

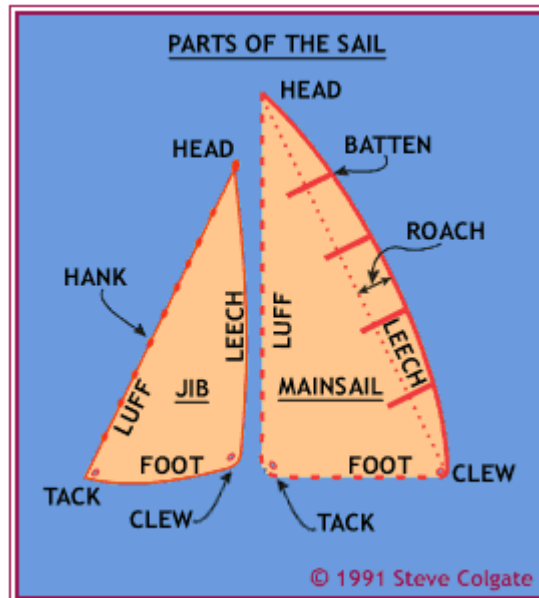
# Sailing Basics

*This article is excerpted from Colgate's Basic Sailing, which is used as a text at the Offshore Sailing School. Steve Colgate calls upon a vast experience gleaned from teaching thousands of students and competing at some of the highest levels of the sport. His clear and straightforward approach focuses on reasons why a sailboat moves with the wind the way it does and seeks to allay the fears of novice sailors.*

**Editor's Note** First-time sailors are faced with a lot of unfamiliar material. The centuries-old terminology can be bewildering, and at times it may indeed seem as if you are learning a new language as you incorporate these words. It is important not to get discouraged while sifting through the meanings. The sailor's language and onboard movements eventually become second nature after repeated exposure. That said, it doesn't do any good to plow along blindly not knowing your clew from your tack or your outhaul. Proceed slowly, and when an unfamiliar term comes up, take the time to consult one of the accompanying diagrams and study the text until the concept is clear.



**At the author's Offshore Sailing School, students get a strong dosage of fundamentals before they even get on board.**



**What's in a name? When it comes to sailing, and learning to sail, a handle on the basic terminology presents a level**

## Bending and Hoisting the Sails

to "pull that thing over there."

Locate the clew of the mainsail.

Starting at the point where the boom connects to the mast, insert the clew into the groove of the boom and pull it out to the end while another person feeds the foot of the sail into the groove. A pin is placed through the tack corner, the "outhaul" is attached to the clew, pulled tight to stretch the foot, and "secured" or cleated.

The battens are then placed in the batten pockets of the sail. Check that you have the right length of batten in the proper pocket. Starting at the tack, follow along the luff to make sure there are no twists in the sail. Attach the main halyard, looking "aloft" (up) in case it's "fouled" (twisted) around a spreader or backstay. If the main luff has slides, put them all on the mast track starting at the head of the sail. If the mast is grooved, you will have to feed the luff of the sail in the groove as it goes up. However, before you hoist the mainsail, it's best to get the jib ready.

If the jib is not rolled up on a roller furler, it will have to be attached each time you go out sailing. The tack of the jib is the corner that is attached first. There are a number of ways to quickly identify this corner: (1) the sailmaker's label or emblem is almost always located there since there is an International Sailing Federation rule to this effect; (2) the angle at the tack is much wider than the angle at the head; (3) the jib hanks, or snaps, usually attach to the jibstay from right to left, for right-handed people—in other words, with the opening in the snap on the left. If you dump a large sail out of the bag, just by looking at one jib hank you can tell which way to follow the luff to the tack; (4) a good crew, knowing that the tack is needed first, will leave that corner on top of the sail after "bagging it" (putting it away in a sailbag); and (5) on larger boats, "Tack" is often written at the corner so there can be no mistake.

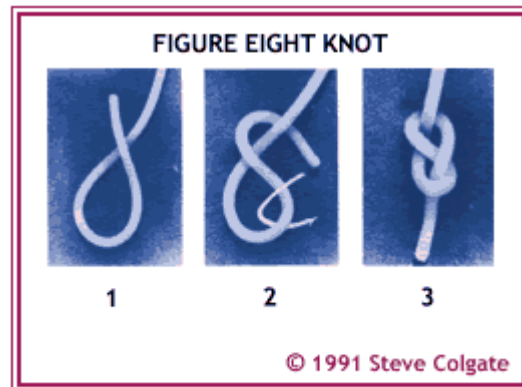


Figure 1

**Start with the basics: A figure eight knot can be used to keep the ends of jib sheets and main sheets from being carried forward.**

Attach the tack of the jib and start hanking on the snaps from bottom up. If you start at the top of the sail, you would have to hold the sail up and hank on each snap underneath. This would get mighty heavy after a while. Also, the sail would be up high where a gust of wind could blow it overboard. So you start with the tack first and pull the sail forward between your legs to keep it low, protected from the wind, and to avoid draping it over the side of the bow in the water.

The jib sheets (the lines that adjust the jib in and out) are now attached to the clew and led through their proper "leads" (blocks, or pulleys, that adjust the trim angle of the jib), and either a "figure-eight" knot or "stop" knot, as shown in Figures 1 and 2, is made in the end of each sheet. This keeps the end of the line from running out of the jib lead when you let it go. Of the two knots, the "stop" knot is the better. Now attach the jib halyard that will pull the sail up, and you're all set to go.

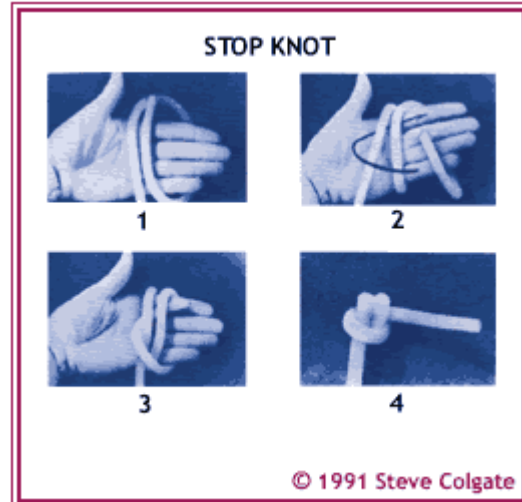


Figure 2

**The stop knot essentially functions the same as the figure eight, although the ability to tie both will prove beneficial when learning other knots.**

The mainsail is raised first for various reasons. It acts like a weather vane and keeps the boat headed into the wind. This is most important on a cruising boat since you are apt to motor out of a harbor, head the boat into the wind, and idle the engine while the mainsail is raised. If the boat swings broadside to the wind, which might happen if you raise the jib first, the mainsail will fill with wind, press against the rigging, and bind on the sail track, making it virtually impossible to raise the sail farther.

The same problems arise on smaller boats, but if you start from a mooring, the boat automatically "lays" with her bow pointed directly into the wind. Sometimes the current is strong enough to overpower the wind's effect, but in that case, usually the wind won't be strong enough to create problems in raising the sail. Therefore, with small boats sailing from moorings, the only reason to raise or unroll the jib last is because it flails around during and after raising. This tangles the jib sheets and causes an awful commotion on a windy day, which continues until the main is raised and you start sailing. The flailing also reduces the life of the jib because it breaks down the cloth fibers and fatigues the sail. If the jib is rolled on the forestay, just release the furling line and pull on the leeward jib sheet to unroll it for use.

One important item to remember when raising sails is that all the sheets must be completely loose so the sail will line up rather than fill with wind. At the same time, all lines that might be holding the boom down (like the cunningham or the boom vang) must be eased so that nothing can keep the main from going all the way up. A crew member should hold the end of the boom up in the air to relieve the pull of the leech of the sail if the boat does not have a topping lift (line to hold the boom end up).

**Leaving the Mooring** Before leaving the mooring, let's get a couple of basic terms clear: starboard and port are two terms in constant use on board a boat. Starboard is right and port is left when facing forward (toward the bow). Some remember this by the fact that "port" and "left" have the same number of letters. It's been said that the words came from sailing ships of long ago that used a sweep, or oar, for steering. It was called the "steering board" and was over the right side of the boat when one faced the bow. Thus the right side was called the "steering board" side and later, the starboard side. The left side was clear to lay next to a dock while the boat was in port and became the "port" side.

***"Make sure you understand the difference between port and starboard before getting underway."***

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Now we're ready to sail away, but since the boat is headed directly into the wind at a mooring and is not moving through the water, it is what we call "in irons" or "in stays." This can happen at other times when a boat attempts to change tacks by turning into the wind, is stopped by a wave, and loses "steerageway" or "headway." In order to steer a boat, water must be flowing past the rudder. If the boat is "dead in the water" (motionless) the rudder is useless, so the sails have to be used in its place.

Because the boat is pointing directly into the wind, the sails are "luffing" (shaking). To "fill" the sails, you will have to place the boat at an angle to the wind. Usually this angle is 45 degrees or more, and when the boat reaches this position, the sails will fill with wind and the boat will start moving forward. Until that point, however, the sails have to be manually forced out against the wind to fill them. This is called "backing" the sail. If you want to turn the bow of the boat to starboard (to the right), you hold the jib out to port as in Figure 3. The wind hits the port side of the jib and pushes the bow to starboard. After the boat is pushed 45 degrees to the wind, the jib is released and trimmed normally on the starboard side.

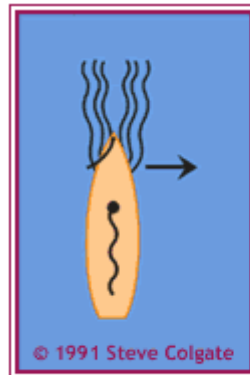


Figure 3

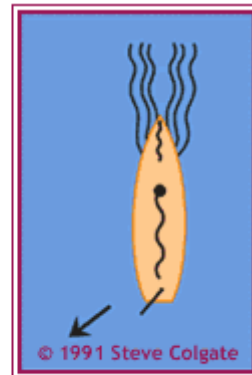


Figure 4

**When the boat is pointed directly into the wind, backing the jib in Figure 3, causes the bow to move to starboard, as does moving the tiller in Figure 4.**

Though backing the jib is the fastest and surest method of falling off onto the desired tack, there are other ways. If the boat is drifting backward as in Figure 4, put the tiller to starboard. The rudder will turn the stern of the boat in the direction of the arrow and the boat will "fall off" onto the port tack.

You might be sailing a small boat that has no jib. In that case, you can push the main out against the wind. This starts the boat moving backward and turns the stern to the opposite direction of the side that you are holding the main. In other words, if you back the main to the starboard side, the stern will go to port as in Figure 5.

Help the boat to turn by putting the tiller to starboard as described in Figure 4.

If you are sailing a yawl or a ketch, you can back the mizzen (aftmost smaller sail) out against the wind in the same manner, and with the same effect, as backing the main of a small boat. Note Figure 6. The standard procedure when leaving a mooring is for a crew member to untie the mooring line, but hold on to the end of it (or, if possible, use it to pull the boat forward to gain a little forward momentum) while another crew member backs the jib. When the bow is definitely swinging in the desired direction, the mooring line is released and you're off sailing.

As the boat starts moving forward, the rudder becomes effective. Though it eventually becomes automatic, at first one has to think which way to push the tiller to steer a sailboat. As the boat sails along, water flows past the rudder. When the rudder is turned, it deflects the water flow and pushes the stern opposite from the direction of the deflected flow.

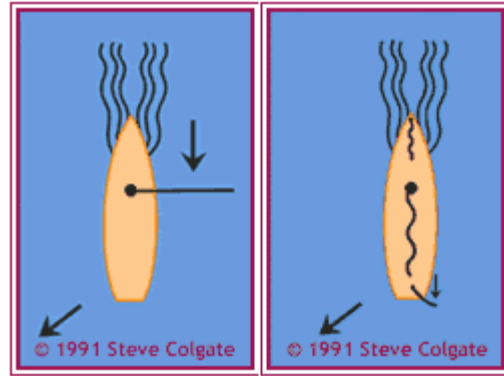


Figure 5

Figure 6

**Pushing the boom out in Figure 5 causes the stern to swing to port, while luffing into the wind in Figure 6 and back winding the mizzen sail accomplishes the same thing.**

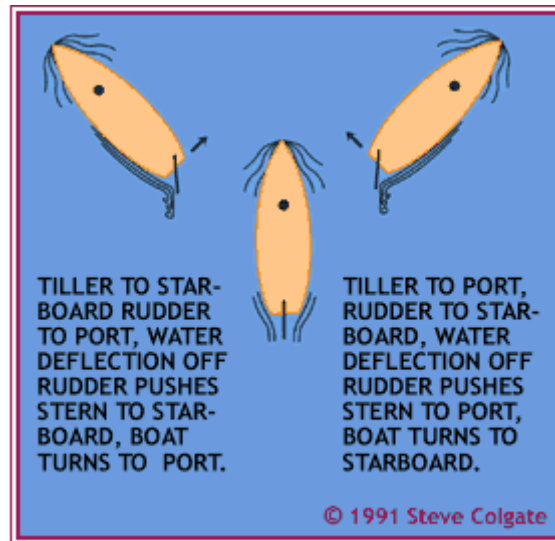
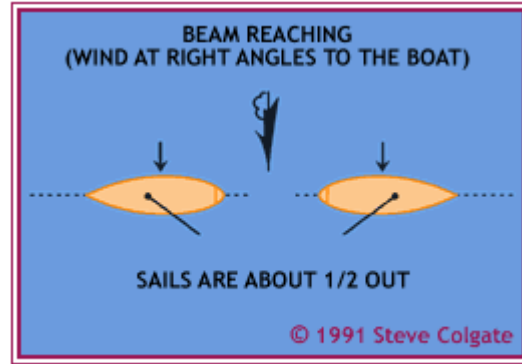


Figure 7

**The basics of tiller movement and how it relates to the direction of the boat is the starting point for many students.**

You should study Figures 7 and 8. The hull and keel of the boat act as a pivotal point, so the bow goes in the opposite direction of the stern. When leaving a dock in a cruising boat under power, one often sees the new owner try to swing the bow out too sharply. The stern bumps along the pilings because the skipper is so intent on turning the bow, he forgets he is actually throwing the stern toward the dock. To turn to port you have to push the tiller to starboard and vice-versa, which confuses many beginners. It's interesting to note that the fireman who steers the rear wheels of a hook-and-ladder truck is called the "tillerman." The theory is the same. There's no easy way to remember how to steer a sailboat. Practice is the key. Just sail on a "beam reach" (see Figure 8) and make a series of small turns to get the feel of it.



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Figure 8

**Beam reaching is a useful reference point when it comes to sail trim. When the wind is 90 degrees to the boat, the sails are half in and half out. Pointing higher, the sails must be trimmed in more, falling off, they must be eased.**

Just sail on a "beam reach" (see Figure 8) and make a series of small turns to get the feel of it.