

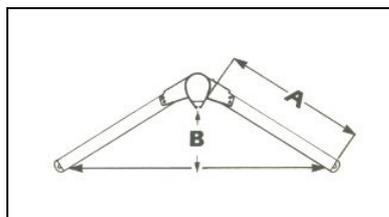


## **FLYING FIFTEEN TUNING GUIDE**

The aim of this tuning guide is to help you get the most out of your Flying Fifteen. It is necessary to spend some time setting up the boat and calibrating all of the measurements to ensure that you have maximum boat speed for any given conditions & can quickly move through the gears when these conditions change.

### **Spreader Settings**

The two measurements for spreader settings are Spreader Length and Spreader Deflection. Spreader length controls the sideways pressure on the mast and therefore affects sideways stiffness. It is measured from the side wall of the mast to the shroud (A). Deflection controls the pre-bend. It is measured by putting a straight edge from shroud to shroud and then measuring from the mast to this edge at the nearest point (B). This measurement will vary between different models of masts depending on the characteristics of each. Furthermore it should be noted that the deflection is a rough guide to setting the pre-bend and may have to be altered slightly later (see pre-bend)



Superspar M2

Proctor Epsilon

Spreader Length (A)	430	430
Spreader Deflection (B)	180	165

### **Rig Tension**

Rig tension reduces the jib luff sag and straightens out the entry to the jib. This makes the jib point higher but less responsive to changes in wind strength and waves and therefore more likely to stall. Consequently in choppy conditions or in very light or very heavy conditions we sail with slightly less tension; **350lbs**. In all other conditions we sail with **400lbs**.

### **Mast Rake**

Mast rake is measured from the top of the mast to the top of the transom with the mast ram off. We recommend sailing with a rake between **24°10" – 24°11"** in all conditions. To do this, hoist the jib with 400lbs tension and make sure that the mast ram is off. Attach a long tape measure to the main halyard and measure **20'6"** to the black band at the gooseneck. Cleat the main halyard and measure to the transom. This is the mast rake.

## Pre-Bend

When you have the tension and rake set correctly check the pre-bend with the mast ram in neutral (i.e. where it sits with the rig tension on but no forces acting upon it). We sail with a pre-bend of **1 inch** which is measured by pulling the main halyard tight against the gooseneck. The distance between the mast and the halyard at spreader level is the pre-bend. You may have to angle the spreader tips forward or aft slightly to get the desired pre-bend – this will not affect your rake and tension settings.

## Keel Position

On the Ovington Mark 9 smoothy, we set the front edge of the keel flange **3940mm** from the transom (front bolts **3885mm** from the transom). On the Ovington Mark 10, the keel is set further back; front edge of keel flange **3912mm** from the transom (front bolts **3857mm** from the transom).

## Mast Ram

The mast ram controls the fullness in the lower half of the main by controlling the mast bend low down.

0-5 knots: When the crew is sitting to leeward, let the ram off and pull the mast forward to flatten the sail. This is because low energy wind finds it difficult to travel around a curved surface.

5-10 knots: As soon as the crew sits in the middle let the ram back to its neutral position.

10-15 knots: When both helm and crew are on the windward side or sitting out, ram the mast straight by pulling it on approximately **½ inch** from its neutral position. This will help power up the bottom of the main.

15 + knots: As you become overpowered let the ram back to its neutral position.

## Kicking Strap

The kicking strap controls the twist in the mainsail and is used in conjunction with the mainsheet. The main should be kept as close to the centreline as possible until you start to become overpowered. In light winds, use the mainsheet tension to control the twist in the leech and then remove the slack from the kicker. As you have to ease the main, you should aim to put on enough kicker to have the top leech tell tale on the main flying approximately 80% of the time i.e. occasionally flicking behind the mainsail.

## Outhaul

When sailing upwind, the outhaul should be pulled on tight to the black band in all conditions with the exception of very light, choppy conditions where it can be eased **½ inch**. Downwind the outhaul should be eased **1½ – 2 inches** unless overpowered in which case it should be left on. On a run it should only be eased **½ inch** to keep maximum sail area to the wind.

## Cunningham

This control line should only be used when sailing upwind in 15 knots and above. In these conditions it can be used to remove some of the crease on the main luff. Do not remove the creases completely however.

We hope that this guide is of use to you. If you have any queries, please do not hesitate to contact the Speed Sails team on 01922 455503 or e-mail us: [sails@speedsails.co.uk](mailto:sails@speedsails.co.uk)