

Router Lifts

A look at five devices designed to make the router table more user-friendly

BY JOHN WHITE

Crank turns the drive screw.

Carriage supports and guides the router.

Router mounts to the carriage.

Plate fits in a cutout in the top of the router table.

Guideposts support and guide the carriage.

Drive screw, turned by the crank, moves the carriage up or down.

A LOOK UNDER THE HOOD

All router lifts let you adjust the height of a router bit from above the table by turning a crank. Some even allow you to change bits from above the table.

Mounting a router under a table immediately introduces problems. For starters, to get at the router, you must bend down and reach under the table. Then you have to work with height-adjustment controls and locks that are upside-down and backward. And to change a bit with even a small measure of convenience, you must first remove the motor from the router base so the work can be done on top of the table.

Now, however, those problems just might become things of the past. Several products, generically called router lifts, have entered the market. And although these lifts vary in design, sophistication and cost, all of them promise to make the router table a friendlier place to visit.

I recently tried five router lifts currently on the market: Bench Dog Prolift PL1001 and PL1002, JessEm Rout-R-Lift, Router Technologies Router Raizer and Woodpeckers Precision Router Lift. Each of them allows you to adjust the height of the bit from above the table simply by turning a hand crank. And some of them go a big step further, allowing bit changes with the router in the table.

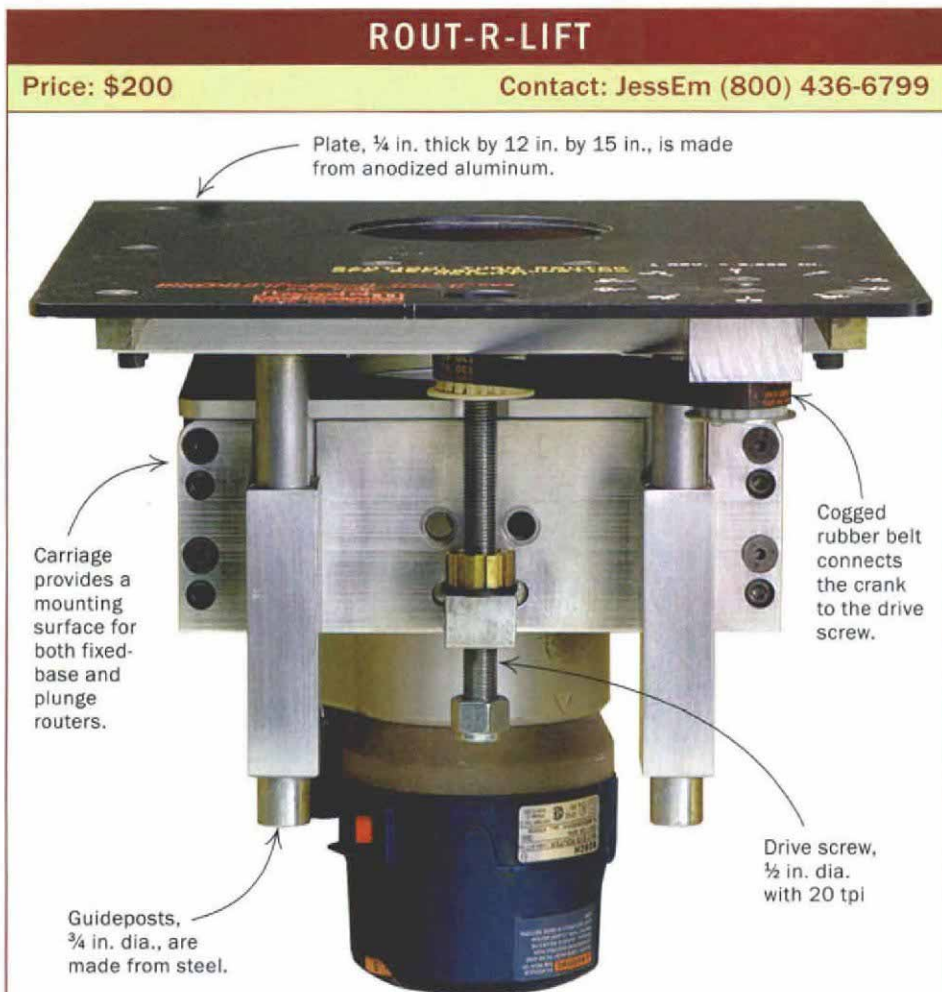
JessEm Rout-R-Lift

The Rout-R-Lift, made by JessEm, has a carriage that cantilevers out from two $\frac{3}{4}$ -in.-dia. steel guideposts. The carriage flexed a bit under firm hand pressure, but this was not a problem in use, even when I took fairly heavy cuts.

The carriage is raised or lowered by a 20-tpi (threads per inch) drive screw attached to the crank handle by a cogged rubber belt. An adjustable brass nut on the screw eliminated any backlash in the drive.

Because the base of the router mounts to the plate of the carriage, the Rout-R-Lift can accept both fixed-base and plunge routers. But because the router ends up sitting well below the surface of the table, bit changes are awkward. Above-the-table changes are possible with some routers. For example, with a Bosch 1617 fixed-base router in the lift, a wrench can reach the collet nut from above; the second wrench to hold the shaft must be positioned under the table. JessEm plans to release a heavy-duty version of the Rout-R-Lift that allows easier bit changes from above.

The table insert rings, made from phenolic plastic, lock into the top with a quarter turn. Five different inside diameters are



The router base mounts directly to the lift's carriage. That allows the Rout-R-Lift to accept both fixed-base and plunge routers.

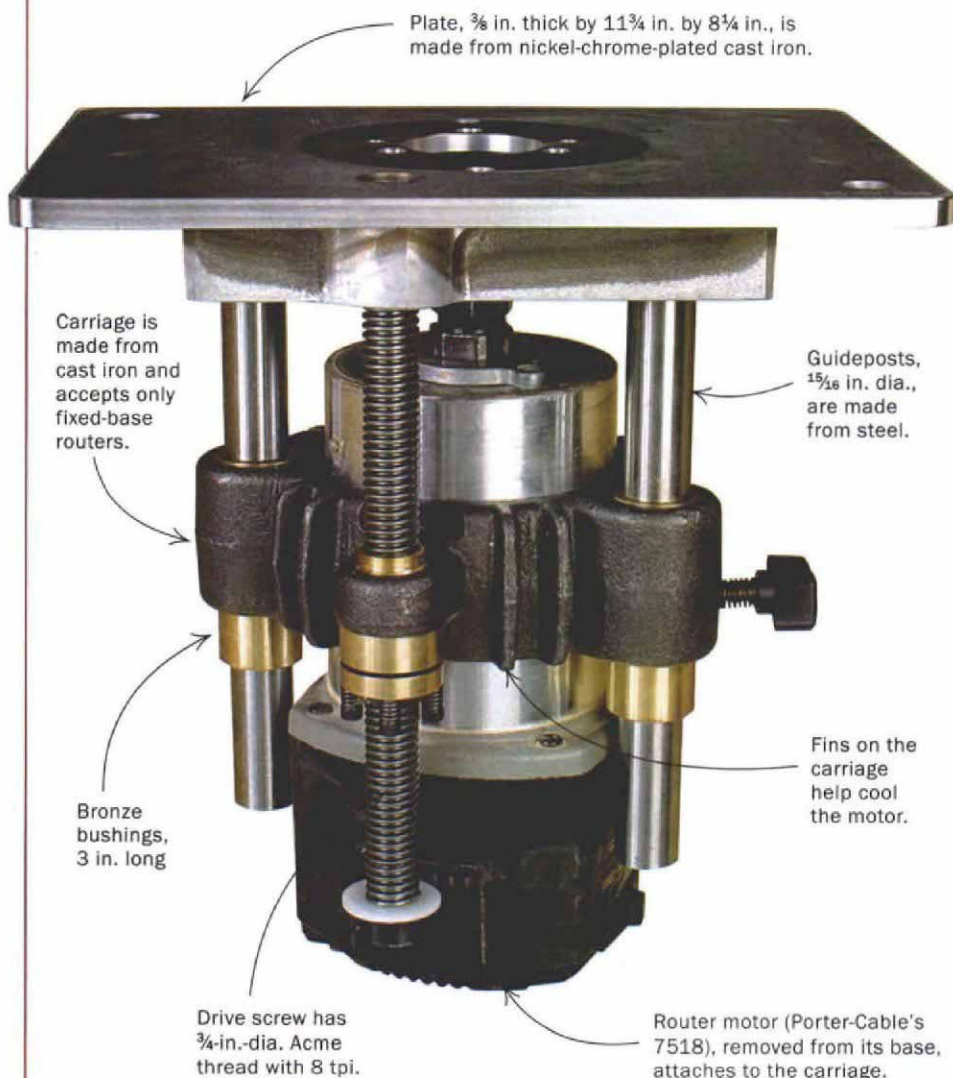


Get cranking. Each full turn of the Rout-R-Lift crank raises or lowers the bit 0.050 in. With the aid of the index marks, movements in increments as little as 0.002 in. to 0.003 in. are possible.

PROLIFT PL1002

Price: \$380

Contact: Bench Dog (800) 786-8902



Meaty parts. The two ProLift models incorporate a heavy drive screw. A spring-loaded nut eliminates backlash.



Above-the-table bit changes. Both ProLift models let you raise the router collet above the table, so bits can be changed from on top.

available, from 1/4 in. through 2 1/2 in., including one that accepts Porter-Cable guide bushings. Only one insert ring—the 1 1/2-in. size—is included with the lift.

All things considered, the Rout-R-Lift performed well in service. It's a high-quality tool with a cranking action that was smooth, easy and accurate.

ProLift PL1002 and PL1001

Bench Dog offers the ProLift in two versions. Model PL1002, made almost entirely from cast iron, is an industrial-weight product designed for continuous use in the shop. Model PL1001 is nearly identical, but most of the main components are made

from aluminum, making the device more affordable for the occasional user. By the way, neither of the two ProLifts accepts a plunge router.

The ProLifts have lots of parts, but essentially they're just fancy clamps that hold a router upside down. Each mounts to a plate that fits into a cutout in the top of the router table. To add a router to a ProLift, first remove the motor from its base. Then clamp the motor to the carriage of the lift. An adjustment system in each of the ProLifts lets you raise or lower the motor from above the router table. And, of course, when the motor goes up and down, so does the bit that you put in the collet.

The differences between the two ProLifts are related mostly to the router models they each can accept. The cast-iron ProLift (PL1002) accepts Porter-Cable's model 7518, a big 3/4-hp fixed-base router. But with the addition of adapter rings, available as accessories from Bench Dog, the PL1002 also accepts several models of smaller (1 1/2 hp to 2 hp) fixed-base routers. They include Porter-Cable's 690, Bosch's 1617 and 1618, DeWalt's 610 and Makita's RF1100 and 1101.

The aluminum ProLift (PL1001) won't accept the Porter-Cable 7518. But it does accept each of the smaller models listed above. The two Makitas require an adapter

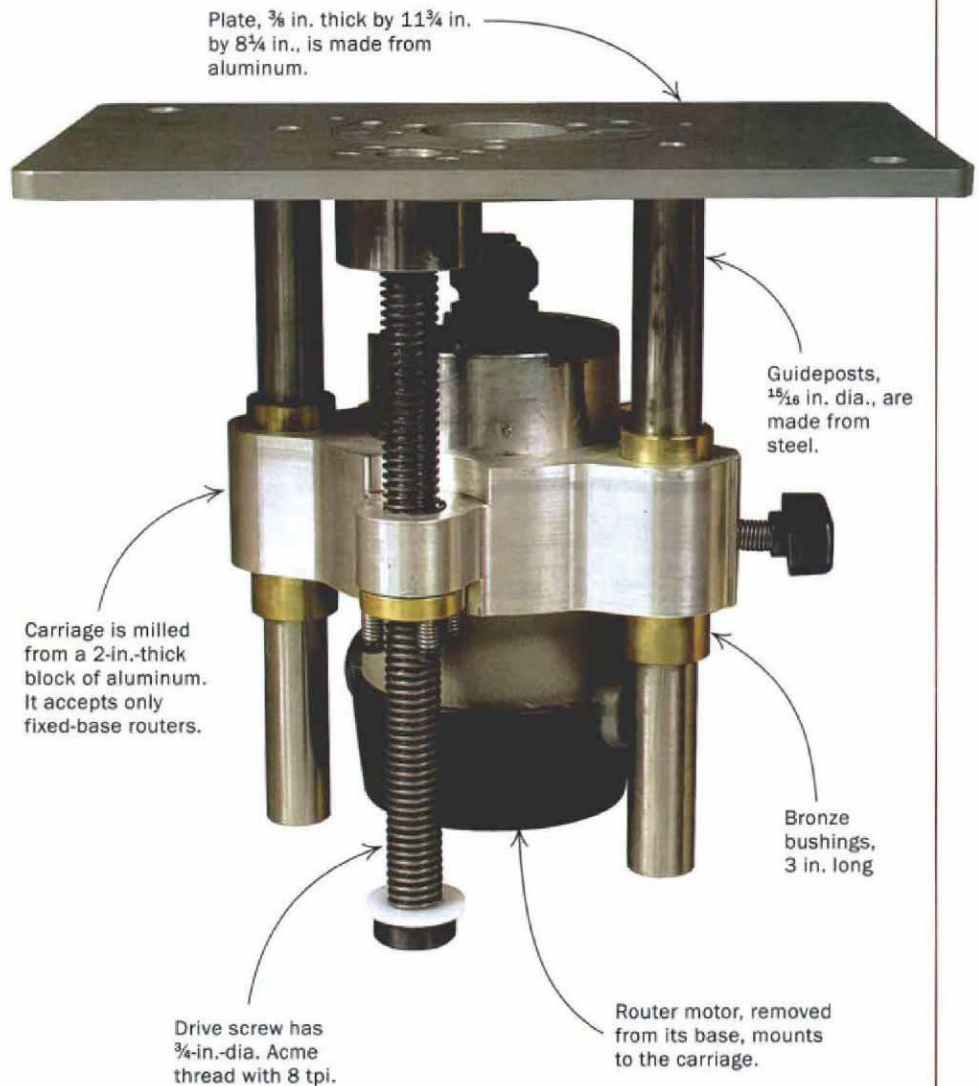
PROLIFT PL1001

Price: \$260

Contact: Bench Dog (800) 786-8902



Ratchet wrench is required. The ProLifts don't come with a crank; instead, you supply your own. An indexed collar (left), supplied by Bench Dog, fits over a socket, allowing adjustments as small as $\frac{1}{128}$ in.



ring to fit the aluminum ProLift. The other small routers don't.

Both Bench Dog models use a pair of meaty $1\frac{5}{16}$ -in.-dia. steel guideposts to support the carriage. And the carriage slides on hefty 3-in.-long bronze bushings. A $\frac{3}{4}$ -in.-dia. Acme-threaded drive screw is used to raise or lower the carriage, with the upper end of the screw running in a ball bearing. There is no backlash, or play, in the mechanism because the nut is spring-loaded.

Neither ProLift comes with a crank handle to raise or lower the carriage. Instead, all cranking is done with a ratchet wrench and $\frac{1}{16}$ -in. socket that you supply. At first, I suspected this was a subtle effort at cutting

costs. But I soon realized the ratchet system worked especially well. Indeed, it was better than the crank systems on all of the other router lifts I looked at.

By using a tall socket with a 3-in. extension, it was easy to crank the router up or down while keeping my knuckles clear of the bit and fence. And a cleverly designed collar that slips over the socket allows you to read up-and-down movements of the bit in increments as small as $\frac{1}{128}$ in.

With the insert rings removed, each ProLift has an opening in the plate large enough to allow the router collet to be raised above the table. That's a big plus when changing bits because there's no

more need to hold the collet wrenches at awkward angles.

The cast-iron version of the ProLift comes with three chrome-plated steel insert rings with inside diameters of 2 in., $2\frac{1}{8}$ in. and $3\frac{3}{4}$ in. By adding an optional adapter to the 2-in. insert ring, it accepts the Porter-Cable guide bushings.

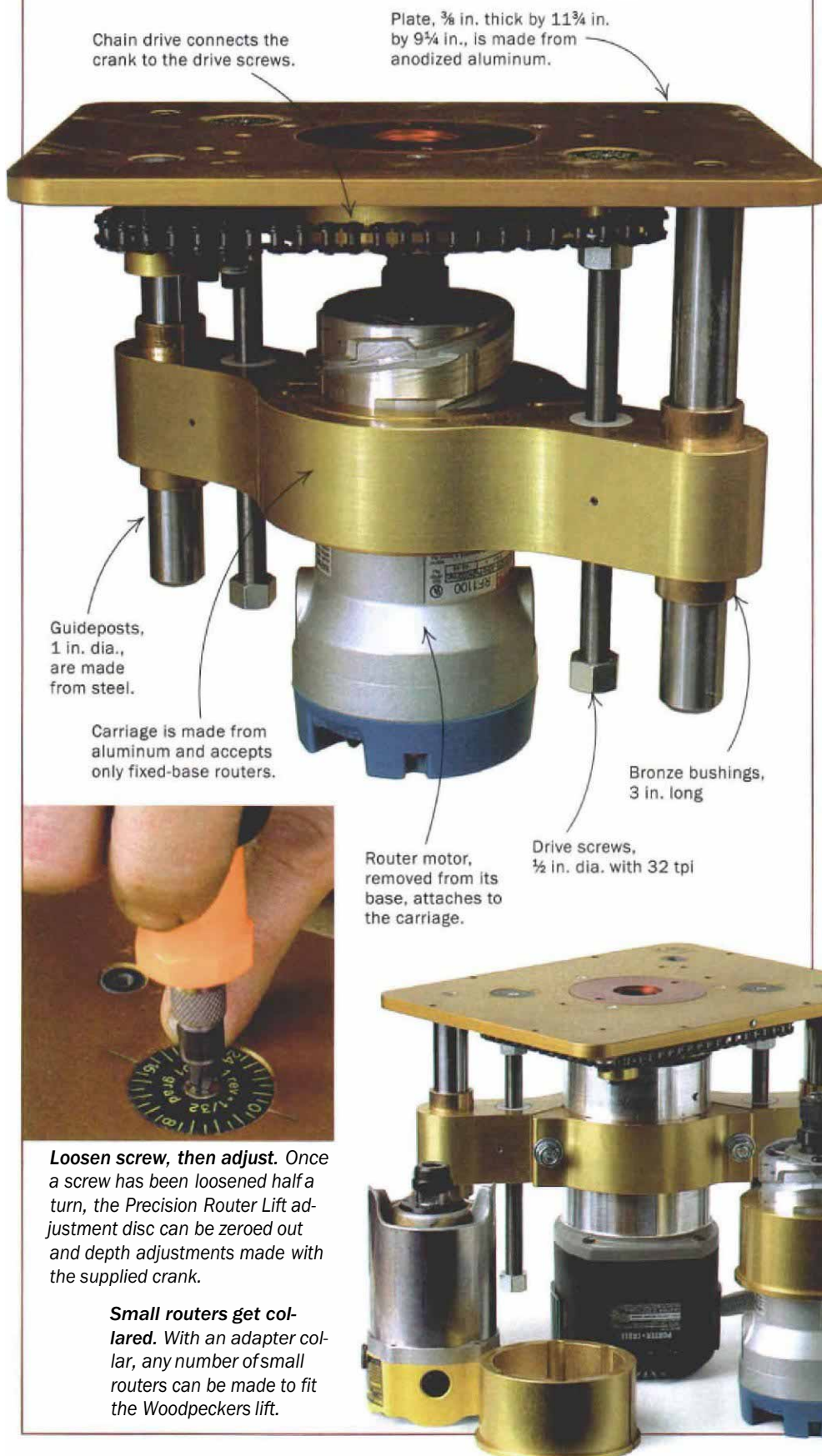
The aluminum ProLift comes with two insert rings, with inside diameters of 2 in. and $2\frac{1}{8}$ in. Adding an adapter to the smaller insert ring allows it to accept the Porter-Cable guide bushings.

Overall, I found both ProLift models easy and convenient to use. When it came to changing bits, these two got the highest

PRECISION ROUTER LIFT

Price: \$270

Contact: Woodpeckers Inc. (800) 752-0752



Chain drive connects the crank to the drive screws.

Plate, $\frac{3}{8}$ in. thick by $11\frac{3}{4}$ in. by $9\frac{1}{4}$ in., is made from anodized aluminum.

Guideposts, 1 in. dia., are made from steel.

Carriage is made from aluminum and accepts only fixed-base routers.

Bronze bushings, 3 in. long

Router motor, removed from its base, attaches to the carriage.

Drive screws, $\frac{1}{2}$ in. dia. with 32 tpi

Loosen screw, then adjust. Once a screw has been loosened half a turn, the Precision Router Lift adjustment disc can be zeroed out and depth adjustments made with the supplied crank.

Small routers get collared. With an adapter collar, any number of small routers can be made to fit the Woodpeckers lift.

marks in the class. And they scored well on adjustment, too. Indeed, I could raise or lower the bit as little as 0.001 in. without any fuss.

I also found both of them to be plenty sturdy. But there's only one option—the Porter-Cable 7518—for those who want to use a large router. And the 7518 works only with the cast-iron ProLift.

If you plan to use one of the smaller routers, and use the router table every day, the cast-iron version would be the one to get. But for occasional users, the less-expensive aluminum model makes more sense to me.

Woodpeckers Precision Router Lift

In general, the design of the Precision Router Lift from Woodpeckers Inc. is similar to Bench Dog's ProLifts. The foundation of the Woodpeckers product is a substantial aluminum carriage with long bronze bushings that ride on large (1-in.-dia.) steel guideposts. Carriage movement is controlled by a pair of fine-threaded drive screws that run in long, threaded nylon bushings. A chain drive synchronizes and connects the screws to the removable crank handle.

The carriage motion was very smooth with no backlash. And the fine threads on the lead screws allowed me to make adjustments of less than 0,001 in.

The Precision Router Lift is designed to be used with Porter-Cable's large fixed-base router, model 7518. But simply by adding adapter collars, the carriage can also accept a wide range of smaller fixed-base routers: Porter-Cable's 690, Bosch's 1617 and 1618, DeWalt's 610 and Makita's RF1100 and RF1101. The Precision Router Lift won't work with a plunge router.

The anodized-aluminum plate has a 3½-in.-dia; opening that accepts insert rings with inside diameters of 1 in., 1¼ in. and 2½ in. And it takes just a quarter turn of an insert ring to lock it in place. The 1¼-in.-dia. insert ring is designed to hold Porter-Cable's guide bushings.

Two discs, each graduated in thousandths of an inch, are recessed into the plate. The discs spin with the drive screws, and in the process they provide a readout of the changes in bit height. The discs can be adjusted with a screwdriver,

ROUTER RAIZER

Price: \$90

Router Technologies
(515) 266-1293

Router Raizer is a kit that makes a plunge router adjustable from above a table. You supply the router.



Raising (or lowering) the Raizer. The Router Raizer, like the other lifts here, uses a simple crank to adjust the bit.



but I found the process to be fussy. Also, because the drive screws have fine threads, it's a slow process to make major height adjustments. Indeed, it takes 32 turns of the crank handle to move a bit just 1 in. To speed up things, the shaft of the crank can be chucked in a power drill. For me, though, that process was time-consuming and awkward.

Overall, the Woodpeckers Precision Router Lift worked quite well. It's a sturdy

and well-built tool. All of the adjustments were precise. And it lets you change router bits from above the table.

Router Raizer

Made by Router Technologies, the Router Raizer is a kit that adds an above-the-table height-adjusting crank handle to most plunge-router models. But it won't work with a fixed-base router.

The heart of the Router Raizer kit is a

threaded shaft that replaces the original height-adjustment screw on a router. The new adjuster extends through the router's subbase, ending in a hex socket that accepts a removable crank handle.

Aided by some well-written instructions, installing the kit is relatively simple, although a hole does need to be drilled through the router's subbase. An assortment of bushings and adapters fits the kit to a wide range of routers, including those by Bosch, Craftsman, DeWalt, Elu, Fein, Freud, Makita, Porter-Cable and Ryobi.

A Craftsman router with the Router Raizer kit installed worked very smoothly. The 16-tpi drive screw made major height adjustments go quickly, yet it still allowed for precise smaller adjustments.

The crank can still be used when the router is handheld. It's just a matter of slipping the crank into the top of the screw assembly. It worked very well—better than most other add-on cranks I've used.

But the Router Raizer doesn't allow you to crank the collet enough to allow bit changes from above the table. You must remove the router from the table to change the bits.

All things considered, though, if you use a plunge router in a table, the Router Raizer is a relatively inexpensive way to improve performance significantly. □

John White is Fine Woodworking's shop manager.

A router with a built-in lift system

Milwaukee's new 1 $\frac{3}{4}$ -hp router has several interesting features, but one in particular makes it especially suitable for use in a router table (for a review of the router, see *FWW* #153, p. 30). The motor can be raised or lowered with a crank that's supplied with the router. When used in a router table, it's just a matter of drilling a hole in the table to provide access for the crank. Effectively, then, you can adjust the bit height from above the table.

The 5615-20 is a conventional-style router with a 16-tpi Acme-threaded drive screw mounted to one side of the motor to set the depth. When the router is upright, for handheld use, depth adjustments are made by rotating a top-mounted knob. When the router is inverted, a

small T-handled socket wrench can be used (right) to turn the screw. To make a coarse adjustment to the height of a bit or to remove the entire motor to change a bit, simply push an easy-to-reach button to release the motor.

To change bits you'll need to remove the motor from the base, but that's a quick and easy process with this router. Also, the router has a relatively short (1 $\frac{1}{4}$ in.) range of depth adjustment. The collet can't be lowered very far into the table. So if you have a long bit, you might not be able to make a shallow cut.

The 5615-20 works well as both a free-hand router and in a table. It would be my first choice in its size range if I were picking a single machine for my shop.



Adjustment from above. Milwaukee's new router allows you to adjust the bit height simply by using a T-wrench (supplied).