

## Quick guide to IOM sail trim for normal wind and flat water – by John Ball

The challenge with the IOM rig is that adjusting one item may affect several others. For example tightening the back stay to flatten the main will also add more twist to the leach – requiring adjustment of the vang or mast ram. So the trick to set up the boat quickly, is to isolate each adjustment to minimize its effect on other settings. To do this the sequence is important.

### Sail Trim (in this order)

Getting started.

Install the rig into the boat, with ram off, vang eased, and connect the sheets.

### Step 1

#### Mast Setup

Slowly bring sails to close hauled – check for jams or sheets too tight. Note the forward prebend.



#### Tension Backstay

Tension the back stay so that mast is straight. Or very slightly bend aft – look at the main luff as you do this and watch for the sail luff to fall into shape. (lay boat on side and sight down mast)

Add light tension on jackline down haul to control the mainsail luff.

Tension mainsail downhaul just to take out wrinkles.



## Step 2 Downwind Trim

Let the sheets out all the way. The main boom should hit the shrouds.

Pick up the boat by the fin and hold into the wind to push the main full out. Now tighten the boom vang to firm up the mainsail leach for the downwind setting. Use just enough vang so that the upper mainsail leach does not twist forward.

Gybe the main and check the leach on both sides – if one side is more twisted forward, then mast tip is not centered.



## Step 3 Upwind Trim

Now to set the upwind trim, pull in the sheets to close hauled.

To set jib twist, adjust the jib topping lift. A good starting point is for about 40mm from topping lift to leach at mid point.

Once racing, you can play with this setting (try +/- 5mm to see if you can improve your VMG to weather relative to the other boats.



Next set the mainsail twist by adding mast ram to push the bottom of mast into column. This pushes the top of the mast up and closes the mainsail leach. To see the effect, hold the boat up and push aft on the mast at the mast ram, while watching the mainsail upper leach open and close as you push and release. This is what the ram is all about.



For mainsail twist, try to match the curve of the jib leach.

Compare this picture to the previous one – the only difference is some ram – note how the leach has closed towards the backstay around area of the orange wind telltale. This is exaggerated as shown, as there is no wind pressure on the sails.

#### **Step 4 Fine tune Sail Trim**

##### **Foot Draft and sheeting angle**

Check the fullness of the sail foot and adjust with the outhaul (25 to 35 mm for jib and 20 - 25 mm for main depending on conditions)

Check main boom sheeting angle to centerline by adjusting the mainsheet, allowing the boom to be 10 mm from sheeting post (range is 8 to 15 mm depending on conditions)

Check the jib clew to mast centerline. (63 mm for average conditions, 60 with more twist for very light wind and ease to 70 for top of range and waves).

#### **Step 5 Go Sailing to check the trim**

##### **At launching**

Check radio and Rx are on and working by moving rudder and sails before releasing boat. Ensure the hatch lid is on, and drain plug in place.

Sail close hauled and check for same behavior on both tacks. Eg sail close hauled on Stbd, and observe. Then tack the boat without adjusting the sails and observe again.

Is the behaviour different on each tack? If it rounds up on one tack and bears away on the other, (ie always turning one way) check that the rudder on centre, check the mast for vertical side to side, check jib boom to mast for same on both tacks. Fix any problem before proceeding further.

If the boat behaves the same on both tacks ie always rounds up or always bears off, then either:

Weather helm? (too much power aft of the balance point) Reduce the power of the main by increasing twist by easing mast ram. Excessive weather helm may require decreasing mast rake.

Lee helm, (too much power ahead of the balance point) add more power to the main by reducing mainsail twist by adding mast ram. In light air, may require increasing mast rake.

### **After Sailing – repeating the settings**

Once you have the basic backstay setting for a straight mast, mark the backstay at the bowsie to find that setting quickly next time.

When easing off the vang for the day, hold the locknut in place and unscrew the barrel – that way you can screw the barrel to the locknut next time to get the same twist.

Ease downhaul, jackline, ram, vang while noting settings for next time.

### **Some tuning hints.**

The jib sheeting angle is good setting to play with when tuning against another boat . But be methodical, – try bringing in the jib 2 mm and sail alongside your partner, with the other boat making NO changes. If you do better, come in another 2 mm and repeat, until you find you are slow – then go back to the previous setting and write down that setting for future use. Then swap roles and repeat to help them.