



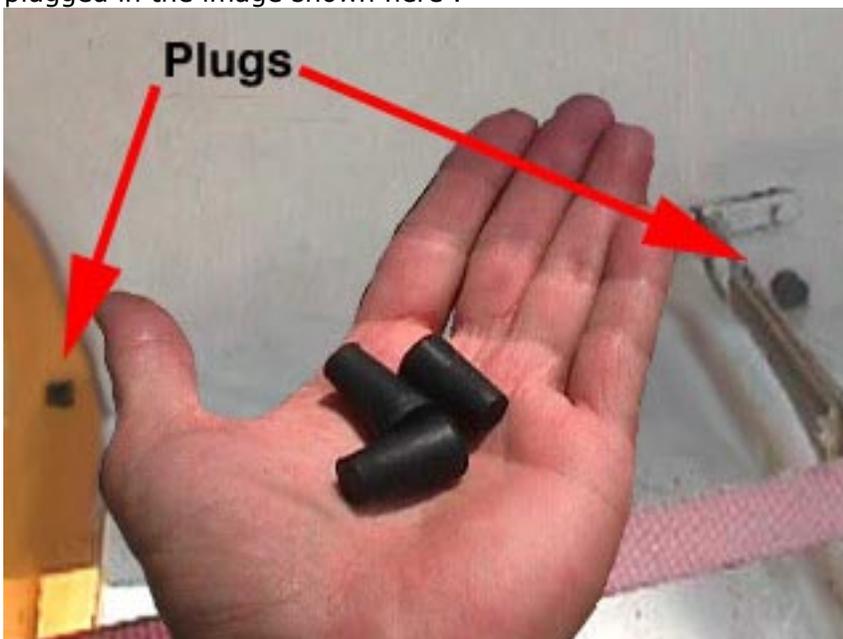
Rigging the Banshee Sailboat

1 The set-up...

I rolled my Banshee "Doozie" into the shade and laid out all the rigging "ingredients."



2. With your boat still sitting on your trailer - or on the beach... **insert the three rubber plugs** into the drain holes on the interior transom wall and in the aft side flotation cells. Only two are plugged in the image shown here .



3. Unfurl the mainsail

In a soft grassy area unroll/unfurl mainsail (the clew (lower most aft aspect of the sail) has a red outhaul line attached in the lower right corner of the photo).



4. Attach the halyard

Use a bowline to tie the halyard to the head of the mainsail. I use 1/4 inch Sta-Set Polyester braid for most of my control lines (halyard, outhaul, downhaul). I've found that anything smaller is hard on the hands in cold, wet, windy conditions.



You can buy all the cordage you need on-line at either Layline or West Marine. My mainsail has a mast sleeve (the top is open) as opposed to many Banshees that have mainsail "socks" (closed at the top) instead. The enlargement shows how to tie a bowline knot. The bowline is really useful for making a knot that will not untie or slip. I use a bowline here to attach the halyard to the mainsail, and also on the outhaul, and on the mainsheet. A good knot to know! Make the loop as small as possible so that the mainsail can be hoisted as high as possible.

5. Insert mast base into mainsail

With the mainsail completely extended, slip the bottom of the mainsail sleeve onto the upper end of the mast base (the larger of the two mast pieces).



6. (& 7,8) Continue to pull/slip the sleeve onto the mast until the mainsail is completely slipped onto the mast base.



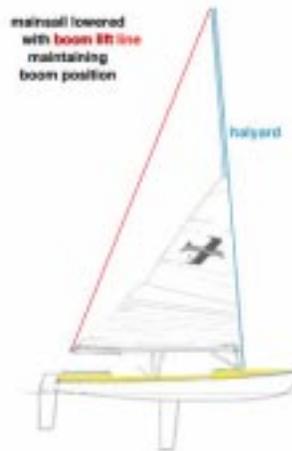
9. Assemble the two piece mast

Insert the topmast into the upper end of the mast base. Be sure to align the topmast block (sailing lingo for pulley-- see image immediately below) and the bases boom attachment.



10. Rig halyard and boom lift

Insert the halyard (aqua colored here) through the topmast block. On my Banshee I use a boom lift line (purple colored -- including clips it is 19'4" in length) that clips to the topmast and the outhaul end of the boom. That way when lowering the mainsail, the boom remains up and out of the cockpit.



Boom lift in action.

11. The completed mast boom lift and halyard lines. Make sure that the mainsail is NOT twisted around the mast at this point. Make sure too that the halyard and boom-lift (if you employ one) are not tangled.



Note: If you do step the mast and these lines are tangled -- NO BIG DEAL. Grab the mast and tip the boat onto its' side- untangle the lines and hold onto them as you push the mast back up-righting the boat (make sure you will not hit electrical power lines (or people!) while doing this!) ...and NO, you will not swamp your boat when doing this. The side floatation cells on the Banshee keep the cockpit high and dry.



12. Stepping the mast

Slip the mast well gasket (rubber donut) onto the base end of the mast. Be careful! I've lost these little babies over the side before -- they do not float! If you do lose yours you can buy a replacement (as well as other Banshee parts) at Abbott Boats.



13. The donut should be about six inches below the mast vang fiddle block (hardware at the top of the picture here).



14. While maintaining a grasp of the halyard and boom lift, place the mast into the mast well in the deck of the Banshee. The mast will lock into place when the vang block connector is pointing aft.



The bottom of the mast base has notches on both fore and aft edges (see image 13). In the bottom of the mast well there is a 5/8" bolt [referred to as the "step pin"] aligned bow to stern that the mast base notches slip down onto. This prevents the mast from rotating when the boom swings to port (left) or starboard (right).

At this point I usually already have my Banshee in the water, pulled up to shore so that stepping the mast is an easy task. You could do this while it is still trailered. However, if you do-- be especially wary of overhead powerlines. The aluminum mast is an excellent conductor of electricity and **touching such a power source could be a fatal mistake!**

I should also mention that stepping the mast in windy conditions can be quite difficult. Get assistance if you have any doubts.

15. The donut is visible here recessed in the mast well. The boom-lift line and clip (hanging loosely is just shy of touching the deck- a good way to measure the boom lift length) are to the right of the mast. The halyard is fluttering in the breeze out of sight.



16. Secure the halyard

Making sure that the halyard does not wrap the mast-- thread the halyard through the deck block and cleat it as shown. My halyard is 32 feet long and seems just the right length.



17. Same photo as above but from a wider angle. Do **NOT** hoist the mainsail at this time. DO cleat it however!



18. Connecting the Boom

Position the boom within the cockpit with the outhaul track of the boom to the rear.



19. Carefully(!) remove the clevis pin to ready it for mating with the mast. I'd suggest getting a spring loaded pin (about \$20) instead- they are much easier to handle. BTW, it's a good idea to have extra connecting pins too!



You may notice that my boom is on its ninth life. The plug in the mast connecting end has been pulled clear on a few occasions. I was not using a boom vang in my early sailing days. In those first 4 years of sailing I was caught twice in a sudden thunderstorm. On both occasions my boom went nearly verticle in anything but a luffing heading. Like an idiot I tried to run using only the mainsheet to control the boom. **Major mistake!** On both occasions the boom was yanked from the "gooseneck" mast attachment and nearly taken my head off. VERY scary to have a whipping mainsail, mainsheet, and boom to contend with. Get a Vang!

20. The mast/broom connector (tight view-- located on the lower part of the mast, aft side.)



21. The mast and boom connected!



22. Attaching the Boom Lift

Connect the boom lift line to the aft end of the boom. I've made my boom-lift line about six inches longer than the distance offered when the mainsail is hoisted.



This line does nothing while the sail is hoisted (maybe a rather large tell-tail?). The length of boom lift line is 19'4" including clips and I've just jury rigged a short length of line (white nylon rope) on the aft end of the boom to provide a connection. The boom lift should be long enough that it does not distort the shape of the leech edge of the sail, but not so long that the boom does not stay clear of the cockpit when the sail is lowered.

23. Rigging the Mainsheet

Tie the main sheet to the transom block using a bowline knot. Make the loop large enough so that the tail of the mainsheet (rope) will not get "pinched" in the main block. My mainsheet is either 5/16" or 3/8" poly single braid. It is soft and very pliable. A stiffer rope will tend to tangle. My mainsheet is 25 feet long.



24. Thread the mainsheet (1) through the forward boom block (from its aft side); (2) through the traveler block (from its forward side); (3) through the aft boom block (from its forward side) and then (4) through the swiveling ratchet cleat. The mainsheet should **NOT** be cleated (as it is in this photo-- [I needed tight lines for the shot]) at this point. The boom should move freely.



25. Then tie a figure 8 knot in the end of the mainsheet to prevent it from escaping from the ratchet cleat.



26. Rigging the Outhaul

Slip the clews outhaul shackle onto the boom track while pulling the outhaul line aft. The outhaul line should be above the shackle. Make sure that you do NOT twist the outhaul portion of the sail here! Pull the sail tight to determine which end of the shackle slips onto the track first. The outhaul is attached to the clew grommet with another bowline knot. You will need to adjust the outhaul tension after hoisting the mainsail and cleating the downhaul and vang. A tuned mainsail will have a slightly bowed mast.



27. Thread the outhaul through the outhaul block (pulley on the aft end of the boom) and maintain tension while...



28. feeding the outhaul through the boom's outhaul clam cleat.



29. Pull the outhaul aft slightly to "jam" the line into the cleat. My outhaul line is about seven feet long. Five would do.

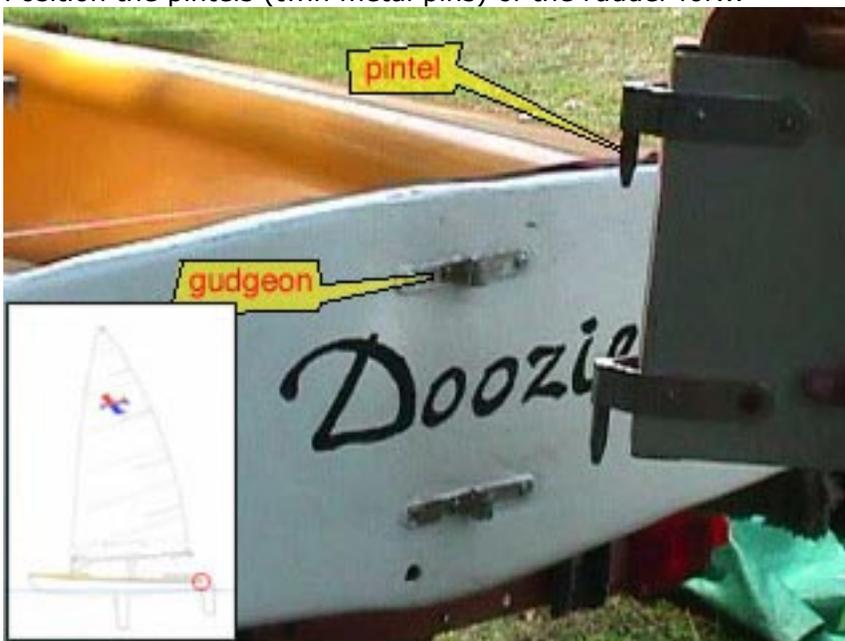


30. Boom mainsheet and outhaul jobs completed.



31. Connecting Rudder/Tiller

Position the pintels (twin metal pins) of the rudder for...



32. insertion into the transom rudder gudgeons. They will both need to be inserted simultaneously (easier said than done especially if your boat is rocking in the water!).



33. Extend tiller into cockpit.



I've had to jury rig a bungee between the rudder and tiller to prevent the rudder from rising to a up/horizontal position when sailing fast.

34. I use a bungee sail tie as a preventer to prevent loss of the rudder in a capsize.



35. Rudder assembly completed.



36. Hoisting the Mainsail

The bow (front of the boat) should be facing into the wind during the whole rigging process but **especially** when hoisting the mainsail. Make sure that mainsheet is not cleated or tangled around something inside the cockpit. The boom should swing freely in the wind as you hoist the mainsail. Keep your head out of the way of the boom and hoist the mainsail by pulling down on the halyard and simultaneously pulling it through the block and deck cleat. Once the sail is snug to the top of the mast-- cleat the halyard. Coil the remaining halyard and pin it beneath the portion between the deck block and the cleat (see image 39 below).

You may wish to insert the daggerboard (#37 below) prior to this step. If the wind is gusting and changeable-- I do.



37. Daggerboard insertion

Insert daggerboard into daggerboard well. The blunt edge of the daggerboard faces forward.



I recently removed the daggerboard well trim and replaced the old original plastic gasket with inner-tube rubber to keep unwanted water from gushing into the boat via the daggerboard well. It has done a good job of keeping the daggerboard in the position required for the sailing conditions.

Prior to that job I used a figure-eighted bungee (see image 38 below) over the daggerboard well to hold the board in position. Mike Salmon has written some rigging notes on this procedure.

38. I have found an adjustable bungee useful for providing additional daggerboard holding power. Just criss-cross it over the daggerboard. I could not push the daggerboard down any further here (it was touching the ground beneath the trailer in this shot).



You might notice that I've had to use "bondo" in a few places to keep a smooth trailing edge on my daggerboard.

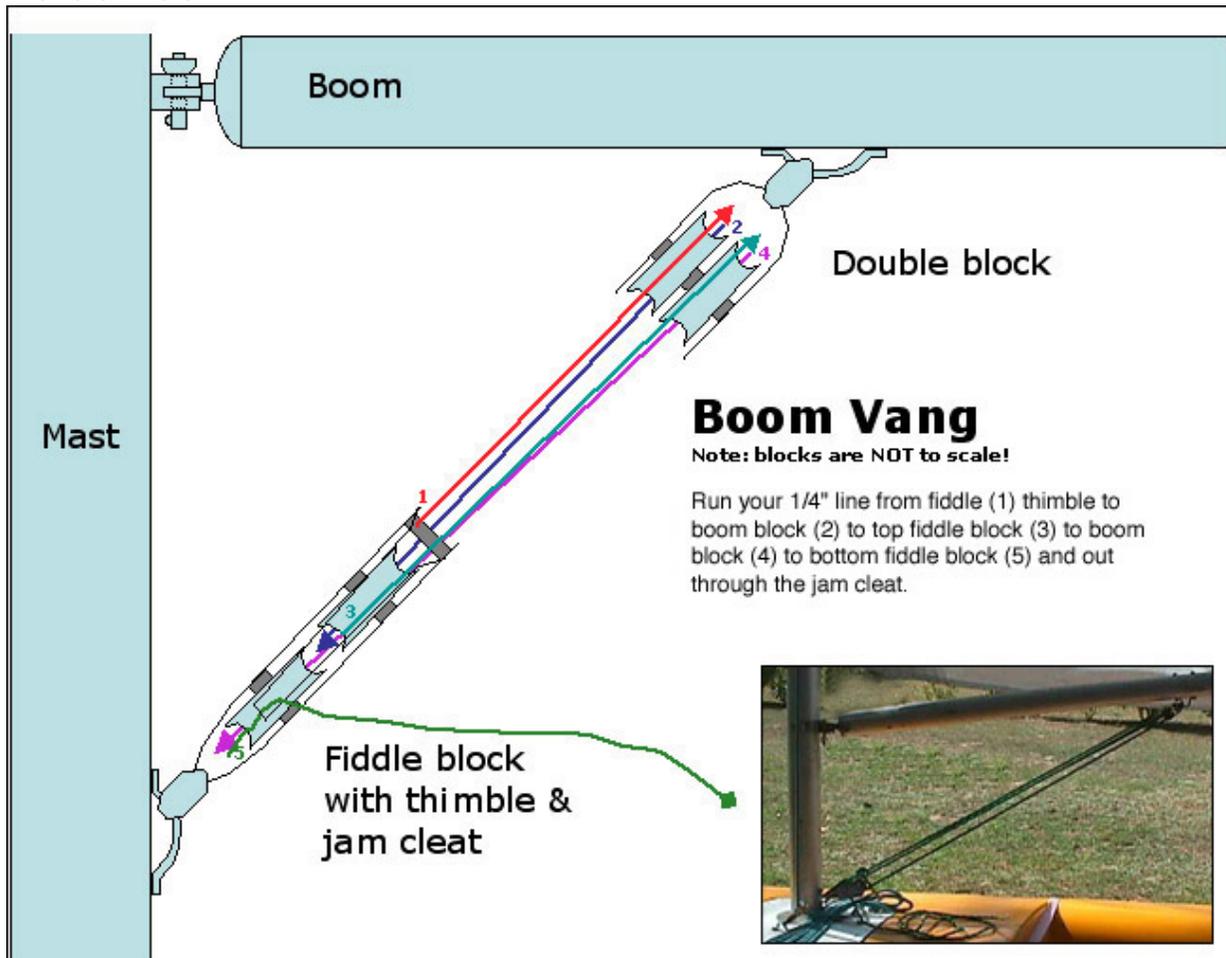
My **kicking/hiking strap** is barely visible in this shot (better shots here; pict 18, pict 25). It is a white 2" webbing strap that is wrapped about the daggerboard well and connected back to the double D ring strap on the interior transom wall. You may decide to pad your strap (hollow swimming pool "noodles" works well) and or split the strap into a starboard and port strap. I tried the split strap and found it complicated movements in the cockpit too much. By the way I drilled 1" holes in the daggerboard well stabilizer to thread these spread kicking straps through. It worked well but I since reverted back to the central placement. I sometimes switch to the spread layout when my boys (age 8 and 11) are skippering. They cannot reach the straps otherwise and so cannot hike out.

39. Rig the Boom vang

Start the run by tying a bowline to the mast block connector (see image in frame 40 below) looping to each pulley in turn and ending with the jam cleat. This thing seems to do a good job of keeping the boom horizontal in gusty winds.



I've just started using a vang. I use a double fiddle block (Harken; about \$18) with a jam cleat on the mast and a double block (Harken; about \$10) on the boom. I wish I had bought a fiddle block with a thimble.



I cannot begin to tell you **HOW IMPORTANT(!!!)** using a vang is in your Banshee! Well, maybe that came close! The vang line is 3/16" line that is 14' in length. Too long-- I think 10' would do the job. If you gamble and do not use a vang you risk compromising your mast/boom connecting hardware. Don't do it. The vang was only about \$40 and the performance improvement is **incredible**.

40. The fiddle block with jam cleat.



41. The double block on the boom.



42. Rigging the Downhaul/Cunningham

I use a short rope with a double figure eight knot in the end for my downhaul line (yep-- it's aqua too! Sorry about any confusion). Feed it through the foot's downhaul grommet, through a deck block, tighten, and cleat it. This line is about 3' long.



:-(Oops! I should have pushed the outhaul line through from the opposite side of the sail. The arrangement in the photo here could place undue stress on the sail (RIP!) when the boom is pushed the port (left) side of the boat. This image is slightly distorted. I had to shrink it vertically to include all the areas mentioned

43. A closeup of the downhaul's cleat.



That's my rigging technique for my Banshee (Doozie, sail #2577). I also carry a few other pieces of "essential" equipment:

A flotation vest (for each person);

Sunblock and blistex lip balm;

A waterproof FM radio that I fasten to the boom close to the mast;

A paddle;

A 20 foot "painter" line to attach to a dock, an anchor line or a towing boat;

A 9 pound galvanized fluke anchor and have not found a good place or way to store such conveniently on board;

A bailer in the storage compartment. I use a bottomless 2 liter plastic soda bottle (cap is screwed on). I've tied a long (12') cord from the bottle's neck to the mast well inside the storage area. It's a little flimsy but it does the job and is easy to store and retrieve.

I hope that this helps those of you who are new to sailing the Banshee. Please let me know what suggestions you have for additions and/or corrections.

May you have many happy and windy days on your boat!

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