

SONAR SEMINAR – 7/20/07

Peter Galloway

GETTING READY

PREPARATION

Sanding/Fairing: Sand the entire boat with minimum 600 wet or dry. Use flat block to remove fiberglass imprint. Focus on front third of the hull and blades. Topsides are important too.

Blades:

- Thin: Optimum for straight line speed/low drag.
Less lift
Less forgiving—requires more concentration
Critical to sail the boat flat
Best in flat water upwind and anytime off the wind
- Fat: An “upwind” shape
Provides more lift
Wider groove
More drag
Slow off the wind
Better in high winds and rough water.
- Wax: Not fast on a bottom.
Water should sheet on all parts of the hull, not bead.
To keep the boat white, use Teflon polish all over (three applications for effectiveness), then sand back with very fine wet or dri to remove beading.
- Marks: Mark all critical adjustments.

TUNING:

- Mast step and headstay fitting max forward position.
- Headstay: 26'-0"
- Prebend: 1" – 2" forward of neutral
- Uppers: 230-260 lb
- Lowers: sag the mast 1 inch at spreaders

RIGGING

- Use fairleads on cleats so crew can trim from the rail.
- Mechanical advantage should be sufficient and low friction. Outhaul and jib halyard especially.
- Tip weight should be minimized. Use Low stretch, lightweight halyards where possible.
- Tie on the spinnaker sheets and halyard.
- Use Spectra/Polypropylene, single ended spinnaker sheets to reduce weight.
- Install mast puller to change mast blocks.
- Use a mainsheet bridle if you are comfortable with it. Use a removable center stop.

- Reduce to a 4:1 mainsheet.
- Reduce the mainsheet blocks one size. Lock them to keep them from rotating.
- Use bullet blocks on the jib clew to reduce friction.

TRIM:

- Top batten should be parallel to the boom both upwind and down.
- Outhaul, should be tensioned according to power need. Maximum when you cannot hold the boat flat or need to drop the boom below centerline.
- Trim boom on the centerline, or slightly higher if you can keep the boat flat.
- Drop the traveler when you become overpowered and sheet harder.
- You mainsheet tension controls your power in both the main and jib. It also controls your jib sag.
- When you want to point; trim hard and poke the top batten to windward. This adds drag so you will go slower.
- When you want to go fast, or have a speed problem, ease the mainsheet until the top batten drops off.
- Sail as flat as possible upwind in almost all conditions.
- In flat water, use a little backstay to flatten the main and jib.
- Minimum cunningham until you start to get overpowered.
- Ease the spinnaker halyard 12 inches to sail by the lee without jibing.

HEAVY AIR TRIM

- Block the mast aft by one inch but be sure to take up the lowers by about three turns as blocking aft loosens the lowers.
- Move the jib leads aft. 2 to 3 inches or more as it gets windier. The top of the jib should be open.
- Drop the traveler to centerline or more to keep the boat on its feet. Sheet hard to keep the headstay straight.
- A little backstay helps flatten the main and keep the headstay straight.
- Power through the wave instead of pointing.
- Trim the vang hard when running to remove lee helm.

WEIGHT

- Crew weigh of 680-720 pounds seems good all around.
- Slight weather heel is good downwind to balance the helm and get the mainsail higher.
- Move the weight aft—especially in planing conditions.
- **SAIL THE BOAT FLAT!**
- Move the weight forward downwind. Put one crew forward of the mat in light air.

CREW WORK

- Learn to roll tack and jibe.
- Use weight placement to help turn the boat with minimum rudder. Weight to windward to head down. Weight to leeward to head up.
- Tack when going fast only and look for flat spot to tack in.
- Ease the mainsheet during each tack in lighter conditions.

- Ease the jib sheet six inches when hit by a strong puff (Northwesters). Then trim back after the puff ends.
- Anticipate the puffs.
- Bring the pole back as far as possible when sailing downwind and ease the sheets.
- In very light air, sail high enough to erect the spinnaker only.
- In absolute drifting conditions downwind, heel to windward, move the weight as far forward as possible, head for the mark and “stop molecules”.
- Have the forward crew always look aft when sailing downwind. He/she should be calling puffs, wind strength and wind shadows affecting you.

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THE RACE

PREPARATION

- Familiarize yourself with the sailing instructions
- Know the rules
- Check with NOAA.

PRE-START

- Get out early and record the wind direction periodically.
- Get port and starboard headings frequently and write them on the leeward backrest so all can see them from the windward rail.
- Are the winds oscillating or is there a persistent shift
- Sight the line and figure out which end is favored.
- Get sighting landmarks to establish the line.
- Is there a lobster pot on the line you can use as a reference?
- Which way is the current running, how hard and when will it change.
- Look up the course and find the windward mark. Is it favoring one tack over the other?
- Which side of the beat has the most wind?
- Keep an eye upwind right up to the start and try to predict the relative strength at the start for trim purposes as well as which way to go to get to the most wind as soon as possible (lighter conditions).

STARTING

- Try to start near the favored end, not necessarily right at it. This can be flavored by which way is favored.
- Are the one minute or other rules in effect?
- Try to set up with a slow boat on each side of you.
- Be up to speed at the gun.
- Sail high early in order to get separation from the boat to leeward and pinch off the boat to windward.

STRATEGY

- Which is the favored way to go on the beat. If you are not sure, try to be closer to the middle of the course for the first part of the beat until a favored side becomes apparent.
- Sail the lifted tack.
- In light to moderate conditions, always look for more wind.
- Sail in the least current, but remember, more wind is better than less current.
- Look at the big picture.

POSITIONING

- It is the hardest thing to learn.

- Position to minimize your risk and maximize your opportunity to gain.
- Sail the lifted tack whenever possible.
- Look for lanes to tack in.
- If the greatest portion of the fleet is headed in one direction, chances are they are right.
- When in doubt, head for the mark.
- Stay out of the blanket zones near the marks.
- Stay away from packs of boats. They create a “wind fence”.
- Sail in clear air as much as possible except in a big shifting winds lie a Northwester. It’s better to be on the lift headed toward the next shift, then to sail in clear air.
- Stay away from the laylines early. (except when local conditions warrant it, i.e current, wind pressure, a lot of boats, etc.)
- Leading back when lifted is the most powerful position.
- Be patient, especially in shift conditions. Wait for the header.
- Try not to take losses until you have to.

TACTICS

- Don’t tack on an opponent intentionally unless you know the other way is the wrong way to go.
- Avoid luffing matches. Encourage the other boat to head for the mark and stay in the race.
- Loose cover means you maintain control.
- Set up for the inside overlap on close mark roundings.
- When a close-crossing boat passes ahead, ease sheets and head down at him early, then trim and head up as he crosses in order to discourage him from tacking on you.
- Head up to break overlaps and force the leeward boat to sail her proper course.

BIG FLEET STRATEGY

- Sail back and forth on front of the line before the start, Keeps away from the pack and allows you to keep a better eye on the wind.
- The “Edges” are critical—upwind and downwind. So even more importance is placed on figuring out which way is favored.
- The middle early and late is slow (lots of bad wind),
- Stay out of the “cone” near the marks.
- Figure out early which gate is favored. See if you can sail by it before the start and figure it out. This can be flavored by not only which is more upwind, but the crowd factor as well as which way to go on the next beat.
- Go for the inside overlap at the leeward marks.
- When departing the windward mark, anticipate the blanket zone from boats astern approaching the windward mark. If you are in a big pack, sail high initially after rounding to get into the “fast lane”.

CONCLUSION

- Remember that the boat that wins the race has the fastest average speed around the course. **BASIC RULE:** always keep your boat moving as fast as possible.
- The winner of the regatta is usually the most consistent. Sail conservatively and win.