



Jewelry Box

Materials:

- (1) 1 1/2" x 5" x 60" - Sides
- (1) 8" x 10" x 1" - Base
- (1) 8" x 10" x 1" - Top

Router Bits:

- 2" Core Box Bit
- 1 1/2" Surface Planning Bit
- 1 3/8" Roman Ogee

Techniques:

- X-Y-X Milling
- Vertical Contours

Preparation: Create a template of the side profile you wish to mill. This is best done on a band saw using 1" MDF material. Use double-sided tape to mount the template and the stock you will be milling to the table. The material should be mounted parallel with the bed rails of the machine, and the template will mount approximately 3" away from the end of the stock. (Fig. A)

Machine Setup: Attach a shop-made milling table to the rails of the machine. (see *Appendix, Milling Table*) Place a 2" core box bit into the router.

STEP ONE: Start with the router turned off and plunge the core box bit down until it touches the template (Fig B). Slide the router bit off of the template, turn the router on, and slide the router along the length of the stock.

STEP TWO: When you get to the end of the workpiece turn the router off and release the plunge. Slide the router back to the template and move the router 1/8" on the y-axis (half of a turn on the handwheel). Reset the plunge and repeat step one.

STEP THREE: Continue this process across the workpiece (Fig. C) until you have completed milling the contoured profile of the template. You'll be surprised at how quick and easy the process is.

STEP FOUR: When you complete the milling, you will find that the bit shape and the y-axis spacing will have left you with small peaks to be sanded off. These are much easier to take off than the steps that you would have had you used a flat bottom bit.



Figure A - Template and stock mounted on milling table



Figure B - End view with bit plunged down onto template

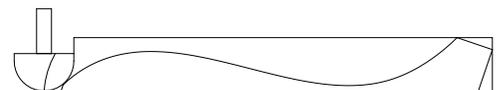
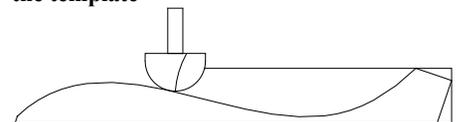
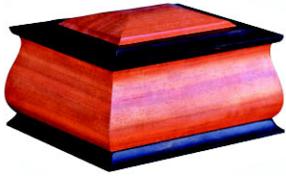


Figure C - Following the profile of the template





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STEP FIVE: Once you have milled the profile, simply miter the workpiece into 4 pieces and join them together with biscuits and glue (Fig D).

STEP SIX - Milling the base: To create the base for the box to mount on, cut your 1" flat stock to the final size. Mount the workpiece with double-sided tape to the flat milling table. Use spacers against the bed rails to assure that the workpiece is parallel with the router. Select the bit you wish to use for the profile of the top edge. Mill all 4 sides using the x and y-axis of the router.

STEP SEVEN: Flip the workpiece over and use the same technique to create the feet on each corner of the base. We used a 1 1/2" surface planing bit to mill out 1/4" of material.

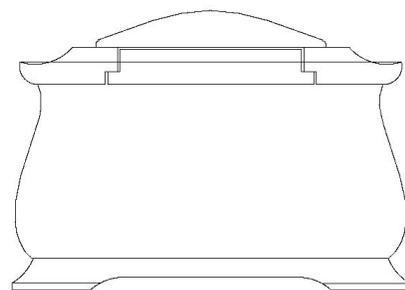
STEP EIGHT - Milling the top: The top of the box is created using the same vertical contour technique as the side panels. However, it is milled out of one solid piece using two templates.



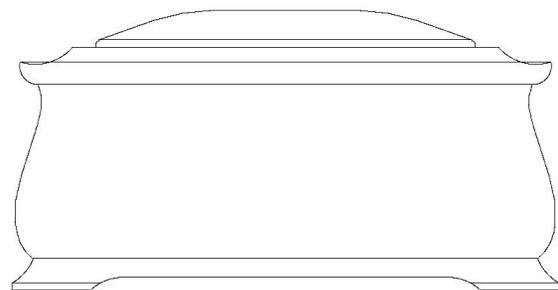
Figure D - Mitered corners joined together with biscuits



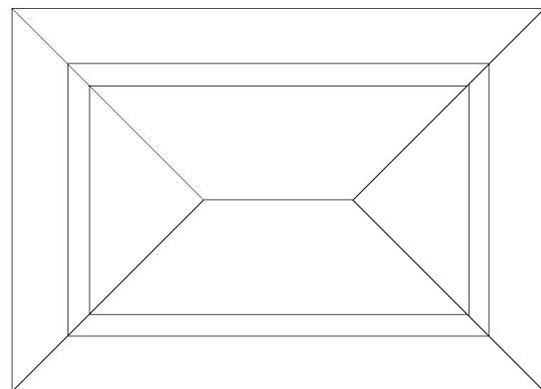
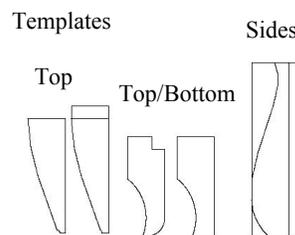
Figure B



Side View



Front View



Top View