

MK II Laser Sail – The Secret of Trim



MKII features

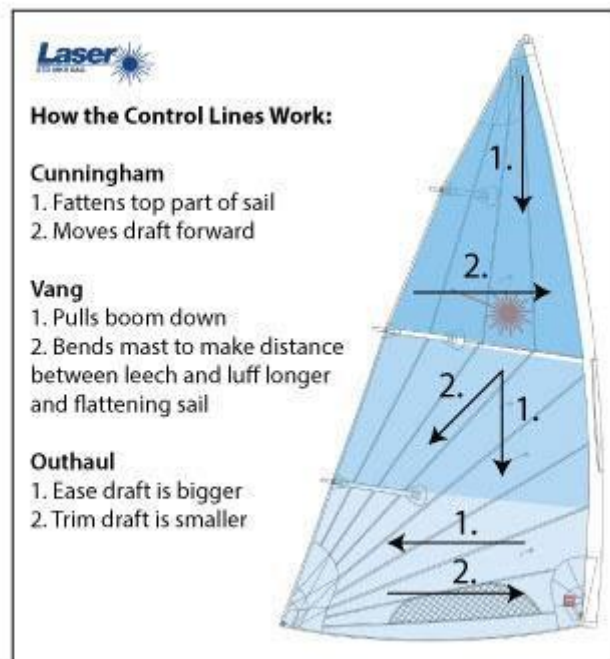
Here are some of the obvious differences between the two sails:

- **Sail “Radial” Cut:** This new bi-radial cut provides a more durable and efficient foil which gives the sail a longer shelf-life while making it a more powerful and efficient engine. Anecdotally I’ve heard several sailors say the sail is faster and allows the boat to point much higher sailing close-hauled.
- **Battens:** The MKII includes tapered battens. When inserted the leech of the sail has a more closed profile. In his analysis of the sail Brett Beyer calls this “a more firm, upright leech.” To achieve the desired shape, make sure to insert the battens thin end first then close the pocket tightly.
- **Corners:** Each corner of the sail (luff, leech, foot) have reinforced fabric which makes the sail a bit stiffer and adds to durability. The sail itself is also made with heavier cloth which adds life.
- **Luff patch:** The new luff patch, located along the forward edge of the mast sleeve, is designed to reduce those nasty diagonal wrinkles evident in the old standard.
- **Overall appearance:** The sail has a rounder aspect with the deeper part of the sail up higher. It is stiffer, especially the luff. With the new tapered battens, the leech conforms more to the shape of the sail, increasing the integrity of shape and eliminating leech flutter.

Using MKII Control Lines

Overview

The laser sail has “five string controls,” the mainsheet and traveller both affect sail angle while vang, **Cunningham** and outhaul affect sail trim—specifically whether the sail is adjusted for max pressure (more draft) or less pressure (less draft). Increased pressure equals more power and decreased the converse. That said your goal is to go for a balanced rig. The point of differentiation is specific to each sailor’s skill level, size, weight, and the conditions being sailed. A sailor who weighs 68 Kgs will have a different threshold than one who weighs 80+ Kgs.



Draft

There are two ways to change the draft of the sail. To increase pressure, increase the depth of the sail. To decrease pressure, flatten the sail. Your outhaul is the main adjuster of sail depth. By adjusting the **Cunningham**, the draft can also be moved forward (pull on **Cunningham**) and back (**Cunningham** released).

When comparing the old vs. new, trim controls remain the same however they work much better with the new cut MKII.

Outhaul: Affects mostly the bottom third of the sail. The MKII sail is rounder and deeper and the depth/draft has more integrity so outhaul can be adjusted tighter. Instead of a One (1) full hand width start at ½ a hand for upwind sailing. For the reach go slightly eased and for downwind ease to two (2) hand lengths.

Vang: The vang affects primarily the middle third of the sail and works in two ways. Vang **ON** bends the mast and also creates more distance between the luff and the leech of the sail, affectively flattening the middle section. Secondly, use the vang to keep the sail at a **90-degree** angle to the mast. To prevent the boom from bouncing make sure to take the slack out of the vang.

Cunningham: Controls primarily the top third of the sail. When used it flattens the top and also brings the draft more forward. With the new stiffer sail, the **Cunningham** adjustment is more precise.

Baseline trimming for maximum pressure upwind:

Max Pressure setting:

When you have full-control of your Laser—it's not heeling and you aren't overpowered—set up your boat for max pressure. The **Cunningham** should be slightly pulled so there aren't any creases in the front of the sail. Adjust your outhaul to ½ a hand's width depth, and trim the vang enough to take the slack out (so the boom stays parallel to the water). Mainsheet blocks are Block to Block and traveller is tight.

Depowering for close-hauled sailing:

An overpowered boat is a slow boat. If you are hiking hard but having trouble keeping the boat flat and you're feeling weather helm, it's time to depower. Remember you won't be losing speed but will be putting the boat back under control. As the wind increases and the boat becomes harder to control, start to put on **Cunningham** and vang to depower. The sail will flatten (**Cunningham** and **Vang**) and the draft will move forward (**Cunningham**). You can also use the **Outhaul** to flatten but remember you still want a little curve in the sail.

It's hard to see trim changes in the sail when it's upright so I recommend you rig up and turn your boat on it's side. Try out the trim controls mentioned here and you'll see what effect they have on the sail. And remember when setting up your new MKII it's always a good idea to mark your boom and control lines for close-hauled, reaching, and downwind settings.