

## J/111 Rig and Sailing Guide

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### RIG TUNE:

- check rake and headstay length- make sure to match up with recommended dimensions from sailmaker. Some are recommending 15.11 m from pin-to-pin centerline.
- check mast pre-bend and ensure it takes into account mast-step position and forestay length to ensure proper pre-bend as recommended by your sailmaker:
  - Doyle Sails- about middle mast-step location- use 1.5 to 2" prebend.
  - North Sails- mast-step aft with 3" of pre-bend (don't know forestay length).
  - Quantum Sails- about middle of mast-step- use 2" prebend.
  - Ullman Sails- about middle of mast-step- use 1.5" prebend.
- uppers- for light-medium- appear to be 51 to 55 on Loos gauge
- lowers- for light-medium- appear to be about a 3" arc you can swing the lower shroud while at dock- e.g. loose for North and Doyle sails. Quantum is 0" swing to 500 lbs.
- upper/lowers- med-heavy- use recommended tightening from sailmakers. Be careful NOT to over-tighten the lowers- very easy to keep main too full with max backstay and lowers that are too tight. Error towards looser lowers (converse is very slow with a stiff carbon mast).
- spreader marks- a good base to start from is:
  - upper- 670 mm from mast centerline
  - lower- 1035 mm from mast centerline

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### SAILING GUIDE:

#### I. MAINSAIL trim-

- UPWIND- use standard guidelines for trim- almost always parallel upper batten to boom, keep telltales on upper batten flowing greater than 50% of the time. When in doubt, ease the mainsheet so upper batten "opens up" about 15-30 degrees to leeward of parallel.
  - the mainsail can act as an "air brake" and slow the boat down significantly. Over-trimming main with upper batten "closed" (closer than parallel) will slow the boat down significantly.

- trim outhaul as needed for conditions- basically, trim flatter than you might expect with a J/105 or other types of boats-- a main that is too full, too much draft will slow the boat down quickly.

- DOWNWIND- ease outhaul so that at least a "fist" wide gap exists between foot and boom.

- Ease vang so upper batten is at least parallel to boom or more "open", pointing to leeward.

- Ease main as far as possible, until you see the leading edge "luff".

- A common mistake is over-trimming the main downwind and/or "over-vinging too tight"- in either case the main stalls.

II. BACKSTAY adjustment- the mainsail trim is very critical to speed- and backstay is a critical speed adjuster. Make sure you have marks on your backstay that permit repeatable settings- so far these are approximate figures for each wind/wave condition- subject to pre-bend and mainsail fullness/ draft (also relates to "jib trim", see below). The boat powers up very fast and generates a lot of AWS (apparent windspeed) quickly, so these settings suggested here reflect that "quickness" to target speeds based on your recommended shroud settings/ sailmaker sail shape settings (when in doubt, tighten the backstay when the wind is over 8 kts to de-power, or loosen the backstay when is under 8 kts to power up).

- L (0-4 kts)- slack to 500 lbs
- LM- (4-7 kts)- 500- 1,500 lbs
- M- (7-11)- 1,500 to 2,500 lbs
- MH- (11-16)- 2,000 to 3,750 lbs
- H- (16+)- 3,000 to max

### III. JIB trim-

- UPWIND- use standard guidelines from sailmakers. However, here are some tips to take into consideration if you're feeling "slow" for the sailing conditions:

- a. the jib can act as an "air brake" if you close the slot too much (very easy to do with five adjustments). Start by trimming the jib leech to recommended spreader marks with your jib "luff" breaking evenly from top to bottom on your luff tell-tales and in-hauler located at SS handrail. If that does not help, try easing the leech open 1" outside of spreader marks by easing the jib sheet.

- b. there are FIVE elements that affect jib trim- it's the interaction of the (i) in-hauler, (ii) jib car, (iii) jib halyard, (iv) backstay and (v) jib sheet. You have to under-

stand the basic interaction of the 5 elements. In approximate order of priority (the "cascade effect" on sail trim) and description:

1. backstay- sets sag on headstay and jib "fullness" or "roundness"
2. halyard- sets the camber/ depth position- from 25% to 40%
3. jib car/ in-hauler- they always act together to control "camber/depth" and "angle"
4. jib sheet- once others are set, this is your "governor" affecting slot/ speed/ angle

c. jib trim "settings"- you need to "calibrate" your jib trim with numbers- so make a notebook "cheat sheet":

1. backstay setting
2. halyard setting
3. jib car location
4. in-hauler setting (in degrees from 7.5 to 10 in 0.5 increments)
5. jib sheet mark location (especially important for tacks/ acceleration)

- d. basic jib trim setup (leech set up to "spreader marks"):
- L (0-4 kts)- no in-hauler at 0-2, then move to SS handrail
  - LM- (4-7 kts)- handrail to max in-haul- depends on waves (flatter tighter, wavier wider)
  - M- (7-11)- max in-haul (6.5 degrees)
  - MH- (11-16)- max in-haul to handrail (ease in-haul as needed to waves)
  - H- (16+)- handrail to no in-haul (flatter tighter, wavier wider)

IV. SPINNAKER trim- (windward-leeward racing)- most all sailmakers have "max" luff, so easing the tack line too much "opens" the head far too much, making the head too flat (always error to max halyard/ max tack).

- L (0-4 kts)- max halyard, max tack line
- LM- (4-7 kts)- max halyard, max tack line
- M- (7-11)- max halyard, tack line 6"
- MH- (11-16)- max halyard, tack line 6"
- H- (16+)- max halyard, tack line 6"

V. CREW trim- for general parameters, J/105 sailors are familiar with the "big booty" syndrome, so keep weight forward until you KNOW you need weight aft (in other words, the skipper is complaining of the bow going under, the rudder letting go and you've experienced at least a half-dozen wipeouts/ broaches). In general, upwind heel (10-15 degrees leeward) and downwind heel (10-15 degree windward).

THE GOAL = keep the bow knuckle in the water at all times = maximum waterline length and fastest speed (get ALL bodies out of the cockpit to trim as needed). Here's a general guideline for the 111:

- L (0-4 kts)- upwind/ downwind- 2-3 people in front of shrouds, induce heel as needed (15 deg leeward up/dwn)
- LM- (4-7 kts)- upwind/ downwind- 2-3 people in front of shrouds, induce heel as needed (15 deg up/ 15 windward dwn)
- M- (7-11)- upwind/ downwind- 2 people in front of shrouds, all bodies on rail upwind/ downwind (flat up/ 15 dwn)
- MH- (11-16)- upwind- 1-2 people in front of shrouds (flat water- 2/ waves- 1), downwind- 2 people in front of shrouds
- H- (16+)- upwind- 1 person in front of shrouds, downwind- 1 person then further aft to keep rudder in water.

VI. TARGET BOATSPEEDS- see the general guide to upwind target boatspeeds. This will vary based on wave conditions. Please also see the modified ORC polars table.