The Table Saw Router Fence

By JEFF BRANCH

Once I decided to build a new router table, I knew the fence design had to be a good one. To save space, I wanted my router table to reside on the right side of my table saw. While considering ways to lock my router table fence in place, I wondered if I could do something in conjunction with my big table saw fence.

I had other items on my router table fence wish list. I wanted a fence which could be easily removed when not in use. My old router table had zero dust collection capabilities; something I wanted to correct with my new fence design. Also, I wanted a tall router fence face which had a t-track. The t-track would allow me to easily attach things like a feather board to the fence.

The design I settled on was a combination of two router fences seen in *Fine Woodworking* magazine. One article featured a router fence which clamped to a table saw

fence and was deep enough to add dust collection. This design directed dust to a hose mounted *under* the table surface. I liked the ease of attaching a router table fence to my table saw using clamps (four clamps) and the router table fence face was tall.

The other design had nice features too: a dust cavity which lead to an end mounted dust port, t-tracks, and clamping was accomplished using just two specialized clamps. One thing I did not like was the low height of the fence face.

I decided to take the best of both designs and come up with my own router fence. The resulting design is shown in the photo above. I was able to work all the features I wanted into the design and so far this router table fence has worked well.
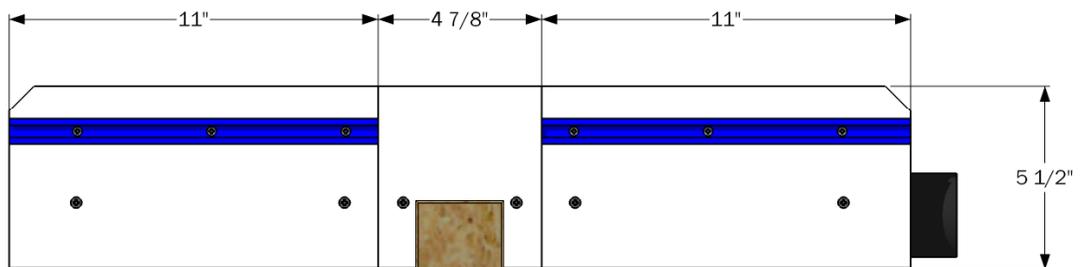
My router table fence is sized to work with the Jet 10" contractor style table saw. Most likely you will need to at least alter the fence length to fit your saw.
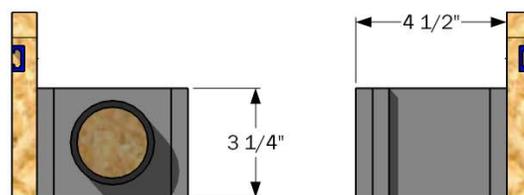
Main Dimensions

Top View

26 7/8"

5 3/16"

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Front View

11" — 4 7/8" — 11"

5 1/2"

End View

4 1/2"

3 1/4"
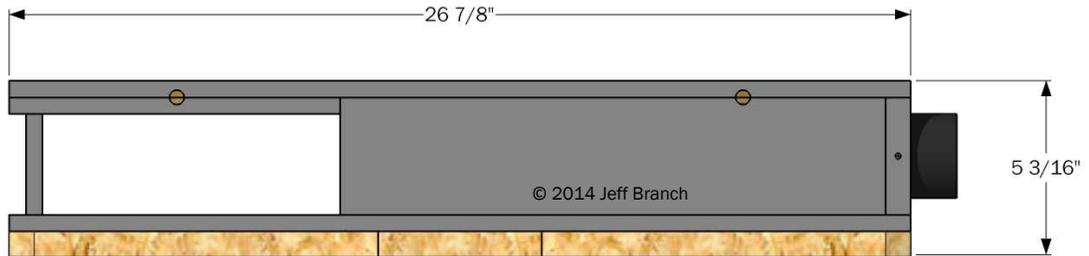
Materials

Since this router table fence is designed to work in conjunction with my table saw fence, I was most interested in ease of movement. I was a little concerned that the weight of this fence, when clamped to my table saw fence, would be heavy. I did not want the added weight to reduce the ease of movement of my table saw fence.

It is only natural for the additional weight of the router fence to effect the table saw fence. To minimize this, I selected both 1/2" and 1/4" birch plywood along with 3/4" melamine coated particle board. These materials resulted in a little weight, but fine adjustments using my table saw fence are possible.
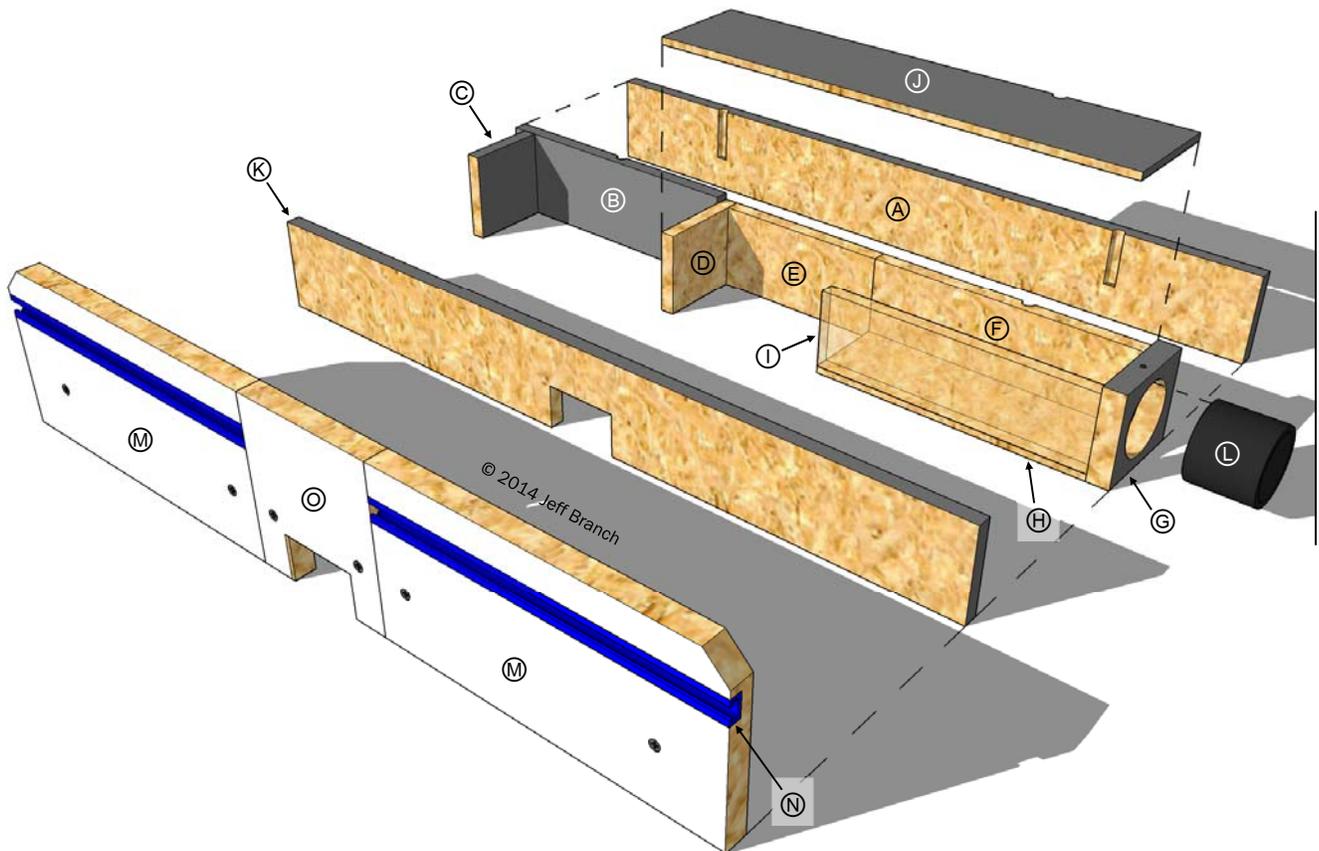
Cut List

Ⓐ 1 Back — 26-7/8 x 3-1/4 x 1/2"

Ⓑ 1 Sub Back — 9-7/8 x 3-1/4 x 1/2"

Ⓒ 1 Left Side — 3 x 3-1/4 x 1/2"

Ⓓ 1 Dust Chamber Left Side — 3-1/2 x 3 x 1/2"

Ⓔ 1 Dust Chamber Back Left — 6-1/8 x 3 x 1/2"

Ⓕ 1 Dust Chamber Back Right — 9-5/8 x 2-3/4 x 1/2"

Ⓖ 1 Right Side — 3-1/2 x 3-1/4 x 3/4"

Ⓗ 1 Dust Chamber Bottom — 9-5/8 x 3-1/2 x 1/4"

Ⓘ 1 Dust Chamber Front — 9-5/8 x 2-3/4 x 1/2"

Ⓙ 1 Dust Chamber Top — 16-1/4 x 3-1/2 x 1/4"

Ⓚ 1 Front — 26-7/8 x 3-1/4 x 1/2"

Ⓛ 1 Dust Port — See notes

Ⓜ 2 Fence Face — 11 x 5-1/2 x 3/4"

Ⓝ 2 T-track — See notes

Ⓞ 1 Fence Face Middle — 4-7/8 x 5-1/2 x 3/4"

Notes

You will need to adjust the length of your router fence to suit your needs.

Part **L** is available from Rockler.com, item #63555. Part **N** is available at Amazon - Kreg KMS7507 24" t-track. The t-track is 3/8" deep and 3/4" tall. See page 7 for information on the Grip-Tite clamps used to secure the fence to your table saw fence.

Be sure to understand and implement the safety steps found in your power tool user manual. Never underestimate the potential danger associated with woodworking power tools and hand tools. Be sure to use safety glasses, a dust respirator and hearing protection when appropriate. Make sure you have easy access to first aid supplies. Be safe in the workshop.

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Build the Initial Frame

Begin construction by forming parts A, B, C, D and E (see the cut list). Using a brad nailer and glue, attach the sub-back, part B to the back, part A.

Next position the left end, part C, 1/2" in from the left end of the back. Attach with brads and glue.

Attach the dust chamber left side, part D to the dust chamber back left, part E, with brads and glue.

Position the combined parts D and E adjacent to the right side of part B, flush with the bottom of part A (see below and page 3). Attach with brads and glue.

The next step is to create the right side, part G. It needs a 2 1/2" hole. I created this using a hole saw. Before you do this, test fit the dust port, part L by cutting the hole in a piece of scrap. The dust port I bought was slightly smaller than the hole. I decided to drill the 2 1/2" hole in part G and make slender shims to help wedge part L in
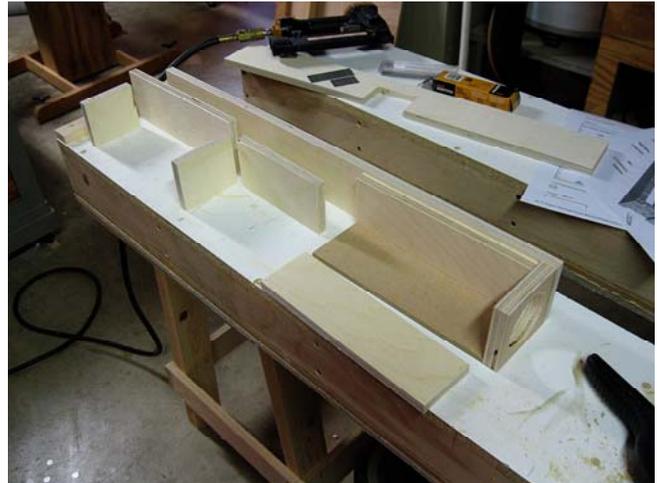
place. Prior to inserting part L, I applied silicone to the opening as an adhesive and sealer. One final step: pre-drill and drive a 3/4" long wood screw from the top of part G into part L as shown in 4b. In the same way, I added a second screw, driving it into part G and L from underneath.

3/4" long wood screw

Inset part C, 1/2"

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Ⓐ

Ⓑ

Ⓒ

Ⓓ

Ⓔ

Ⓖ

Ⓛ

4a
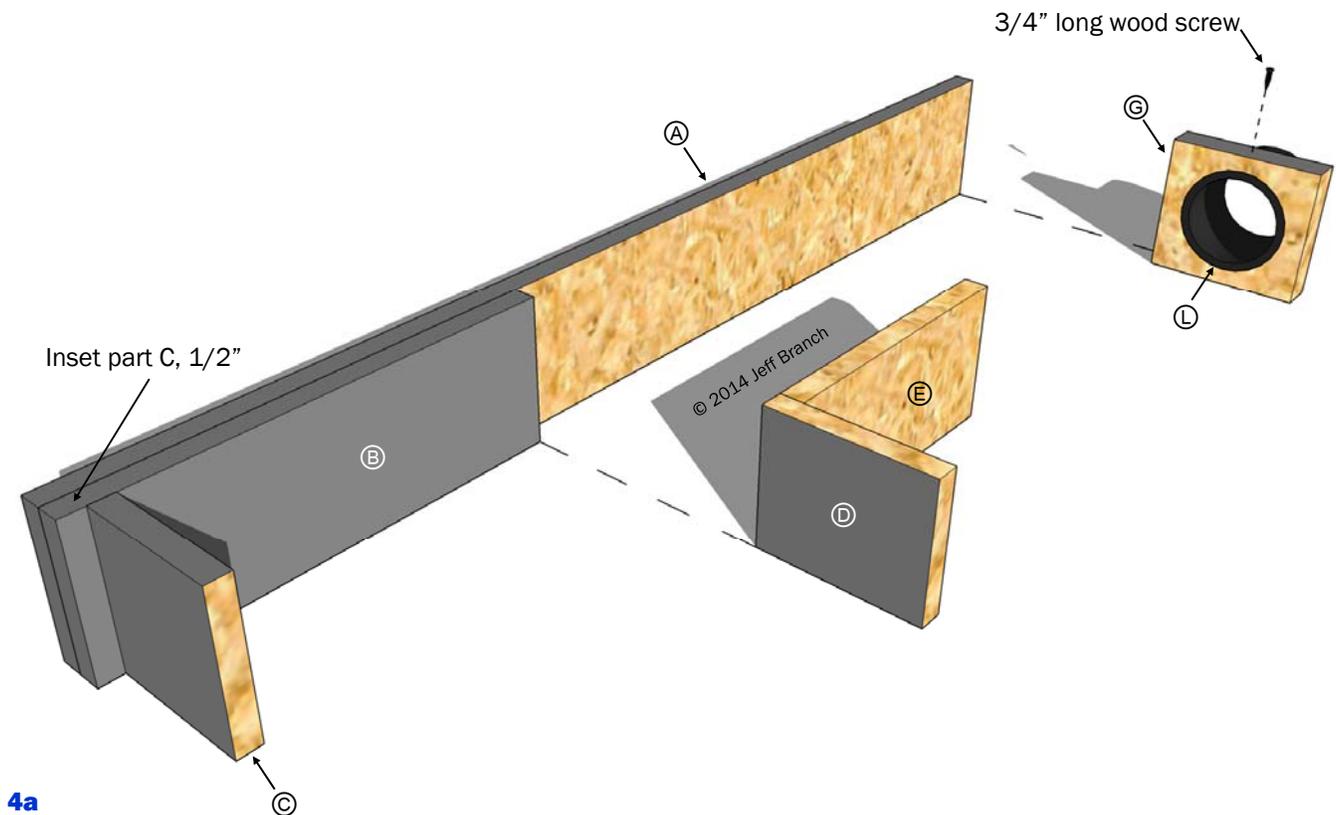
Build the Dust Chamber

Add the dust chamber by creating parts F, H, I and J following the sizes shown in the cut list.

Using the dust chamber bottom, part H, as a spacer, put it in place and then position the dust chamber back right, part F. Attach part F with brads and glue. Then, using brads and glue, attach parts H and the dust chamber front, part I.

Form the front, part K, taking note that the opening is centered left to right. The dimensions for the opening are shown below, but the size should be based on the router bits you use. If you use larger bits, adjust the size accordingly. I plan on changing the size of this opening as I add larger router bits to my collection.

Create part K, and attach it to the completed fence frame using brads and glue.

Next, form the dust chamber top, part J and position it as shown noting it fits into a notch seen in illustration 5a at the top of parts E, F and I. Part J fits flush with the top of parts A and K. Attach it with brads and glue.

Opening is 2-1/2" wide by 1-1/2" tall.

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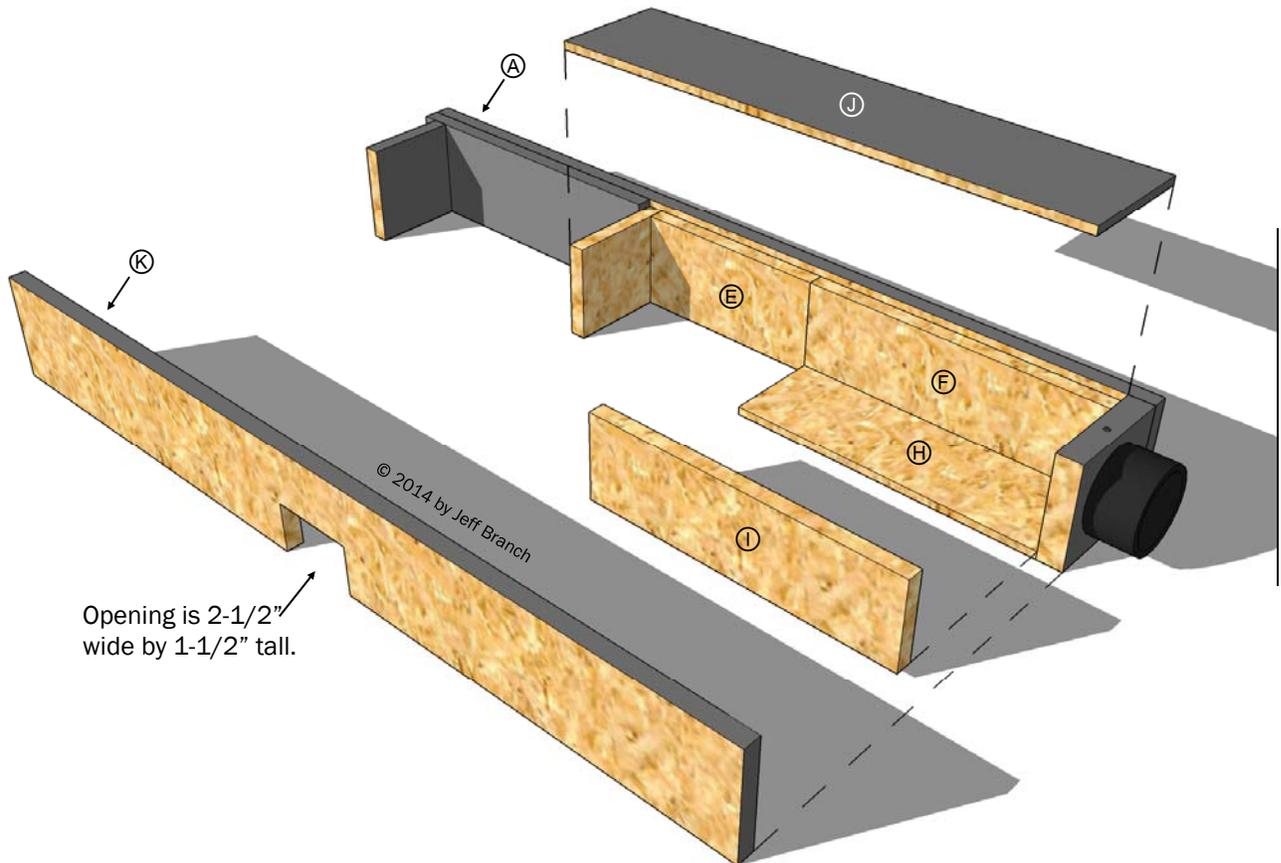
5a

Final Construction

The first step in final construction is to drill the two holes used to clamp the fence to your table saw fence.

Drill two 1/2" holes as shown in the photo to the right and illustration 6a below. The holes are 5" from each end of the fence and are 1-3/4" deep.

Next, create parts M and O following the dimensions given in the cut list. To avoid chip-out in the melamine, coated particle board, use a table saw blade designed specifically for cutting plastic (see more about this by clicking here).

For the fence face, part M, I clipped the outward top corner at 45° and formed a slot sized to match my t-track, part N, locating it 3-3/4" from the bottom of the fence. I attached the t-track with silacone and 1/2" screws. These screws extended out the back of part M, and I filed them smooth. I was concerned that using smaller screws would not have enough bite in the particle board.
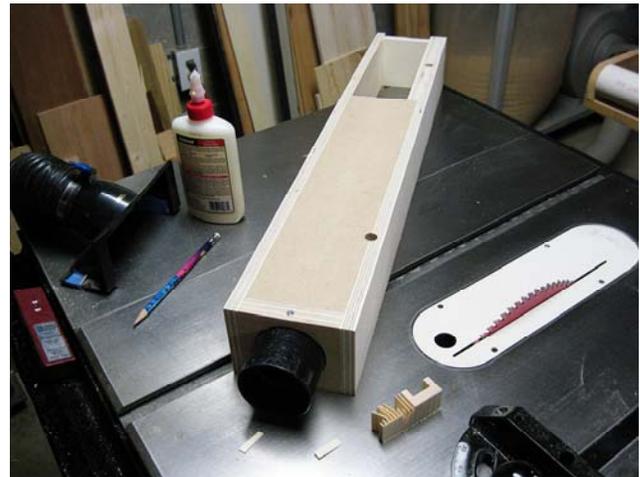
Next, I formed the fence face middle, part O and created the same size cut-out as used for part K on page 5.

I positioned parts M and O against part K and attached them with screws. Lastly, using my router, I cut a small chamfer along the bottom edge of parts M and O as well as inside the opening in part O.

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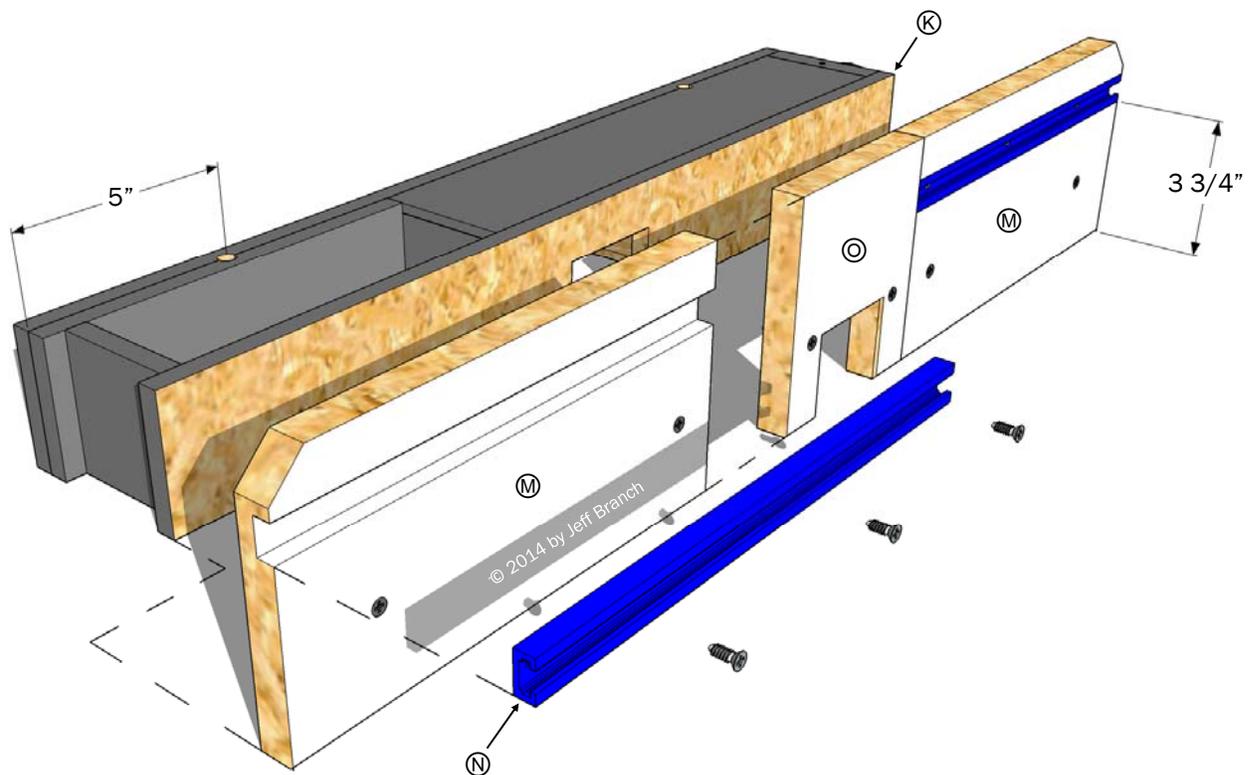
6a

Using Your New Fence

A nice feature of this fence design is the ease of attaching it to your table saw fence. To accomplish this you will need to purchase two specialty clamps called Grip-Tite Clamps, item #148872 at Woodcraft.com (see 7a and 7b).

I have not had noticeable deflection of my fence at the rear where the table saw fence is most prone to deflection, but I suspect it could happen with enough pressure. I will usually add an F-style clamp at the rear to make sure my table saw router fence does not move (see 7c).

A primary goal of this new fence was dust collection which is excellent using my 1-1/2 hp Delta dust collector. Dust at the router bit is non-existent.

Any easy way to attach the dust hose to the fence dust port is with a small ring clamp which has a thumb screw—note the blue thumb screw in 7c. See more about this by clicking here.

I keep a remote control on/off switch for my dust collector nearby when using my router table.
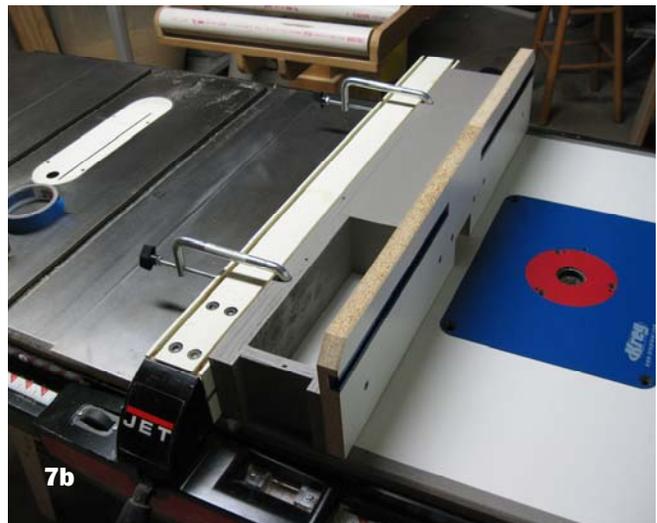
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7a

7b

7c