

# PACIFIC DOME

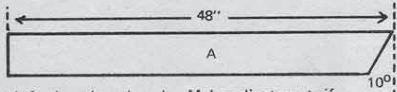
*continued*

## Shop Yoga

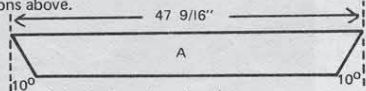
Our radial arm saw's gauge was such that a right angle cut across a strut reads  $0^{\circ}$  on the gauge. Therefore, the settings for the cuts were  $10^{\circ}$  and  $12^{\circ}$ . If your saw's gauge reads  $90^{\circ}$  for a right angle cut, angle you cut will be complement of  $90^{\circ}$ . That is,  $80^{\circ}$  instead of  $10^{\circ}$ , etc.

### CUTTING A's

**First cut:** (in half)  
Set stop at 48"  
Set angle at  $10^{\circ}$   
Cut first one and check for length and angle. Make adjustments if necessary and go ahead on the rest.  
Follow general instructions above.  
Stack



**Second cut:** (to length)  
Set stop at 47 9/16"  
Leave angle at  $10^{\circ}$   
Cut first one. Check very carefully for length and angle.  
Continue as above.



**Color code:** Stack them in a neat pile; spray-paint tips of each end red.

### CUTTING B's

**First cut:** (in half)  
Set stop at  $60^{\circ}$   
Set angle at  $12^{\circ}$   
Cut first one and check for length and angle. If o.k., cut the rest.  
Stack

**Second cut:** (to length)  
Set stop at 55 1/2"  
Leave angle at  $12^{\circ}$   
Cut the first one. Check carefully for length. If o.k., cut the rest.

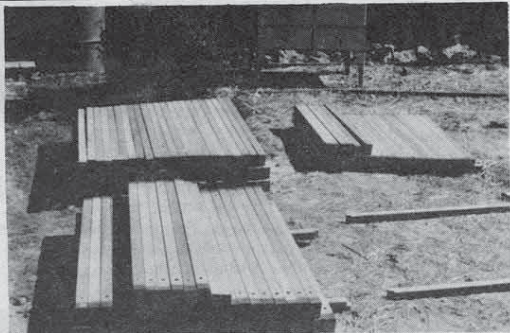
**Color code:** Spray-paint tips of both ends blue.

### CUTTING C's

**First cut:** (in half)  
Set stop at  $60^{\circ}$   
Leave angle at  $12^{\circ}$   
Cut first one and check for length. If o.k., cut the rest.  
Stack

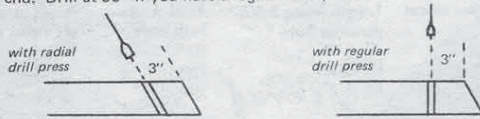
**Second cut:** (to length)  
Set stop at 56 3/4"  
Leave angle at  $12^{\circ}$   
Cut first one. Check length carefully. If o.k., cut the rest.

**Color code:** Spray-paint tips of both ends yellow.



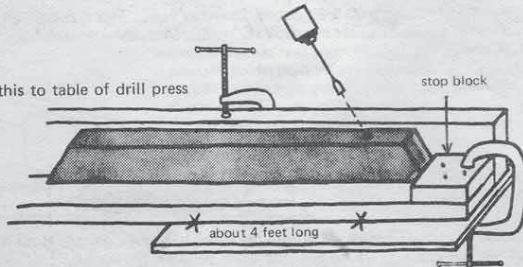
## Drilling Struts

It is essential that the hole be drilled very accurately, so use a drill press. The hole must be centered, and if you have a radial drill press, drilled at the same angle as the strut end. Drill at  $90^{\circ}$  if you have a regular drill press.



## Jig:

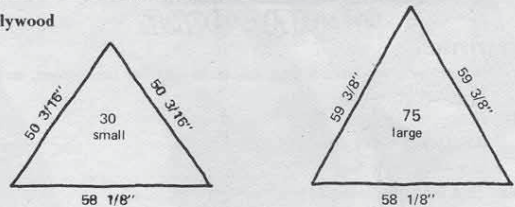
Clamp this to table of drill press



Using a paddle type blade, drill all the way through strut. Disregard minor splintering where bit breaks through.  
Have a big enough block under bit so you don't drill holes in drill table.  
Sweep shavings out of jig after each hole; otherwise the next strut will be out of position.  
V-mark jig & table and check for slipping periodically while drilling.



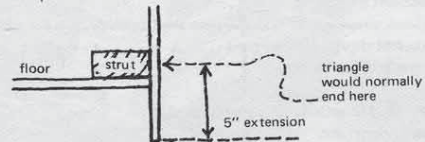
## Cutting plywood



The number of triangles above are for covering the *entire* dome with plywood. Adjust accordingly (subtract) for windows, doors.

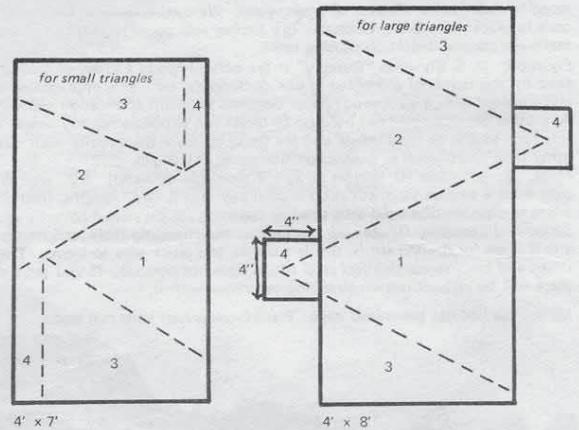
Plot on graph paper how best to utilize plywood for the size dome you are making before ordering. Find most economical way to get triangles out of rectangles. For our domes we found 4' X 8' sheets good for the large triangles, 4' X 7' sheets good for small triangles. Draw the plywood sheets on graph paper, cut out paper triangles, move them around to find the most economical arrangement.

We cut the 15 bottom course point-up triangles with 5" extensions so they let water run off the dome past the floor:



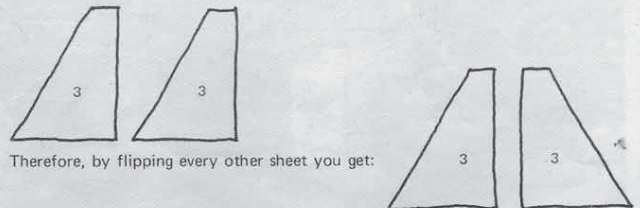
However, it might be simpler to fit in pieces of plywood here, or use flashing.

*Plywood triangles layout:* with graph paper we determined that this was the best utilization of plywood:



Note that you cut two whole triangles and two halves from each sheet. The halves are patched so that you get three full triangles per sheet.

If you are using "Duraply" or any other type of good one-face plywood, you will have to flip over every other piece you cut. That is, you will cut one good side up, the next good side down. If you cut all pieces good side up, you would end up with all left side triangle halves:



Therefore, by flipping every other sheet you get:

