CIRCUMFERENCE MARKING JIG

Whether marking the circumference of a gourd, bowl or any other object, getting the line a consistent height above the base can be challenging. The following jig is simple to make and will easily mark a consistent line above the base plain.

Materials:

This Jig can be made from scraps around the studio or shop. Total cost of materials should be less than $5.00. All that is needed are the following items:

1. Two pieces of scrap 3/4" Plywood, Hardwood or poly material. One piece 3" x 3" and one piece 2-1/2" x 2-1/2". See the included drawing.
2. Two 10-24 threaded inserts or nuts. (available at most hardware stores)
3. Two 10-24 x 1" thumb screws (available at most hardware stores)
4. Two small pieces of neoprene or rubber inner-tube
5. One piece of 3/8" hardwood dowel or 3/8" aluminum or brass rod (length to be your choice, typically 12" to 18")
6. One typical #2 pencil

Procedure:

Cut the 3/4" plywood, hardwood or poly into the sizes called for on the drawing. Drill the holes as defined in the drawing. Use a drill press, square or block of wood to insure the holes are drilled straight and square. The diameter of the average #2 Ticonderoga is about .300" so a 5/16" drill bit will drill a large enough hole.

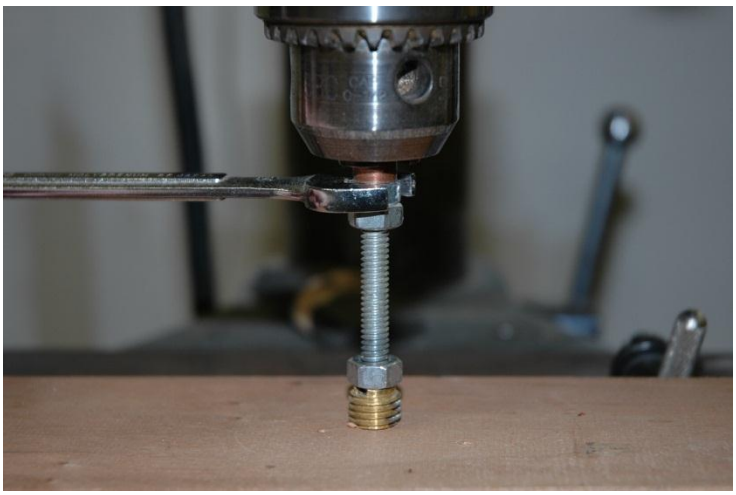
The upper block can be cut into an octagon or left as a square; your choice.

Once the holes for the pencil, rod and inserts are drilled, sand the blocks and apply a finish of your choice. Spray shellac was used on these examples. The 3/8” hole in the upper block will likely be too tight to allow the block to slide up and down freely. The hole can be reamed out with either a carbide bur (available at most hardware stores) or by cutting a slot in a piece of 1/4” dowel, slipping a piece of sandpaper in the slit and sanding the hole until it slides smoothly on the 3/8” dowel. Another option would be a round (rat-tail) file.

The advantage of using poly plastic is that you can drill and tap it so as to avoid having to use the inserts but it can be a bit tough to sand the hole if you need to.

Cut two reasonably round pieces of neoprene or inner-tube. A punch was used to make the bumpers on ours. Insert the small rubber bumpers into the holes for threaded inserts. These act as cushions for the screws to push against instead of bearing directly on the wood if a dowel is used for the post.

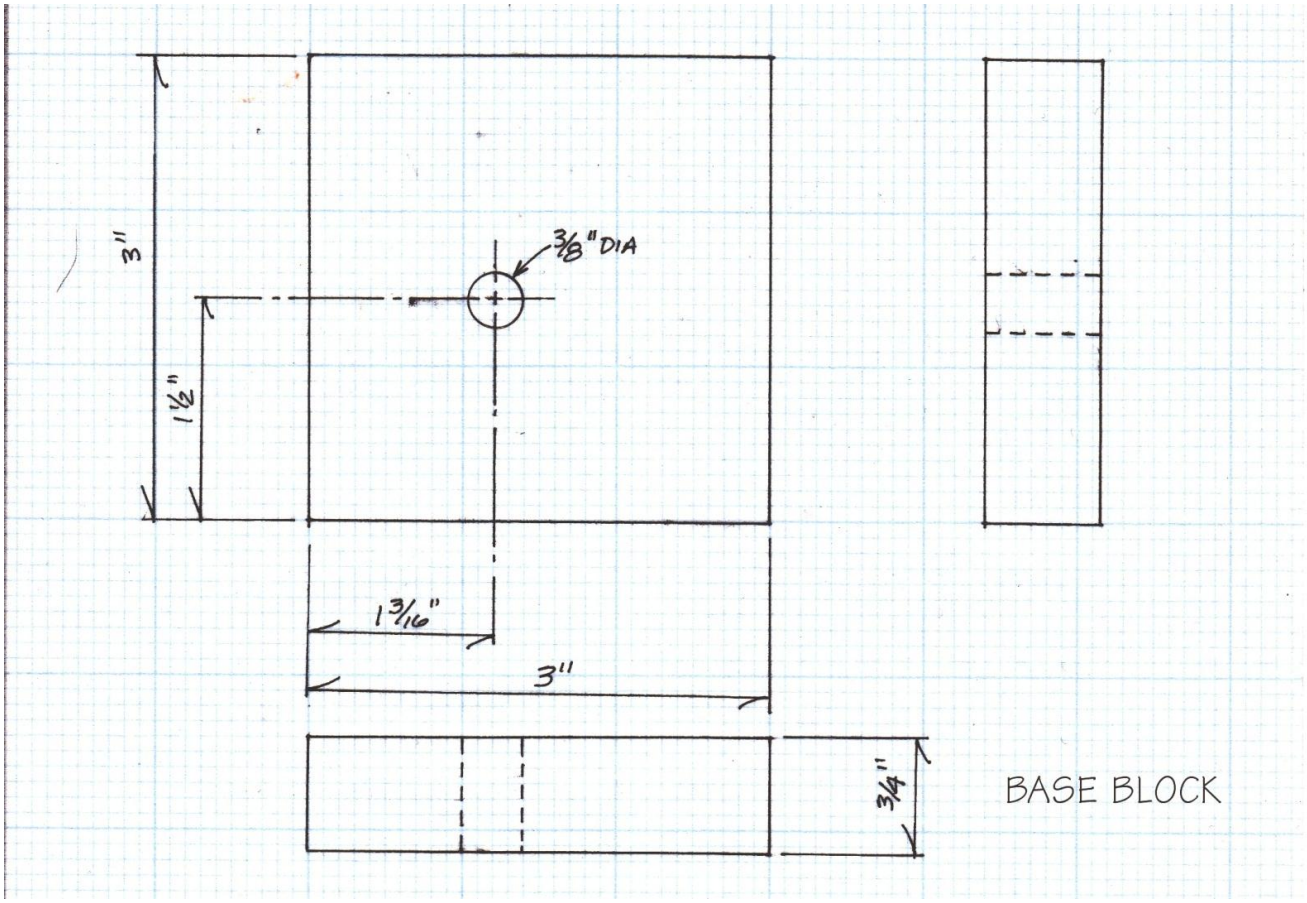
Install the threaded inserts – here is a good way to insert the slot-head brass inserts so they end up straight. Use the right sized threaded rod and a drill press.



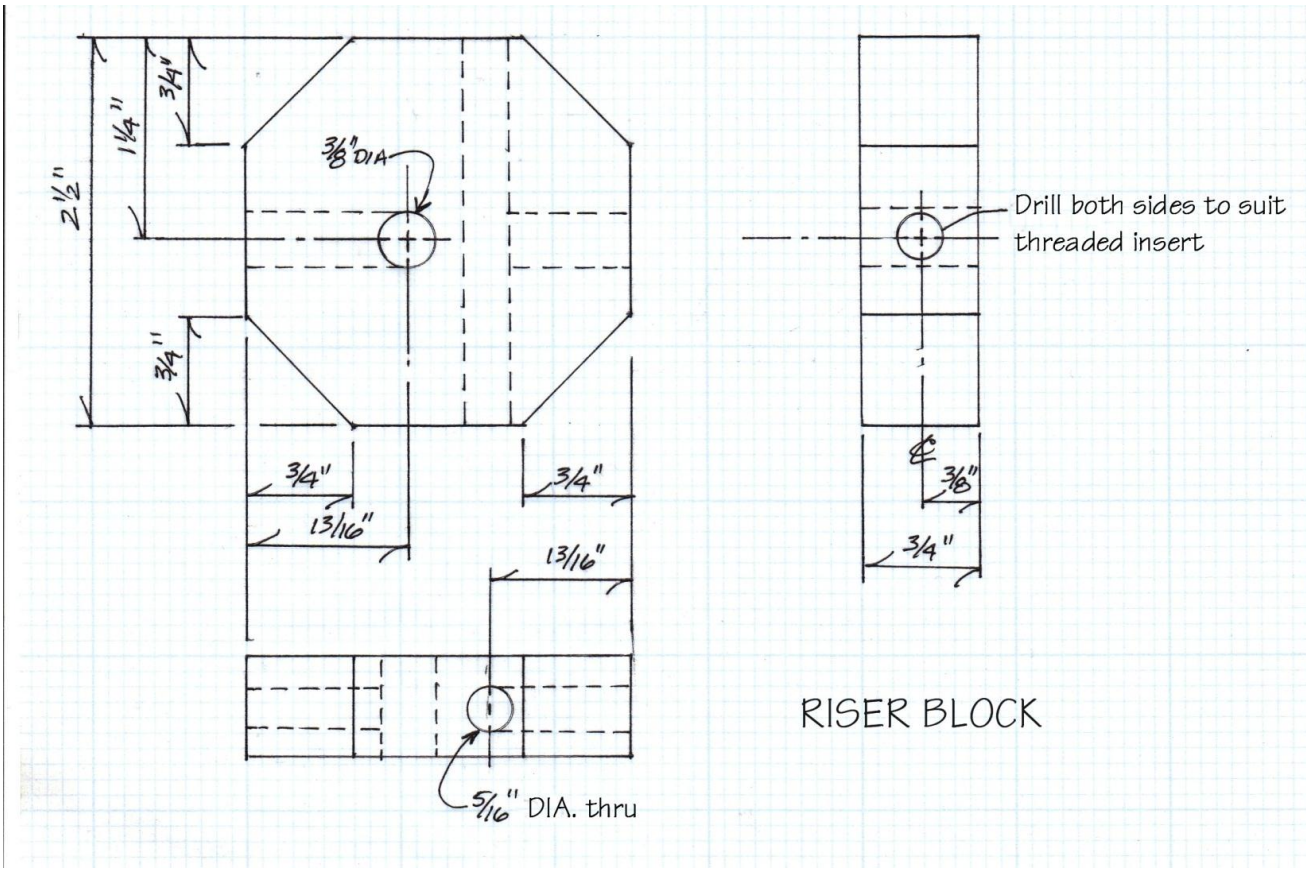
Glue the dowel into the 3/8” hole in the base. If you are opting for an aluminum or brass rod and they do not fit tight, an additional threaded insert may be required to hold them in place, but my experience has shown that they will likely have to be tapped into the hole accommodating a tight fit. But epoxy or super glue is good insurance here.

Slip the upper block onto the vertical 3/8” dowel and lock it in position with the thumbscrew.

Insert the pencil into its hole and tighten with a thumb screw.



BASE BLOCK



RISER BLOCK

CONGRATULATIONS! You have just completed a very handy jig for marking consistent lines and a desired height above the base.