

Flush Trimmer Jig

By Santanu Lahiri

I found this jig in a book published by the Fine Woodworking people: **Ingenious Jigs And Shop Accessories**, publisher Taunton Press, ISBN# 1-56158-296-4. The Author is Jim Siulinski. The jig I made was somewhat simplified in the interest of time, but if you can copy the original, it will look **MUCH** nicer. I have provided a picture of the original jig at the end of this article so you can see what the original looked like.



This jig is somewhat unusual in that it performs the same function as a plane or a flush-trim bit in a router. It planes down edge banding strips to match the level of the rest of the surface. So what is special about it?

The answer is that it makes it a lot easier on the woodworker, and is much less prone to errors, not to mention substantially quicker than planing by hand. Okay, so a router with a flush trim bit can achieve the same result, just as quickly. The advantage of this jig is that you do not have to worry about holding the router perfectly straight on a narrow surface about an inch or less wide. I know I can't do it. If you can, you are exceptionally lucky.

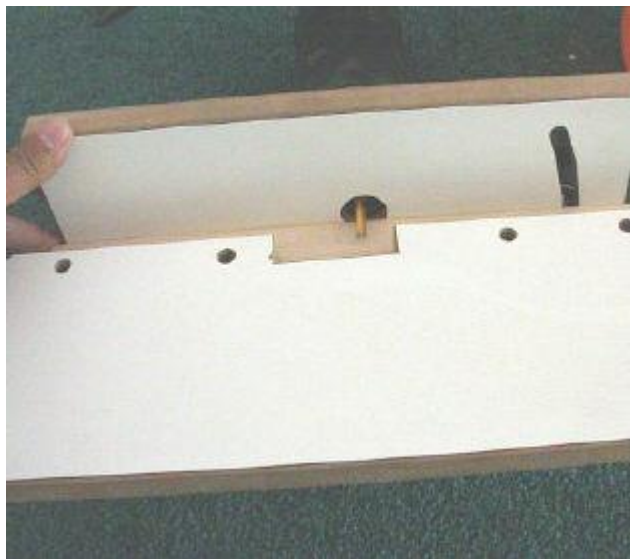
This jig gets around several problems: First, we'd need to mount edge banded surface vertically. Second we would have to keep the router vertical on a surface that may curve as we proceed with our trimming. This jig actually allows the surface to be kept horizontal, so no need to clamp it down as with a router. Second, the jig actually rides on the flat surface and follows the edge banding. So even if you were trying to trim the edge of a curved surface, you do not have any problems unless the curve is very tight.

There is a third benefit - this jig also can take out glue bubbles sticking out from the joint. This is not quite as easy with a flush trim bit mounted on a router.

Of course, there are limitations to the jig. It works best when the surface being flush trimmed is at least half again as long as the riding surface of the jig. Since the design of the jig calls for a carriage base at least 14-15" (36-38cm) long, your surface needs to be at least 21-24" (44-50cm) long by 5" (12cm) wide to really take advantage of the jig.

By the way, the jig is made for left-handed use. So that is good news for those of you left-handed people out there!

Here are two other views of the jig:



View from the bottom



View of the Carriage

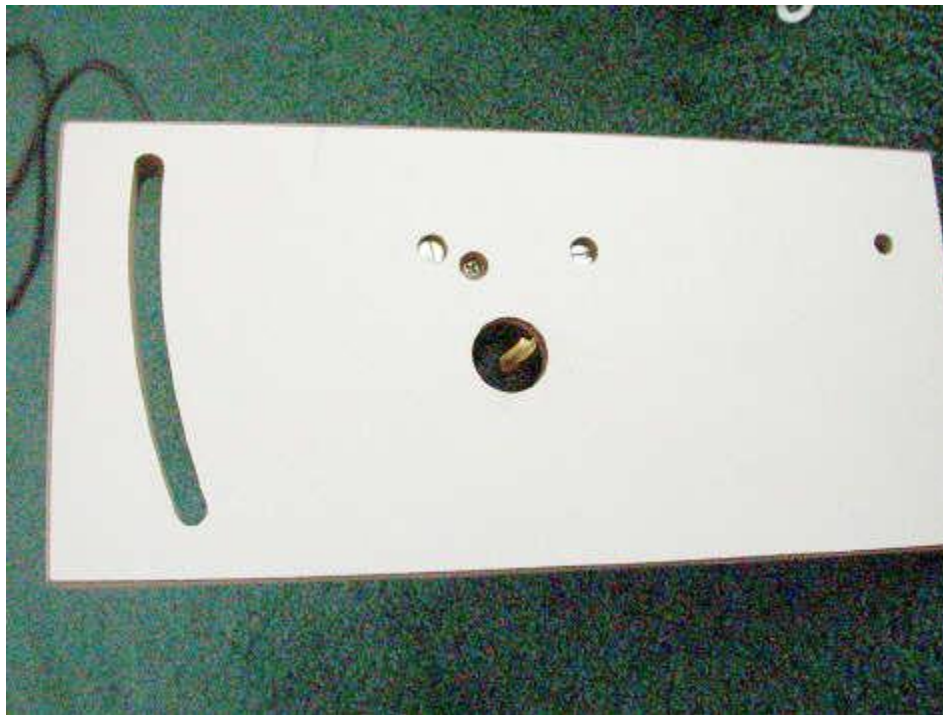


The jig has two main parts to it. The carriage which rides on the flat surface of the table or whatever else you may be trimming, and a vertical plate the trim router is mounted to. The body of the jig is made from $\frac{3}{4}$ " thick MDF, surfaced on both sides with white

laminates. I used Neoprene contact cement to glue the laminate to the MDF. The carriage also has a wood block 1½" thick and 3½ to 4" high running the length of the vertical plate (12") for mounting the necessary hardware.

The most difficult part of making this jig for me was routing the recess for the trim-router in the vertical plate. After my first attempt ended in a long gash the length of the plate, I ended up making a template for the router plate. On the Porter Cable trim router, the router comes off easily leaving a flat base. Remarkably convenient for marking out the template. Then I used a regular router with a plunge bit and a guide bushing to route out the recess. When making the template, don't forget the thickness of the bushing itself. Or you will find yourself wondering why the recess looks to be a 1/16th of an inch too small to take the plate. Again I speak from experience. You should also route the recess so that the depth is not more than the thickness of the router base plate (about 1/4"). There are three mounting holes on the baseplate of the Porter Cable trim-router. These take metric screws. I had to go to Sears Hardware to find the proper size. Take the baseplate with you, it will save a trip, as the screws are of two different sizes. I also found two good-sized round knobs to use on the jig. I used 5/16" bolts throughout the entire

project, so these knobs also had to be the same size.



The other slightly tricky part is routing the circular groove on the vertical plate. To do this, I had to make another jig out of acrylic sheet to mount my router. I used a 1/2" plunge cutting bit. The center was located at the hole on the far side of the plate. Locate this hole first, about 3/4" from the edge, and about an inch from the top of the plate.

After drilling the hole, use a 5/16" bolt to provide a good pivot point for the router. Next I mounted the circle making jig on the bolt and routed the groove in multiple passes, lowering the bit about an eighth every time.

The radius of the groove is somewhat flexible, but it should be large enough that it clears the trimmer base plate recess by at least two to three inches. Remember that in the final assembly,

you will have a knob riding the bolt from the trimmer side, and it need to be clear of the trimmer body.

The last item is drilling the hole for the router bit to go through. I used a 1" Frostner bit to drill this hole. Note that you have to provide good backing for the laminate when drilling this hole, otherwise the bit tears through the laminate on the far side and spoils an otherwise perfectly good surface.



Once the mounting plate is ready, you need to prepare the riser for the carriage. I made this out of two $\frac{3}{4}$ " maple blanks glued together. Size the block to the same length as the vertical plate. Clamp this block to the vertical plate so that the base of the maple block just

clears the hole for the router bit. Now mark and drill two $\frac{5}{16}$ " holes on the block, one through the $\frac{5}{16}$ " hole on the vertical plate, and another through the circular groove, about 1-1 $\frac{1}{2}$ " from the top of the groove. If you wish, you can counterbore these holes on the other side of the block (see picture near top of article). The $\frac{5}{16}$ " carriage bolts will go through these holes. I also attached the laminated MDF base to the block with four screws, as you can see in the picture.



The one thing you need to do before attaching the base is cut out the notch for the router bit in the base MDF plate. This was, for me, just under $\frac{3}{4}$ " deep. It allows the sawdust an escape route. When mounting the plate, be sure to align the edge of the plate along the middle of the wood block. This will create a $\frac{3}{4}$ " wide escape chute for sawdust, not to mention pushing the carriage base onto the table surface proper, rather than riding on the edge band itself.

The last item is the height adjustment. The brass angle forms my fine height adjustment addition. I could not find anything like the clamp Mr Siulinski had used, so I settled for an angle from Home

Depot. I simply mortised a slot the thickness of the angle and screwed it in. You can turn it into a proper height adjustment mechanism by threading the inside of the hole and using a bolt to control the height of trimming.

Final Assembly: I put the jig together with $\frac{5}{16}$ " carriage bolts driven in from the wood block side, mounted the router plate and locked them together using some washers and the round knobs.

To use the jig, turn the bit so that cutting edge is vertical and pointing down. Loosen the knobs, then position the carriage on the surface being trimmed. Double-check that the cutting edge of the bit is still vertical, turn the knobs to lock in the position. Now you can simply turn the router on and slide the jig along the surface being trimmed.