

Cindy Drozda

"The Fine Art of Woodturning"

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Using a Camera for measuring wall thickness

You can mount a webcam camera on your captured hollowing system where the laser mounts, and be able to see where the tool is inside your hollow vessel. Here is the easiest way to do it!

Equipment needed (in addition to captured hollowing rig):

- **Computer**, such as a laptop, with a USB port and a screen. An external monitor that you can mount near the lathe headstock works very well. Or put the laptop where you can see it while turning. It's a good idea to cover up the laptop's keyboard to keep the dust out.
- **Software** that will display the output from the camera on full screen. Windows comes with "Camera" which is great. For Mac, use QuickTime or VLC in "New Movie Recording" mode without starting to record.
- **Camera**, small and lightweight enough to install on the laser mount arm of your hollowing rig. It needs to plug into your computer. USB webcams are available in all sizes and prices. Look for one with a narrow angle lens if possible, and auto focus or adjustable focus.
- **Clear plastic film** to cover the screen you will be displaying the camera on.
- **Marker** that will mark on the film over the screen and can be erased easily. Dry erase markers may be too light. I use a solvent based marker and remove with denatured alcohol. Wet erase markers and water are good also.

The Process:

- Connect the camera and open the program.
- Adjust the position of the camera on the hollowing rig arm so that the cutter is visible, and about in the middle of the frame.
- Use the marker to draw on the film-covered computer screen to show you the wall thickness that you want on your vessel. You may like to also draw the cutter as well.
- When you put the tool inside the vessel, the camera will show the vessel, with the marks you made on the screen showing where the tool is.
- Proceed with hollowing, knowing that when you see the mark get to the edge of the vessel's picture, you are at your intended wall thickness.
- Each time you reposition the cutter, or want a different wall thickness, erase the old marks and re-draw the outline of your wall thickness.

If you want to get more technical, see my instructions on using vMix to quickly superimpose the image of the cutter on your vessel.