A good jig is one of the smartest investments a woodworker can make. When the right materials, fasteners, and hardware are used, a jig pays you back by making a difficult or monotonous procedure simpler, faster, more accurate, and safer. If you've experienced these rewards, you've probably also endured the frustration of trying to cobble together a jig when you don't have the right materials on hand. After twenty-plus years of jig building, I've come up with the comprehensive collection of items described on the pages ahead. Whether you are knocking together a jig for a one-time operation, or making one that you plan to use for a long time, this kit will take the frustration out of jig creation. That's right: You can build it right the first time, instead of settling for compromises and workarounds.

Checklist:
- Plywood & MDF
- Glue
- Screws
- T-track
- Clamps
- Inserts & T-nuts
- Knobs

If there's a jig-making item that didn't make our list, but you can't do without, send an e-mail to editor@woodcraftmagazine.com. We'll share the best suggestions in a future issue.
Stock up on sheet goods

Sheet goods offer a combination of strength and stability that’s difficult to match with solid wood. Most of these products are readily available at your local home store.

**Hardboard.** This mash-up of fibers is smooth, slick, precisely thicknessed, and inexpensive—ideal attributes for any jig-making material. Standard hardboard is fine for one-time jigs, but tempered hardboard is better suited for those that may see repeated use.

**Particleboard.** Melamine-coated particleboard is flat, slick, and glue-resistant. It’s not as stiff or durable as plastic laminated MDF or plywood, but it will often do.

**Medium-Density Fiberboard.** I have a love/hate relationship with this stuff. It’s my go-to sheet material for jigs because it’s cheap, flat, and precisely thicknessed. It’s also dense enough for use as router templates. On the downside, it’s heavy, tends to sag, and generates clouds of dust with sawing or routing.

**Plywood.** Hardwood plywood is stiffer and smoother than construction-grade sheets, making it the logical choice for jigs. Despite its attributes, I prefer MDF because of the price difference, and because plywood thicknesses are typically less than listed and can vary from sheet to sheet. (Higher-priced plywoods, such Baltic Birch and Appleply, are stiffer and more stable. I buy these materials as needed for my “keeper” jigs.)

**Phenolic Plywood.** Skinning Baltic-birch plywood with a phenolic resin creates a super-stable panel that’s slick and resistant to moisture, chemicals, and abrasion. I reserve this top-shelf sheet good for my ultimate jigs and fixtures.

When wood just won’t work

Every good jig kit needs a small stockpile of plastics. Each of these items offers unique attributes, such as flexibility, durability, and visibility, that you can’t get from wood.

**Laminate.** Plastic laminate can provide a slick, durable skin for hard-working jigs and fixtures. In the workshop, grey offers the best combination of reflection and contrast.

**Acrylics and polycarbonates.** Clear baseplates and guards let you keep an eye on your work. Acrylic (e.g., Lucite, Optex) is more rigid, giving it an edge for router table baseplates, but it’s not as strong as polycarbonate (e.g., Lexan, Tuffak). If there’s a chance of a blade or bit encounter, use polycarbonate.

**Phenolic.** This plastic-and-paper composite is easier to machine than clear plastics, but it’s pricey. I reserve it for baseplates and tablesaw blade inserts.

**Polyethelene.** UHMW (ultra-high molecular weight) polyethelyne is dense, tough, rigid, and slick. It’s great for bases and guide strips that need to move. It’s easy to machine, but doesn’t work with adhesives.
Stick to it

This selection of go-to glues offers a range of strengths and drying times. Just remember that making jigs is different than making furniture, so be judicious. There will be times when you’ll want to reposition or remove a part without damaging the workpiece or ruining the jig.

**Quick Stickers.** Hot-melt glue and double-faced tape can make permanent bonds or offer temporary tacking. For the latter, don’t use too much, and take care when separating the stuck parts. Contact adhesive is a true dual-purpose adhesive. For a temporary bond, mist the surface and immediately stick the item in place. For a permanent bond (sufficient to affix laminate) spray both surfaces, let dry, and then press the parts together.

**Wood-to-Wood.** Regular yellow glue is still the gold standard of jig joiners. This glue is inexpensive, easy to clean up, and strong. The only downside is the time it takes for the bond to reach full strength. When minutes matter, I use Nexabond, a fast-curing cyanoacrylate formulated for joining wood to wood.

**Universal Adhesives.** These two belong in your kit because they bond almost anything to anything. Epoxy is my choice for joining wood to metal. As when permanently affixing a bolt into a plywood base, for example. For sticking parts to plastics, I prefer E6000, a flexible one-part craft adhesive. To ensure that the glue is good to go, I prefer small single-application tubes.

Pull the trigger for faster fastening

There will be times when you can’t come up with a convenient means of clamping two pieces together, or simply do not want to sit around watching glue dry. This pair of problem solvers can help, and may even change the way you approach jig making.

With a little guidance from the drilling jig, pocket hole screws can be used to secure a glue joint without the hassle of additional clamps, or without glue for a solid, reversible joint. The jig and bit take care of the clearance hole and counterbore while the self-drilling screw tackles the pilot and pulls the parts together.

A 23-gauge pin nailer offers an even faster, and less visible fastening option. The tiny pins may not have as much long-term holding power as screws, but they can hold parts together while an adhesive cures. The pins’ tendency to pull through can be used to your advantage. For some operations, a few pins can tack parts together more conveniently than double-sided tape. When you’re done, simply pry the parts apart. The holes left by the headless fasteners disappear under a first coat of finish.
Screws you will use

Since most jigs are made from sheet goods, a basic assortment of screws should meet most of your needs.

**Drywall.** These screws work fine with plywood, but may snap when working with MDF. Also, fully-threaded shafts can prevent boards from pulling together. Predrilling and clamping parts together when driving helps, or you can opt for a different fastener.

**Decking.** The self-drilling tip and underhead nibs reduce the need for predrilling and countersinking, while the smooth shanks help draw parts together without a clearance hole.

**Round washer heads.** In addition to a self-drilling tip and smooth shank, the flat-bottomed head prevents this fastener from pulling through the top and overdriving.

**PowerHeads.** Discovering that these cabinet-hanging screws sit flush like flat heads and resist pull-through like washer heads, I now keep a few on hand.

Hold it!

Clamps are cheap insurance, not only for your work, but for you. These accessories have the mechanical advantage to grip workpieces more reliably than you could accomplish with hand pressure, and the ability go where fingers should fear to tread.

**Toggles.** Start with a basic assortment like what’s shown above, and buy more as needed for specific jigs. (To ensure even clamping pressure on ends of longer workpieces you’ll want to buy a pair of each.) The first three toggles are usually screwed directly to a jig’s face or base. The T-track hold-down is more maneuverable, but it requires an additional means of engagement—either a T-track, or series of through holes—to set the bolt. Remember that you can employ the same clamps on several different jigs, so don’t be put off by the cost. Remove a few screws, or twist off a knob, and you can relocate the clamp from one jig to another.

**Clamps.** My jig-kit clamps are smaller and shorter than most in my clamping arsenal. The object is to fix the workpiece without making the jig top-heavy, or interfering with a blade or bit. Strength is a consideration, but you only need enough pressure to keep parts from shifting. For one-handed convenience, I often reach for pistol grips, but rely on C-clamps or F-style clamps when I need more security. (An advantage to threaded clamps is that they can be cinched securely enough to serve as handles.)
Threads for success

Aluminum extrusions are one of the most useful and versatile components for jigs and fixtures. While most metalworking requires special equipment, aluminum can be sawn and drilled much like wood. The metal’s strength permits a variety of useful profiles in thicknesses that would be almost impossible to match with other materials.

**Angle.** OK, it’s not a track, but this home center staple has found its way into a bunch of jigs. This extrusion’s basic profile is the key to its versatility. I’ve used angle for edging, fences, and tracks.

**Standard.** My second favorite profile, standard T-tracks provide a channel in which T-shaped and standard head ¼” bolts can slide freely and be locked in place. To install, rout or dado a ¼”-wide slot, then glue or screw them in place.

**Back-to-back track.** The double-slotted profile provides additional sliding and setting options. I prefer INCRA’s T-track because the built-in scale-slot (a shallow groove along the top of one of the tracks) offers a means of setting pieces according to specific measurements.

**Miter slot.** For jigs destined for regular use, this ¼”-wide slot extrusion keeps bars from wearing out the walls of a dado or groove.

**Top trak.** This T-slot profile, made by KREG, can be added to the edge of a board for incorporating T-nut stops or other accessories to the fence of your drill press, crosscut sled, or miter saw station. This profile also has a slot for a self-adhesive scale (sold separately).

To top off your jig kit, buy a few extra sets of baseplate screws to fit your routers.
SUBSCRIBE!

2 YEARS for $29.99!

go to woodcraftmagazine.com and click SUBSCRIBE

- or -

Complete the form below and mail in an envelope addressed to:

WOODCRAFT MAGAZINE
PO BOX 7020
PARKERSBURG WV 26102-9916

□ Payment Enclosed

Name
Address
City
State Zip
Country
E-mail

Send in now to get
2 Years for $29.99!

or go to woodcraftmagazine.com and click SUBSCRIBE

By providing my e-mail address, I am indicating I’d like to receive information about my subscription and other offers from Woodcraft Magazine via e-mail.

Outside of the U.S and Canada add $30 for postage.
Foreign orders must be prepaid. Payment in U.S. Funds only.