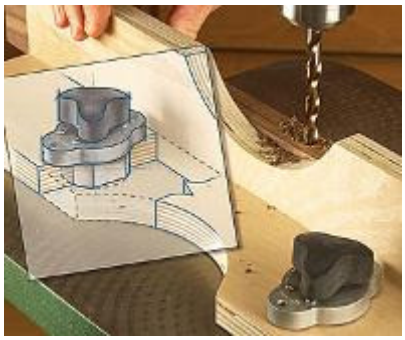
Woodworking Tips



Choose your material and components wisely

When you build a jig, you expect it to help you do something more quickly, more easily, more accurately, more safely, or exactly the same time after time. These components and materials will help the next jig you build meet those challenges.

The MagJig fits through a hole in a jig base. The knob turns the magnet on or off. Available in two sizes, about $30 each, Lee Valley, Woodcraft.

"On-and-off magnets"

The Magswitch, a permanent magnet you can turn on and off, quickly and tenaciously fastens a fence, guide, hold-down, or other jig to a steel or iron tool table. The device contains two powerful rare-earth magnets. Twisting a knob rotates one of them so the poles align to turn the magnetic attraction on. Twist the knob the other way, and the poles cancel each other, effectively turning the magnet off. Several configurations of the Magswitch are available, including the MagJig, designed specifically for attaching shop jigs, as shown. (I saw these MagJigs at Carba-tec, when we were up there.)

Epoxy round rare-earth magnets into blind holes in a jig. Putting them into steel mounting cups increases magnetic pull.

Strong and mighty rare-earth magnets

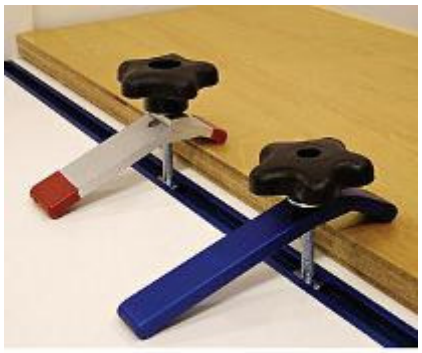
Small rare-earth magnets have so much pull that disengaging a jig attached with them may be difficult. Putting in fewer or smaller magnets will alleviate that, but might make the jig more prone to being pushed sideways. Use these permanent magnets for light-duty attachment, such as holding a setting jig or measuring device while you set up a tool. You can usually buy them in bags for around US$1 apiece or less.

Use ⅜"-deep T-track in thinner material. The track in the center accepts standard hex bolts and nuts. A 4' length of track costs less than $20.

T-track and hold-downs

T-track offers so much versatility, you should make it your first choice for adjustable hold-downs and movable jig parts. Most track accepts T-nuts or T-bolts, but some track accepts standard 1/4"-20 hex bolts and nuts. You can surface-mount the track, set it into a groove or dado (either 1/2" or 3/8" deep x 3/4" wide), or butt surfaces up against either side.

Hold-downs make great anchors



Hold-down clamps grip workpieces firmly. Increase capacity with a longer T-bolt and a block under the tail.

An inexpensive (around US$10) hold-down clamp anchors a workpiece to a jig or locks movable jig parts to a T-slot. Just slip the clamp's bolt into the track, slide the piece to be held under it, and tighten down.

Affix a jig to the miter slot in a tool table with this miter slot hardware kit. Item 26993, Rockler.

An expansion bar secures a jig, such as a feather board, into a miter channel. Turning the knob draws the screw up into the hole, expanding the bar's width slightly so it grips the sides of the miter slot.

A vertical toggle clamp holds the workpiece firmly in place on this sled. The foot adjusts up or down to change tension or clamp thinner material.

Toggle clamps

Toggle clamps provide quick, positive clamping. Though more complex and more expensive, they often work in situations where T-track hold-downs prove impractical. Install vertical clamps to hold a workpiece against the surface where the clamp is mounted, whether vertical, horizontal, or any angle between.

Clamps great at a drill press

Horizontal clamps press a workpiece sideways against a fence, such as on a drill-press jig, or a stop. Some toggle clamps slide into T-tracks. The clamps come in several sizes and cost about US$20 each.

The horizontal toggle clamp on this jig safely and securely holds a small workpiece against a notched fence for drilling .

A self-adhesive measuring tape attached to a jig simplifies adjustment and work positioning. Tapes read left-to-right or right-to-left.

Measuring tapes that stay in place

To simplify positioning a workpiece precisely on a jig or setting an adjustable stop, apply a self-adhesive measuring tape directly to the jig. Made of steel, heavy paper, or plastic, these tapes have a PSA (pressure-sensitive adhesive) backing, and are available in either left- or right-reading versions with English or metric scales. To allow easy centering, as well as accurate measurements in both directions from a point, such as a drill-press chuck or mortising bit, apply left- and right-reading tapes so they meet at the reference point.

Slippery UHMW polyethylene comes as solid stock in many shapes and sizes or as self-adhesive tape. It's ideal for sliding jig bases or fence faces.

Slippery stuff

Parts slide more freely on a low-friction surface of ultra-high-molecular-weight (UHMW) polyethylene. You can buy it as solid stock or self-adhesive tape, often called slick strips or slippery tape. When a jig guide slides in a miter-gauge slot or T-track, make the guide from UHMW for smooth movement. For a fence, such as a resawing jig, put a larger piece or several strips on the face. Thin UHMW tape is a quick and less-expensive way to make a slick-sliding surface. The tape is ideal for disposable or limited-use jigs, too. Solid stock generally costs around US$30, depending on size; rolls of tape sell for US$10 - $20 each.

High-friction tape adds grip to a surface to prevent slipping without bonding or clamping. About $5 for 1x12", item 99K34.01, Lee Valley.

Sticky stuff

When you need a jig surface that resists slipping and sliding, high-friction tape fits the bill. It's similar to the pads that keep cell phones from sliding off car dashboards. The tape's adhesive backing makes it easy to attach to jig faces. Apply it to the fence of a sliding cutoff table, for instance, so the workpiece won't creep. Or, use it to make a nonskid back on a straightedge guide for a router or circular saw.

Self-adhesive sandpaper on this miter jig prevents slippage. About $17 for 2½"x30' roll, various grits, item 68Z72.01, Lee Valley.

Sandpaper keep jigs in place

Another quick way to slip-proof a jig surface is to apply strips of self-adhesive sandpaper. Sold in rolls, the sandpaper has a PSA (pressure-sensitive adhesive) backing that sticks to any smooth, clean surface.

Screw a handle similar to a plane tote onto a jig to keep your hand from slipping into danger. About $11, item 30876, Rockler.

Create a custom handle

For positive control, attach a dedicated jig handle. It's ideal for sleds and other cutting jigs that need to be pushed firmly and safely.

Our advice for your improved accuracy

Even old hand-me-down saws and low-cost bench top machines can produce clean, on-the-money cuts. We'll show you how.

Know the angles

You'll find the best and least expensive tablesaw accessories at an office supply store, of all places. Invest about $10 in a couple of plastic drafting triangles. They give you perfect 90°, 45°, 60°, and 30° corners for setting blade angles and miter angles as shown in photos.

As shown in photos, set a blade angle, raise the blade fully and register the triangle against the body of the blade, not against the teeth. Raising the blade fully gives you the most surface for the triangle to rest against. Lower the blade to the proper cutting height after setting the angle.

Ask for an extension

An extension screwed to the miter-gauge head will improve the quality and accuracy of your cuts. Use a flat length of 3/4" plywood, MDF, or hardwood, as shown in photo.

The extra surface steadies longer stock. An extension that reaches past the blade backs up the cut, preventing tear-out on the back edge of the work-piece.