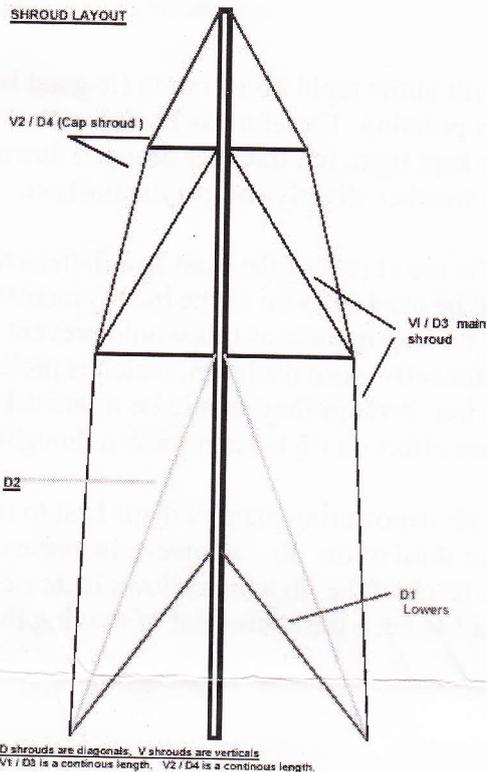


## Some thoughts on SB3 rig



From rigging notes:

Caps 4425-4440 from bearing surfaces (2 different measurements given in Laser notes). Aim is for 4" of prebend. Reducing that length would presumably increase prebend.

Think of V1/D3 and D2 as opposing forces: increase V1/D3 tension and the mast bends more; increase D2 and the mast is straightened. Increasing rig tension therefore does not change the amount of prebend, but reduces the effect of increasing backstay tension on the main, and reduces jib luff sag. A rough guide to rig tension would be to have the lee shroud just slack in all conditions, provided that this is achieved with no lateral bend. The main reason to reduce rig tension in light airs is to increase jib luff sag.

The optimum rig tension will allow the sails to adapt equally as wind increases, ie jib luff sag will reduce in increasing breeze, therefore flattening sail and moving draft aft, and the mast will bend more having the same effect on the main. The trick is to keep the 2 sails changing in unison. For example if rig tension is too low, then pulling on backstay to reduce jib luff sag will bend mast too much and cause main to invert. The mast will also compress more and so jib luff sag will not alter much. Net effect: jib to full, main too flat.

As the backstay gets tightened this will cause increase twist and flatten the top third of the sail. It is probably right to increase mainsheet tension at this point to counteract some

of the increased twist. The principal aim of using backstay is to reduce jib luff sag and depower the jib.

In general it is probably better to tune the rig to the lulls as it is easier to depower in gusts than it is to increase power in lulls.

Main control: in general a more twisted main will allow rapid acceleration (ie good in a steep chop), but a closed leech will allow better pointing. Therefore as breeze increases in flat water then the mainsheet tension should be kept tight, but traveller dropped down to lee. In a chop it is better to keep traveller up to weather slightly and play mainsheet.

The vang predominantly causes mast bend in the lower part of the mast and flattens the main dramatically in its lower third, and should be used early on as the breeze increases. I don't see any logic to having the D1s with any tension in them as this would prevent mast bend at this level. The vang would then predominantly close the leech, which is probably more effectively achieved with main sheet tension. Perhaps they should be tightened in heavy breeze to allow the backstay to have more effect on rig tension (only a thought...).

The jib halyard remains a powerful part of the jib depowering plan: perhaps best to think of it as a way of reducing the depth of the lower third of the jib – as breeze increases, lower the jib, this has the effect of opening the leech of the jib which allows increased jibsheet tension to close it again. The net effect has been the equivalent of moving the jib cars aft.