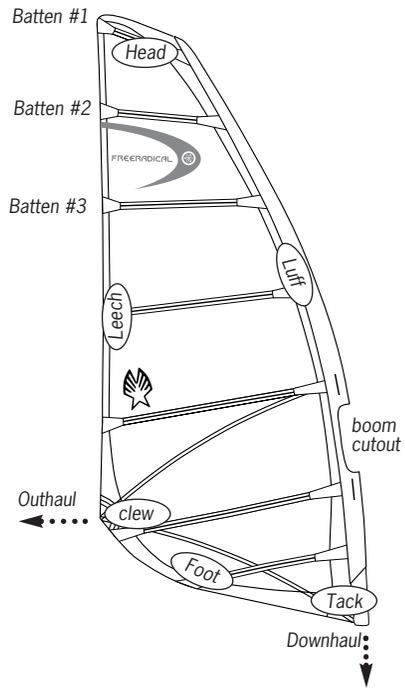


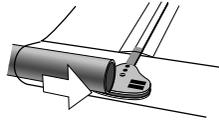
EZZY SAILS

FREERADICAL

CAMBERED SAIL TUNING



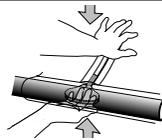
- 1** Slide the mast through the luff sleeve. Note: slide the mast above the cams (**DO NOT ATTACH CAMS TO THE MAST YET**).



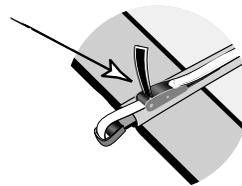
- 2** Attach the mast extension and thread the line through the cleat. **DO NOT TENSION THE DOWNHAUL YET**, just cleat the line off.

- 3** Connect the front of the boom to the mast and outhaul the sail to the boom length that is printed on the sail. The suggested boom length is measured from the clew to the front of the mast at the center of the boom cutout.

- 4** Attach the cams to the mast by pushing down on the batten with the palm of your hand, approximately 12" (30 cm) from the luff sleeve, and snap the cam onto the mast with your other hand.



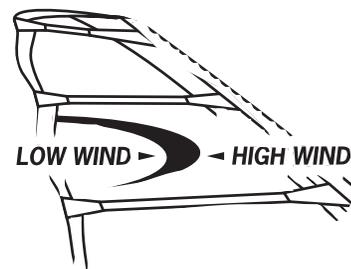
If the cam is difficult to put onto the mast, check that the batten tension webbing is loosened until the Velcro touches the buckle. This will allow the cam to slide further from the mast and will make it easier to get the cam onto the mast. Also, make sure the sail is outhauled flat before attempting to snap the cams onto the mast.



Opening the zipper will make it easier to snap the cam onto the mast. But, to avoid damaging the zipper, be sure to close the zipper again before tensioning the cam batten.

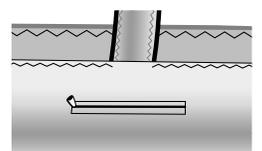
- 5** Downhaul your sail until the leech goes loose between the upper three battens. Use the logo that is printed between battens #2 and #3 as an indicator. You **ALWAYS** want a loose head, even in light wind sailing. In stronger wind you want to downhaul more which continues the looseness down the leech and gives you better sail control.

The amount of downhaul tension will vary for different wind conditions: A high-wind setting requires more downhaul tension to loosen the upper leech and give more twist. In lighter wind, the sail needs less downhaul for a tighter leech and better low-end power.



Always keep your base extension at its shortest possible setting. If there is not enough space for downhauling and you have mast extending from the top, use the adjustable top to raise the sail up on the mast rather than extend your base.

- 6** Now, tension the camber battens by pulling on the batten strap while pushing the palm of your other hand against the batten end-cap. When the camber battens are correctly tensioned, the sleeve directly in front of the cam should be tight. It is possible to over-tension the cam batten, which will cause the cam not to rotate. A quick check of this can be done by holding the sail up on land and pumping the sail from both sides of the boom. The cam should rotate smoothly; if it doesn't, decrease a little batten tension.



Sleeve is tight when batten is correctly tensioned.

- 7 ■ Check that the batten tension on the screw-batten tensioners is correct. When correctly tensioned, there should be no wrinkles running across the batten pockets. If the battens need adjusting, use the screwdriver key that is stored at the tack of your sail and tighten the battens until the wrinkles through the batten pocket disappear.



WARNING: OVER-TENSIONING THE BATTENS COULD DAMAGE THE SAIL.

- 8 ■ To set the outhaul: first, make sure the sail is correctly downhauled to the printed indicator between battens #2 and #3, then release ALL outhaul tension while making sure the battens and cams are all flipped the same way. This is your starting point at zero outhaul. Now, adjust the boom to the end of the guide tape. Next, outhaul to the end of the boom. This will be an average outhaul setting. For light wind, use as little as 2.0 cm. (3/4") of negative outhaul and for strong wind, up to 2.0 cm. of positive outhaul.



Adjust the boom to the guide tape, then outhaul.

- 9 ■ Check that the camber is not over-rotated. Over-rotation will fatigue the cam and the batten and lead to possible breakage. If the cam is over-rotated, you need more downhaul.



Cam is over-rotated, need more downhaul.



Cam is not over-rotated, downhaul is correct.

- 10 ■ Wrap the tack-strap webbing around the bottom of the mast base. The tack-strap should be tensioned at least until the edge of the foot is tight. High tack-strap tension is desirable in all wind conditions. The tack-strap can not be over-tensioned: more tension in stronger wind puts the center-of-effort lower, giving the sail more control; in light wind, tensioning the tack-strap makes the foot deeper and tightens the lower leech creating better low-end power.

- 11 ■ Secure the mast pad by wrapping the velcro around the mast then over the mast pad.

(Following this de-rigging sequence will prolong the life of your sail and avoid possible sail damage.)

- DE - RIGGING**
- 1) Release the camber batten tension (push the release lever located on the center of the buckle) and undo the tack-strap.
 - 2) Undo the tack strap and unfasten the mastpad velcro.
 - 3) Release the downhaul.
 - 4) Snap the cams off of the mast.
 - 5) Release the outhaul and remove the boom.
 - 6) Slide the mast out of the luff sleeve without creasing the sail.
 - 7) Roll the sail beginning from the head, and tuck in the mast pad horizontally.
 - 8) Insert the sail into the sail bag with the sleeve-end first.

SAIL CARE

- **Sunlight** will break down all sailcloth in a relatively short time (300 hours of direct sunlight). Don't dry off your sails in the sun!
- **Creasing** damages sail cloth. When rigging and de-rigging, try not to crease your sail or let it flap in the wind.
- **Sand** will scratch the monofilm and can clog the batten tensioners. Try to roll your sail sand-free.
- **Cleaning:** Use a mild soap and water with a rag to clean your sail. Harsh solvents may damage the sail cloth. Contrary to what most people think, you do not need to fresh-water rinse your sail.
- **Storage:** It will not damage your sail to store it with the battens fully tensioned. If storing your rolled sail vertically, make sure the sleeve-end is supporting the weight. This prevents the clew from getting damaged.

PROBLEMS

My Camber is difficult to get onto the mast.

- 1) Make sure the batten tensioner is completely released while snapping cam on.
(or)
- 2) Make sure the sail has no downhaul tension and is outhauled fully before snapping cam on.

My Camber does not flip:

- 1) Camber batten is too tight, release a little batten tension.
(or)
- 2) Cam is under-rotated, need less downhaul.

My Camber keeps popping off the mast:

- 1) Camber is over-bending, need more downhaul.
(or)
- 2) Mast diameter is larger than normal, lengthen the webbing straps on the cam.

My Sail feels heavy:

- 1) Leech is too tight, need more downhaul.

My Sail feels too powerful:

- 1) Sail is too deep, try more downhaul and outhaul.
(or)
- 2) Mast is too stiff, check that you are using the correct mast.

My Sail lacks power

- 1) Sail is too flat, try less downhaul and less outhaul.
(or)
- 2) Mast is too soft, check that you are using the correct mast.

If you have further questions, comments or suggestions, please feel free to contact us:

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