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tuning up your **Router Table**

Follow these tips to maximize the potential of this shop workhorse.

■ Along with the table saw, the router table is one of the most useful tools in the shop. A flat and sturdy router table makes routing safer and more accurate. And you may not give it a lot of thought — until something goes wrong.

▼ **Flatness.** A straightedge will show you if there's a dip or crown in the tabletop.

But you can give your router table a simple top-to-bottom checkup to find and correct any problems. The payoff will mean better-looking joints and edges.

Tabletop

My first router table was nothing more than a plywood table attached to a stand made from “two-by” material. After a while, I noticed that the depth of cut wasn't always consistent.

After a little investigating, I discovered there was a slight dip in the surface — most likely caused

by the weight of the router. A flat table is a big factor in getting accurate cuts when routing.

You can easily check the flatness of the top with a straightedge. You'll want to check across the center of the table from side to side and front to back. You're looking for any dips in the table. (A slight crown is okay.)

The problem with even a slight dip is the workpiece can “bridge” the hollow spot without contacting the table. And that means a shallower cut in the middle of a long workpiece. Or it can result in joinery that doesn't quite fit right.

But there's a simple solution. You can add some bracing under the table to flatten it, like you see in the photo at left. I like to create a slight crown at the center of the brace to help keep it flat.



Check for high and low spots



▲ **Bracing for Support.** Attach bracing to a sagging tabletop to keep it flat and rigid.

Router Insert Plate

Another area to look at is how the router is mounted. The router on my first router table was simply screwed to the underside of the top. It worked great, but I was limited in the diameter of bits I could use because of the fixed opening size in the tabletop. And the thickness of the top reduced the depth of cut I could make.

For most of us, an insert plate eliminates these problems. But there's more to it than just adding a plate. There are a few adjustments to make to help you get the

accuracy and results you expect from your router table.

Tight Fit. The first thing you need to do is make sure the plate fits properly in the opening. It shouldn't move from side to side or front to back. You need the insert plate to be a solid foundation for the router and bit for safer and more accurate routing.

If you find that your insert plate moves at all, you can shim the sides of the plate or the recess with tape. I prefer clear packing tape since it allows the plate to slip in and out easily, but any tape you have handy will do. Your goal is to eliminate any "wobble room" when the plate is installed in the table.

Flush. The next thing to check is that the plate is flush with the tabletop at all four corners. If it isn't, the workpiece will catch on the edge of the plate or recess.

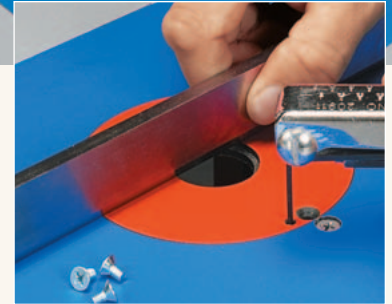
There are some easy fixes for this. You can shim the plate with tape (upper photo at left). Or you can install "leveling screws" in the recess (lower photo at left). Adjust the height of each screw until the plate is flush all around.

The ultimate option for leveling the router plate is to purchase a set of levelers like you see at right.

◀ **Leveling Screws.** A screw in each corner of the recess fine-tunes the height of the plate.



▲ **Flush.** Use a straightedge to check that the plate and insert are flush with the top.



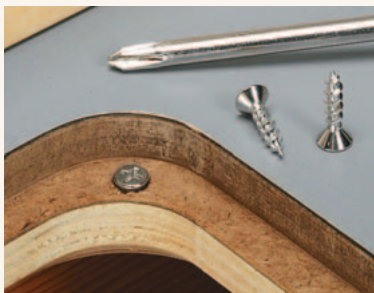
They fasten to the underside of the table. Then long set screws are adjusted up or down to "dial in" the height of the plate.

Reducing Rings. Finally, if you have an insert plate with reducing rings to accommodate bits of varying diameters (inset photo above), check them with a straightedge and tweak them until they're flush with the top of the plate, as well.

▼ **Leveling.** Commercial levelers (like these from Kreg), make it easy to keep the plate flush with the top.



▲ **Tape Shim.** A layer or two of tape may be all you need to tweak the height of the plate.



Miter Slot

A miter slot is a feature that lets you use featherboards and sleds, and make angled cuts with a miter gauge. If your table doesn't have a miter slot, it's easy to add one. It can be a simple groove cut into the table, as you see in the photo at right. Or you can add an after-market aluminum miter track for added durability.

Regardless of the type, when it comes time to use a miter gauge or a sled, you'll want to check for a good fit in the miter slot. Here, the goal is to have a smooth, sliding fit without any side-to-side play. If the miter bar is a little loose, you can shim it with aluminum tape from an auto parts store (far right photo). If it's too tight, simply file or sand it lightly until it fits.



▲ **Proper Fit.** Check for side-to-side play and make sure the bar is flush with or below the top.



▲ **Shim to Fit.** Shim a loose-fitting bar with foil tape you can buy from an auto parts store.

Fence

Even though I often use bearing-guided bits, having a fence can make routing safer and more accurate. And let's face it — all you really need is a board clamped to your router table. But even if you have a feature-packed fence, there are some things to consider.

Flat & Straight. The first and most important thing is that the fence has to be straight. Again, I use a metal straightedge to check the fence, as you see at right.

For a single-face fence (main photo at right), it's an easy task to check for flatness. If I see any gaps, I'll use shims to flatten it, if I can. Otherwise, I'll replace the face.

If your fence has a split face, like the one shown in the inset photo, the two pieces need to be parallel and aligned with one another. This helps keep the workpiece from catching on the fence or changing position relative to the bit as you slide the workpiece through. And on a fence with sliding faces, you can shim the back side of the faces to make sure they're aligned and parallel.

Square. Another key requirement for a fence is that it has to be square to the tabletop. Like the top, the fence serves as a reference surface for the bit. Here again, if it's not square, it can affect the accuracy of the cut.

A small machinist's square is a great tool for this job (photo below).

▼ **Square to the Table.**
Check the fence for squareness at several locations along its length.



▲ **Fence Flatness.** A flat, straight fence is key to getting accurate, repeatable results.

If you find the face of the fence isn't square, shimming it with a piece (or two) of tape on the underside may be all you need to bring it square (lower right photo).

Adjustability. The final thing to check is that the fence should be quick and easy to adjust. I make sure the fence slides easily across the tabletop. You may need to wax the top and remove any debris that might interfere with smooth positioning before clamping it down.

Accessories. What I've talked about so far will go a long way

toward helping you get the accuracy you expect any time you're working at your router table. But there are some other things you can add that will make any routing task safer and more enjoyable. You can see some of these items in the photos on the next page. (For sources of these handy accessories, turn to page 6.)

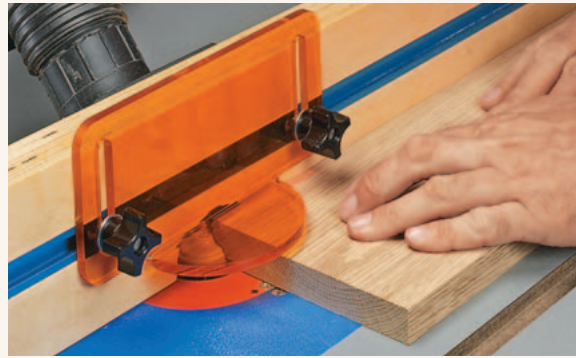
As you can see, it doesn't take much effort to give your router table a tune-up. After spending just a little bit of time, the results will show in your projects. 🛠️

▼ **Squaring the Fence.** A few strategically placed pieces of foil tape are all you may need to bring your router fence square with the table.



Simple and Inexpensive: 7 Great Add-Ons & Upgrades

1 Dust Port. Adding dust collection to your fence means a cleaner shop.



2&3 T-Track & Bit Guard. A T-track is great for adding useful accessories like this simple guard. It keeps your fingers a safe distance away from the bit.

4 Featherboard. For a more consistent cut, a featherboard keeps downward pressure on the workpiece.



7 Sturdy Table. Make your table rock-solid by adding these heavy-duty levelers.



5 Miter Slot. You can use a miter gauge, a sled, or other accessories in a miter slot.

6 Switch. With this switch upgrade, a simple bump is all you need to turn off the power.

Sources for Router Table Tune-Up

Router Insert Plate

Kreg Tool: [PRS 3030](#); Woodsmith Store: 618062

Router Insert Plate Levelers

Kreg Tool: [PRS 3040](#); Woodsmith Store: 618063

Bit Safety Guard

Rockler: [67157](#)

Dust Collection Port

Rockler: [35317](#)

Safety Power Tool Switch

Rockler: [20915](#); Woodsmith Store: 456549

Heavy-Duty Lifting Levelers

Rockler: [81239](#); Woodsmith Store: 454430

These specific sources were also cited

- Kreg Tool Company
kregtool.com
800-447-8638
- Rockler
rockler.com
800-279-4441
- Woodsmith Store in Clive
800-444-7527