EZZY LION RIGGING

Before Rigging:

1) Your Lion comes with RDM cams set in the sail. If you have an SDM mast, please refer to the second guide, "*Instructions For Custom Fitting Ezzy Cams To Your Mast*"

2) In order for the downhaul gauge to be accurate, you need to measure the length of your mast. Please refer to page 3 and page 4 of this guide for instructions.

	First Choice Ezzy Mast	Total Length (including tip plug)
6.0	430	430.5
6.5	430	430.5
7.0	460	460.5
7.5	460	460.5
8.0	460	460.5
8.5	490	490.5
9.5	490	490.5

Chart 1: Correct mast combinations and lengths.

I) Rigging Order:

Open Sleeve Velcro
(at cams)

↓

Slide Mast into Sleeve
(above cams)

↓

Check Head Cap
(inserted into mast plug)

↓

Light Downhaul
(hand pull only)

↓

Outhaul Flat
(flat across boom)

↓

Snap Cams on Mast
(Fig 2)

↓

Final Downhaul
(pages 3 and 4)

↓

Adjust Outhaul
(page 5)

↓

Close Sleeve Velcro
(at cams)

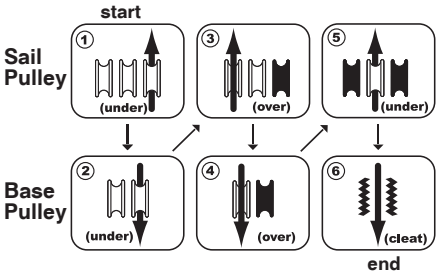


Fig. 1: Threading the tack pulley for a Chinook-style extension.

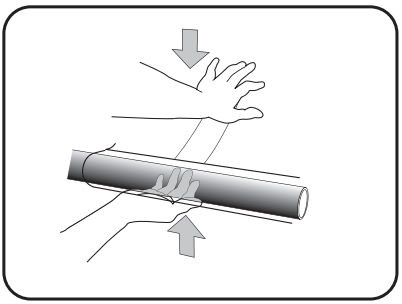


Fig. 2: Popping the cams onto mast.

- Push down on the batten while lifting the cam onto the mast.
- If you have difficulty getting the cams onto the mast, make sure you have no downhaul tension and your sail is outhauled flat.

II) Setting the Downhaul With the CORRECT Ezzy Mast:

a) First, check that the length of your Ezzy mast falls within the recommended lengths (chart 1).

b) If your mast is **LONGER**, move the downhaul gauge **DOWN** by the difference.

c) If your mast is **SHORTER**, move the downhaul gauge **UP** by the difference.

Note: Use the factory drawn medium line on the sail as your reference.

d) Then, downhaul your sail until the calibration mark lines up with the bottom of the mast (Fig. 2).

e) Refer to Fig. 3 for which line to use of the downhaul gauge.

Additional Information:

- We have set the adjustable head cap to its shortest setting. **Do not re- adjust the head webbing.**

- Do not over-downhaul. Too much downhaul will make the sail unstable.

- It's best to adjust the downhaul and outhaul together. For example, if you increase the downhaul for strong wind, you should also increase the outhaul. And, for light wind, to get maximum power, reduce the outhaul as well as the downhaul (see section VII on the last page).

- See Chart 2 for additional tuning tips.

	First Choice Ezzy Mast	Total Length (including tip plug)
6.0	430	430.5
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Chart 1: Correct mast combinations and lengths.

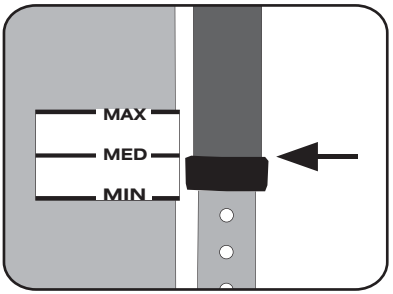


Fig. 2: Downhaul until the calibration mark lines up with the bottom of the mast.

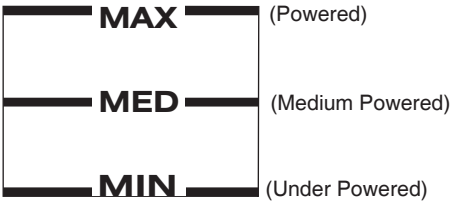


Fig. 3: Downhaul Gauge with suggested settings.

III) Setting the Downhaul if You DO NOT Have the Correct Ezzy Mast:

This method involves measuring the length of your mast, then repositioning the downhaul gauge up or down, depending on the length of your mast. After doing this, the downhaul gauge will be set and ready for rigging.

Follow these steps:

1) Measure your mast, including the tip plug.

2) Refer to chart 1 and note the required mast length for your sail.

3) If your mast is **LONGER**, move the downhaul gauge **DOWN** from the original position by the difference your mast is longer by in Chart 1.

4) If your mast is **SHORTER**, move the downhaul gauge **UP** by the difference.

5) Once repositioned, you are ready to use the downhaul gauge.

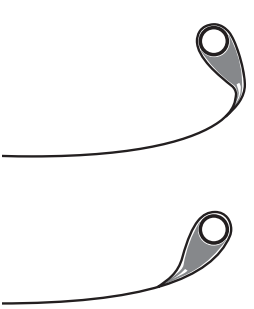
6) Depending on your mast, you may need to refine the gauge position based on how the sail feels. Refer to Chart 2 for fine tuning tips. Then, once you have found your medium wind sweet spot, move the gauge so the MED line is even with the bottom of your mast, Fig 2.

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Chart 1: Correct mast combinations and lengths.

Problem	Adjust Downhaul	Adjust Outhaul
Unstable	+2 mm	+2 cm
Back Handy	0 to -2 mm	+2 cm
Stiff, front handy	0 to +2 mm	0 to -2 cm
Lacks power	-2 mm	-2 cm
Too much power	+2 mm	+2 cm
Feels Heavy	+2 mm	0 to +2 cm
Cams are over-rotated	+5 mm (or more)	0 to +2 cm

Chart. 2: Tuning at the beach.



Cam is over-rotated, you need to increase the downhaul.

Cam rotation is correct, downhaul is correct.

Fig. 4: Increasing the downhaul reduces cam rotation

IV) Setting the Outhaul:

The Lion requires positive outhaul (Fig. 5).

The three cords sewn at the clew indicate how much positive outhaul is needed for varying wind conditions. The longest cord shows the maximum outhaul for strong wind; the shortest cord indicates the minimum outhaul for light wind and the middle cord shows a medium outhaul setting.

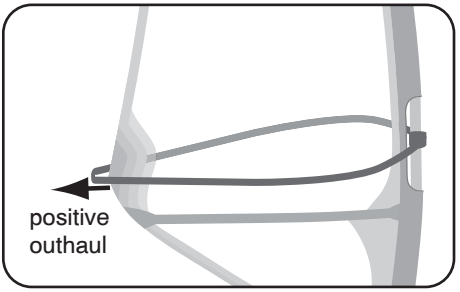


Fig. 5: Positive outhaul

Follow these steps to set the outhaul:

a) First, correctly set the downhaul.

b) Next, release all outhaul tension.

c) Then, gently pull on the outhaul cord and set your boom to the end of the cord (Fig. 6).

d) Finally, outhaul your sail to the end of the boom (Fig. 7).

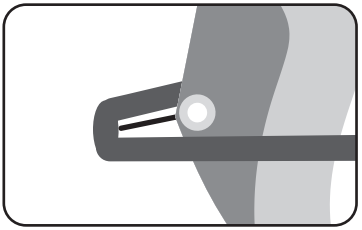


Fig. 6: Set the boom length to the outhaul cord

Additional Information:

- When setting your boom to the cord, don't pull the clew.

- We suggest starting with the medium length cord. If you feel over-powered (back-hand pressure), increase the outhaul about 1 to 2 cm. If you feel under-powered, reduce the outhaul by about 1 to 2 cm.

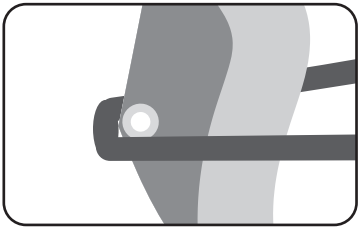


Fig. 7: Outhaul sail to the end of the boom

V) Tension the Tack Strap

a) The tack strap requires a lot of tension. Its purpose is to tension the foot and add shape to the bottom of the sail. It also lowers the sail's center of effort. When properly tensioned, the tack strap will improve your sail's performance and handling.

You always want a lot of tension on the tack strap.

b) Tension the strap until you see a wrinkle extending out from the tack, see Fig 8.

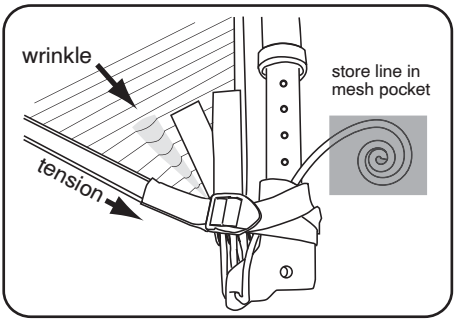


Fig. 8: Tension tack strap and store downhaul line in mesh pocket.

VI) Tensioning the battens:

Use the tensioner key that is stored in the pad of the sail and tension the battens until you eliminate any vertical wrinkles that extend out from either side of the batten pocket (Figure 9).

Note: Your battens have already been tuned by us in the factory and most likely will not need further tuning. Be careful not to over-tension your battens.

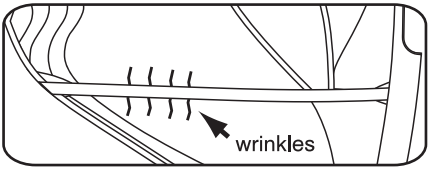


Figure 9: Tension the battens until there are no vertical wrinkles on either side of the batten pocket.

VII) Helpful Rigging Hints:

1) If it is difficult to pop the cams onto the mast while rigging:

a) Make sure you have your sail outhauled flat.
b) Make sure you have no downhaul tension.
c) Cam pocket may be too short or you may have the wrong cam inserted. Refer to guide titled "Custom Fitting Your Ezzy Cams To Your Mast".

2) If you can't close the velcro openings on the mast sleeve:

- Your cam pocket is too short.

3) The sleeve is loose in front of the cam:

- Your cam pocket is too long.

VIII) De-rigging:

1) Undo the downhaul completely.

2) Snap the cams off of the mast.

3) Undo the outhaul completely.

4) Spin the mast while slowly pulling it out of the sleeve, without wrinkling the sail.

5) Roll your sail beginning at the head. After rolling, fold the mast pad along the sail, then wrap the tack strap and fasten the velcro (see fig. 10).

6) Insert the sail into the sail bag with the SLEEVE-END first (fig. 11).

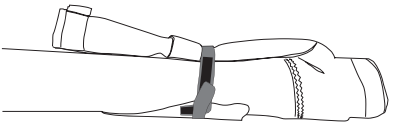


Fig. 10: After rolling, tuck the pad, then wrap with the tack strap and secure the velcro.

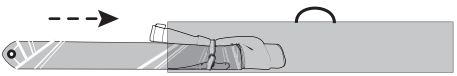


Fig. 11: Insert with the sleeve-end first into the sail bag and store horizontal.

IX) Using Without the Cams:

You can use the Lion with two cams, one cam, or with no cams. To remove the cam, the sail should be unrigged. Open the velcro slots and remove the cam and the cam pocket. Close the slots and you are ready to rig.

X) Sail Care:

- To avoid mold and mildew, dry your sail thoroughly before storing it.

- Creasing damages the sail cloth. Avoid creasing your sail when rigging and de-rigging.

- Sunlight kills all sail cloth. Keep your sail out of the sun when not sailing.

- Don't rig on sharp objects.

- After rolling the sail, tuck the pad so it rests along the sail, wrap the tack strap around the pad and the sail, then attach the velcro (Fig. 9).

- Insert your sail sleeve-end first into the sail bag (Fig. 10).

- Never store your sail upright resting on the clew.

XI) Basic Theory Relating to Outhaul and Downhaul:

- Adding downhaul, in addition to loosening the leech, moves the **draft back** because it flattens the luff.

- Adding outhaul, in addition to flattening the sail, reduces tension along the luff and moves the **draft forward**.

It is important to adjust the downhaul and outhaul together.

1) If your sail feels unstable, give a few millimeters of downhaul and a few centimeters of outhaul.

2) If your sail feels stable, but has back-hand pressure, give a couple of centimeters of outhaul until the back hand pressure goes away.

3) If your sail feels "stiff" and wants to pull you forward, release some outhaul and possibly increase the downhaul.

4) If your sail lacks power, reduce downhaul and outhaul.

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