



## **Tuning Guide May 2007**

### **One-Design Optimisation**

The one design rules are written such that if it is not specifically allowed then it is prohibited. For example, adding an extra slot in the starboard side of the mast to have a topping lift as well as a jib halyard is outside the one design rules. You can remove the table and some cushions for one design racing but they must be on board for IRC or you will take a Hull factor hit.

Things you can do...make the mainsheet continuous; add a cleat to the side of the mast for the halyard you use for the pole. You can use elastic and tape where you need to. Make sure there is elastic or string between the V1's and D2's to prevent spinnakers getting caught in there. Add elastic to the Jib Cars to keep them aft, add elastic to keep the jammers on the spinnaker sheet turning blocks open.

Add some grip tape to the pole and fore hatch. If you're having problems with your snap shackles on halyards and sheets change to some Tylaska's. Add some elastic between the forestay and pulpit to stop the spinnaker gear going in the gap.

### **Halyards**

The X-35 comes with two spinnaker halyards and a genoa halyard, but no topping lift. We use the genoa halyard as the topping lift and the class rules give you the option to reeve this through the topping lift block up the mast. We then use the starboard spinnaker halyard for the genoa on port hand courses and the port halyard for the spinnaker. We have also crossed the spinnaker halyards in the mast so the port halyard comes out on the starboard side. We've removed our steaming light before it is taken off by a halyard.

### **Rig Tune**

Buy the RT-10M Loos Rig Gauge. Get the foot of the mast in the right place, winches, blocks and using the boom as a lever, we took the head door off to achieve this! Then check the latest North Tuning Sheet or ask your sailmaker for theirs!

### **Main Trim**

#### **Light Airs (<9kts)**

Put in the light battens. Easy the outhaul, twist the main until the top telltale flies, pulling the traveler to windward to keep the boom centre line. Snug the kicker downwind but not too much, keep that leech twisted open on the run.

#### **Medium Airs (10 – 20kts)**

Backstay on, keep the boat speed up....7kts upwind target! Cunningham and kicker both coming on.

Heavy Airs (20+ Kts)

Heavy battens in! Backstay on more! Cunningham, outhaul, vang on! Traveler below the centre line but not all the way down, eases the mainsheet in the gusts! Keep the boat upright! Don't let the rudder stall out!

### **Jib Trim**

Light Airs (<9kts)

Code 1 Headsail. Time to power up! The X-35 loves this wind range, inhauler on, car forward bring the boat up to speed, and above 7kts you will need everyone hiking hard!

Medium Airs (10 – 20kts)

Code 2 headsail. In 10kts have lots of inhauler on and the halyard so the wrinkles are just out of the luff, gradually increase halyard tension and ease the inhauler as the breeze builds. Dropping the car back.

Heavy Airs (20+ Kts)

Code 3 time, no inhauler needed car position should be .....Make sure your battens stay in.

### **Spinnaker Trim**

Light Airs (<9kts)

Use the 1.5S or equivalent. Lower the pole to keep the clews level and the pole horizontal. Weight Forward.

Medium Airs (10 – 20kts)

Keep the pole horizontal, crew weight to windward and forward, aim as low as you can in the gusts, but head up keep the tension in the sheet when it goes soft.

Use either the 1.5S or 4S equivalent.

Heavy Airs (20+ Kts)

Make sure your tweakers are 2 to 1, read the class rules before buying the blocks. Pull tweakers on when running. Steer to keep the boat under the kite and watch for the Chinese gybe. Grind in the sheet as the boat starts to roll to windward and luff up.

Use either a 4S or 5S kite, you can carry two symmetric kites for one-design so choose two before you go racing. Get some bodies behind the wheel when it's blowing.

### **Instruments**

Calibrate and Calibrate. Everyone is racing with different types so best to get the support for yours on board to help calibrate them. Install a cockpit VHF speaker with volume control.

### **Bottom Preparation**

A couple of schools of thought, one is go with the antifoul route and then rub down to 600 grade wet 'n dry. Use washing up liquid and lots of warm water if using

your crews' hands! Then use a pencil to mark up the rough patches. The other is to remove all the antifoul entirely and go with the gelcoat finish. (Check your warranty if you go down this route).

### **House Keeping**

Buy a de-humidifier and use it when you can plug into the electric. Not only removes weight but keeps the inside in better condition. You will need to service the winches fairly regularly, lots of kitchen roll, Harken winch grease & McLube. Also a socket set to get the winches off the deck.

## **IRC Optimisation**

### **Weighting & Measuring**

Get the boat RORC measured. You will need to have your cushions and table on board for this, but remove everything else. (You must race in IRC with table and the cushions you are weighed with).

Put your new sails up, use them and then after a couple of outings get your sailmaker to re-measure them, they will be smaller! And your rating will go down once you tell the rating office.

### **Upwind Sails**

With the upper wind limit currently set at 28kts for one-design, the need for a smaller jib is not there. However in IRC there is no upper wind limit and a code 4 jib is a very useful purchase, make sure the luff tape goes all the way to the top of the headstay else it will come out of the luff groove, if your sailmaker doesn't know this, shop elsewhere! You will need to race in IRC with a trysail unless you have a mainsail that has 3 reefs. We vacuum pack ours!

### **Downwind Sails**

IRC allows 3 spinnakers for X35's without penalty and taking a fourth will probably increase the rating by about 0.001. In IRC there is no penalty for asymmetric versus symmetric spinnakers as long as they are inside the measurements of the rule.

Rigging for an asymmetric is easy if you have the second reef spinlock clutch. Rig a strong block onto the bow fitting and then lead the tack line aft through the 2<sup>nd</sup> reef clutch. We have our tackline the same length and size as the guy or brace, so it is a spare if needed. Rig for outside gybes. You will need to shorten the strop on the downhaul, as the pole will need to be lower than for a symmetric.

### **Other bits and pieces**

Get some Cleat Boots to cover the bow cleats, you can't use these in one-design but you can in IRC. Adding metal rings on elastic to the halyards, below the mast exits, will prevent half kinks when hoisting sails. You can also add guy elastic on rings to help bring the guy into the boat for those quick gybes, not so good for asymmetrics.

Any of your own tips you would like to share with the class will be greatly appreciated.

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