

J105

CREW GUIDE

CREW RESPONSIBILITIES,
SAIL TRIM
AND
TECHNIQUES

SPRING 2001

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J/105 Crew Organization and Duties

J/105 News, October 2000
By Robert Taylor

Bob Taylor is a J/105 two-time North American Champion, having won in Newport in 1998 and San Francisco in 2000. He is a retired dentist who has started a dot-com one-design chartering business called OneDesignCharter.com. He served as Vice President of the J/105 Class Association for the 1999-2000 year.

I've been racing the J/105 for several years now and have recently been working with new and existing owners on getting their boats and crews up to speed. I've seen many of the top racing crews in action at the major regattas and have come to appreciate the duties each crewmember contributes to the boat's performance. While every boat's crew may have slightly different duties depending on their personal strengths and weaknesses, here's a guideline for organizing a five-person crew to make it around the buoys.

Bowman:

Before the race: Anything and everything from the mast forward is your responsibility as far as boat and gear preparation, above and below the deck, including the jib and spinnaker inspection, halyards and shackle inspection, sprit and furling drum function. After running the tapes on the kite, rig the spinnaker sheets, tack line and halyard (tape it if there's a shackle), get the jib up and furled, tape bow cleats and any sharp edges in your area. Communicate with the helmsperson and tactician about their starting and race strategy. Dress accordingly, you'll get wet before anyone else!

At the start: Ask to run the starting line for your own reference, get a sense of the intensity of other boats, keep your helmsperson alert to other boats, know what the current is doing at the starting line, it's not always your fault if you're over early! Get off the bow and seated on the rail as soon as possible in the forward most spot.

Upwind leg: Constantly relay information about incoming puffs and wave sets to the helmsperson and trimmer, look up the course to assess the wind direction and strength, relay your impression to the tactician, skirt jib on tacks if needed, adjust outhaul, vang as requested, cunningham if rigged at the mast.

Final approach to weather mark: Free up spinnaker halyard if it is secured to anything, open forward hatch, double-check all spinnaker lines, help pre-feed tack through bow pulpit if necessary, stand at mast ready to hoist spinnaker halyard.

Weather mark and downwind leg: Hoist spinnaker halyard as fast as possible, check spinnaker head for right halyard hoist, be ready to troubleshoot spinnaker wrap, assist in tack line adjustment, close forward hatch, eyeball lazy spinnaker sheet for correct lead, assist in jib furling if needed, face backwards and call out puffs and waves as they come down the course, adjust outhaul and vang. During the jibes, pull in on new spinnaker sheet to get the clew around the furled jib, be fast, pull hard, stay in front of the shrouds.

Spinnaker takedown and back upwind: Make sure the jib unfurls completely, it's CRITICAL the lazy jib sheet gets put behind the open foredeck hatch prior to starting the douse, grab the lazy spinnaker sheet and hand down to the "squirrel". At the douse, pull aggressively on the lazy sheet, whether around the forestay or under the jib, until you can grab the spinnaker tape and make sure the "squirrel" has it coming down the hatch, call for the halyard to be in a controlled release, keep your feet on the deck, not on the kite, gather and guide the kite into the hatch, grab some foot and stuff it in the hatch, leave the tack for last. With the typical port side douse, try to keep the port side spinnaker sheet from going down the hatch with the kite. Once the tack is released, get that in the hatch, gather the tack, sheets and halyard and center them forward in the hatch opening and "dog" down the hatch. Pull some slack in the spinnaker

halyard and get back on the rail, let the back of the boat know they're clear to tack if needed, look for oncoming boats, puffs and waves coming down the course. Do any clean up later.

Pitman:

Before the start: Everything from the mast, back to the primary winches, is your responsibility, above and below decks. All winches, cleats, sheetstoppers, blocks, shrouds, etc. are your responsibility as well as gear stowage and placement below decks. While sail tuning adjust halyard tensions, check onboard electronics for function, make sure the countdown timer is working if so equipped, otherwise make sure your watch can do the countdown. Help the trimmer with the jib sheets during the pre-start maneuvering, be ready to hike to either side after the start, whether to help heel the boat or hiking on the weather rail.

Upwind: Constantly monitor and relay your boat's speed and gauge with boats on your weather side to the tactician and helmsperson, this is especially critical in the first few minutes after the start. Be ready to make any halyard adjustments during any upwind tacks.

Final approach to weather mark: Stay hiking as long as possible, then get into position in the forward cockpit so that you can pre-feed the spinnaker tackline and be ready to extend the sprit once the bow is at the weather mark.

Weather mark and downwind: Bow's at the mark, extend the sprit fully, upon hoisting the spinnaker, tail the spinnaker halyard as fast as the bowman is hoisting it, do not allow any slack in the halyard above the deck turning block. Once hoisted, adjust halyard setting and tack line height. Be ready to let out a little halyard if the kite went up with a twist. Prepare the lazy spinnaker sheet for a jibe, clean up and flake spinnaker halyard. Fly the kite just prior to the jibe and release the sheet as the kite is jibed, make up lazy sheet to do it all over again. Be ready with a winch handle if the spinnaker trimmer needs grinder.

Spinnaker takedown and back upwind: Prior to the douse, double-check the spinnaker halyard to make sure it will run freely, get below to the forward hatch and be ready to take in the lazy spinnaker sheet from the bowman. During the douse pull in the spinnaker sheet and then the tape, be quick about it and try not to twist the kite as you grab it. Once the douse is near completion, keep your head away from the starboard side as the pole is on its way in! Hustle back to the weather rail and assess the competition on your weather hip, again giving speed and gauge to the tactician and helmsperson.

Mainsheet Trimmer/Tactician:

Before the race: Your responsibility is all things from the traveler to the stern, including mainsheet controls, spinnaker blocks and hydraulic backstay adjuster, etc.

Check the mainsail for rips and the battens for tension, check shroud tensions for the racing conditions expected and adjust if necessary. Develop a strategy for the upcoming race and constantly reassess the wind conditions, current direction and the competition.

Have a crew meeting to discuss your plan and get input from the crew. Trim the main during the pre-start and set up a plan to pick an area on the starting line to implement your race strategy. Don't block the helmsperson's view of the boats ahead and keep the boat moving.

Upwind: Set the main up for speed right at the start and get to whichever rail is needed to properly balance the boat. During the tacks, take up the lazy jib sheet and hand over to the jib trimmer once fine-tuning is needed. If on the weather rail, be ready to jump into the cockpit to release the mainsheet if a big dip is anticipated.

Assess tactical and strategic plans as the race unfolds, listen to your crew. Approaching the weather mark: On the final approach to the mark, take over the jib trimming duties to allow your trimmer to prepare for trimming the kite. As the bow rounds the mark, ease off the jib sheet and furl the jib, as soon as the kite is 50% hoisted. Call for adjustments on backstay, outhaul, vang, cunningham.

Downwind: Control the main on the jibes if it's blowing hard, otherwise balance out the boat, have a good view of the surrounding boats and implement tactics to gain positions.

Preparing to douse and back upwind: Call for upwind settings on outhaul, vang, backstay. When ready to douse, unfurl the jib and put the working jib sheet with one turn around its winch. Step on that jib sheet to control the jib tension so that the jib foot is not over the lifeline, but not too tight either. Put the spinnaker halyard around the starboard secondary winch with one turn, remove working spinnaker sheet if necessary. When the douse starts, control the halyard release with pressure on the secondary winch, stopping the douse if necessary with the halyard sheetstopper, keep an eye forward on your bowman to see how he's doing. Once the spinnaker trimmer releases the sheet, he'll take over the jib sheet you've been stepping on. As the douse is nearing completion, release the tack line and sprit, remember to forewarn your "squirrel" that the pole is coming, jump back to the mainsheet and trim to your pre-marked settings. Assess the tactical situation.

Trimmer:

Before the start: Make sure your gloves fit well and your kneepads are thick enough! When sailing upwind check the jib shape, car positions, etc. When trialing the kite, look for rips or tears in the cloth. Get a good feel for the breeze and be nice to the helmsperson, communication between the two of you is what makes it all work. Discuss speed through the jibes and get your timing down.

Upwind: Final trim on the jib and giving the helmsperson the groove he needs is the priority. Call for changes in jib halyard tension if needed. Hike on the rail once the jib is set and you're fast. You're first off the rail to release the jib sheet for any tack.

Final approach to the weather mark: Hand off jib trimming duties to mainsail trimmer and set up working spinnaker sheet on secondary winch. Be on the weather side with spinnaker sheet in hand as the bow rounds the mark.

Spinnaker set and downwind: As the spinnaker is hoisted, trim in on the sheet to spread the corners of the spinnaker, once the kite starts to fill, begin easing the sheet to get it flying properly. Constantly communicate with the helmsperson as to the amount of pressure on the sheet; it's the highest priority downwind. In preparing to jibe, hand off the working sheet to the pitman, grab the lazy sheet from him and cross over the coachroof, under the boom during the jibe itself. Trim in hard on the new working sheet and be ready to ease big time once the kite fills, balance the boat and concentrate on the new trim.

Preparing to douse and back upwind: Prior to the douse, continue to fly the kite as best you can while the jib is unfurled. Once the douse begins and the bowman has the lazy spinnaker sheet well in hand, release the sheet and jump to the new working jib sheet. Trim the jib to the necessary setting as you work back up to speed upwind. Check that the tack line, sprit, and spinnaker sheet are in okay. Once set with the jib trim, get to the weather rail.

Helmsperson:

Before the start: Get feel of the boat, the wind and the waves. Assess the mental and physical state of your crew. Discuss race strategy and tactics with your tactician; be very nice to your trimmer(s). Focus on whether the boat seems to be up to speed this day, if not, try and figure out what's different and adjust accordingly.

Around the course: Stay focused on boat speed and communicate with your trimmers. Stop looking around, you'll only slow down. Don't forget to smile every once in a while and remember to compliment your crew!

View From the Bow – The Bowman and Mark Roundings

From April 2001 Newsletter
By Kevin Kelly (*ECLIPSE*)

Preparation

- Connect the spinnaker at all 3 corners and tape the shackles (we have a shackle on the tack line, one on the halyard, and none on the sheets). It would take me about 10 seconds to remove the tape if I needed to. Not sure how long it might take to go up the mast after the halyard.
- Pull the pole all the way out and pull the tack out to within 12 inches of the end of the pole.
- Put a strip of tape on the side of the cabin, forward of the tackline cleat. Mark the tackline with tape at the same spot and show the main trimmer how to preset the tackline to the tapes. You will want to use tape so that you can move these marks to suit the wind conditions.
- Mark the pole line with permanent marker (this mark will never move) and show that mark to the main trimmer. Bring the pole back in.
- Bring the spin halyard to within 18 inches of the top and mark the halyard with permanent marker at the mast exit. Show this mark to the mastman.
- Run the starboard sheet under the furling basket to keep it from getting caught up when furling the jib.
- Slipknot the halyard to the shroud base to keep it out of the way.

We ALWAYS set and take down on the port side. Also, we always use the cabintop winches for both the jib and the spinnaker. On the last tack to starboard for the final approach to the rounding, the jib is trimmed to the port primary winch so that the spinnaker sheet can be set up on the port cabintop winch.

“Average” conditions @ 10-15 knot winds low waves. No Offset.

At about 4 boats from the windward mark . . .

- The bow asks the tactician what the plan is but prepares for anything (bear away, jibe set, set jibe, etc.).

Bear away set

At about 2 boats from the windward mark . . .

- I stand up, open the hatch, lift the TACK and the starboard sheet over my legs with my left hand, put my left foot against the port toe rail, and sit on the forward edge of the hatch opening.
- I tug the HEAD to release the slipknot in the halyard and drape it over my left arm.
- I prefeed the tack over the bow pulpit by pulling on the tack line with my right hand and helping the sail out of the hatch with my left hand
- While he’s still sitting on the rail, the mastman starts to “sneak” the halyard until the HEAD is about half way up the back of the jib. He does so by pulling on the halyard between the turning block at the base of the mast and the cheekblock on the cabintop. This keeps some weight on the rail and reduces the chance of a knot at the turning block.
- The main trimmer hands the mainsheet to the driver, sets the tackline via the tapes, and takes up the slack on the tail of the halyard.

As the bow passes the mark . . .

- I call for the pole and the main trimmer pulls it out to the mark as I feed the rest of the tack of the sail forward.
- The spinnaker trimmer brings the CLEW back to the shrouds and holds there.
- The mastman jumps the halyard to the mark at the mast exit, calls it made, releases the outhaul, and adjusts the vang.
- The main trimmer takes the tail of the halyard back with him so that he can help get the main out and release the port jib sheet.

- I stand up, furl the jib, close the hatch, and, standing just in front of the spinnaker trimmer, flip the lazy sheet out from under the furling basket and call “bow is ready to jibe at anytime”.

In less wind everything is a little later and a lot slower.

In more wind I would start at about 3 boats out and be careful not to sneak the halyard up too high. It's critical to keep the head of the sail against the back of the jib to reduce windage and keep it from getting away and hitting the mark or another boat.

With 6 guys you would keep the main trimmer on the mainsheet and have a pitman setting the tackline, pole, and tailing the halyard.

Set Jibe

Same as bear away.

Jibe Set

Same as a bear away set except that I flip the starboard sheet out from under the basket before I open the hatch and . . .

As the bow passes the mark . . .

- I call for the pole and the main trimmer pulls it out to the mark as I feed the rest of the tack of the sail forward.
- I help the spinnaker trimmer bring the CLEW forward until it's just around the forestay.
- The mastman jumps the halyard to the mark at the mast exit, calls it made, releases the outhaul, and adjusts the vang.
- The main trimmer takes the tail of the halyard back with him so that he can help get the main out and release the port jib sheet.
- As the boat jibes, I duck under the jib and walk the bulk of the spinnaker forward and around the forestay. The spinnaker trimmer hauls in the slack and trims in the sail.
- I furl the jib, close the hatch, and, standing just in front of the spinnaker trimmer, call “bow is ready to jibe back at any time”.

An offset at the windward mark, when square, can give you a little more time to clean things up for the final set. However, you will need to know ahead of time if the offset is square and not upwind or downwind of the turning mark. On a square offset, the pole goes out at the mark so I need to be careful not to let the foot of the sail get away from me while we're reaching to the offset. If the offset is far enough downwind of the turning mark, the spinnaker can go up early and be pulling before you get to the offset (read your SI to see if this has been disallowed!). If the offset is far enough upwind of the turning mark, you will want to be very careful not to get things going too soon. In this situation you would treat the offset as if it were the turning mark in your approach.

Windward takedown

As we approach a port rounding, on port . . .

At about 5 boats from the leeward mark . . .

I tell the main trimmer that he will be releasing the pole then the tackline and to wait until I call for the halyard. I also ask to make sure that the halyard and spinnaker sheets have been flaked.

At about 3 boats from the leeward mark . . .

- Mastman goes below and stands on the floor of the head area. The mastman **MUST** stay away from the path of the pole.
- I stand just to windward of the hatch and get a good grip on the lazy sheet.
- The driver calls for the jib to come out.

- When the driver calls for the takedown, the main trimmer blows the pole, blows the tackline and watches for the CLEW to come around the forestay.
- Once I get the CLEW around the forestay I call for a controlled release of the halyard.
- I grab the CLEW and hand it through the hatch to the mastman.
- The mastman's job is to work all the way up the tape from the CLEW to the HEAD while I gather the body of the sail into the hatch. The mastman makes sure that all of the sail is up in the forepeak and comes out the back to get to the rail.

Leeward takedown

As we approach a starboard rounding, on starboard . . .

At about 5 boats from the leeward mark . . .

I tell the main trimmer that he will start by releasing about 6 feet of the halyard and then wait until I call for more. The pole and the tackline come in last. I also ask to make sure that the halyard and spinnaker sheets have been flaked.

At about 3 boats from the leeward mark . . .

- Mastman goes below and stands on the floor of the head area. The mastman **MUST** stay away from the path of the pole.
- I take the starboard (lazy) sheet and reach for it under the jib as I bring it around the forestay tucking it under the basket. I hand the lazy sheet through the hatch to the mastman.
- The driver calls for the jib to come out.
- When the driver calls for the takedown, the main trimmer eases the halyard so that I can reach under the jib and pull the foot of the spinnaker on board.
- A controlled ease of the halyard allows the mastman to work all the way up the tape from the CLEW to the HEAD while I gather the body of the sail into the hatch.
- Finally, I call for the pole and the tackline. The mastman makes sure that all of the sail is up in the forepeak and comes out the back to get to the rail.

Mexican takedown

As we approach a port rounding, on starboard . . .

At about 5 boats from the leeward mark . . .

I tell the main trimmer that he will start by completely blowing the halyard. The pole and the tackline come in last. I also ask to make sure that the halyard and spinnaker sheets have been flaked.

At about 3 boats from the leeward mark . . .

- Mastman goes below and stands on the floor of the head area. The mastman **MUST** stay away from the path of the pole.
- The main trimmer sets up the starboard jib sheet on the cabintop winch.
- The driver calls for the jib to come out on the wrong side.
- When the driver calls for the takedown and starts his jibe for the mark, the spinnaker trimmer over-trims the sheet and I reach down and pull the foot of the sail on board.
- The mainsail trimmer blows the halyard and the sail falls to the deck and is stuffed down the hatch.

Finally, I call for the pole and the tackline. The mastman makes sure that all of the sail is up in the forepeak and comes out the back to get to the rail.

Three ways to Douse an Asymmetric

From the Experts TECHNIQUE BY DAVE ULLMAN

Edited by Marvin Pozefsky from Sailing World Magazine

The Leeward Drop

The general rule we use now is: unless we absolutely have to, we won't do a leeward drop in more than 7 knots of wind. Only if you're laying the mark, or worse, if you're over-laid, should you attempt a leeward takedown. Here's how to do it properly. If you have a very competent crew, and enough people, keep heading toward the mark and blow the halyard—release it completely. If you leave the tack nailed and the foot stretched tight, you usually won't shrimp. Like a symmetric spinnaker, the a-sail should float just over the water. Then grab the middle of the foot and haul the sail into the boat through the forward hatch.

If you don't have 100-percent confidence in your crew work, you'll want to run off for two or three boat lengths as you douse the sail. This will blanket the chute behind the main, depressurizing the sail so you can gather it in, under control. But running off will take you away from the mark. You'll lose those boat lengths, which become double when you head up toward the mark. It's better to not approach the mark on layline, because then you can do one of the two preferred a-sail drops: either the weather strip or the Mexican.

The Weather Strip

The weather strip is one of the bread-and-butter moves at the leeward mark. A weather strip keeps the sail on the weather side, so there's no chance of shrimping. The first step in a weather strip is to raise the jib. Then the bow person grabs the lazy sheet, which is used to pull the sail around the headstay to the windward side.

Steering the correct course is the key to this maneuver. To help rotate the spinnaker around to the weather side, the boat must be turned almost dead downwind. After the bow has been turned down at least 20 degrees from the usual downwind course, the foredeck team starts pulling hard on the last sheet to start the spinnaker around the headstay.

The chute must collapse as the boat turns down. If it doesn't, you won't be able to pull it around. If the chute won't collapse, release the tack completely. Don't ease it part way—easing it only five feet or so will only make the sail deeper. Release it all the way and the sail will collapse. Here's another tip: keep the jib sheeted in so that the chute collapses into it. Then the spinnaker can't go anywhere except on deck.

After the chute collapses and the clew is pulled around the forestay, you can begin easing the halyard. When most of the sail is pulled to the weather side, you can release the halyard completely and the chute will just fall down the jibe and onto the deck. The helmsman must keep the bow down during this part of the maneuver. If he heads up too quickly, you can lose control of the spinnaker as it's coming down.

The Mexican

This type of drop is called a Mexican because, in the 1992 America's Cup, San Diego's prevailing winds were so consistent that every time crews rounded the leeward mark and performed this maneuver the boats were pointed toward Mexico. The name has now become so universal that I often hear it used in Europe. With a little practice, this takedown can be completed in about two-and-a-half boat lengths. Unless you've got a top crew, you don't want to tackle this in a big breeze or you'll end up with the spinnaker in the water. But it's the fastest and most efficient way to get around the mark if a jibe is required.

Before the jibe, raise the jib and have the foredeck team grab the lazy spinnaker sheet on the leeward side. As the boat jibes, four things must happen. The foredeck crew pulls on the lazy sheet and

then grabs the foot of the chute as it comes across. The cockpit crew jibes the jib, but doesn't release the old spinnaker sheet. A spare crewmember pulls the spinnaker leech forward to keep the sail from blowing behind the mast. The pit crew begins to ease the spinnaker halyard just as the boat begins to turn.

By the time the boat is in mid-jibe, the halyard is well down, the spinnaker sheet is now being eased, and the chute should be ready to collapse into the foretriangle, on the weather side of the jib. Like on the weather strip, the jib is oversheeted on the new leeward side to funnel the chute down to the deck. The helmsman needs to watch the drop and turn the boat fast enough to keep the spinnaker on the new weather side. If he turns too slowly, it will drop into the water as the jibe is completed.

With a good rate of turn, the chute will drop onto the foredeck, but it's important not to ease the tack until the sail is fully under control. If the sail ends up in the water by accident, you won't lose control of it if the tack is still nailed. But, if the sail hits the water with the tack eased, then all three corners of the sail are loose and you'll end up with the sail trailing behind you—shrimping. And we never want to do that again!

J/105 "Speed Day," May 18, 2001

By [Tim Dawson](#), North Sails



On Friday May 18, North's Rhode Island sail loft hosted a "Speed Day" for twenty-five J/105 owners and owner's representatives in fleets 14 (Narragansett Bay) and 2 (Northern New England.) We'd like to extend a special thanks to both JC Raby and Jeff Johnstone, for donating their brand new J/105's for the testing session.

Both J/105's were outfitted with brand new Sharkskin mains, 3DL™ AP jibs and AP 77 square meter asymmetrics. The boats lined up and sailed a series of five-minute tests in the 'two-boat testing' format. The goals of the tests were to see how the two boats were being sailed and define how the differences affected performance. Aside from being a little chilly, sailing conditions were perfect. We sailed north of the Newport Bridge, where we saw winds of 12-18 knots from the south with flat water. Owners split time between sailing aboard the 105's and observing the tests with Ken Read from the spectator boat. Most owners felt that the time spent observing was the most valuable.

After sailing, the boats were put away and we had a short debriefing of observations along with a question and answer session with Ken Read and Andreas Josenhans.

Downwind:



"Ease, ease, ease, and then ease some more" - Ken Read.

The key to sailing deep angles is to allow the sail to be eased so that the maximum area projects out from behind the main. When sailing low, nearly all the collapses of the spinnaker are "leeward breaks". This is when the wind on the leech of the spinnaker becomes stalled. After the leech becomes un-pressured, the sail will then collapse with a similar look to a "windward break". It is important to trim the spinnaker from a position that you can see the leech of the sail. When the leech becomes un-pressurized, the trimmer must ease more and/or have the driver head up a little. When progressively easing to the "max ease" position, the sail will curl temporarily, but then it will settle back in to a full flying shape. When easing, expect the first couple panels to curl, but they will pop back full. It was easy to see this effect from the spectator boat. Many owners were astounded at how they could see the leech of the spinnaker get soft with an over-trimmed sail.

Tack line height - When sailing deep angles, a high tack helps to allow the spinnaker to rotate to windward for maximum projection and sets the luff of the spinnaker in a proper running shape. You can get to the point where the tack gets too high and you lose projected area. The maximum height of the tack seems to be 5 feet. Marks should be made on the tack line to show where this point is so the tack can be pre-set. For reference the "boom above sheer" (BAS) measurement of the J/105 is 5 feet. This is the height of the gooseneck off the deck. The tack should never be eased above the gooseneck. In choppy water the tack line may need to be carried slightly lower to help stabilize the sail and make it more forgiving to trim.

Vang tension - the best rule of thumb is to set the top batten parallel to the boom. From this point, you can't be far from wrong. At tighter angles the vang may need to be a touch looser.

Upwind:

Steering - In flat water and moderate wind, sailing high instead of footing for speed provided the best VMG. I think that we were all surprised how high you could sail while only losing a little bit of speed. The extra speed gained by sailing lower was not enough to compensate for the lack of height. The faster boat was flatter most of the time. This was achieved more by sailing high than de-powering the boat with the sails. Note of caution here - introduce some choppy waves and this may not prove to be true.

Traveler vs. sheet - In flat water, keeping the leech tension constant and slightly twisted and de-powering by lowering the traveler in the puffs, yielded the best results. This is due to the fact that the minimal change in steering is required to maintain speed. Previous testing in choppy water in similar breeze has shown that keeping the traveler car near centerline and changing the twist with the mainsheet fine tune was faster. This is because there is a wider range of steering that is required to maintain speed in chop.



Lessons Learned:

Any time we are able to sail two boats together in a controlled environment, we want to make sure that we learn from it. It should be noted that these lessons might be very specific to the conditions of the tests. The techniques that work in these conditions may be universal, but different techniques may be better in different wind/wave conditions. Remember, these conclusions were based on the flat water with 12-14 knots downwind building to 18 knots upwind. More chop, and/or more or less wind might have produced different findings.

Target Boat Speeds

From Nick Brown

| True Wind | Up Class | Up 155 | Down 77 | Down 89 | Down 110 |
|-----------|----------|--------|---------|---------|----------|
| 6 | 4.7 | 5.3 | 5.2/76 | 4.7/86 | 5.9/68 |
| 8 | 5.6 | 6.1 | 6.0/89 | 5.9/93 | 6.8/83 |
| 10 | 5.9 | 6.5 | 6.7/97 | 6.4/110 | 7.1/102 |
| 12 | 6.2 | 6.6 | 7.1/108 | 6.5/142 | 7.6/112 |
| 14 | 6.4 | 6.8 | 7.4/117 | 7.0/156 | 8.1/116 |
| 16 | 6.5 | 6.8 | 7.3/133 | 7.5/160 | 8.6/116 |
| 20 | 6.6 | 6.9 | 7.3/179 | 8.7/160 | 10.0/117 |

J/105 Quick Trimming Guide



| Wind: | Backstay Tension: | Headstay Length: | Outhaul: | Cunning-ham: | Boom Off Centerline: | Vang: | Jib Top Batten Angle: | Jib Halyard: |
|-------|-------------------|------------------|------------|-------------------------|-----------------------|----------|-----------------------|-------------------------|
| 0-6 | Off | Max. Length | Eased 3" | Eased | Above by 9" | 0 | Open by 20 degrees | 9" wrinkles |
| 6-9 | Off | Max Length | Eased 2" | Eased | Above by 9" | 0 | Open by 15 degrees | 6" wrinkles |
| 9-12 | 10-20% | Max Length | Eased 1.5" | Slight Tension | Centerline | 0 | Open by 5-8 degrees | 6" wrinkles |
| 12-15 | 30-75% | Max Length | 3/4" Eased | No wrinkles | Centerline to down 6" | Snug | Open by 2 degrees | No wrinkles |
| 15-19 | 75-100% | Shorten 1" | Black Band | No wrinkles | Down 1-2 feet | 75 lbs. | Open by 5 degrees | No wrinkles plus 1 inch |
| 19-22 | 100% | Shorten 1.8" | Black Band | No wrinkles plus 1 inch | Down 2-3 feet | 100 lbs. | Open by 5 degrees | No wrinkles plus 1 inch |
| 22+ | 100% | Shorten 1.8" | Black Band | No wrinkles plus 1 inch | Down 2-3 feet | 100 lbs. | Open by 5 degrees | No wrinkles plus 1 inch |