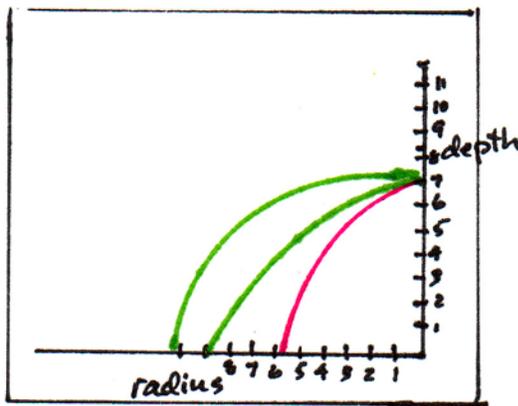


Mastering the Angles: McNaughton's Center Saving System

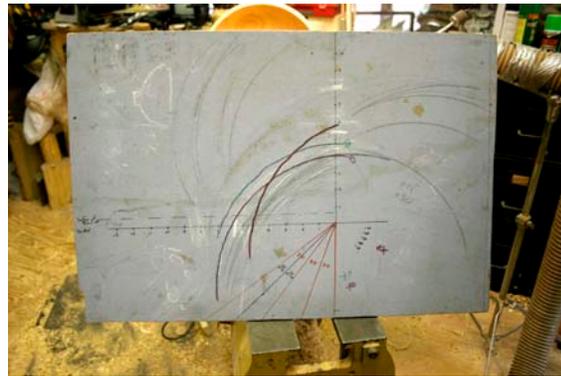
Barbara Dill

I have used the McNaughton system for many years, since this system has many advantages in turning wood, primarily the ability to save wood and time. A fellow woodturner showed me how to use this in the late 90's. I admit that using this tool at first was unnerving since the tip was in a big piece of spinning wood and I had no idea where it might be.

So, after thinking about this, I found a simple method of knowing where the tip is and knowing the angles needed to create a cone successfully.



Cardboard Grid



Actual grid I use

This shows various shapes and sizes of bowls

Draw a grid on plywood that has two axes at 90 degrees to each other. This grid can be used for any sized bowl and for the appropriate tool. Draw the radius and depth of the bowl on the grid and sketch the curve of the outside of the bowl. Choose the tool that seems best suited for the bowl's shape and put it on top of the grid. The path of the tool can be easily seen. The tool can now be moved from the starting position of the cut to the mid way position and then the end position. Make a mark on the top of the tool where it meets the wood and note to angle of the tool at each position.



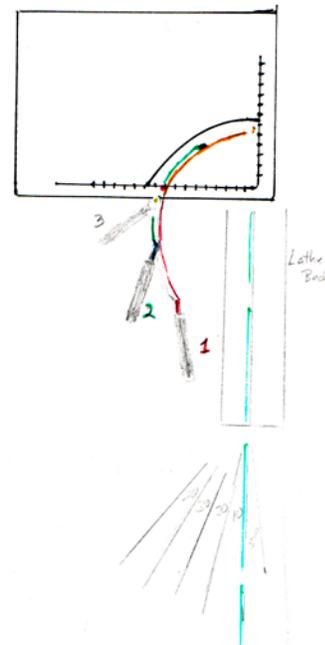


The first photo shows the tool's position at the beginning of the cut (about -5 degrees); the second photo is the path at the middle of the cut (about 25 degrees) and the third photo is of the path at the end of the cut (about 45 degrees). The arrows point at the angles of each cut compared to the flooring which is parallel to the center.

I draw reference lines on the floor with a permanent marker which enables me to measure the angle while turning.



The handle of the tool can reference these lines to make sure the expected angle is being used.



Another clue to help this process is that the handle the tip of the tool are on a straight line. This helps knowing where the tip is.

It is important to keep the inside of the tool close to the outside of the cone. This helps create the angles needed to create the desired cut and to save wood by not making the cut too deep or too shallow.

I like to have the tailstock center against the wood whenever I can for safety reasons. When this interferes with the starting angle, make the initial cuts and then use the tail stock.

Next is the process with photos. I'll do that soon!

