

Design for a horizontal router fixture for the Festool Multi Function Table

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I often use sliding dovetail joints for many of my furniture designs. I like them because they are self aligning, self squaring, self locking and very strong. With all these highly desirable features it is odd to me that dado construction still is more popular than sliding dovetails. One explanation is that up until the introduction of the Festool rail guided routers cutting multiple properly aligned female sliding dovetail grooves was very difficult to do accurately. With the Festool rail guided routers it is very easy to do even for seemingly complex interlocking sliding dovetails like where a horizontal component is fastened to a vertical component and then locked in place by a second vertical component or a fore-aft component which also locks into a dovetail groove. Making these cuts is also made much easier by the use of the Festool Multi Function Table which allows for easy and accurate positioning of the work pieces.

Another reason many even seasoned woodworkers consider sliding dovetail joinery to be difficult is difficulty they have experienced in the past trying to accurately cut the male portion of the joint. Most often a router table is used. This requires the workpiece to be held vertically while being pushed past the rotating dovetail bit. This is moderately easy to do on short and wide work pieces but can be quite difficult to do repeatedly if the work piece is either long or narrow, or both. In these cases any tilting of the work piece will cause the male dovetail to be wider, and hence tighter, in some areas than others. The result is either an overly tight joint that may not go together at all, or overly loose joint that is too weak to be useful.

The easiest and most consistent way to cut the male portion of a sliding dovetail joint no matter what the configuration of the work piece is with a router held securely in a horizontal orientation where the work piece can be moved flat on a table surface and against a fence for length of cut control. This manual describes one means of constructing a jig which can easily slide into the side rails of a Festool MFT holding a Festool Router in the desired horizontal position as shown in this photo.



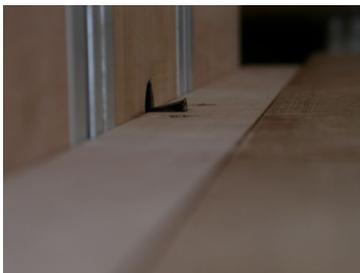


The jig is constructed from standard Festool catalog MFT rail pieces, Festool knobs and hardwood plywood scraps. The MFT rail sections form both the structure for the jig and guide the router base plate while it is raised or lowered to expose more or less of the dovetail bit.

The key to the safety of this jig is that the bit is fully trapped down inside a fence base that rests in the gap between the top surface of the MFT and the side rails as

shown in the photos below. Only enough of the bit is exposed to cut the proper width of male dovetail.

In the photo to the right a thin brass sheet is used as a wear surface and to make it easier to slide the work piece past the bit. The top surface of the MFT is used as the horizontal sliding surface for the jig so the size of work piece that can be accommodated



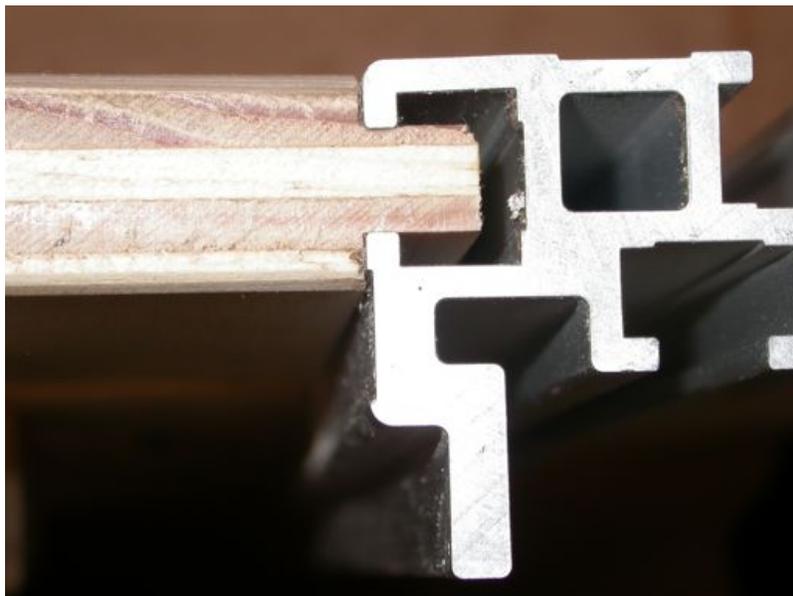
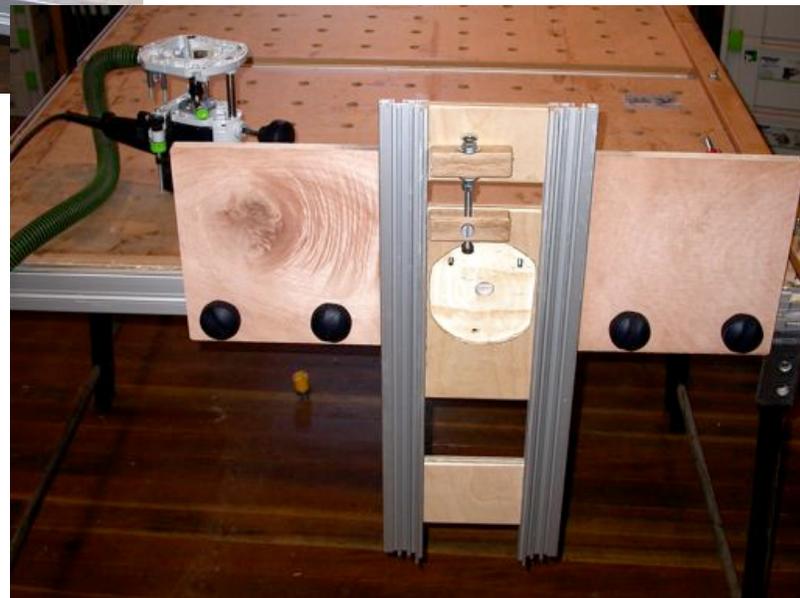
is limited only by the size of the MFT to which it is attached. Even very long work pieces can be accommodated by putting two or more MFT together with table joining elements available as a standard stock item from Festool.





This photo shows the completed unit resting on top of a Festool MFT with a Festool 1010 router attached. The fence base is shown held to the top of the MFT side rail by recessed 8mm flat head screws threaded into nuts in the top “T” slot on the MFT side rail.

The photo to the right shows the jig mounted on the side rails of the MFT without the router. The router is raised and lowered by means of the threaded rod that passes through the fixed upper support and through a barrel bolt in the moveable router mounting base which slides up and down and is held in position by the channel extruded into the MFT side rails used as jig supports.



The photo left shows how the plywood is machined to fit into that channel. The pieces above and below the movable router base plate (the center piece) are fixed to the two aluminum supports (the MFT side elements) while the middle piece is free to move up and down to change the depth of cut. All three pieces of plywood are machined at the same time and then cut into the three components shown. That way the top



and bottom pieces establish and hold the distance between the two aluminum rails to be the same throughout the range of travel of the center, router base, component. Adjustment is easy, smooth and very repeatable. No locking is necessary since the weight of the router holds the setting well.

Dust collection is maintained through the standard Festool 1010 dust

collection port

The following photos show just how easy it is to attach, remove and use the unit in a va-



riety of situations. can be accommodated on the flat surface of the



Large and small pieces routed easily on the large MFT.