

DN TUNING GUIDE

RAKE: Use the main halyard and headstay length to adjust the rake of the DN. The higher you raise the sail, the more you can lengthen the headstay and the more your mast will bend. Lowering the halyard and shortening the headstay will make the mast bend less. This is because of the increased angle of the headstay to the mast, as well as the sail being lowered into the stiffer, less tapered part of the mast. Adjust the headstay so the boom is slightly angled down from horizontal at the leech end. Adjust the main halyard so there is about 12" between the boom and the deck at the stern (14" in light winds, 10" in heavy winds).

MAST STEP: The farther forward the step is, the more the mast bends and the more pressure you put on the front runner. In light air or sticky conditions, move the mast step forward. When you want the boat to point higher and the mast to bend less, move the mast step back.

SOCKET ON MAST: The farther forward you put the socket, the easier the mast rotates. Put the socket in the middle for light and heavy winds and in the back for medium winds.

SIDESTAYS: Sidestays should be 136" long, measured from the pin that attaches them to the plank, to the pin that attaches them to a Struble or Sarns hound/triangle. The length will vary if you are using a different type of hound attachment. The looser you make the sidestays, the more the mast and plank bend. Tighten your sidestays so when you stand on your plank the sidestays are just snug. Tighten the sidestays more for heavy air and less for light air.

BLOCK POSITION: Control the rotation of your mast by adjusting your mainsheet blocks to pull or push the boom. If you move the blocks aft on the boom, your sheet will push the boom forward and rotate the mast. By moving the blocks forward on the boom, you can pull the boom aft and take the rotation out of the mast. A certain amount of rotation is desirable to add camber for low-end power and acceleration. You should position your blocks so the mast "derotates" when the main sheet is trimmed hard. The object is to reduce mast bend to get more leech tension for higher pointing and top end speed. By "derotating" the mast, you line up the stiffer fore and aft axis of the mast with high leech loads. This means you can pull harder on the sheet without over flattening the sail and dumping off the leech. In light winds with sticky conditions, allow the mast to rotate. In heavy air with cleaner ice, pull back harder and harder on the boom unless the mast will not rotate after tacks.

BATTENS: Many people spend too much time on battens and tensioning devices. Just put the battens in tight enough to remove the wrinkles and then leave them alone. In heavy air, it helps to add a second or stiffer batten to the top one or two battens to flatten the top of the sail.

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PLANK POSITIONS: With heavier winds and clean ice, move the plank aft to put more pressure on the front runner. Move the plank forward in snowy or sticky conditions when steering is not a problem and you need the most hiking leverage.

HALYARD POSITION ON HEADBOARD: The DN headboard has four different holes in which you can attach the halyard. The closer to the leech you attach the halyard, the tighter the leech will be. If you attach the halyard to the front hole, the sail will hoist a little higher and make it easier for the head to twist back and open the leech. To avoid wrinkles in the head of the sail, use the front holes, towards the luff, when you hoist the sail all the way to the top of the spar. Use the back holes, towards the leech, when you sail with the halyard eased.

CARE AND STORAGE: The mast is clear coated with epoxy to make it easy for the purchaser to make additions to the mast. The clear coat does have an ultraviolet ray inhibitor. However, the mast should be kept covered when it is not being used. The mast should be stored with the groove down whenever possible, especially during the summer months.

THESE TIPS ARE A GOOD STARTING POINT! If you have any further questions or comments, please feel free to contact Ron Sherry. Composite Concepts also produces Clone Hulls, Custom Planks, Tillers, Hiking Racks and Prepreg Carbon Fiber Runner Sides. We are distributors for Bryant Spars, Jofa (helmets), William B. Sarns Company and Harken.

More DN Tuning Tips

1. Set your boat up in your yard. Check all your equipment: sails, runners, wires, helmet, goggles, track shoes, hull to plank fittings, etc. Make a list of everything needing attention. The idea is to know what needs to be adjusted or fixed before it gets cold and you want to be on the ice sailing.
2. Tip the hull upside down and mount the plank. Measure the squareness from the front chock bolt to the center, inner bolt of the side chock. If it is not square, turn it around and measure it again. Turn the tiller to line up the front chock with the side chock when measuring. Make it perfect!
3. If you are using Sarns studs, put a washer under the front and back of each plate so the plates are slightly concave. This will keep the plank from rocking fore and aft.
4. Make the hull to plank bolts tight, then loosen 1/2 turn. This allows for a little play in the fittings and keeps them from wearing out so fast.
5. Check runner alignment by simulating plank deflection with the skipper's weight plus 30 pounds. This will duplicate light air down wind when alignment is most critical.
6. Check alignment with the mast up, using wire tension rather than actual weights, to simulate the skipper's weight plus 30 pounds. Putting weights in the boat causes extra friction, which can flaw alignment results.
7. Shim all runners the same whether your chocks are glued on or not.
8. Make sure all runners are profiled and sharp, with no nicks. On the ice, it is much easier to make runners dull, when necessary, than to sharpen them. A good starting point is 18" of 8/1000 flat, 10" in front of the pivot bolt and 8" behind, with a dull lead-in and exhaust.
9. Make your side stays 136". Measure them from the pin that connects them to the plank to the pin that connects them to the Sarns triangle.
10. Set your mast step and plank one spot forward of max. aft.
11. Set shroud tension so that when you stand on the plank, the shrouds are a little loose. This is a great all-around setting. If it is blowing hard with glass ice, move the step back. Make the rig tighter but don't change the side stay length. If you have light air and snow, move the step forward. Loosen the rig but don't change the side stays.

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12. Always set up the pulleys so you are pulling back on the boom except for in extremely light air.

13. Set the halyard so that there is 14" to 16" between the boom and the back deck.

14. Hike out at the start and after tacks. Move forward and fair in once you build up apparent wind.

15. Use the boats around you, rather than your finish, to judge speed, height and the effectiveness of your tuning adjustments.

16. If you are going fast but not pointing high, move the step and the plank back, tighten the rig, and pull back harder on the boom. The most important adjustment is to move forward in the boat and tuck in your elbows. Do not raise the sail higher. This will cause more mast bend and dump the leech off more.

17. If you are pointing high but not going fast, check your runners for alignment and nicks, loosen the rig, move the step and plank forward and lower the sail. Hike out hard to build apparent wind before you move forward in the boat.

18. The most important Tuning Tip is to share information..runner profiles, racing techniques, good bars etc.. The faster everyone around you is...the faster you will be.

DN QUICK SET UP GUIDE

* VERY IMPORTANT: USE SHOES WITH SPIKES!

1. Put the plank on the ice with the arrow pointing into the wind and remove the hull to plank nuts.
2. Put the bobstay strut in the hull and the bobstay on the strut.
3. Put the hull on the plank with the bow toward the wind, use the aft holes.
4. Tighten the hull to plank bolts until they are tight and then loosen them 1/2 turn.
5. Put the runners on so they are just snug, then apply the parking brake.
6. Connect the wires to the mast.
7. Put the mast on the step with the top to the side on the ground.
8. Connect the headstay and then the sidestay to the side of the plank where the mast is lying...be sure there are no twists in the stays.
9. Raise the mast and connect the other stay to the opposite side of the plank.
10. With the parking brake on and the bow into the wind, put up the sail.
11. Put the boom on.
12. Go get dressed and put your helmet on before you connect the mainsheet.

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