Rigging & Tuning Guide

This introductory guide is intended as a brief summary of how to quickly and easily rig the 5000. The guide is divided into four sections:
1. Rigging the mast
2. Rigging the trapeze wires and kicker (vang)
3. Righting moment and weight equalisation
4. Rigging the sails

1 RIGGING THE MAST

Stepping the mast

The easiest method to step the mast is as follows:
Leave the boat secured to the trailer and attached to the car tow hitch. Alternatively, sit someone on the bow to prevent it from lifting.
Pick up the mast and place it with the sail track pointing downwards on the 5000 with the heel/tenon over the mast step and the topmast beyond the transom. Using a short length of line tie the kicker eye to the aft most cross bolt on the mast step leaving about a two inch (50 millimetre) gap between them. Next attach the shrouds 3 holes from the top of the chainplates. This is a good medium position to start from. With the inner end of the gennaker halyard attached securely in the boat, attach the outer end to the bow eye.
Clear cunningham and kicker lines to the aft side of the mast step. Standing in the boat, near the mainsheet jammer, lift the mast and walking forward raise it about the heel into a vertical position. Check that the tenon of the mast is fully engaged into the mast step between the cross bolts and that both bolts are visible fore and aft of the mast. Pull up the slack in the gennaker halyard and cleat off. As a temporary forestay before the genoa is hoisted, take a trapeze wire around the shrouds and attach the trapeze ring to the bow eye with a line and take up the slack on the trapeze adjuster.

Attaching the Lowers

The Lowers are attached to the mast to pass behind the Morrison wires. Take care that the "T" terminals are properly seated in their backing plates on the mast. It is very important to have the lowers in the correct range. Too little tension gives inadequate support to the mast, too much can invert the mast. Ideally, the lowers should control the lower mast bend from virtually straight to a curve consistent with the overall mast bend.

Setting the Morrison wires

The Morrison wires prevent the mast from inverting downwind and promote mast bend for light airs. Apply tension to the wires by bending the mast using the main halyard attached to the cunningham eye on the mast. With no mainsail set and the rig tension on, there should be approximately five inches (125 millimetres) of mast bend measured between the main halyard and the spreaders.

2 RIGGING THE TRAPEZE WIRES AND KICKER (VANG)

Trapeze Wires

Apart from the trapeze wire acting as a temporary forestay, attach the other trapeze wires to the elastic retractors taking care to ensure that the wires are not twisted.

Kicker (Vang)

The bottom block of the kicker can now be attached to the kicker eye on the mast. The rest of the system should then be rigged in the manner shown in the rigging diagrams in the Class Measurement Rules. When de-rigging, it is only necessary to undo the lower kicker block from the mast; the other blocks and lines need not be detached.

3 POWER EQUALISATION

Measuring your Weight and Righting Moment

The Class Measurement Rules detail the measurement of combined helm and crew weight and righting moment. It should be noted that test measurements are often carried out at the end of races organised by the Class Association and that when taking part in handicap events, you should be able to demonstrate to other competitors that you have abided by the Class Measurement Rules in respect of rack settings and ballast weights.
When setting the racks and determining the amount of ballast weights to carry, measurements taken before the race should take into account the effect of potential loss of body fluids and take up of water by clothing and equipment. If in doubt, safety margins should be built into rack settings and amounts of ballast weight carried. For example set the rack one position in from the maximum setting given by the Rack Chart.

Setting the Racks

Once the rack position has been determined, the racks should be pulled out to the appropriate setting. When inserting the pins into the racks, check that they pass into the internal sliding tube correctly. This is best done by trying to pull the rack out once the pins have been inserted. Tape the pins into place using insulating tape wrapped right around the tube. This will stop them falling out and prevent lines from catching. Note that the first hole nearest the centre-line is counted as position 0 in the Rack Chart. Loading the Ballast Weights The Ballast Weights are in the form of lead coated in plastic and come in three sizes; 1, 3 and 9 kilograms. The weights are held under the aluminium retaining bar on the centre spine of the boat between the gennaker control cleats and the mainsheet cleat.

4 RIGGING THE SAILS

The Genoa

The 2:1 genoa halyard reduces the compression loads on the mast but care must be taken when raising the genoa to prevent the natural tendency for the wire to throw twists into the halyard above the swivel. The ring encircling the external gennaker halyard above the spreader and the moving part of the halyard helps reduce the chance of twisting. Additionally, lightly taping both parts of the upper swivel also helps. This tape is then broken when the genoa is first furled.
Once the genoa is hoisted, attach the 3:1 purchase system to the loop in the wire halyard. Make sure the rope tail of the halyard is not trapped between the wire and hook. Tension the 3:1 to give a reading of 42 on a Loos tension gauge, then furl the sail. Coil up the halyard and place in the pocket on the underside of the gennaker bag.

The genoa sheets are set up to give a 2:1 purchase, thread the sheet from the cleat platform through the deflection block on the genoa track up through the clew cringle and back to the eye on the track slider. Repeat for the opposite side, giving a continuous sheet arrangement. A good average setting for the tracks is to have two holes showing in front of them. Finally, return the trapeze wire acting as a temporary forestay to its normal position.

The Gennaker

Imagine the gennaker as a flying jib and you can't go wrong! Attach the tack line and then the sheets. The sheets are the same as for a jib in that they pass behind the luff of the gennaker not around the front. However they do pass ahead of the genoa luff! The halyard is attached to the head last.
The tackline has a knot in it to act as a safety when the gennaker is detached. Make sure that with the pole right out the knot is just at the pole end. The tackline is adjusted at its inboard end at the deck eye. Tie the gennaker as close to the knot as possible. The sail is stuffed into the bag outside the genoa sheets
The gennaker halyard take up elastic runs from the aft pole support through the block 200 millimetre in from the outboard end of the pole, back into the boat and is attached to a floating block through which passes the gennaker halyard.

The Mainsail

The battens must be secure in their pockets. FAILURE TO MAINTAIN TENSION CAN RESULT IN DAMAGE TO THE MAINSAIL. The two parts of the batten fastening line both pass from their tied side through the batten end. One end passes up through the grommet on the sail, the other down through the same grommet. Tension is applied and a reef knot tied as tightly as possible. Having checked the battens, slide the webbing at the clew of the mainsail over the aft end of the boom; thread the outhaul through the clew cringle and secure into the boom notch with the knot inside the boom. Ease the outhaul to its fullest extent. Standing inside the boat place the plastic slides at the tack and cunningham into the "T" track on the aft side of the mast. Check the 2:1 halyard is untwisted. Shackle the halyard to the head of the sail, feed the bolt rope into the feeder and sail track and carefully hoist the sail ensuring that the halyard is running alongside the aluminium cleat and not through it, and the trapeze wires are not caught on the mainsail battens at the leech. When the sail is pulled right to the top of the mast, apply extra tension to the halyard and place it in the cleat. Coil up the halyard and place in the pocket on the underside of the gennaker bag. The cunningham is connected to the centre point of the genoa sheets enabling the crew to adjust the cunningham at all times. This control affects the depth of the mainsail, the more cunningham applied the flatter the sail becomes, which is necessary when sailing upwind in strong winds. Thread the line as shown in measurement diagram