

# Handling a Sailboat in Tight Spaces

## Applying Your Maneuvering Tools

The second of a three part series on boat handling.

This article is the second in a series on handling a sailboat in tight spaces. Last month's discussion covered the tools we have available to control a sailboat under power. If you have not read last month's article I would recommend doing so before reading this one – it can be found online at [www.48north.com](http://www.48north.com), click on the link to January's magazine and turn to page 42.

Now let's start applying the tools we discussed last month to achieve different maneuvers. I will also include some suggested exercises. The simpler maneuvers will be listed first because they are used later in more complex maneuvers.

Please practice all of these skills in a safe place – most of the early skills can be done around a stationary reference point in the water, like a mooring ball or a fender tossed overboard on a windless day. I would suggest doing them where there is little traffic and, unless you want one, no audience. To start with, do these exercises without wind or current and then, when you feel ready, add them to perfect your skills. Just to be clear – these are all to be done under power, no sails please. One final thought, boat handling takes patience, things should be done no faster than is needed to maintain good control of the boat.

**Controlling Speed** – There are two parts to this skill; the first is learning how to control the boat's speed by using the throttle and gear shift. The second part is staying aware of how fast the boat is going (you can't control what you are not aware of). This second part is sometimes the hardest for new boaters.

Propulsion is the main tool, but wind and current can also have an

impact. Here is a fairly simple exercise; on a calm day, drive the boat for 1-2 minutes at 1 knot (say between .9 and 1.1 just to be real about it). To do so you will likely need to shift between forward and neutral as most boats will go faster than this at idle. Repeat the exercise at 2, 3 and 4 knots. Then go from the faster speeds down to the slower speeds, see if you can use a touch of reverse to slow down to the next lowest speed without over shooting. Also pay attention to your surroundings so you can get a feel for each speed.

Lastly, do this same exercise into a wind and then turn so the wind is at your back. If the wind is strong enough, going down wind may require operating in reverse. If you want to practice in current you will need to use the SOG (speed over ground) reading on your chart plotter or GPS rather than the knot meter. And if you are going with the current, say a 1 knot current, skip the 1 knot speed as the boat will be dead in the water and you will have no steerage.

**Stopping** – This skill is almost always used as part of docking or mooring. Sure, we may go dead in the water to fix something but we usually just shift to neutral and let the boat drift to a stop. At the dock this is unacceptable, we need to be able to stop the boat within a predefined space – far enough into the slip to let the crew off, but without going 'crunch' at the end of the slip.

There are three tools we can use to stop the boat, propulsion, dock lines and manual labor. Wind and current can also have an effect, either helping or hurting, so they will also need to be taken into account.

Start by practicing with the throttle and gear-shift. You will need a reference point like a mooring ball or piling –

something fixed (could be a fender you toss over but this only works on a calm day). Practice coming up alongside the reference (say 10 feet from it) and stopping the boat with the reference right beside you. I am suggesting this for a reason; most of my students have a tendency to pull the boat into a slip with great care. But once the crew hops off the boat they relax and think they are done. What they are forgetting is to bring the boat to a full stop (it is almost always still moving forward). What I teach them is to look sideways, at the dock or another boat, and see if they are still moving; and if so, to do something about it. Practicing with the reference point beside you helps create this habit.

Once you are comfortable stopping the boat with the reference point beside you, work with your crew to stop the boat with it beside or in front of the bow. Have them call out to you the distance and point to the ball. We use calls like "1 boat length," "half a boat length," "10 feet" and "5 feet." This really helps with mooring balls because they usually disappear from the skipper's view when you get close. Then try doing this exercise with wind or current, both helping and hurting. You should find it much easier to stop going into the wind or current, and this is why we usually approach mooring balls from downwind or into the current. However, we still need to be good at stopping with the wind or current behind us as we may need to dock in these conditions.

Dock lines and manual labor can also be helpful in stopping a boat when docking. They can become critical in some situations – say the engine fails to shift into reverse or the skipper comes in too hot. For this reason, we usually teach crew to take the mid-ship dock line with them and, once they are on the dock, to hook it around a cleat near the outer end of the slip. This way, if the skipper cannot stop the boat, they can simply tighten the line to stop the boat. The mid-ship line works best, it gives you time and line to work with and it will generally pull the boat into the dock without twisting it. This twisting is the main problem with using the bowline; pulling on it will swing the bow toward the dock and the stern out (usually into another boat). The stern

line will not work because the boat will usually hit the end of the slip before you can get it around a cleat and it will also swing the stern in and the bow out.

**Steering Forward** – Most people think of using the wheel or tiller when it comes to steering a boat, this is understandable since the rudder is the most commonly used steering tool. But there are other tools, most notably prop wash and prop walk. Recall from last month's article that prop wash is the action of the water from propeller on the rudder, and prop walk is the tendency of the stern to pull sideways when in reverse. In addition, wind can help or hurt what you may be trying to do.

Here are a couple important points:

- Because the rudder is in the back of the boat, turning it causes the boat to turn by swinging the stern the opposite way. In open waters this fact has little impact but when you are close to docks or another boat it is important to remember your stern is going to swing.
- Most fin keeled boats will pivot around the front of their keel when going forward (about at the mast).
- Speed has a big impact on steering so stay aware of how fast you are moving, especially in tight spaces.

Here are some things to practice: at a relatively low speed, say 1 knot, put the wheel over hard and put the engine in neutral. Watch for two things, how much distance in the original direction does it cover before turning 90 degrees? Where does it pivot from? Now try this going a little faster and slower, say at 1.5 knots and half a knot.

Now let's see how adding prop wash affects a turn; start the same turn as above, at the half knot speed, but as soon as you get the wheel hard over, goose the engine (rev it up to over 2000 RPM for about 1 second) and then go to neutral. This should help the boat turn noticeably faster.

Next, let's explore the impact of prop walk. This is important to know because we almost always put the engine in reverse when we are docking and, therefore, prop walk will be affecting the boat. The most important thing to remember about prop walk is that it will help when turning one way

(to starboard on most boats) and hurt when turning the other way. To see this for yourself, start the same half knot turn to starboard but instead of putting the engine in neutral put it in reverse at idle. Most boats will spin a little faster when you do this. Next, do a similar turn to port; this time you should find the turning momentum of the boat slows when the engine is put in reverse.

If the wind is coming from the side, it will help a turn away from the wind and hurt a turn into the wind. Try turns both into and away from the wind with

1 knot of boat speed; the effects become increasingly noticeable as the winds get stronger but can be felt even in light winds.

Next month we will continue this discussion by looking at the maneuvers of backing and spinning.

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Clockwise from Top Left: Custom graphic on a pole-less cruising spinnaker. Roller-reefing Platinum-Drive genoa. Lazy Cradle mainsail sail handling/covering system. Multihull carbon aramid Tape-Drive sails



Neil Rabrowitz photo

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