

Settings and Techniques to Maximize Boat Speed

(David Ames)

Wind Ranges 3-6 kts.

In light conditions it is tough to get the sails working so wind flow over the upper 1/3rd of the main and jib become the most important factors in trimming the sail and producing the correct sails shape.

Mast Rake: 28' 5 1/2" Headstay Tension: 110 lbs. for snug jib shape.

Halyard Tension - The best way to judge halyard tension is to sail down wind and tighten the halyards until there are no wrinkles in the luff of the sails. When sailing upwind there should be some horizontal wrinkles in both the main and jib luffs. The outhaul should be tightened until you get a slight horizontal wrinkle in the foot of the sail.

Boat Heel – The optimal boat heel is slightly less than in the 0-3 wind knot range when the ideal heel is somewhere between 5-10 degrees of leeward heel. Heeling **5-10 degrees** to leeward can help open up the main and jib leaches. Gravity assists pulling the leach of the main and jib outward the more you heel the boat. Wetted surfaces become less of an issue up wind in 3-6 kts and the sails should produce enough power to heel the boat to the optimum angle. **Weight positioning** becomes more of the critical focus point, if you are trying to produce more pressure move the crew weight in and forward in the boat and when the boat powers up be patient in moving the crew weight to weather (**the crew should only move up to weather after the skipper is almost hiking**) to get the boat to the desired heel. When sailing downwind heeling to leeward helps to get the spinnaker/Main slot opened as well.

Sail Trim – The jib should be trimmed outward from normal closed hauled in light to medium wind conditions. The telltale at the top of the jib should be flowing and the leach should be 1-2 inches outside of the leeward shroud. The foot of the jib becomes the critical indicator for how tight the crew should trim in and the foot of the jib should be trimmed until a slight horizontal crease forms between the tack and foot of the jib. Trimming based on pressure is the main goal so if you are trying to build pressure make sure both sails are eased 1 inch and if you have good pressure be patient and only sheet in the last inch after the pressure has fully built and you are attempting to point. The main should be trimmed much further in than in 0-3 kts and should trim in until the top batten telltale almost stalls. The telltales on both the main and jib should be checked by the skipper and crew to identify any stalling and make subtle adjustments in the trim to keep the upper 1/3rd of both sails flowing.

Steering Technique – The wind flow through the jib/main slot is dynamic which means that your steering angle will affect the amount of flow through the slot. In order to accelerate from slow speed, the **sails must be trimmed out about 1 inch from where they would be at top speed**. The skipper needs to steer so that **both telltales on the jib are flowing perfectly straight back** which will maximize the flow. Remember, if you pinch or foot the boat it will take longer to build pressure. Once pressure has been built with the sails trimmed 1 inch out you can start to allow the boat to point a little, the best way to point in light wind is to **allow the helm and the leeward heel to slowly point the boat up**. When you allow the helm to point the boat you will not create any unnecessary drag. **Once pressure has built up**

you can shift your weight out and trim in both the main and the jib 1 inch to point a little bit better. Your overall strategy is to have a **smooth change from building pressure to pointing** and if you happen to **stall or hit a lull then you need to go back to promoting flow in the upper part of the sails.**

Sailing in 3-6 kts has a very similar technique as sailing in 0-3 kts, remember to **lock in on the telltales** and **pump the sail 1-2 times when trying to build pressure** and if the pump does not have an impact on pressure then look at the telltale on the upper main batten to see if you are over trimmed and stalled.

Steering Mechanics – Proper steering and trimming mechanics should use the minimum amount of energy and waste of motion. Remember to hold the tiller and main sheet close to your belly and keep your lower body further in than your shoulders.