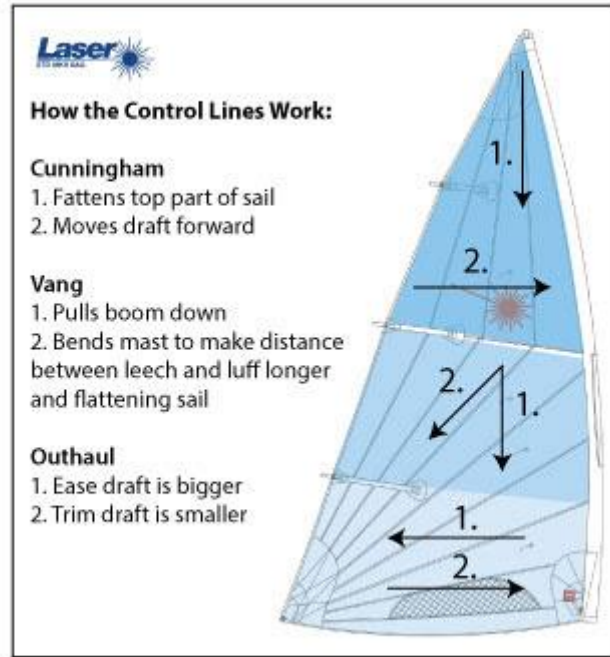


Laser Radial Tips



Cunningham: The Radial Laser sail is fairly deep and the cunningham is very effective at flattening the depth, opening the leech, and generally depowering the rig. Recognise that the distance between the gooseneck and mast head is much greater when the rig is straight (downwind) than when bent (upwind). What once was “X” amount of luff cloth tension (straight mast) is now less (bent).

As a result, if you are headed upwind and your base mainsheet setting changes, you must adjust your cunningham to maintain the same sail setting. Pre-start, ensure that you set your cunningham when sheeted in and sailing upwind. When you ease, the cunningham will look much harder. Do not panic, it will settle in and soften as you trim back for the beat. You can use the cunningham to fine-tune the sail and bridge the adjustment gaps of other controls as you shift gears. You can adjust it often if the wind and wave conditions are not consistent, always shifting gears subtly matching the cunningham to the mainsheet’s base setting. Essentially, until you are trying to depower, use this control to pull out some of the wrinkles that appear typically around the mast collar. Of the three control lines, while sailing upwind, it is adjusted the most frequently

Outhaul: It is common to hear the "one fist, two fist" rule of, well, fists depth of the sail foot. This is the measurement from the maximum depth of the sail at the foot to the boom. Probably more generous than the actual width of a Radial sailor’s fist, start with the sail "two fists" off the boom at max draft of the foot.

This is around 20 to 25 centimetres off the boom. Never any more.

Even max tension is then only “one fist”, 10 centimetres, never less. Outhaul changes are that simple.

Vang: This is the most critical control for downwind sailing and when overpowered as a pre-bend tool. On a reach, adjust the tension with every puff as you reach higher or lower. Basically, keep the top batten close to parallel with the boom, erring to the open side. Upwind, the vang flattens and depowers. Think of it as a pre-bend adjustment to the mast as much as anything. Like a big bow (mast) and arrow (boom), the vang control will shove the boom forward into the middle of the soft lower mast section, while pulling from the bottom of the mast at the lower vang tang and the upper mast section via the leech.

Mast bend is induced and the sail flattened with the increased luff curve. The Mark 6 Radial sail will now invert, so be careful not to overdo it. Reason being that same soft masts fall away as it is loaded up in puffs or when hitting waves, opening the leech automatically and de-powering. In light air upwind, set the vang to where you want your sail to be when rocking the boat flat after a tack. Of the three control lines, downwind vang is the most important.

Condition Sail Setup

Drifter conditions: Start out with the mainsheet trimmed with the aft blocks about ten inches apart, trim cunningham to remove all wrinkles. Now, ease the mainsheet blocks 50 centimetres more apart and tension the vang just snug (this will keep the boom/leech honest during roll tacks). Re-trim mainsheet to your 25-centimetre upwind setting and you should see some droop in your vang control line. This is what you want. Outhaul is set at two fists.

3 Knots: Trim down to 20-centimetre apart on mainsheet blocks. Leave cunningham and vang settings. You should have more wrinkles in the sail (ease if necessary) and droop in the vang when fully trimmed.

6 Knots: Starting to get closer to the rail. Trim the mainsheet blocks 5 to 8 centimetres apart and trim the cunningham to maintain the amount of wrinkles. Repeat the vang-snug drill from #1. If it's lumpy, there probably is enough pressure to allow a generous two fists, so consider 2 to 5 centimetres off on outhaul, particularly if you are heavy.

8 Knots, Soft Hiking and/or Bum at Rail: Mainsheet blocks at 5 centimetres apart trimming in/out more aggressively, two blocking is OK here, particularly in the flat stuff. Cunningham setting should allow for only subtle wrinkles in the luff. Still no vang tension when trimmed for sailing to weather. Try trimming toward the inside of two fists of outhaul in flat water.

10 Knots: Fully hiked, from here upwards (until vang sheeting), the mainsheet is two-blocked, easing in the bigger lumps to balance the helm and help acceleration. Add a touch of cunningham for a smooth luff. Just snug the vang when the mainsheet blocks are two inches apart. Fully hiked means one fist outhaul, although perhaps a generous one.

12 Knots: Max hike, you now begin to use the cunningham to depower at this point, using enough to balance the helm but keep power. One fist for sure here.

14 Knots: Now, you finally go for enough vang so that the control line has subtle tension when the mainsheet is two blocked. Continue to set the Cunningham hard enough to depower as needed.

16 Knots: At this point, your cunningham should be very hard and you should begin to depower with increasing amounts of vang.

18 Knots Plus: (Fresh to Frightening) From here, continue inducing pre-bend via more vang tension. Hold off when the sail begins to invert. At that point, take on two (2) more centimetres of outhaul (but never have the outhaul on the boom) and put the cunningham down to absolute maximum. Begin to vang sheet as necessary. You should have a flat, heavily vanged sail that is vang sheeted (off) is faster than one that has been inverted and trimmed harder. At some point as the breeze builds, any Laser rig will become inverted with tension.