TOOL TEST

Router Tables

The best offer flat tables, versatile fences, and good dust collection

BY ROLAND JOHNSON

What about the router? Three options

There are three ways to equip a router table. First, you could bolt a fixed-base or plunge router to a router plate and drop it in the table. But then you're left reaching under the table to make height adjustments, and pulling the motor out to change bits. Instead, consider setting up the table in one of the two other ways. You can use a router with built-in above-the-table height adjustments. These routers also raise the collet high enough for above-the-table bit changes. Or, best of all, get a router lift and clamp a router motor in it.

There seems to be no limit to what the router can do. That's why just about every woodworker has one. But if you are using the router only as a handheld tool, you're not taking full advantage of its versatility. Mounted in a table, the router becomes a super-accurate joinery machine that can spin out perfect sliding dovetails, and tenons that fit their mortises straight from the table. You can also rout more consistent edge profiles because the router won't tip.

It's not hard to make a router table in your shop. All you need is a piece of plywood or MDF for the top and a straight piece of wood for the fence. Bolt the router to the top and you're good to go. But there are problems with shopmade tables. If you go the simplest route and bolt a fixed-base router to the table, you're stuck reaching underneath to adjust the bit height, and removing the router altogether to change bits. Even using a router with above-the-table adjustments, you probably won't be able to change the bit that way because the table will be too thick to allow the collet to get above it. And a simple fence will be hard to adjust.

So, if you are looking for a new router table, it makes sense to get a manufactured one. You'll get a smooth, durable top, a rigid fence that's easy to adjust, and built-in dust collection. The top will also accommodate a router lift, which makes it a snap to change bits and bit height from above the table. Add one of those (see p. 46) and a powerful router, and you have a tool that adjusts like a shaper, setting up precisely for any task in just a minute or two.

With this in mind, the editors at *Fine Woodworking* asked me to review the manufactured router tables currently available. For accurate work, the table's flatness is critical. So I eliminated tops with MDF cores, because past testing has shown that they are more prone to sagging. That left only tables made from cast iron, solid phenolic, and aluminum. I'll tell you how I

Accuracy is critical

The heart of any router table is its top and fence. If these essential surfaces aren't flat, straight, and square to one another, smooth edge profiles and accurate joinery become much harder to create.

Perfectly flat is hard to find. *Most of the tables had a dip, but the cast-iron tables had a slight crown. In practice, a crown is better than a dip.*

All of the fence faces were square. *The T-tracks above them are set back slightly. This decreases the fence's effective height, but eliminates potential problems with aligning the fence face and T-track.*

They were straight, too. *All types of fences and fence faces were flat.*

NOT IDEAL

FIXED ROUTER

BETTER

PLUNGE ROUTER WITH ABOVE-TABLE ADJUSTMENTS

BEST

ROUTER LIFT/ROUTER MOTOR

TOOL-FREE FENCE LOCKS

Because it's used to guide parts through the bit, the fence simply cannot move during use. All of the clamping systems worked great, but some were easier to use.

Clamp the table's edge. *Only the Woodhaven fence locked down this way, but the lock was easy to use and made it a snap to quickly pull the fence off the table for pattern routing.*

Lock down to a T-track. *The Excalibur (shown) and JessEm fences slid easily in the T-track, and you don't have to reach down behind the fence to loosen and tighten them.*

Through a slot in the table. *Because of this system, the Rockler and Bench Dog fences were more difficult to move forward and back than other fences.*

tested them, which one came out on top, and which one proved itself to be the best value.

A crown in the table is better than a dip

A router table should remain flat when weighed down by your router (and a lift, possibly). One that dips is difficult to work with, because you'll have to force boards down into the valley to get consistent edge profiles—and there's sure to be some boards that won't bend easily. A dipping top also makes it hard to rout accurate joinery. Even with a flat router plate, an overall dip in the table around it will create problems.

I checked the flatness of all of the tables with a straightedge and feeler gauges. The tests were done with the two most likely router configurations for a table. For one test, I used a standard router plate and a Triton M0F001 2-hp router (which has integrated above-the-table adjustments). I did the second test with a lift and a Porter-Cable 7518 3¼-hp motor. However, two tables did not accommodate plates and lifts. Instead, they are predrilled for specific routers. I used the Triton TRC001 with the Sommerfeld table, and the Festool OF 1400 router with the Festool CMS table.

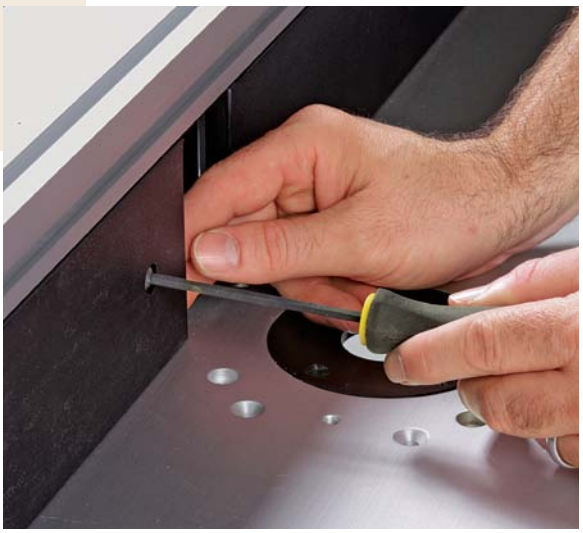
So how much dip is too much? In my opinion, a top that dips more than 0.030 in. (just less than 1/32 in.) would create significant

FENCE FACES THAT OPEN AND CLOSE

It's not safe to have big gaps between the fence faces and the bit, so the faces should be able to slide side-to-side to accommodate bits of different diameters.

Slots in the fence for adjustments. *On JessEm's fences, loosening three knobs on the back lets you slide the fence.*

T-tracks in the fence face work, too. *The only downside is that replacement fences need the T-track, too. That means you need a special router bit. (Rockler's Pro Phenolic table is shown.)*



A less convenient approach. *The fence on Sommerfeld's table requires the use of an Allen wrench (provided) to loosen screws before the faces can be adjusted.*

Photos: staff

T-TRACKS FOR HANDY ACCESSORIES

Clamping a featherboard to the top or a stop to the fence is a hassle. T-tracks allow you to do the same thing much faster.

Use the track on the fence for stops. *The fence is also a good place to attach hold-down-style featherboards and bit guards.*

Track in table holds more than a miter gauge. *Use it for a featherboard, which presses the stock against the fence, for smoother edge profiles.*

problems for edge profiles and joinery. But of course, the less the better. All of the tables, except for the two cast-iron ones, dipped somewhat, but not more than 0.030 in. Both of the cast-iron tops actually had a crown, which is better than a dip, because as long as you keep downward pressure on the workpiece right at the bit, you'll get accurate profiles and joinery.

Fence should be straight, square, and strong

Every router table needs a fence, preferably one that adjusts easily and accommodates featherboards, auxiliary fence faces, and other accessories. Like the table, the fence needs to be flat (no bow) along its length and square to the table when locked in place.

I used a long straightedge to check the fences for flatness. All of them were flat. And because the foundation of each fence is an aluminum extrusion, they are extremely rigid and won't bow when you press workpieces against them. Also, all of the fences were square to the table and did not move after they were locked in place, even using all the brute strength I could muster.

Another important feature of a router-table fence is ease of adjustment. All of the fences are easy to lock and unlock, and to move back and forth. However, I prefer the fences that mount to T-tracks attached to the table's edges; they slide with a bit less resistance. They're on the Excalibur, JessEm, and Sommerfeld tables.

Get better dust collection with an enclosed router

When upside down in a router table, routers tend to leave piles of chips and dust on the floor. All of the tables I tested have a dust-collection port behind the bit opening in the fence. They do a decent job above the table, keeping the chips mostly out of the way. But on their own they leave some chips on the table and a large pile on the ground. The two Excalibur tables and the Benchdog take dust collection to another level, collecting nearly all of the chips. That's because in addition to the fence port, they

DUST COLLECTION

Good dust collection improves both accuracy and air quality. The best tables collect dust from above and below.

Every fence has built-in dust collection. *These ports did a very good job of keeping the table clean, but can't catch everything on their own—a fair amount falls straight to the floor.*

A router enclosure makes a big difference. *The Excalibur (shown) and Bench Dog tables have ports that collect dust as it falls into a small cabinet around the router. They caught nearly everything the fence port missed.*

Online Extra

For a step-by-step lesson on router-table dust collection, go to **FineWoodworking.com/extras.**

Router tables, head to head

EXCALIBUR 40-200C

Street price: $760
Source: general.ca
Flatness with plate and router: 0.008-in. crown
Flatness with lift and router: 0.008-in. crown
Dust collection: Excellent

This table has it all: a cast-iron top that doesn't sag, a versatile and stout fence, a remote power switch, and the best dust collection. The fence is easily positioned with adjustable scales on the mounting brackets. The fence faces are easily adjusted and can be easily replaced with shopmade sacrificial fences. A scale on the top of the fence can be quickly set for any bit application and there are plenty of T-track slots to add jigs or featherboards. A single 4-in. dust port collects from both the router-enclosing cabinet and the fence. Router power is supplied through a push-button switch that can be mounted on either front leg, easily reached by knee or knuckle. Rounding out the assembly is a three-wheeled mobility kit that keeps all four legs firmly on the floor when the single steering wheel is raised.

JESSEM MAST-R-TOP WITH ROUT-R-FENCE AND ROUT-R-STAND

Street price: $560
Source: jessemdirect.com
Flatness with plate and router: 0.010-in. dip
Flatness with lift and router: 0.015-in. dip
Dust collection: Fair

This table has a good stand and a solid top, but its fence really shines. It has T-tracks on the front, top, and back, making it a snap to attach accessories like featherboards and stops. Edge-banded MDF faces can be adjusted quickly and easily replaced with wood or MDF when sacrificial faces are needed. Mounting brackets on the table's edge slide and lock nicely. However, there are no scales on the fence mounts or on the fence. There is a dust-collection port in the fence, but not beneath the table. These missing conveniences can be overlooked when you get such a strong performer at a great price.

also have a router enclosure with a 4-in. port. This allows them to catch the chips that escape the fence port and fall beneath the table.

The base should have a power switch

A stationary power tool—and a router table is one—should have a power switch that you can easily reach. You shouldn't be reaching under the table to turn the motor on and off. The tables from Excalibur and Festool handle this with a remote power switch mounted to the base. For the others, you'll need to buy one as an accessory (Kreg's PRS3100 is a solid choice for $32 online).

A clear winner, and a great value

After all of the testing was completed, it wasn't hard to pick the Excalibur 40-200C as the Best Overall router table. Its cast-iron top has a 0.008-in. crown, which is very slight and preferable to a slight dip. The fence is versatile, stout, and easy to adjust. Those features alone would make it a great router table. Add excellent dust collection and you have a combination that can't be beat.

The JessEm Mast-R-Top paired with JessEm's heavy-duty stand is the Best Value. The stand is stout and makes a nice base for the solid phenolic top, which was nearly dead flat—it dipped just 0.010 in. when weighed down by a router plate and router. But what really makes this table great is the Rout-R-Fence, which has plenty of T-tracks for attaching accessories and is easy to adjust precisely. □

Roland Johnson is a contributing editor, and a unabashed tool junkie and gearhead. He lives in Sauk Rapids, Minn.

BENCH DOG CAST-IRON ROUTER TABLE WITH STEEL CABINET

Street price: $1,000
Source: rockler.com
Flatness with plate and router: 0.005-in. crown
Flatness with lift and router: 0.005-in. crown
Dust collection: Good

The base offers great storage and good dust collection, but doesn't come with an external power switch, which is a hassle, because to control the motor you must open the cabinet and router enclosure doors. Rockler sells an accessory switch, however. This table fits only Benchdog and Rockler plates and lifts.

EXCALIBUR 40-200P

Street price: $695
Source: general.ca
Flatness with plate and router: 0.021-in. dip
Flatness with lift and router: 0.022-in. dip
Dust collection: Excellent

This table is identical to the 40-200C, but has a solid phenolic top, rather than a cast-iron one. The phenolic top had a slight dip. The version with the cast-iron top costs only $65 more, and has a crown rather than a dip, so we recommend it over this one.

JESSEM MAST-R-TOP WITH MAST-R-FENCE II AND ROUT-R-STAND

Street price: $630
Source: jessemdirect.com
Flatness with plate and router: 0.025-in. dip
Flatness with lift and router: 0.0028-in. dip
Dust collection: Fair

This table is identical to the router table chosen as Best Value, but with a slightly taller fence. There also are scales on the mounting brackets, which make it easier to set the fence's distance from the bit and to keep the fence parallel to the miter slot, which is helpful when you're routing cope-and-stick joints with a sled.

JESSEM MAST-R-LIFT EXCEL II

Street price: $1,050
Source: jessemdirect.com
Flatness with small motor: 0.002-in. dip
Flatness with large motor: 0.008-in. dip
Dust collection: Fair

This unique table has a router lift integrated into it and a phenolic top. Height adjustments are instant using a wheel attached to the base. It also has an under-table dust port. However, this port did not collect enough falling chips to prevent a pile from forming on the floor. This table also has the Mast-R-Fence II.

ROCKLER PRO PHENOLIC TABLE WITH STEEL STAND

Street price: $500
Source: rockler.com
Flatness with plate and router: 0.020-in. dip
Flatness with lift and router: 0.021-in. dip
Dust collection: Fair

This is a light but strong table. The fence is solid, and has plenty of T-track for accessories. It was easy to move, lock down, and adjust the fence faces. The base is sturdy, but has no power switch. This table fits only Rockler and Benchdog plates and lifts.

WOODHAVEN 8243K

Street price: $596
Source: woodhaven.com
Flatness with plate and router: 0.026-in. dip
Flatness with lift and router: 0.029-in. dip
Dust collection: Fair

This table's fence clamps easily and securely to the table, and has plenty of T-tracks for accessories, featherboards, and the like. However, the base is made from flat aluminum extrusions (for the legs) and MDF (for the aprons), which make it unstable during heavy use.

FESTOOL CMS GE BASIC

Street price: $1,200
Source: festoolusa.com
Flatness with Festool router: 0.002-in. dip
Dust collection: Fair

This compact router table is a great option for the job site. Also, the fence allows you to offset the infeed and outfeed tables with the turn of a dial. It fits only the Festool OF 1010 and OF 1400 routers, which claim above-the-table height changes. However, changing the bit from above the table was difficult.

SOMMERFELD TOOLS ROUTER TABLE

Street price: $670
Source: sommerfeldtools.com
Flatness with Triton router: 0.018-in. dip
Dust collection: Fair

This table's top is made from three pieces of aluminum bolted together. It takes some work, but once together it's solid, and the base is, too. The top is pre-drilled for two routers: the Triton TRC001 and Milwaukee 5625-20, both of which have above-the-table adjustments. It has the tallest fence in the group, which is nice for routing boards on edge.