

Making Double Dovetail Splines with the MLCS Router Table Spline Jig



Items Used:

MLCS #9537 Router Table Spline Jig
MLCS #7697 11/16" diameter, 8-degree Dovetail Bit
MLCS #5402 3/8" diameter, 8-degree Dovetail Bit
Router Table with Miter Slot
Wood Glue
Flush Trim Saw
Belt or Orbital Sander
Optional: Table Saw

Start by making a box with miter joints and gluing up the box assembly. Once the glue has dried, the reinforcing double dovetail splines will be added to create a strong, decorative enhancement to the mitered corners, turning a plain box into a piece of art.

Cutting the Large Dovetail:

You want to create the dovetail socket at least halfway through the thickness of your corner. To determine the bit height, place the spline jig on the router table and place the box near one of the ends. Raise the router in the router table so the dovetail bit is at the desired height. At this point you will need to determine how many and the positions of the dovetail splines along the height of your box. To make things symmetrical and easier to adjust, our box had two dovetail splines cut in each corner. That allowed us to simply turn the box end-for-end to make each spline socket. Adjust the two support fences so that the spline location is centered in the opening of the cradle of the spline jig. (*Optional: To reduce the amount of material to be removed by the large dovetail bit, you may choose to first make a cut with a 1/4" straight bit or up cut spiral bit*). For the 3/4" material we used for this box, the bit height was set to 1-3/8" above the router table (see fig. A). Make the dovetail spline sockets in all four corners of your box (see fig. B).

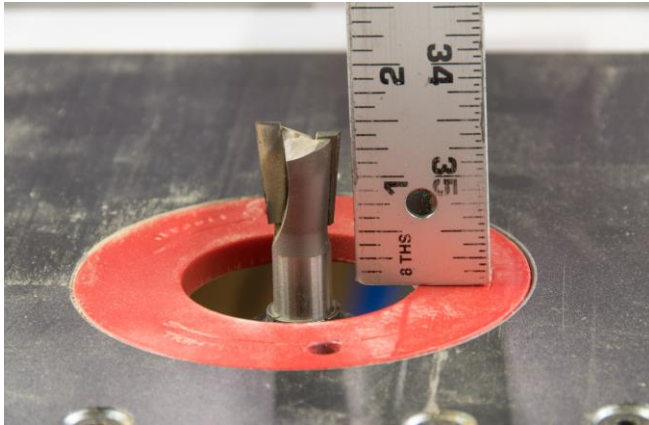


fig. A



fig. B

Using the same 11/16" dovetail bit, the spline material gets cut next. This is done on the router table. For maximum visual effect, a contrasting color of wood is suggested. Because the spline will be narrow, please make sure to use a push stick and keep your hands well away from the router bit. Set your router table fence so that the dovetail bit only cuts to the bottom face of your material. Cut the spline material to 11/16" wide to match the width of the dovetail socket. Cut the bevel on the first edge of the spline material and flip it around to cut the opposite edge to complete the spline insert (see fig. C). Cut the strip of spline material into short pieces and glue them into the spline sockets (see fig. D).



fig. C



fig. D

Once the glue has thoroughly dried, use a flush trim saw to cut the excess spline material close to the face of the box (see fig. E). Be careful not to cut it too close and scratch the sides of the box. Use a belt sander or orbital to continue to sand the spline inserts until they are flush with the sides of the box (see fig. F).



fig. E



fig. F

The small dovetails have to be cut into the dovetail splines that were previously created. For this the 3/8" diameter dovetail is used. The bit height needs to be adjusted to the desired height. For our box, the dovetail bit is set to a height of 1-3/16" above the router table (see fig. G). This will leave approximately 3/16" of the large dovetail spline as a border around the smaller dovetail. Once the bit height is set, cut the small dovetail sockets into the box ends (see fig. H).

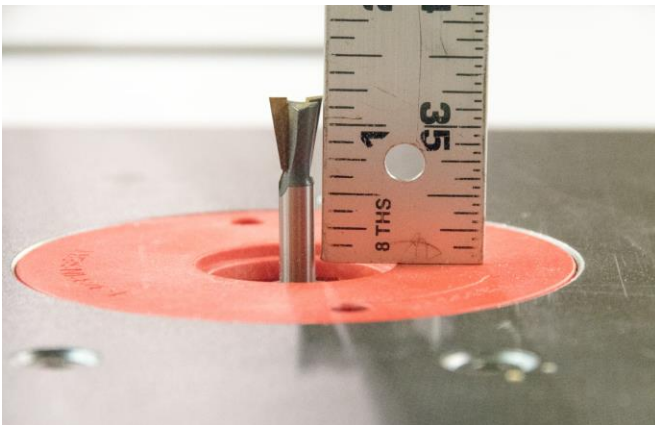


fig. G



fig. H

The small dovetail spline inserts need to be created next. Because of the narrow width, these can be made on a router table but a table saw with the blade tilted to 8-degrees is suggested as a safer alternative. Once the spline strip is cut, it gets cut into pieces and these are glued into the dovetail spline sockets and flush trimmed the same way as the large dovetail splines after the glue has thoroughly dried. Apply a finish and your box will become a treasured family keepsake.