

Club FJ Tuning Guide

Sourced from elsewhere with Allison's notes in blue. Important video is green text.
To be reviewed with matching video.

Mast Position and Shroud Tension: Set the butt of the mast as far forward as legally possible. Some of the Laser Performance boats have a mast step that goes beyond the max legal forward position of 106 1/4 inches. Once you get the butt far forward drop the pins on your chain plates as low as they'll go. There is no magic number here since there is a lot of variation in shrouds/chainplates. **The idea is that your forestay is as tight as it will go and the mast is raked back.**

Pro Tip: Put the big loop in the forestay at the top of the mast by running it through the shackle that holds the block for the jib halyard. It doesn't come like this from the factory, but it'll give you an extra half inch of forestay length.

Once you get your mast in position the only thing you can really adjust easily is your jib halyard tension. By applying more halyard tension you pull the mast forward and tighten up both shrouds. When sailing in most conditions you want the leeward shroud to be just taught, or alternating between taught and just slack. The windier it is the more jib halyard tension you'll need. **(Just like in a 420)** In flat water you can err on the side of more tension. Too much tension and you'll go high and slow, too loose and you'll go fast but won't be able to point with the other boats. **(This is absolutely critical. The skipper's tendency is going to be to loosen everything and point down for speed which will feel great at the time when everyone else around you is going slower... BUT everyone else around you will be pointing higher >> pointing needs to be your primary focus)**

Pro Tip: Sail upwind and have the crew wiggle the leeward shroud. If you need to put more tension on, sail downwind and let the boom out. The mainsail will push the mast forward and help the crew put on more tension. Remember it's easier to let tension off than put more on when you're sailing. Only adjust this between races!

Jib Trim: The jib pulls the FJ forward, while the mainsail keeps it pointing. **(UNLIKE a 420 where the sails' roles are backwards: in a 420, it's the jib that points the boat and the mainsail that provides the power)** A properly trimmed jib is critical for fast boat speed. **(it's critical that crews know what they're doing- skippers can assist with this)** First off, make sure that the jib leads are in the right position. In the older Vanguards with silver tracks you should see 3 holes showing from the back. In the newer Laser Performance boats the same setting is achieved by setting it 2 holes from the back. Never move it forward of this position! As it gets windier and you have to ease the main to keep the boat flat move the leads back one hole. Once it's so windy that you have to start easing the vang it's time to move one more hole aft. The idea is that you want the profile of your jib leech to match that of your main.

Pro Tip: Put a band of e-tape on your spreaders and reference where your trim is in relation to your markings. Make note of times you feel really fast and note how your jib is trimmed. **In medium conditions the jib should be in pretty tight. Many people under-trim the jib in these conditions. In light air an over trimmed jib will stop your boat. When the wind is less than 4 knots make sure that the slot between the main and jib is open. Notice if the skipper is**

showing any lee-helm. If the jib is over-trimmed in light air it tends to pull the bow down and stall the boat completely. This must be corrected immediately by easing slightly. In heavy wind make sure you ease the jib in the puffs. It's faster to ease the jib instead of the main. (That's you, crews!) Easing the jib also brings the bow up to help the boat feather through the puff.

Main Trim: Maintaining altitude is more important than speed in the FJ. (As stated before: pointing needs to be #1 priority) If the boat is set up properly, then main trim is usually the number one reason a boat isn't pointing. Once the skipper is able to firmly place weight on the rail they should be trimming the main hard. Once hiking is possible your goal should be to break the boom in half. (You can't possibly break the boat- do not be afraid) A flat sail and tight leech make the FJ go upwind. You can use a lot of vang to help achieve this shape. Once you've pulled in the main really tight, have the crew duck in and snug up the vang. When you ease your boom should go out, not up! Downwind, put on just enough vang that the top batten falls in column with the rest of the sail. The vang should be actively played downwind in heavy air (tightened for stability, eased for speed). (See Allison's video for more explanation)

Pro Tip: If you find yourself in the middle of a race without enough halyard tension, you can actually tighten up your forestay by pulling harder on the main sheet. This might get you by short term, but you definitely want to check your tension before the next race. (See Allison's video for more explanation)

The stock Laser Performance (North) sails are pretty deep and are made of very heavy cloth, so it might feel like it's hard to get the right shape at times. To help flatten out the sail your outhaul is very important. Put on enough outhaul that you start to see a horizontal crease form in the foot of your sail. This is true for all conditions, especially drifting conditions! To get more outhaul tension you can "bow string" or sweat the outhaul by pulling down in the middle of the line, then re-cleating it. If you get in a boat that has a worn outhaul cleat put a trucker's hitch in the outhaul and make a simple purchase system to get more tension. The Cunningham is less important in the FJ. Smaller pairs can use it to de-power and flatten out the sail, but it's rare to tension the Cunningham in anything below 10 knots.

Pro Tip: Lead the Cunningham over the slug in the tack of your sail. Snug it up until it pulls the slug down all the way. Leading it like this gives the sail much better foot shape. If it gets windy enough to need Cunningham, simply re-rig it through the grommet on the sail.

Weight Placement: The FJ is very sensitive to even subtle adjustments in weight distribution. First off let's talk fore and aft weight placement. Keeping the stern from dragging through the water should be your primary goal. When the stern is dragging it creates a lot of suction (drag). The water should just be kissing your transom, and your wake should be smooth. Big skippers will need to slide forward, sometimes even straddling the thwart while sailing upwind, especially in very light air. Crews should match their skipper's position while trying to keep their weight close to the skipper. When hiking together on the rail both skipper and crew should be "hip to hip, shoulder to shoulder." Keeping weight together and out of the ends prevents the boat from "hobby-horsing" through the waves. Imagine the teeter-toter motion that would happen if the crew was sitting on the bow and the skipper on the stern. As it gets windier and choppy it's more important to keep weight slightly aft to avoid taking waves over the bow. **SO SO IMPORTANT.**

Pro Tip: Crewing backwards allows the crew to get their weight further forward, and it keeps your face out of the vang.

Controlling the angle of heel is also very important. When sailing upwind you want just enough leeward heel so that your tiller tugs ever so gently against you (very slight weather helm). In light wind this means more heel, and in heavy wind it means almost completely flat. In light air the skipper should be sitting on the thwart and the crew wedged down to leeward with just their head above the deck. Crews should never sit on the leeward rail! Instead, both sailors should keep their weight low and concentrated in the middle. As it gets windier let the skipper move out first.

Pro Tip: The FJ has a gybing centerboard, which means the leading edge is always pointing to windward by a couple of degrees. Matching the rudder angle to the angle of the centerboard and aligning the two foils is lights-out fast! ([See Allison's video for more info](#))