

Roll Top Bread Box



Items Used:

Tambour Router Bit Set #8593 (#8596 includes Tambour Router Bit Set and Cable Kit)
Tambour Door Cable Kit #2059
3/8" Rabbeting Router Bit #5391 / #7691
3/8" Straight Router Bit #5472 / #7772
1/8" Radius Round Over Router Bit #6350 / #8650
5/32" Radius Roman Ogee Router Bit #6360 / #8660
1/2" Flush Trim Router Bit #7805 / #7807
3/4" Top Mounted Bearing Dish Cutter #5516 / #7816 (Optional - For making the finger pull in the bottom rail of the tambour door when not using a surface mount handle or knob)
1/2" O.D. Template Guide Bushing #9674 (9pc. Template Guide Bushing Kit)
3/8" Forstner Bit #9203
1/2" Forstner Bit #9205
1" Forstner Bit #9213H (Optional - For making the finger pull template for the bottom rail of the tambour door when not using a surface mount handle or knob)
Double Sided Tape #9489 / #9493 / #9386 / #9387
Wood Glue
(6 pieces) #8 x 1-1/4" long Wood Screws
(2) 3/8" Wood Dowels - each 1-1/2" long

Getting Started:

From 1/2" to 3/4" Plywood or MDF, use the paper templates to create the templates for cutting the shaped ends of the bread box and the tambour track slot required on the inside face of the bread box ends. Use a band saw or jig saw to cut the radius and then use a sander or file to smooth out the curve.

Making the Bread Box Carcass:

The sides of the bread box will be made using 3/4" thick stock. Cut the two bread box ends to a length of 10" and a width of 7-3/16". Use double sided tape to temporarily tape the two bread box side blanks together to cut the radius on the front side of them. Then tape the template to those two blanks. Use a band saw or jig saw to cut the radius on the corner to within 1/16" to 1/8" of the outside of the template (see Figure A). Use the guide bearing on the 1/2" flush trim bit to follow the perimeter of the template to insure that both side pieces are identically shaped (see Figure B). Remove the template and separate the two sides.



Figure A



Figure B

Making the slot for the tambour door to track in is next. It is important to mark which faces of the bread box sides will be the inside faces of the box as these faces will be the ones to get the track cut into them. Use double sided tape to attach the template to the inside face of the bread box side. Align the template with the bottom and back edges of the bread box side (see Figure C). Install the 1/2" O.D. template guide bushing in your router base or router table insert. Install the 3/8" straight router bit into the router. The slot will need to be cut to a depth of 7/16". For best results, make the slot in two or three passes changing the cutting depth between passes until you reach the full 7/16" depth. It is imperative that you keep constant pressure from the template on the template guide bushing through the entire cut. Start the cut at the bottom of the bread box side following the template around both radii of the template and stopping the slot when the template guide hits the step on the back edge of the template (see Figure D).

Caution: Do not continue and cut the slot past where it bottoms out vertically on the template and do not continue horizontally out through the back edge of the breadbox side. If you do, that will leave a visible notch in the back face of the bread box.



Figure C



Figure D

The outside face of each side piece needs to have the front, top and back edges cut with the 1/8" radius round over bit to relieve the edge of its sharp corners. The inside face is also routed but only do the front edge and top. The back edge is left untreated. It will mate flush with the back panel.

To make the pieces that will make up the top and back of the bread box, machine stock to a finished thickness of 1/2". The back is cut to a finished length of 16-3/8" by 6-5/8" wide. The top piece is cut to a finished length of 16-3/8" by 6-7/8" wide. The edge of the top piece that will become the front leading edge needs to have a 1/8" round over profile routed on both the top and bottom edge to relieve the corners. The back is glued in between the two side pieces of the bread box. The bottom edge of the back should be flush with the bottom and back edge of the side pieces (see Figure E). Temporarily place the top between the two side pieces to stabilize the carcass while you secure the clamps in place and allow it to stay there until the glue has dried and you are ready to remove the clamps. The top is added next. It is glued to the top of the back and to each side piece. The top will sit just below the round over profile that was routed along the inner edge of the side pieces. (see Figure F). Again, apply clamps until the glue has dried. The upper part of the carcass for the bread box is now complete. The base will be added to the box after the tambour has been made and installed in the slot cut to act as the tambour track.



Figure E



Figure F

Making the Roll Top Tambour Door:

There are (9) slats needed to make the tambour door. These slats need to be made from 5/8" thick stock. They all need to be made and cut to the same 17-1/8" finished length. They need to be ripped to a finished width of 1". You will also need the lead strip of the tambour that will be made using 3/4" thick stock. The lead strip needs to be made so that it fits between the two side pieces of the bread box. The finished length will be 16-3/8".

Because the tambour slats are very narrow, it would be a safety issue if you did not make a jig to hold the narrow strips as you rout the profile along each edge. The jig is simply a 1/2" thick plywood or MDF base with a second piece of hardwood stock attached to it lengthwise 1" from the long edge. A 1" stop block is also added to the right end to keep the stock from sliding in the jig while you are routing the profiles. In addition, we have added two toggle clamps to the jig to secure the stock in position on the jig (see Figure G).

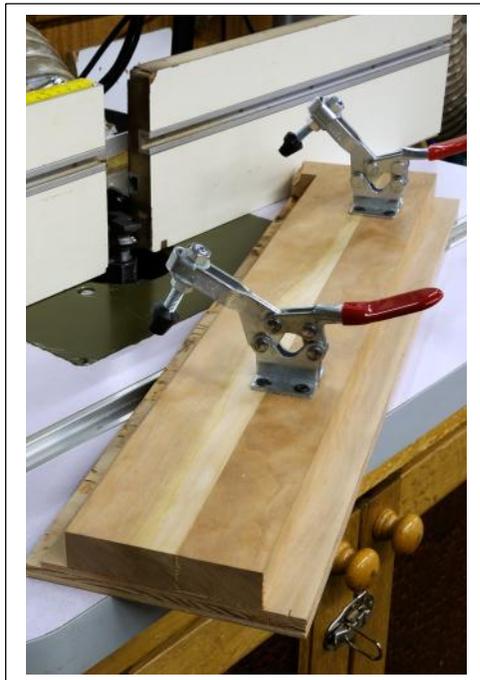


Figure G

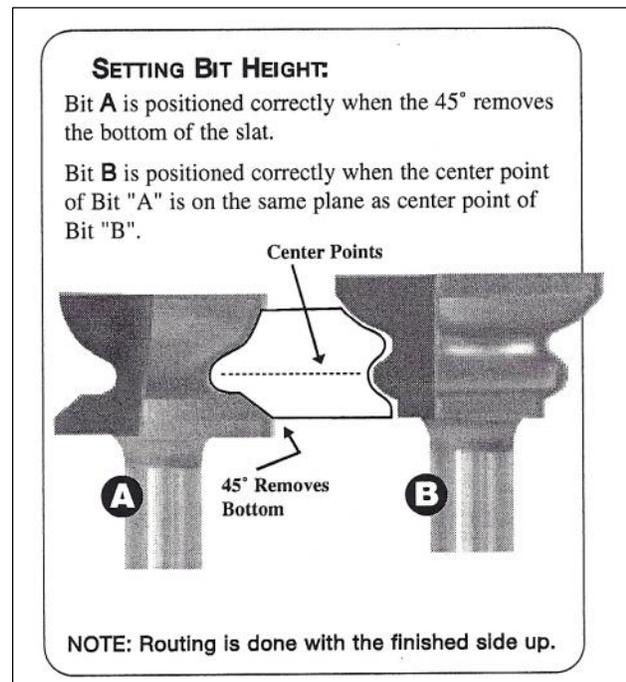


Figure H

Set the height of bit “A” as shown in Figure H and rout the top edge of each slat and also rout the top edge of the lead strip (see Figure I). Rout with the finished side up. Set the height of bit “B” as shown in Figure H and rout the opposite, bottom edge of each slat (see Figure J).



Figure I



Figure J

The lead strip is next to get the tambour profile routed on the top edge only as that will mate up to the bottom tambour slat. Using bit “B”, rout the profile on the lead strip with the finished side facing upward. **Do not rout** the bottom edge of the lead strip. That is left with a square edge (see Figure K).



Figure K



Figure L

Cut the lead strip to the finished length. (16-3/8”) Cut the slats to their finished length (17-1/8”). Drill 1/8” diameter holes through each slat for the cable (see Figure L). We recommend placing the holes for the outer cables 3-1/2 to 4” from the ends of the slats. The lead strip requires the same 1/8” diameter cable hole drilled to a depth to intersect a 1/2” diameter hole drilled to a 3/8” depth, in the middle of the back face of the lead strip to hide the crimp sleeves on the ends of the cables (see Figures M & N).

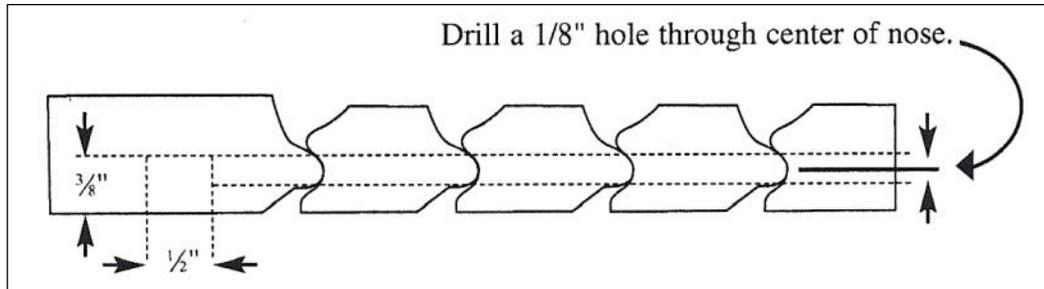


Figure M

These 1/2" diameter holes get drilled in the back face of the lead strip (see Figure N). Make sure to drill the holes in the correct locations to match the slats, as the lead strip is narrower than the slats. You will need to compensate for that difference when locating and drilling the holes in the lead strip. You can add optional 1/2" diameter wood plugs to cover the 1/2" holes drilled in the back face of the lead strip.

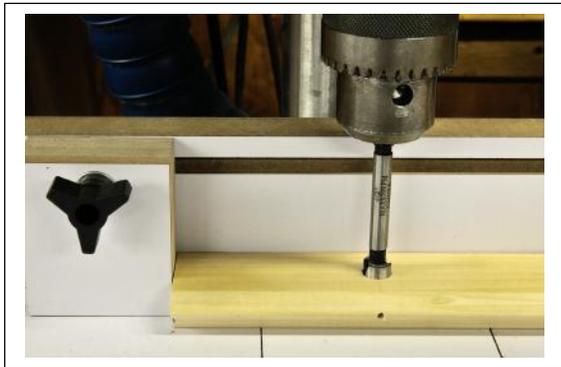


Figure N



Figure O

Use a 3/8" Rabbeting bit or stacked dado blade in a table saw to remove material on each slat to leave a 3/8" deep, 1/4" wide tenon that will be held in the 3/8" wide by 7/16" deep groove (see Figure O).

The lead strip is held in the 3/8" groove using a dowel. Using a doweling jig for accuracy, drill a 3/8" diameter hole, 1-1/8" deep in each end of the lead strip. The dowel holes need to be aligned directly in-line with the tenons on the slats when the tambour is assembled. Glue a 3/8" diameter by 1-1/2" long dowel in the hole in each end of the lead strip (see Figure P).

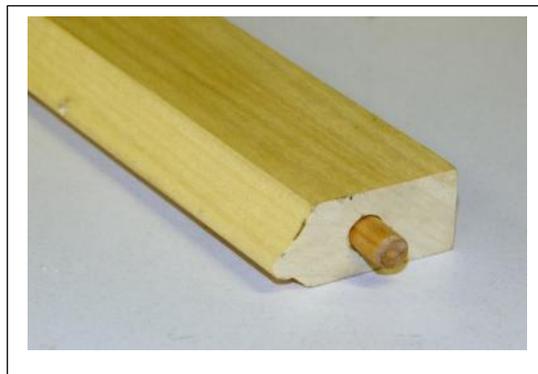


Figure P

You will need to decide if you are going to use a surface mounted pull/knob or rout a finger pull recess in the face of the lead strip to aid in opening and closing the tambour door. A template can easily be made for a 3/4" dish cutter router bit with top mounted bearing to make the finger pull recess. The finger pull recess in our bread box was made using a template with a 1" wide by 4" long opening in it (see Figures Q & R). Use a 1" diameter Forstner bit to cut the round ends of the 4" long recess. A jig saw is then used to connect the two 1" end holes to create the template opening. You may need to file the straight cuts to remove any undulations on the opening of the template or they will create a wavy recess if left rough.

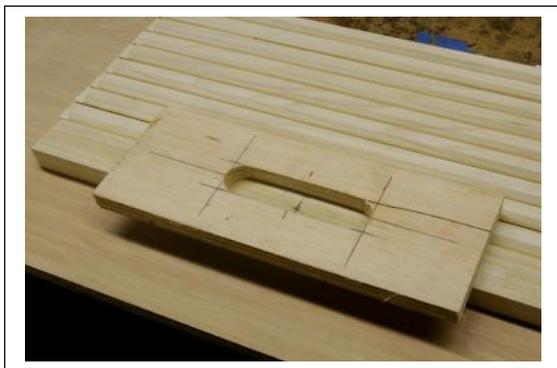


Figure Q



Figure R

Cut the support wire for the tambour to a rough length of 24". Assemble the tambour by crimping a sleeve on one end of the support wire. Feed the opposite end of the support wire through the lead strip of the tambour, by inserting it first into the 1/2" recessed hole in the back of the lead strip and going through the 1/8" diameter hole until it comes out of the top of the lead strip. Repeat for the other side. Thread the support through the tambour slats making sure to keep them all facing the same direction, as there is a front and back side to them. When you have the support threaded through all (9) slats, pull the tambour support wire tight and crimp another sleeve on the wire so the sleeve is tight against the top slat. Cut off the excess support wire (see Figure S).



Figure S

Installing the Tambour Door into the Carcass:

Turn the bread box carcass upside down. Slide the tenons on the tambour slot into the tambour door track slot from the bottom of the bread box side pieces. The tenons will slide in the 3/8" wide slot, which acts as the track for the tambour. Continue until the dowel embedded in the end of the lead strip is also inserted in the slot. Turn the assembly over and check that the tambour will slide correctly in the slot and the door will slide open and closed without needing any excessive force (see Figure T).



Figure T

Making and Installing the Carcass to the Base:

The base of the bread box is made from 3/4" thick stock. If you are unable to find a full 12" wide board, then gluing one up from narrower stock will be necessary and is actually preferred as you can decrease the risk of your base cupping across the grain by alternating the growth rings of each narrower board. Once you have glued up your blank for making the base, cross cut it to a finished length of 18-7/8" and rip it to a final width of 11-5/8". Using the 5/32" radius roman ogee router bit, rout the decorative profile along both of the ends and just the front edge of the base. The back edge will be left untouched (see Figure U).



Figure U



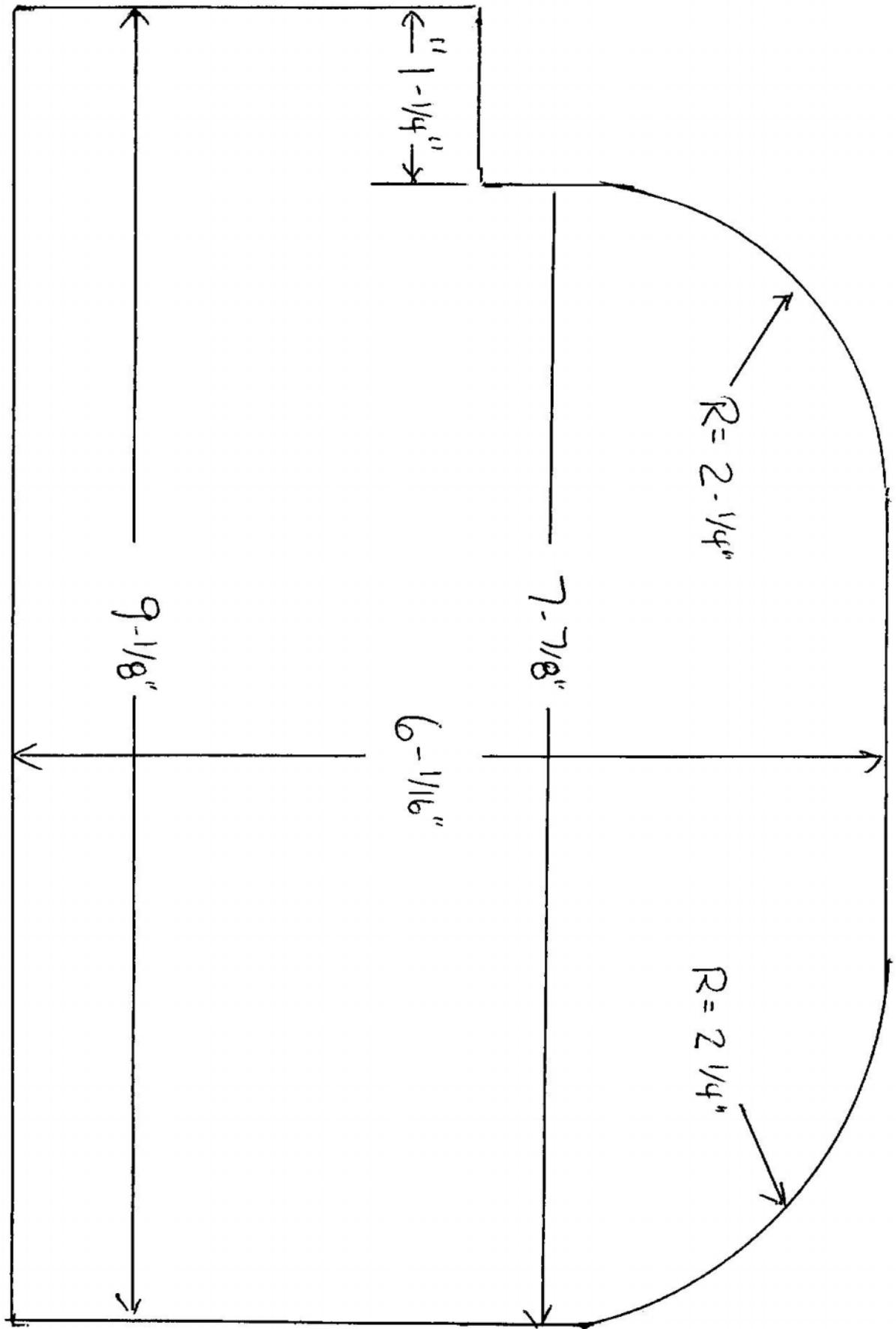
Figure V

With the breadboard carcass, with the tambour door installed in it, upside down on the work bench, align the back edge of the carcass and base. Make sure that you have the base positioned so that your overhang of the carcass is identical on each end. Countersink three holes in the bottom of the base where they will intersect the center of the bread box sides, at the following distances from the back edge of the base: 1", 4-1/2", and 8". Use (6) #8 wood screws to attach the bread box carcass assembly to the base (see Figure V).



Cut List:

Part:	Qty:	Dimensions:
Sides	2	10" long x 7-3/16" wide x 3/4" thick
Top	1	16-3/8" long x 6-7/8" wide x 1/2" thick
Back	1	16-3/8" long x 6-5/8" wide x 1/2" thick
Base	1	18-7/8" long x 11-5/8" wide x 3/4" thick
Lead Strip	1	16-3/8" long x 1-3/4" wide x 3/4" thick
Tambour Slats	9	17-1/8" long x 1" wide x 5/8" thick
Dowel Rod	2	3/8" diameter x 1-1/2" long



TAMBOUR TRACK TEMPLATE

