

# Tuning Guide 16 Square

*These tuning notes are from a skipper weighing in at over 100kg's. For lighter skippers you will need to less powerful settings as described.*

**Mast Rake** - just in front off or on the rear beam.

**Spreader rake** - in line with the back of the mast.

**Diamond Tension** - as tight as I can without inducing prebend.

Diamonds should be firm you don't want prebend.

**Side Stay Tension** - firm (not critical on cat rigged boat)

**Outhaul Position** - outhaul car and mainsheet blocks inline with the top of the mast when sheeted in. This is around the middle of the track so it lines up with the top of the mast.

**Battens** – The top 2 battens are around 8kgs.

Enough downhaul to pull the wrinkles out. As the breeze gets up keep cranking the downhaul as much as you need to hold it down. When its really blowing the sail is nearly right down on the tramp and the traveller let down a bit.

That's my setup up until about 10-12kts.

Only variation is if it is a bit sloppy I will run a tighter rig.

Over 12kts and starting to get overpowered I start loosening the diamond wire tension a couple of flats at a time. Until the boat stops feeling chocked and drives properly upwind. Basically the more wind the more I loosen the diamonds. For example number wise if I started out tight on say number 3 by the time it is blowing 25kts I would be down to about 4.5

The top 2 battens are replaced with heavier battens. As the wind increase's these get heavier, until the top batten is almost unbendable.

**I only rake the mast if it is rough sea's or extremely windy.**

**You can try pulling the outhaul cart in a bit when it is blowing to let the leech fall off.**

**Make sure when going upwind the mast is rotated not sitting in the middle sometimes with downhaul on you have to pull the spanner around.**

**If your out on trap sheet on hard and point up don't worry about the telltales, but don't stall the boat. It is better to "foot" a little than to "pinch".**

### **20+ knots**

**Let your diamonds off a few turns and go for it!! Try to avoid pinching upwind foot off a bit and drive it.**

**If you are on the lighter side, I'd rake the spreaders a bit (25-35mm) and the mast as well (one extra hole in the side stay adjusters can make a big difference).**

**For lighter Skippers the moderate wind normal rake position will be mid way between the rear beam and the inspection hatch, and will rake back from there as the wind increases.**

**To test mast rake, take a trapeze wire to the tang where the front stays attach, (add a bit of rope to it as it will not be long enough), then take the point where the rope touches the tang, to the Centre line of the rear deck. It should generally touch the deck midway between the rear beam & the inspection port.**

**You may have to adjust it forwards or backwards to suit your weight and wind strength. Move back for strong winds or light crew weight and forward for light winds or heavy crew weight.**

### ***Down wind***

**Square or just above to the breeze downwind.**

**Traveller about 6 inches from the end of the beam.**

**Outhaul car on the main right out.**

**Both dagger boards up plus one rudder to reduce drag and lighten the steering.**

**Down haul off.**

**Mast rotated to 90 degrees.**

**Sheet main on until telltales flow.**

**The main thing is to concentrate on steering and try to keep working deep as possible without stalling.**

**The 16sq will indeed do the wild thing, however there is a quite narrow wind and wave range that it actually faster in, although it is about the best fun you can have hooning around before the start. They will not readily fly a hull down wind like the lighter "A" class, but if you can fly a hull upwind it will be about the same breeze needed to do it downwind, once it gets to about 15 knots they do get a bit nose if you don't react quickly.**

**Just remember that a guide is only a good starting point. From here you can adapt your own set of number's that suit your weight and sailing style.**

**But if your right off the pace it's good to have a base set of numbers to return to. Alternatively you can set you boat up the same as the quick boats, but remember its no good copying a 100kg crews setting's if you are only 70kg's.**

**The boat set up is only a good starting point and from here it is all up to the nut on the tiller. Try to avoid making several changes at a time if the boat doesn't feel balanced, but rather change one thing and sail with you head out of the boat. That is there are bigger gains in sailing the boat well than changing settings every week.**

**Hope that helps.**