

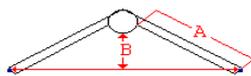


Fireball Tuning Guide

The Fireball is quite a complicated boat and so getting the rig properly calibrated and clearly marked will make sailing the boat fast through the changing wind conditions and sea states a much easier task. Speed Sails have put together this tuning guide to help you ensure that you have the boat set up correctly. These measurements are based on a 2:1 jib halyard.

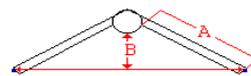
Spreader Settings:

Proctor



A=425mm
B=125mm

Superspar M7



A=420mm
B=145mm

Pre-Bend

The pre-bend that you set in the rig is the most important part of the set up as it ensures the sail matches the mast. We set the pre-bend with the mast rake at **22'8"** and a rig tension of **400lbs** on the luff of the jib. The bend is then set at **27mm**; this is gauged by holding the main halyard tight to the top of the gooseneck and then measuring the distance between the wire and the back of the mast at spreader height. It should be pointed out here that the spreader deflection is only a rough starting point and so may require alteration to get the bend right.

Mast Rake:

Mast rake is measured from the top of the mast to the top of the transom in the centreline of the boat. When the tape is at the top of the mast the distance to the black band at the gooseneck should be **18'9"**. We sail the boat with 3 mast rake settings:

Setting 1: Both in the boat – high trapezing: For this we use **22'8"** this is again measured with **400lbs** of rig tension on the luff of the jib.

Setting 2: Trapezing – consistently overpowered (flapping the mainsail upwind): Here we use **22'6"** with **400lbs** on the luff of the jib. For Cumulus masts, when raking from **22'8"** to **22'6"** turn spreaders out by one complete turn.

Setting 3: Consistently overpowered – racing abandoned: In this extreme weather we have **22'4"** with **400lbs** on the luff of the jib.

Strut:

Force 0-1 – The strut can be used to pull the mast forward to help flatten the bottom of the mainsail.

Force 1-2 – The strut can be pulled slightly back behind the neutral position (neutral is where the mast sits naturally with the rig tension on but no extra forces acting on it) to help power up the bottom of the main. Be careful not to do this too early as it will just chock the sail up.

Force 2-4 – The strut can be fixed in its neutral position.

Force 4+ - As you become more overpowered you can ease off gradually more and more strut.

Jib Bars:

This is a very critical area of the set up as it controls the slot between the main and the jib, which in the Fireball is very important. (The following settings correspond to the mast rake settings)

Setting 1 – The bearing surface of the jib sheet pulley should be set at **250mm** from the centre line of the boat and they should be left up to ensure the sail is quite flat and that you have an open leech. (The top tell-tale should just be breaking first)

Setting 2 – While the mainsheet is still on the centre line the bars can stay **250mm** from the centre, but they should be pulled down to put more power in the bottom of the sail. (Leech tension should still be set with the top tell-tale just breaking first). As you have to ease the mainsheet from the centre the jib bars should move out to **260mm** from the centre. They should remain pulled down.

Setting 3 – Now you are really overpowered you can ease the bars out to **270mm** and then slowly ease the pulleys back up to flatten the bottom of the sail and open the leech.

Jib Cunningham:

This should be set to just remove creases from the front of the sail (as the wind increases more tension will be required).

Centreboard:

With the board at right angles to the bottom of the boat, mark a line "0" on the head of the board then put marks at 1" intervals down the board.

Setting 1 – The board should be kept **1"** forward of vertical.

Setting 2 – While you still aren't planning you should have the board vertical. As you begin to plane on the upper end of this setting you can pull the board up **2"**

Setting 3 – Bring the board up **3 – 4** inches in flat water and up to **6"**s in big sea's, as it stops the boat tripping over itself.

Cunningham:

This should only be used once you become overpowered! As you have to ease the main adding a little cunningham will help flatten the main a little. In heavy airs you will have to pull it quite hard to open the leech and flatten the main.

An important thing to note is that as the wind lulls the first thing to do to power up the rig is to ease the cunningham!

Kicker:

Until you have to ease the main the kicker should only have the slack taken out of it as the mainsheet should be used to control the leech profile. Above this wind strength you should ensure there is enough kicker tension to keep the top tell-tale flying approximately 80% of the time.

In very heavy air you will have to pull very hard to get anywhere near enough tension but remember to let it off at the windward mark.

Outhaul:

Upwind – Pull it tight and forget it.

Downwind – On long broad reaches ease it about 2" to help power up the bottom of the main.

Spinnaker:

90% of the time the key to setting the spinnaker correctly is to ensure both the tack and the clew are level. This is easier to do from outside the boat. A guide to check it from in the boat is to begin to ease the spinnaker and watch where it begins to curl (top, middle or bottom). If it breaks high then the pole is too high and vice versa.

If the wind drops almost completely so that you are struggling to set the spinnaker then dropping the pole a few inches will support the spinnaker and help it set.

The aim of this tuning guide is to help insure that you have the boat and rig set up to get the best possible performance from it. When you go about marking the rig then remember the age old rule – KISS (Keep It Simple Stupid).

I hope that this guide will be of use to you and if you have any further questions then don't hesitate to contact the SPEED TEAM on 01922 455503 or you can e-mail us at – sails@speedsails.co.uk