

3" Bevel Edged Mirror; Framed In Wood



Note: It's necessary for brevity to use precise dimensions, measurements, etc. to write a "how to". As there are always more ways than one to do something the below should be considered only one suggested way to get from here to there.

Material: 3" bevel edge mirror and a wood disc of at least 4" in diameter and at least 5/8" thick

Tools and supplies: Chuck that will securely grasp a tenon of about 1 3/4" to 2 1/2" and expand into a mortise of 3" (a OneWay Talon chuck with standard #2 jaws is ideal), a high school type pencil compass, ruler, pencil, parting tool, spindle gouge, straight faced drop nose scrapper, custom made sizing jig, spacer for long point live centers, double sticky turners tape, sandpaper, finish products.

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Process/Design:

Jam chuck the wood disc, centered, between chuck and live center. Establish a 3/16" long tenon that is about 2 to 2 1/4" in diameter. See disc of wood at left in picture above. Note: Since the hole the point of the live center makes must be removed, if the point is long as most are, a thin spacer should be installed on the point before it's plunged into the wood. See small piece of wood at center top of picture above. To prevent splitting, the appropriate sized hole was drilled in it before it was used with the live center.

Separately make a sizing jig of thin wood or from an old credit card; the long face should in length be the diameter of the mirror that is to be used. The long face should be straight and flat. The sides adjacent to the face should be tapered away for good clearance. It is also helpful if the center point of the face of the long edge is marked. See the jig in center bottom of above picture. Do not use sizing jig or compass (both discussed below) when lathe is turning.

Remove the wood turn it around and install tenon in chuck. Move tailstock away and remove live center unless sure you can't accidentally poke yourself in the elbow with it. Smooth off the face of the disc and find center. Using a high school type compass mark a circle that is about three inches on the face centered on the disc face. Cut away the 3" circle to a deep a little more than the thickness of the mirror. While establishing a near 3" mortise work to ensure that the size is a minor fraction larger (if too tight the wood could shrink and bust mirror, too big and looks weird) than the sizing jig. When size is established us the jig face to ensure the bottom of the mortise is flat. To establish a flat bottom the square faced drop nose scrapper is very helpful. After mortise is established work the remaining face that curves away toward the rim. Sand and finish the non mortise face of the mirror wood. See disc of wood at right in above picture.

Remove mirror blank from chuck, turn around and reinstall with chuck jaws expanded in the mirror mortise. Do not put great pressure on the wood but firm up the chuck by applying a little pressure through both key holes. If getting enough pressure without breaking out the mortise is a problem you can either reverse and turn the mortise deeper or remove and reinstall onto a fitted plug via double sticky tape. Bring up the live center, with spacer used if live center point is too long, to

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provide additional support to begin the process of shaping the back side of mirror blank. Remember that the mortise is straight into the face, so while you want a reasonably thin mirror; cutting through to the mortise results in a start over. You want a pleasant convex curve (this simple convex curve is easiest to sand and finish; it will not lay flat on its back should the user have hand problems; it fits nicely in the palm of a hand when in use; and it shows figured wood to full advantage.) with the high point in the center and running out of wood at the rim where the final diameter should be small enough to fit in a cloth mirror bag, about 3 1/2 to 3 5/8” in diameter. At some point the tail stock will have to be removed to finish the curve. The square faced drop nose scrapper is the last word for faring a curve if the corners are kept clear of the wood though I can't provide a logical explanation for this truism. Once a pleasant curve is established sand and finish. Note: Vigorous sanding can put more stress on the wood than you should have put on it with your turning. Breaking it at this point results in a near 100% do over. Just before sanding should always be a decision point - reject without mercy before deciding to sand if any flaw is detected.

Finishing hints – lube you paper towel or cloth with a little mineral oil (available in drug and grocery stores) to keep the friction polish from drying too quick and pulling which looks like a poor sanding job. As a final step applying very little Renaissance Wax will help to keep down finger prints.

The mirror can be installed (clean it first) with very little liquid nails (let it squeeze out and you have a mess), silicone or double sticky tape. I've been using double sticky tape for years with no failures. The tape doesn't have a shelf life, isn't messy and would be easy to do over or replace if it ever fails.

Final note: Two very good friends - Don Riggs for process and Doc Johnson for design deserve most of the credit for the above. I'm good with the people who think a person should be judged by the quality of his friends!