

BASIC SAILING TECHNICS

Basics of Steering



Photo © Tom Lochhaas - sailor Tom Gynan

As soon as the sails are drawing and the boat is beginning to move, be sure you are sitting on the side of the boat the wind is coming over – opposite the sails (as shown here). The wind against the sails will make the boat heel (lean) over, and your weight is needed on the high side to keep the boat from capsizing.

As soon as the boat is moving, water is streaming past the rudder and the boat can be steered with the tiller (see tiller in [Part 1](#)). If you have ever used an outboard motor on a small boat to steer by pushing the motor's tiller arm, then you already know how to steer a small sailboat, since the tiller works the same way.

If you have never steered with a tiller before, it takes a bit to get used to, because it seems to work the opposite of what you might expect. **To turn the boat to the left (port), you move the tiller to the right (starboard). To turn the boat to starboard, you move the tiller to port.**

This makes sense when you look at how the rudder is hinged to the stern of the boat. Moving the tiller one direction rotates the rudder to the other side, and water moving against the rudder pushes the stern of the boat the other direction. Look at this photo and think through these steps to better understand:

1. Move the tiller toward the port (left) side, as this sailor is doing.
2. This swings the rudder out a little on the starboard (right) side.
3. The water against the rudder's starboard side causes a pushing motion that moves the stern the other direction, to port.

4. Moving the stern to port means the bow now points more to starboard. Steering by moving the stern is very different from steering a car, where the front wheels turn the front of the car. A boat steers by pushing the stern one way or the other – like driving a car in reverse.

Don't worry if this sounds confusing - you'll learn this very quickly on the water! **Most important, make *very small* movements of the tiller until you get a feel for steering!**

It is easiest to learn to sail a boat from a mooring (a permanent anchor line in the water). The wind will blow the boat straight back, such that the bow faces into the wind. This is the one direction in which we can't sail, so the boat has to be turned so that the wind is coming across the boat from either side.

To turn the sailboat after it is released from the mooring line, simply push the boom out to either side. The wind will now blow against the back of the sail (rather than past it on both sides), and the boat will rotate – this is called “backing the sail.” Now the boat can begin to sail as you pull in the mainsheet to tighten the main sail.

It is a little more difficult to learn to sail off a dock or beach. If the boat is being blown sideways against the dock, it can be almost impossible to get started. In this case, walk the boat to the end of the dock and turn it there to face outward into the wind. Then you can back the sail to get started.

Remember that the boat can't move if the sails are loose and flapping in the wind. But as soon as they are tightened up when the wind is coming over the side, the boat will begin to move forward. The next pages describe how to manage the sails and steering.

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5. Remember that the sheets pull in and let out the sails. Pulling the mainsheet brings the mainsail closer to the centerline of the boat. Pulling the jibsheet brings the jib closer to the centerline.
6. Once the boat starts moving forward, position the tiller so that the boat is not turning to either side. If the sails are loose and flapping, pull in the mainsheet just until the mainsail stops flapping and takes shape – you will feel the boat speed up. Then pull in the jib sheet until the jib also stops flapping.
7. There is one simple general principle for where to position your sails. The closer you sail toward the wind (close hauled), the more you pull in the sails. The farther you sail off the wind (broad reach), the more you let out the sails.
8. The photo at left shows the sails far out to the side as the boat sails downwind. (The wind here is blowing from right to left.) The photo at right shows the sails brought in close as the boat sails upwind. Notice the boat heels over more the closer it sails into the wind.

Safety a Big Issue for Small Boats

Give your Boat a Quick Inspection Before Heading Out on the Water

It doesn't require a 40 ft. cabin cruiser to enjoy the nation's many lakes, rivers, and coastal waterways, but those operating small boats to engage in water-related activities do need to be aware of their boat's limitations and behave accordingly.

Statistically, more than 80 percent of all boating fatalities occur in boats less than 26 feet in length, often the result of capsizing or falls overboard. In many cases, a contributing factor is one or a combination of the Coast Guard's Big 4: excessive speed, reckless operation, operator inattention/inexperience, and boating under the influence.

But other factors point to hazards particular to smaller craft. In small, open-constructed boats, the wave-size-to-boat ratio is much less than on a larger boat, and a small boat will fill with water more quickly if washed over by a large wave, or even a small one. Transoms and helm station areas are wide open and the boats have smaller and fewer bilge pumps, or none at all. Also, decks are not watertight, and water can enter and damage the control cables, leaving the boat stranded.

Even empty, such boats have little to no freeboard – the distance between the rail or top edge of the boat and the waterline – and even less when fully loaded with occupants, food, and gear. It's easy to overload these vessels unintentionally, and an overloaded boat is more likely to capsize, even in relatively calm waters.

So keep in mind your boat's maximum load capacity. On most mono-hull boats up to 20 feet long, this information can be found on the capacity plate, permanently affixed to the hull by the

manufacturer. It notes the maximum horsepower rating and maximum load weight at which the boat can safely operate. If a capacity plate isn't present, one easy formula for calculating the maximum load for a mono-hull boat is to multiply the boat's length times its width and divide by 15. As such, a 6 ft. wide, 18-foot boat can carry up to 7 people safely.

To make capsizing even less likely, be sure your load is distributed evenly to keep the boat balanced. Standing for any reason in small boats, even changing seating positions, can raise the center of gravity and make the boat less stable. The same is true for sitting on the gunwales or seat backs, or on a pedestal seat while underway. A raised center of gravity means that a wave, wake, or sudden turn can result in a person falling overboard.

For safety's sake, complete a pre-departure checklist prior to launch to make certain your boat is in good working order and has all the necessary safety equipment on board. And, big boat or small, be sure to check the weather report and waterway conditions, bearing in mind that conditions considered safe for a 40-foot boat might be unsafe for one half that size.

Small boats are a lot of fun and important to many water-related activities. Take a moment to do a 15-minute inspection before launch, watch your load, and mind the Big 4. Make sure that all of your small boat journeys are safe ones.

Complete this Pre-Departure Checklist

To make sure your small boat is "seaworthy" and that all essentials are on board, set aside 15 minutes for a quick inspection before launch.

- Check the operating condition of your boat: motor, steering, battery, hoses, clamps, bilge pumps, wiring, fuel tanks, lines, float switches, and lights.
- Make sure you have a U.S. Coast Guard-approved life jacket of correct size and type for you and every passenger (and, on the water, make sure they are worn, not just stowed).
- If your boat is greater than 16-feet in length, be sure you also have a Coast Guard-approved throwable flotation device – i.e. buoyant cushion, ring buoy, or horseshoe buoy (kayaks and canoes are exempted from this requirement).
- Check for other safety equipment appropriate to the size of your boat and the area where it will be operating; for example, flashlight, tool kit, first-aid kit and sunscreen, paddles, oars, binoculars, anchor and anchor line, fire extinguisher, spare battery, visual distress signals, charts of the local area, and a VHF-FM marine radio.
- Check the capacity plate (if affixed to the hull) or calculate the maximum load to make sure you don't overload the boat with passengers and gear.

Sea-Terms

Basic Sailing Terminology for the Beginner Sailor

When you are [learning to sail](#), the first thing you will notice is that it is full of confusing terminology. For the beginner it can be quite overwhelming, but everyone has to start somewhere, even British Olympic heroes such as Ben Ainslie or Sarah Ayton. So if you don't know your sheets from your booms, or your port from your

starboard, here are some definitions of some of the most common sailing terms.

The Bow and the Aft

The bow is the name given to the forward part of the boat, and the aft is the name given to the back half. However, the aft is slightly more problematic because it is also known as the stern. The bow is important to know because its location directly relates to two of the most important terms in sailing: port and starboard.

Port and Starboard

Port refers to the left-hand side of the boat when you are looking forward towards the bow. Starboard is the opposite, referring to the right-hand side of the boat. Beginner sailors often think that it would be easier to use 'left' and 'right', but these could refer to something else whilst out on the water and become confusing. It is important to know these two terms because many sailing rules regarding the rights of way that oncoming boats have refer to them. One common way to remember them is that 'port' has the same amount of letters as 'left', but they will soon roll off the tongue easily.

Windward and Leeward

As you will already know, sailing is intricately linked to the wind and what direction it is coming from. It therefore comes as no surprise that we have our own names to refer to these directions. Windward therefore refers to the direction in which the wind is blowing, and leeward the direction opposite the way the wind is blowing. People tend to confuse these quite a bit to start with, so don't worry if it takes a while to remember them.

The Boom, the Rudder and Sheets

These are all objects found within a sailing boat. The boom refers to the horizontal pole that connects to the foot of the sail. It moves from side to side to harness the power of the wind, and can be quite dangerous if the sailor is not paying attention to it. The rudder is the flat piece of plastic or wood that is positioned under the boat, and is responsible for steering. It is controlled with a sheet, which is the name given to any rope that is used to control either the boom, the sail or the rudder. Sheets also have different names according to their role, but we won't go into that here.

Tacking and Jibing

These are two of the most common manoeuvres in sailing. Tacking is accomplished by turning the bow through the wind, allowing the wind to change from one side of the boat to the other, and the boat moves towards an upwind location in a zig-zag manner. Jibing is essentially the opposite of this, and involves turning the stern of the boat through the wind in order to travel downwind. However, the manoeuvre is often a lot quicker and less controlled than tacking, and the quick-moving boom can make it more dangerous.

a-back A sail is a-back when its *forward* surface is acted upon by the wind.

a-baft the hinder part of a ship - behind - thus, *abaft the fore-mast*, means anything between the stern and the more-mast

a-board

In the ship: as, the cargo is *a-board*. A ship is said to *fall aboard* when she runs foul of another. To get *aboard* the main deck is to bring the clew of the main-sail down to the chess-tree.