



**Tel: 01604 592808**  
**Fax: 01604 592818**

## **TUNING YOUR INTERNATIONAL FIREBALL**

The first step to success is to make sure you have a competitive hull and whilst it need not be new, it must be stiff enough to withstand high rig tensions and be down to weight.

### Layout systems

**Aft mainsheet** - transom bridle sewn into mainsheet along boom to centre jammer.

**Kicker** - 16:1, cascade block and tackle system led back to mainsheet jammer and to helm.

**Cunningham** - 2:1, led back to centreboard case and helmsman.

**Pole up-haul** - 2:1, led back to centreboard case and helmsman.

**Outhaul** - 4:1, led back to centreboard case and helmsman or cleat on boom.

**Pole downhaul** - 1:1 Spectra to stopper knot with elastic take up.

**Spinnaker Halyard** - 2:1 pump action with 4:1 elastic take-up.

**Jib Halyard** - 12:1, led to aft end of centreboard case.

**Jib Fairleads** - a bullet block attached to a rod that goes through a car on a track for athwartship adjustment and a 2:1 on the rod which adjusts leech tension, which is led back to helmsman on centreboard case.

**Jib Cleat** - Mounted on inside of side tank just aft of shrouds, so that crew tacks facing forward.

**Mast Strut Forward** 2:1 ball bearing traveller car mounted on foredeck, control led back to helmsman.

**Mast Strut Backwards** - 6:1, led back to helmsman.

**Rig** - The pre-bend rig is the most popular and used by most of teams around the World with the Proctor cumulus being the favourite. These pre-bent rigs have a full luff curve mainsail, which are more “user friendly” than a straight rig; the masts are more flexible and have a better gust response.

The mast foot should be mounted close to the front bulkhead to get the best balance between jib and main. Mast rake needs to be altered for different wind conditions, but maintaining rig tension. The Fireball goes faster with increased rake in stronger winds – and vice versa.

### **Set-up**

1. Apply rig tension to the rig to insure the mast is set up straight side ways. Your shrouds may have to be adjusted slightly to achieve this; the mast should be a snug fit at deck level.
2. Pull your tape measure to the top of the mast and measure to the top of your black band at gooseneck. The measurement should be 18'9" (5715 mm), once you have achieved this measurement, take the tape measure to the top of the transom, and then you can measure your rake.
3. Set the mast to the lightest air setting with the correct rig tension. Calibrate your shrouds and jib halyard, then gradually work trough the different wind speed settings and calibrate as necessary. Be sure you can achieve maximum rake!
4. Check your Pre- bend measurement, taken at spreader height this should measure 27mm.
5. Strut: With your rig upright calibrate your strut to its neutral position. As you can see from the chart, the strut is hardly moved through out the wind range.
6. Jib sheeting angles need to be changed to suit wind and sea state. (See our separate tuning guide).

All these measurements are only a guide and should be adjusted to account for different crew weights and sail shapes. One last tip for heavy air sailing – raise the centreboard up to 25% upwind, which improves balance and makes the fireball faster and easier to sail.