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TURNING AND DETAILING PLATTER BASES

INTRODUCTION

Platters offer an excellent opportunity to express your self creatively and to use an infinite number of designs and surface treatments. I have found that designing and detailing the bases on my platters is as enjoyable as detailing the front of the platter. There are two types of bases that I use most frequently: a three-footed base and a multi-axis base. I was introduced to the latter base type by, John Uteck of the North Carolina Woodturning Association, (*North Carolina Woodturner*, February, 2004, Vol. 14, No. 2). The following are the steps that I use to create and detail each of these base types.

Tools:

1. 3/8" bowl gouges - with fingernail and traditional grinds

2. ¼" skew chisel

3. ¼" 3 point tool

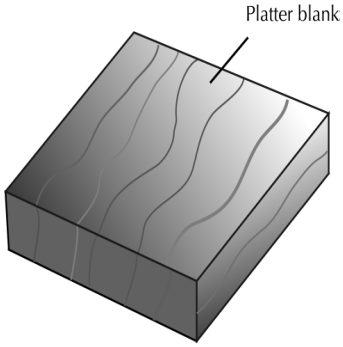
4. 3/8" & ¼" beading and parting tools

5. Texturing tool

6. Grinder

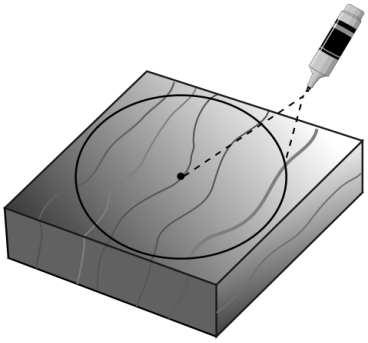
I. Select Platter Blank

1. Dry wood, preferably kiln dried, is recommended.
2. The blank should be at least 11" in diameter and 2" thick. I like to turn 14" to 24" platters.
3. Check the wood for defects as well as for character.
4. Make sure that the most interesting side of the wood is used for the face of the platter. This is the side to which the faceplate or screw chuck will be attached.

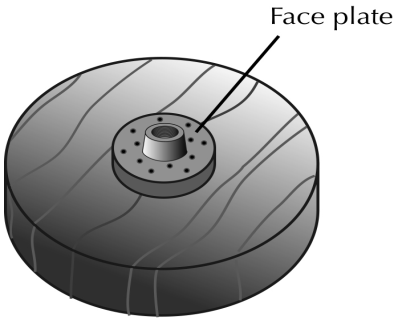


II. Prepare the Blank

1. Plane the face of the blank, if uneven, so that the faceplate or screw chuck will sit evenly.
2. Draw a circle on the blank with a compass to determine the largest diameter possible.
3. Cut out the circle on a band saw in order to facilitate turning the blank on the lathe.



4. Mark the center point to make it easier to align the faceplate in the center of the blank. *(You will need to drill a 3/8"hole ¾" deep in the center if you are using a screw chuck instead of a faceplate.)*
5. Attach a 3" or 4" faceplate to the front of the platter with #10 machine screws 1" long. A blank larger than 15" will require a 6" faceplate.
6. Mount the blank on the lathe.
7. True up the edge and base of the blank.

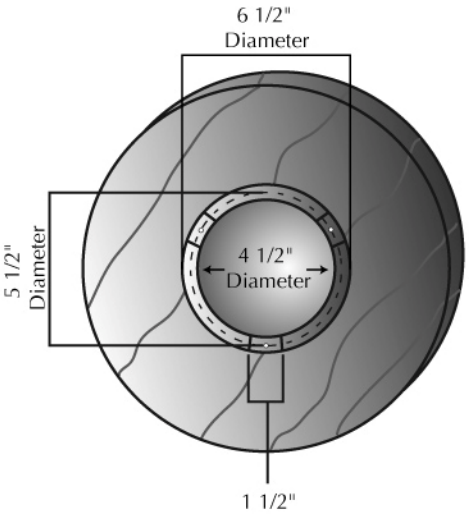


Turning a Three-Footed Base

Once you have selected and prepared the platter blank and mounted a faceplate or screw chuck, you are ready for the first steps in turning the base of the platter. This will involve preparing the recess and foot, turning the foot and base of the platter, and then detailing the foot.

I. Prepare the Recess and Foot

1. The platter blank should be mounted on the lathe and trued.
2. Draw 4½" and 6½" circles in the center of the base of the blank to create a 1" wide band, this will be your platter's foot.
3. Then draw a 5½" dotted circle in the center of the 1" band.
4. Use the radius of the 5½" dotted circle to divide the 1" band into thirds.
5. Mark a line ¾" on both sides of each of the three points on the band. These will be the three 1 ½ areas to be carved to create the feet.

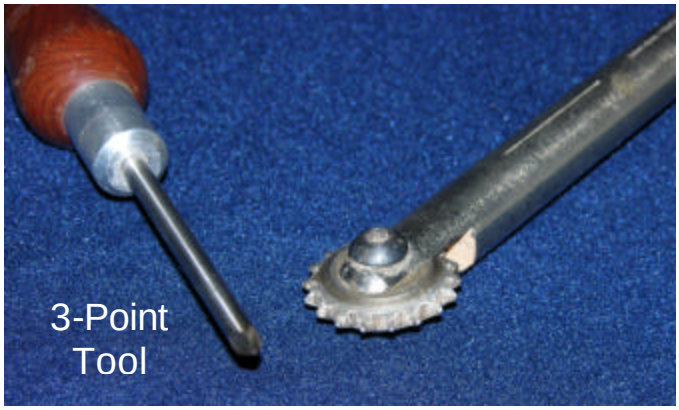


The radius of a circle is equal to about 1/6th the circumference.

II. Turn the Foot and Base of the Platter

1. Recess the 4½" diameter circle to a depth of 1/4"to 3/8". This will be used for expansion chucking the blank when turning the front of the platter. It is important that the sides of the circle are straight for expansion chucking.
2. Rough turn the shape of the rest of the base of the platter from the 6½" circle to the edge of the blank. I like to create a slight ogee near the edge of the blank.
3. Carve the three feet in the base of the platter in the 1" band. I use a long neck grinder to carve the feet. A reciprocating carver works well also.
4. Refine the shape of the platter base.
5. Sand the recess foot and base of the platter to 400 grit.
6. At this point, I detail the foot, base, and recess of the platter. I use a three-point tool to turn beads and a texturing tool to texture between the beads.

I like to use a 3/8" bowl gouge with a fingernail grind using a pulling and slicing cut to shape the back of the platter. I find I get less tear-out this way. I use a 3/8" bowl gouge with an English grind for my finishing cuts.



I sometimes use a chatter tool to detail the platter in addition to the texturing tool.

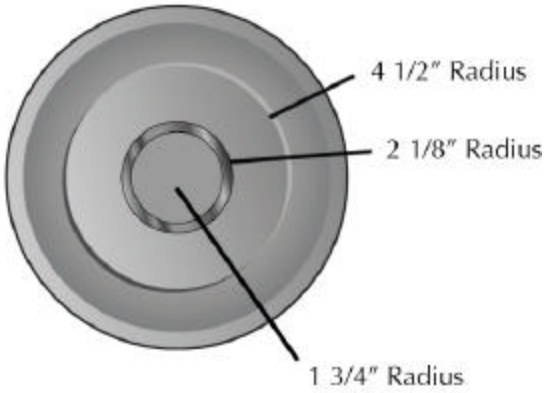
7. Carefully fine sand (600 grit) the completed detailing.
8. Remove the blank from the lathe.
9. Remove the faceplate from the blank. You are now ready to work on the front of the platter.
10. Remount the blank on the lathe by expanding the chuck jaws into the recess in the foot of the platter to turn the front of the platter.

TURNING MULTI-AXIS BASES

I turn two sizes of multi axis bases. For platters that are 15” or larger, I turn a 9” multi axis base, for platters less than 15” I turn a 6” multi axis base.

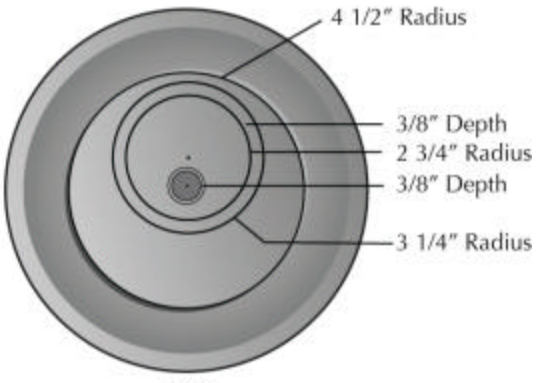
I. Prepare the Platter Front to Turn a 9” Multi-axis Foot

1. Draw a 2” circle in the center of the platter front.
2. Divide the circumference of the circle into thirds.
3. Drill 3/8” holes ¾” deep for your screw chuck in the center of the platter and at each of the three points on the circle. Number the holes along the 2” circle 1, 2 and 3.
4. Use a screw chuck in the center hole to mount the platter blank on the lathe and true it up.



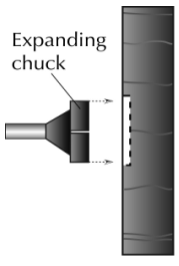
II. Turning the Foot and Base of the Platter

1. Draw a 4 1/2” radius circle on the base. This will be the 9” circle around the foot of the platter.
2. Turn the shape of the rest of the base from the 9” circle to the edge of the blank, leaving the 9” circle 3/8” to ½” higher than the rest of the base.
3. Draw a 2 1/8” radius circle and a 1 3/4” radius circle on the base.
4. Turn a channel 3/8” deep between the 2 1/8”radius and 1 3/4” radius circles. Keep the sides of the channel straight.
5. Remount the platter blank in hole #1.
6. With a live center in the tailstock, mark a new center on the base.
7. Draw 2 3/4” radius and 3 1/4” radius circles around this new center.
8. Turn a channel 3/8” deep between these circles.
9. The new channel should coincide with the first channel where they overlap.
10. Repeat steps 7-10 with holes #2 and #3.
11. Remount the blank in the primary center hole and turn away the marks made with the live center on the base and add additional detailing if desired.



BASE

III. Expansion Chuck the Platter

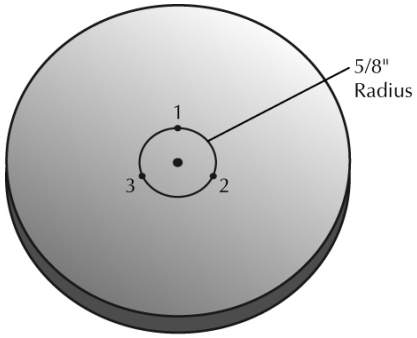


With your three-footed or multi-axis base completed and detailed you can now proceed to turn the front of the platter as desired. You can remount the blank on the lathe by expanding the chuck jaws into the recess in the foot of the platter.

The sides of the recess must be straight or dove tailed depending of the type of chuck being used.

IV. Prepare the Platter Front to turn a 6" Multi-axis Foot

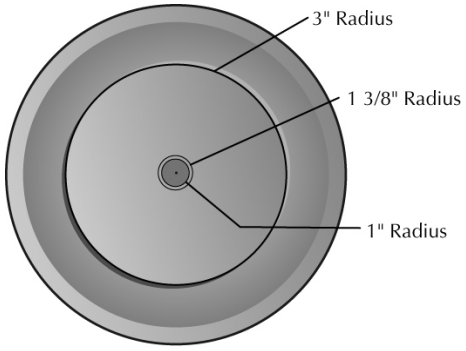
1. Draw a 5/8" radius circle in the center of the platter front.
2. Divide the circumference of the circle into thirds.
3. Drill four 3/8" holes 3/4" deep for your screw chuck in the center of the platter and at each of the <u>three</u> points on the 5/8" radius circle. Number the holes on the circumference 1, 2 and 3.
4. Use a screw chuck in the center hole to mount the platter blank on the lathe and true it up.



FRONT

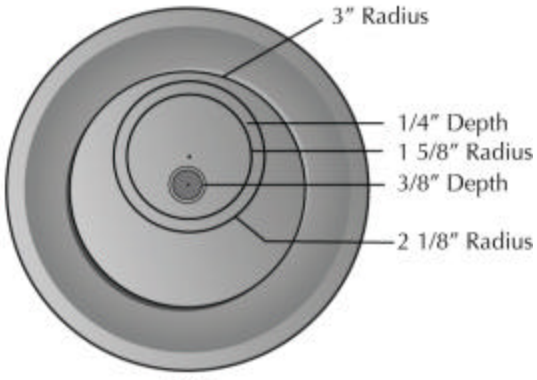
V. Turn the Foot and Base of the Platter Base

1. Draw a 3" radius circle in the center of the platter base. This will be the 6" circle around the foot for the platter.
2. Turn the shape of the rest of the platter base outside the 6" rim leaving the 6" circle 3/8" higher than the rest of the base.
3. Draw 1" and 1 3/8" radius circles on the base.
4. Turn a channel 3/8" deep between the 1" and 1 3/8" radius circles. This center channel is 1/8" deeper than the multi axis channels because it will be used to remount the platter when turning the front of the platter.



BASE

5. Sand the 3/8" deep channel.
6. Remount the platter blank in hole #1 in the front of the platter.
7. Bring up the live center in the tailstock to mark a new center on the base.
8. With a compass draw a 1 5/8" and 2 1/8" radius circles around this new center.



BASE

9. Turn a channel 1/4”deep between these circles.

10. Sand the 1/4”deep channel.

11. Repeat steps 7-10 with holes #2 and #3.

12. Remount the blank in the primary center hole and turn away the marks made with the live center on the base.

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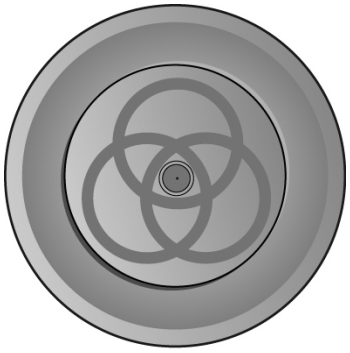
13. You can also add any detailing at this time.

14. Sand and finish the platter base.

15. Expansion chuck in the center channel to turn the front of the platter. It is essential that the center channel be at least 1/8” lower than the rest of the multi-axis channels.



FINISHED BASE

VI. Finish the Platter

No matter which of the bases you have used, proper finishing will preserve and enhance both the base and the completed platter. When adding color, I use water based dyes, inks, and transparent acrylics before applying the finish. I use an oil/varnish mix or a lacquer finish on my platters, depending on the wood. I prefer oil/varnish on dark woods and lacquer on light woods. The oil/varnish mix consists of 1/3 pure tung oil, 1/3 polyurethane and 1/3 mineral spirits.

Note: The most important part of finishing is a thorough and careful sanding job.

Multi-Axis Base

Three- Footed Base