

TAMING THE WILD PENGUIN

by Bud Dalley, Jr.

Developing your skills by sailing your Penguin during the winter can give you a great edge on your competition come springtime. Here are some tips on trimming your sail.

UPWIND

Light Air: Upwind When sailing upwind in light air and smooth water, we sail with the traveler on the centerline. This helps create helm in the boat as well as increases the power of the sail which can be handled easily by the large area of the centerboard. We make sure the vang is completely eased so the leech stays open and twists off. At this stage your next step is to over-rotate your mast slightly, to approximately 45 degrees to centerline, this will also help to twist off the leech. You should use a mainsheet with as little purchase as possible so that you can trim quickly and the weight on the end of the boom is as little as possible.

Moderate air: Upwind This is when the skipper is usually on the rail, with the crew on the centerline or to leeward. at this point we start to make some changes in tuning in order to better shape the sail to suit the wind strength. From here on out the cunningham starts to play a big role in sail shape, so in our team, the crew does the adjusting. The cunningham is adjusted so that the entry of the sail is rounded. This provides maximum forward force and gives the boat its power. If the cunningham is eased too much, the draft position is aft, the sail has too much sideward force and the boat will be tough to steer. If the cunningham is too tight, the draft will be too far forward and the sail will lose all of its power. We adjust the cunningham with every slight change in wind strength. At this point we can still use as much power as we can get so we turn the mast slightly more forward to approximately 35 to 40 degrees. This removes some twist in the sail giving you a little more speed. If you have a 3:1 mainsheet, you probably won't need any vang yet. I sail with a 2:1 mainsheet for ease in maneuvering and sometimes use the vang to keep the boom from rising as I ease the sheet. You need to be careful when using the vang, because a little too much tension will flatten and de-power the sail quickly. We still keep the traveler on the centerline as this helps us to point high.

Heavy air: Upwind As soon as the crew is on the rail and hiking, we start to use our heavy air tuning. We adjust the cunningham for the same reasons as in moderate air. Now we start using the vang to flatten the sail which takes some of the power out of the sail. When adjusting the vang, you need to adjust the cunningham. As you increase vang tension, the sail flattens and the draft moves aft, so we tension the cunningham to move it forward and round out the entry. When the wind eases, we ease the vang and the cunningham to maintain as much power as we

can handle. We also ease the traveler halfway between the centerline and the rail. This changes the angle of the force provided by the sail to a more forward direction. Also by adjusting the rotation of the mast, we can affect both the depth of the sail and the twist of the leech. Rotating the mast, so it's more straight, will give you more depth (power), and a more straight leech. Rotating it so it bends gives you less depth (less power) and a more twisted leech.

DOWNWIND

Light air: Downwind When sailing downwind in light air, ease the sheet so the boom goes out perpendicular to the centerline of the boat, and ease the leeward shroud all the way. Rotate the mast as far as possible, we rotate it to about 120 degrees. This helps to put some shape in the front of the main. Keep your movements in the boat to a minimum, and steer by using your weight, not the tiller, as this will eliminate as much drag as possible.

Moderate air: Downwind Downwind we do the same things as in light air, and we make sure the vang is eased and the leech is twisted open. This seems to be the fastest setting for downwind work.

Heavy air: Downwind Downwind in heavy air we use our discretion when easing off the leeward shroud. We feel it's important to keep the rig in the boat, so if it's really blowing, we don't ease the shroud. By not easing the shroud it makes it harder to turn the mast, so sometimes we ease the shroud halfway. Keeping some tension on the vang will keep the boat from rolling downwind in heavy air at the expense of some boat speed, so careful attention should be applied here. I haven't talked much about outhaul tension because we don't adjust it during a race unless the wind changes dramatically. the range of outhaul that we use is about 1 1/4 inches from full on to fully eased, and we use the same setting upwind and downwind. The depth of the sail from the boom should be approximately 7 inches, and you should deviate from this setting very little (5/8 inch of movement) as the sail will get slow very quickly. As you can see, the crew is very busy and controls boat speed as much as the skipper, so good communication is very important at all times.

Good luck using these techniques to help your boat speed!

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