Racing Tips

On this page we will have racing tips that are specific to the J/105. Suggestions from owners are solicited. Many of these are reprinted from past newsletters.

Best Tips from Key West Race Week 2001

Jim Doane - If the current is flowing across the upwind leg, work on pointing the boat up when it is leebowing you, and visa-versa foot more when the current is pushing the bow down.

Seadon Wijsen - On crowded race course (like Key West or Block) set up your boat for a little less breeze than the actual, in anticipataion of bad air zones and congested mark roundings. If it's 14 knots true, set rig tension and sail trim selection to 12 knots anticipating the chopped up race course.

Will Keyworth - Always have a team meeting on the way out to the race course, discussing goals for the day. Then on the way in, conduct a teamde-briefing. This is the best way to congeal and improve as a team.

Chris Perkins - On crowded course, make a concerted effort (tactically) to stay out of packs of boats. Winds tend to bend around packs, plus it can be distracting for most crews.

Fast Settings for the Class Jib

by Mark Washeim, Shore Sails Long Island
J/105 News, June 1997

With only one headsail in the class inventory, "changing gears" is the key to trimming the 100% jib in a wide range of wind conditions. The easiest way to remember your fast gears is to develop trimming references for the luff, leech and foot of the jib. Here are a few tips that work well on the J/105:

Trimming References

- The **length of the wrinkles in the luff of the sail.** This will tell you how halyard tension is affecting sail shape.
- The **leech of the jib relative to the beginning of the taper** and the tip of the lower spreader. This will tell you how trimmed you are for a given condition. Mark the taper with a piece of tape and the midpoint from the taper to the spreader tip.
- The **foot relative to the pad eye on deck** (for the furling line on the port side and tack line to starboard) and the adjacent outboard stanchion. This will tell you how full or flat the lower portion of the sail is.

Speed Wrinkles
In light air ease the halyard tension to create luff wrinkles. This will make the sail fuller, give the luff a straighter entry and make the leech more round (moving the draft back). Note the length of these wrinkles relative to any references on the sail (telltales, seams, draft stripes). This will allow you to relate this information to others. The longer the wrinkles, the deeper your sail will be. If the sail begins to get very loose between the headstay foil and the tack, do not ease the halyard any further. Ideally you want the luff wrinkles as long as 26" before this begins to occur. Older sails will fall out of the headstay

extrusion before newer sails. As your headsail ages, you may want to have your sailmaker re-tension the luff tape to further facilitate this adjustability which I find extremely valuable on the 105.

As the wind speed increases, reduce the length of these wrinkles by increasing halyard tension. In most cases, you should begin to use some backstay tension before all the wrinkles are removed, otherwise the sail may become too full forward. In high winds the luff of your sail should be smooth with no wrinkles. Note the position of the draft. You may need to stretch the luff of your sail beyond a smooth setting in order to hold the draft forward, flatten the center, and straighten the leech.

Leech Position
The leech should trim from midway between the taper in the lower spreader and the tip, when no one is hiking. As the wind speed increases, trim the leech closer to the taper. When everyone is hiking, trim the leech to even with the taper. The lower leech should look as if it is parallel with the mast at this point. Never trim the sail so that the lower leech looks inside of parallel to the mast (or hooked to weather). As the wind increases further the leech should be one to two inches outboard of the taper. When conditions are extreme, the leech will be further outboard. In this case talk to the driver and take note of the amount of helm the driver has with the mainsail quite eased. If the helm is excessive, ease the jib sheet to better balance the boat.

Foot Position
Most of today's headsails have a very straight "vertical profile" in the lower 40% or so. This means that the sail is shaped quite flat near the bottom, and so the jib lead position greatly affects the depth of the lower portion of your sail. To best set your jib lead, first set your luff wrinkles with the halyard, then trim in the jib to your leech reference point. Now check your foot position. In light air set your lead so that the foot is about 65% of the way from the foredeck pad eye to its athwartships stanchion. This will give you a very powerful setting. In moderate air (everyone hiking) set the lead so that the foot of the jib is about 30% of the way from the pad eye to the stanchion. This will provide a tight enough leech to maintain good pointing and power without excessive fullness. In high winds move the lead far enough aft so that the foot is flat when the leech is trimmed 1 to 2" from the taper in the lower spreader.

Summary
Because the class jib is a non-overlapping, high aspect sail, halyard tension will greatly effect the lead. Anytime you adjust your halyard you probably need to move your lead. Sail shapes vary with age, from sailmaker to sailmaker, series to series, boat to boat. Using these references when trimming your jib will help you both discover and remember what's fast.

Please feel free to phone or e-mail Mark with any comments or questions: Tel 516-673-5055, E-mail 73611,2375@compuserve.com.

Setting Up the Rig -- From the North Sails J/105 Tuning Guide

J/105 News, Fall 1996

Headstay Length: Headstay should be 13.00m from centerline of the pin passing through the upper end of the headstay at the hounds to the centerline of the stem tang pin at the bottom of the headstay.

Centering the Spar: Hoist a 100 ft measuring tape on a centerline halyard (preferably the jib halyard), then swing the tape to the centerline of the chainplate on each side. When both measurements are equal, the masthead is centered.

Mast Butt Location: The median mast butt location should measure 9.75 inches from the aft bulkhead to the aft surface of the mast, above the floor molding. Be sure to lubricate the plate under the spar with winch grease.

Tensioning the Shrouds: Wind up the upper shrouds (V1s) tight by hand, making sure the mast is centered. Stop when you cannot make any more turns by hand. Do the same for the upper (D2) and lower (D1) diagonal shrouds. Once hand tightened, add the following number of turns to the verticals and diagonals. Be sure to pin the shrouds, as they have a tendency to spin loose.

For the Class Jib:
V1s (uppers) = 11.0 turns
D2 (intermediates) = 10.5 turns
D1 (lowers) = hand tight

This baseline tension optimizes speed and shape for headstay length of 13.00 meters and wind strength of 8 knots true. For more wind, shorten headstay incrementally to a length of 12.95 meters [by winding up the furling drum] at a wind strength of 13 knots true.

Editor's Note: The complete North J/105 Tuning Guide is available at your local North Loft. Please consult your sailmaker for the best settings for your sails. As a comparison to the above shroud tension numbers, on POLAR MAGIC, we had the following shroud settings in most conditions: Uppers - hand tight plus 11 turns, Intermediates - plus 8 turns, Lowers - plus 1 turn, headstay - 13 meters, mast butt just aft of center in step.

Tips From The Owners

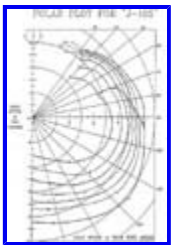
J/105 News, June 1995

- Jeff Johnstone (*Polar Express*, #118) -- With the wheel, most helmsmen tend to sit too far aft. Ideally, crew weight should be out of the ends for ooptimum upwind and downwind performance. In most conditions, I like to sit forward of the wheel with my aft foot on the pedestal guard and my front foot on the seat just aft of the traveller. For the best footing, we took a 1" wide strip of nonskid tape and placed this on both sides of the pedestal guard, then added a small teak footrest on the inboard edge of both cockpit seats aft of the traveller.
- From J Boats: Securing the Tack Line -- The newer model J/105s have an oversized Harken cam cleat aft for the tack line. This is sufficient for most sailing conditions with the class spinnaker, but if you plan to fly the spinnaker regularly in over 25 knots, we recommend either 1) securing the tack line around the bow cleat, 2) taking the tack line tail and wrapping it around the leeward primary self tail cleat, or 3) rerigging the tack line to a stopper.
- Tom Creeden (*Quetzal*, J/92 #67) -- The lazy sheet is under the tack line (for an inside jibe) and is the only line that is crossed. This makes a very clean foredeck. To set, we set the pole, prefeed the tack and clew and hoist away. This seems to work well for us. I can't remember the last time we had a wrap during a set. We don't use a bag below although one could if they were concerned about a snag below deck. When hooking up the halyard as shown in the diagram remember to have the halyard outside the jib sheets. [Diagram shows three corners of the assymmetrical secured by the hatch -- head to starboard, tack forward, and clew to port for a port set.]

Technical Notes

J/105 News, December 1992

Polar Plot: Thanks to Nick Brown who had Rod's theoretical VPP on the J/105 translated to the graphic plot. Click on thumbnail image for more detailed image.



This shows:

	To Attain Optimum VMG		
At Wind Velocity	Boat Speed Beat	Run	App Wind Angle for Opt Run
6	4.5	4.7	86 degrees
8	5.6	5.9	93 degrees
10	6.2	6.4	110 degrees
12	6.4	6.5	142 degrees
14	6.6	7.0	156 degrees
16	6.7	7.5	160 degrees
20	6.8	8.7	160 degrees

J/105 Crew Assignments

J/105 News, April 1996
by Jeff Johnstone

There are lots of ways to organize a crew, and the fewer the crew the easier the job. We enjoyed sailing with lots of new faces every weekend last season and so arrived at a system to simplify our maneuvers and to give everyone something to do during the race. This is how we organized POLAR EXPRESS for a five person team sailing with the three sail class inventory.

BOWMAN:

- **In General:** responsible for finding next mark, collision avoidance, hooking up all spinnaker lines.
- **Before Race:** Tape up bow chocks, bow cleat, check for exposed cotter pins, etc. Re-flake spinnaker. Triple check rigging of all spinnaker lines and hook-up of spinnaker.
- **At The Start:** Site line, collision avoidance, keep time.
- **Upwind leg:** Find next mark, collision avoidance.
- **Weather Mark:** Hook halyard onto spinnaker, open hatch, feed spinnaker tack out during pre-feed. Feed rest of spinnaker out at "HOIST". Pull up on furler line to furl up jib. Then close hatch. Look for next mark.
- **Jibing:** Stand at old windward shrouds and aggressively pull in on new sheet, "skirting" the clew as it passes the headstay. Look for next mark.
- **Spinnaker takedown:** Go forward and hand the takedown line (attached to spinnaker tack) back to the "Squirrel" who is in the forward hatch. When the tack line is released, pull aggressively on

the takedown line to bring the spinnaker around the headstay. When chute is down the hatch, disconnect halyard (leaving head of chute outside of "dogged" hatch) and clip halyard onto handrail. You can also leave halyard attached and simply clip it into the shrouds out of the way of the jib.

MASTMAN:

- **In General:** assist bowman with spinnaker, jump spinnaker halyard at mast, adjust mainsail controls (vang, outhaul, cunningham)
- **At the Start & Windward Leg:** Help call puffs and lulls. Look up race course for wind. Keep eyes out of boat focused on what's ahead.
- **Weather Mark:** Jump spin halyard at "HOIST", release cunningham, outhaul and backstay. Standby for vang adjustment. IF REACHING IN LOTS OF WIND- keep hand on vang and in position to quickly release upon hearing the shout "VANG!"
- **Jibing:** Be prepared to assist Trimmer by handling one of the spinnaker sheets.
- **Spinnaker Takedown:** Tighten mainsail controls for upwind settings, then position yourself to windward of foredeck hatch and stuff spinnaker down hatch, or go below and be Squirrel.

GRINDER:

- **In General:** Assist in cockpit "pulling strings."
- **Before the Start:** align the prop, coil and straighten all cockpit lines.
- **At Start:** handle mainsheet for the helmsman. Be ready to assist Trimmer on final trimming (on port winch) into the start. Help call positioning on nearby boats.
- **Upwind:** call relative boatspeed/pointing vs. competition. While tacking- Load new winch for the tack, do rough trim, then move to windward while Trimmer takes sheet and does fine tune. Standby to assist helmsman on traveler/mainsheet.
- **Windward Mark:** Pull out bow sprit, pull tack line, then hoist spinnaker halyard. Take up slack on furler line (after Bowman furls).
- **Jibing:** handle mainsheet.
- **Downwind:** watch behind calling puffs and wind shadows for helmsman.
- **Spinnaker Takedown:** In rapid succession, release spinnaker sheet (passed off by trimmer), release tack line, and "control" release the spinnaker halyard while Bowman gathers in. Then hop back to help helmsman with mainsheet.

TRIMMER:

- **In General:** fine trimming on jib and spinnaker.
- **Before the Start/Race:** Adjust jib leads and halyard tension to conditions.
- **At Start:** handle jib trimming on both winches.
- **Upwind:** Make all fine-tune sheet adjustments-including halyard. During tack, release old sheet, then move to new leeward side, slap in the winch handle and take sheet from Grinder.
- **Windward Mark:** Pre-load spinnaker sheet on leeward secondary winch, then crack out jib at mark. Trim in new spin sheet and release jib sheet.
- **Jibing:** trim both sheets on the jibe, or have Mastman assist by releasing old sheet.
- **Takedown:** Pass spinnaker sheet to Grinder, check jib halyard setting and lead position, unroll jib, trim jib around mark. When settled release bow sprit line.

HELMSMAN:

- **In General:** focus on driving fast and not getting distracted, forewarn everyone of maneuvers, keep group focused on the race and on having fun. Don't let the little things prevent you from enjoying yourself.

Back to the J/105 Class Association.

nhw@ids.net