J/70 Tuning Guide

Photo Paul Todd/OUTSIDE IMAGES

For any question you may have on tuning your J/70 for speed, contact our experts:

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NORTH SAILS

J/70 Tuning Guide

Version 007

After just a few short months of sailing, training and testing the new J70 we are able to share with you with some tuning notes and tips to help you and your team get up to, race winning, speed quickly! As new information, regarding setup, tuning and trimming techniques, becomes available we will update the information at *onedesign.com.* You can also sign up online for our e-mail blasts so all J70 updates will come to you directly.

BASICS

The J70 has already proven to be a design that incorporates many decades worth of great ideas and puts them into a 22' package of fun and speed. The J70 incorporates the speed and handling of a top tier sport boat with the stability and reliability of a performance keelboat dinghy creating an sailing experience that accommodates all ages, abilities and sailing appetites. The J70 has proven to reward racers who sail tactically strong races and have great boat handling. We expect to see the J70 class crown a diverse group of champions in the coming years. Let North Sails help you be one of them!

Tuning the J/70

Attached is our quick tuning guide that we have developed for the J70. North Sails worked in concert with Southern Spars in designing our sails to match the characteristics of the class approved J70 mast. Using the North Design Suite, our design team was able to design the perfect sail and mast combination using the same tools and process we use for projects like TP52, Farr 40 and other high performance racing programs that choose North Sails and Southern Spars.

WHERE TO START

Starting tuning points-Rake and prebend

- The headstay length that we have found works best is 27' 8 ¼" pin to pin.

TIP: If your mast is up, unhook your headstay and pull it taut down the front face of the mast. Make a mark on the headstay (a Sharpie pen works best) at the top of the white band that is on the mast. From that "Sharpie" mark, measure to the center of the pin in the furler. That measurement should be 4' 6".

- We are always shooting for 2.5 to 3" of prebend for the mast and utilizing the following will get you in that range

Step by step tuning

1. Step the mast and connect the forestay

2. Measure from the top of the tape/ permanent marker mark on your headstay to the center of the pin where the forestay attaches to the furler (see pic). This should measure 4' 6".

3. To aid in centering the mast laterally in the boat, place a pencil mark 8' back from the stem fitting at the shear on each side. Hoist a tape measure on the jib halyard and measure to the pencil marks previously marked on your shear (the hull-deck intersection) on each side of the boat. Adjust the upper shroud lengths correspondingly from side to side until the mast is centered in the boat. Be sure to adjust the lower shrouds as well, maintaining a straight mast as viewed from up the back of the mast slot.

4. Tension the uppers to 22 on the PT gauge.

5. Tension the lowers so the mast is straight laterally when sighting up the slot at the back of the mast. The lowers should be tensioned at 12 on the PT2 gauge.

6. The above settings (22 uppers/12 lowers) are considered your base settings (see chart).

RIG TENSION CHART

	WIND SPEED	UPPERS PT2	LOWERS PT2	JIB LEAD*	VANG	OUTHAUL	TRAVELER	WINDWARD SHEET	
	0-6 knots	18	7	4-5 holes	0%	Loose	6-8 Up	1-4″	
	7-11 knots	22	12	4-5 holes	Snug	Firm	3-6 Up	2-4″	
BASE SETTING	**12-15 knots**	**24**	**16**	**4-6 holes****	**85%**	**85%**	**Center Up 3**	**2-4″**	**BASE SETTING**
	15-18 knots	28	24	5-6 holes**	95%	95%	Center	1-3″	
	18-22 knots	30	28	5-6 holes**	100%	100%	Center	1-3″	
	22+ knots	31	30	5-6 holes**	100%	100%	Center Down 3	0-2″	

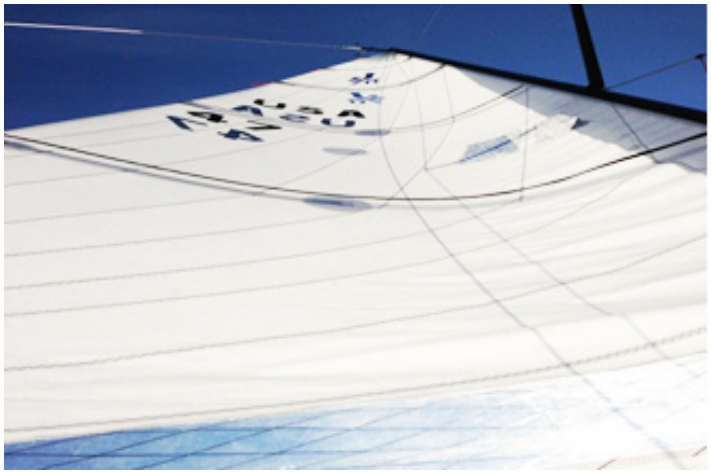
** Lead is holes showing in front. ** 6 holes recommended for flat water only.*

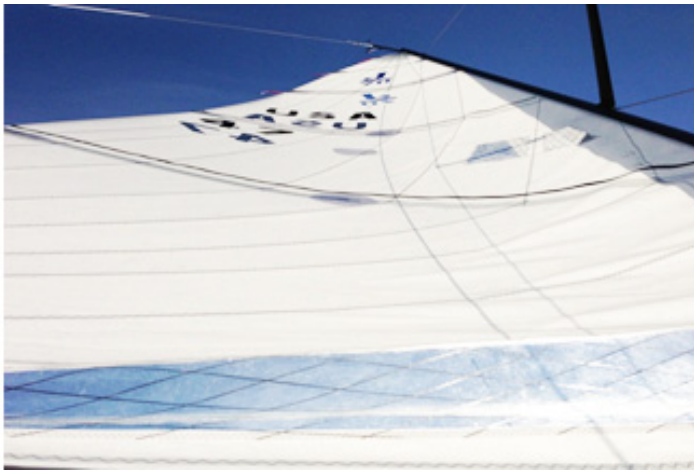
PREBEND TARGETS

0-6 mph	3″
6-18 mph	2.5″
18+ mph	2″

7. Re-measure the side to side position of the mast to ensure it is centered. Using calipers, measure the distance between the studs on all five shrouds to ensure repeatability and to be able to get back to base quickly.

8. Check that you have developed the proper pre-bend in the mast (positive bend) by pulling the main halyard taught to the gooseneck. The distance between the back of the mast and the main halyard at the spreaders is targeted at 2 ½ to 3.





Sail Trim

MAINSAIL

After many hours of on water testing we were pleased with, not only the handling of the J70, but also the responsiveness of the boat to sail trim adjustments. The J70 has shown to be forgiving to sail trim mistakes while at the same time rewarding the trimmers who continue to make sail trim adjustments to the ever changing wind conditions. While many of the "basic" sail trim concepts have proven to be very competitive with the J70 here are a few trimming notes that we have found that will help you get up to speed quickly.

- It is important that the mainsail is at full hoist at all times. Always make certain that the mainsail is pulled up to the white band at the top of the mast. We check this regularly between races.

- The J70 main is equipped with a tack strap. It is important to make sure that the tack strap is tensioned so that it is taking the tack load. This will insure that the boltrope doesn't chafe at the feeder.

- Batten tension on the full length battens is a critical item for proper sail shape. We set our batten tensions so that there is enough tension to "just" eliminate any vertical wrinkles coming from the pockets. You certainly don't want more tension that this. We also recommend backing the battens off when storing the sail between events.

- A backstay flicker to help the mainsail leech pass through the backstay when light air tacking and jibing.

- Trimming the mainsheet so that the middle full length batten is parallel the boom has proven to be the fastest base trim setting. At times, you will find you can trim about 2 inches tighter, specifically, when the boat is "up to speed" and you want a bit more point. Make sure the boat is fully up to speed though!

JIB

A key to great speed in the J70 is proper jib trim. One thing we have found is key is to always keep the jib leech tell tales flowing. The jib is very high aspect, and little adjustments in trim make a big difference. We have been trimming as hard as possible, just to the point where the telltales stall. If they stall, you will feel the boat slow down and we immediately ease to keep flow and the boat going fast. Few tricks for better jib trim:

- Put a mark on the deck and on your sheets so that the trim is easily repeatable and something that can be done over and over again.

- If the boat feels slow, try to ease the jib slightly. We found that the boat can easily feel bound up and most times it has to do with the jib being trimmed too hard.

▶ In lighter winds, we will use the windward sheet to help in haul the jib, which allows for a closer sheeting angle. We have had success windward sheeting up to 3-4" "in" (see pic below).

▶ Our goal is to set the jib halyard in all conditions so that there is a slight hint of wrinkles along the luff. Only in conditions where you feel you need to depower would we pull the halyard on enough so the sail would just start to go smooth.

▶ Think of the jib sheet as your gas pedal. A small bit of ease, and pressing the bow down, will result in acceleration and more speed!

MORE TIPS

▶ Make sure the jib sheet gets knotted through the jib block from the inboard side of the car. This helps keep the sheet as far inboard as possible

▶ **Weight Placement** – Upwind and Downwind

• Displacement mode - Constantly look to see that the knuckle of the bow is just kissing the water.

• Light air mode- you will want to sit forward to reduce transom drag and wetted surface as much as possible.

• Breezy mode- In breezier conditions begin to move crew weight slightly farther back.

NOTE: If you are downwind and planing, you will want to sit father back, but be sure not to sit so far back that the boat will sit "artificially" bow up.

▶ **"Mark it"!**

This sounds basic, but be sure to put marks on your sheets, pole, tack line, and halyards so settings are easily repeatable.

SPINNAKER

Spinnaker trim on the J70 is much easier than that of a conventional poled boat. There are a few tricks that can make you faster downwind and make your sail handling easier. Tack height on the sail is important. Generally, we keep the tack down tight to the pole end when reaching (broad or beam). Letting the tack up on reach will just move the sail to leeward and increase heeling. When running we can let the tack line off when the tack will ride straight up or just slightly to leeward. We have found this setup to be faster in deep running conditions. We will generally let the tack off in these conditions 6-12".

Two other topics that always come up are whether to take the spinnaker down between the shrouds and the mast or behind them. The other topic is whether to gybe the spinnaker inside it's luff or outside. We've found that it almost always seems easier to take the spinnaker down between the mast and shrouds. This makes setting the spinnaker easier as it does not have go all the way around the shrouds which are pretty far from the mast. When setting the spinnaker, it is best to take the whole sail out of the bag prior to setting. This makes it much easier to hoist the sail. Normally, we've found that it is just as fast and a lot safer to gybe the spinnaker inside its luff. This eliminates any chance that the lazy sheet could fall in the water, it makes for a less sheet for the spinnaker trimmer to pull in, and it allows you to perform any of the three takedowns at the leeward mark.

GYBING THE ASYMMETRIC SPINNAKER

There are two types of gybes. The inside gybe and the outside gybe. How you hook up your tack line to your spinnaker tack dictates whether you will gybe inside or outside. By placing your tack line on top of the spinnaker sheet when hooking the tack line up to the spinnaker you are setting up for an inside gybe, where the spinnaker passes between the luff of the spinnaker and the furled up jib on the headstay. Hooking up the tack line underneath the spinnaker sheet sets you up for an outside gybe. Most of the time though, you will see teams gybing inside. On the gybe, the fastest method is to have the trimmer ease the kite as the boat heads down, another crew starts to trim the new sheet and the forward crew overhauls the new sheet just behind the shrouds. The forward crew then pulls down on the clew to untwist the head as the kite comes around. Almost everyone is now gybing inside and not using the outside gybes.

SPINNAKER SETS

We have found that it is best to always set the spinnaker from between the shrouds and mast. This does mandate taking the spinnaker down between the shrouds, which is the easiest way for all three takedowns.

SPINNAKER DOUSES

There are three types of takedowns: the windward, the leeward, and the "Mexican".

The windward douse is used when doing a port rounding and you are approaching the mark on port tack. The "Mexican" is for rounding a mark to port but your approach is relatively shallow on a starboard tack. The leeward douse is for rounding a mark to starboard while on starboard tack or when you approach the mark at a very sharp angle while on starboard tack and you will have to gybe quickly around a mark leaving it to port.

For the leeward douse, you can either grab the lazy sheet off of the clew, or grab the sheet just above the lifeline. The helmsperson then must bear off slightly, the clew should be pulled in between the shrouds and under the mainsail to prevent the kite from blowing over the leech of the mainsail, and then the tack line must be blown off completely. The halyard should then be fed down as the crew gather the spinnaker.

For the windward douse, the skipper can sail low, while the crew start to trim the windward sheet to pull the kite around to the windward side the forward crew should blow off the tack to unload the pressure off the kite. The clew should be trimmed all the way back to the shrouds and then pulled between the shrouds and the mast. The halyard can then be released and the kite stowed.

For the "Mexican", as you approach the leeward mark on starboard, the helmsperson should bear off into a slow gybe, the trimmer will over-trim the sheet as the boat gybes to port. Just as the boat is headed directly down wind and the mainsail begins to gybe, blow off the halyard. The spinnaker will blow against the rig and fall on the deck. When the sail is 2/3rds the way down release the tack and stuff the spinnaker in its bag. Practice of these three douses is vital to success on the racecourse.

Sail Care

Always store your sails away from the sun and make sure they are clean and completely dry.

Be sure that you always "roll "your upwind sails. This will help then last longer and remain wrinkle free.

Contact Us

If you would like to discuss setting up your J/70 sails contact the North J/70 experts listed on the cover of this guide.

Good Sailing!