



# HOD Tips & Tricks

*These are some tip & tricks selected for publication through the years. They are meant to help you along your way... If you are a HOD skipper and wish to contribute please contact us!*

## Jib Leads

The fore and aft location of the jib leads are an important adjustment for overall boat speed. The standard starting numbers are 84 to 86 inches from the stem. This is a good place to start. I just measured my standard range and it is 85 to 86 inches.

There are a couple of things that might make these measurements different from boat to boat. They are the height (or size) of your jib blocks and the location of your headstay relative to your stem. There are also a number of items that will change your effective jib lead even with the same stem to block measurement. I've put them in the following table so that it is easier to see their effect.

<u>Control</u>	<u>Moves Effective Lead Forward</u>	<u>Moves Effective Lead Aft</u>
Mast Rake (mast tip aft)		X
Jib Halyard (tighter)	X	
Cunningham (tighter)		X
Overall Jib Height Off Of Deck (higher)	X	
Size of Jib Block (larger, i.e. higher)		X
Location of Headstay (closer to stem)		X
Sheet Tension (harder)	X	

Now that you know what influences the lead, the question is where should we set it? The rule that it should be set so the jib breaks evenly from top to bottom doesn't work in most dinghies including the HOD. The lead would be too far forward. The key is looking at the leech. It should match the mainsail which will always have your jib luffing up high first. If you are sailing in conditions that has your main near centerline with a fairly tight leech you would have your jib lead further forward. In windier conditions when the main is being dropped down to leeward the jib leads need to come aft to open up the top of its leech. Keep in mind small adjustments have fairly large effects on our jibs.

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## Thunderstorm Movement - Is it a threat?

During the summer, there are many times that you see a dark storm on the horizon which you are rightfully concerned about. If you are thinking about going out, should you or if you are already out on the water should you head in . We had this at the Wolcott Memorial last year and at the Nationals two years ago. Because of the relatively slow speed that we can sail and the high winds associated with these storms it takes a little bit of planning to be safe. Storms are either frontal related or just isolated storms produced by convective energy. If they are frontal, then they will travel with the front. The Chesapeake Bay area generally has fronts that pass from the NW to the SE. Take a look at a weather map before the days racing do determine any frontal threats. The speed and direction the fronts are moving is easily forecasted. The second type of storm is the isolated buildup that we see so often during our summers. These storms move with the winds aloft. Although the jet stream will push the top of the largest storms off in their direction, it is not the controlling factor in storm movement. Most of the mass of a buildup is in its lower portion. Because of this, it is the 5000 foot winds aloft and the 10000 foot winds aloft charts that need to be studied. These two wind directions generally will not be that far apart from each other. The storms will follow this wind direction. Armed with this knowledge you can make sound, safe decisions.

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## Measuring Mast Rake

Mast rake is a critical measurement in all race boats. Larger keelboats measure it by keeping track of their head stay lengths. Most dinghies actually measure the distance from the mast tip to some fixed point aft. In the Hampton this point is the centerline where the deck meets the transom. It is important to have firm rig tension, and pull the ram on enough to keep the mast straight. This requires sighting up the aft edge of the mast to confirm that it is straight. Just a slight bend will change your measurement significantly. If you use the larger wire in your jib luff as your primary head stay, you will need to have your jib up for this measurement.

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## Current and Tide

Everyone knows that current is the horizontal flow of water and tide is the rise and fall. What some people seem to confuse is how different the times of high and low tide are from slack current. All of this information is available in a number of forms but comes from the same data bank. Unfortunately, all of the current points are in the shipping channels or close to them because they were researched for commercial use. For the Hampton Trapeze, May 19th, the tide information for Hampton (it is within a couple of minutes everywhere in Hampton Roads) shows high at 0659, low at 1257, and high again at 1924. From this information you might conclude that the current would be changing sometime around 1300. That is just not even close! Based on data from the closest current point to the race area ( about 2 nm SSW), slack occurs at 0841 and again at 1521. At 1133 it is max ebb flowing out at 076 degrees and 1.0 knot. A couple of other ideas to remember is that current flows strongest in deep water, but changes direction first in shallow. Also, all of the published times are assuming no weather influence. High winds will significantly change both the timing and the strength of current and tide.

### Hampton Trapeze - May 19, 2001

TIDE	CURRENT
0659 HIGH	0841 SLACK
1257 LOW	1133 MAX EBB (076' @ 1.0KT)
1924 HIGH	1521 SLACK

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## Light Air Technique by Latane

Have the crew move gently outside the coaming on the low side to maintain leeward heel, and ease the jib about 1-3 inches from the 6 kt. setting. The helmsman should ease the main about 3 inches and move inboard if necessary. In the light stuff it is also important to keep the skipper's weight forward of the traveler bar to reduce wetted surface. In these conditions the jib luff wire should be loose and sagging to leeward 3-4 inches at midpoint. Have the vang and cunningham off and the outhaul on hard. The ram should be up 1-2 inches above neutral for some prebend, and the traveler to windward to allow the end of the boom to get near centerline, without putting too much downward tension on the main leech with the main sheet.

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## Upwind Main Leech Control

The shape of the main leech is one of the most important upwind speed components on the boat. The best way to determine how open or closed your leech is set up is to watch the telltale on the aft edge of the top batten. When your leech is closed, this telltale will hook around the back side of the main, when it is open it will continuously stream aft. Your leech is controlled one of two ways. If you have a traveler, you can control the leech with the mainsheet and then use the traveler for the in and out angle of the sail. The other solution is vang sheeting. With this method you use your boom vang for the vertical tension and use the mainsheet to control the in and out angle.

In light air you want the top telltale streaming aft 100% of the time. This will require no boom vang and pulling your traveler car to windward in order to minimize the downward component of the mainsheet. As the wind builds your leech should become tighter. If your speed is good try stalling the top telltale 25 - 50% of the time. If you slow from either hitting a wave or experiencing a drop in pressure immediately go back to good flow by opening the leech. Remember that whenever the wind drops your leech will close up unless you make an adjustment. If you are sailing in stronger wind you will not be able to stall the top telltale. In these conditions I just sail with a very tight leech with the boom dropped down off centerline. This will flatten the main by inducing more mast bend and also help keep the headstay tight and the jib flat.

One other piece of gear that comes into play with leech control is the mast ram. Whenever you are trying to tighten the leech, the ram must be set. If it is allowed to float up and down, then as you tighten the mainsheet or boomvang in order to tighten your leech it will actually be bending your mast instead.

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## Outhaul Adjustments

The outhaul controls the draft in the lower third of the main. Let it out and get more draft, pull it in and get less. That part is pretty obvious. The point that is sometimes missed is the amount of influence the outhaul has on the lower batten. When it is let out the batten hooks to windward. If the wind is light enough not to sheet the boom to centerline this can be good. You get more draft and a straight aft exit relative to the boat. If the wind gets really light be careful of having too much draft. The error that is most common is in the fully powered up conditions; the times that you are looking for more power. You have the boom on centerline and you can't quite hike the way you feel you should. If you ease the outhaul you will get more power, but you will also significantly increase the drag. My number one parameter for outhaul adjustment is the exit angle of the bottom batten relative to the boat centerline. I rarely let it hook to windward. The result is a harder outhaul than if you looked at draft alone.

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## Some ideas to help you point

Here is a list of things that will help you point or sail closer to the wind. Remember this does not necessarily mean a higher VMG or velocity made good upwind. However, there are times for tactical reasons that pointing becomes more important than pure VMG. Of course any of these can absolutely destroy your boat speed if taken to an extreme.

- Tight leeches particularly the main. The telltale on the top batten should be stalling some.
- Weight forward
- Heel more
- Less rake or rig forward
- Draft in the aft range, particularly the jib. Get this with a loose sailcloth and a tighter headstay.
- Less main cunningham.
- Traveler up
- Lead forward on the jib
- Tight sheeting angles
- Steer so that windward telltales are lifting
- New sails are always good for a couple of degrees.

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## Getting your spreader sweep symmetrical

Accurate symmetric spreader sweep is a difficult thing to achieve when just counting turns or using a protractor. If they are not exactly symmetric, as you load the rig up you will get a side to side S bend that can not be removed. Here is the solution that I found to work extremely well. Take your shrouds out of the spreader tips and rig your mast. Snug up the rig in the approximate rake that you sail with. Depending on how adjustable your shrouds are you may need some help holding them snug and in the proper deck position. On a step ladder, measure the horizontal distance from straight shroud to spreader tip and adjust to be equal. These steps will ensure very accurate symmetry. From this point on just count turns to achieve the sweep that you would like. Another thing to keep in mind when you reattach your shrouds to your spreader tips is to keep them up. The shrouds do not slide through the tips so when it blows harder and the rig gets tighter the tips will come down. You don't want the spreaders below horizontal when they are fully loaded up. To achieve this you will have to have them a little higher than what looks right in the lighter air.

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## Centerboard Upgrade

There have been numerous approaches to how to make a fast Hampton centerboard over the years. The more recent ones have been an anodized board that could not be sanded, a polished aluminum one that had to be continuously sanded, and a baked on hard powder coat finish. This last one is what is standard equipment on the newest Mathews Brothers Hamptons. If you have either an anodized or polished aluminum board, Eddie Williams (757-727-0750) can have this new technique done to your board. The first part of the process is to rough up the original board to get a good bond with the paint. Because of this, there is no reason to do anything to your c/b before bringing it to Eddie. It takes a couple of weeks so the off season is a great time to have it done. The cost is \$100.00 and the only color available is white. It will be returned wet sanded and ready to go. Eddie works with Buddy Krise on these. The Wheelers, Stokes, Hannas and Eddie Wolcott are a few that are sailing with this new finish.

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## Reading List - Great Books that will help pick up your game

1. Winning in One-Designs by Dave Perry -- If you only read one of these, read this one. It covers our whole sport and is an easy and entertaining read.
2. The Art and Science of Sails by Tom Widden and Michael Levitt -- Great book on sail trim.
3. Sail Power by Wallace Ross -- This book is some what dated, but it starts at the basics in sail shape and works on through all the variables.
4. Championship Tactics by Gary Jobson, Tom Widden and Adam Loory -- Just what it says.
5. Sail, Race and Win by Eric Twiname -- This book is unique. It describes how to approach the sport. Subjects like practice, mental preparation, reinforcing success and the secrets of losing are a few that are covered.
6. Rig Your Boat Right by Mark Chisnell and John Hodgart -- Some good clues on how to solve your rigging problems.
7. Understanding The Racing Rules of Sailing Through 2004 by Dave Perry -- Dave's books on rules are a great way to learn the rules as well as to use as a reference throughout the racing year.
8. Wind and Sailing Boats: The structure and behavior of the wind as it affects sailing craft, by Alan Watts -- Like all weather books, I found this to be somewhat of a difficult read but full of great information.
9. High Performance Sailing by Frank Bethwaite -- Save this one for last. When you read this you'll be ahead of me. It is very technical and I haven't gotten through it yet.
10. The Offshore Race Crew's Manual by Stuart Quarrie -- This book doesn't apply to Hampton racing, but if any of you race occasionally on larger boats it will help. It is the only book I have found on sail and boat handling for larger keel boats for around the bouy racing.

## Subscription

1. Speed and Smarts by David Dellenbaugh Annual rate is \$40 (ten issues). 1-800-356-2200.
2. SOUTHERN BAY RACING NEWS YOU CAN USE by Lin McCarthy Lin does a great job with this weekly e-newsletter. She covers all racing in the southern Chesapeake and includes some national and international news as well.
3. Scuttlebutt just send a blank email to: [join-scuttlebutt@listsrv.boats.com](mailto:join-scuttlebutt@listsrv.boats.com) This is a frequent (almost daily) e-newsletter focused on national and international racing. It can be a little overwhelming, but then it is not hard to hit the delete key!

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## CBYRA High Point Trophy - Key points not to miss:

The CBYRA High Point Trophy is awarded to the skipper with the best score on the bay for the entire season. All of the details of the scoring rule are presented at CBYRA High Point Rules and Formula. The following notes are some key points that will ensure you will score as high as possible.

1. You must be a member of CBYRA. Join now. The cost is \$30.00. Go to the [CBYRA page](#) for info. Last year we had 17 paid members and 4 more that sailed enough races to qualify but did not join.
2. You must sail a minimum of 5 regattas to qualify. The nationals count. Since you must sail 2 events in order to compete in the nationals, all you have to do is sail 2 more and you qualify for high point also! The other key number to

remember is 8. If you sail 8 events, you will drop your worst score which will usually significantly improve your overall score.

3. Your score is improved by a factor of 25% if you sail one event outside your own area. Last year everyone that qualified did this. What this really means is that your score will be significantly reduced relative to the other competitors if you don't meet the requirement for these "bonus points".

4. The high point formula adds 2 points to the numerator for every event the competitor participates in. This favors those that race the most events regardless of how well they do. So get out and race and move up the list.

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## Keep a Log

Several of our competitors keep a race log and record scads of information, particularly concerning rig tuning, sail trim in various conditions, and mistakes. Why? First, I think, for repeatability. While some settings should remain fairly constant when the rig goes up and down (e.g. spreader sweep), others (like mast rake depend on factors like the mast ram setting and the headstay tension. To get predictable, repeatable results, it is very handy to refer to a log or race journal as the rig goes up. A similar logic applies to sail trim for various conditions on the water. With a log that tracks settings by wind speed and sea state, you may be able to reproduce the magic more often.

The second reason I've heard of for keeping a log is to learn from mistakes. Sometimes the mistakes can be local, as when you detect a wicked adverse current somewhere on a course. Sometimes the mistakes are general: boathandling, misunderstanding the rules, tacking for no reason. Although you probably will remember some of these mistakes, the act of writing them down will enhance memory and may help you analyze what happened afterward. Of course, you can learn from successes as well -- indeed I find that I'm recording what I'm doing right more than what I'm doing wrong, because, at this time, it's less writing.

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## Puffs and Shifts

There has been a lot of material written about sailing in puffy and shifty conditions, but here is one point I picked up from Kevin Hanna this last summer. When a puff hits, if you don't head higher than it is a header and you should tack. This is true because boats can always head higher with more pressure. So even though it appears that the puff is from the same direction as the previous breeze, it is actually a header. By tacking quickly, you will take advantage of the much more obvious lift on the other tack.

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## Avoiding the "The Teabag"

On Sunday at this year's Rock Hall Regatta, Tom Ballantine was looking to crew for Steve Kistler, because the wind looked pretty heavy. It didn't turn out that way, but during some pre-start maneuvering, Tom was out on the trapeze, lumbering along, in the words of Lars Florio. Suddenly, a very big header put Tom in the drink on the windward side, tea bagged. In the ex-post analysis, there was one key point. The skipper needs to **bear off** to get the crew back in the boat. There's really not a lot of hope that the crew will be able to unhook because in addition to his or her own weight, there's a whole bunch of water flowing by. So, the best hope for getting the crew back is to fall off and let the crew scramble back aboard as the sails start to draw, which pulls the crew back in close to the hull. We sort of figured this out, but through some trial and error, so if it happens next time, I'm just going to fall off.

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## Varnish Work - Red Devil Scraper

One of the traditions of the Hampton Class is the varnished coamings, centerboard cap and rubrails. Although all boats do not maintain these in pristine varnished condition, most do. Here is an idea that my father learned from the craftsmen at the Concordia Yard in Padanaram Massachusetts back when their boats were the traditional 40 foot yawls and the 12 foot Beetle Cats. Both of these boats had more than their fair share of varnish work. Over a season bright work tends to get nicked up. These nicks are time consuming to blend in with sandpaper. These craftsman used small scrapers that they kept very sharp with a file. With a sharp edge and using the base of the handle as a guide it is quite easy to blend those nicks in. The scraper acts like a hand held plane. Use the file frequently to keep the edge sharp. You will be pleased with the results!