



Mirror Tuning and Setup Guide 2021

Ben McGrane – Mirror National Champion

Wind Speed	1-6 knots	7-12 knots	12-20	20+
Mast Rake	5070	5070	5050	5050
Rig Tension	15-16	15-16	18	18
Kicker	None	Slack out	Tension to tight	Tight
Outhaul	10-15mm eased	10-15mm eased	10-15mm eased	Tight without foot crease
Cunningham	No	No	Some once full kicker and wanting to depower.	Lots
Jib Tack	10mm above deck	20mm above deck	10mm above deck	0-10mm above deck
Jib Halyard	Slightest sag between hanks	Slightest sag between hanks	Tension so no sag	Tension so no sag

Setup Guide

With the mirror setup I've aimed to keep it relatively simple with little option to change rig settings on the water. I've finalised 2 rake settings which is effectively a change to implement at the wind strength you start using kicker over mainsheet tension. With an unsupported lower mast the kicker immediately bends the lower mast and you end up with a loss of forestay tension, to counter this I prefer going ½ hole tighter on the shrouds and then pulling the forestay to the increased tension of 18. The slight increase in rake I've found is beneficial in opening the opener jib slot.

How to measure the rake?

Pull on the rig tension until it reads the required number with a Loos gauge reading on the shroud. Hoist a tape on the main halyard and measure 4.2m at the black band. Then take the tape measure to the back of the boat and measure against the aft edge of the deck at the centre of the transom.



Repeating settings

Halyards – the Selden mast comes with tooth racks for both halyards which are a neat solution. Not only do they minimise wear on the rope, they do not allow any slippage and I've also marked the tooth to hook onto each time I hoist the sails.

Pole Uphaul – we have a single black mark at the cleat which we use all the time except for very light winds when I would lower the pole slightly.

Kicker – I have 3 marks on my kicker. There are no strict rules here but I have identified a mark which I use consistently as a go to for downwind and for the initial kicker setting upwind once easing mainsheet. Beyond that it is a case of looking at the sail and making small adjustments but they work brilliantly at each mark of the course and through changing conditions for quick reference.

Jib – Same with the jib. We have a mark which gives us a consistent position for the day and conditions for repeating the same sail set up quickly each time Keira sheets in.

Sailing the boat

0-6 knots. Weight placement is key, get forwards but don't over do it. Also getting low in the boat to reduce drag, sounds a bit over the top but I think it has had one of the biggest impacts on our light wind speed. Careful to not sheet too tight, at any point you feel slow then ease sails. Try to keep the flow over the mainsail and leech tell tales flying, this can sometimes mean the main out towards the quarter in very light winds so the jib needs to also be well eased to have any chance of flow through the slot.

7-12 knots. Again I try to keep myself pretty small, low on the deck and then sat on the tank. Keira moves from leeward on the thwart to sat next to me on the tank and then on the gunnel. Let the crew move and the helm sit still. 7-12 knots is quite a big transition period in any boat so controls change quite a bit up to the point of fully powered. As the wind builds you are aiming to not give any power away. The jib tack is slightly higher and slightly soft luffed, trying to get the maximum power out of the leech of the jib. Mainsail is also leech tensioned, avoid kicker for as long as possible. Sail the boat as flat as possible, small eases if the boat feels slow. Try not to point too high, the daggerboard is small and flat sided so height is better found through speed.

12-20 knots. Now fully powered to overpowered. Kicker is on so happy to have more tension to avoid forestay sag. If on the slightly more raked setting the jib sheet can be pulled harder without closing the slot. Focus on sailing the boat flat and avoid hitting waves.

20+ knots. Overpowered. Kicker is on hard. Use the Cunningham to then twist the main and open the upper leech. Outhaul on but not so tight you have a crease along the foot. If struggle for speed ease the jib slightly. Avoid the jib slot being so tight that the main starts to back at the luff. More jib halyard tension to lower the sheet angle and open the upper leech.

