

# Strong Wind Laser 4000 Sailing

Racing in light winds may be closer and more tactical but when it comes down to it, sailing in a breeze is more fun. In the Laser4000 we have a high performance dinghy designed to be planning so when it gets windy you just have to let the boat do its stuff.

## 1 Upwind

Upwind the boat wants to be sailed free and at speed, judging the fine line between stuffing too much and stopping or alternatively reaching off into oblivion is something that must be learnt. It is therefore important to give yourself a stable platform from which to learn. hopefully what follows will help you in your quest for speed.

### 1.1 Straight line

The crew is flat out on the wire the and your flying past RS400s wondering why they bother. The kicker / vang should be tight, if the boom lifts when you ease mainsheet the kicker is not tight enough. As the wind increases further just pull on more and more tension, you won't break it. The cunningham / downhaul starts off loose with just enough tension to take the horizontal "bag" out of the sail. Again as the wind increases just use more and more tension. P.S If the wind drops let some tension off

### 1.2 Tacking

Speed not haste is the key. Before you start the tack try to have reasonable speed and the boat flat.

**The Helm**, ease the main to allow the crew to start to come in and initiate the turn pulling the main back in as you go towards the wind\*. Coming out on the new tack let the main go out \*\* to keep the boat level sit down pull the main back in and your back up to speed. In light winds you can simulate heavy weather tacking by having the crew sit in the middle of the boat with their back to the mast and not moving during the tacks.

\* Having the main in as you go through the wind minimizes the side to side \* rocking caused by the fully battened rig.

\*\* If you come out of the tack and don't let the main out you will just stagger sideways while you get the boat flat again. Or have to apologise / shout at the crew for having capsized again.

**The Crew**, as the helm initiates the tack STAND UP, just in case I missed that one STAND UP. It does feel a bit unusual at first but the Laser4000 has more space underneath the boom than all the dinghys that I know of and quite a few yachts. As you come out the other side either hook on or go out on the handle then hook on\* \*\*. If the boat capsizes because the helm says you are not fast enough he / she is mistaken, usually.

\* The nationals has been won by a boat with a crew who didn't go out on the handle. It's not that vital to go out on the handle, hooking on first can be done well enough though is probably a bit slower.

\*\* The trapeze wires as supplied by laser are too long this makes going out on the wire more difficult, get them shortened. As to handles the L shaped metal ones are easiest to hang off but are heavy and hurt when they hit you in the eye! Discs on the end of a thick bit of string is the most popular method these days, have a look around in the dinghy park at an event to see what other people use. (alternatively view the "Tweaking Tips" document on [www.laser4000.lasersailing.com](http://www.laser4000.lasersailing.com))

## 2 Downwind

Go fast it's more fun

### 2.1 Straight line

The spinnaker pole should be in the middle with both wing-wangs cleated. Kicker and cunningham should both have been let right off, leave them cleated though. The crew should shorten their trapeze adjuster lines quite a lot, not as much power is required downwind as upwind. The easiest way for the helm to tell if the boat is correctly trimmed is to cleat the main and let go of the tiller. Correctly set up sailing downwind and the tiller should have virtually no weight on it. The Helms life jacket should be worn outside the spray top as it provides an excellent handle for the crew to hold on to in bad waves. (This may not work so well if the helm is a lot smaller than the crew)

Not pulling the main in enough is the most common problem people do not realise quite how fast they are going and how far forward the apparent wind is. Use the telltales on the trailing edge of the mainsail to judge how far in the sail must be. If they are still all flying then pull it in a bit more.

### 2.2 Gybing

The faster you are going the better. Remember that the apparent wind speed as you gybe is the true wind speed minus the boat speed.

**The Helm.** Tell the crew you want to gybe, as they come in off the wire initiate the turn with the sails once you have gone through the wind and are on the new gybe stop the turn with the rudder. The aim is to come out of the gybe dead downwind. It is a good idea for the helm to flick the main through the wind as this results in the boat being more dead downwind coming out of the gybe.

**The crew.** Keep the kite filling as you come in to the boat. As you go through the wind do not let go of the sheet \* and back the kite as you come out on the new gybe. This is done to prevent the kite twisting around itself during the gybe, its also faster and reduces the effort required from the crew. It should not be necessary to go out on the handle after a gybe. It is much more important to trim the kite first for speed, if you are constantly capsizing coming out of gybes it is the helms fault. No crew can ever be fast enough to compensate for a helm gybing badly

\* It is also possible for the helm to take the kite sheet from the crew before \* the gybe, this can make the crews life easier and is especially useful when \* the crew has little previous trapezing or sailing experience.

### 3 Transitions

How not to go swimming and end the race with a crew that can still breath and talk at the same time. It all comes down to one thing, thinking ahead. The manoeuvres that we have to do are pretty simple, plan ahead and avoid problems and your performance will improve.

#### 3.1 Bearing away + hoist

Before you reach the windward mark think, you are going to bear away so set the boat up to make this easier by letting off the kicker and cunningham. This opens up the leach of the main moving the center of effort forward; the boat now wants to bear away.

The crew should also shorten their trapeze lines ready for the downwind leg. Now for the bear away itself WAIT, LOOK and LOOK again then you can bear away to dead downwind and hoist.

**Why?** Hoisting while going dead downwind is much easier and hence very much faster. Looking around allows you to avoid the pile ups which often happen and prevents swimming, always a good thing.

Hoisting for the crew is faster standing up facing forwards or backwards depending on preference. when the waves get big it is a good idea to sit down as if the crew falls over so does the boat.

#### 3.2 Dropping the Gennaker

Same again look and plan ahead. As the crew comes in off the wire they should either stand on the spinnaker sheet so that the kite stays full for the longest possible time or give the sheet to the helm before the coming off the wire. More speed = more control = less swimming.

**IMPORTANT for helms.** The kite will go up or down twice as fast if you point the boat dead downwind and DO NOT hike when the crew is hoisting, it just makes the hoist much harder.

And finally

If you can't work out what you are doing wrong ask people for advice the 4000 fleet is a friendly one and questions on the chat page are usually answered promptly. If you are worried about how your boat is set up, go and copy another persons settings. And remember the faster you go the easier it is to control a 4000 in a breeze, it also happens to be much more fun.