



WORLD CHAMPION BOATBUILDER FOR OVER 40 YEARS

4737 Adams Road, Chattanooga TN 37343 (423)875-0740 Fax (423)875-4011

www.optistuff.com



HOW TO USE A RACING COMPASS



Why use a compass? Recognizing shifts is a major factor in determining who is leading the race and who is following. Lifts, headers, oscillating vs. persistent shifts can be taken advantage of with the use of a compass. Sailing a five-degree wind shift for one minute in an Opti can gain or lose you three boat lengths. But there are times you want to ignore the compass as when you are covering a competitor going into the finish line.

How Does A Compass Work? A compass measures direction. A racing compass measures changes in direction. When sailing up wind on port or starboard there is an area of about 45 degrees in which, you cannot sail because your sail will luff. As the wind shifts right or left the area also shifts and one of the tacks takes you closer to the up wind mark than the other tack. This is what is meant by a “lifted or favored” tack and a “headed, knocked or un-favored” tack.

When you can see the upwind mark with the shore behind it, as on a small lake, it is easy to tell which is the lifted tack. But on large bodies of water and in the ocean it is almost impossible to tell which tack is better. The compass solves this problem because it has a floating dial on the inside, which, always points in one direct, north. This circle dial has equally space numbers on it. The outside of the case does not move. On racing compasses there are three marked lines on the outside case. A center sight line and 2 lubber lines, one on starboard and the other on port. The lubber lines mark the 45 degrees where your sail will luff as mentioned above. The center sight line is good for finding the upwind mark when there is a course change. The lubber lines are read while sailing to windward as they can easily be read from a hiked out position.



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Pre-start readings: To detect wind shifts you first have to know the average wind direction on each tack. A good routine for determining average wind direction is to sail 10-boat lengths close hauled on each tack. Repeat this 3 times. Write down or memorize the average compass heading of the lubber lines on each tack. If you are sailing on starboard after the start and the number on the lubber line gets larger than the average reading taken before the start then you are on a lifted tack and would want to continue. If the number gets smaller then you are being headed and should consider tacking. When on port tack the opposite is true. As the number gets smaller you are being lifted and if larger you are being headed.

Most racing compasses are design to make the procedure described above easy. They even have very simple methods of finding out which end of a starting is favored. Most race committees post the compass reading of the up wind mark. If you are having difficulty finding it you can line that number up on your compass and the mark should be straight in front of you.



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How to choose and mount a compass: You should only use a compass once you are a very good sailor who has total control of their boat at all times. Several well-known models that are suitable for the Optimist are the NEXUS 73r and the Plastimo Iris 100 shown above. They are small, easy to read and mount. They both can be quickly removed from their mounts to take home and prevent theft. You will want to mount the bracket as close to centerline and deck level as possible without interfering with the boom vang. The foredeck of the Opti is about 1 inch thick so you cannot through bolt the bracket but must use sheet metal screws. These are often provided. Also be sure the compass cannot fall out in a capsize. Duct tape around the bottom can prevent this.