

Turning a Contemporary Laminated Lamp



Introduction & Thoughts on Design:

The making of a lamp is an excellent project for beginning to intermediate turners as it involves both spindle turning and faceplate turning. Before mounting any wood on the lathe, it is best to spend some time sketching out a design. If this is your first attempt at turning a lamp or spindle work, try to keep the design fairly simple. Generally the base and the upright spindle parts of the lamp are turned from two separate pieces of wood. Some thought should also be spent on deciding what wood or woods to turn the lamp from. Are you going to use solid wood or are you going to glue up several pieces of wood to create a laminated design. Another consideration is whether or not you are going to paint or color the lamp. Painting the lamp accentuates the lines of the turning as the grain of the wood does not interfere or distract the eye from the lamp's curves and clean lines. If you are making the lamp for yourself the overall size of the lamp and lamp base should be taken into consideration. I find that the hardest part of turning a lamp is finding a suitable lamp shade. I am fortunate, in that there is a local lamp shop that is willing to take the time to help me choose an appropriate shade at a reasonable price. Sometimes it can be very difficult to find a lamp shade that complements your work and does not distract from it.

Tools and Materials:

- 1 1/4" Spindle Roughing Gouge
- 3/4" Skew
- 3/8" Spindle Gouge
- 5/8" Bowl Gouge (with side grind)
- 5/8" Bowl Gouge optional
(with Traditional Grind)
- 1/4" Point Tool or Pyramid Tool
- 3/4" Round Nose Scraper optional



3/8" or 5/16" lamp auger or electricians drill bit
 1 1/4" Forstner Bit
 1/4" dovetail Router Bit & Router Table Optional
 2 1/2" x 2 1/2" x 12" Blank for Lamp *plus or minus*
 8" x 8" x 1 1/2" Blank or larger for the Base *plus or minus*
 Lamp kit or Parts to wire lamp
 8' #16 or #14 Lamp wire
 13" plus Threaded Lamp Rod
 2 Nuts for Lamp Rod
 2 Washers for Threaded pipe and nuts
 1 1 1/2" brass Washer for top of turned lamp
 Decorative Filler Parts to go between top of lamp and the light socket
 Light Socket with an oneway or three-way switch
 Lamp Shade holder(Harp) 8", 10" or 12"
 Lamp Shade
 Felt for bottom of lamp base



Sources:

Lamp Parts:

W. N. deSherbinin Products Inc.
 2 Augusta Dr
 Danbury, CT 06810

Mail Correspondence:
 PO Box 63
 Hawleyville, CT 06440

Phone #: 203-791-0494 800-458-0010

Website: www.wndesherbinin.com

Email: lampparts@wndesherbinin.com

Procedure:

If you are going to glue up wood for a laminated spindle lamp, go ahead and do your glue up before preparing and turning the base

Turning the Base:

1. True up the wood for the base by running it through a planer, hand planing it or using a belt sander. The bottom of the lamp base should be flat and ready for finish sanding as the blank will be mounted on a screw chuck from the bottom side. Generally I do not turn or reverse turn the bottom on the lathe.

2. Cut the blank to size roughly 2" x 8" x 8" plus. I prefer to use a blank 8" to 12" square by 1 1/2" to 2" thick depending upon the wood available.

3. Using a straight edge find the centers both front and back.

4. Use a compass or bar compass to draw the outside diameter of the blank.

5. While the blank is still square, using my router table and a 1/4" dovetail bit, I route a recess in the bottom for the electric cord. To do this I mount the bit in the router, bring up my fence so that the bit will cut a hole in the center of the blank. I then adjust the height of the bit so that the electric cord will fit in the slot cut by the bit and when twisted sideways will lock in place. I mark the fence where the center of the bit is and then draw a line on my blank perpendicular to the direction of the wood grain from the center of the piece to the outside. I then route the slot, stopping before the line on the fence and the line on the side of the piece meet.

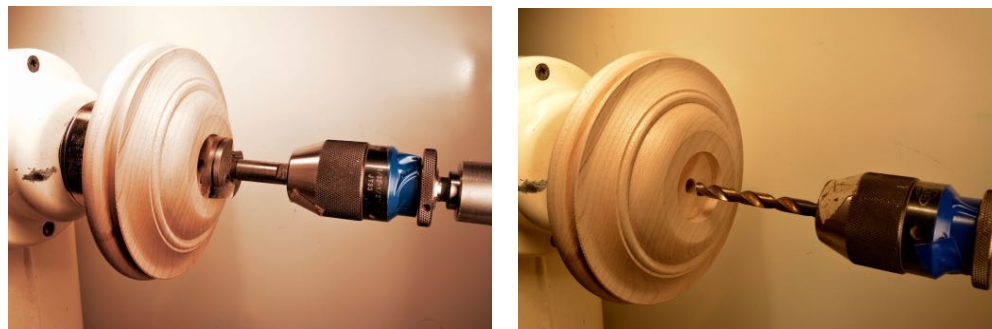




Blank after being drilled and the dovetail slot routed for the lamp cord and finally cut to a circle on the band saw and is now ready to be mounted on the lathe.

6. I prefer to drill the hole for the nut and washer that hold the lamp to the base in the bottom, on the drill press before I turn the base. The hole on the back side of the bottom is approximately 2 1/8" in diameter and 3/8" deep. The hole in the bottom needs to be wide enough to fit the washer that helps connect the base to the threaded rod that goes up through the base and the lamp spindle. and large enough to fit the expansion jaws of your four jaw chuck.

Note: When drilling holes on the drill press especially when using Forstner Drill bits it is always a good idea to clamp the work down on the drill press table. It can be quite painful if and when the piece spins out of control, when the bit inevitably jams in the hole.



7. Now it is time to drill the hole through the center for the lamp rod hole. I drill a 13/32" diameter hole for the drill rod. Unfortunately some threaded rods need a slightly larger diameter hole and I will later, after the base is turned, ream out the hole to fit the threaded rod.

Note: I no longer use a screw chuck to hold the base on the lathe, as I discovered it is just as easy to drill the hole in the back 2 1/8" in diameter and 7/16" deep plus or minus and use a chuck in expansion mode to mount the base on the lathe.

8. The blank is now ready for mounting on the lathe. I like to turn the base first so that I can easily match the tenon on the spindle to the mortise or drilled hole in the base. If you do not have a drill press you can turn out the mortise in the top of the base while the blank is mounted on the lathe with a Forstner bit in a Jacobs chuck.

9. Turn and finish sand the base according to your design by using a story stick or by referring to your drawing. I prefer to use a story stick or at times when I feel like taking a risk I create my design directly on the lathe, which is most of the time.

Turning the Lamp Spindle:

1. If you are going to use solid wood it is best to pre drill the 3/8" plus hole in the lamp spindle first. I recommend the use of a threaded lamp rod to go all the way through the lamp connecting the base to the lamp spindle. Unfortunately some lamp rods require a hole slightly larger than the 3/8" lamp augers provide. One solution is to use an electricians drill bit and have the hole slightly larger than the rod or to cheat and enlarge the hole at both ends and glue in sections of the lamp rod in the bottom and the top. I do not recommend this method, as it is not as secure or safe as a solid rod. When gluing up the parts for a laminated lamp, the section for the hole can easily be sized to fit the lamp rod, by using two pieces for the center glue up and leaving a space in between them for the lamp rod. See photo

If you predrilled the hole through the blank to insure that the piece is turned centered on the hole, you can turn a drive center with a tenon on it to go in the hole drilled in the blank and with a #2 morse taper from a pice of scrap Maple or Poplar; to jam it in you headstock and use it to hold the blank between centers to turn.

2. Mount the spindle blank in the lathe by centering it on the predrilled holes. I use a cone bearing center in the tailstock and a drive center or a Steb center in the headstock. For mounting in the head stock end you can insert a temporary plug in that end for the drive center to bite into.



Note: Before mounting a laminated blank, I glue a plug in both the top and bottom that is approximately 1/2" long into the end which will be drilled later to fit the threaded rod. I do this because the hole left in the blank from the glue up is a rectangular hole and is generally a bit larger than the threaded rod and it would be difficult to center the blank on the hole.

3. Using a story stick or your drawing turn the blank and finish sand it. For my lamp spindle I like to lay out a story stick, especially if I am going to do a production run or if I may desire to turn another lamp sometime in the future.

Assembling the Lamp:

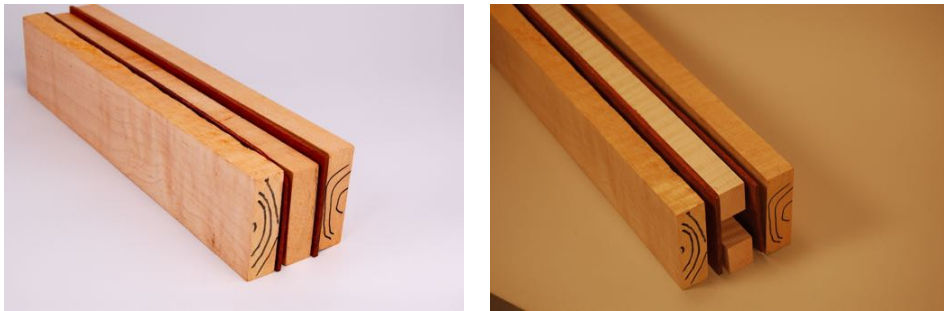
4. Now that both the base and the lamp spindle have been turned. Test fit them together and try connecting them by running the lamp rod through both parts. You may have to use a round file or a larger drill bit to open up the hole in the base to fit the rod.

5. Attach the washer and nut to the base, and screw on the brass decorative washer to the top of the lamp spindle with the filler piece if desired, the harp connector then the light socket and switch. Before you can connect the socket you will need to cut the threaded rod to length. This can be done with a good hacksaw.

6. Once all the parts are dry fitted, you can now connect them and wire the lamp according to electric code or the directions on the lamp package kit. Remember to tie a knot in the cord inside the socket so that it cannot be easily pulled out.

7. Apply a felt or cork bottom to the lamp base to help hold the cord in place and to protect your tabletop. Plug her in and light up your life.

Laminated Lamp Spindl



Picture of Parts Ready for Glue Up

1. Prepare stock by jointing and planing it flat and to a consistent thickness. I like to use 3 pieces of curly or tiger maple 3/4" thick by 2 1/2" to 3" wide sandwiched around two

pieces of Purple Heart 1/8" thick by 2 1/2" or 3" veneer. The inner layer of maple (middle layer) is made from two pieces 3/4" x 1" to 1 1/4" set apart, so that a 7/16" plus hole will be left for the lamp rod.

2. I then put glue on all the faces of the pieces and glue them up. I use a sacrificial piece of lamp rod in between the two middle pieces to insure that the wood does not slip during glue up and that the hole will be large enough for the lamp rod. I generally have the cup side of the outside pieces of wood facing into the glue up. This helps to insure that when the wood moves with the changes in humidity that it will tend to curl into the joint and not peel apart. I like to use Tight Bond yellow carpenters glue for this glue up. I do not bother wiping off the excess glue at this point but choose to scrape it off when I remove the blanks from the clamps after a minimum of an hour and a maximum of two hours, as the glue gets too hard to scrape after two hours.

3. If you haven't done it already, cut little rectangular filler pieces 1/2" long to glue into the ends of the blanks to fill the holes so that the blank can be drilled to fit the lamp rod at the top and bottom and to more easily mount accurately in the lathe.

Note: it just dawned on me that you could save a step and glue the two rectangular blocks in the ends, at this time and not only use them to help space out the center pieces but also for centering the blank on the lathe when turning it to shape.

4. The blank is now ready for turning.

5. Once turned I drill out the center of the Spindle where the temporary pieces were glued in to make it easier to mount the Blank on the lathe, with the proper size drill bit to match the diameter of the lamp rod.

6. Proceed to step 4 in the section titled "Assembling the Lamp" and assemble your lamp.

Tips & Tricks

UL-approved knot provides strain relief to prevent cord from disconnecting.



UL-approved lamp cord knot

If you make lamps (or simply repair them on occasion), it's worth knowing how to make an Underwriters Laboratories approved knot. All commercially sold lamps include a UL-approved knot at the end of the electrical cord within the lamp socket. It's designed as strain-relief to prevent a yanked cord from disconnecting from the socket, as the knot cannot be pulled through the socket nipple. As shown in the drawing, it's "knot" hard to tie, so why "knot" use it?
—William Stetson,
Roanoke, Virginia