MADEbyAP

Make It. Build It. Fix It.

2x4 Workbench Plans



Need a space to work on your projects? Don't want to spend a ton of money? Have a few basic tools? Well this workbench is for you! It stands 37.5" tall, the table top is 72" x 28" and the bottom shelf is 68" by 24". This was made entirely with 2x4s that I picked up at my local big box home center (I really wish I had a local lumber yard nearby!).

Enjoy the build!
/AP



Check out the build video at YouTube.com/MADEbyAP
(and don't forget to subscribe)!

Tools Required

- Miter saw or something to cut straight lines with.
- Pocket hole jig
- Drill
- Orbital Sander
- Belt Sander (not required, but helpful)

Materials Required

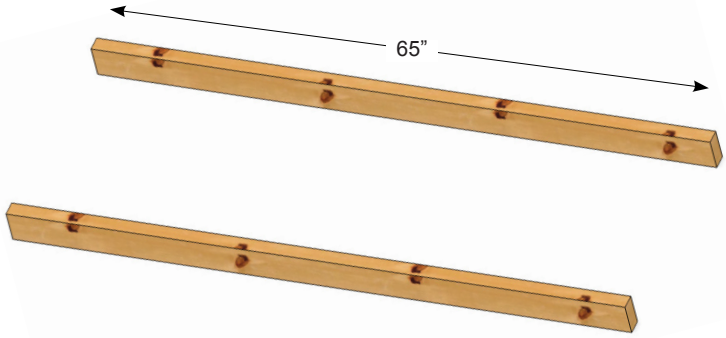
- 12 2x4x8 studs
- 4 2x4x6 studs
- 24” x 68” sheet of 1/2 plywood
- 2.5” Pocket Hole Screws
- 2.5” Wood screws
- 60, 120, 220 grit sandpaper
- Wood Glue (optional)

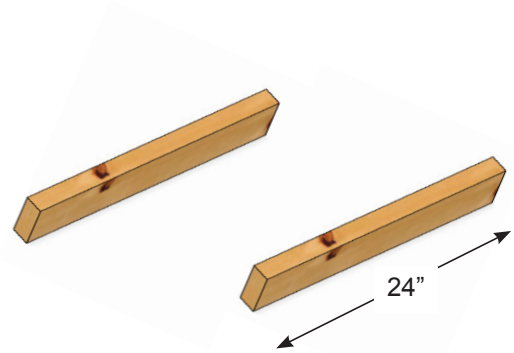
Building the Base

We’re going to start by building two platforms. One will serve as the bottom shelf, the second will serve as the top of the base where the counter top will sit. There’s a couple of ways to do this. I think I went a little “off standard” with my instructions and build, but you could also cut the long rails to 68” and then sandwich all inner support cut at 21” each in between the rails. You’ll still end up with the same dimensions as outlined in my weird way below. You do you though.

Step 1

Take four of your 2x4x6 studs and cut them down to 65”. These will be the long rails for your platform.



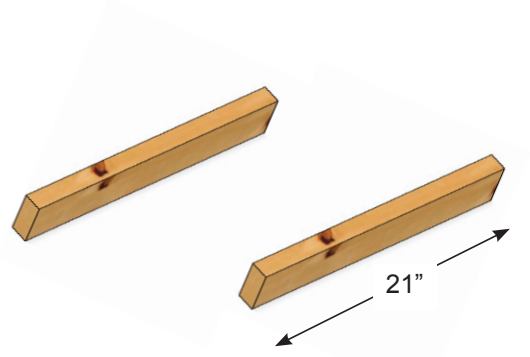


Step 2

Take two of your 2x4x8 studs, trim about an inch off of the end of each one, then cut two 24” pieces from each. You should have roughly 47” left to play with from each of those two. Just put them aside for now.

Step 3

Take two more of your 2x4x8 studs, trim about an inch off of the end of each one, then cut two 21” pieces from each. You should have roughly 54” left to play with from each of those two. Just put them aside for now.



* Any of the links through the document that go to an Amazon page, are affiliate links meaning I get a small percentage of every sale. Thank you for helping support my building habit!

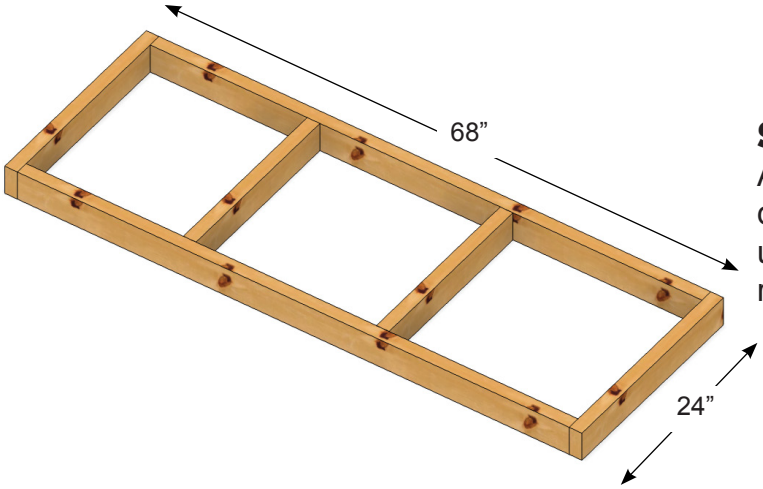
Step 4

Before we start assembling, add your pocket holes to the ends of the long rails, and the ends of each of your 21’ long inner supports.

If you need a pocket hole tutorial check out this video:

How to Set Up a Pocket Hole Jig



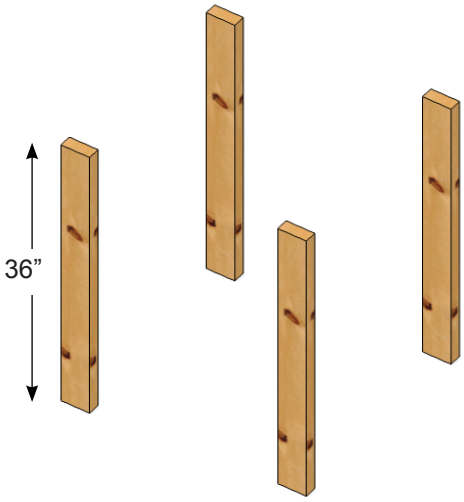


Step 5

Assemble both the platforms as illustrated. I didn’t use any glue for these joints, just straight up pocket holes. If you’re paranoid, or just really really like glue, then have at it!

Step 6

Take the two 47” pieces left over from Step 2, and the two 54” pieces left over from Step 3 and cut them down to 36”, which will be the final height of our counter (not including the 1.5” from the counter top itself)



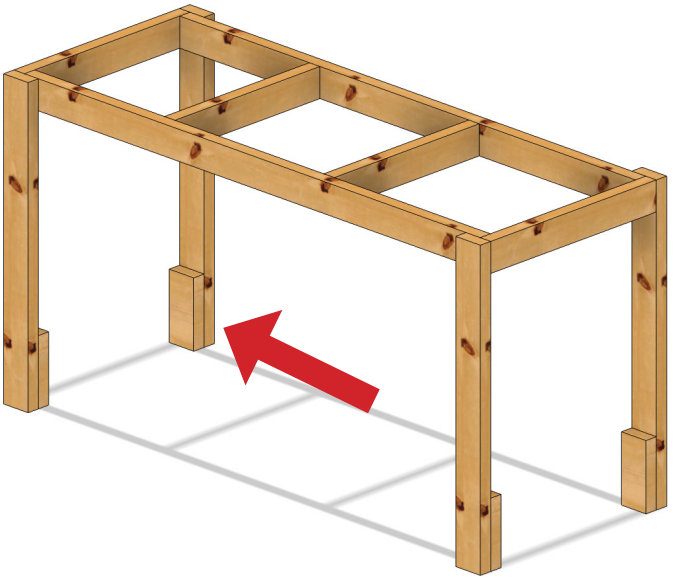


Step 7

Now we attach the legs. The easiest way to do this is to lay one of your platforms on a flat surface, place your leg on the front facing edge, and attach with 2.5” wood screws. I countersunk my screws, if you want to safe a step you don’t really have to do that. The only thing to be cautious of is to make sure you place your screws so they don’t interfere with the pocket hole screws in the platform.

Step 8
Grab the scraps left over from Step 6 and use them to cut spacers for the bottom shelf. I cut them down to 8”, however now that I’m thinking about moving my 3D printer to that bottom shelf, I’m going to lower them to 8”. Just cut them to the hight you think is best for your purposes!

When ready, just screw them to the bottom inside of the legs (since the platform will rest on these).

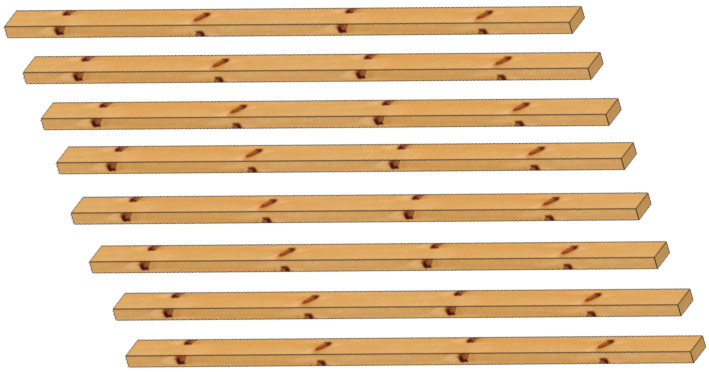




Step 9
Slide the bottom platform between the legs, and rest it onto the spacers. Screw in place, minding the pocket holes. We’ll put the 1/2” plywood on the bottom shelf at the very end. So for now, your base is complete! Let’s move on to the top!

Building the Top
While simple in construction this can be one of the more frustrating parts because of the quality of 2x4s. It’s hard to find super straight studs at a big box home center. I literally spent a half hour trying to find 8 that had decent surfaces, and were also not bowed or warped. While I got some decent studs, I still had to spend a lot of time sanding with the belt sander (using 60 grit to really knock down the uneven areas).

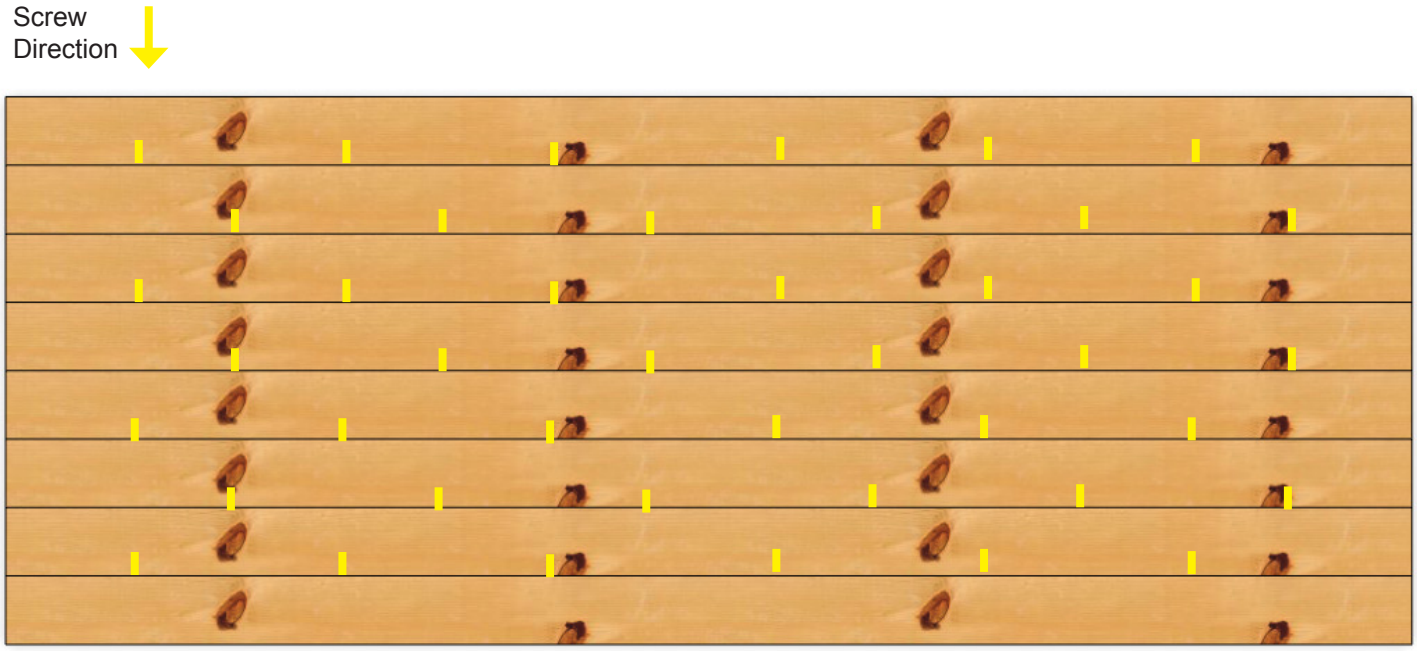
Step 9
Grab 8 of your 2x4x8’s, trim about an inch off one side (so you have a nice clean end), and then cut each of them down to 72”.



Step 10

Add pocket holes to each board along the long end. If you want to use glue instead of pocket holes you'll achieve the same end results. Wood glue is hella strong. I tried to illustrate where the pocket holes should go if you go that route. The key is to just alternate your holes so you don't accidentally screw into another pocket hole.

I'm a bit of an overkiller so I used both. I've seen successful set ups with one or the other, so do what you feel comfortable with!



Step 11

After the top is all put together, flip it over and sand it down. Because I had some uneven spots I used a belt sander with 60 grit sandpaper to try and get the joints all nice and level. I worked my way up to 120, then 220 to get a nice smooth finish.

Step 12

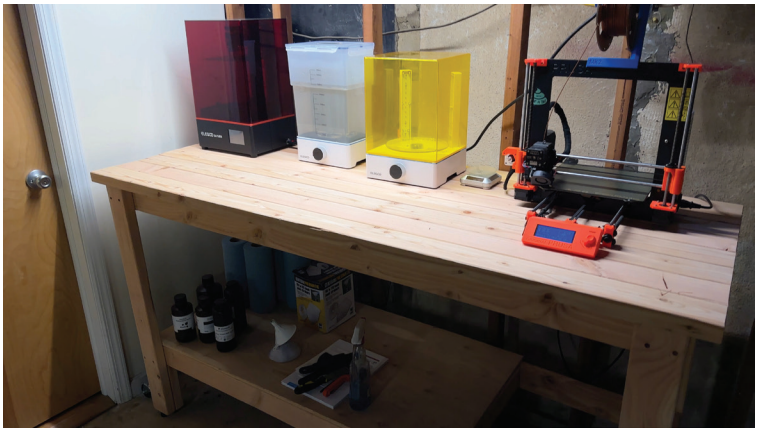
To attach the top to the base, I flipped the base upside down and drilled pocket holes along all sides so when I flip it back right side up, I can screw up from the base into the top.





Step 13
With the base right side up, place the top on. You'll want 2" of overhang on all sides. Once you have the top in position, drive your pocket hole screws in.

Step 14
Cut a piece of 1/2" plywood down to 24" x 68" and secure to the bottom shelf with 1" screws or nails.





That's it! You're done!
Pat yourself on the back for finishing this build. I hope it brings you years of surface to make awesome projects on. I hope you found these plans useful, share your builds by tagging me on Facebook (@madebyap) or Instagram (@madebyap81)!

Some other things to consider:

1. Since this is my 3D printer counter, I attached a power strip to the back just to keep things nice and contained.
2. I debated on adding a coat of Tung or Linseed oil. I ended up not doing that since this is just going to get beat up. I may revisit but for now, the raw wood is just fine.
3. I did add some floor levelers since my floor is uneven. These are easy to install and can be picked up here.
4. I added retractable casters. I'm not a fan though because they do take up some additional space on the sides (due to the foot pedal. I don't think I'll actually keep them on since this table is meant to be stationary, this is the set I used in case you want to add them though.