

Build Your Own Loading Bench



Build Your Own Bench Rock-Solid Basics

By Dave Campbell

When I moved to Wyoming last year I thought I would finally have the room to build the ultimate reloading bench. And eventually I will, but some logistical realities set in that forced me to build my third basic reloading bench. Nonetheless, this bench will serve 90 percent of a hobbyist reloader's needs. When I finally finish building my house, I'll transform what is now my bedroom into a dedicated reloading room and apply the principals I am about to describe into the "ultimate reloading center." Building a project like this requires some woodworking knowledge and several tools. Now that I have a few of the nicer tools like a commercial

cabinet saw, drill press and a plate jointer, it makes the job easier and less time consuming. In the past, when I did not have a large table saw I used a circular saw and a straight edge to rip stock on saw horses, so you don't have to have a complete woodworking shop in order to build this bench. Still, plan on taking about 100 hours to build it.

The primary consideration for a reloading bench is that it be sturdy. Under load any compound-leverage press will put a lot of force on its base, and the best and easiest way to counteract those stresses is with mass and some thoughtful construction. Whether your bench is half the size of mine or like the one I'll



build later—a wrap-around reloading center—it needs to be stout. This is no place for medium density fiberboard or orientated strand board. The frame for a reloading bench needs to be made as if it supports a small house, so when I built this bench I did exactly that—framed it like a house and then faced it like a cabinet for convenience and aesthetics. Priority number two is convenience. The bench needs to be a comfortable size. My first two basic benches were 8 ft. long, a good length if you plan to mount three presses. The downside to such benches is that they take up a lot of wall space and tend to be accumulation points for a lot of junk that needs to be dealt with before you begin a handloading project. Too, convenience and efficiency dictate that tool and component storage be close to the center of operations.

To minimize the “clutter factor” and make the best use of space in my shop I chose to make this bench 6 ft. long. This allows me to have two drawers on each side of the center to store dies, shell holders, some of my most used powder and other accessories. A center cabinet stores my tumbler.

The carcass—or frame—of the bench is constructed of 4"x4" legs and 2"x4" cross members. When I purchased the 4"x4"s, pressure-treated lumber was on sale and cheaper than standard, kiln-dried lumber, and I made the mistake of trying to save a couple of bucks. Don't do it. Pressure-treated wood is green as spring grass, and when it dries it will twist and distort, making the fitting of drawers and faces a nightmare.

When I build the reloading center I'll buy clear “two-by” stock, glue it up and mill it to dimension. More money and hassle up front, but better dividends down the road. I dadoed the 4"x4" legs to accept the 2"x4" cross members and screwed and glued them together using commercial construction adhesive. Using both screws and glue helps ensure there is no wobble in the joinery induced years later after things dry out and shrink.

Once the frame is made there comes the matter of facing and

siding it. I've faced and sided previous benches with oak and oak plywood because I love oak and its aesthetics. But oak—and other hardwoods—can be a major pain to maintain, so this time I took a different approach. Reclaimed lodgepole pine trees from fires have a distinctive blue stain to those areas of the tree exposed to fire. Called “blue pine,” it is sold for siding and decorative applications. Because of a large fuel base—a byproduct of severely curtailed logging on government property, along with tree kill-off by a major infestation of bark beetles—there have been many wildfires in recent times, creating a surplus of the decorative wood. The face frame was cut from 1"x4" blue pine, but the siding had to be glued up pieces of 1"x12" tongue-and-groove stock. In order to get a clean joint between those pieces I needed to rip the tongue and groove off the stock, joint the pieces and then glue them up with the help of a plate jointer and biscuits.

In cabinetmaking, the toughest and most time-consuming task is making drawers. It eats up a lot more time when you don't have a drawing with measurements to go from. The drawers were constructed from 3/4" Balkan birch plywood, a very strong and high-grade plywood with more plies than standard plywood. No plywood handles dovetails very well—the standard joinery for drawer construction—so I used an interlocking dado/rabbit.

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cut a profile into each one's top edge to make it easier to grasp the die boxes. Then I radiused the top edge of each of them with a drum sander mounted in my drill press. The 3/4" components were radiused with a router. I made the bottom drawers large and deep in order to hold the odd sizes of powder and bullet boxes, along with several accessory tools I like to keep close by. In the center, I made a simple cabinet door with no intermediate shelving. It stores my tumbler perfectly. Since these drawers have to hold relatively heavy items like several pounds of powder and bullets, I chose drawer slides rated at 100 lbs. It is here where my initial attempt to save a couple of bucks cost me several times that in time. The outboard drawer slides are mounted to the 4"x4" legs, and when they dried out and twisted I had to get in there and carve out some relief cuts in order to get the drawers to slide properly. Finishing the drawers, face and siding was easy. I simply sanded it down to 220-grit and applied a wipe-on polyurethane. Wipe-on poly is much easier to use than brush-on finishes. Poly is a very durable coating, and it allowed the "blue" in the blue pine to really pop out. With the carcass complete I turned to the top of the bench. It's pretty simple. I ripped a sheet of 3/4" AC plywood into two 24" wide pieces and cut them to 72" long. Then I glued them together to form a 72" long, 1 1/4" thick top. The trick here is to keep the edges smooth and flat so that the laminate will adhere properly and without voids. I chose a light grey laminate finish for the top because it's easier to see what I am working on and keep clean. If you have never worked with laminate, remember it's prudent to glue and rout the edges flush before gluing on the top. The top was attached to the carcass with eight steel L-shaped angle brackets and No. 10x1 1/4" wood screws.

Because of the weight of a massive single-stage press and the forces it endures, the bench must be attached to a solid wall to keep it from tipping under load. I used two simple straps cut from 12-gauge x 1 1/2" hot-rolled flat bar screwed into the

rear of the carcass and screwed into the wall studs.

A new bench required some updating of the tools mounted to it. Somewhat reluctantly, I retired my 35-year-old Rockchucker press and installed a new RCBS Rockchucker Supreme press, teaming it with an RCBS Quick Change Powder Measure. Both are mounted on RCBS Accessory Base Plates with holes drilled and tapped for a variety of accessories. Each reloader has different needs, and what I built may not suit you exactly. I strove for versatility within the space limitations with which I am currently burdened. But the principles of sturdiness and convenience illustrated here should get you started building a dedicated reloading bench.

Master Materials List for Reloading Bench

- 4 – 4"x4"x37" #2 or better Douglas Fir
- 6 – 2"x4"x62 1/4" #2 or better Douglas Fir
- 4 – 2"x4"x19 1/4" #2 or better Douglas Fir
- 2 – 2"x4"x26 1/2" #2 or better Douglas Fir
- 2 – 1"x3 1/2" x70 3/4" Blue Pine
- 2 – 1"x4 3/8"x23 3/4" Blue Pine
- 2 – 1"x3 1/4"x18 1/2" Blue Pine
- 2 – 1"x3 1/4"x23 3/4" Blue Pine
- 18 1/2 ft. x1"x8" Blue Pine
- 2 – 19 7/8"x8"x1" Blue Pine
- 2 – 18"x20"x1" Blue Pine
- 1 – 68 1/4"x36"x1/4" Baltic Birch plywood
- 4 – 5 1/4"x18 1/4"x3/4" Baltic Birch plywood
- 4 – 5 1/4"x16 1/8"x3/4" Baltic Birch plywood
- 4 – 5"x17 1/4"x3/4" Baltic Birch plywood
- 2 – 15 1/6"x17 1/8"x1/4" Baltic Birch plywood
- 21 – 5 7/16"x4 13/16"x1/4" Baltic Birch plywood
- 4 – 14"x18 1/4"x3/4" Baltic Birch plywood
- 4 – 14"x16 9/16"x3/4" Baltic Birch plywood
- 2 – 17 1/4"x16 9/16"x1/4" Baltic Birch plywood
- 2 – 30"x72"x3/4" AC plywood
- 1 - 36x72 high pressure laminate
- Carpenter's glue
- Assorted #8 wood screws 1 1/4" and 1 1/2" long
- 8 – 1 1/2"x1 1/2 Ell brackets
- 2 lbs. 1 1/2" finish nails