Cabinetmaking With Festool

by David Frane

Over the years, I've built a lot of cabinets on site. Admittedly, some would have been better and many would have been cheaper had we subbed them to a cabinet shop.

But sometimes it's preferable to do the work yourself. Shops aren't always interested in doing small jobs or highly custom work, and scheduling and expense are often problems when using outside vendors. And lastly, there's no shortage of clients and architects who want to add or change cabinets throughout the job.

Recently, I had to build a set of custom kitchen cabinets that contained a lot of melamine and veneer plywood. These materials are difficult to work with outside of a cabinet shop, and from a little previous experience with Festool's line of power tools, I decided it would be a great opportunity to give them a comprehensive evaluation.

ATF 55E Plunge-Cut Saw and FS Guide Rail

I wouldn't normally build cabinets with a circular saw, but the ATF 55E is really a circular saw in name only. Sure, you hold it in your hand, but you don't use it freehand. Instead, the saw rides on top of an extruded aluminum guide rail and can't wander like a saw that you run against a fence. As a result, it can make cuts as straight as or straighter than anything you can make on a typical job-site table saw.

With a circular saw, you normally cut veneer plywood with the good side down. The bottom side cuts clean, but the top may splinter as the teeth exit the kerf; the opposite is true with a table saw. With either tool you risk getting cuts that are bad on one side. A good example would be trimming the bottom of a veneer-faced door. You can score or tape the heck out of the surface, but that's a time-consuming process and it still doesn't guarantee satisfactory results. Festool addresses this problem by putting rubber splinter guards on the bottom of its FS rails. The strips of rubber bear down on the surface and prevent chipping on the saw side of the kerf. You're less likely to scratch finish material because the base doesn't touch the work. I've used this tool to recut existing doors without damaging the face veneer in any way.

Festool's saw and guide produced splinter-free cuts in veneer plywood and cuts in melamine that were almost as good. Although slightly better cuts are possible in melamine with a Powermatic model 66 table saw and a triple-chip blade with a 0-clearance insert, that's a heavier and more expensive saw than you'll find on most job sites. Surprisingly, Festool's system produced cleaner cuts in sheet goods than I've ever gotten on a portable or contractor-grade table saw.

The guide rails, which come in a variety of metric lengths, are held in place by clamps that fit into slots on the bottom of the extrusions. The shortest rail is about 30 inches, and the longest about 16 feet. I was ripping 8-foot sheet goods, so I got a rail that was just less than 10 feet long. The longer rails are inconvenient to store and transport — if I owned one, I'd build a protective sleeve to keep it in. The ATF 55E comes with a 55-inch rail, which is a good size for crosscutting plywood; it's also good for material that won't fit on a miter saw or is awkward to crosscut on a table saw.

Setup is faster than with an edge guide, because the splinter guard is placed directly against the cut marks, without the typical adjustment for the saw shoe. But it's a slower setup than setting the rip fence on a table saw. The saw and rail definitely make it easier to work alone because you don't have to maneuver heavy sheets of material onto a table saw, and tighter quarters are possible because you don't need space to feed or catch the material. But table saws are better for making identical cuts because the fence has to be set only one time. The FS guides require a new setup after every cut.

The ATF 55E does not have a blade guard. Instead, the blade retracts into the base the same way a bit retracts into a plunge router. An adjustable stop controls depth of plunge, and a variable-speed knob allows you to match the rpm to the material being cut. The motor has a soft start and circuitry that maintains consistent speed under load. The ATF 55E takes

Used with an FS guide rail, the ATF 55E will make straight cuts with less splintering and chipping than portable and contractor table saws; plus, it has no tendency to wander.

a metric blade that's about 6 1/4 inches in diameter. Maximum depth of cut is just over 2 inches, shallow for a circular saw, but adequate for a tool designed to cut sheet goods and other finish material.

According to the manufacturer, the company sells a lot of saws to flooring contractors who use them to cut in borders and do intricate inlay work. The saws are also popular in the solid-surfacing trade, where precise cuts and effective dust collection are requirements. The ATF 55E costs $375 and comes with a case, a 55-inch rail, and clamps.

Plunge Router

I chose the OF 1000E plunge router because I needed to make rabbets and dados. I've used this router before and was impressed with its features and ergonomics (see "Buying a Plunge Router," 9/01). It's a smaller than average plunge router, not the sort of tool you use for heavy cuts in dense material. But its light weight, pistol grip, and trigger switch make it easy to use with one hand. I particularly like the depth lock, which is activated by turning a knob-shaped handle on the front. A sophisticated depth-control mechanism allows precise adjustments to the plunge depth, and a dust collection port built into the base helps keep your workspace cleaner.

With the hole-drilling guide, the OF 1000E plunger router quickly makes clean, perfectly spaced shelf pin holes. You can also use it to drill 35mm holes for Euro-style hinges.

This router comes with an edge guide that can be used by itself or to connect the tool to an FS guide rail, making it easy to mill dados for fixed shelves and cabinet backs. The OF 1000E costs $295 and comes with a storage case, an edge guide, and two collets (8mm and 1/4 inch).

Shelf pin jig. My favorite item from Festool is the hole-drilling jig, because it allows me to do something that I've never been able to do before — drill accurate shelf pin holes really fast. In the past I had to choose between using KV track, which is ugly and interferes with hinge plates, and using painstakingly slow drill jigs that produce rough-looking holes in melamine and veneer plywood.

But Festool's hole jig is a completely different animal. Using a guide plate, the OF 1000E router rides along a special FS rail producing neat and perfectly spaced holes by plunging a pointed router bit into the stock. A spring-loaded dog in the rail determines spacing, making 5mm holes evenly spaced 1 1/4 inches apart. With this guide, you can make shelf pin holes about as fast as you can make the router go up and down. The shelf pin jig kit costs $290 and includes a ton of accessories but no router or rail. But you can buy the basic parts for about $125. All you need is a guide plate, bit, end stop, and clamps. A 42-inch rail costs $52 and is probably sufficient. If you need something longer, a 95-inch rail is $169.

Dust Collection

I also tried a top-of-the-line CT 33E dust extractor. Except for the hose and motor, this machine has nothing in common with the cheap vacuums most of us use; it's designed specifically to extract dust from power tools.

Although you can get optional floor tools as attachments to clean up the workday mess, the hose is narrow and the $4 filter bags are pretty expensive for cleaning up job-site floors.

The CT 33E is extremely quiet and powerful; it kept my work area amazingly clean when I used it with Festool's saw and router. Like most extractors, it turns on when you activate the power tool it's connected to.

Festool's dust extractor has more features than you can shake a stick at; it's one of the few tools I couldn't figure out without first reading the manual. Features include variable speed, oversized wheels, and a knob that cleans the filter while it's still in the machine. I had this tool for six months before I noticed the hidden onboard storage compartment.

Functionally, this is a great dust collector. My only objection is the $445 price. Festool makes a smaller model, but at $375, it's not much cheaper. Personally, I'd find it hard to spend more for a dust extractor than for my

The CT 33E is the Rolls-Royce of dust collectors. In addition to wheels and a parking brake, it features clamps to hold Festool's Systainer boxes on top for storage and transport.

miter saw. That being said, if you need topnotch dust collection, these vacuums are probably worth their price.

Systainers

Festool tools and accessories come in specialized plastic storage boxes called Systainers. Although the boxes vary in depth, they have the same footprint and stack on top of each other. Latches on the side and front allow you to connect one box to another, so you can grab a handle and carry two or three boxes at a time. You can also attach them to the dust collector and wheel them around on top.

I like being able to connect the boxes but am less impressed with the way the interiors are organized. Most tools come with added accessories, and it was a pain to get everything to fit inside.

The Upshot

I'd consider buying the saw and router systems if I did a lot of site-built cabinetry. The saw and guide rail are useful for on-site finish work. I've used them to cut odd-shaped shelves and trim the bottoms of existing doors without damaging the finish. Festool equipment can be purchased directly from the U.S. distributor and at a small number of retailers.

Festool USA
888/337-8600
www.festool-usa.com.

David Frane is a finish carpenter and contributing editor to The Journal of Light Construction.

Laserjamb Q-Pro
by Gary Katz

Rotating lasers fall into three categories: manual leveling, "self-leveling," and "automatic self-leveling" instruments. Manual and self-leveling tools have spirit vials and must be leveled by hand — at least to some degree. But automatic self-leveling lasers rely on microcomputerization and servo motors to level the tool. When you switch on one of those high-tech tools, lights flash and motors whir. Once the lights blink off or in some cases glow steadily, the laser has leveled itself and is ready to go.

Laserjamb's Q-Pro is no exception. On startup, the instrument emits a blinking light, goes into automatic self-leveling mode, and then begins to spin. I checked this instrument against the same benchmarks I've used for previous laser tests and found it exactly as advertised, accurate within 1/16 inch at 30 feet, nearly 1/8 inch at 75 feet, and about 3/16 inch at 100 feet. This tool can be electronically calibrated in the field, and the instructions include steps for dialing it in.

But accuracy is useful only to a point; if a rotating laser isn't equipped with a fail-safe sensor that alerts the operator when the tool has been bumped and the line is no longer in the same position, the instrument is of little use. The Q-Pro's sensor system is activated when it's in automatic mode (the default) and will shut down if any bump or major vibration jars the laser enough to knock the line off level. Like other tools, the Q-Pro automatically starts up again after a few seconds and re-levels itself. If you're worried that automatic restart might re-level the instrument at a new elevation, this tool can be instructed not to restart after it's been disturbed. Pressing the aptly named Tilt button and waiting 30 seconds eliminates the possibility of the tool restarting automatically after the sensor has shut it down. The operator must restart the laser and so can make sure the level line is at the correct elevation.

The Q-Pro can also be set to shoot sloping lines and angles — up to any degree. Simply press the Auto/Manual button, and the self-leveling system (including the sensor) is shut down, so the laser can be used for tasks like installing a stair railing, grading a sloping driveway, and setting forms or pavers for walkways.

While the laser beam on this instrument is easily visible indoors in bright light at a distance of 30 feet, the light fades fast outdoors and a detector is required. But unlike other tools I've worked with, the Q-Pro detector also

The Solo Mount allows use of the Laserjamb pole without a ceiling to wedge against and makes the tool suitable for work outdoors. The unique Laserjamb pole offers greater flexibility in laser elevation compared to a tripod.

works as a remote control, so I didn't have to carry two hand-held devices when using the tool outdoors.

Like other lasers I've used, the Q-Pro has two modes of operation: chalk line and single dot. Turning the top cover changes the mode. The chalk-line mode is useful indoors over short distances, though the single dot is always brighter and therefore more visible outdoors. The detector doesn't function when the aperture is turned to chalk-line mode, but the remote control works with both modes and will bring the light beam to where you need it.

The Q-Pro includes Laserjamb's unique telescoping stand with an extension rod, so it can be set up just about anywhere. The telescopic pole system has greater flexibility than a standard tripod, because you can drop the beam almost to the floor and raise it almost to the ceiling. The stand and its components are well made, and assembly is easy. A bucket clamp, called a Solo Mount, also included with the kit, allowed me to use the tool without the benefit of a finished ceiling and enables the tool to work outside still using the Laserjamb pole. The Solo Mount came in handy when I wanted to shoot control lines for window and door jamb elevations — the ceiling wasn't in, and of course I wanted to set the laser up between the joists. My only complaint is that the Q-Pro kit is packaged in a bulky case that takes up too much room in my van for everyday travel.

Laserjamb
888/443-3750
www.laserjamb.com.

***Gary Katz** is a finish carpenter in Reseda, Calif., and a frequent contributor to* The Journal of Light Construction.

Pro Pac Tool Bag
by Dave Holbrook

If I'm in a hardware store, chances are I'll check out the toolboxes. I keep hoping someone will come out with a box that'll solve my chief gripes: Dents, distortion, and flimsy latches make closing metal boxes a pain. Drop-in trays always seem to have a hole under the handle that allows small tools to spill over into the bottomless pit below. In the bottomless pit itself, tools become entangled and you have to rummage through them to find the one you need. And sorting trays automatically unsort when the toolbox bumps around in the back of the truck. Periodically, I empty the whole mess onto the floor to cull out the duplicate and triplicate screwdrivers, nailsets, flatbars, and other items I thought were gone for good and therefore replaced.

The Veto Pro Pac XL (vertical tool orientation protected and packed) comes as close to an ideal solution as anything is likely to. Not a box but a bag, the body of the XL is made from Denier 1800 nylon, which is where its similarity to a gatemouth bag or a bucket insert begins and ends. Frankly, it smokes them both, and every box I've seen.

On the outside, the XL resembles a classy piece of carry-on luggage, featuring an integral, comfortable grip that extends through the bag to the base, separating the two sides into independent compartments. The grip is deliberately designed to flex along the top of the bag, preventing fatigue breakage and actually improving carrying comfort. Four flat zipper pockets and four D rings, as well as a detachable, padded shoulder strap, are the only features on the bag's exterior.

Its streamlined, spill-proof design includes no latches; instead, heavy, smooth-acting two-way zippers open the bag on each side, down to the waterproof polypropylene tray that forms its base. When a side is opened, its zippered flap can be folded and snapped onto itself, in two successively lowered positions, to keep it from flapping in the breeze.

To switch between chalk-line and single-dot modes, just turn the top cover. The chalk-line function is good for interior work and provides a distinct line for leveling cabinets or chair rail. The single-dot mode provides maximum beam visibility when working outside or over longer distances.

The interior is neatly detailed with 30 substantial pockets of varying widths and depths and 32 little pockets for punches, small drivers, bits, and such. Backing the pockets, the center panel is lined with a stiff, smooth polypropylene panel to prevent gouging or tearing by pointed or edge tools. In front of the pockets is the bottom tray area, affording space for hammers, bars, tape, chalk line, speed square, and more. There are also two flat, zippered interior compartments for storing small parts like wire nuts, straight rulers, and I don't know what all.

I transferred at least one of everything from my former favorite, a 22-inch Rubbermaid toolbox, and had room for all with space to spare. The only tool the XL wouldn't accommodate was my Estwing flatbar, which is

too long by a couple of inches. The XL's effective storage area measures 16 1/2 inches wide, 15 1/2 inches high, and 9 1/2 inches deep empty. Soft sides allow you to stuff it fuller than you're likely to need.

Amazingly, the vertical storage not only puts everything right where you can see it, but also keeps it there. Challenged to do so by its maker, Roger Brouard, a 20-year veteran carpenter, I zipped up the bag and tossed it across my garage. Nothing spilled or even moved out of place (okay, a couple of nailsets rose slightly in their pockets). Bag tossing isn't a typical application, but it's a jaw-dropping demo I'm likely to show off again.

Empty, the bag weighs a healthy eight pounds. That may seem like a penalty surcharge, but consider it mute testimony to its heavy-duty construction. Fully loaded, it's comfortable to carry and easy to store, even behind the front seat of a pickup.

The XL bag debuted in September 2002, to be followed by two other models, the L-C (large compact), a 12 1/2-inch-wide, 13-inch-high, 9 1/2-inch-deep technician's bag, and the XXL-F, a framer's bag measuring 25x13x9 1/2 inches.

The Pro Pac's unique vertical organization makes tools easy to find without rummaging and keeps everything in its place, even when the bag is tossed around. The sturdy bag has room and pockets for all your hand tools, as well as a comfortable strap for long hikes from the truck.

For this tool, I'm putting my money where my mouth is; $120 seems like a reasonable sum to pay. And I'm not even in the field anymore.

Veto Pro Pac
877/847-1443
www.vetopropac.com