



PLANS BY HOMEMADE MODERN

# DIY BAR CART



DIFFICULTY LEVEL: EASY

# TOOLS

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## REQUIRED

18V ONE+™ 4 1/2 IN. ANGLE GRINDER  
10 IN. SLIDING COMPOUND MITER SAW WITH LASER  
18V ONE+™ COMPACT DRILL/DRIVER KIT  
18V ONE+™ 5 IN. RANDOM ORBIT SANDER

## ADDITIONAL REQUIRED ITEMS

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TAPE MEASURE  
PENCIL  
SAFETY GLASSES  
HEARING PROTECTION

## PURCHASE LIST:

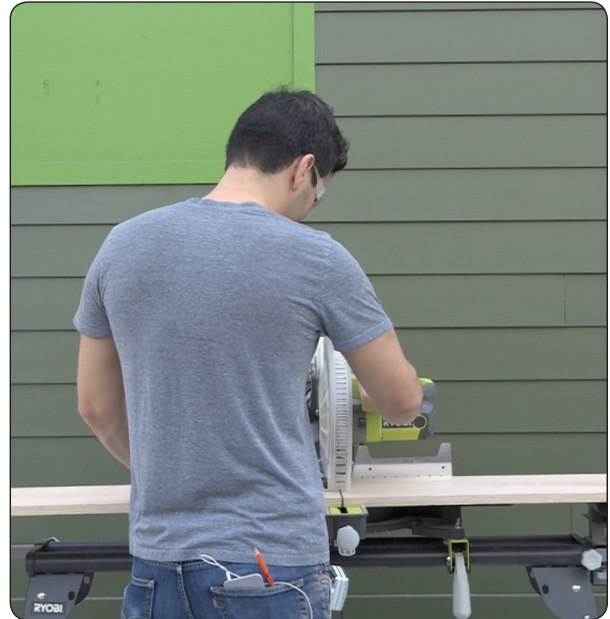
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220-GRIT RANDOM ORBIT SANDER PAPER  
DANISH OIL AND RAG  
MOLDABLE GLUE  
7/8" DIAMETER DOWEL  
CASTERS  
END CAPS 1/2" DIAMETER X 2  
REDUCER COUPLINGS 1/2" DIAMETER TO 3/4" DIAMETER X 4  
STRAIGHT COUPLINGS 1/2" DIAMETER X 16  
90-DEGREE ELBOW FITTINGS 1/2" DIAMETER X 4  
18" LONG 1/2" DIAMETER X 4  
1-1/2" LONG 1/2" DIAMETER X 16  
4" LONG 1/2" DIAMETER X 2  
8" LONG 1/2" DIAMETER X 1  
1" BY 2" OAK BOARD  
1" BY 12" OAK BOARD

# ASSEMBLY:

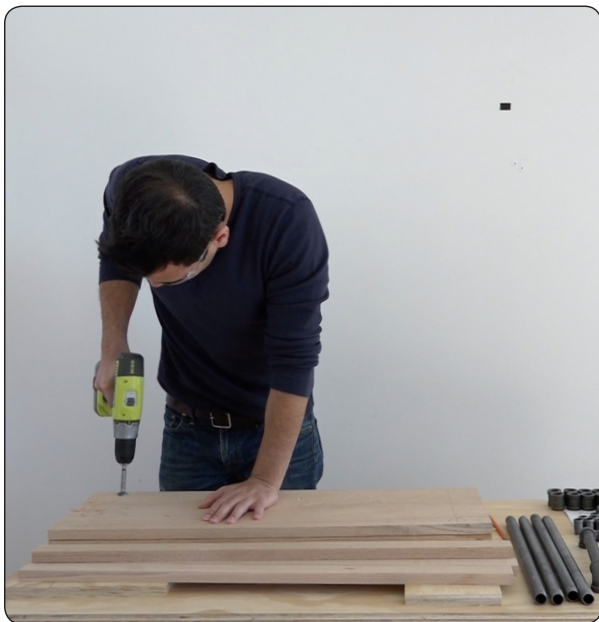
1

Cut the oak boards. I used a compound miter saw to cut 1" by 12" and 1" by 2" oak boards into pieces that are 32" long. 1" by 12" and 1" by 2" are nominal dimensions and these boards are actually  $\frac{3}{4}$ " thick and 11-1/4" and 1-1/2" wide respectively. I wanted a bar cart that is 32" long but this same design concept would work for carts as long as 48" and as short as 24".



2

Drill holes in the oak. I wanted to make sure that holes for the pipes are drilled at the proper distance so I screwed 90° elbow fittings on either side of a 8" long piece of  $\frac{1}{2}$ " diameter pipe and then used this assembly to trace the location of the holes on one of the 1" by 12" oak boards. I drilled  $\frac{7}{8}$ " diameter holes about 2-1/2" in from the ends in all four corners. I then used the holes I drilled in the first board to trace the hole locations for the 1" by 2" pieces of oak.



**3**

Sand the oak. I used an orbital sander with 220-grit pads to sand the oak smooth.



**4**

Stain the oak. I used a clean rag to apply a single coat of Danish oil to the pieces of oak.





5

Insert wood dowels into the pipefittings. I cut some short pieces of 7/8" diameter dowel to fit inside iron pipe reducing couplings that went from 3/4" diameter on one end to 1/2" on the other. I used "Sugru" moldable glue to fix these short wood plugs into the couplings. Construction adhesive would also work but would be a lot messier than the Sugru.



6

Assemble. I threaded the short 1 1/2" long pipes through the holes I drilled and then sandwiched the oak boards with couplings on either side. I used 18" long pipes for the vertical supports between the top and bottom shelves. (See pipe list in MATERIALS)



7

Screw in the handle. I should have assembled the cart upside down starting with the handle first but I didn't so I had to fully insert one side of the 8" handle pipe into one of the elbows and then back it out and halfway into the elbow opposite to it. I had a hard time getting it aligned so I used my angle grinder to grind down one end of the pipe by about 1/8". I also could have used 2 free spinning couplings but those cost a bit more. I suggest assembling it handle first with cart upside down to avoid these hassles.



8

Drill holes for casters. I flipped the cart upside down and then drilled holes in the dowels so that I could insert the stems of the bronze casters that I had. I then added additional screws through the mounting plates on the casters and into the dowels.

9

Add steel rods. I drilled  $\frac{1}{4}$ " holes in the oak rails and then cut pieces of  $\frac{1}{4}$ " diameter steel rod with the angle grinder and inserted them into the holes.

