

Missionary Sailing School

Video: Watch first this short video of a pleasant day at sail (boat is a pilothouse cutter, though only one headsail is in use. An 'inner stay' can be seen if you look closely and the mast is certainly midship)

<http://www.youtube.com/profile?user=lunarcod#p/u/56/ykyc6k-MHvk>

Lesson 2: Parts of a Sailboat

Open the following **webpage**:

http://www.sailingcourse.com/keelboat/parts_of_the_boat.htm

1. Dimensions of the sails [scroll down on the webpage to study the illustration labeled “E, P, I & J Measurements”, looking over it before returning to these notes]

This illustration will be useful later, when you are trying to determine the dimensions of your sails. When buying a used boat it is possible you may need to replace one or more of the sails, if their conditions are questionable (fabric appears worn or frayed, grommets corroded or missing, stitching loose or missing, or overall soiled/stained beyond your preference...a dirty sail will sail, just doesn't help your 'image'.)

Used sails are available everywhere, at considerable savings, and are usually chosen according to these measurements (in some cases, if your boat is a 'production model', meaning many of them have been made, you may actually find a sail designed specifically for your boat). In any case, a spare mainsail is a good idea for long range sailing (provided there is room to store it below.) Also, your *sail inventory* should include a *storm jib* and *trysail* for possible extreme weather days (these will be discussed in another lesson)

2. 'Parts of the Boat - Terms'

Now look over the "Terms" on this first list. They will be covered in their respective sections later but introduce yourself to them at this time [return here before proceeding on to 'Parts of the Hull']

Before continuing, watch this **Video** describing some of the parts of a sailboat:

http://www.youtube.com/watch?v=XC6HnyF-V_c Watch and make list of items mentioned

[Now return to the **webpage** we have been studying from]

3. 'Parts of the Hull'

[Look over this list. Stop before "On Top of the Deck"]

These terms are fairly straight forward, although you may want to come up with your own method to learn them [as they did on this page, "The sailor *left* his bottle of *port* wine behind".] Actually, the term 'port' was applied because in early sailing times the ships would be moored to their wharf (or *pier*) facing out of the harbor, ready to sail off on their departure. As things would most often have it, that put the 'left' side of the ship to the land (hence, where the "port" was.) So, this became the "*port side*" of every boat. Remember, there is only one port side (and one starboard side) on a boat, whether you are facing *forward* or *aft*.

Practice these terms while sitting in a chair. Using hand gestures, indicate where or what each of these terms are as though your chair is the boat itself.

Remember, *aloft* refers to anywhere above the deck. Sometimes a line may be caught, a sail hung-up, or some other emergency occurs requiring you to scale your mast. Or you may need to position yourself higher for a better view as you approach uncertain waters (perhaps a narrow entrance to a harbor, or where reefs and other hazards may be lurking). It becomes easier to see down into the clear waters of the Caribbean from higher up and thereby give better instructions to the helmsman so you “go aloft”. But as a rule, never go aloft without a safety line or every possible precaution.

[Just for fun, watch this short *Video*: <http://www.youtube.com/watch?v=Uf6haJgpvdQ>
Now, take a quick glance at this informative webpage and bookmark it for later reference:
[“Tips For Going Aloft”](#)]

4. ‘On Top of the Deck’

Let’s go through these one at a time (read each webpage definition first, then my notes):

- The *toe rail* may be metallic (usually aluminum), or may be wood, fiberglass, etc. (but without the holes mentioned here.) And some boats have none at all. But if you acquire a boat without a toerail I strongly suggest you add one when possible. Not only does it assist with a ‘foothold’ as you walk along the deck but it will also keep tools, keys (and anything else that loves to roll, slide, or leave your hand unexpectedly) on board! A toe rail with holes at intervals is ideal for tying on *fenders* [round, bumper-like things for protecting your boat from damage from a dock or even a fellow boat] and for attaching a row of safety netting (as well as to the *lifeline* above it). Netting like this is a great help in keeping sails (such as the jib), small children, and pets on board as well.

- *Stanchions* are only as good as how they are mounted. The proper way to attach any item to your deck including *cleats*, *blocks* [which are pulleys], and *stanchions* is with a *back plate*. As you inspect a prospective boat for purchase try to examine how these things were attached. You should be able to see where their bolts have passed through the deck and appear inside with their respective nuts. But is there something more than just a washer inside, between the nut and the interior surface of the deck? A proper mounting would include a reasonably sized plate of steel or aluminum, preferably a single piece for all the bolts involved. This broadens the holding power of the nut and ensures a much stronger bond. Once in awhile you’ll find a boat where things are held together by screws and caulking. It might as well be ‘Duct Tape’ (though, don’t knock duct tape...it will become your best friend.)

Some boats may not have stanchions because the outer edge of their deck is so close to the water that, rather than chance a wave smashing the deck and tearing away stanchions they opted not to use them. However, there should be some secure way to move from the cockpit to the mast or bow when underway, especially in heavy going, lest you end up with a ‘man overboard’.

- *Lifelines* are usually run through stanchions, but in their absence (or for additional safety) they can be created by rope attached to *stays* and other available stationary points along a route from *stern* to *bow*. The term also applies to any ‘leash’ attached to you and the ship that allows you movement over the boat (but not overboard!) Referred to as a *jack line* when it is a secure cable or rope running the length of your deck (usually down the middle) to which a shorter length is attached and then to you. For best results you should be wearing a *safety harness* (often suspender-like with an automatically inflating life vest built in...we’ll discuss safety gear later). Whatever you do, only leave the ship when you “want to”

– not when the sea or wind decides for you!! [Men, many an overboard sailor was found days later, drowned and with his zipper down. Enough said.]

- **Bow pulpit.** Also, remember that in the earlier video a *stern pulpit* was described as the railing encompassing the aft most part of the boat [I guess that would be for those who like to preach from the ‘back of the church’]



Not all boats have a bow pulpit. It is not practical for most catamaran designs and also on boats with a long *bowsprit* [a pole or platform that extends well ahead of the boat’s bow from which jibs and other headsails are flown.] In these cases special netting may extend along each side of the sprit to ‘catch’ (hopefully) an off-balanced sailor. Most modern sailboats have dispensed with bowsprits [having one will add to



the **LOA** – ‘length overall’ – of your boat, meaning that when you tie up for the night at a marina you will be charged extra for that ‘stick’ out ‘front’] But there are exceptions, as in the cruiser at right, with both ‘sprit’ and ‘pulpit’.

[Note: LOA is the overall length; **LOD** is the length of the usable deck minus any ‘overhangs’ on bow or stern; and **LWL** is the ‘length at the water line’, that part that actually makes contact with the water. In our earlier discussion about how a ‘longer boat’ can be a faster boat – it only applies to LWL. In some cases a hull (on a ‘mono’) will be so designed for performance that a significant part of the overall length will be ‘suspended’ above the water, especially on the stern, to reduce ‘drag’. What is sacrificed to create this kind of ‘racer’ is functional interior space, important to long range cruising. Having an LWL that is fairly close to the LOD suggests a more ‘roomy’ boat below.]

- **Wheel and Tiller.** Both are used for steering a sailboat, although a wheel (or, *helm*) is more familiar to first-time sailors, being similar to the steering wheel of a car. A tiller, however, gives a much more natural ‘feel’ for how the boat is responding to subtle changes in wind (strength and/or direction). Cruisers debate over which they prefer but the ‘wheel’ has exceeded in popularity. There are ways that both can be setup for self steering (very important for long distance sailing and will be covered in a later lesson.)

Enjoy this **Video** of “Pete’s first time sailing on a boat with a tiller” (off of Long Island Sound, NY)

http://www.youtube.com/watch?v=FNJpU5jZ_2M&feature=related

Review: [Now return to the webpage we have been studying from]

- Click on the photo of a sailboat’s *foredeck* which appears at the beginning of this section [“On Top of the Deck”] It will enlarge and give you a chance to review some of the terms we have learned.
- Once again, using your chair as your ‘boat’, what are the boating names for the sides, top, bottom, etc?
- What are *back plates* and why are they necessary?
- What is a *jack line*?
- Define LOA, LOD, and LWL.

Bonus Video! After such a long lesson treat yourself to another sailing video, this time on the Sea of Abaco in the northern Bahamas. As the camera pans around the boat try to name the parts you recognize [video opens with a great view of stanchions and lifelines.]

<http://www.youtube.com/watch?v=VVEFxGvfZd8&feature=related>