

# Build an Economy Router Table Top

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## *A Starter Router Table Top*

Originally: "Build an economy table top and install a mounting plate" by Mike on 07-30-2009 at <http://www.routerforums.com/table-mounted-routing/15637-build-economy-table-top-install-mounting-plate.html#post127219>

Object: Build a router table top and install a mounting plate for maximum value. This project is for beginning skill level and up.

Materials required:

- 1 Rockler phenolic impregnated Baltic birch plywood, 3/4" x 24" x 32"
- 1 Grizzly PT10432047 "insert" (Mounting plate)
- 1 Rousseau RM3509-T Template mounting kit
- 1 roll double sided carpet tape
- 1 bottle of thread lock

Total cost: Under \$70

[Note: Rockler no longer carries this plywood, and the price is likely over \$70 these days)

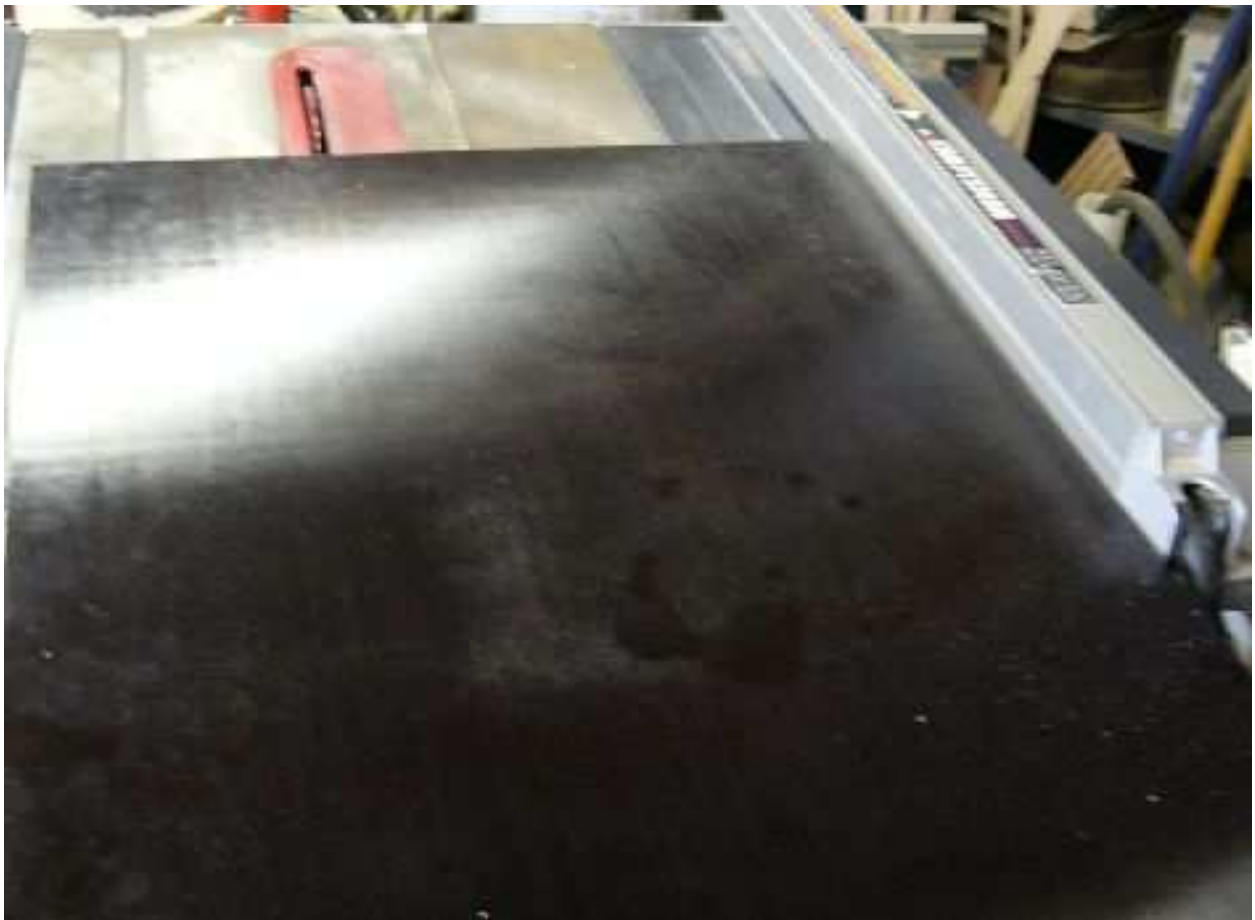
Tools required:

- A plunge router that accepts PC style guide bushings
- Brass set up bars
- A 1/2" solid carbide spiral up cut bit with a cutting length of 2"
- A saw
- A drill motor
- A 5/16" drill bit
- Two C clamps
- A punch with an end diameter of 1/4"
- A hammer
- A tape measure
- Scissors
- Safety glasses and hearing protection

Begin by cutting 2" off the length of the board which will leave it at 24" x 30". I did this with my panel sled on my table saw but you can use a circular or hand saw with a guide jig.



The next step is to rip cut the board to 16" width. I used the fence on my table saw as a guide.



Save the 2" x 24" and 8" x 30" pieces for building a fence.

Clamp your board onto saw horses or a table edge. Position the mounting plate 4-3/4" from the end of the board with its length running across the short span and center it.



Apply the carpet tape around the guide and press firmly into place. Remove the backing paper from the tape and center the fiber board template on the mounting plate. There will be about 1/16" opening around the mounting plate. Press the template firmly down onto your board. Remember all set up is done with the router unplugged. Install the special guide bushing in your router, and install the 1/2" router bit.



Position your router in the lower left corner so the guide bushing is against the templates two sides. Lower the bit until it contacts the wood and lock it in place. Using a 1/2" and a 3/8" set up bar stacked to equal 7/8" set the depth stop. This will allow the cutter to extend just past the bottom of your board for a clean cut. Release the plunge lock so the bit rises into the router base. At this point I suggest you get someone to help hold the board in place. Even when tightly clamped I had some movement and had BrianS hold the board to prevent this. Be sure you are both wearing safety glasses and hearing protection, check to be sure the router switch is in the off position and plug the router in. Turn on the power and plunge the bit through the board. Lock the router in the down position and follow the template clockwise around the hole.



The inside will drop free of the board when the cut is complete. Raise the bit, shut the router off and unplug it. Using the Allen wrench provided remove the spacer ring from the guide bushing. Position the router in the lower left corner, lower and lock the router so the bit is touching the black lip. Use the lip of your mounting plate to adjust the depth stop. Release the plunge so the bit raises up into the router base. Again have someone hold the board to prevent movement. Check that the router switch is in the off position, plug the router in and turn the router on. Follow the template in a clockwise direction until the lip has been cut. Raise the bit back into the router base, turn the router off and unplug it. Clean away all the dust and set the mounting plate into the opening. The plate should set just below the table surface. There will be about 1/32" play from end to end and side to side. This is normal. Mark the location of the 4 corner holes onto the lip. I used a transfer punch but a nail would work fine. Lift the plate out and set it aside. Drill the 5/16" holes just deep enough for the magnets to sit flush in the



corners. Use the Allen wrench to check the hole depth at the side of the hole and compare it to the magnet. Your board should now look like this:



Insert the magnets into the holes and lightly tap into place with the punch and hammer. If you have a magnet that is too low you can use a 1/8" drill bit and drill through from the other side to push the magnet out. A drop of epoxy in the hole should cure this problem. When your magnets are flush put the mounting plate back into the opening. Remove the template and carpet tape. Apply the thread locker to the Allen screws and turn them into the corner holes with the Allen wrench provided. Start off a bit low until all the screws are in place and then level the plate to the table surface. The input side can be a hair lower than the table surface, and the output side can be a hair above the table surface. This will let your material pass easily through. Let the plate sit until the thread locker sets up per the instructions. I prefer

to use Vibratite for this. It is the only thread locker that can be readjusted and after 24 hours it re locks the fastener.

Here is the finished table top in the back of Brian's van for the trip home.



Why 16" x 30"? This is the size of the Router Workshop table top. It will handle any job you throw at it.

Why no T tracks? You can clamp any accessories in place or add the tracks if you choose to. They are really not needed.

What about building a fence or table cabinet? These will be covered in other threads.