

FENCES FOR THE ROUTER TABLE

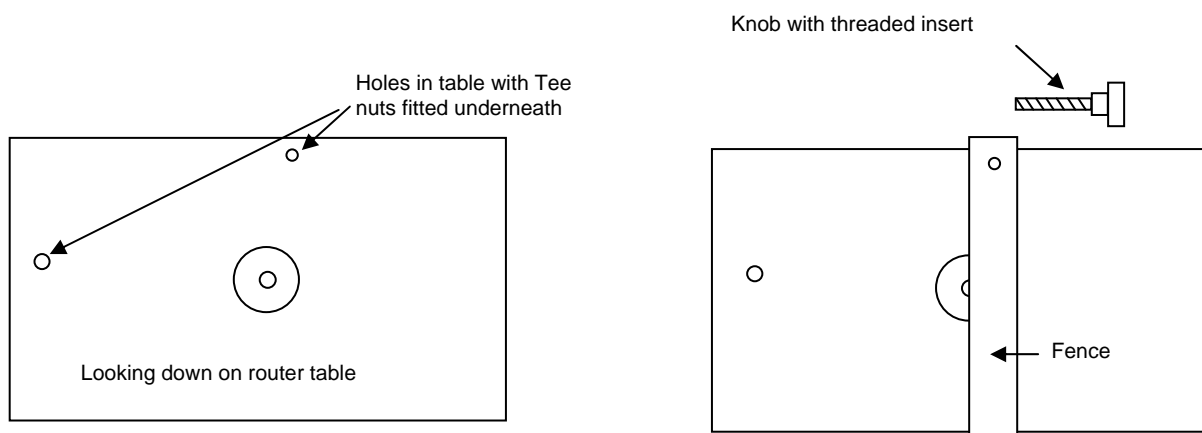
Over the years I have made all sorts of fences for the router table, some with dust extraction built in, and these ideas have slowly evolved to give some very simple and effective fences. I will describe two of them here in detail. It is possible to apply these ideas to all sorts of other situations. The idea is that I make a new fence for each cutter I want to use so that the fence matches the cutter exactly. This way the fence gives maximum support to the workpiece as it goes past the cutter. With boxmaking we are often handling small workpieces and it is vital that there is no possibility of the workpiece catching on a gap in the fence as it goes past the cutter. If we make the fence to suit the cutter then any gaps can be kept to an absolute minimum. For this idea to work the fence must screw down to a threaded hole in the table top, so it always goes back on the table in exactly the same position.

The best fence material is old recycled hardwood which is dry and stable, although pine is okay. Ideally we want a material that will remain flat and straight and will not wear, so the fences can be used time and again. These fences are ideally suited to router tables built along the lines of the Gifkins Table above.

Making the fences

To attach the fences to the table top you need a knob or two with threaded inserts and Tee nuts to suit. The details given below are for M8 threaded knobs and M8 Tee nuts.

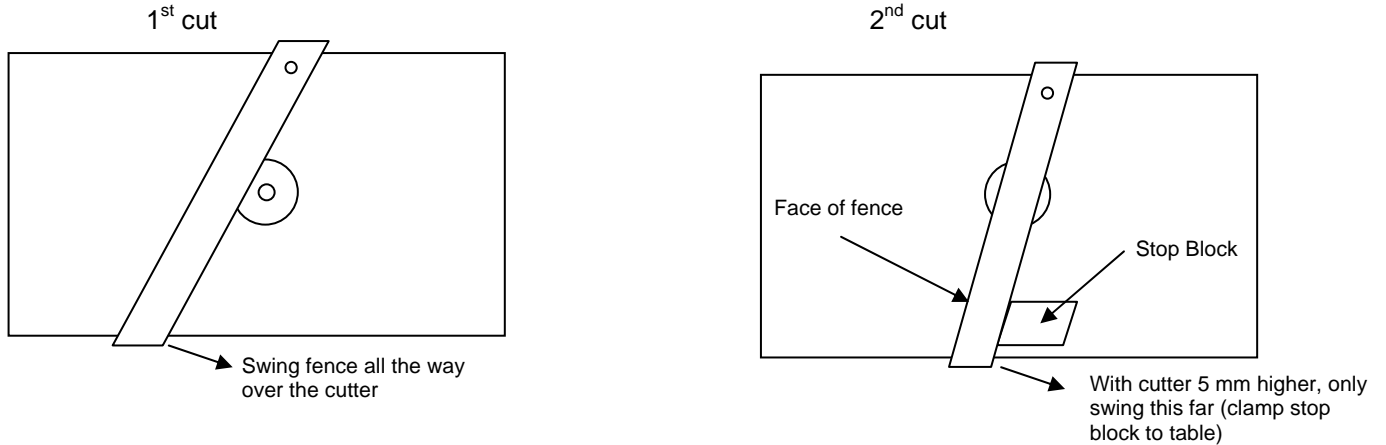
Start by drilling two 10 mm holes in the table top as shown on the next page, and fit captured Tee nuts on the underside of the table. To do this you need to use a forstner bit to drill a large hole through the Laminex on the underside, as the Tee nut needs a soft material to sink its teeth into. One hole is for short fences across the table and the other is for longer fences running the length of the table. These threaded holes are important as it means we can pivot the fence around these points, and it also means that the fence will always go back on the table in exactly the same position. I then drill an 8.5 mm hole in the fence and use a knob with threaded insert to hold the fence down to the table at one end. Don't make the hole in the fence too big as we don't want any free play.



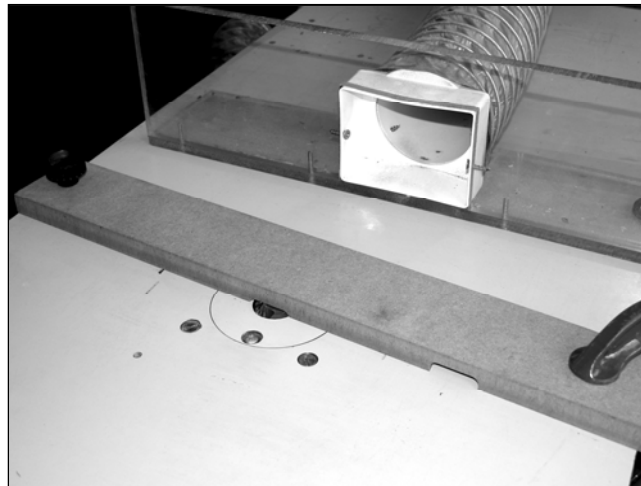
The beauty of this set up is that we can fit a cutter to the router and then machine a rebate through the fence by swinging the fence over the cutter.

Fence for panel raising cutter or tenon cutter

Fit the panel raising cutter to the router and set the cutter about 1 mm higher than you need for your current project. Turn the router on and swing the fence over the cutter to produce a dish shaped rebate right across the underside of the fence. Now raise the cutter about 5 mm and again swing the fence over the cutter, but this time not going all the way across. Clamp a stop block to the table so it stops 5 mm or 10 mm short of the face of the fence.



This way, there will be a deeper rebate on the back of the fence to aid dust extraction. In use, the fence is held with the knob at one end and a clamp at the other, and a dust extraction hood can be placed on the table behind the fence. The cutter should throw the dust well clear of the fence, so the hood can sit back from the fence.



Fence for slot cutter

This is an improvement on the fence described in my earlier "Boxmaking Plans - introduction to small joinery".

Start with a straight cutter in the router that is a bit larger in diameter than the 1/2" shank on the slot cutter (I used 14 mm). Use this to cut a slot in the fence, but not right through. This slot should stop 5 mm short of the face. It is best to do this in a few passes, only cutting away about 5 mm height of material each time. Clamp a stop block to the table so that each pass stops at the same place. This slot should be high enough to allow room for the set screw and washer which are above the blade of the slot cutter.

Now fit the slot cutter to the router and set the height 1 mm higher than you want for your project. With the router running, swing the fence over the cutter as far as it will go. The stopped slot from the previous cut won't allow the slot cutter to come right through the fence. Swing back off the cutter and re-set the cutter height to 1 mm lower than your project. Once again, swing the fence over the cutter as far as it will go. This will allow room for a bit of height adjustment when working on your project.

The idea of this fence is that the work is fully supported both above and below the cutter, as well as right up to the cutting tips before and behind the cutter. You would need to make a new fence along these lines if using timber that is a very different thickness to your current project.



50 mm x 3.2 mm Slot cutter



Fence for slot cutter.
Photo shows fence upside down, with face away from camera.



Slot cutter located loosely into fence.
Photo shows fence upside down, with face towards camera.



Tee nut inserted into underside of table, along with the range of hardware used.