E Scow Tuning Guide

Sail Information || E Scow News|| E Scow Tuning Guide || Contact E Scow Experts || Order

Tuning Guide for Aft Chainplate, Swept Spreader Rig

See also: E Scow Tuning Guide for Standard Traditional Rig

Updated Oct 2006.

This E Scow Tuning Guide was written for E Scow sailors using the rig with the chainplates at the max aft position with longer spreaders. With this rig, backstays are not required, allowing the skipper to fully concentrate on tactics and boat speed.

Before stepping the mast:

1. Clean and lubricate turnbuckles, make sure that the top and bottom threaded studs are even in the turnbuckle tube.

2. Position mast so that base is locked in mast step plate on deck and top end is resting in the boom rest support.

3. Check all pins, wires and fittings for wear, and attach upper and lower shrouds.

4. Check the spreaders to make sure they are pinned in the middle hole for an all purpose setting.

5. Make sure that all halyards are pulled down and are not fouled.

6. Using the feeder line that comes up through the mast step, tie this onto the bottom end of the jib halyard and pull the jib halyard through the deck. **Take care not to loose the feeder line through the deck or you will have to re-run through the pulleys inside the backbone.**

7. Using a person on the foredeck pulling on the spinnaker halyard and someone walking up the mast, step the mast and attach the forestay.

After stepping the mast, proper shroud tensions should be obtained. **If you have a new North mainsail with the slug sewn into the sail, remove the screw holding the slug slide in the mast and remove the slug slide. This slide can be shackled on another sail for use of an older mainsail.**

ALL PURPOSE SETTING

1. For all purpose setting of the side stays, set the mast rake at 33'11-1/2", measuring from the tip of the spar to

the intersection of the deck and transom.

2. At this point , tighten the upper shrouds so they measure 600 lbs. on a Model A Loos tension gauge. Make sure the uppers are in the after most hole in the chain plates and also make sure you tighten each turnbuckle the same amount. If you want to really fine tune the rig, measure down to the deck at the chainplates using the jib halyard and adjust the uppers to center the mast athwartship. This is a good all purpose setting for the uppers. Note: If you have a new boat it is important to sail a few times in heavy air to stretch out the rigging before setting permanent marks on the shrouds and the mast rake.

3. To set the lowers you must go sailing. The lowers should be in the forward most hole in the chain plate with adequate pressure on the rig, sight up the aft side of the spar (up the tunnel) and adjust each lower so that there is approximately 1/2"-3/4" of leeward bend at the spreader height off of an imaginary line running from the base of the mast to where the sidestays attach near the top. This is a good all purpose setting for the lowers.

4. Spreaders: Forward hole so that spreaders are raked all the way aft.

Downwind Considerations

In very light winds, we use the reacher on all the spinnaker legs because it's smaller than the runner and will fly more easily. Usually an E Scow has two spinnaker pole rings on the spar: use the low ring on a tight reach and ease the pole forward until it's approximately 1' to windward of the centerline of the boat. Be careful not to gauge this on the headstay, because it could be sagging to leeward. Keep the pole height approximately 90 degrees to the mast. Also, keeping the pole low on a tight reach opens the leech of the spinnaker. Also when reaching the main cunningham along with main outhaul should be eased. Work the vang constantly as the puffs come and go. Pull the leeward board up halfway, to three quarters of the way up and heel the boat so that the boom just kisses the water. This reduces the wetted surface and is very fast.

In light air when sailing downwind we leave the pole forward. In more moderate air we move the pole two to three feet off the headstay, keep the boom just kissing the water and pull the board three quarters of the way up. As the wind builds, we can gradually pull the pole aft and raise it to the high ring on the mast. In the really strong puffs you can sail the E Scow straight downwind and pull the pole way aft. In strong wind and big waves you must reach the boat much more than normally. This is done to achieve a better angle to the waves and prevent the bow from digging in the big ones. It is also fast to use the reacher when the waves are extremely big. We have found that in medium to heavy air it is very fast to sail downwind with the pole aft and everyone hiking out on the high side, pressing the boat up for speed. At the same time adjust the board height to allow the boat to slide a bit, especially in waves. Keeping the boat flat in this mode is faster.

Special Considerations

The angle of heel is very important on an E Scow. Upwind in up to 10 knots, go for maximum heel, but never let the water get up on the leeward deck. In more wind, sail with the bilge board vertical in the water. Don't let the boat heel to much when sailing in a chop: it might feel good, but it is not fast. Just make sure that the bilge board is vertical, or that the boat is just a little flatter. When sailing in a lot of chop, be sure to have a very full jib, power up the main by keeping the rake forward, Cunningham off all the way and the outhaul pulled just until the vertical wrinkles disappear.

An E Scow travels at very high speeds for a sailboat, and is very maneuverable even though the rudders are only 10" X 16". Still, it is important for the crew to be in tune with the skipper to help steer the boat. When a big puff hits, the bow has a tendency to blow to leeward, so the jib crew must be prepared to ease the sheet to prevent this. The most important thing to do when tacking an E Scow is to lower the new board at the right time. As the boat is turning through the tack, wait until the bow is just past head to wind to lower the board: if you do this to soon, it just creates extra drag and slows the boat down. Don't worry about raising the windward board until the boat is up to speed on the new tack. We like to ease the main slightly and then trim it in to heel the boat as we

come up into the wind, and then everybody rolls the boat together. In light to medium winds, keep the jib trimmed in until the boat is head to wind and let the wind break it across. When it starts to get windy it isn't necessary to roll the boat, but ease the jib sooner so the bow can come up into the wind easier.

FINE TUNE SETTINGS FOR MAST AND SHROUDS

Special Notes:

1. With this rig we always keep the mast rake at 33'11-1/2" and we adjust the shrouds accordingly.
2. When you tighten up the shrouds the mast rake will measure further aft so always measure the rake with only snug Uppers.
3. Use only a Model A Loos tension gauge to find shroud tensions.

	0 - 10 Knots	*10 - 18 Knots*	*18 - 30 Knots*
Rake	33' 11- 1/2", snug uppers	Unchanged	Unchanged
Uppers	Base Setting 600lbs	Base Setting 600lbs	Plus 3 Full Turns
Lowers	Minus 1 full turn	½" of sag in mast	Plus 2 turns
Spreaders	Front hole, max sweep	Middle Hole	Middle Hole

SAIL TRIM GUIDELINES

JIB

	0-10 Knots	*10-18 Knots*	*18-30 Knots*
Clewboard	3rd hole forward of corner hole / 1st punched hole	same	4th hole down
Luff Tension	Tension luff to eliminate horizontal wrinkles		Slightly over tension to move draft forward
Jib Car (off centerline)	0-5 mph - 15"	5-15 mph - 13 1/2"	15-30 mph - 14" or more to eliminate backwinding

MAIN

	0-10 Knots	*10-18 Knots*	*18-30 Knots*
Sheet (Top Batten*)	Parallel to boom to 5 degrees open, top telltale flowing 1/2 the time at least	Parallel to boom, to 5 to 10 degrees open	5-20 degrees; twisted to leeward - top telltale flowing always
Traveler Car	3" to 6" above center	Center to 12" down in puffs	Between 6" down and rudder post
Vang Tension	Loose	Firm to moderate in puffs	Very tight
Cunningham	Loose	No wrinkles	Over-tension draft forward
Outhaul	Just remove wrinkles along boom	Remove wrinkles in chop, to black	To black band

		band in flat water	
Mast Rake	Set at 33' 11-1/2" mark	same	Same to slight aft rake
Boards	Full down	Full down	Full down, unless the waves are big and then up 2"

* Check top batten by sighting from underneath boom, sitting on cockpit floor.

Tactical Considerations

As far as tactical considerations go, at the start just remember that E Scows accelerate quickly, so it's important to trim in before the boats around you or you might get rolled right away. If you have the room to leeward, simply put the boat on a tight reach with 15 seconds to go, get it up to speed by the time you hit the line, and make sure you can sail over the boat to leeward. E Scows don't seem to create much of a wind shadow, so don't be afraid to sail in someone's bad air if you think it's the right way to go, since the gains in a windshift can outweigh the loss of boat speed. These boats sail so fast that you are never out of the race. If you find yourself behind, several good windshifts can move you right through the fleet. The important thing to remember is to keep the pedal down and never give up.

All these generalizations are norms and averages that have proven fast over many years. Some experimentation by your part may be necessary to fine-tune your particular rig and sailing style.

Good luck with your new sails and please feel free to call us with any questions you may have.

SAIL FAST!

For tuning help contact the North E Scow experts.