

PERFORMANCE SAILING - TAKING YOUR SAILING FURTHER

Welcome to the first part of this series of discussion subjects and pointers for you to think about when you're on the water.

Have you ever been sailing and broken the rudder or its fittings? After you've righted the boat (Niall!) the race is going on and you're safe – you have to get your boat back to shore. How do you do it without the aid of the safety fleet?

Well, that's where application of the 5 Essentials comes in – as a reminder these are:

- Balance.
- Trim
- Sail Setting
- Course (made good)
- Centre Board.

Please note that the rudder is not one of the 5 essentials and we're going to leave the Centre Board/Dagger Board out of this as on the Laser 5000 it stays down. The trick is to apply 2 of the Essentials, almost to an extreme.

Let's look at how balance (the side to side aspect of the boat) affects the direction you're going in.

The hull shape of the boat is designed so that least resistance in the water is created when the boat is flat. If the boat is heeling to leeward, more resistance is created on the leeward side as the hull meets the water. Conversely there is less resistance on the upwind side (less of the hull in the water). The result is that the boat is going to go where there is less resistance – that is, it's going to turn to windward.

If, on the other hand you can heel the boat to windward, the hull will encounter more resistance on that side and then try to turn to leeward. The result of this is that you can dictate the direction in which the boat is travelling by using your (and crew's) body weight.

Of course, sometimes the movement is pretty slow, or perhaps you don't have the energy to throw yourself around the boat sufficiently to turn the boat as you want. Well, by use of the sails, you can have even more of an influence on the boat's direction.

You all know that if the jib isn't sheeted in quickly enough after the tack, then the boat is likely to turn back head to wind. This is because the power generated by the huge fully battened mainsail as it's sheeted in will pull the bows of the boat towards the wind. That power needs to be balanced out by the jib.

Using both the jib and the main in equal proportions will keep the boat sailing in a straight line. If one or the other is over sheeted (or conversely under sheeted) then the boat is going to change direction.

Try keeping the jib pinned in whilst on a beat, then easing out the main (trying not to tip the boat into the oigin on top of you!), don't move the rudder. See how the bow is pulled away from the wind. Now, pull the main back in to its close hauled position and then ease the jib. The boat will now start to move closer into the wind until everything starts to flap and you lose headway. The trick is to find the balance between the two.

Combine the sail balance with the boat balance and you will find that you are able to keep the boat more or less going in a straight line; with almost no pressure on the rudder (you should be able to hold the tiller extension using just the tip of your finger and thumb).

To initiate a tack, with the boat flat and in control with sufficient momentum, ease the jib slightly. Let the boat heel to leeward (slightly) and the boat will start to move to windward through the no go zone. As it passes through this zone, pull on the jib on the new side (careful not to let it back), get your weight onto the new windward side and let the main run out slightly. Be careful not to let it out too much as you will then go into a gybe and start doing impressions of a ballerina doing pirouettes.

Gybing the boat is the opposite – heel the boat to windward, ease the main and she will bear away. Now, put your hand onto the falls of the mainsheet, feel the pressure in it (but don't pull on it or you will pull the boat back up to windward). When the pressure goes out of the falls, the boat is on the verge of the gybe. The crew can then pull the boom across when it goes slack. The jib will have gone quite slack before this. While the boom is crossing, so are you (and your crew of course) to the opposite side (i.e. when the boom is in the middle of the boat, so are you, but going in opposite directions). Quickly get the boat and sails back in balance or you will once again be doing impressions of swan lake (but with less elegance!).

Try doing this at your local club. I would suggest using something other than a 5k to try this (Enterprise, Bosun, Laser 2000 are all good boats to practice this on). Take it out into the middle of the sailing area, either tie the rudder midships, or take it off then try to sail a triangular course. To start with you are likely to go around in circles, but once you've mastered the art, you will get a great sense of satisfaction and it's great practice for the time when you suddenly find yourself in the bottom of the boat, with the tiller extension pointing straight up into the sky!

NOW, HERE'S THE GOOD BIT

If you can sail the boat back to the shore without the rudder, then you can sail your 5k around the course a lot faster!

Imagine putting a plank of wood into the water across the transom, it's going to slow the boat right down (as well as put a lot of pressure on your hands as you hold it). This is the same as putting the rudder back onto the boat and using it to the extreme. The less you use the rudder, the faster the boat will travel.

This is where balance and sail setting come in. Keeping the boat flat in the water will greatly reduce the amount of rudder you use. If the boat is heeling to leeward, you **will** be pulling the tiller toward you to correct the boat direction as it tries to come to windward. You may not be all that aware of it, but believe me, it's happening.

Also, if you're trying to go for height upwind, you will keep the mainsheet tight in to gain the height, but you also need to keep the jib in tight to stop you having to pull on the rudder and prevent the boat from going head to wind! In windy condition, for speed you're likely to ease the jib slightly to go 'hull down', but at the same time you're going to ease the main to keep everything balanced and the airflow over the sails correct (we'll talk about airflow another time).

Now, as you come up to the windward mark, you're going to want to bear away. In fresh to frightening conditions, this is going to be hairy, but whatever the conditions, the drill is more or less the same.

After you have prepared the boat for the rounding (ease kicker, open bag, observe around you), heel the boat to windward (stay on the wire) to start the bear away, follow the turn of the boat with the rudder (slow turn!). Ease the mainsail, the jib stays in to pull the bow around, this is particularly true in big winds, (get your weight right back to pull the bows out of the water – or else you'll do an impression of the U33 flooding its bow tanks). If you try to turn the boat with the main pinned in, all you will succeed in doing is putting the breaks on, you'll be going in the wrong direction, loading up the rig and probably end up swimming (along with all the other boats to windward of you).

Once you've accelerated through the zone and are going in the right direction, the crew can now come in off the wire and start to get the kite up – enjoy the rush! Watch for those gusts, if they hit and you're too slow to react to go with them, the boat will heel to leeward – causing the boat to round up in the direction of least resistance (as discussed above) – result – A SWIM!

Well, that's how balance and sail trim can help you get around the course. Pretty soon we'll talk about the course to sail and how trim also affects boat speed. Once the skills are learnt to help the boat go faster, we'll also talk more about the 5 essentials of racing.

In the meantime, if you're not on the water due to the Baltic weather, why not find a patch of grass, peg down your 5k securely (on its launching trolley – no wheels) and try our some dry land drills for tacking and gibing. Get your crew/helm to watch and critique and then try again until it feels comfortable

