MANEUVERING IN CONFINED SPACES

Often called "close quarter" maneuvering, the ability to confidently control your boat in confined spaces is a skill cruising boaters must acquire. One of the most common maneuvers is the so-called "standing turn," in which you make the boat turn 180 degrees in not much more space than the length of your boat.

In all cases, you will want to approach the area at which you need to turn slowly so that you can come to a stop easily and in control by use of a moderate amount of reverse thrust.

MULTI-ENGINE BOATS

To turn a multi-engine boat in place, start by placing one engine (or set of engines) in Forward gear and the other engine in Reverse gear. Do not apply throttle. Just allowing the engines to idle in opposite gears is often enough to get the boat to spin.

If you want the bow to go to starboard, place the starboard engine in Reverse and the port engine in Forward.

If you want the bow to go to port, place the port engine in Reverse and the starboard engine in Forward.

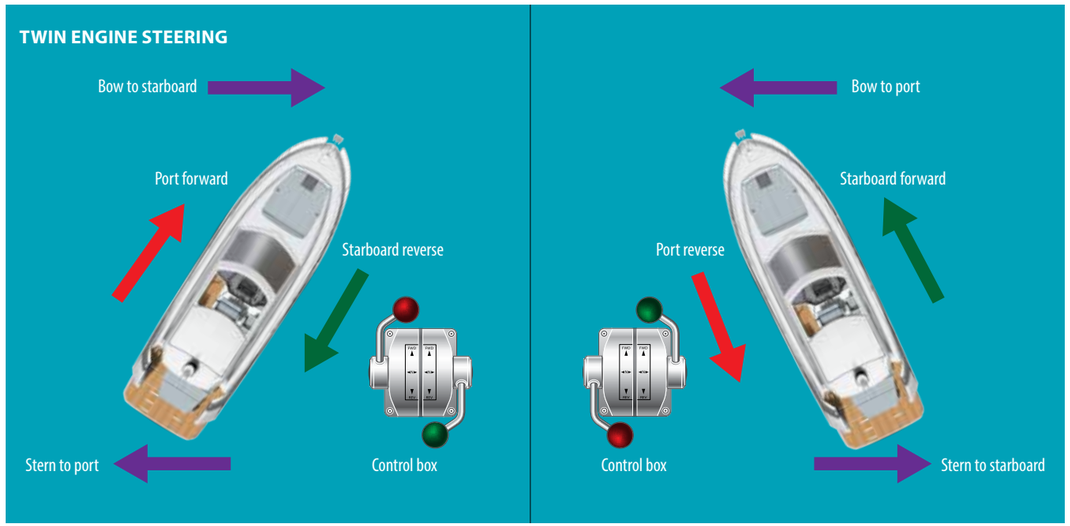
Looking all around you as the boat spins, you may take the engines back to Neutral as the boat's momentum carries it around. Once you are facing the desired direction, shift both engines into Forward gear and proceed slowly.

SINGLE-ENGINE BOATS

Turning a single-engine boat requires more technique. This is especially true if the boat is powered by a single inboard. If that is the case, start as you did with the multi-engine boat previously, with a controlled stop at the desired spot.

BUMPING IN AND OUT OF GEAR

In any close quarter maneuvering, you will find it helpful to develop the habit of placing your engines in Neutral and allowing the boat to coast under its own momentum. Then, if more thrust is needed either to make way or to steer, apply a small amount of throttle momentarily. Just allow the engines to idle in gear; adding throttle is often not needed. Then place the engines in Neutral again. In this way, you avoid the mistake of over-correcting with high power that many new boaters seem to make. And you can cancel the effect of prop walk.



Twin inboard powered boats may be controlled by opposing the engines, shifting in and out of gear while using very little throttle.

Outboard-powered cruisers are now common and offer shallow draft and steerable thrust.

A boat powered by a single inboard steers (mostly) by the stream from the propeller pushing against the rudder. This is intuitive when moving forward. When in Reverse, another phenomenon takes over. You will want to know which way your boat's engine "kicks" or turns the boat's stern. Most single engines turn right-handed propellers (turn clockwise in Forward). These tend to kick the stern to port when in Reverse.

To perform a static 180-degree turn in the easiest manner, follow these steps:

- Begin with turning the wheel to starboard and applying a short 1- or 2-second burst of throttle to get the bow moving to starboard. The rotation of the bow will be to starboard throughout the turn.
- Shift back to Neutral.
- Leave the wheel turned to starboard.
- Place the engine in Reverse gear for just a short burst, again just for a second or two.
- As the stern moves to port, the boat rotates further through the 180-degrees.
- Return the control lever to Neutral.
- Recall that your wheel is still turned to starboard.
- Now apply a quick burst of Forward. Repeat the process as needed to complete the turn.

You will get through most 180-degree close quarter turns in fits and starts rather than one smooth motion (although that can be accomplished).

Once the boat is facing the desired direction, center the helm, then place the engine in gear and proceed. Note that the standing turn for a right-handed prop must be rotation of the bow to starboard and that the wheel remains to starboard throughout the turn.

STEERABLE THRUST BOATS

Boats with steerable thrust propulsion systems steer by directing the propeller's thrust to be in the same direction that you turn the wheel. To turn a boat's bow to starboard, turn your wheel to starboard, thereby directing engine thrust to starboard, that in turn pushes the stern in the opposite direction to port and the bow to starboard.These include outboard, sterndrive, and pod systems.

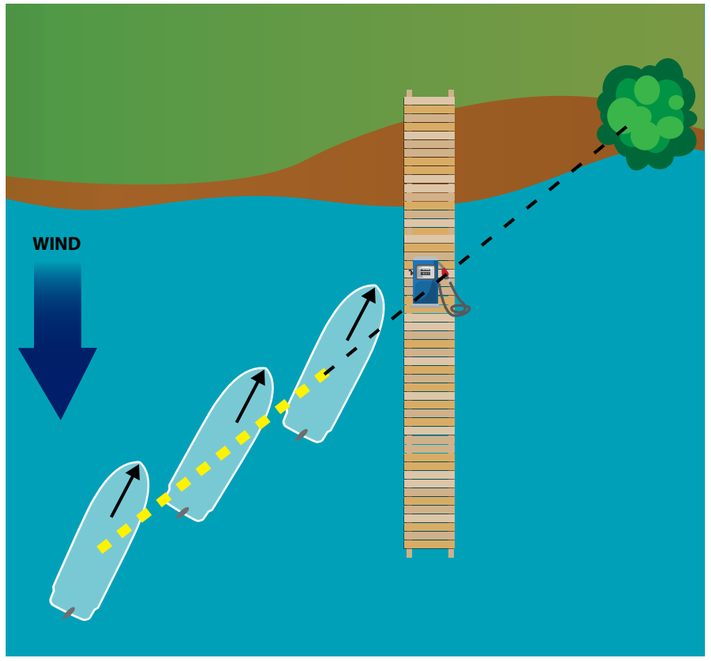
Steerable thrust can be helpful in confined spaces, as the boat can be steered in Reverse, but this is not as effective as steering in Forward gear. One reason steerable thrust is less effective in Reverse is that the propeller is shaped to maximize forward thrust, making the shape less than optimal in Reverse. Secondly, when in Reverse, the drive unit is now essentially at the front of the boat. That is literally the opposite of how the boat was designed to be propelled. It still moves the transom left or right, as it does when propelling from behind, but it is no longer a shallow, pointy, tapered bow that tracks well to lead the way. Instead, the deep, broad, flat transom is trying to lead the way.

A boat powered by a single steerable thrust system also dictates a different technique in executing a standing 180 turn.

NEUTRAL BEFORE WHEEL

Operating a single engine craft in tight spaces, you will find it helpful to develop the habit of not turning the wheel before you have shifted the engine into Neutral. In doing so, you ensure that turning the wheel has little effect on the boat's position until you re-apply power. That's because, with engines in Neutral, no thrust from the propeller is steering the boat (in the case of steerable thrust systems) or water flowing over the rudder.

Certainly, there are times of wind or current where steering and throttle may be needed simultaneously. Most times, they are not.



Approaching with bow into the wind or current - whichever is stronger - provides the best control.

HOLD POSITION USING WIND AND CURRENT

Your boat's position may be held by pointing the bow into the wind or current (or more into one than the other) and applying just enough power to counter the effect of those forces on the boat. Some input at the wheel is often necessary as this action, often called "stemming", is an imprecise art. Essentially, you need to keep the bow pointed into the wind or current without allowing the bow to fall off so much that the boat becomes broadside of either. If you get wind and current abeam, control will be lost. Still, with practice, an experienced cruising boater can make it look easy, dropping back, advancing, and even slipping side-to-side by using controlled input to the steering wheel.

Always use wind and current to your advantage, if you can, in this situation.

ANGLE TO THE CURRENT

Keeping the bow into the current direction prevents the boat from getting sideways to the current. With the bow into the current, the boat, like a weathervane, wants to stay pointed in that direction.

If, however, the bow falls off too much, the boat will present its side (be broadside to) the wind (assuming the wind and current are in the same direction, which is not always true). When that happens, much more throttle and work is required at the wheel, and the steady position one had been maintaining will be lost. This is troublesome, especially if you are in a gaggle of other boats awaiting a bridge opening or an open spot at the fuel dock. Better to keep the boat bow into the current direction in the first place because you have more control.

HEAD ON A SWIVEL

When maneuvering in confined spaces, you must maintain a 360-watch around your boat. You must be looking forward and aft and side-to-side while completing these maneuvers.

To execute a 180-degree standing turn with a boat powered by a single steerable thrust system, follow these steps:

1. First stop in the desired location. Place the engine in neutral.
2. Next, turn the wheel all the way (called "hard over") to the side you want the boat to turn.
3. Apply a short 1- to 2-second burst of power. Just a spurt and just idling in gear. Do not use lots of throttle.
4. The boat is now partway through the turn. Return the control lever to neutral.
5. Spin the wheel hard over in the opposite direction.
6. Shift into reverse gear, again applying minimal throttle for a second or two.
7. Shift back to neutral. Now, turn the wheel hard over the other way.
8. Finally, place the engine in forward gear momentarily and proceed as above.

Repeat, using the pattern of neutral, hard over wheel, little throttle, forward, reverse until you have brought the boat around. Proceed in the desired direction.

Holding the Boat in Position Near an Object in the Water The ability to hold your boat in place in water is one a cruising boater should develop. This skill will prove helpful while queuing up for a bridge or lock opening; while waiting a turn near a fuel dock; or for picking up something you've dropped in the water.

Fenders out, approaching at no-wake speed is how experienced boaters enter a marina. If the marina has pilings, then fenders deployed early could create problems by getting caught on a piling while maneuvering into the slip. Consider having them tied onto stanchions and ready to flip outboard once in the slip.

HOLD POSITION USING ENGINE POWER

The techniques for staying in position using engine power are different than when encountering wind and current. After all, there will be times when the wind is dead and the tide is slack, especially when cruising on a lake. In any event, here are techniques for holding position using engines.

The person at the helm of a single engine boat will have their work cut out for them if their boat does not have bow thrusters. It will involve using constant, but very slight, alternating bursts of forward and reverse. This shifting will more or less keep the boat in place.

This will be coupled by input at the steering wheel, which is used to keep the boat in the right attitude relative to the object you are standing by, keeping the boat pointed as desired.

As stated above, for best control, only turn the wheel when the engines are in neutral.

For multi-engine boats, the task for the person at the helm will prove easier.

1. First, steer the wheel so that the rudders or drives are centered.
2. Then leave the wheel alone unless absolutely required.
3. By "splitting" the engines (that is, by placing some in forward gear and others in reverse gear as explained previously), the boat's attitude and proximity to the object in the water can be maintained simultaneously.

TRIMMABLE THRUST, SHALLOW WATER, AND STEERING

Note that outboards and sterndrives will steer better at minimal speed if the drive or engine is trimmed so that it is vertical in the water. This has the two-fold effect of ensuring the prop thrust stream is horizontal, which is most effective; and it serves to create "more rudder" in the water, as the drive serves as a rudimentary rudder.

Of course, sometimes the draft requires trimming up so that the prop can clear the bottom. This comes with a caveat: when an outboard or sterndrive is trimmed up, its prop thrust pushes the stern down, causing the boat to "squat." This increases the boat's draft and can defeat the act of trimming up! Since trimming up also lessens the rudder area in the water, it causes many skippers to use more engine speed (rpm) to compensate. This often results in creating a bigger wake without increasing boat speed. For example, it is improper to run at 5 mph if you create a large wake, even in a zone marked "5 MPH/ No Wake."

There is always a balance to be found between drive trim, engine speed (rpm) and draft that must be determined for any slow speed, shallow water situation.

MAINTAIN DIRECTIONAL CONTROL AT MINIMUM SPEED

Maintaining directional control at minimum speed is important for a number of reasons. One reason is to leave the smallest wake possible, which is required in many areas, both marked and unmarked. It's bad form to "wake" docked boats or waterfront residential property, for example. Also, when approaching locks and bridges, transiting connecting channels between bays and lakes, off to see a fireworks display or boat race, you will find yourself in company with dozens, or maybe hundreds, of other boats all moving slowly.

You may question why maintaining control at minimum speed is difficult for a boat. Simply put, it is the stream of water from the propeller that is exerting itself that steers a boat. At a good clip of speed, a generous amount of feedback is delivered to the person at the helm. One can feel the steering action in a definite way. As this stream is diminished (as the boater throttles back), steering becomes less sure.

The first step is to realize that you will need to perform oversteering at slow speeds. As you turn the wheel, the boat will respond slowly and with much less effect. By steering more than you normally would, you can make the boat respond quicker.

Since every action prompts a reaction, you will need to compensate and steer back the other way. If you do not do so soon enough, the boat will veer sharply off course. You must correct your original oversteer with an opposing oversteer, before the boat veers off. This occurs much sooner than most beginners think.

Steering at low speed is a constant series of oversteering one way before countering with an oversteer in the opposite direction. With experience, the range of oversteering used will become smaller, as the operator learns just exactly how much is needed in varying situations of wind, current, and other factors. With time, a cruising boater will fall into a normal and natural cadence of using oversteering to maintain control at minimum speeds.

OVERSTEERING

Unlike a car that sticks to the road, boats move about on water. Wind, current, propeller torque, how weight is distributed aboard, and the boat's own momentum are all factors that will cause a boat to turn, even if the steering wheel is not touched.

Looping dock line around a pile and belaying both ends on the boat makes it easier to remove the line and take it with you.

COMING ALONGSIDE A PARALLEL DOCK

Coming alongside a parallel dock is a common circumstance for cruising boaters. You'll need to manage your crew, your boat, and its equipment. Here's how to come alongside a parallel dock.

There is nothing wrong with accepting help so long as you are confident the helper is a dock worker or fellow boater. Well-meaning passersby generally lack the experience to help effectively unless given a lot of direction.

☑ THE APPROACH: A CHECKLIST

1. Assign all crew a job handling lines, etc. For some, the job will be to simply watch, but let them know it's important that they do so.
2. Instruct all crew not to grab, fend off, push, or take any action until you say so.
3. Place fenders along the side you intend to dock against.
4. Have dock lines ready, cleating them off at the appropriate place on the boat.
5. Look at the dock and assess the location of cleats, rings, or piles to which you will tie.
6. Approach slowly, bumping in and out of gear, barely making way.
7. Note direction of the wind and current (look at flags ashore or detritus in the water).

THE APPROACH

Approach the dock slowly, and into the wind or current, if possible, for best control. Use the technique of bumping in and out of gear. Identify the location alongside the dock you will land, keeping cleats, rings, and pilings for tie-off in mind.

Approach at a 45-degree angle, coasting in, engines in and out of gear.

As the bow comes within two feet of the dock, shift to Neutral.

Turn the wheel towards the dock.

Apply a couple of seconds of Re-