

# Highlander Tuning Guide

This tuning guide is designed to make sailing your Highlander as clear and straight forward as possible. Superior boat speed depends on adjustments to your rig and sails.

The following measurements and sail trim tips are what we have found to be the fastest for setting up your new sails. As you are getting used to your new sails, this guide should be referenced when setting up your boat for the varying wind conditions.

## Rig Tune

There are a number of elements that are involved when properly tuning the Highlander. Combining the correct rake measurement with the proper shroud and diamond tension is important to attain top performance. Outside of sail trim, correct rig tune is the most important contribution to top boat speed.

## Mast Step

Your mast should be set up to the class minimum position, which is 67" measured from the forestay to the front of the mast. We've also found that placing a 3/16" to 1/4" shim under the back of your butt casting. This prevents the mast from flattening out too quickly and allows for more "punch" by straightening the mast.

## Mast Rake

You can measure your rake by hoisting a 50 foot tape measure to the top of your Highlander mast. Proper mast rake should be 30'-4" when measured from the top of the mast to the intersection of the deck and back transom. This is a great setting for a nice helm feel. As you measure your mast rake also make sure your rig is square by measuring the side to side distance from the top of your mast to the side stay plates.

## Rig Tension

Using an old style Model A Loos Tension Gauge your rig tension should register between 28 and 31 on the forestay.

## Diamond Tension

The main is set up for variable rig tension. A good range for your bottom two diamonds should register 15 to 16 on the Loos Gauge. Setting the upper diamond is more relevant to crew weight and sailing style. We suggest upper diamonds in the range of 3 to 5 (Loos Gauge) for the more "stout" crews and 0 to 2 for the lighter crews. A lighter diamond setting induces more side to side mast bend, thus depowering the top of the sail.

## Sail Trim and Adjustments

**Jib Lead** –A good indicator of proper jib lead position is when your upper telltales break just barely before your lower telltales.

**Jib Cloth** – Jib cloth is necessary to create a finer entry at the front of your jib. Just enough cloth should be applied until only a hint of wrinkles appear at the luff of the jib.

**Jib Sheet Trim** – Proper trim of your Highlander Jib will have the upper batten on the Jib out from the centerline position roughly 5 to 10 degrees.

**Mainsheet Trim** – Maintaining the upper batten parallel to the boom is the best guide to trimming your main. Remember to constantly adjust your mainsheet trim to maintain speed and height. Your main can be trimmed tighter for short spurts, when you want to height (pointing angles). It can be eased to induce twist to gain speed. Finding the groove between the two trim points is key!! In heavy air remember to EASE, HIKE, TRIM!

**Outhaul Tension** – The shelf foot on your Highlander Main allows you to pull on more outhaul upwind thus reducing power and ease more off downwind making the main deeper.

**Bridle Traveler** – 22” is a good overall position. Mark this position with a black marker on the bridle line. Now try experimenting in light and heavy air by raising and lowering your bridle height to maintain a neutral helm.

**Boomvang** – Consider the boomvang the “gas pedal” upwind. Heavy vang tension will bend the mast and flatten the sail which neutralizes the helm. By pulling on the vang in the puffs you maintain control and steerage. By easing the vang when the puff subsides, you increase power thus maintaining your speed.

**Spinnaker Trim** – Working the leading edge of your spinnaker will give you the best results. To do this one must constantly ease and trim the sheet; while adjusting the guy to roughly perpendicular to the apparent breeze.

If you find this guide either unclear or have an alternative suggestion, please don't hesitate to contact us. We are glad to have you on the Team and are looking forward to working with you!

Thank You,  
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