

Schooner Construction Plans

Glue together 4, 50' runners of 3" PVC.

Lay runners out to bolt 1" x 14' metal drawbars on ends: Attach 6" from runner ends and allow 4' 8" center-to-center between runners. Drill 7/16" holes through drawbar and runner and fasten with 4 1/2 x 3/8" carriage bolts, heads down. Use flat washers under all nuts on schooner.

Place blocks under runners to raise them off the ground.

Mark spots to drill hoop holes every 4' on top of the outside runners from drawbar to drawbar.

Cut 11 sections of 1 1/4" PVC 14' long for cross pieces.

Lay cross pieces in place (near, but not on top of, marks on runners) and drill 5/16" holes through cross pieces and runners. You will need a 5" or longer bit – spade bits work best.

Bolt cross pieces to runners with 1/4" x 6" carriage bolts. Use flat washers under nuts.

Drill hoop holes on outside runners with 1 1/2" hole saw or spade bit. Only drill through the top and WAIT TO DRILL THE END HOLES ON ONE END UNTIL THE TARP IS ON. This will be your finishing end and will allow you to tighten the tarp.

Glue 45s and caps on the runners.

Cut the bells off of 13 sections of 1" x 20' PVC to make hoops of identical length (exact length doesn't matter).

Lay 11 of the hoops together and mark the shoulder and ridgeline bolt holes: Mark the ridgeline in the center; the shoulders 5' from the ends. Drill 5/16" holes making sure they all face the same direction.

Make 3 50' long sections of 1" PVC for shoulders and ridgeline. These will be trimmed to fit later. Lay these on the cross sections, one in the center (ridgeline), one on either side (shoulders). Allow the shoulders and ridgeline to protrude 1" past the drawbar on the starting end.

Lay the 11 drilled hoops on top of the ridge and shoulder sections. These are the interior hoops, the end hoops will be added later. Align the hoops over their respective holes in the runners, check to make sure the ridgeline and shoulder sections are still protruding 1" beyond the drawbar and drill 5/16" holes in the shoulders and ridgeline by drilling through the existing holes in the hoops. Using a 1/4 x 3" carriage bolt, fasten the first hoop to the shoulders and ridgeline before drilling more holes. Be sure the washer and nut will be on the inside of the schooner.

Continue to bolt the hoops to ridgeline and shoulders checking as you go to make sure hoops are lying straight across their runner holes. This will insure an even spacing between hoops.

Insert hoops into the runners.

Cut 12 53" x 1 ¼" shoulder braces from leftover cross pieces.

Cut 4 56" x 1 ¼" pieces from new stock for end braces.

Using 3 ½ x ¼" carriage bolts, bolt top end of shoulder braces to shoulder at intersection of shoulder and hoop. Using 4" x ¼" carriage bolts, bolt bottom end of shoulder braces to cross pieces at the intersection of cross pieces and inside runners.

Using 3 ½ x ¼" carriage bolts, bolt top end of 56" end brace to shoulder. Using 6" x ¼" carriage bolts, bolt bottom end of end brace to runners.

Bolt 4 1 ¼" x 10' PVC pieces diagonally at each corner to brace the ends of the schooner.

Unfold tarp and drag over top of schooner. Minimum of 2 people required. Don't try this in windy conditions!

Holding 1 ¼" Tees in place in slots where the shoulders and ridgeline will connect, slide 1" PVC end hoops through sleeves and Tees at tarp ends.

Glue 1 ¼ x 1 reducer bushing in Tees (6).

Slip shoulders and ridgeline into tees on starting end. DO NOT GLUE.

Stretch tarp tight to mark and drill 1 ½" hoop holes in runners at finishing end. Insert last hoops.

Stretch tarp again to measure shoulders and ridgeline. Cut them 3" too long. Pull Tees over shoulders and ridgeline. (Two person job). DO NOT GLUE.

Slide 50' of rebar through each sleeve on the long side of tarp – upper sleeve, not lower flap sleeve. (Rebar can be in sections).

Cut slots in tarp above rebar at each cross piece.

Insert tie-down straps in slit above rebar and run under cross pieces and tie down both sides evenly.

Take a 50' section of connected (welded) rebar or a 50' section of ¾" PVC and slide through the lower, flap sleeve.

Bend rebar in an "S" to make a crank or glue an "S" shaped crank on the PVC.

Make a slit above rebar or PVC rod in flap every 8' and fasten a hose clamp around to secure flap to rod.

Note: Your schooner is a kite too. It will hop in 30 mph winds and fly at 50. Have a serious restraining system to secure your schooner to the ground.

If you find errors in these plans or have suggestions please call or email us. 660/684-6035. info@featherman.net

We would also love to post here photos of your schooners in action!