# HARMONY

Barbara Dill

*Harmony,* 2013, Spalted wood, 5" × 4½" × 4½" (13cm × 11cm × 11cm)

Last year, the Professional Outreach Program (POP) committee invited me to be in their "Harmony" exhibit at the Tampa symposium, but I was not convinced I should take this on—I had never before intentionally turned a conceptual piece. I thought for a few days, talked to some people who encouraged me, and then accepted the invitation.

My first thought was of a note to represent music, so I tried to turn multiaxis musical-note forms based on the shaped note tradition (do, re, mi) that was a huge part of the southern church of my youth. Harmonic waves made while using multiple axes came next, obviously concrete thinking, but I had to try. The results were horrible.

After I gave up on those ideas, I started thinking conceptually about harmony with ideas like balance and equality. I looked around my shop and saw a multiaxis spindle I had made in 2005, before I became totally obsessed with figuring out a way to think about multiaxis turning *(Photo 1).* I had turned this successful form by luck, using the random-experimentation method. I also had made many candleholders and bottle stoppers using these random multiaxis cuts, but these pieces drew little attention, so I moved on *(Photos 2, 3).*

## Harmony emerges

With balance and equality in mind, I started experimenting. The red lines on the piece in *Photo 4* are the two axes used to turn this piece. They are parallel to each other but not to the center axis of the wood, if it had been used.

It took me about four weeks to solve the many problems inherent in turning the piece I envisioned. One requirement of the POP exhibits is that the piece must fit into a 6" (15cm) cube, which meant I had to use this concept on a shorter, fatter piece of wood.

1

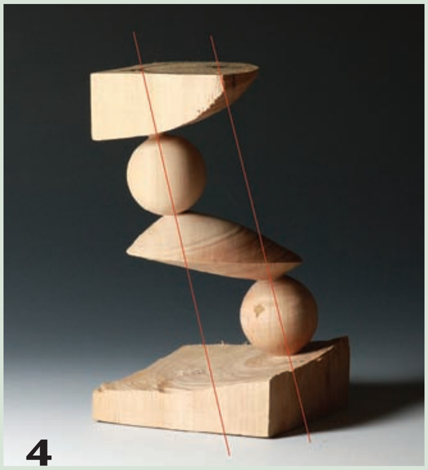
2

3

*(Left)* I keep samples of successful ideas to remember how I made them. I clearly mark the axes on each end to avoid spending time trying to figure out how I turned the piece. Cherry, 11" × 3" (28cm × 8cm)

*(Middle)* Candleholder, Cherry, 13" × 3" (33cm × 8cm)

*(Right)* Bottle Stopper, Cherry, 5" × 3" (13cm × 8cm)



4
The red lines identify the two axes used. Notice that they are on the diagonal of the square, as opposed to the width or length.

5
The tool tends to bounce when entering the wood after lingering in the "air wood," especially when the speed is slow.

6
The toolrest is made from UHMW polyethylene.

7
I used card stock to measure the length and width of the bead.

The size and shape required for the wood made the turning more off balanced than when turning a long, slender piece of wood. The beads were so far off the toolrest that tool control was almost impossible. And, the cut at the base of the first bead was difficult to make because the tool had to enter the square wood at different depths.

## Solutions

Speed helps, but when the wood is this off-balanced, speed is difficult *(Photo 5)*. A friend suggested I glue pieces of wood to the sides of the problematic corner. I did this on the next turning and had much better results. I always use a ½" (13mm) spindle gouge for most of my multiaxis turnings, but this time, I used a ½" bowl gouge that I had sharpened like a spindle gouge. This helped because the heavier tool did not bounce as much.

When making a bead (or sphere) on a wide piece of wood, the bead is several inches away from the toolrest, which makes it nearly impossible to control the tip of the tool. Increasing the speed was not the answer, so I made a small toolrest that could fit between the V cuts and support the tip *(Photo 6)*. I made this toolrest from a square of ultra-high molecular weight (UHMW) polyethylene. The tap fit the threads of an old toolrest. Hands must be carefully kept behind the wood as it rotates!

Measuring the bead is challenging. I used card stock to slide into the V cut to measure the length and width more accurately *(Photo 7)*.

The next problem occurred when the piece was mounted on the second axis—there is not much wood supporting this axis *(Photo 8)*. To solve this problem, I hot glued a piece of wood in the space between the sides of the V cut. I then used strapping tape to secure the wedge *(Photo 9)*.

The wood was wide and had to be turned slowly to avoid the vibration of my lathe because of the wooden floor in my shop (I have since had the floor reinforced, which has helped). Now that I understand the process, I can first take some of the wood off that I know will come off later *(Photo 10)*. ■

*Barbara Dill is a retired nurse. She has been turning wood since 1990 and has been teaching and writing about multiaxis turning since 2006. More of Barbara's work can be seen at www.barbaradill.com.*

8
A wedge of wood hot glued into the V space supports the second axis.

9
For security, strapping tape gives additional support for the wedge while turning.

10
I learned from many practice pieces that excess wood could be removed from the second axis before turning the first axis, which helped with balancing the wood while turning.