

HART™



Wine Rack

PROJECT PLAN

Finished Dimensions: 24-5/8"W x 36"H x 12"D


Skill Level: Intermediate


Materials

Item	Qty
1"x 12" x 6' Board*	1
1" x 3" x 8' Board*	5
1" x 2" x 8' Board*	2
#8 x 1-1/4" Square Drive, Pocket-Hole Screws	
#8 x 1-1/4" Flat Head Phillips Wood Screws	
Sand Paper**: 150g, 220g & 320g	
Wood Glue	

* Board Dimensions are "nominal". Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

** Starting grit will depend on board surface condition, a rough surface will require starting with a coarse grit first.

 Grit is measured in the coarseness of the particles on the sandpaper. The lower the grit number, the coarser the paper. Heavy sanding would require 60 to 80 grit, medium sanding would require 120 to 220 grit, and finish sanding would require 320 to 400 grit. Super fine sanding would be 600 grit and higher.

 A select/premium board or plywood comes with a smoother surface finish. It is clear or has very few tight knots, and it will have straight and sharp edges. This grade of wood pairs well with other boards or panels better and requires less time to sand and finish.

Tools Used



Miter Saw

or



Circular Saw



Drill/Driver



Jig Saw



Orbital Sander



20V 1.5Ah Battery



20V 4.0Ah Battery



Charger



Tape Measure




Countersink Bit



Safety Glasses

Also Needed:
Clamps
Drawing Compass

 **Battery Tip:** A 4.0 Ah battery is recommended to be paired with high amp draw tools for maximum efficiency.

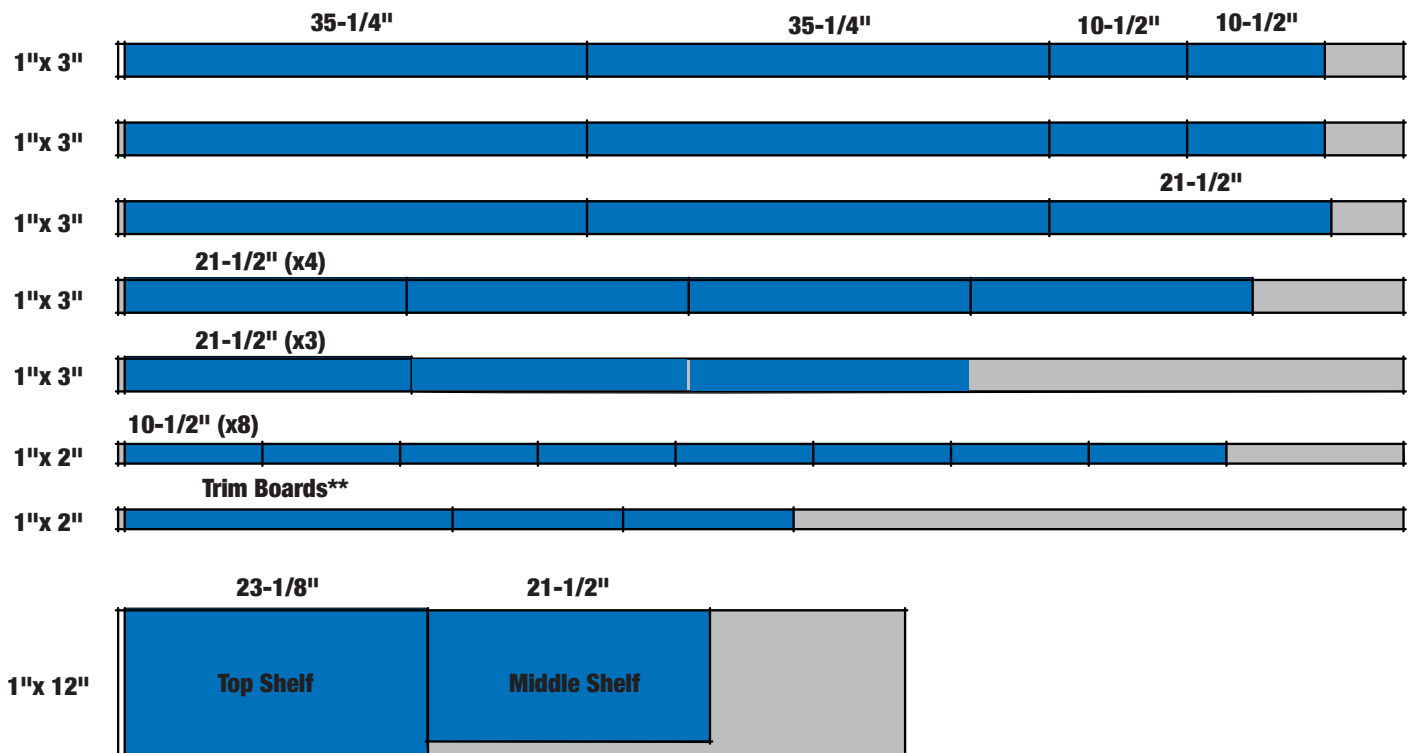
Lumber Cut List

Board*	Description	Cut to	Qty
1" x 12"	Rack Top Shelf	23-1/8"	1
1" x 12"	Rack Middle Shelf	21-1/2"	1
1" x 3"	Legs	35-1/4"	6
1" x 3"	Bottle Racks & Wine Glass Top Supports	21-1/2"	8
1" x 3"	Wine Glass Rails	10-1/2"	4
1" x 2"	Wine Glass Side Supports & Leg Side Supports	10-1/2"	8
1" x 2"	Rack Top, Front Trim	24-5/8" **	1
1" x 2"	Rack Top, Side Trim	12" **	2

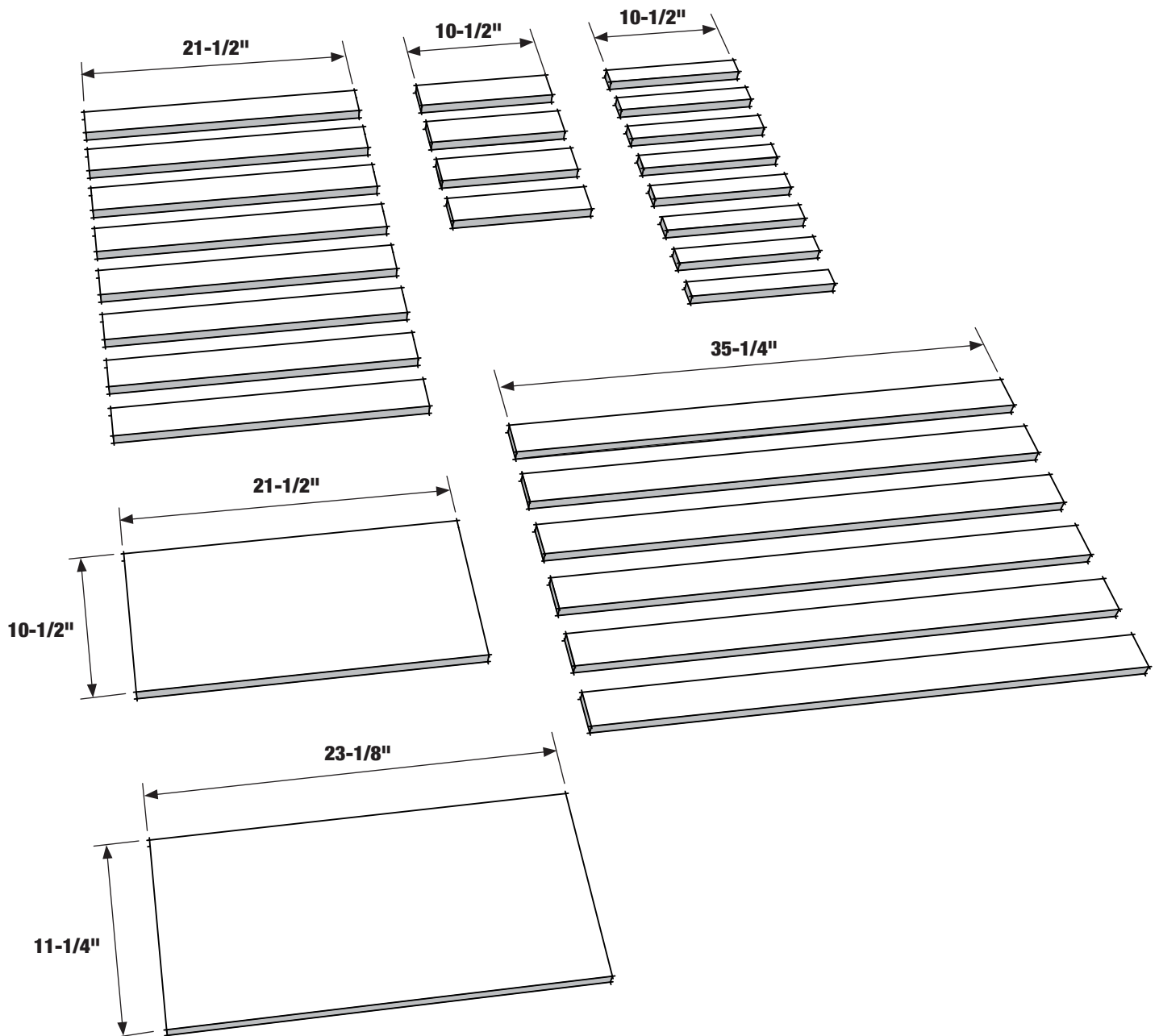
* Board dimensions are "nominal." Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

** The Front and side trim boards will be cut to correct size later in Steps 23 & 24 to match Wine Rack top dimensions.

Lumber & Sheet Layout Guide



Lumber & Sheet Cut Layout Guide



Assembly Instructions

Step 1

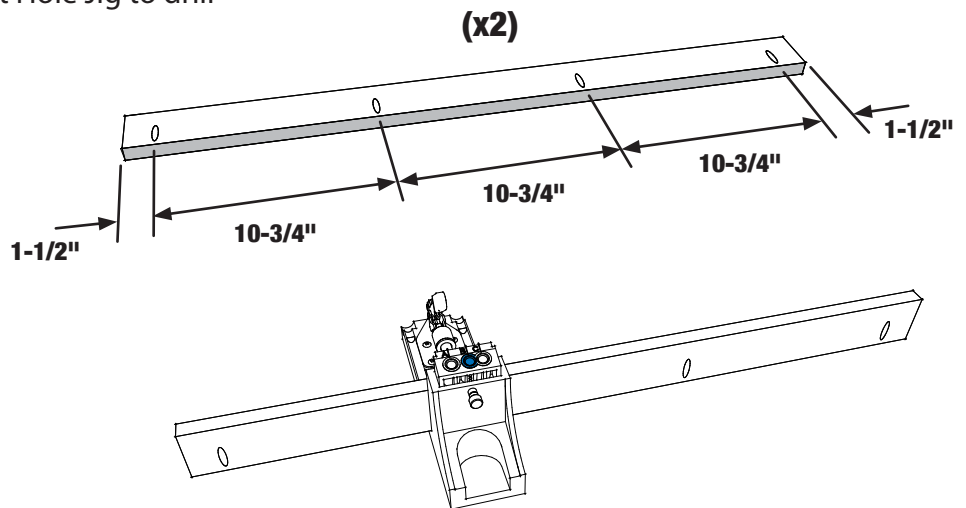
Cut out all material using the Lumber & Sheet Cut Layout Guide.



Step 2

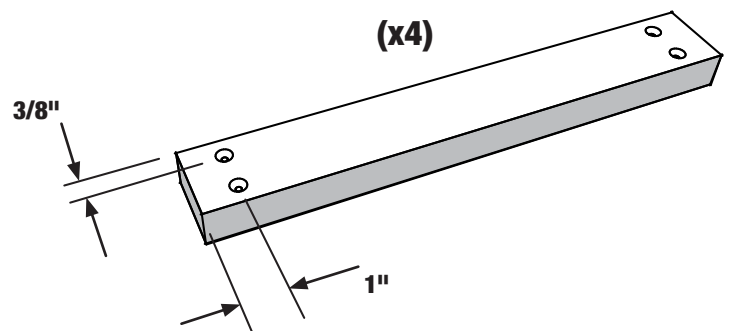
Take (2) of the 35-1/4" leg boards and mark the locations of the pocket holes following the dimensions in the diagram.

Use the (B) guide hole on the Pocket Hole Jig to drill holes in the side of the boards.



Step 3

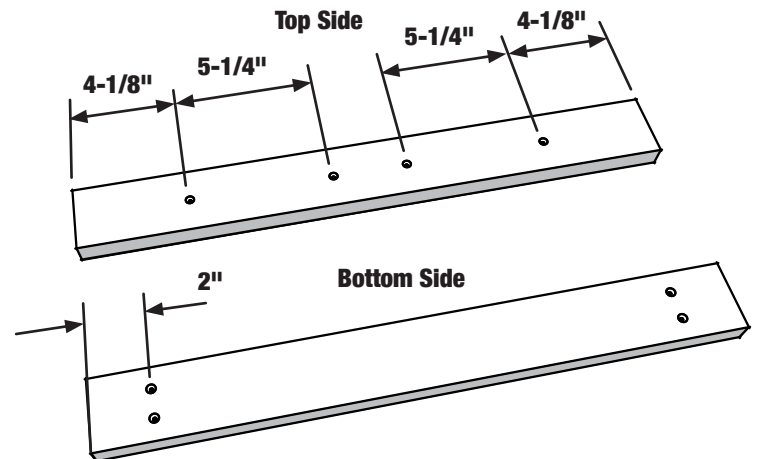
Take (4) of the 10-1/2" leg side support boards and measure and mark points for the countersink holes. Follow diagram for measurements. Measurements are symmetrical on each end.



Step 4

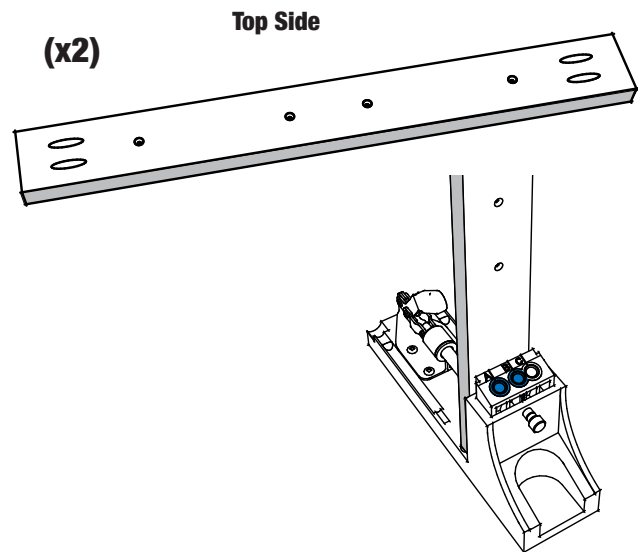
Take (2) of the 21-1/2" boards to be used as the wine glass holders. Drill countersink holes in the locations outlined in the Top Side diagram.

Turn boards over to the bottom side and drill countersink holes 2" from each end. Holes should be 1" apart with equal distance on each side.



Step 5

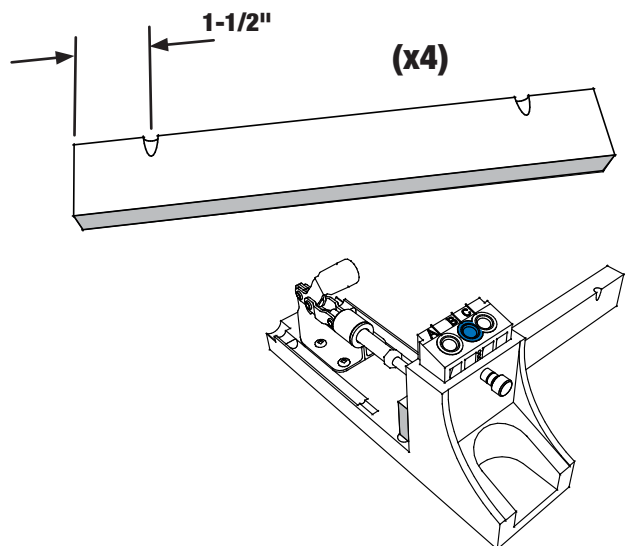
On the same (2) 21-1/2" boards, drill two pocket holes on each end on the top side. Center boards in Pocket Hole Jig and use the (A&B) guide holes.



Step 6

Take (4) of the 10-1/2" boards and measure 1-1/2" from each end. Mark a point. Use the (B) guide hole to drill holes in the side of the boards.

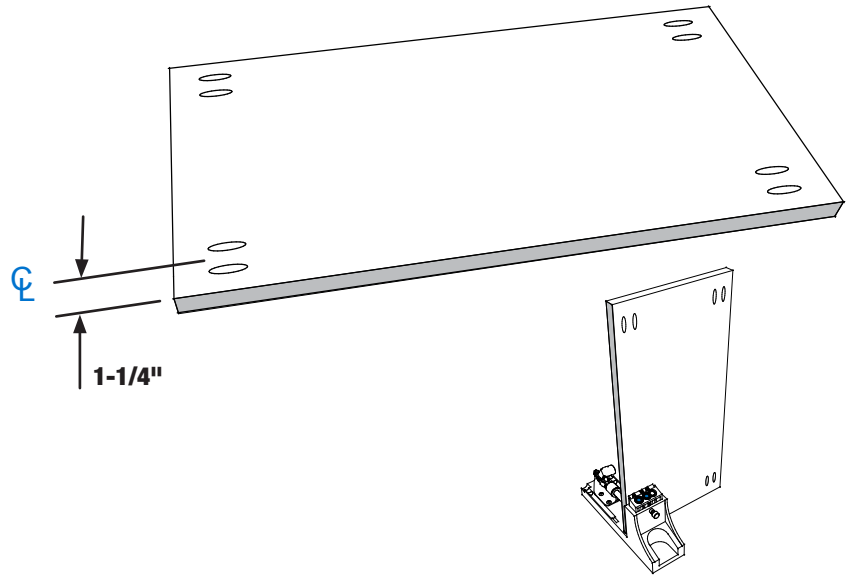
Note: Part of the hole will be drilled into the top of the board. This will be covered later in the assembly.



Step 7

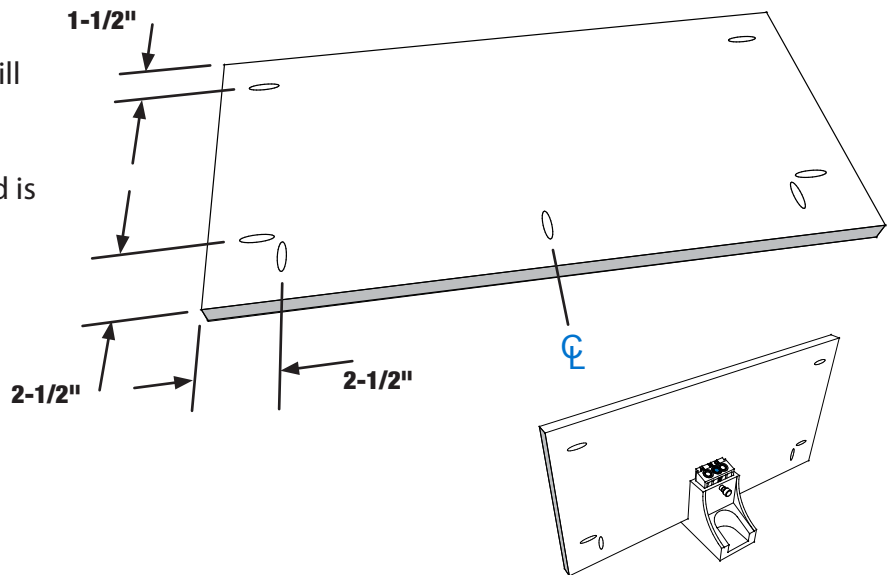
Take the 21-1/2" x 10-1/2" board and mark locations for pocket holes. Do this by measuring 1-1/4" from the long ends. This is the middle shelf.

Place board in the pocket hole jig as show in the diagram. Put the 1-1/4" mark in the center of the (A&B) guide holes. Drill holes.



Step 8

Take the 23-1/8" x 11-1/4" board and drill pocket holes on the locations shown in the diagram. Align to (B) guide hole. Dimensions are symmetrical. This board is the top of the Wine Rack.

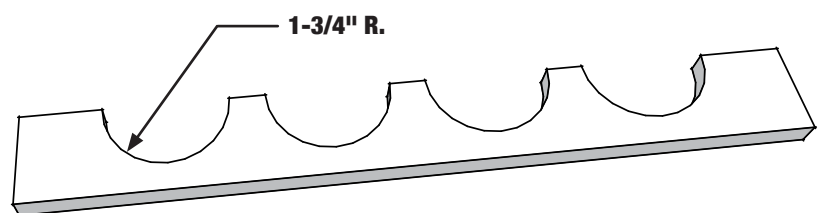
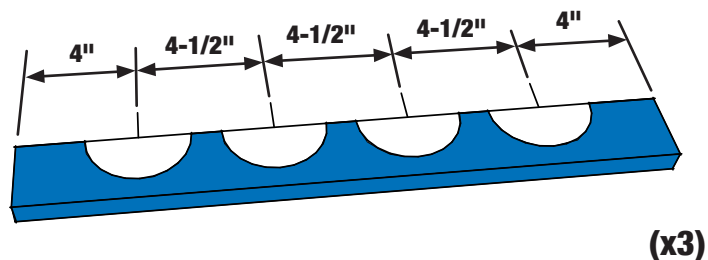


Step 9

Take (3) of the 21-1/2" boards and mark points at measurements shown in the diagram. These boards will be the back rack boards.

At the (4) points, use a drawing compass and mark a half circle with a 1-3/4" radius.

Use a Jig Saw to cut out the half circles.

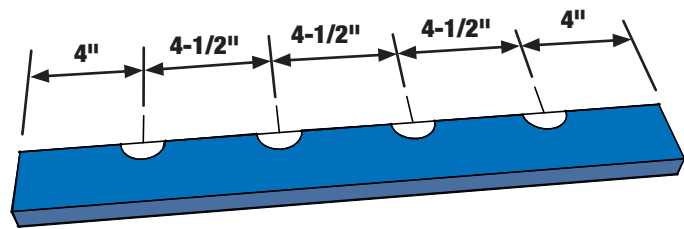


Step 10

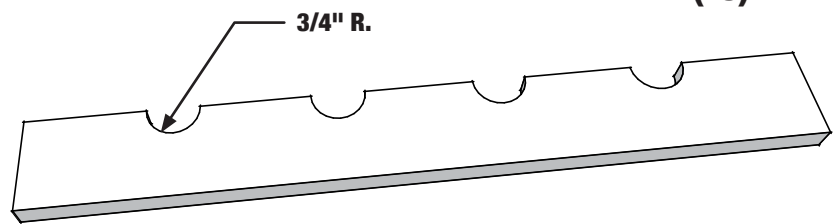
Take (3) more of the 21-1/2" boards and mark at points shown in the diagram.

At the (4) points, use a drawing compass and mark a half circle with a 3/4" radius.

Use a Jig Saw to cut out the half circles. These are the front rack boards.

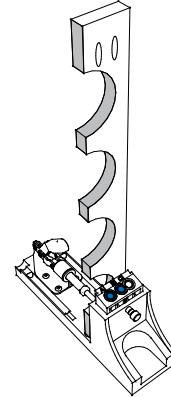
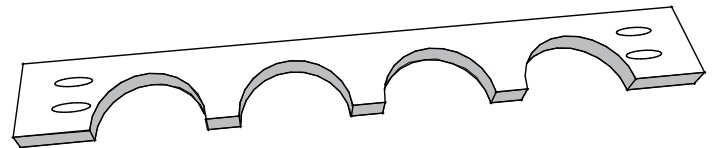


(x3)



Step 11

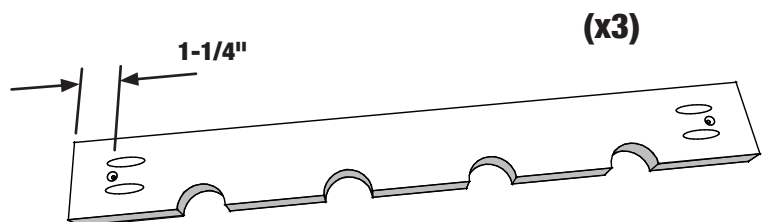
On the (3) back rack boards, drill (2) pocket holes centered on each end using the (A&B) guide holes.



Step 12

Repeat Step 11 on the front rack boards as well.

Then add a countersink hole in the middle of the pocket holes at 1-1/4" from each end.



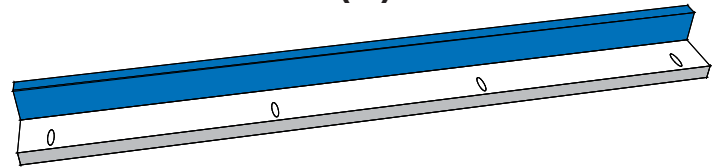
(x3)



Step 13

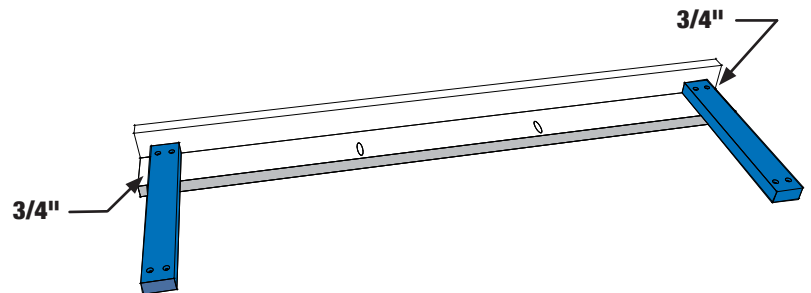
Attach (1) of the 35-1/4" legs with the pocket holes to another 35-1/4" legs using pocket hole screws.

(x2)



Step 14

Using wood screws, attach (1) 10-1/2" piece at a 90° angle to (1) of the legs built in Step 13 and 3/4" from the edges.

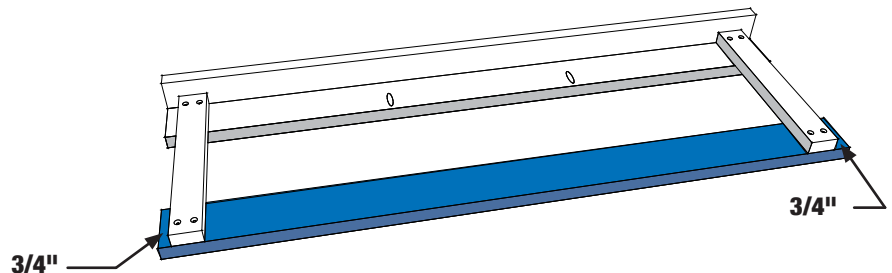


Step 15

Place an additional 35-1/4" board underneath the 10-1/2" piece. Attach with wood screws.

Repeat this process to build the other leg.

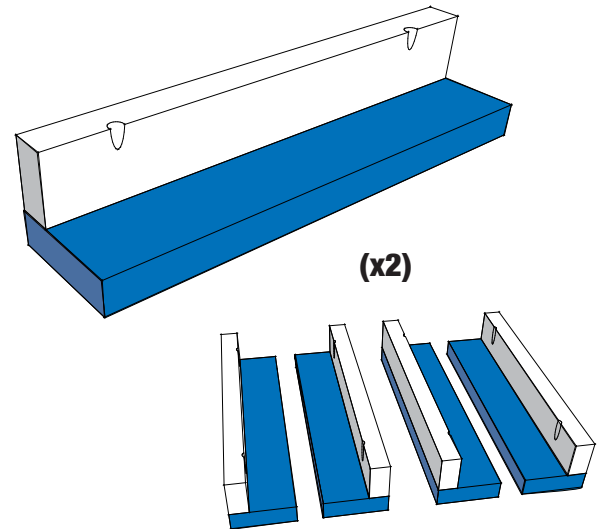
These pieces will form the sides of your wine rack.



Step 16

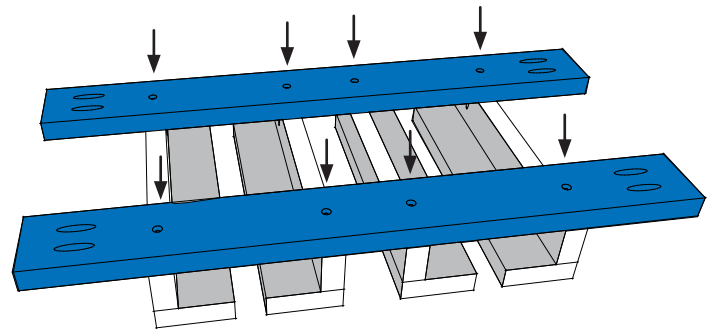
Assemble the wine glass holder portion of the rack by attaching 1" x 2"x 10-1/2" side support piece at a 90° angle to (1) of the 1" x 3"x 10-1/2" rail pieces with pocket hole screws.

Attach another side support piece to a rail piece, but on the opposite side this time. There will be (2) sets of these wine glass holders.



Step 17

Continue assembling the wine glass holder by using wood screws to attach the top support boards.

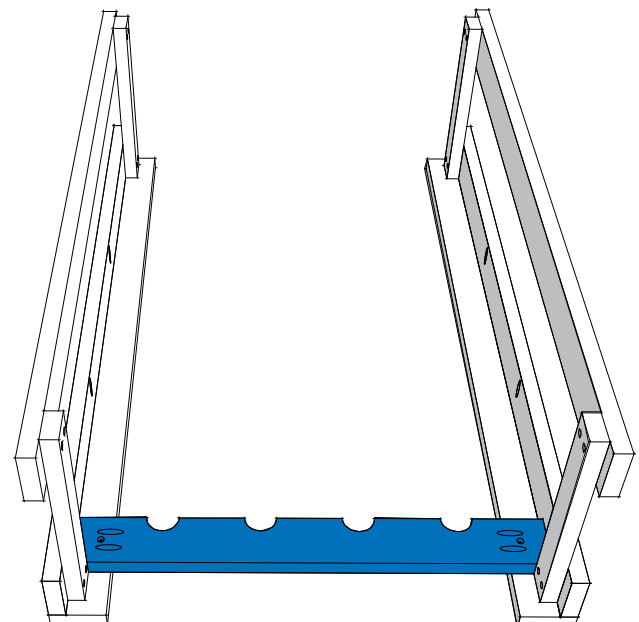


Step 18

Place the (2) leg assemblies down on their front face frame.

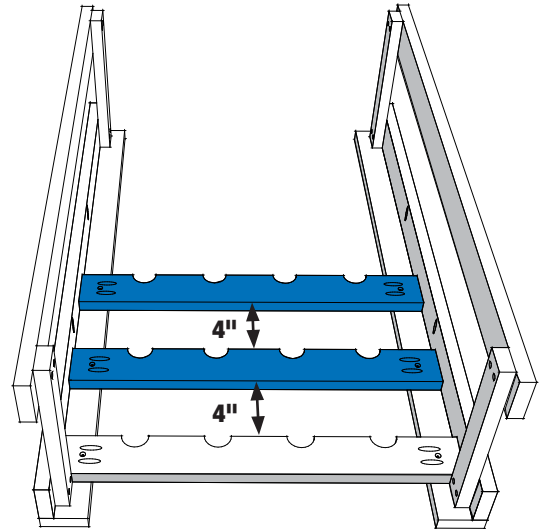
Align (1) of the front rack boards to the bottom of the legs. The bottle holder should rest squarely on the top of the (2) lower side support board.

Attach using pocket hole screws and (2) wood screws through the back of the front face frame.



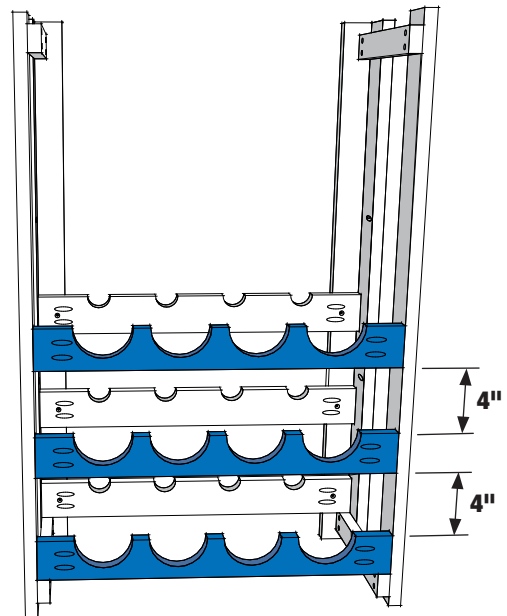
Step 19

Add the other (2) front rack boards to the assembly. Space boards 4" apart from each other. Attach using same method in Step 18.



Step 20

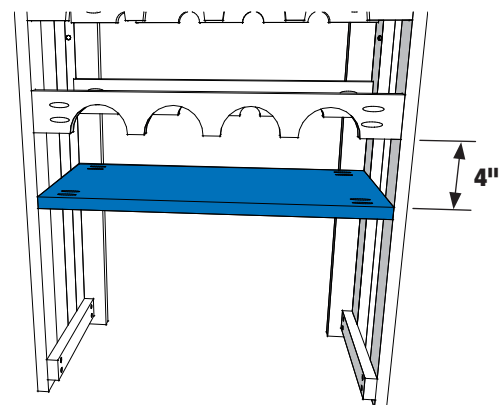
Stand the wine rack assembly upright. Attach the (3) back rack boards with pocket hole screws. Start at the bottom and work upwards like in Step 19. Boards are also spaced 4" apart from each other.



Step 21

Turn wine rack assembly upside down. Attach middle shelf with pocket hole screws 4" from the bottle rack board.

H **Tip -** To set distance and support when attaching the shelf, measure down 4-3/4" and clamp a scrap block at that location. Rest the shelf on blocks and attach.

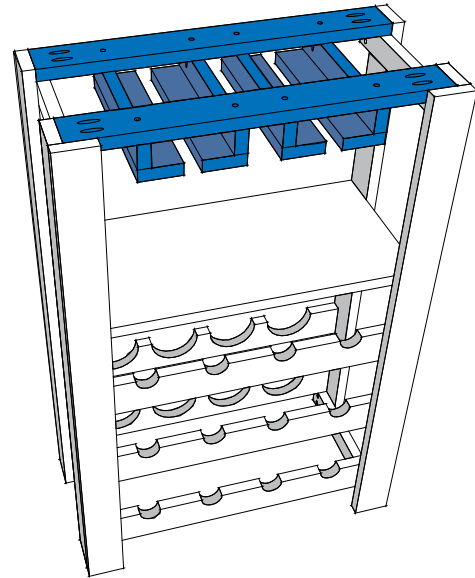


Step 22

Stand the wine rack upright again.

Place wine glass holder inside the legs of the assembly and resting on top of the side supports. The top of the wine glass holder should be even with the top of the legs.

Attach with pocket hole screws.



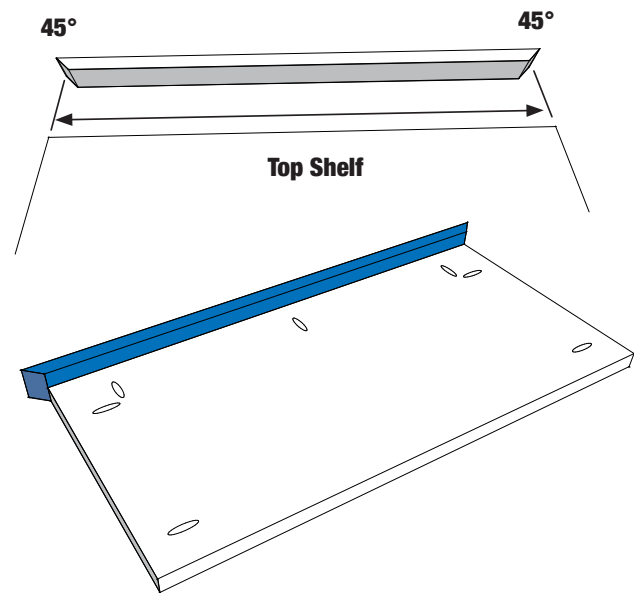
Step 23

Measure across the front edge of the top rack board. This measurement should be 23-1/8".

Mark (2) points on the top edge of the 1" x 2" x 8" board at that distance. Allow enough material to cut the (2) 45° angles outward of those marks.

Set the Miter Saw at 45° and cut the (2) angles.

Align trim board, then glue and attach with pocket hole screws.

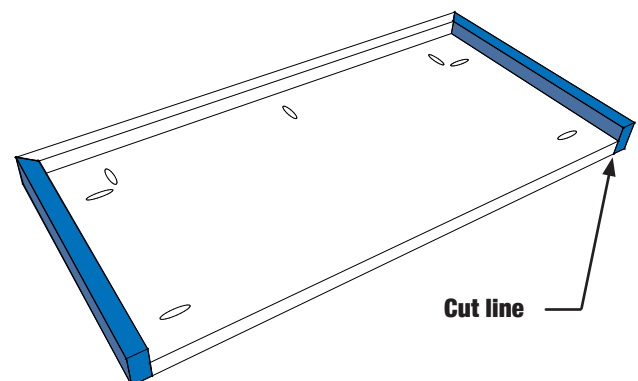


Step 24

To cut the side trim boards, start by cutting a 45° angle going opposite ways on (2) 15" long boards.

Align the side trim boards with the front trim board. Mark a cut line even to the back of the top board and cut with a Miter Saw.

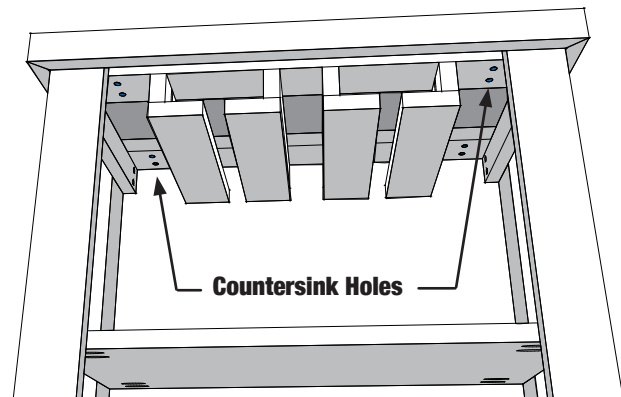
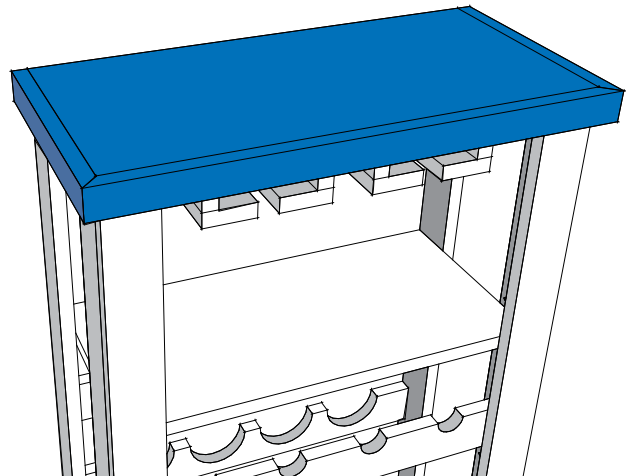
Attach with glue and pocket hole screws.



Step 25

Place top on the Wine Rack. The trim boards should fit over top of the legs and glass holder. There should be 1/16" space on each side and it should be flush on the front and back. Center the board on assembly and attach with wood screws.

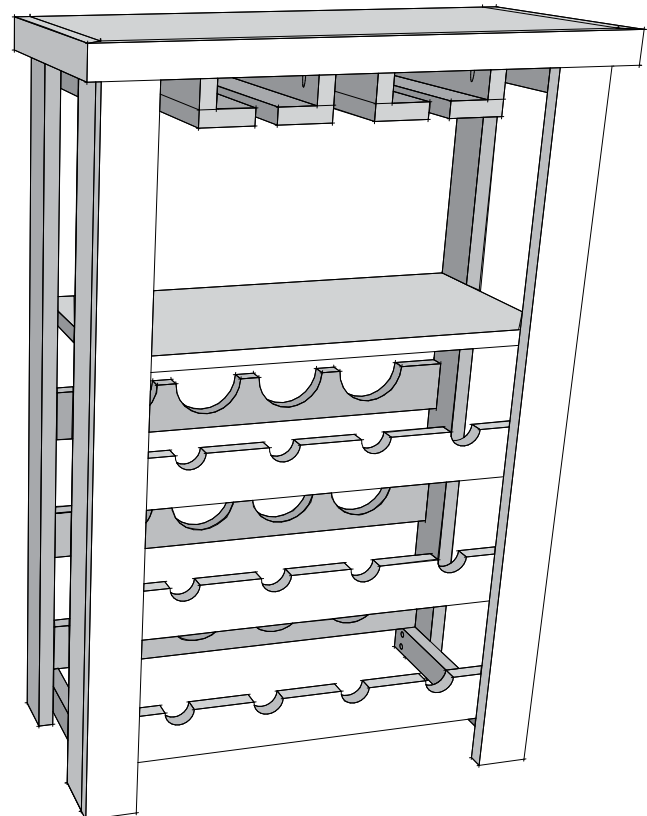
Attachment is made from the underside of the glass holder through the (8) countersink holes shown in diagram.



Step 26

Sand and finish to your desire.

Project complete and ready for use!



H Rougher finish – Use 60-80 grit sandpaper to hand sand with the grain of the wood.

Smoother finish – Use 60-80 grit sandpaper to remove scratches & imperfections.

Followed by using 120-220 grit to smooth.

Finish Sanding – Use 320-400 grit sandpaper

Super fine sanding – Use 600+ grit sandpaper

