

16 ft. Dome Frame Instructions

You will need:

- one or two friends
- a couple of 9/16" wrenches*
- a small ladder (if you can't reach 8 ft.)

*Ratchet wrenches make the job easier, but normal wrenches will work fine. A drill with a 9/16" socket tip will speed things up.

NOTE: If you are setting up on a deck, temporarily nail a brace board to the outside of each deck board to hold the frame in place while you set it up.

ASSEMBLY:

1. The frame is constructed of two different length struts. There are 30 'A' struts that make up the spokes of the six pentagons, and 35 'B' struts that form the perimeter of each pentagon (*see diagram*). Use your color coding stickers to help differentiate between the strut lengths.
2. Put a large washer on every bolt before you put on the struts. The washer will protect the skin from the ends of the struts on the outside.
3. As you erect the frame, put the struts on the bolts so that the heads of the bolts are on the outside of the dome, and the nuts face inside the dome. Make sure that the angles on the end of the struts bend with the curvature of the dome.

Use the written instructions below if they are helpful to you. Some people find it easier to set up by just following the frame diagram. Watch the dome construction section of the Pacific Domes video before assembling your frame and putting on the dome skin.

ROW 1

4. To start, lay out 10 'B' struts in a circle. Be sure angles on ends of struts bend inward.
5. Put 1 'A' strut and 1 'B' strut on a bolt and add them to 2 of the 'B' struts in the circle. The A & B struts should point toward the center of the circle (at this point you should have 4 struts on each bolt). Repeat this to all ten points on the circle of 10 'B' struts.

ROW 2

6. Put 3 'A' struts on a bolt and add them to 2 'A' struts (row 1 verticals).
Repeat 5 times to every second hub of Row 2.
7. Put 2 'B' struts on a bolt and add it to 2 'B' struts (Row 1 verticals) and 2 'A' struts, one from each hub on either side (Row 2 horizontals).
Repeat 5 times to every second hub of Row 2.
As you are bolting each hub, stand up Row 1.
Stand up the vertical struts of Row 2 and tighten the Row 2 hubs just enough to keep the Row 2 vertical struts from swinging down.

TOP PENTAGON

8. Put 2 'B' struts and 1 'A' strut on a bolt and add it to 1 'A' strut (row 2 vertical) and 2 'B' struts, one from each hub on either side (Row 2 vertical).
On the Top Pentagon hub next to the one you just did, put 1 'B' strut and 1 'A' strut on a bolt and add it to 1 'A' strut (Row 2 vertical) and 2 'B' struts, one from each hub on either side (Row 2 vertical) and 1 'B' strut from the first hub you just did.
Repeat 4 times.
9. Swing up the last remaining 5 'A' struts and bolt them all together, thus crowning your dome!
10. Tighten all your bolts. You are now ready to attach the dome frame to your floor or perimeter board.