

## PORTABLE SHOOTERS BENCH

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This portable shooters bench design is not completely original, but I have not seen another like it. It is very stable in field conditions, compact, simple to set up and not outrageously heavy, usually 17-20lb. No special tools are necessary to assemble it and you can size it to suit your needs, within certain limitations.

This idea developed when a friend showed up for a desert shoot with an 8-foot long banquet table. He was using it as a shooting bench. It was too low, too long and too heavy to suit me. But it lit a fire in me to improve on what he had. I scrounged up a set of legs from a broken banquet table and created something taller, lighter and sized to fit my shooting needs. The result is similar to (but not exactly like) what you see here.



Please note that there are different styles of table legs available and each may require some variation in mounting design. I have come across three different styles that work well. I prefer the size found on the smaller 24"x48" tables \*. Only because they are narrower in the leg spread (side to side).

\* These smaller tables I find I can buy NEW (the whole table) when on sale at Office Depot, Office Max and a few other discount office supply stores for about \$20. That is now my source for table legs. However, I now have a few tabletops in the garage that I have little or no use for. (cut in half lengthwise they make good shelves for the garage).

Current table materials:

Table (legs or table)

Top (24" X 48" sheet of 5/8" CDX plywood) (or you can use the original table top and save money, but they are pressed board and heavy)

Clamps (to attach the legs to the table, this type of clamp is designed to attach pipes to the studs in a house frame etc.)

Molding (a trim rail around the front area of the table to keep thing from rolling off) (an OPTION)

Wood glue

Wood screws 1 1/4" long and 1/2" long

Additional wood for leg mounting

Leg tips (heavy duty table leg caps or crutch tips)

Dowel to extend the legs (broom handle – Home Depot).

Stain and finish. (Model table not finished yet)

\*\* I prefer the legs shown in the photos are over the box frame leg sets, but either is equally good for this purpose.

Assembly:

Determine the size you want/need. By trial and error I discovered that 40" in length was about the right size for my needs. I initially made mine to fit in the back of my SUV. Forty inches is also long enough to place the front sandbags or rest anywhere under the stock and not have it falling off the table. I assembled one 35" long to fit in the trunk of a friend's small car.

To keep the weight as low as possible I started with a full 24" width and found it to be more than I needed. I trimmed it down (mainly to reduce weight) and settled on a final width of 22". However, the legs were 24" wide. NOTE: The smaller table leg sets (available only on the 24x48" tables) are only about 20" wide (refer back to first paragraph).

I used a saber saw to cut two recesses at the rear of the table top to allow shooting from either side. I did this because I often shoot left-handed. If you never shoot left (or right) handed, you may decide to make only one cutout. If you do this however,

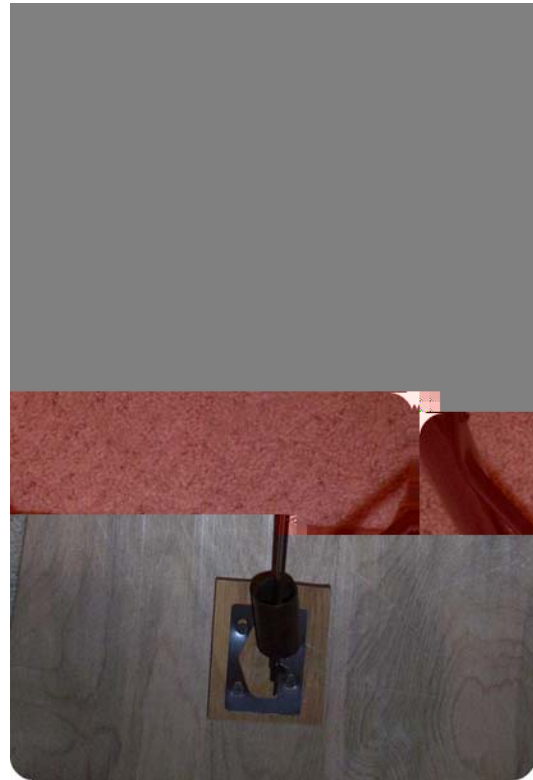
remember to mark the top so the leg can be mounted in the center. The width at the rear is about 13". This is wide enough to mount the rear legs with a little left over on each side. This width is also adequate to settle your elbow comfortably.

After you have your top the size and shape you want, radius the edges with a file or router then sandpaper. Next I applied glue to the entire edge to seal it and prevent splintering of the plywood. I then put on one coat of clear finish. I didn't go to any extremes to make this a beautiful table, only functional. You can apply paint if you wish, but I suggest lighter colors, as the darker ones will get real hot in the sun.

Layout the leg locations. Because of the short length of the top, the legs will overlap one another when folded. If both legs are mounted directly to the bottom side of the table, one set will lay flat and the other will point skyward at a 5-10 degree angle. This is not convenient to pack in your vehicle or to store in the garage. If that is not a problem, skip the next section about adding blocks.

I added blocks to the bottom of the tabletop that allows the legs to lay parallel when the table is folded. You can use one large block, however, individual blocks (per photo) are lighter. Raising one set of legs allows both leg sets to lay flat and parallel. On this model I used standard 1" thick pine and it in not really 1" thick so the legs do not lay quite parallel but close enough for me. If you want them parallel you need to make your blocks exactly the thickness of the tubing.

Attach the block(s) of wood to the bottom side of the tabletop with glue and the 1/4" screws. Attach the legs to the block with screws. NOTE: install the two blocks at the end of the table first. Then install the legs to those blocks. Make sure they are straight. With the legs folded parallel to the surface of the top, mark the position of the support block for the support strut. Attach the block at that location with glue and screws. Again lay the legs parallel to the top and attach the support to the block.



Now for the fun part! The legs as they are made were too short to suit me and I am only 5'7". I don't like sitting at the shooting bench all hunched over feeling like some kind of contortionist. This posture is not conducive to relaxed shooting. After a day shooting squirrels or prairie dogs the back suffers. To make the table height comfortable I had to raise it four to five inches.

Additionally, I like a stool that is high enough to allow my feet to be flat on the ground with my thighs parallel to the ground. That is about a 16" to 18" tall stool. I use a folding campstool with cloth seat. The model I like is camo patterned and has a storage pouch below the seat.



To raise the table I added some length to each of the four legs. The leg set mounted on the block is about one inch longer than the other set. The idea is to extend one set of legs about 4" and the other legs about 5".

Depending on the diameter of the leg tubing you may need to consider different leg extensions. In this case I was able to use broom handle stock. The tubing on the set in the photos is about 1.15" outside diameter. If the dowel is too large a diameter you can split them lengthwise with a hacksaw for a couple inches and force them in, or you can shave them down with a block plane, spoke shave, or even a pocketknife. If your dowel stock is too small in diameter you may be able to wrap tape around it as a shim. I haven't tried that, I prefer splitting or trimming to get a good fit. Once the dowels are in place, lock them with a screw. Drill a hole in the side of the leg and into the wood. Insert a screw to hold the legs tight. This is just an insurance policy so you don't lose a leg somewhere when you aren't looking. A three-legged table is quite wobbly.

On a couple of tables I was able to use electrical conduit. The next several paragraphs deal with installing conduit type leg extensions. If you used dowel you may find some tips in this material also.

Many of the leg sets I have encountered are about one inch outside diameter with something less than 1" inside diameter. These instructions apply to that particular size of leg tubing (not the model here). The conduit is about 7/8" outside diameter. In this case, the dimensional difference makes for a very tight fit. The objective is to force the conduit into the bottom of the leg. So, two options are available, cut the table leg vertically to allow it to expand, thus the conduit will slip inside. Or, cut the end of the conduit vertically and compress it to fit into the leg. DO NOT cut the table legs; DO cut the conduit (I know, I made that error once).

Cut four lengths of the electrical conduit, two 6½" long and the other two 7½" long. Measure 1½" from one end of each section and put a piece of masking tape around the conduit there. From that same end, cut across the middle down to the tape. Make a second cut 90 degrees to the first. After doing this you now have four tabs 1½" long. If you have the same trouble I have with a hacksaw, your cuts are not straight, but that is not a critical issue here.

Next, "bell" the end of each table leg to help get the conduit started into the leg. The metal of the legs is relatively easy to shape with a steel bar or long screwdriver. Put the end of the bar, screwdriver of whatever you are using, inside the leg about 2" and rotate while applying pressure outward at the opening. The leg is now "Belled".

Now you are ready to install the leg extensions to the leg sets. Remove the tape from the conduit. Put Press the four tabs at the end of the conduit as tightly as possible and push the conduit into a leg. Use a hammer and drive the conduit in until it is very tight.

Repeat the step with the other three legs. Make sure the two shorter conduit extensions are on the leg set that is raised on the block. If not, you will never get the table to level. Once these conduits are in place they may be very difficult to remove, next to impossible in fact.

Measure the conduit in each leg set and make sure they extend the same distance from the end of the original leg. The table should stand level on a level surface. If not, adjust the leg extensions with a

tap of a hammer or trim the offending leg shorter with a file. Done?

Now add the crutch tip. I use crutch tips here because they are heavier duty than the average rubber or plastic table leg caps.



There are a few side effects of making this shooting bench. I must warn you that your shooting partners may want to use yours, not theirs, because yours is, stable and lighter than theirs. Also, you may find it quite useful in the garage as a small convenient worktable or reloading bench. I set mine up and clamp the rifle vice to it for cleaning or other gun work.

If you have any questions about the instructions or have suggestions to improve this portable-shooting bench please contact me at [desert@pe.net](mailto:desert@pe.net), or call me (909) 785-4986.

If you do not have the means to make one of these benches I can be talked into doing it. To break even on this it will cost the buyer parts and shipping + \$30 labor. The current material cost (2001 prices) runs about \$55-\$65. The Labor included my expense or

running around town picking up the materials, thus I usually come out only a few bucks above even.

Your comments and suggestions may make this more useful to hundreds of others that are looking for an inexpensive, simple, light, convenient, and portable shooting bench. And feel free to pass the instructions along to your friend. I hold no patents or rights here.

I have received suggestions like adding a piece of half-round molding around the top to make a small fence so things will not roll off the top. One suggestion was to cut a hole large enough to hold a drink cup.

Since I first wrote and published this article in the California Varmint Callers Assn. website table legs have become almost impossible to find in my area. I used to get them through Harbor Freight, but they no longer carry them and I have not yet found another reliable commercial source. I have scrounged a few sets by asking at churches and schools if they had any tables with damaged tops. However, as I state in the beginning I now just wait for the sales and buy new tables, remove the legs and start from there.

Have a Safe Shooting Day.



For assistance, more information or if you have additional ideas that can improve this bench, please send me a note at [desert@pe.net](mailto:desert@pe.net).