**

- set out of the starboard lazarette
- pack the spinnaker so the aft leech goes into the lazarette first, then the leading edge second
- usually both sheets have to exit the lazarette on the forward edge (often there is a cut-out) so the lazarette lid closes all the way.
- Tape the spinnaker halyard to the starboard upper shroud
- Put the pole on the port foredeck, with the inboard end slid under the twing (never between the upper and lower shrouds!). Tape the topping lift to the port upper shroud.

### **When sailing with 4 people:**

The jib trimmer is usually the spinnaker trimmer. Upwind the trimmer is farthest forward in the cockpit.

The bow person sits behind the trimmer upwind.

The third person back is the traveler person. Often the traveler person flies the spinnaker downwind. That is a boat's choice to make.

### **Pole up**

When raising the pole on a port-tack approach to the windward mark, the bow person uncleats the guy (port sheet) and pulls slack into it (in case the skipper is sitting on it). They then hop up on the bow. The jib trimmer slides the pole forward and pulls up the topping lift to the mark (put a mark where the pole is perpendicular to the mast or slightly lower when in the high ring). The bow person guides the inboard end onto the ring (upper ring in all but light air).

When approaching the mark on starboard tack for a tack set, the bow person uncleats the guy (port sheet), slides the pole forward and then raises the pole to the mark. It will just dangle there until the tack. During the tack, the bow person hops up on the bow and puts the inboard end onto the ring.

If you are on port tack and you know you will be tacking on or near the starboard-tack layline, you should put the pole up before you tack. With the guy uncleated, the pole should fall back onto the port shrouds when you tack. If the sheets are short, you may have to uncleat the port twing. But then all the bow person needs to do on the tack is hop onto the bow and push the pole forward (pulling the port twing back on if you had to let it off).

## **The set**

Approaching the windward mark, the bow person takes the spinnaker out of the lazarette, closes the lazarette hatch, pulls the slack out of the starboard sheet and CLEATS the sheet, puts the tack of the spinnaker around the starboard shroud base, and pulls the head of the spinnaker up to the boom. If approaching on port and the pole is up, they take up the slack in the guy as well.

On the sets, be sure the spinnaker sheet is PRE-CLEATED with the slack out, so the chute pops full when the guy is quickly pulled aft!

In light air, pre-sneak the tack as much as possible, and sneak the halyard up about 6 feet. You cannot sneak in heavy air as the chute can fill (air bag).

The skipper eases the main around the mark and calls “Hoist” when passing a beam reach angle (not before, and a little later in heavier air). In heavier air, the skipper sits to leeward and holds the boom in by grabbing all four parts of the mainsheet until the spinnaker is most the way up (to keep from trapping the spinnaker between the back of the mainsail and the starboard shrouds). After set, the skipper lets the backstay off, then takes out the slack so the boom end doesn’t get caught in gybes.

The traveler person (sitting in front of the skipper) pulls the guy back to the correct angle (just off the headstay in light air, and halfway back to the shrouds in heavy air), and can then grab the sheet (starboard sheet) and trim or ease it if it is not trimmed perfectly. If the traveler person will be the spinnaker trimmer downwind, they have it. If the jib trimmer is the spinnaker trimmer downwind, they take the spinnaker sheet from the traveler person, and the traveler person goes forward, closes the lazarette, and starts cleaning up the spinnaker halyard and is ready to do the twings in the gybes.

The jib trimmer only eases and recleats the jib an inch or two for the rounding, if at all. It is imperative that the jib sheet not go out more than a couple inches! The trimmer then quickly hoists the spinnaker, and then uncleats the jib halyard. Then they grab the spinnaker sheet and start trimming, if they are the spinnaker trimmer. Otherwise the traveler person will trim the spinnaker downwind, and the jib trimmer stays forward, closes the lazarette, and starts cleaning up the spinnaker halyard and is ready to do the twings in the gybes.

The bow person holds the pole forward with their right hand as the guy is being pulled back, and can assist with pulling the guy back quickly with their left hand. They then step forward and pull the jib all the way down. They then crouch to leeward and stand by for a gybe, while looking for the leeward mark and the other boat, and for boats in other matches coming upwind.

If the run is 100% starboard tack, we prefer to do a normal bear away set, but then I keep turning right into a gybe. We have the twings set with the port twing off and the starboard twing on. The traveler person is pulling the guy back as quickly as possible, with the starboard sheet UNCLEATED and in their hand. The bow person can gybe the pole with the jib up (the jib trimmer just has to remember to uncleat the jib sheet in the maneuver). Gybe sets (sets without the pole) are really slow!

**If sailing with 3 people:**

If the traveler person is the spinnaker trimmer downwind:

The jib trimmer hops up on foredeck to put pole up, and either does their own topping lift, or the traveler person can pull the topping lift up.

The bow person then hops back into cockpit for the hoist.

The traveler person gets the spinnaker out of the lazarette and does the sneaking of the sheets.

The bow person hoists the spinnaker and then uncleats the jib halyard and hops up on the bow to get the jib down, and stand by for the gybes.

The skipper or traveler person pulls the guy back, and then the traveler person closes the lazarette and flies the spinnaker.

If the jib trimmer is the spinnaker trimmer, then the jib person puts the pole on and hops back in the cockpit.

Then the jib trimmer and traveler person change positions so the traveler person is forward and can hoist the spinnaker, etc.

On the gybes, the trimmer has to do their own twings.

Coming into the leeward mark, the bow person puts the pole on the boom or the port side of the foredeck if possible (pulling slack in the topping lift) , then hops into the cockpit and blows the spinnaker halyard. The trimmer gathers the spinnaker.

With three people, it is faster to stuff the spinnaker down the hatch rather than trying to stuff it into the lazarette, especially if the spinnakers are relatively new. The trick is to put the jib sheets up on the cabin top and drape all the hanging control lines over the port jib sheet cleat holder to open the space and avoid getting the lines tangled in the chute before the drop.

Just remember that for the second set, be sure to pull the spinnaker 100% out of the hatch and place it on the starboard thwart before hoisting.

## **If sailing with 4 people:**

### **Gybes**

In gybes, the bow person gybes the pole, clears the windward shroud telltale after gybing pole, then crouches to leeward, holding slack out of leeward twing to keep it out of water in light air (sitting to leeward).

Whoever is forward in the cockpit pulls the new twing on as the boat turns down, then releases the old twing as the bow person releases the old guy from the pole.

In a fast gybe into a possible luff (Gybe Hot), the twings need to be switched immediately, and the chute rotated so the new tack is at the forestay as the boom crosses over! The bow person simply puts the new guy in the pole and drops to their knees and holds the guy down. Never fight putting the pole on the mast!

### **Drops**

The skipper pre-sets traveler for rounding, and backstay if needed

The forward crew does outhaul and downhaul as needed, and makes sure the spinnaker halyard is ready to run freely (dropped down below, never coiled).

The forward crew clears the two spinnaker sheets and places them up on the thwart on their side so no one can be standing on them during the drop.

The forward crew opens the starboard lazarette.

Before raising jib, the forward crew makes sure the windward sheet is uncleated and has all the slack out of it and that the leeward sheet has some take-up in it. The bow person can push the jib to the side that will be the leeward side when the jib is raised.

If on port tack, the bow person simply puts the pole on the port foredeck (forward person release the topping lift). Be sure to pull slack in the topping lift!

If on starboard tack and the jib is still down (light to medium air), the pole goes on the port side of the foredeck (be sure to pull slack in the topping lift!). If the jib is up (heavier air), the pole goes either on the port side of the foredeck (the pole has to come back into the cockpit and then forward OUTSIDE the port jib sheet), or on the starboard side of the boom if there are ears to do so. **DO NOT TRY TO PUT THE POLE ON THE PORT BOOM EARS WHEN ON STARBOARD TACK.**

The spinnaker trimmer grabs the spinnaker on the starboard side and starts pulling it in. Pull foot first to get the tack around the head stay (the skipper can pull slack in the port spinnaker sheet to be helpful). Then when the trimmer has several handfuls of spinnaker, they start stuffing it into the lazarette.

The forward crew releases the halyard (slowly at first to be sure it doesn't go over the bow or into the water). Then the forward crew pulls both twings tight and is ready to trim the jib around the mark. If the forward person is the traveler person, they can take over the stuffing action so the jib trimmer can trim the jib around the mark.

If done soon enough, the traveler person can trim the main sheet around the mark, which is helpful.

Then the traveler person pulls both spinnaker sheets tight so nothing is dragging in the water.

When settled on port tack, the jib trimmer can slide the pole under the port twing for safety, and tape the topping lift to the shroud. When on starboard tack, the jib trimmer can tape the spinnaker halyard to the starboard shroud.