Maneuverability Is Key (cont'd)

Following is the order of increasing maneuverability. Any boat lower on the list must give way to boats higher on the list:

- A disabled boat
- A boat that is difficult to maneuver, like a dredge or barge in tow
- A boat whose maneuverability is restricted by size or draft, like a freighter
- A boat engaged in commercial fishing, like a trawler
- A boat being rowed
- A sailboat
- A recreational powerboat

Powerboat vs. Powerboat

Remember that your sailboat is considered a powerboat when the engine is running. Then you need to follow the Rules for two powerboats meeting in open water:

- *When meeting head-on*, the boats should pass port side to port side, just like cars on a two-way road (in America).
- *When crossing*, the boat on the other boat's port (left) side must **give way**.

- *When one powerboat overtakes another from behind*, the overtaking boat (the **give-way vessel**) must use a sound signal to indicate which side it intends to pass on (one short blast for starboard, and two for port). The boat being passed signals approval by repeating the same sound signal back - or may use the danger sound signal (five short blasts) to indicate it is not safe to pass now on that side.

The ultimate rule is always to avoid collision. This may mean slowing or stopping your boat, even if you are the stand-on vessel, to avoid collision with another boat that fails to give way. Use common sense along with the Rules of the Road, and if in doubt of the intent of a large boat posing a danger, you can always hail them on your VHF radio for clarification.

Typical Small Sailboat

Photo © Tom Lochhaas

The Hunter 140 shown here is a typical centerboard sailboat used for learning how to sail and for sailing in protected waters. It can hold two adults or three children. It is easily rigged and sailed.

Shown here is the boat as it is typically left on a dock or mooring, with sails and rudder removed.

The mast and boom are usually left in place on the boat. The forestay holds up the mast from the bow of the boat, and a single shroud on each side of the boat holds the mast side to side. The shrouds are mounted back of the mast, so they also keep the mast from falling forward. The stay and shrouds are made of flexible wire that can be disconnected to trailer or store the boat.

On most large sailboats, there are multiple shrouds to support the mast, along with a back stay support to the stern. Otherwise, this boat is representative of the basic standing rigging of a sloop, the most common type of modern sailboat.

The Mast Step

Photo © Tom Lochhaas

Here's a close-up view of the bottom of the mast atop the boat. The stainless steel mounting piece affixed to the boat is called the mast step. In this boat model, a pin emerging from the mast on both sides simply fits into a slot in the mast step. The mast is lightweight and easily raised by hand.

Once the mast is stepped, it is held securely in place by the shrouds and forestay, as shown in the previous photo.

The Rudder

Photo © Tom Lochhaas

On most small sailboats, the rudder is mounted on the stern of the hull, as shown here. The rudder is a long, thin blade hanging vertically from a simple set of hinges (which varies somewhat among different boats). The rudder pivots on a vertical axis, swinging side to side, which turns the boat when it is moving through the water.

The rudder may be stored on the boat or removed, like the sails, after sailing. Here, the rudder is being reinstalled. On this model the rudder has a kick-up feature, which allows it to swing up if the boat strikes bottom.

The Tiller

Photo © Tom Lochhaas

The rudder is turned side to side by the tiller, the long metal arm seen here extending from the top of the rudder about 3 feet into the cockpit. On many boats the tiller is made of wood.

Note the black handle on top of the metal tiller arm. Called a tiller extension, this device mounts near the end of the tiller and can be moved far out to the side of the boat or forward. The extension is needed because when sailing close to the wind, sailors may need to move their body weight far out to the side (called "hiking out") in order to keep the boat balanced.

Most large sailboats use a wheel apparatus to turn the rudder, because the forces on the boat's rudder can be so much larger that it would be difficult to steer with a tiller.

Boom Gooseneck

Photo © Tom Lochhaas

The boom attaches to the mast with a fitting called a gooseneck. The gooseneck allows the boom to swing far out to both sides as well as to pivot up and down.

This photo also shows the vertical slot in the mast used to hold the mainsail's front edge (the "luff") to the mast (as you'll see in Part 2 of this course). The sail "slugs," fittings on the sail's luff, slide up the mast in this slot.

A similar slot can be seen in the top of the boom, to hold the foot of the sail.

The L-shaped metal pin at the forward end of the boom holds the forward bottom corner of the mainsail, called the tack.

The Halyards

Photo © Tom Lochhaas

Halyards are the lines that pull the sails up the mast. A typical small sloop like this sailboat has two sails, the mainsail and jib, and thus has two halyards – one to pull up the top corner ("head") of each sail.

At the end of a halyard is a fitting, called a shackle, that attaches the sail to the line. The line then runs up to a block (pulley) at the masthead, and comes back down alongside the mast as you see here. Pulling down on this end of the halyard hoists the sail up.

When the sail is up, the halyard is tied off tight to the mast cleat using a cleat hitch, as shown here.

Halyards are part of the boat's running rigging. "Running rigging" refers to all the lines that control the sails or other rigging, which can be moved or adjusted while sailing - unlike the fixed rigging, the usually metal, fixed parts of the rig (mast, boom, stays, shrouds).

Mainsheet Block and Tackle

Photo © Tom Lochhaas

Another key part of a boat's running rigging is the mainsheet. This line runs between the boom and a fixed point in the cockpit (as shown here) or cabin top. As the line is let out, the boom and mainsail can swing farther out from the boat's centerline. As described in Part 3 of this course, moving the sails in or out, called trimming the sails, is necessary for sailing at different angles to the wind.

Even in a small sailboat the force of the wind in the mainsail can be considerable. The use of a block and tackle in the mainsheet provides a mechanical advantage so that the mainsail can be managed by one person, with one hand, while sailing.

On most larger sailboats, the mainsheet mounts from the boom to a traveler rather than to a fixed point. The traveler can move the attachment point side to side for better sail shape.

Finally, notice the cam cleat where the mainsheet exits the block and tackle. This cleat holds the mainsheet in place after being adjusted.

Jibsheet and Cleat

Photo © Tom Lochhaas

When the jib sail is put on the forestay ("bent on"), a sheet is run from its aft corner (the "clew") on each side of the mast back to the cockpit. The jib sheets allow the sailor to trim the jib, as described in this course.

Each jib sheet is led back through a cam cleat, as shown here, which holds the line in place. The jaws of the cam cleat allow the line to be pulled back but not slip forward. To release the jib sheet, the sailor jerks the line up and out of the jaws (into the open space below the top red piece shown).

The Centerboard

Photo © Tom Lochhaas

The final part we'll look at in this boat introduction is the centerboard. You can't actually see most of the centerboard, however, because it is in the water below the boat. This photo shows only its top edge protruding from the centerboard trunk down the middle of the cockpit.

The centerboard is a long, thin blade mounted at one end on a pivot point. When its control line is let out, the centerboard swings down into the water – usually about 3 feet down on a boat of this size. The thin board slices cleanly through the water as the boat moves forward, but its large flat side provides resistance to prevent the wind from blowing the boat sideways. In Part 3 of this course we'll discuss how the centerboard is used while sailing.

Note the centerboard control line running back on the right side of the centerboard trunk. The cleat that holds the line and keeps it from moving forward is called a clam cleat because of its shape. With no moving parts, this cleat holds a line squeezed into it. It is not as secure as the cam cleat for the mainsheet and jibsheets, but the force on the centerboard line is much less.