[**Captain Bob**](http://pyracy.com/index.php?/profile/2481-captain-bob/)

* Ship's Master
* 
* 
* Member
* 108 posts
* Location:Sacred Tomato, CA
* Interests:Science, technology, history, military history, etc.

([IP: 209.240.207.41](http://pyracy.com/index.php?/modcp/ip-tools/&ip=209.240.207.41)) ·

[Posted March 29, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=183662) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=183662)

As a pirate, I find myself to be somewhat underqualified. My sole sailing experience was in the summer of 1980. I was attending Tech School at Keesler AFB in Biloxi, Mississippi. One of my fellow students owned an 18-foot fiberglass sailboat. In the afternoons and on weekends, weather permitting, we would sail the back bay and he taught me and several others the basics of sailing.

This was all good fun, but a year later, a friend introduced me to the Horatio Hornblower series of books. Reading these novels, I learned there were such things as mainmasts, foremasts, mizzenmasts, sprits, and possibly many more bits of lumber from which one might spread sail. The boat I learned to sail didn't have a mainmast, just the *only* mast. There were no stuns'ls, topgallants, etc., but just a lowly mainsail and jib.

My request is this: Explain what the different masts and sails were, and where were they typically located. I'm sure they didn't hang all the canvas out at all times, so just how did they coordinate all that "laundry" and when was it used?

Thanks in advance for what I'm sure will be an interesting discussion.

-- Cap'n Bob

P.S.: If anyone thinks of a related question I should'a asked, go ahead and answer it anyway.

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[**Fox**](http://pyracy.com/index.php?/profile/1019-fox/)

* Old Twillian
* 
* 
* Moderator
* 2,568 posts
* Gender:Male
* Location:Beautiful lush Devon, England
* Interests:Nautical history of the 16-18th centuries and living history based thereon.

Shooting pirates.

([IP: 82.26.120.171](http://pyracy.com/index.php?/modcp/ip-tools/&ip=82.26.120.171)) · · 

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Blimey Bob! That's a pretty tall order! OK, I'm gonna go for the basics, let someone else fill in the gaps.

On a three masted vessel, from bow to stern the masts are *fore, main*, and *mizzen*. On a four masted vessel the *bonaventure mizzen* mast sits astern of the mizzen.

On a two masted vessel the main mast is whichever is the tallest. On a schooner for example the main mast is the aftermost, so a schooner has a main- and fore-mast. A ketch on the other hand has a main- and a mizzen mast. The spar which sticks out the bow of the vessel is the bowsprit.



Schooner



Ketch

There are various different types of sail which fall broadly into two categories: Square sails, and "fore and aft" sails. Within the latter category there are several types - lug, sprit, gaff, lateen etc. Since we're talking GAoP I'm going to confine my descriptions to a square rigged vessel of that period.

In the GAoP most "ships"**\*** were three masted vessel, square rigged on the fore- and main-masts, lateen (a kind of triangular fore-and-aft sail) rigged on the mizzen, and with a square sail on the bowsprit. On the fore- and main-masts there were usually 2 or 3 sails, depending on the size of the vessel: from the deck up these were the *course, topsail*, and *topgallant*. The sails were also distinguished by the mast they were on, thus the bottom sail on the fore-mast was the "fore-course", the second sail up on the main was the "main-top" etc. Usually only one lateen sail was carried on the mizzen, but larger ships sometimes also carried a square mizzen-topsail.

Studding sails (or Stuns'ls) are those additional sails which are added onto the sides of square sails, suspended from "stuns'l yards" which are extensions of the yards. Bunt sails are extensions which are laced onto the bottom edge of a square sail to give it more area. Studding sails were *just* coming in during the GAoP, but were not widespread until after it.

There, that's a start. 

**\****Technically most "ships" of the GAoP were what should technically now be termed "barques", but such nomenclature was not standardised during the era and they were usually described by contemporaries as "ships". The idea of each distinct rig having a distinct name came about long after the GAoP, and during the earlier periods names given to vessels reflected more the use they were put to than the rig they carried*

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[**blackjohn**](http://pyracy.com/index.php?/profile/1144-blackjohn/)

* Iron Age Hero Lost at Sea
* 
* 
* Member
* 3,745 posts
* Gender:Male
* Location:Columbia, Md
* Interests:Stuff... and junk.

([IP: 205.156.36.11](http://pyracy.com/index.php?/modcp/ip-tools/&ip=205.156.36.11)) · · 

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I'll just point toward wiki...

<http://en.wikipedia.org/wiki/Sail>

<http://en.wikipedia.org/wiki/Mast_%28sailing%29>

<http://en.wikipedia.org/wiki/Square_rig>

That should keep you busy for awhile. 

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[**Coastie04**](http://pyracy.com/index.php?/profile/27-coastie04/)

* Dread Pyrate
* 
* 
* Member
* 1,009 posts
* Gender:Male
* Location:Juneau, AK
* Interests:Nautical history, sailing (especially tall ships and my own 'Sanctioned Mistress'), shooting (of all eras and calibers), and homebrewing.

([IP: 152.121.19.61](http://pyracy.com/index.php?/modcp/ip-tools/&ip=152.121.19.61)) · · 

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I'll point you to [this site.](http://sailtraining.org/sailrigs.htm)

The picture at the top gives all the names of the common sails on a square rigger. One thing to note, in the GAoP, ships didn't have the split tops'ls. That is to say, instead of an upper tops'l and lower tops'l, there was just a tops'l, as in the picture below.



Coastie 

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[**Daniel**](http://pyracy.com/index.php?/profile/352-daniel/)

* Pyrate Captain
* 
* 
* Member
* 652 posts
* Gender:Male
* Location:McLean, VA
* Interests:History, pirates, fiction, writing, writing historical fiction about pirates, jokes, games, law.

([IP: 70.243.111.197](http://pyracy.com/index.php?/modcp/ip-tools/&ip=70.243.111.197)) · · 

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Here's a little introductory guide I wrote some time ago to spars, sails and lines in the Golden Age of piracy.

1. SPARS

Spars are the main timbers supported by the hull. As a rule, they are straight and round. They are mostly used to hold the sails up and hold each other up. There are many kinds of spars. I do not know if spars were usually made of the same type of wood as hulls; hulls were usually made of oak in the Royal Navy, and of cedar for civilian ships.

1A. MASTS

Masts are thick vertical spars. Every sailing ship must have at least one mast. Masts either stand on other masts or are fitted through holes in the decks into a supporting hole on the lower deck called a "step." The tallest mast on the ship is called the mainmast. On a two-masted vessel, the shorter mast is called the foremast if it is forward of the mainmast, or the mizzenmast if it is behind the mainmast. On a three-masted vessel, the mainmast is always in the center, with the foremast in front and the mizzenmast behind. On a four-masted vessel, the front mast is the foremast, the second mast is the mainmast, the third mast is the mizzenmast, and the rearmost mast is called either the bonaventure mizzen (on galleons and other old-style ships) or the jigger mast, in more modern ships. Stepped masts usually stay where they are as long as the ship lasts; the other masts can be taken off and stored while the ship is harbor, which is called "striking" the mast."

1A(i). Topmasts. Topmasts sit on top of a stepped mast. A topmast sitting on the mainmast is called the maintopmast; a topmast sitting on the foremast is called the foretopmast, and so on. Most ships have at least one topmast .

1A(ii). Topgallant masts. Topgallant masts sit on top of topmasts. A topgallant mast sitting on the maintopmast is called the main topgallant mast, with other topgallant masts named in the same way. Many ships do not have topgallant masts.

1A(iii). Royal masts. Royal masts sit on top of topgallant masts. During the Golden Age of piracy, only a very few of the largest warships carried royal masts. Masts higher than the royal mast existed, but not until after the end of the Golden Age of piracy.

1A(iv). Spritsail topmast. This was a special mast that sat on a platform at the tip of the bowsprit (see below). Spritsail topmasts were usually much shorter than the other masts. The spritsail topmast existed for only a brief time during the 17th and 18th centuries, but they were around during most of the Golden Age. Though they were common during that time, not all ships had them.

1B. YARDS. Yards are horizontal spars that are attached at their center point to the masts by fittings called "parrels." They are used to hang square sails from. Yards can be turned on the ship's vertical axis through a limited arc. Yards can also be raised and lowered on the mast through a limited range. Usually there is only one yard per mast. Yards are named according to which mast they are attached to: the yard on the main mast is the main yard, the yard on the foretopgallant mast is the foretopgallant yard, etc. The tip of a yard is called a yardarm. Some ships had extendable yardarms on which studdingsails (see below) could be set.

1B(i). Spritsail yard. This is a special yard that is fitted on the underside of the bowsprit. Very common in the 17th century, gradually disappeared during the 18th.

1C. BOOM. This is a horizontal spar attached by one end to a hinge at the back of a mast, while the other end swings freely back and forth. It is used to hold the foot of a fore-and-aft sail. Since booms can swing freely, they tend to bop people on the head unexpectedly, with sometimes lethal results.

1D. GAFF. This is a spar much like a boom, except that is set higher on the mast and is used to hang a fore-and-aft sail from. The gaff must have a boom below it to hold the foot of the sail. But not all booms have gaffs; no gaff is needed if the fore-and-aft sail sail is triangular. While booms are almost always horizontal, gaffs may be angled upward from the mast.

1E. BOWSPRIT. There is only one bowsprit on any ship. The bowsprit is a thick, sturdy spar that protrudes forward and upward from the bow. It is there so that stays (see below) can be tied to it. (It is not used as a battering ram, at least not on purpose).

1F. JIBBOOM. This is a spar lashed to the end of the bowsprit, parallel to the bowsprit and extending well beyond the end of the bowsprit. Its purpose is to hold the foot of a jib, particularly for a ship that has two or more jibs. Because it does not have to support stays that hold up masts, the jibboom does not have to be as thick or sturdy as the bowsprit.

1G. CATHEADS. Rhymes with "flat head," not with "math ed." These are short, thick spars that support the anchor when weighing or dropping anchor. There are usually two catheads, mounted near the bow where they protrude forward and outward.

2. SAILS

Sails in the Golden Age of piracy were usually made of white canvas. Sails in the front part of the ship are caled headsails; while those in the back part of the ship are called aftersails. Sails come in two major types: square sails and fore-and-aft sails.

2A. SQUARE SAILS. Square sails are misnamed, for they almost never square. They are typically trapezoids, wider at the base than the upper edge and often, but not always, wider than they are tall. By definition, however, a square sail must be four-sided. It also must be mounted roughly athwartships on a yard. As a rule, square sails are more powerful than fore-and-aft sails with the wind behind the ship, but are less effective than fore-and-aft sails when sailing upwind.

The bottom edge of a square sail is called the foot, while the top edge is called the head. The side edges of the square sails are called leeches. The two bottom corners are called clews .

2A(i). Courses. Square sails mounted on the lower, stepped masts are called courses or simply sails. Thus, the square sail hanging from the main yard is called the main course or the mainsail, while the square sail hanging from the fore yard is the foresail or fore course. The courses are thicker, heavier, and often larger than the sails mounted on the masts above them. Unlike other square sails, courses are "loose-footed," i.e. the bottom edge is not attached to a yard or other spar

2A(ii). Topsails. Square sails mounted on the topmasts. Named according to the position of the topmast; i.e. main topsail, fore topsail, etc. Pronounced "tops'ls" by seamen.

2A(iii). Topgallants. Square sails mounted on the topgallant masts. They are also called topgallant sails or "t'gans'ls" by especially salty seamen.

2A(iv). Royals. Square sails mounted on the royal masts. These were normall used only in light winds. They are called main royals, mizzen royals, or fore royals according to which royal mast they are mounted on.

2A(v). Bonnets. Wide, short square sails that could be "laced on" to the foot of a course sail to provide extra sailing power. Usually used in light winds. Bonnets began to disappear in the 1700s as they were replaced by studdingsails. (Foxe refers to these as bunt sails, a term I have not encountered in the Golden Age. The 1707 Sea-Man's Vade Mecum calls them bonnets).

2A(vi). Studdingsails. These square sails are mounted next to the courses, topsails, topgallants, or royals, on the same yard, to provide extra sailing power. Usually used in light winds. Pronounced "stuns'ls" by seamen.

2A(vii). Spritsail. A square sail mounted on the spritsail yard on the bottom side of the bowsprit. In "The Great Age of Sail," E.W. Petrejus calls it "the dreaded spritsail, so difficult to handle that it was responsible for the death of many a sailor."

2A(viii). Spritsail topsail. This was the name for any sail mounted on the spritsail topmast or its yars (see above). It was not always a square sail; some ships called polacres mounted a triangular lateen sail here. The foot of a square spritsail topsail was normally tied to the spritsail yard below and behind.

2B. FORE-AND-AFT SAILS. The fundamental difference between a fore-and-aft sail and a square sail is that a square sail is designed to take the wind from only one side; if it takes the wind from the wrong side, it will be ineffective at best, or at worst drive the ship backward and possibly damage itself or its mast. But fore and aft sails are designed to take the wind from either side. Although the name "fore-and-aft" implies that the sails are parallel to the ship keel, most can be set at a considerable angle to the keel when desired. Most fore-and-aft sails are triangular, but some are four-sided.

2B(i): Jibs. Jibs are triangular sails hung from jib halyards that run from the foremast or foretopmast to the bowsprit or jibboom. It is possible to mount two or three jibs on the same bowsprit and/or jibboom. If there are multiple jibs they are called, from aft to fore: the inner jib, the outer jib, and the flying jib.

2B(ii): Staysails. These are are triangular sails that hang from the stays that run diagonally from the masts to the bowsprit, or from the masts to other masts. They are very little different from jibs. Special "storm staysails," thick and tough, could be used in heavy weather when other sails had to be furled.

2B(iii): Gaff sail. This is a four-sided fore-and-aft sail supported by a boom and a gaff (see above). If it is the rear-most sail on the ship, it is called the spanker.

2B(iv): Lateen sail. This is a triangular fore-and-aft sail hung from a special fore-and-aft yard that slopes diagonally instead of being horizontal like most yards. A very old sail that was used by Columbus, it hung around well into the 17th century, usually mounted on the mizzenmast, or on the bonaventure mizzen of a galleon.

3. LINES

Lines are what sailors call ropes. They come in two flavors: standing rigging and running rigging. Today, standing rigging is usually made of metal wire while running rigging is made of nylon rope. In the Golden Age, both standing and running rigging were made chiefly of rope (made of manila in the 19th century, although I don't know if this was used yet during the Golden Age), though some small portions of the standing rigging might be made from iron chain. All lines would be heavily smeared with tar to weatherproof them; unfortunately, this also made them very flammable.

I am not discussing mooring lines or anchor lines.

3A. STANDING RIGGING

Standing rigging consists of all the lines that just stand there and don't have to move around. Its purpose is to SUPPORT things, unlike running rigging whose purpose is to CONTROL things.

3A(i): Shrouds. When a landlubber says, "the rigging," the shrouds and ratlines are what he usually means. The shrouds run from each side of the mast down to the side of the ship, spreading out slightly as they descend. Each mast is supported on each side by several shrouds. In the case of shrouds above the stepped masts, they run not to the side of the ship but to "spreaders" or "crosstrees" mounted on top of the mast below. They keep the masts from falling over to either side. Shrouds can be tightened or loosened by the deadeyes, which are three-eyed blocks that connect the shrouds to the side of the ship. Shrouds are named for the mast they are attached to and the side of the ship they are on: the port main shrouds run from the port side of the ship up to the port side of the mainmast; the starboard foretopmast shrouds run from the starboard side of the foretopmast down to the spreaders or crosstrees on top of the foremast. Likewise there are mizzen shrouds, main topgallant shrouds, and so on.

3A(i)-a: Futtock shrouds. These are very short shrouds that run from the crosstrees or spreaders down to the mast a few feet below. They meet the mast at a point just above where the regular shrouds are attached. Real sailors climb from the shrouds to the futtock shrouds to get onto the top of the mast. Lubbers climb through the "lubber hole" cut into the floor of the top.

3A(ii): Ratlines. Ratlines are horizontal lines that connect the shrouds together, forming a ladder for sailors to climb. Since they only have to support the weight of the sailors, they are much thinner than the shrouds. Seamen pronounce these as "rat-linns."

3A(iii): Stays. These lines keep the masts from falling over forward or backward. Each mast is typically supported by one stay, which runs forward, and two backstays, which run aft. The thickest and sturdiest stay holds up the mainmast and is called the mainstay, a word that is now part even of lubbers' language. The forestay, foretopstay and sometimes the foretopgallant stay are secured to the bowsprit, although the fore topgallant stay might be secured to the crosstrees instead. The mainstay, mizzenstay, main backstays and mizzenbackstays are most often secured to the deck below. Other stays, like the maintopstay, maintopgallantstay, mizzentopstay, maintop backstays, and so on, are secured to the mast in front or behind. That is, the maintopstay is secured to the foremast, while the mizzentopstay is secured to the mainmast. Stays were not intended for sailors to climb on, but some sailors climb on them anyway, particularly when they want to get from one mast to another or get down quickly. (Sometimes they get down more quickly than they intended).

3A(iv): Bobstays. There are usually two bobstays, which run from the bowsprit aft to the bow. They keep the bowsprit stable. "Martingale stays" are essentially the same, except that they spread out to either side of the bow, while the bobstays usually run straight back to the stem of the ship.

3A(v): Footropes. These lines run along and below the yards, about three feet down. They provide sailors a place to stand on while furling, reefing, or otherwise messing with the sails. Footropes did not actually come along until the mid-17th century; pirates in Drake's or Hawkins' era had to straddle the yards while working on the sails.

3A(vi): Robands. These short lines are used to tie (or "bend" as seamen say) the sails to their spars.

3A(vii): Wooldings. These lines are tied tightly around the masts, either to strengthen a sprung or cracked mast, or to hold in place a fish (piece of wood) that strengthens the spar. They gave their name to the buccaneers' practice of "woolding," which meant to tie a knotted line tautly around a prisoner's head and tighten it until his eyes burst out.

3A(viii): Catharpings. These lines connect the portside shrouds to the starboard side shrouds. This serves two purposes: making the shrouds tauter, and making them narrower so the yards can swing further to the side before they hit the shrouds. Catharpings are not often seen today, I don't know how often they were used in the Golden Age of piracy.

3B: RUNNING RIGGING. Running rigging consists of lines that the sailors must pull, coil, knot, untie, belay, and otherwise mess with to run the ship. Again, standing rigging SUPPORTS things, running rigging CONTROLS things. When they are not being used, the working ends of many running rigging lines (many braces, sheets, tacks, halyards, and topping lifts, for instance) are kept tied to belaying pins on pinrails along the edge of the deck. Running rigging tends to be run (or "rove") through various pulleys called "blocks," without which the sailors could not work the lines. I have left out the blocks from these descriptions, because even if I understood them, they would unnecessarily complicate an already complex matter.

3B(i): Braces. These are connected to the ends of the yards and are used to turn the yards and their sails to port or starboard. Every yard has two braces, one on each side. They are named for the sail they control, rather than the yard they control: i.e. the brace attached to the port mainyard arm is the port main brace, not the port mainyard brace. To "splice a main brace" was a difficult job which traditionally was rewarded by an extra rum ration, so that splicing the main brace is today a landsman's phrase for getting drunk.

3B(ii): Sheets. These are connected to the clews of the courses and run aft; if they are not tight, the sails will simply flap like laundry in the breeze. Jibs also have sheets, connected to the free-hanging corner ("clew") of the sail. As the jib sheet is hauled to the port side, the jib will take the wind on its starboard side; if the jib sheet is hauled to the starboard side, the jib will take the wind on its port side. Sheets are an eternal source of confusion to lubbers, who naturally assume that they are sails rather than lines.

3B(iii): Tacks. Tacks are connected to the clews of the courses, just like sheets, but they run forward instead of aft. They help pull the foot of the sail around when the yards are being turned from one side to another. Since the process of zig-zagging to windward requires the yards to be turned from one side to another frequently, the tacks have given their name to the process of "tacking."

3B(iv): Halyards. Also spelled "halliards." Their name is also their purpose: to haul the yards. Unlike braces, halyards are used to hoist the yards up or lower them down on the masts. This is most often done in harbor, not at sea. The lines that haul up the head of a jib or staysail are also called halyards.

3B(v): Brails. These lines run from the yard down over the surface of the square sail to the foot of the sails. I3B(vi): 3B(vi): Gaskets. These are short lines that can be tied around a furled sail to bind it to the yard.

3B(vii): Reef lines. These lines occupy a lot of sailors' time. Horizontal rows of reef lines are punched through the sail, each one a short line that hangs out about two feet on each side of the sail. When shortening sail, the topmen pull the sail partway up, folding it like a pleated skirt as they pull it up, until the row of reef lines is right under the yard. Then they pull the ends of the reef lines around each side of the yard and tie them to each other with (what else?) a reef knot. (The reef knot is known as a square knot to Boy Scouts and other lubbers).

3B(viii): Downhauls. These are connected to the upper corner or "head" of a triangular sail like a jib or staysail. The downhaul is used to haul the sail down by its head when you want to stow it.

3B(ix): Lifts. These lines run from the yardarms slightly upward to the masts, and keep the yards at right angles to the masts when the wind is trying to force the yardarm downwards.

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[**Captain Bob**](http://pyracy.com/index.php?/profile/2481-captain-bob/)

* Ship's Master
* 
* 
* Member
* 108 posts
* Location:Sacred Tomato, CA
* Interests:Science, technology, history, military history, etc.

([IP: 209.240.207.41](http://pyracy.com/index.php?/modcp/ip-tools/&ip=209.240.207.41)) · · 

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Thanks, all! This clears up a lot of my confusion. Now I just have to store all this new information in my tiny, walnut-sized brain. Until then, I think I'll just bookmark this thread so I can refer back to it.

Once again, thanks large!

--Cap'n Bob

**Edited March 30, 2006 by Captain Bob**

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[**Saiolorgirl**](http://pyracy.com/index.php?/profile/2917-saiolorgirl/)

* Bilge Rat
* 
* 
* Member
* 13 posts
* Location:Philadelphia
* Interests:Sailing, costuming, photography...<br><br>I live on a boat, (will be a topsail schooner when I'm done), with my hubby and two little girls. We have lived aboard since 2004 and never plan to lub land again. We are going to Key West in the fall, and 2010 is going to start our circumnavigation.<br><br>

([IP: 66.92.235.178](http://pyracy.com/index.php?/modcp/ip-tools/&ip=66.92.235.178)) · · 

[Posted May 16, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=193593) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=193593)

I love it. A lot of the "pirates" I know firstly don't know a thing about boats and secondly, don't seem to care...

I love that you're willing to ask, and that so many of you know!

I'm going to be working on rigging a boat soon... I don't know much of the logistics. But by the time I'm done... We're also going to need to make all the sails.



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[**Captain\_MacNamara**](http://pyracy.com/index.php?/profile/1380-captain_macnamara/)

* Plunderer
* 
* 
* Member
* 467 posts
* Gender:Male
* Location:The Seas of Ansteorra
* Interests:Piracy, the Sea, Sailing Vessels, Period Gunnery, and Rum...

([IP: 69.30.168.179](http://pyracy.com/index.php?/modcp/ip-tools/&ip=69.30.168.179)) · · 

[Posted May 16, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=193645) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=193645)

Is that the boat they were giving away in California? 

* [Quote](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/)
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* [Options](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/#elControls_193645_menu)

[**Charity**](http://pyracy.com/index.php?/profile/1286-charity/)

* Dread Pyrate
* 
* 
* Member
* 1,457 posts
* Location:Netherlands
* Interests:Tall ships, Pirates.. ;) Reading, photography,photo editing&graphics, music, history (Dutch golden age, golden age of sail, English Tudor/Elizabethan), Thomas Howard fourth Duke of Norfolk and the Dukes of Norfolk in general, museums, nature, CATS, good movies, pc stuff,chatting with people all over the world and makingh new friends,cycling, and more...

([IP: 80.57.45.28](http://pyracy.com/index.php?/modcp/ip-tools/&ip=80.57.45.28)) · · 

[Posted May 16, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=193656) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=193656)

Hey Captain Mac, long time no see.. :)

Thanks for all this info!

Mega interesting 

* [Quote](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/)
* [Edit](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=editComment&comment=193656)
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* Member
* 467 posts
* Gender:Male
* Location:The Seas of Ansteorra
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[Posted May 16, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=193658) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=193658)

Hey Charity I been lurkin', as usual lol

Aye... it'll come in handy when we re-rig a sailboat to resemble a small ship for our crew 

* [Quote](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/)
* [Edit](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=editComment&comment=193658)
* [Options](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/#elControls_193658_menu)

[**Saiolorgirl**](http://pyracy.com/index.php?/profile/2917-saiolorgirl/)

* Bilge Rat
* 
* 
* Member
* 13 posts
* Location:Philadelphia
* Interests:Sailing, costuming, photography...<br><br>I live on a boat, (will be a topsail schooner when I'm done), with my hubby and two little girls. We have lived aboard since 2004 and never plan to lub land again. We are going to Key West in the fall, and 2010 is going to start our circumnavigation.<br><br>

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[Posted May 17, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=193892) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=193892)

 Captain\_MacNamara said:

Is that the boat they were giving away in California? 

IF you where talking about the one in my post; no. I just bought it in NY. Going to be moving aboard in a few weeks. When we have the money, we're going to rig her as a topsail schooner.

* [Quote](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/)
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* Plunderer
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* 
* Member
* 467 posts
* Gender:Male
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[Posted May 17, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=193896) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=193896)

sweet 

I'd love to live aboard a vessel... but there's a number of reasons it can't be done in my case 

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[**Desert Pyrate**](http://pyracy.com/index.php?/profile/1016-desert-pyrate/)

* Plunderer
* 
* 
* Member
* 377 posts

([IP: 69.106.248.245](http://pyracy.com/index.php?/modcp/ip-tools/&ip=69.106.248.245)) · · 

[Posted July 10, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=205927) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=205927)

I can highly recommend Harland's Seamanship in the Age of Sail. It's sort of an operations manual for a sailing ship.

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[**hitman**](http://pyracy.com/index.php?/profile/1015-hitman/)

* Pyrate Captain
* 
* 
* Member
* 720 posts
* Gender:Male
* Location:Sardis Ga
* Interests:women, booze,books,tobacco,tall ships.hot rods and other monstrocities

([IP: 148.63.212.65](http://pyracy.com/index.php?/modcp/ip-tools/&ip=148.63.212.65)) · · 

[Posted July 10, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=205952) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=205952)

As a quick visual refrence if you have any of Patrick Obriens books around there is a diagram at the front of every one of em of a square rigged ship with it's sails set out to dry in a calm. It's not period nor is it as complete and understanding as whats been given thus far however it is a handy little diagram if like me you need help getting all this sorted and perfer paper to crt.

* [Quote](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/)
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* [Options](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/#elControls_205952_menu)

[**MorganTyre**](http://pyracy.com/index.php?/profile/2806-morgantyre/)

* First Mate
* 
* 
* Member
* 291 posts
* Location:South Texas
* Interests:Sailing, rigging, snorkeling, spearfishing, diving

([IP: 68.201.87.162](http://pyracy.com/index.php?/modcp/ip-tools/&ip=68.201.87.162)) · · 

[Posted July 10, 2006](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=findComment&comment=205976) · [Report post](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/&do=reportComment&comment=205976)

The best book on the subject (that I've come across) is "Eighteenth-century Rigs and Rigging" by Karl Heinz Marquardt ISBN 1-881093-00-X

At over 300 pages with probably close to 1000 illustrations it is pretty much THE reference book. Chatper list (main chapter headings only, I don't have the patience to type out the full expanded table)

I) Spars

Masts

Lower Masts

Topmasts and Topgallant Masts

Bowsprit

Varying Dimension and construction methods for smaller vessels

Yards

Tables 1-52 (mast and yard dimensions)

II) Rigging of Spars (Ship Rig)

Bowsprit

Jib-boom

Flying Jib-boon

Spritsail Yard

Sprit Topmast

Sprit Topsail Yard

Lower Masts

Topmasts

Fore Yard and Main Yard

Crossjack Yard

Mizzen Yard

Gaff

Mizzen Boom

Driver Boom

Driver Yard

Snow Mast, Trysail Mast

Main and for topsail yards

Mizzen topsail yard

Topgallant Masts

Topgallant Yards

Royal Masts

Royal Yards

Studdingsail booms

Bumkins or Boomkins

III) Northern Variants of Ship Rig

Cat

Bark

Kray

Skerry-boat

Dutch herring-buss

Fly-boat, Dutch Flight

Jackass bark, Jigger barkm hermaphrodite bark

IV) Rigs for two-masted and smaller vessels

Snow

Brig

Brigantine

Bilander

Ketch or howker

Schooner

Lugger

Dogger

Galliot

Dutch Galeas

Ketch-yacht

Yacht

Dutch state or pleasure yacht

Sloop

Lighter, hoy

Norwegian jekta (yacht)

Cutter

V) Details of single-mast rig

Mast

Bowsprit and jib

Flying Jib

Foresail

Boom

Gaff

Topmast and topgallant mast

Crossjack yard

Squaresail boom

Topsail Yard

Mainsail

Trysail or storm mainsail

Squaresail or crossjack

Topsail

Topgallant sail

Gaff topsail

Lower studdingsails

Topmast studdingsails

Ringtail sail

Mizzen

Water sail

Save-all topsail

VI) Rigs for vessels with spritsails

Koff

Tjalk

Smack, Dutch hoy

Aak

Sprit rigging

Spritsail

Barges and lighters

Strikeable masts, tabernacle masts

VII) Rigs for boats

Launches, Longboats

Pinnaces and rowing barges

Cutters and jolly boats

VIII) Foreign and Exotic Rigs

IX) Sails

X) Cut and Shape of sails

Main course

Fore course

Mizzen Course

Driver, Spanker

Try-sail, spencer

Main topsail

Fore topsail

Mizzen topsail

Main topgallant sail

Fore topgallant sail

Mizzen Topgallant sail

Main royal sail

Fore royal sail

Mizzen royal sail

Sprit course

Sprit topsail

Sprit topgallant sail

Sky-scraper, sky-sail

Squaresail, crossjack

Topsail

Save-all topsail

Topgallant sail

Gaff mainsail

Gaff topsail

Main staysail

Fore staysail

Foresail

Mizzen staysail

Storm Mizzen

Main topmast staysail

Fore topmast staysail

Inner Jib

Storm Jib

Middle staysail

Mizzen topmast staysail

Main topgallant staysail

Jib

Flying Jib

Mizzen Topgallant staysail

Main royal staysail or spindle staysail

Lower main studdingsail

Lower fore studdingsail

Main topmast studdingsail

Fore topmast studdingsail

Mizzen topmast studdingsail

Main topgallant studdingsail

Fore topgallant studdingsail

Watersail

Ringtail sail

Wingsail for a ketch

Smoke-sail

Tables 54-59 (sail materials and dimension)

XI) Rigging of Sails

XII) Running Rigging to Sails

Main course

Fore course

Mizzen course

Early Driver

New Driver (merchantmen)

New Driver (men-of-war)

Main topsail

Fore topsail

Mizzen topsail

Main topgallant sail

Fore topgallant sail

Miozzen topgallant sail

Royal sails

Spritsail course

Sprit topsail

Main staysail

Fore staysail

Mizzen staysail main topmast staysail

Fore topmast staysail

Middle staysail

Inner jib

Mizzen topmast staysail

Main topgallant staysail

Jib

Flying jib

Mizzen topgallant staysail

Main royal staysail

Mizzen royal staysail, mizzen spindle staysail

Lower studdingsails

Top studdingsails

Topgallant studdingsails

Watersail

Ringtail sail

Wingsail for a ketch

XIII) Belaying plans

XIV) Blocks and Tackles

Blocks

Miscellaneous Blocks

Tackle, purchase

XV) Cordage, splices, hitches, and knots

Cordage

Splices

Hitches and bends

Knots

Miscellaneous ropework

XVI) Netting and other accessories

Appendix

Bibliography

* [Quote](http://pyracy.com/index.php?/topic/7168-sails-masts-and-rigging/)
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I'm going to be working on rigging a boat soon... I don't know much of the logistics. But by the time I'm done... We're also going to need to make all the sails.



Two books I would reccomend are John Leathers Gaff Rig Handbook (Can't give you the ISBN as the book is currently sitting in the bathroom at our rigging shop and I'm home sick) and Brion Toss's "The Riggers Apprentice" ISBN 0-87742-165-X. Also for logistical questions I reccomend Briot's website and his forum ( <http://briottoss.com> ) though beware - the forum has recently ended up on some spam lists and is constantly bombarded with viagra ads and the like though members on the forum list are not getting the same stuff in their personal mail. Sailcut ( <http://www.sailcut.com> ) is a free sail design software which includes gaff sails. That will get you started if you are doing it on your own though for a boat that size I would reccomend going to a real sail loft.