

Table Saw Taper Sled By Don Garner

To make quick and accurate tapered cuts using your table saw, nothing works better than a taper jig.



There are two styles of taper jigs out there, one is a hinge style jig (we featured a version of this style back in March of this year, also submitted by a listener) while the other is this month's Jig of the Month, a sled style jig.

While both styles get the job of tapering components done, the sled version is a little more versatile and easier to set up. Especially when it comes to making tapered cuts in larger components or odd shaped components.

Let's start with a list of the parts needed for making the sled in our shops.

1. Sled base – 7" wide, $\frac{3}{4}$ " thick plywood
2. Adjustable fence – 4" wide, $\frac{3}{4}$ " thick plywood
 - * The length of the sled should be at least 1-1/2 X's your table saw top depth. For example: 22" deep top = 33" long sled
3. (3) Carriage bolts with wing nuts and washers
4. (2) Toggle Clamps

Next let's start to assemble the pieces to build the sled. Once the sled base and adjustable fence are cut to their correct widths we need to cut slots through which the carriage bolts stick up to secure the two pieces together.



We need three lines marked at equal distances from the top, bottom and middle on both pieces. Mark the top and bottom lines about 3-4" in from the ends. It's

important that all three marks line up with each other as exactly as possible, so that the jig works correctly and hassle free.

The slots will need to be wide enough for the carriage bolts to move back and forth relatively freely and to allow for any slight adjustments.

Start by drilling a hole at one end of the slot and then using your jigsaw or a spiral cutting router bit you can cut the slot along it's length. Note in the pictures that the slots don't extend to the edges of either piece.



For the slots on the base piece, we're going to need to countersink the slots to accommodate the carriage bolt's head so that it will ride smoothly across your tabletop.



This countersinking can either be done freehand with your router (please be extra careful so it doesn't get away from you) or with a series of cuts using a forstner bit. Either way, make these cuts deep enough for the carriage bolt.

So once the slots are cut on both the fence and the bases you can insert the carriage bolts and add the washers and wing nuts to secure the pieces together.



The next step is to add the toggle clamps to the trailing end of the adjustable fence. One near the end and the other towards the middle is probably a good idea for overall securing of tapered components to the sled.



So now that it's built, let's put it to use!!

Start by setting your table saw's rip fence to make a 7" wide cut (the width of the sled base). Lay the component on the sled so that the portion to be removed overhangs the blade side.



It's easier if you mark one end with where the cut will start and the other with where the angled cut should end. Move the adjustable fence over to butt up against the component being tapered. Tighten the wing nuts and clamp down on the toggle clamps.

Move the sled into position against the rip fence and start making your cut just like you would with any other ripping cut.



Your final result will be a nicely tapered component cut to the exact angle and size that your project requires! Just keep the fence in place and you're ready to go again!