



UK Halsey J-22 Tuning Guide.

The measurements and settings included in this tuning guide are ones that we found to be fast settings for the J22. Since crew, wind, and sailing conditions vary, you may find different settings that are best for you. However, by following these instructions you can be confident that you are well set up to be successful at your next regatta.

Always remember that besides having a prepared boat, nothing replaces time on the water.

Boat Preparation

Hull: The finish on a new J22 requires little attention. Wet sanding is not necessary and not recommended as it will make the finish more porous, and in time, this will cause the hull to absorb water.

Keel: One of the most critical and laborious aspects of preparing the J22 is keel fairing. The keel should be faired for minimum thickness. A well-faired keel will provide more lift (better pointing ability) upwind and less drag (better speed) off the wind.

Rudder: Keep your rudder as clean and smooth as possible. Repair all scratches immediately to prevent water from coming in. Also make sure it is at the minimum depth. The rudder is oversized and it will cause less drag.

Windex: Install a small-size Windex wind indicator on the back of the masthead crane.

Spreader ends: Make them smooth. This will prevent the spinnaker halyard from catching. Also, make sure they are at equal high and equal angle between spreader and wire top and bottom. This is a must for tuning the rig later on in this guide.

Outhaul system: Take off both ends of the boom and replace the outhaul system using a 4:1 Harken microblock system and 3/16" prestretch line. It is best to use a cascading system for less friction and twist.

Boat Weight: Keep all equipment onboard as minimum weight as allowed by the class. As per rule 3.1.4 the dry weight of your boat can not be less than 857 kgs.

Winch handle holders: Place winch handle holders on either side of the companionway, this keeps the handles close to the winches.

Keep your deck layout simple. Make the size and length of control lines to a minimum.



Rig Tuning

Headstay length and rake: While attached to the top, lay the forestay along the front of the mast down to the gooseneck. Place a piece of tape with top of the black band at the gooseneck. This is essential to set up the appropriate amount of rake.

Step the mast: After connecting the headstay the measure from the top of the tape on your headstay to the intersection of the stem and bow plate should be 5' 1/2". (1.54mts)

Center the mast over the boat: To properly center the mast, measure back 8' from the jib tack shackle to each rail and mark the rail on each side. Using a Loos Tension Gauge, tighten the uppers up to 250 lb. Take the jib halyard, measure down to each mark and adjust the uppers until the measurement is the same on each side.

Tighten the lowers by hand and sight up the mast groove making sure that the mast is straight. Adjust the lowers to move the center of the mast in line with the hounds and mast tip. There should be about 1" of prebend in the mast with the angled step. When checking prebend, be sure that the backstay is slack and there is no tension on the halyards.

Adjust your backstay bridle turnbuckles so that the rollers hang 4-6" below the connector plate when the backstay adjuster line is slack.

Fine Tuning the Rig

Your mainsail is designed to perform with some prebend in the mast. Prebend is achieved through shroud tension. Tightening the uppers compresses the mast, pushing the middle forward. This compression or prebend flattens the lower part of the mainsail and increases headstay sag for light air conditions.

When the wind starts to build up you will progressively tight your shrouds. The lower shrouds will reach a point where they are tighter than the uppers. Because they are pulling back they try to straight the mast eliminating the pre-bend. To recover mast bending for the upwind leg you must apply backstay tension, flattening the mainsail and tightening the headstay. The immediate consequence will be a flatter jib entrance and high pointing ability.

Loose gauge Model B rig tensions

Knots	0-5	5-10	10-15	15-20	20+
Uppers	15	19	25	27	30
Lowers	12	15	20	24	26

Sail Trim

There are four elements that will influence on your boat speed when sailing upwind:

- Headstay Sag
- Backstay Tension
- Mainsheet Tension
- Jib sheet Tension

following these tips will give you more criteria at the moment of sail trimming. Once you use this guide, it will be easier for you to concentrate in tactics and race course matters. You know your boat is going fast!

Mainsail Trim

Sailing upwind, Your J/22 mainsail is not going to need Cunningham adjustment in light to moderate winds when the maximum draft must be at 50%. Start giving tension to the luff, enough to take most of the wrinkles away only when all crew members are hiking. It will help the boat balance by moving the draft forward and twisting the upper sections of your mainsail.

The outhaul should be at 1" off the band (maximum eased):

- 1" off in light air
- 3/4" off in moderate air
- At the band in heavy air.

Keep the upper batten parallel with the boom. This is viewed by sighting directly underneath the boom up toward the upper batten. The top batten should be open 5 degrees. As the wind increases the top batten should be even more opened. In light to moderate breezes (0-6 knots) bring the traveler 8" to 6" windward of the centerline with the mainsheet eased slightly so the upper batten is 5 degrees open, the boom should be very close to centerline of the boat. As the wind builds to 8-10 knots, take the traveler car to the centerline and trim in mainsheet so the boom is really close to the centerline of the boat.

In heavy winds, leave the traveler down to leeward; it will help you keep the boat under control. If you notice that your boat is not moving at top speed in heavy weather, check mainsheet trim. Also you have the option of "Vang sheeting" your mainsail. Trim your mainsheet very tight and take the slack out of the vang. Going to weather you will have control of leech tension just by easing mainsheet on the puffs because the boom is not going to lift due to the vang tension, it will just ride to leeward when the puff hits and then you can bring it back to the initial position just by recovering with the mainsheet.

It is important to release some vang tension after rounding the weather mark.

Sailing downwind, Release the vang until the top batten is parallel to the boom. Backstay and Cunningham must be slack. Release the outhaul until maximum eased position (1" from band).

In heavy wind the backstay should be with some tension. It is important to bring the spinnaker pole down to open the leach at the same time. To get the same effect with the mainsail, play the vang so can power off when the gust hits and up after.

Vang

Your vang is set to keep the top batten 10 degrees open. In light and moderate breeze you can play the leech tension with the mainsheet, so when you tack the sheet is a little eased so the mainsail is powered up, the trim in and recover leech tension. On heavy air keep the vang maximum tight, even before and after tacking.

Vang sheeting might be used in very heavy, puffy conditions where depowering quickly is necessary. When vang sheeting, the traveler must be cleared off in the center. During less gusty conditions the traveler can be played to keep the boat flat. Using the traveler results in a tighter backstay than vang sheeting, the advantage is that vang sheeting allows you to make quicker adjustments.

Backstay

The backstay is an adjustment that allows you to control the fullness and power on mainsail and jib. When tensioned, the backstay bends the mast flattening the main and opening its leech and increasing tension on the forestay, resulting in a flatter jib.

When adjusting the backstay, pay attention to both wind strength and sea conditions. The tension to the backstay starts at 8 true knots of wind. As the wind starts increasing, the backstay tension must be increased too, taking care of not over tension it so the boat still has power on waves and does not stall on light air spots.

Jib Trim

Halyard tension: In light air should be tensioned so that a few wrinkles remain in the luff. As the wind increases to a range of 10-14 knots and up, the tension should be increased so the wrinkles are just eliminated.

Remember that the top third of the sail should break 1 second sooner than the bottom third.

Place a tape mark 4" from the outboard end of the spreader tip. When sailing in light air the leech of the jib should be trimmed at the spreader tip. In medium breeze the jib can be trimmed to your 4" tape mark or, depending on the sea condition, 5" to 6" in from the spreader tip. As you become overpowered, ease to 2" off the spreader tip.

Don't forget that when the boat is accelerating after a tack, wave or starting line you must ease the jib sheet by 2" to gain speed. Once you've reached top speed trim in again.

Spinnaker

Light Air: In light air, never go dead downwind. Go up few degrees so can keep the spinnaker full and reach top speed for the light air conditions, keep the boat moving and the spinnaker floating. Even though you'll cover more distance, will arrive earlier than going D.D.W

Medium Air: On 10 knots of wind the out board end of the pole must be just a little lower than the clew. Lowering the tack will project more area. As the wind strength increases adjust the pole so both, tack and clew are even.

Heavy Air: Tack and clew must be even. Keep the pole slightly forward to keep the spinnaker in the front of the boat.

Go Fast Tips

- 1) Sail at maximum crew weight.
- 2) Sail the boat as flat as possible.
- 3) Do not pinch.
- 4) Set the shroud tension for the wind you are expecting in the first part of the race.
- 5) When in doubt select the more powerful option (it is easy to depower.)
- 6) In the runs heel the boat to windward.
- 7) In the runs use as much crew weight as possible to steer the boat.



QUESTIONS?

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