SEASON 8 TIPS COLLECTION

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I built this rack that incorporates a shelf, power strip, and a cord rail to keep the cords neatly organized (drawing above).

After cutting all the parts to size, I drilled the holes in the shelf for the charger power cords and series of holes in the cord rail. Cut the slots in the rail for wrapping the cords. Now, assemble the rack and attach the power strip. You can mount the rack on either end of your workbench.

Episode 802
Router Table Push Block
Make a handy push stick for your router table. It has a V-notch and stop (inset) along the bottom edge to hold the workpiece against the fence and table at the same time.

Episode 802
Tire Tread Depth Gauge
Use an inexpensive tire tread depth gauge as a convenient marking and measurement transfer tool in the shop.
Episode 803
Versatile Miter Jig

Instead of a miter gauge, I prefer to use a sled for all of my crosscutting at the table saw. To avoid having to remove the sled to make mitered cuts, I came up with this simple jig. The miter jig clamps to the crosscut sled to make accurate 45° cuts. Then it's quick to remove to use the crosscut sled for straight cuts. This jig is also versatile enough to be used by itself by running it against the table saw rip fence to make mitered cuts.

To build the miter jig, start by cutting the hardboard base and the plywood clamp support to final size. Use a combination square to lay out the angles on the front edge. Taking extra care to lay out and cut these edges will ensure the accuracy of the jig. The base and clamp support are then held together with glue. The fence is cut from solid stock and is attached with screws through the bottom of the base and clamp support.

Making a miter cut using the jig is simple. Just clamp it to the back fence of the crosscut sled (photo above). Make sure the jig lines up with the kerf line of the sled. (The jig can be placed on either side of the saw kerf.) Set a workpiece against the clamp support and lock it in place using a toggle clamp. Now just push the crosscut sled forward to make the cut on your workpiece.
Episode 803
Router Table Dust Hood

When using my router table, a hose from my dust collection system attached to my router table fence has always done a great job keeping the dust at bay in my shop. However, when my fence is removed for free-hand routing, I didn’t have an adequate way to capture all of the dust and chips. To solve that problem, I built the router table dust hood you see above.

BUILD IT. The hood is pretty simple. It consists of three layers of plywood. The lower two layers are glued together and then cut to shape. Cut the top to size in the same manner, noting that there is just a slight curve on the front edge of this piece. A hole drilled on the top accommodates the dust port. Now it’s just a matter of gluing the top to the lower layers and rounding all the corners with a disc sander.

USING THE HOOD. To use the dust hood, simply clamp it to the back edge of the router table. Position it so you have adequate clearance for your workpiece. The V-notch in the two lower layers directs the dust and chips towards the dust port.

Episode 804
T-Track Planing Stop

Using bench dogs is the go-to method I prefer for holding a workpiece to my bench. But recently, I needed to plane a board that was too narrow to span two adjacent bench dogs. So I came up with this planing stop using an extra piece of T-track and some dowels.

HOW IT’S MADE. The T-track can be just about any length, as long as it is longer than the spacing between two dog holes on your workbench. The posts are cut from a piece of ¾”-dia. dowel. I made each of mine 3” long. I then drilled a through hole in each dowel at the drill press. A 3½”-long, ¼” hex head bolt slides into the track. The dowel is held on with a washer and nut. The dowels are easily adjusted to fit in the dog holes on your bench.
A zero-clearance insert is the key to a chip-free cut. This is simple enough when using a standard saw blade. But when it comes to a dado blade, it can be challenging. The various widths of different cutter and chipper combinations, plus the addition of shims, means you have to create multiple inserts.

Making the inserts isn’t difficult, but trying to remember which insert to use can lead to mistakes. That’s why I write the combination of cutters, chippers, and shims on each insert so I never have to guess again. It’s a simple solution that works.

**Episode 804**  
**Low-Profile Bench Stop**

In the photo at left, you can see a stop made from a thin strip of ¼” hardboard. The hardboard is durable enough to use as a stop and won’t interfere with tools. The stop is held to the worksurface with a pair of bar clamps. A cleat on one end helps to keep it square and acts as another clamping surface.

**Episode 804**  
**Dado Blade Inserts**

Using scrap wood, I drill a series of larger holes with a Forstner bit, (stop short of drilling all the way through, though). Then, using a sandpaper grit of 120 or coarser, I sand the piece until the holes are filled. If you use an electric sander to capture the sawdust, be sure to clean the dust bag before starting.

To make the wood filler, I find that a good ratio to start with is to use three parts yellow wood glue to one part sawdust.

**Episode 805**  
**Using Shop-Made Filler**
**Episode 805**

**Shop-Made Fence**

Wood auxiliary rip fences come in handy on the table saw. But it’s tough to secure them without the clamps getting in the way of the cut. I solved that problem with the simple fence you see here.

**Fence Details.** The fence consists of four layers. The two outer layers are cut to the length of your rip fence. The two middle layers are each made up of three parts, with gaps wide enough to accommodate the clamp heads.

I left all of the pieces a little wide and then ripped the whole assembly to final width after it was glued together. The design could also be modified for resawing on the band saw by making one outer layer taller.

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**Episode 807**

**Dado Caddy**

A dado blade is one of my favorite tools, but I’m not a big fan of digging through the box to find the right combination of scoring blades and chippers. So I came up with the dado blade caddy you see above to put everything out in the open.

**Building the Caddy.** To make the caddy, I started with an extra-long piece of plywood and raised the spinning saw blade into the base in order to cut the slots for blades and chippers. To do this, you’ll want to use the saw’s rip fence to position each slot, and clamp the plywood blank securely to the front and back of the saw table for each cut.

Once that’s done, you can simply cut the base to length, attach the hardwood cleats, and set all your blades and chippers in place.
And there’s virtually no chance of kickback. As you can see, a wide base captures the workpiece beneath it, and a replaceable stop hooks over the end of the workpiece to push it through the saw blade (inset photo on previous page). To keep the jig from rocking, the spacer that’s attached to the bottom of the jig is the same thickness as the workpiece. You’ll want to make several spacers to match common stock thicknesses. The next step is to set the height of the saw blade. What you want is the teeth to just clear the top surface of the workpiece. This way, there’s not too much blade exposed. And I don’t have to worry about cutting through the short strip jig you’ll read about in a bit.

**Grain Orientation: Getting it Right**

One of the keys to getting the best-looking strips from a workpiece is to make sure the grain direction is “right.” What I mean by this is that it’s more important to pay attention to the grain along the edge of a board than it is to the grain on the face. You can see what I mean by checking out the photo. Even though the face of the board features a wavy, “cathedral” grain, the strips ripped from the edge are actually straight-grained. And that may be important if you’re edging plywood with a similar grain. Ripping your edging from a riftsawn or quartersawn board will most likely result in “wild” grain which may not be the best look for a project.

**Episode 807 Thin Strip Jig**

To create thin strips less than 30” long, I use the simple jig shown in the photos above and the drawing at left. This jig works like a big push block that rides against the rip fence as you make the cut. You only have to set the rip fence once, and your strips will all be identical in thickness.

**FEED TECHNIQUE.** Finally, all that’s left to do is turn the saw on and feed the workpiece through. The main thing is to use a smooth, even feed rate. This ensures the saw blade won’t burn the edges or leave tooth marks.
Episode 808
Vertical Ripping Jig

When it comes to cutting tenons, I usually turn to the table saw. Plus, many projects require cuts that can only be made by passing the workpiece vertically through the blade. Rather than cobbling something together every time one of these cuts arises, I built the vertical cutting jig for my saw that you see above.

**JIG DETAILS.** The jig just requires a few parts and hardware, and it's easy to make, as shown below. It consists of two basic components: a fence and a guide.

The fence mounts to the saw's rip fence with two commercial fence clamps. This makes it easy to adjust the fence in relation to the blade. On its own, the fence is a great tall auxiliary fence. The fence's miter track accepts a runner mounted to the underside of the guide. And a wood cleat and hold-down clamp on the guide keep the workpiece secure as you cut.

**USING THE JIG.** After clamping the fence to your saw's rip fence, all you do is secure the workpiece to the guide and set the runner in the miter track. Then position the rip fence to make the cut. The guide will carry the workpiece smoothly through the blade.

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**Front View**

**End View**

**Typical Plywood endgrain (1/4" shown)**

**#6 x 1" Fh wood screw**

**1/4"-20 threaded insert**

**Cleat (1/4" thick)**

**Hold-down clamp w/knob, washer, and bolt (#35283, Rockler.com)**

**Runner (1/4" x 1/4" alum.)**

**Guide (3/4" ply.)**

**Fence (1 1/2" ply.)**

**Fence clamp (#31373, Rockler.com)**

**Miter track (#6ALZ1, Grainger.com)**

**Countersunk hole for screw 1/4"-20 x 1" Fh machine screw**

**1/4"-20 x 1 1/4" Fh machine screw**

**NOTE:** Cut slots on router table

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Episode 808
Narrow Sanding Block

My regular sanding block is too big to sand rabbets and other narrow areas without the block tipping and rounding over the edges. To fix this problem, I made this handy edge sander that easily cleans up narrow rabbets. It has two wedge-shaped slots cut on the top to hold the sandpaper. A pair of wood wedges fit in the slots to keep the sandpaper in place. I sized my edge sander to accommodate commonly available 1” strips of sandpaper.

EDGE SANDER DETAIL. The edge sander is cut from an oversize blank. Make sure to run the blank you’ll be using through the jointer to ensure the bottom edge is truly flat. After cutting the block to length, I rounded the top corners on the front and back edges. A band saw makes quick work of the wedge-shaped slots on the top edge.

WEDGES. The biggest challenge of this sanding block is cutting the small wedges. When cutting small parts like this, I prefer to start with an oversize blank. This makes it easier to keep fingers away from the blade. Be sure to cut the wedges the same width as the sanding block, or slightly narrower.

FINISH UP. To make the sander easier to hold, I also added a screen door handle. Now just add a strip of sandpaper and this block is ready for use.

Episode 809
Coping Saw Vise

When using a coping saw, I sometimes find it easier to saw with the workpiece held vertically. The birdsmouth vise shown at left positions the workpiece at a comfortable height for sawing.

The drawing shows how it goes together. The base is grooved to hold the vise face. I cut a large V-notch into the face of the vise to provide clearance for the saw blade as you cut. A pair of slots provides adjustment for the clamp. I fastened the clamp with pairs of carriage bolts, knobs, and washers.

To use the vise, simply secure it to your worksurface. Place the workpiece between the clamp and face then tighten the knobs.
I use a lot of thin stock in my projects. But it can be difficult to rip thin stock to a consistent thickness. That's why I came up with this roller guide. It's designed to work at the band saw or any other tool with a miter slot, like a table saw or router table.

It works great as a stop for ripping thin strips or to help keep a workpiece against a rip fence. Switch out the miter slot hardware for a flange bolt and it can be used as a hold-down when attached to a fence with T-track. BUILDING IT IS SIMPLE. It's just a piece of plywood sandwiched between a couple layers of hardboard. I glued oversized pieces together, then cut and sanded them to shape after the glue dried.

I drilled the ends of the slot next and used a jig saw to remove the waste. A file and sandpaper helped smooth the cut lines. Now you can add the bearings. Just insert a short length of dowel into a hole drilled in the end of the guide.

Episode 810
Track Progress with Chalk

By using chalk to mark the last grit used on the piece I've just finished sanding, I keep track of where I am in the sanding progression in case I gets interrupted. Chalk sands off much easier than pencil.
Episode 811
Drill Bit Trays

After years of fumbling through a drawer looking for the right drill bit, I decided to devise a better solution. The result was the drawer inserts you see here.

The bits are organized neatly in trays with shallow slots to hold them in place. The two-level, sliding trays allow me to quickly access any bit I need.

The slots for the twist bits were made using a bowl bit at the router table. I used a dado blade to cut slots for the Forstner bits. Now my bits are always at the ready.

Episode 813
Spray a Hole Saw

Tired of wasting time and energy getting plugs out of hole saws, I spray each one with a dry lubricant. Then when I drill the hole, I drill part way through one face first. Then I flip the workpiece and complete the hole for tearout free results and easy plug removal.