Thistle Crew Organization Around the Race Course

Most Thistles are raced with three people: driver, middle crew and forward crew. There are many ways to organize a Thistle crew to get your boat around the racecourse and win races. Who does what, and when, will vary based on how your boat is rigged, and the preferences, strengths and weaknesses of the individual crewmembers. Your best bet is to talk to different crews in your fleet or from other areas of the country about how they organize themselves on the boat. Also, look at how other boats are rigged, as rigging layout often determines crew roles. This article does not discuss how to go fast or rig your boat – your sail maker's tuning guide and the winning boats in your fleet are the best resources for speed questions.

The Big Picture

In a perfect world, the driver might simply drive the boat, focusing completely on keeping the boat moving as fast as possible through waves, velocity changes, and wind shifts. The middle crew would trim the jib and spinnaker and call boat-on-boat tactics and boat positioning to take advantage of shifts and current. Forward crew would keep the boat perfectly balanced using their weight, watch for crossing situations, play the compass, call puffs and fix anything that needs fixing on the boat, as well as manage the spinnaker and jib work at mark roundings and gybes. I know one boat in our fleet that is organized along these lines, and they win a lot of races, but in my experience this rarely happens in real life. What is more important is that you identify what needs to get done on your boat during a race and then make sure your crew understands who is responsible for what.

- Who keeps track of the course to be sailed
- Who times the start sequence
- Who figures out which side of the starting line and course to head for
- What the roles are sailing upwind and downwind, and at mark roundings
- Who calls boat-on-boat tactics
- Who calls laylines
- Who is responsible for deciding crossing situations
- Who owns bailing the boat after aggressive roll tacks
- Who picks the favored end of the finishing line
- Who manages the traveler, cunningham, topping lift, and vang

The list goes on, what's important is that you figure out the responsibilities for each crewmember and stick to them in race after race. Reducing in-boat confusion, particularly at mark roundings, will increase your boat handling confidence and enhance your performance on the racecourse. Spread out the responsibilities, communicate them clearly, practice them, and adjust them until the boat functions as a unit. In other words, keep your eye on the big picture.

Around the Course

Pre-Start

Before the start, our boat works together on figuring out the strategy for the start and the first upwind leg (which side of the course appears favored by higher velocity, more favorable current, or expected shift). We take a few wind shots sailing upwind on port and starboard tack. We talk about what worked or didn't work in the previous race. We look up the course for more wind on the left or right sides. We sail head-to-wind and gauge whether the boat or pin end of the line is the favored (more upwind) end. We sight the windward mark to see which tack will be the longer leg upwind, since sailing the longer leg upwind provides more opportunities to play shifts. Then we set a target, for example, we might decide to start towards the pin end of the line and then head left to reach what we believe will be the first shift and some additional velocity towards the west shore.

Start

The driver is responsible for the start tactics – getting the boat to the decided-upon end of the line, finding a hole, protecting it, and powering up for speed. The situation on the start line changes so quickly that we find it difficult to have anyone but the driver calling boat maneuvers on the final approach to the start. Middle crew trims the jib based on the driver's commands, and calls traffic - both starboard/port situations and boats threatening to create an overlap from behind and to leeward. Forward crew is counting down the time to the start (every 10 seconds within 2 minutes, every second within 10 seconds) though the middle crew has started their watch as a backup). In the final 30 seconds the forward crew is calling distance to the line. If we are early in our approach to the line and need to stop the boat quickly, we'll carve an S-curve or the forward crew will push the boom out hard, which stops the boat. In light air (less than 8 knots), forward and or middle will often shift their weight to leeward in the final seconds before start to create leeward heel to help the boat accelerate. Some advanced boats will make sail adjustments just before the start to get the boat into "first gear" to maximize the forward drive of the sail plan to help squirt the boat out in front of boats to leeward and windward.

Post-Start

The period of time just after the start can make or break your race. The driver needs to be completely focused on keeping the boat moving. Forward and middle crew should be assessing the boats directly to leeward and windward to help the driver know whether to foot off for speed (if there's a big enough gap to leeward) or pinch up to stay clear of a leeward boat or pinch off a windward boat on your hip. Crew should be evaluating the boats around you to find the driver a clear lane to tack into if you need to bail onto port tack.

Upwind

Upwind, the driver manages speed and point, calls for jib trim adjustments, and makes or contributes to tactical decisions. We think the owner should make the final decision on all crossing situations, since the owner will end up being responsible for damage to her or other boats. Middle crew watches for crossing situations, plays the jib sheets, hikes, and works with the forward crew to figure out which way to go and when to get the next shift or more velocity. Forward crew calls out compass heading changes as lifts and headers ("up 5 from average," "up 10 from last starboard tack," "down 10 from last race's average" etc.), looks for velocity on the course, talks through strategy options, and adjusts the cunningham, outhaul, jib halyard fine tune, and traveler. Forward crew also does the lion's share of weight adjustment, moving on and off the rail, in and out of straight-leg or droop hiking to keep the boat flat. On our boat, the driver usually stays planted on the rail for better sight around the jib (and rarely hikes hard enough, according to my forward crew). In light wind, forward crew will play the traveler above centerline to keep the boom centerline with the mainsheet eased for twist. Finally, keep in mind that the Thistle has a lot of main, which inhibits the boat from turning downwind when it

is sheeted in tight. If you have to duck a boat, especially is any breeze, make sure you ease the main or the rudder will not respond. Not easing the main in heavy air crossing situations will result in increasing your boat repair skills and is an effective way of reducing your bank account.

Tacking

If you've never roll-tacked a dinghy, watch how the more experienced crews in your fleet do this, and start practicing. Successful roll-tacking can dramatically increase your upwind success, since with a good roll-tack you will lose no speed through your tacks since the speed the boat generates while rolling counteracts the loss of speed as the boat turns through the wind. (However, roll-tacking is illegal if the speed of your boat after the tack is greater than before the tack.) In our boat, middle and forward crewmembers act as a big lever, using their weight to roll the boat to windward then moving to the high side through the tack. The driver acts as a fine-tune lever, matching movements to the middle crew. During the tack, driver can pull in the main heading into the tack, and then should release six to eight inches of mainsheet as the boat is rolling through the wind (or drop the traveler, or both, depending on your preference and philosophy). On the new tack, the driver re-sheets in the main as the boat rolls flat, gain speed on the new tack, and heads up to point mode if appropriate. The rule of thumb is that if the crew is not getting their butts wet on the roll to windward, the boat is not being rolling as aggressively as it could be. However, the higher the wind, the less roll you'll need through the tack and the more important it is to ease the main as you tack through the wind.

Windward Mark Rounding (Bear away set)

Middle calls layline to the mark. Approaching the windward mark for a bear away rounding, the forward crew moves into the boat to put up the pole and free the spinnaker halyard from the guy hook on the port side. It is key that middle and driver hike hard to keep the boat flat at this point. At the mark rounding, the crew leans back to help turn the boat, and the driver then releases the main sheet and hoists the spinnaker. Unless we're rounding onto a reaching leg, I just let the sheet go and forget about it. Forward crew releases the jib halyard, lowers it into the well, and then pulls the centerboard three-quarters of the way up. Once she's done with that, she moves to leeward, pushes the boom all the way out (unless we've rounded onto a reach) and turns to face aft to call wind lines and tactical situations. During the rounding, middle crew eases the jib out, but too quickly – easing the main before the jib will help the boat turn downwind, as the jib will help spin the bow around. Then, the middle crew grabs the spinnaker sheet and guy (a continuous line on our boat) and works the pole back to get the kite to fill. Forward crew must remember to hook the guy into the guy-hook (or, under the new rules, tighten the windward twing). Forward or middle crew might also ease the cunningham and outhaul for the run.

Windward Mark Rounding (Gybe set)

Approaching the mark for a gybe set, forward remains on the rail and detaches the pole from its upwind resting spot, attached to the starboard shroud and the spinnaker guy. The pole is then stowed below. At the mark rounding, all three crew hike hard to roll the boat around the mark and through the gybe. As the boat turns and gybes, the driver must release the mainsheet, and the driver or forward crew can help by pulling the main across the boat. Once the gybe is complete, and a check for oncoming starboard or port-leeward boats is done, the forward crew grabs the entire spinnaker, counts "1-2-3" in a loud voice, and then throws the sail in a ball up and forward of the boat. On "3", the driver hoists the sail and middle cranks the windward clew around the forestay. Once the forward crew has thrown the sail forward, she immediately grabs the pole and attaches it to the mast and sail. If the driver heads deep, the sail will fill without too much trouble even without the pole. If the fleet is gybing due to a right-hand wind shift, there is often good reason to hold off on the hoist and sail high with the jib still up - this will allow you to drive up and over boats that are struggling to get their kites up. It is especially important that someone on the boat be on the lookout for approaching starboard and port-leeward boats, as you effectively have no right of way over boats coming at you once you have gybed onto port and are up upwind of boats approaching the windward mark.

Reaching

Although we don't often race with reaching legs on Lake Washington, they show up in district and national regattas, and add a number of tactical complexities to the race. Far from being a parade, I've always found the gybe mark to be place where you can gain or lose numerous boats. Crew roles are straightforward on the reaches. On our boat, driver plays the vang (though this will depend on the rigging of your boat), middle plays the kite, and forward stands with her back to the boom, watching for boats attempting to head up over us. It is important that the crew be ready to work together to head up suddenly if you need to protect your space. The driver calls "going up," then the pole has to come forward and the sheets trimmed in to compensate. If the wind is kicking up (15+), we will all move back in the boat, and in planning weather the forward crew will play the centerboard to encourage planning. At the reach mark, make sure the middle crew squares back the pole as you head down into the gybe. Your position with respect to other boats is very important right before and after the gybe mark, so protect your inside position at the mark and work hard to keep other boats from running over you even if the kite is not yet pulling.

Downwind

Downwind, forward crew stands with her back to the boom, holding it out while she calls gusts, looks back upwind for more velocity streaking down either side, and warns of any boats heading into a passing lane to windward of us. Middle is playing the kite (including the pole topping lift), and the driver is playing the mainsheet and vang. With forward to leeward and in front of the boom, I prefer to have middle sit on the cross thwart, and I'll hike out to windward to get windward heel dead downwind or move into the boat to get some leeward heel in light air and when reaching up for speed.

Gybing

Crew roles during the gybe are straightforward. On our boat, as the driver turns downwind, the middle crew squares the pole. When the driver is dead downwind he calls "angle" which is the trigger for the forward crew to release the pole from both spinnaker and mast. The forward crew pulls the boom to the new side as she's ducking under it, and then reattaches the pole to the mast and kite. There are two methods of managing the pole during a gybe. The one I've just described leaves the pole hanging from the topping lift during the gybe, and has the benefit of ensuring that the forward crew is not pinned to leeward by the boom. In heavier air, keeping weight centerline or to weather can help avoid an unplanned swimming lesson. The other approach to gybing is for the forward crew to wiggle to leeward under the boom before the gybe, then release the pole from the old side and attach on the new side as the driver is gybing the boom. I like having the forward crew pull the boom across during the gybe, as it lets me concentrate on driving, especially in heavier air. Some crews roll-gybe the boat, we try and keep the boat on her bottom during the gybe, though when gybing at the windward or leeward mark we'll often roll her around the mark. On a boat with twing-lines rigged, the forward crew will manage the twings.

Leeward Mark Rounding

Coming into the leeward mark rounding, the driver calls the sequence of events for the forward crew. On our boat, the forward can lower the board, raise the jib, and release the spin halyard standing at the mast facing forward, making it easy to work through the sequence as the driver is calling it. At the douse, forward crew first gathers the foot of the sail, pulling it around the headstay while the middle releases the starboard spinnaker sheet. Once the forward crew has the foot of the sail gathered, then (and only then) does she pull the sail down and stuff it into the bag. It really helps control the sail if the forward crew first gathers the foot then pulls it down. We have our spinnaker halyard run into a clothesline reel (Chubby and Tubby), so some effort is required to get the sail down. This prevents the halyard from releasing too quickly during the takedown causing the sail to drop into the water. We are often gybing at the mark using the driver and middle roll the boat. Middle crew times the sheeting of the jib to be no faster than the main is sheeted in, which will help the mainsail turn the boat upwind.

The Leeward Mark Rounding Sequence

There is often a lot of confusion at the leeward mark rounding, and there are significant gains and losses to be made here. The driver needs to be focused on tactical concerns (determining overlap, steering for a tactical mark rounding), so it pays to have a preset sequence of actions that the forward and middle can do without the driver having to manage the maneuver step by step. In fact, we've rigged 3924 so that the driver has no sail handling responsibilities at the leeward mark except for sheeting the main at the rounding. We define *the sequence* this way, with notation as to who does what based on the rigging of 3924:

1. Tighten the cunningham and outhaul if they were eased
2. Lower the centerboard
3. Raise the jib
4. Detach the pole from sail, then mast, and store it below
5. Release the spin sheet and gather the foot of the spinnaker
6. Release the spinnaker halyard and stuff it into the turtle bag

After a while, the driver can just say "Do the sequence now" (which often comes out more like "quick, get it down!") as the boat approaches the leeward mark rounding, and 30 seconds later the pole and kite are stowed, the jib is up, and the boat is ready to turn upwind without the driver having to watch or think about what's happening on the boat.

Finish

Whether the finish is upwind or downwind, forward is looking in front of the boat to figure out which end of the finish line is favored. For close upwind finishes, middle should call when to shoot up into the wind. But hopefully, with great crew work, you'll have no one in front of you as you cross the line.

Notes on Crewing with Two

Although three people on the Thistle is the norm, the boat can be raced with only two, and double-handed boats have even won Nationals. Two person crews are often lighter than three person crews, and therefore they are faster through the water, especially downwind and upwind in light air. The difficulty in racing with two occurs at mark roundings and gybes. We have found that the key skill to master for double-handed racing is driving with your knees. At the windward mark rounding, I grab the spinnaker sheets while the middle crew hoists the spinnaker, douses the jib, and raises the board. During this time I am crouching just forward of the aft grating and driving with my knees. Once the middle is finished up forward, I hand the sheets to him and can resume normal driving. It's the same gig during the gybe. Have the middle hand the spinnaker sheets to the driver, then go forward and gybe the pole. At the leeward mark, it helps if the middle can gather the kite and then release the spin halyard, while the driver trims. And remember to hike, hike, hike to keep the boat flat when the wind picks up.