

## Mirror Tuning Notes

This is designed as a basic tuning guide for sailors who are new to the class and are looking for a guideline setup they can use as a basis for fine-tuning. Anyone will tell you I'm not the person to ask if you want your boat to leave Maximizer for dead off the start line!

**Mast rake** This is a pretty important part of setting up your boat. You should have a measurement of about 3555mm from the block at the top of your mast to the centre line of your transom. This is a lot of effort to find and get right though. A good rule-of-thumb is to put your centreboard upside down in front of the mast, with the edge against the leading edge of the mast. The mast should be raked backwards enough so you can fit 2 fingers between the end of the daggerboard and the mast. Remember putting on rig tension will pull your mast back forwards!

**Rig tension** This varies for each sail maker. If you have Trident sails, you should be sailing with around 70 kilos of tension in the stays, or about 15 on a Loos tension gauge. Goodwin sails will need more tension. If you don't have a tension gauge, then borrow one, and mark the rope on your forestay with permanent marker at the right tension. This will let you know when you have the right amount of tension on.

**Lacing** This should continue the line of the luff of the sail from the end of the gaff, that's about a gap of 15mm from the mast. The tack of the sail should be secured with a separate tie to the rest of the lacing. An easy way to set up the lacing is to crank on the downhaul before tying the lacing off, and then tying the lacing tight enough to take out the slack.

### Beating

**Downhaul** This should be put on enough to pull out most of the creases running horizontally from the lacing. In light wind you will need very little, but it will need to be put on more as the wind increases. Generally if the boat tries to point up on its own, you need more downhaul.

**Kicker** This can be let fully off in light winds, and should be pulled fully in when it is getting windy. In between, it should be pulled in until the top telltale is flowing most of the time, but flapping backwards for about 10 to 20%. This is a pain to do every time you need to adjust your kicker, which you should be doing every leg of the course, so you should take a permanent marker out sailing one day, and mark the right settings so you can find them easily in a race.

**Outhaul** In a drifter, this should be pulled right in, because any wind there is won't be able to get round too big a belly in the sail. In medium airs, it can be let out to give you a bit more power, but don't let too the gap between the sail and the boom get too big. If the gap is more than about 10cm then you don't have enough outhaul. The outhaul needs to be pulled right in if you are getting overpowered.

### Reaching

**Downhaul** This can be let off a little more than on the beat, but still don't let big creases develop in the sail.

**Kicker** The same applies as for the beat, keep that top telltale flying 80% of the time.

**Outhaul** Let this off plenty so you get the most power. There are no hard and fast rules as to how much, but you can get a feel for it by sailing plenty of reaches. You'll be able to tell when the boat is in the groove.

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## Running

**Downhaul** Let this off almost completely, except if the wind is very strong.

**Kicker** Let the kicker off completely, unless there is enough wind to pull the boom way above the deck. Then you should leave the kicker taking up the slack.

**Outhaul** Pull the outhaul tight so that the most area possible is presented to the wind

\*On the run, a mirror goes fast if you get your crew to hold the boom out and you heel the boat over to windward. This puts less of the boat in the water, and presents the maximum sail area to the wind.

Despite designed as a doublehander, the Mirror with full rig makes an ideal singlehander, a sector the class is keen to encourage. Around the country there are many adults who sail their Mirrors purely as a singlehander, and for most events up to Open Meeting level racing against the fully crewed teams. The stable design and small sail area inspire confidence, but with three sails there is much to challenge the serious racers. For adults sailing with small children, the ability to safely control the boat single-handed is an important factor.

With a bit of thought and preparation, sailing your Mirror single-handed is straightforward, I have raced in up to thirty knots on coastal waters, including flying the spinnaker, which is certainly very exciting and gives much faster boats a run for their money.

## Preparation

With no crew it is essential to organize the main controls to make sailing as easy as possible :

- Tie the jib sheets together - this allows you to control the jib from both sides of the boat and avoids the problem of having to go down to the leeward side to release the sheet, essential in a blow. I find it best to hold both jib sheets together and tie a figure of eight knot, reef knots always seem to come apart.
- Long tiller extension - this should allow you to reach the foredeck without letting go
- Flyaway spinnaker pole - this allows you to easily attach the guy with one hand with out letting go of the tiller extension. If available a fork system on the outboard end of the pole is best, it is easier to clip the guy in and it normally releases itself when the pole comes back.
- Controls lead back

## Sailing

As you have to do everything yourself, maneuvers tend to take longer, particularly when the spinnaker is used. When racing in close quarters you may need to adjust your sailing style and plan ahead.

- Face forward when tacking - this allows you to control the jib and keep it filling throughout the tack
- Pull the spinnaker round when gybing using the old guy - this stops in filling inside the jib and tangling
- Get used to sailing the boat without holding the tiller - there will be times when you need to get on the foredeck to sort out the inevitable tangles, a Mirror is very well balanced and can be steered using body weight.
  - Use the controls to de-power in heavy winds
  - Practice using your feet to trap sheets and sailing with the tiller and mainsheet in the same hand.