



DIY Welded Bike Stand

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Overview



Fun

This project is kinda fun, pretty easy so it's good practice if you're just learning how to weld, and is really useful after you're finished!

Profit

For less than \$50, you'll have a nice bike stand for repairing your bicycles.

Parts list

Ingredients

You will need:

- "Pony" 3/4" pipe clamp (check your local hardware store)
- 3/4" schedule 40 pipe: 1 x 8" threaded both ends
- 1" schedule 40 pipe: 1 x 10" threaded on one end, 1 x 3' no threads
- 1 1/4" schedule 40 pipe: 1 x 4" no threads, 1 x 3' threaded on one end
- 3/4" to 1" coupler
- 1 1/4" steel coupler

- 2" square steel stock: 1 x 2'
- 1 1/4" angle steel stock: 2 x 3"
- 2" flat steel or square stock: 2 x 3", 2 x 2'
- 3 x 3/8" eyebolts
- 3 x 3/8" hex nuts
- Thick closed-cell foam (neoprene)

All of which is available at your local hardware store or, better yet, welding supply shop

You will also need:

- Welder (oxyacetalene, MIG, stick, TIG, 2 car batteries, etc)
- Drill press
- Hacksaw, bandsaw, to cut stock to desired lengths
- Bench-mounted vice
- File and/or grinder

Make It!

Step 1: Make crosspiece

The clamp is made by welding angle iron to the bar stock and then welding the bar stock to the pony clamp jaws. Use the vice to flatten the angle iron, so it's more like 120 degree angle iron than 90. Solidly weld the angle iron to the bar stock. Weld the bar stock to the clamp. The clamp is made of cast iron so it might be difficult to weld to, which is why you might have to just tack it. If you're stick welding, use 'Nickle 99' cast iron welding rods. Not quite sure what to do with other techniques.



Attach the clamp to your 3/4" pipe, and the 3/4" pipe to the short length of 1" pipe.



Using epoxy, glue some heavy padding so that the clamp doesn't mar your paint job when you put your bike up. Make sure it looks as ugly as possible (see above.)

Step 2: Make T-piece

Notch the long 1" pipe so that it can be welded to the short 1 1/4" pipe (file, grind, etc). Drill two holes in the short piece so that the eyebolts will fit through them. Weld the long pipe to the short one, and weld two hex nuts where the drillholes are. It's easiest to thread the eyebolts into the nuts then slide them into the drillhole to make sure the hexnuts are aligned right.



Step 3: Make the base

Drill a hole for an eyebolt 3" down the large 1 1/4" piece and weld a hexnut over it, just like in the t-piece.

Weld the 1 1/4" coupler in the middle of the square stock, weld the bar stock to the end of the square stock as shown.



Step 4: Assemble!

Screw the long piece of 1 1/4" into the base.

Slide the t-piece into the base, use the eyebolt to adjust the height you want.

Slide the crosspiece into the t-piece, use the two eyebolts to adjust the angle for clamping.



