

A Rose by Any Other Name



Hands up all those who bought themselves a compass for Christmas? Congratulations! You now have a piece of equipment capable of making a dramatic difference to your performance. Not unlike trailing a bucket behind you! Sue and I started using a compass seriously two seasons ago now and it has both gained us places and lost us races so I thought I'd pass on some of our hard learned lessons.

Where do I put the compass?

This sounds like a simple question but it is not. The wind changes direction all the time so if you are using the compass tactically you will want to check it every 15 seconds at least. If the wind is changing a lot (remember the Nationals at Stone last year?), this could be every 5 seconds or even more often. I reckon that the helm has got far better things to be doing so Sue and I put the compass where only she can see it. That's probably a little radical but it has saved us from arguing over our different interpretations of what the compass is saying.

Wherever you put it, it is important that the compass can be read from your normal sailing position on a beat. In a Snipe you spend most of your time hiked out (at least we do but then we are a bit lightweight), so don't put the compass on the floor or at the back of the centreboard casing.

Most compasses have lines marked on them which the fitting instructions will tell you to place pointing fore and aft, some even have lines running off at 45 degrees to mark the tacking angles. We found that these were next to useless. They are only readable if you are sitting in the boat looking directly forwards. We have swung the compass through 90 degrees so that the lubber lines can be easily read with Sue hiked out, reading the compass by looking across the boat.

What does the compass tell me?

Officially what a compass tells you is in which direction you are travelling, but that's not what you want to know when you're going up a beat. Incidentally, all I am going to talk about are beats as I can't think of a single use for a compass when you're off the wind, unless it is to find your way back to shore after a race has been abandoned due to fog (such as the last Nationals at Broadstairs!).

Anyway, what you want to know is which tack to be on. For this you need to know the average compass reading. Whenever we are hardened up on our normal beating position, before the start, between races etc, Sue checks the reading on the compass. In fact, we often harden up onto a beat purely to check the compass. This means that by the time we start a race we know what setting we expect to see on either tack. These will be different, unless the rules of geometry

work differently on your boat than they do on ours. Now, whichever tack you're on, if the compass reading is higher than the average then the starboard tack is favoured, if it is lower than the average then the port tack is favoured. Simple huh?

Actually it takes me about ten minutes in a quiet room with a piece of paper and pencil to work this out so I'd advise you to write in indelible marker something like

+ good, - tack

somewhere on the starboard side of the boat (the boom is a good place) and
- good, + tack

on the port side.

But how will I know when to tack?

A tricky one that. You're heading along on port tack and the compass swings more positive than average so you tack. Ten seconds later the wind swings more negative than average so you tack back. Ten seconds later, etc etc. Clearly that way lies madness.

As a general rule of thumb, a 10 degree shift is large enough that you can't afford to miss it, and a 5 degree shift is a good enough excuse to tack if you want to (for instance, if you feel that you're going too far to one side of the beat or the other). If all other things are equal, and you're on an open stretch of water miles from anywhere so that there aren't likely to be any wind bends, you can happily sail up a beat tacking every time you're compass swings and you should hit the top mark well up the fleet.

But what about wind bends?

Okay, so this isn't an ideal world. Underneath the short lived wind shifts the average wind direction will almost always change as you go from the leeward mark to the windward. If you're lucky there will be a gentle bend one way or the other but the only way that you can find this out is to have sailed the beat already. I feel nervous suggesting this when Sue and I are almost always one of the last boats off the shore, but what you ought to be doing is sailing up the first beat a couple of times before the start.

If you find that near the windward mark the compass reading is more positive than at the start then that means that the starboard tack will become more favourable as the beat progresses and you will want to go up the right hand side of the beat (mainly on port tack at the beginning, mainly on starboard at the end). If the compass gets more negative then go up the left.

And that's about all you need to know. If there is a complex pattern of wind shifts and bends you may have to plan a complex route but whenever the compass reading is high try to be on starboard and when it reads low try to be on port.

But what about tides, shore effects and wind shifts under clouds?

Hey, I've only just worked out this much. With the rest of that stuff you're on your own!

Christopher Surridge (Spring '97)

Important Crew's note.

Don't believe that taking a compass reading is simple. What Chris hasn't mentioned is the fact that the reading actually oscillates through about 15 degrees at all times, especially when sailing on the sea. This makes it nearly impossible to spot a 5 degree shift, more so when your helm's shouting for an excuse to tack! It's all just down to practice

Sue



Back to:

[Home Page](#)

[Odds and Ends](#)



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