Be A Faster DN Sailor

Articles written by Ron Sherry

The Racing Tack
by Ron Sherry - US 44 - December 1998

Over the last few years, advancements in ice boat technology have radically changed the face of DN racing. For instance, the new bendy rigs have ushered in a new era of speed. However, they have also presented us with a new challenge in tacking...mast rotation problems. The following article details several techniques that have been developed by the masters of the sport in answer to this challenge, as well as some strategies for completing a smooth racing tack while maintaining speed.

The ultimate goal of a racing tack is to complete the maneuver as smoothly and safely as possible without losing speed. Before you tack, make sure there are no other boats in the area and that you have a smooth and snow free area in which to tack. To begin the tack, start turning the boat up toward the wind. Start the turn slowly with the main sheet all the way in. Keep the sail in tight and start to slide your body forward in the cockpit. When the sail tacks, lower your helmet to the cockpit floor in front of the seat back. To accomplish this, anchor your heels in the hiking rack and bend your knees to pull yourself forward. Having your helmet on the cockpit floor means you do not have to ease the sail as much to get your head under the boom and you can maintain greater speed through the turn. This trick also equalizes your weight over all three runners and gives you better steering, making for a smoother tack.

When the sail tacks, ease the sheet just enough to get your head under the boom. Continue to lay the boat off and push the boom forward and to leeward with your leeward hand. As you do this, ease the sheet and use your knees and your weather hand to steer. Usually the mast will rotate at just about the same time the boat goes up on a hike. Let the boat hike, slide your body back into position and ease the sheet slightly. The boat will then begin to come down from the hike. As it does, sheet the sail in hard. This will cause the boat to hike once more. Ease the sheet slightly and before the boat comes all the way down from the second hike, sheet it in hard again. This second hike will help you to accelerate back to top speed. Smoothly completing a tack using this technique will send you off toward the next mark with very little loss of speed.

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The Racing Tack, continued.

If the mast does not rotate using these techniques, do not lay off and pump the sheet. Laying off causes you to lose distance to weather, as well as putting more pressure on the leech of the sail and less pressure on the front of the sail. This allows the front of the sail to luff and the luff curve will keep the mast from rotating. If you try tacking the boat and the mast does not rotate, Jan Gougeon recommends that you head the boat up toward the wind and allow it to slow down a little. This reduces the apparent wind pressure on the leach of the sail and will maximize distance to weather and minimize your losses. No matter which technique you use to rotate the mast, this first step is the most important.

After the boat slows down a little, lay the boat off slowly and push the boom forward and to leeward, while adjusting the sheet. There are many techniques for this maneuver, no one better than another; simply try each one and decide which works best for you. Chip Cartwright slides forward and uses his toes to rotate the mast. Mike O'Brien uses his shoulder. Some people kick the boom. I have had the most success by sliding my leeward foot back so I can press my knee against the weather side of the boom. I then use my leeward elbow against my leeward knee to leverage the boom over. The boom is connected to the sail, which is connected to the mast by the luff rope that is in the back of the mast. A mast that has not rotated has the luff grove to windward. By pushing the boom to leeward, it pulls the luff groove to leeward where it belongs.

The Europeans have developed a solid hound that is about four inches wide. The side stays are connected at the outside of this four-inch bar. When tension is placed on the weather shroud, the solid hound rotates the mast. Perhaps a Sarns' triangle and U-strap put on backward with the bent wings toward the front would have the same effect. Once you understand the dynamics of this issue, it is easy to come up with a solution that works for you. If you have any questions or comments, feel free to contact me at Composite Concepts. The phone number is 586-790-5557, the fax number is 586-792-3374, and the email address is ron@iceboatracing.com.

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Racing DN Ice Boats & Components

Playing the Shifts
by Ron Sherry US44

Catching the first shift in an iceboat race means a lot, especially since the average beat lasts between two and five minutes, there are no compasses on iceboats and if there were it could be very dangerous. In this brief outline, I will discuss some of my techniques on detecting wind shifts before and after the start - upwind and downwind.

It is very important to try and figure out what the wind is doing before the start. The first method is to watch the telltale on your headstay and pick out a landmark in line with the telltale. Watch the telltale to see if the wind shifts left or right. If you take enough readings, it becomes easy to see if the wind is oscillating (shifting back and forth), clocking (shifting to the right), or backing (shifting to the left). In general, you always want to sail toward the first knock. In an oscillating wind, sail on the lift until it becomes a knock and then tack. If the wind is clocking or backing, sail on the knocked tack until it knocks further and then tack over to the more lifted tack.

The most effective method for detecting shifts is sailing the course before the start. This method involves mark roundings, landmarks, and is a good time to scout the ice for smooth spots or areas with less snow. Round the weather and leeward mark at least three times each: sailing the boat as if you were racing. Watch for landmarks behind the marks on your approach. This will help you to judge lay lines and whether the wind is shifting or not. It is important to pick out the landmarks you are aimed at immediately after rounding both windward and leeward marks.

For instance, if you come around the leeward mark and are aimed to the left of your landmark, you know you're on a lift and should not tack right away. If you're aimed to the right of your landmark and it is not because of a velocity decrease, you should tack. This method is good because it will help you to start the beat on the favored tack. The same method can be used downwind.

Each leg of an ice boat race usually lasts two to five minutes. In this short period of time, usually there are very few shifts so if you can start out on the right tack it is a huge advantage. Remember that when you take your practice mark roundings you do not have to sail all the way to the other mark. You could practice three weather mark roundings in a row, taking landmark readings, and then sail downwind and practice your leeward mark roundings.

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Playing the Shifts, cont.

The last method of checking the wind is the buddy system. This system uses a friend with similar boat speed. The two sailors take off at the same time on opposite tacks. The two sailors tack back towards each other either after a certain period of time or on a lay line for a predetermined mark. As the two sailors come together, it is easy to see which side has the advantage.

Next, start from the same place and go for the same distance but have the sailors switch sides. This system works well for upwind and downwind, especially if the sailors stop to compare notes.

Different people use different techniques for attacking the wind shifts. Henry Bossett is a "by the book" sailor and you will always find him on the tack that is closest to the mark. Rarely will you find him in a corner or overstanding any mark. Jan Gougeon has a sixth sense when it comes to the wind. He can smell out a puff or a shift as though he has some kind of a infra-red vision.

Hopefully, you have found some good food for thought through this article. Writing this has reminded me of the different ways to watch for shifts.

Five Steps to a Great Start
by Ron Sherry US44 Oct. 1986

Getting a good start is important whether you are sailing in a local or in an international race. Having clear air and the ability to tack over to the favored side of the course is crucial to winning in an event. In this brief outline, I will describe my techniques on lining the boat up on the starting line, main sheet trim, and entering the boat. This style of starting may not work for everyone; but there are some helpful hints that should make it easier for anyone to get consistently good starts.

1. Set the boat up on the line at such an angle that when the main is trimmed, the boat is just on the verge of hiking.

2. Trim the main just snug, or a little past the point where the boom would hang straight down if there was no wind in the sail. This is a good average for most starts (a little tighter in light air, a little looser in heavy air).

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Five Steps to a Great Start, continued.

3. While standing on the line, constantly adjust the angle of the boat to the wind so that the boat is just on the verge of hiking. Think about a smooth entry, but also about anything that will peak our adrenalin so that when the flag goes down, you can explode off the line.

4. As you run straight off the line, the tendency of the boat to hike is reduced, because of the apparent wind moving forward. When you get close to full speed running lay the boat off slowly until the boat wants to hike. Keep the boat from hiking by holding down on the side stay. I also wrap the main sheet around the tiller, so that all I have to do is lift my thumb to ease the sheet in case of a radical hike.

5. When the boat reaches the point where you cannot hold it down from hiking anymore, step on the plank with your outboard foot. Then slide into the hull with your inboard foot. Lay the boat off far enough and pump the sheet so that you can ride a short controlled hike until the boat reaches top speed. A common error is to trim the main in block to block and begin pointing right away. This will rob the boat of vital speed, so wait until you are sure the boat is moving as fast as it can, then trim the sail all the way in and begin pointing.

There are many other ways of facilitating a good start such as clothes, track shoes, your tiller, and above all, practice. Finding lightweight and warm clothes are important but even more important is finding clothes that are easy to run in. Lightweight track shoes make a big difference. It is also easy to make some alterations to the shoes to make them warmer and drier. I also take a pair of moon boots out to the starting line for warming up my feet between races. Your tiller can make a difference too. I use an extra long tiller so that I can run standing straight up without stepping on the plank. Some of the fastest runners in the class can look very clumsy when they are trying to climb into that tiny fuselage, which is already sailing faster than they can run. This is when a slow runner with a smooth well-practiced start can took like a hero.

I have found that the best time to practice starts is when there is no wind and everyone is sitting around drinking beer and telling stories. Sometimes, I go out with no sail up and just practice running with the boat. It is also a good way to find out if your runners are tracking well.

The best way to get to the finish line fast is by beginning with a good start. Like anything else, good starts take practice. An entire book could be written on this issue if I went into each minute detail. I hope everyone will be able to use this outline when they set up their training for this season.

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