



## 8-Sided Tapered Cedar Planter



### Preparing the Stock:

To determine the width of the stock needed for this project, first you must decide on how large of an outside diameter you want to end up with. After you have made your decision, use the following formula to figure out the width of each stave.

Stave Width for a 8 sided object = Diameter divided by 2.4

Example: 12" diameter divided by 2.4 = 5.00" Stave width

Rip enough length of 3/4" thick stock to a width of 5". Determine the total length needed by multiplying the total finished height of the planter by 8 and allow at least 1-1/2" extra length on each piece for the saw kerf and possible end snipe from routing. This will then be cut down to 8 equal length pieces after the routing operation.

### Tapering the Stave:

We are looking for a shallow taper to the conical planter (4 degrees). To achieve the taper, it will be necessary to use a taper jig (MLCS item #9008) to cut a 2 degree taper on each side of the stave. However before cutting the side tapers, set your tablesaw blade to cut a 4-degree taper and cut a 4-degree taper across the top of each stave (*see fig. A*). The corresponding taper will be cut on the bottom of each stave later. To properly cut this set the taper jig to a 2-degree taper and cut the same edge on all 8 pieces. Then reset the taper jig to cut a 4-degree taper and place the edge with the 2-degree taper against the taper jig (*see fig. B*).



fig. A



fig. B

### **Routing the Profile for the Joint:**

Install MLCS Multi-sided Glue Joint bit # 7839 into your table mounted router. Adjust the router bit according to the instructions for the Multi-sided Glue Joint bits. Set the bit point height to  $7/32$ " above the surface of your router table. Adjust the fence so that the top edge of your stock contacts the out-feed fence after it has passed by the router bit (*see fig. C & D*). Using scrap stock of the same thickness as your stock, test the set-up and joint and adjust as needed to achieve a proper fit. You may experience some snipe at the end of the board as the end of the board comes off of the in-feed fence (that is one of the reasons to leave the boards at the longer length and cut it to final length after routing). Rout only one edge of each stave

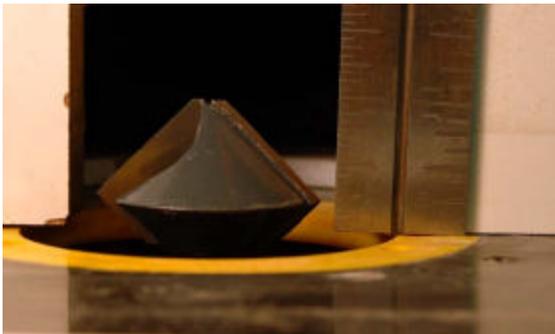


fig. C

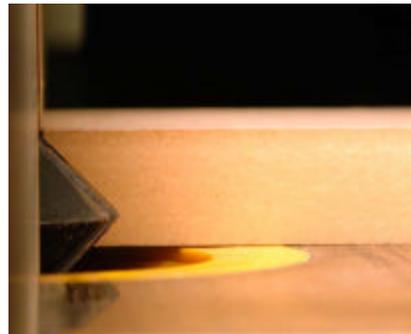


fig. D

### **Cutting and Assembly of the Staves:**

After completing the routing operation, again set your tablesaw blade to 4-degrees. Mark the final length on each stave measuring from the top or wide end of the stave. Using your miter gauge with the gauge set to a 2-degree angle, align the non-routed edge of each stave against the miter gauge body. Cut the bottom end off each stave creating the 4-degree bevel on the bottom of each stave (this will insure that you have a flat surface for your planter to sit on) (*see fig E*). Working quickly, apply glue (Waterproof if you plan to use the planter outdoors) to the routed edge of your pieces and carefully but quickly align the top and bottom of each piece until you have all 8 pieces assembled together. Short pieces of masking tape can be used to temporarily hold the staves together until all 8 pieces are assembled (*see fig F*). Then a large rubber band or surgical tubing can be added around the outside of the conical planter to be used as a clamp to hold the pieces together until the glue sets. After the glue has dried, remove the clamping material.



fig. E



fig. F

### **Making the Bottom Insert:**

Use a wide piece of stock, or make a piece glued up from narrower boards to create the blank for the bottom of the planter. The bottom needs to be at least as wide as the inside diameter of the planter bottom. With the bottom insert sitting face down, place the planter onto the bottom blank and trace the outline onto the bottom of the bottom blank. Before removing the planter from the bottom blank, make a registration line on both the planter and bottom blank to align on final assembly. To keep the bottom slightly raised, draw new lines 1/8" outside the previously traced lines. Again, you must set your tablesaw blade, your bandsaw table or jigsaw base to a 4-degree angle. Use a table saw with a miter gauge, bandsaw or jigsaw to cut the bottom blank out on the new lines that were drawn outside of your traced lines (*you must put the same 4-degree bevel on the edges of the bottom insert to match the bevel on the inside walls of the planter*). If you are going to use this outdoors as a planter, it is advisable do drill water drainage holes in the bottom of the planter (evenly spaced 3/8" holes will provide adequate drainage). Complete the planter by installing the bottom panel from the top side of the planter (do not glue the bottom in place) (*see fig. G*).

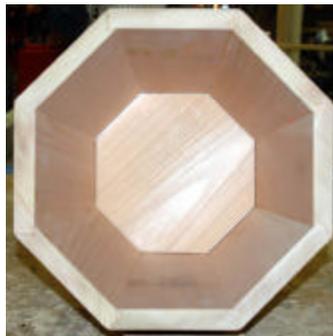


fig. G

### **Final Notes:**

Apply a UV grade outdoor finish to protect the wood from the elements. If untreated cedar will acquire a weathered dull gray finish.