

Star Mast Tune Downwind



Setting up your mast properly for running is almost as important as your upwind setup. Today with a lot more windward leeward courses running speed is more important than ever. Setting up the mast for downwind is pretty simple, just lay the mast forward the right amount and you are all set, right? Yes that's the main part but there are a few small things that can be done to get a little better looking tune. If you make a few small changes, when you lay your mast forward the proper amount for the wind conditions, the shrouds will loosen slightly and the leeward spreader will swing forward and your main will have a much better shape. This is even more important with the new full batten in the head of your main. If your shrouds are too tight and the spreader doesn't swing forward and the upper batten might even pop into a reverse curve.

Before you even leave the dock you should make sure a few small things are right. To get the leeward spreader out of the main you need to make sure that it swings far enough forward. If you have an older mast you will have to notch the inside back edge of the spreader more (photo). The newer spreaders have more cut away but you can even go more. All you need is about 1/4 of metal left. If you have the secondary limiting pins in your newer mast take them out.

The other thing that is important is to get the leeward shroud loose. The leeward spreader will not swing forward if the shrouds are too tight. We like to have the shrouds tight for upwind and we don't want to compromise that but there are a few things you can do to loosen them for downwind. When you lay the mast forward they will loosen somewhat. You can increase this looseness by having the mast butt slide aft. My mast butt not only slides aft but the plug is slightly angled so as the mast goes forward the mast gets a bit shorter. The sliding mast butt will also help you if you have an older boat that doesn't have enough room forward in the mast partner. You can get a mast butt plug with a roller or you can insert a block of delrin in the bottom of your butt plug that extends below the aluminum about 2 mm.

You can also make your shrouds adjustable. Some sailors are using a lever arrangement to loosen the leeward shroud.

Now that you have the little things taken care of what should the mast look like? It is faster in all conditions to lay the rig forward when running. The right amount to let the mast forward depends on the wind strength. You should have a mark on your backstay for your maximum forward position which you will use in under 10 knots of wind. This mark is somewhere around 3' (91 cm) from the upwind position. As the wind increases you must be a bit more careful when letting the rig forward. The further forward you go the easier it is to break your rig.

You also don't want any aft bend in the mast. You want the mast leaning forward and a very slight inversion bend in lighter winds. In moderate winds make sure the mast is forward and straight. This means that not only do you want to lay the mast forward but you don't want to use too much mast ram forward. You should have just enough mast ram to keep the mast from reversing. This will help your leeward spreader swing forward. In light to moderate winds you can use the windward spreader to judge your mast bend. The windward spreader should not be swung back hard against the stop but standing more straight out from the mast.

With the mast laid forward and the spreaders straight out from the mast the mast is much easier to collapse if you dip the pole in the water. Only in extremely strong wind will the need to survive be more important than letting the rig forward. In the last few races at the Worlds in Spain we kept the rig all the way aft. The last race at the 1988 Olympics was another such time for Hal and me but that time the backstay line ended up parting at the cleat and we lost the rig anyway.

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