Boat Trim for Speed

Four devices affect boat speed by producing lift and drag. Drag has two components, parasitic drag which we can not change while sailing, and induced drag, the drag caused by producing lift.

Water drag
The Keel produces lift to reduce leeway. Since the Victoria has a fixed keel, the only way to reduce keel drag is to reduce leeway by avoiding sheeting in too much.

The Rudder produces drag whenever it is used. This can be helpful in tactical situations where you want to slow down, just fan the rudder, or make a sharp turn. When going for speed, the sails need to be balanced to minimize the need for rudder (When balanced, a boat will sail straight ahead, hands off, for several boat lengths, before turning into the wind.)

Wind thrust
The power of a sail can be adjusted with camber and twist. More camber, more power, less twist, more power. Camber is adjusted with the outhaul for both sails. Twist is adjusted with the topping lift for the jib, and the boom vang for the main. You want more power for light winds, less for high winds.

Adjusting the relative power of the jib and main can help balance the boat for less rudder deflection. Also moving the mast fore and aft, or raking it, will help balance the boat.

The sail camber should be adjusted along with boom and jib club angles so that the leading edge of each sail meets the relative wind at nearly zero angle of attack. If the main is “backwinded”by the jib, i. e. a reverse curve appears in the main near the mast, ease out the jib club.

Reduced boom angles will allow you to sail closer to the wind, but you need to use less camber, resulting in less sail power. Closer to the wind, but slower.

Initial Settings
Main boom 5 deg. Jib club 10 deg. Main twist 5 deg. Jib twist 5 deg. Main camber 1 ½ in. Jib camber 1 in.