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<http://www.adobe.com/support/techdocs/316508.html>

CONSTRUCTION DETAILS

I. Required Materials

- a. Built primarily with maple available from any home center or lumber yard
 - i. You'll need two glued-up maple panels, 1" x 12" x 36" (minimum length)
 - ii. Otherwise, select the clearest, straightest maple 1" x 6" and 1" x 8" material you can find.
- b. You'll also need 12" x 12" squares of cork. Home centers may have them. We found them at Target.
- c. Plexiglass for the shelves and sliding doors is another home center item. Find a sheet large enough for all four pieces.
- d. Special-order items are the door track, rare earth magnets, shelf pins, all from Rockler, and roto-hinges from Lee Valley.

II. Required Tools

- a. Table saw or circular saw
- b. Jig saw
- c. Router or router table
- d. Drill/driver
- e. Countersink/pilot bit
- f. Phillips #2 driver bit
- g. 1/4" round-over bit (leading edge of worksurface)
- h. 1/8" round-over bit (finger holes on worksurface)
- i. 1/2" Forstner bit (magnets and cut-out on outer case top)
- j. 3/4" Forstner bit (roto hinges)
- k. 1-inch Forstner bit (finger holes in work surface and glass doors)
- l. 1/4" brad-point or Forstner bit (shelf-pin holes)
- m. 1/8" twist bit (pilot holes for non-countersunk screws)
- n. 1/16" twist bit (for aligning the roto hinge counterbores)
- o. Dowel centers (for aligning the magnets and strike plates)
- p. Clamps
- q. Random-orbit sander

CONSTRUCTION DETAILS

III. Four Sub-Assemblies

- a. Inner Case
- b. Outer Case
- c. Pivoting Worksurface
- d. Miscellaneous Items
 - i. Doors, shelves, hardware, back panel

IV. Inner Case

- a. Cut the bottom, sides, divider, and partition to size from 1" x 8" maple
- b. Drill and cut out wire slot in divider
- c. Drill shelf pin holes in sides and partition
 - i. These are through holes on the partition, so you'll need to support this piece with a sacrificial board underneath it to avoid splintering the hole.
- d. Clamp the assembly together and drill countersinks/pilot holes
- e. Drive #8 x 1¼" Fh Woodscrews

V. Outer Case

- a. Three piece assembly top and two sides
- b. The sides have an elongated "S" curve cut in them
- c. These mate with matching curves in the pivot arms, which are part of the worksurface.
- d. To ensure a good fit, we need to use templates
 - i. Make a pair of templates, beginning with one for the pivot arm. Use the dimensions, or if you have the ability to print on 11" x 17" paper, you can download a full-size pattern from the website
- e. Lay out the template on ¼" ply or hardboard
 - i. Cut and sand it to final shape and size
- f. Now use this template to lay out the template for the outer case side
- g. Cut and sand HINT: Sand until the templates fit together because your final workpieces will fit exactly as the templates do.
- h. Lay the pivot arm template aside for now, we'll come to that shortly

CONSTRUCTION DETAILS

- i. Trace the outer case side template onto maple 1" x 8" x 23 $\frac{3}{4}$ " (twice)
- j. Cut the sides to rough shape
- k. One at a time, attach the template to the rough-cut sides and rout the sides to final shape
 - i. Use a flush-trim bit, set the depth so the bearing rides on the template, and then rout right to left.
- l. Cut the top
- m. Clamp the sides and top together
- n. Drill pilot holes in the sides NOT countersinks
- o. Assemble the outer case with #8 x 1 $\frac{1}{4}$ " Fh Woodscrews and finish washers
- p. Now join the inner and outer cases
- q. Two screws and finish washers through the outside of each outer case side
- r. Four screws in countersinks from the inside of the inner case

VI. Pivoting Worksurface

- a. The templates are already made, so let's start with the sides
- b. Trace and cut
- c. Attach and rout this time, though, feed direction is critical coming at this from the wrong direction will tear out the narrow end. So you'll actually have to *back rout* this at the narrow end. In other words, start routing at the narrow end and rout from left to right. In order to do this safely, you'll need to have a pivot pin mounted in your router table. This will make it less likely that bit will grab the workpiece and pull it out of your grip. Make this cut in very light passes until it is complete. As soon as you rout past the rounded corner. Pull the workpiece away from the bit and finish routing in the proper direction.
- d. Cut the worksurface to length from the glued-up maple panel
- e. Dry clamp the completed assembly
- f. Position over the case assembly (checking for clearance)
- g. Assemble with #8 x 2" Fh Woodscrews and finish washers

VII. Miscellaneous

a. Roto Hinges

- i. Assemble pivoting worksurface and case facedown on benchtop
- ii. Lay out center point of roto hinges on the inside of the case
- iii. Drill a 1/16 hole at this point through the case and just into the pivot arm to locate the hinge holes

CONSTRUCTION DETAILS

- iv. Remove pivoting worksurface assembly from case
- v. Drill counterbores on the OUTSIDE of case and INSIDE of pivot arms
- vi. Disassemble pivot arm and worksurface and leave this way for applying a finish

b. Mounting Cleats

- i. Hanging Cleat cut to size and attach with three woodscrews in countersinks/pilot holes
- ii. Back Support Cleats cut to size and attach with two woodscrews in countersinks/pilot holes

c. False Back

- i. Cut back to size from pre-assembled maple panel
- ii. Mount cork tiles to back panel with spray adhesive (center one tile and then trim two others to fit on each end of the panel)

VIII. Glass doors

- a. Cut to size from plexiglass
- b. Drill finger holes with Forstner bit
- c. Soften edges of holes by sanding
- d. Sand back face of glass doors with ROS to "frost" the glass

IX. Finish

- a. Apply a clear finish

X. Final assembly

- a. Attach pivot arms to case with roto hinge. Glue the hinge into the counterbores and the sides and pivoting arms.
- b. Now reattach the worksurface between the pivot arms to capture the hinges
- c. Assemble the tracks and sliding doors according to manufacturer's instructions
- d. Lay out and drill counterbores for the magnets, cups, and strike plates that hold the pivoting worksurface closed and the cork/backboard in place

ROTO-HINGE INSTALLATION

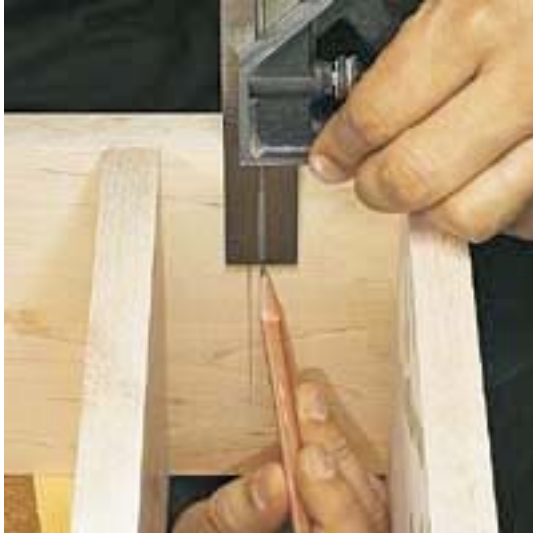


FIGURE 1 On the inside of the case, lay out the center of the Roto-Hinge countersink using the dimensions shown in the Builder's Plans.



FIGURE 2 Hold the pivoting arm in position and drill a $\frac{1}{16}$ "-diameter hole through the inside of the case and just into the pivoting arm (not all the way through it). This will provide perfectly aligned drilling locations on both pieces.

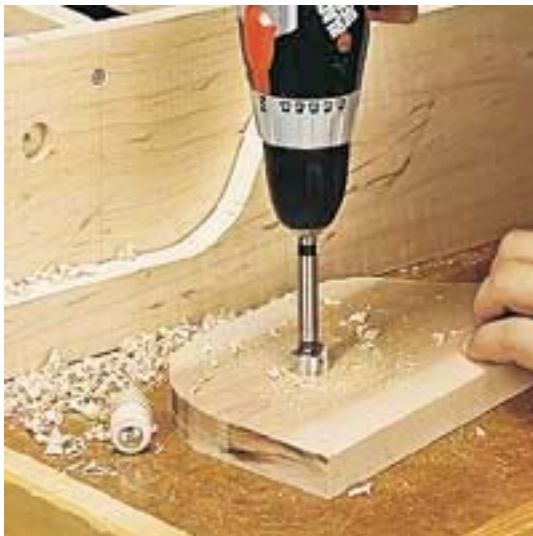
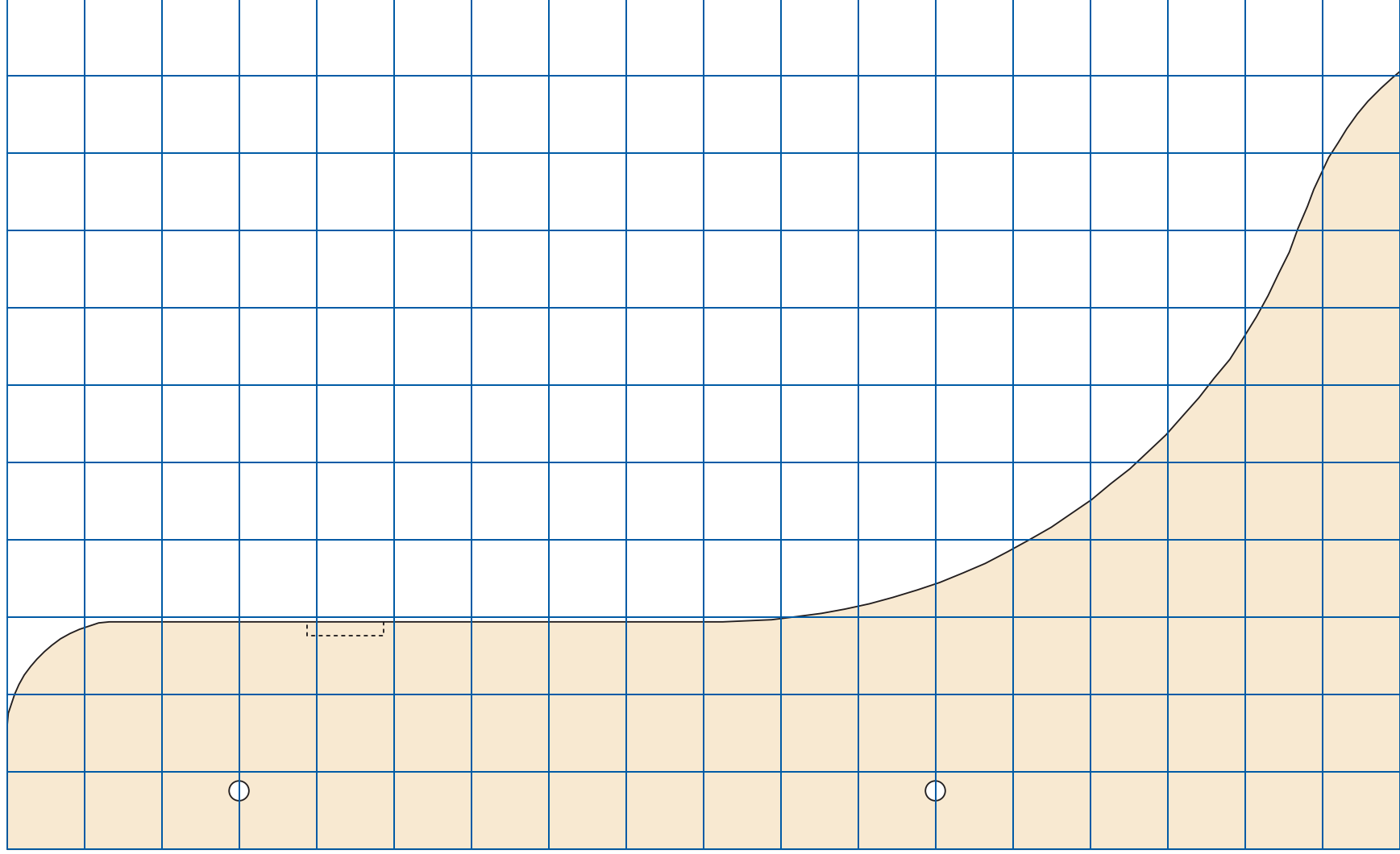


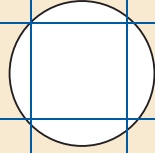
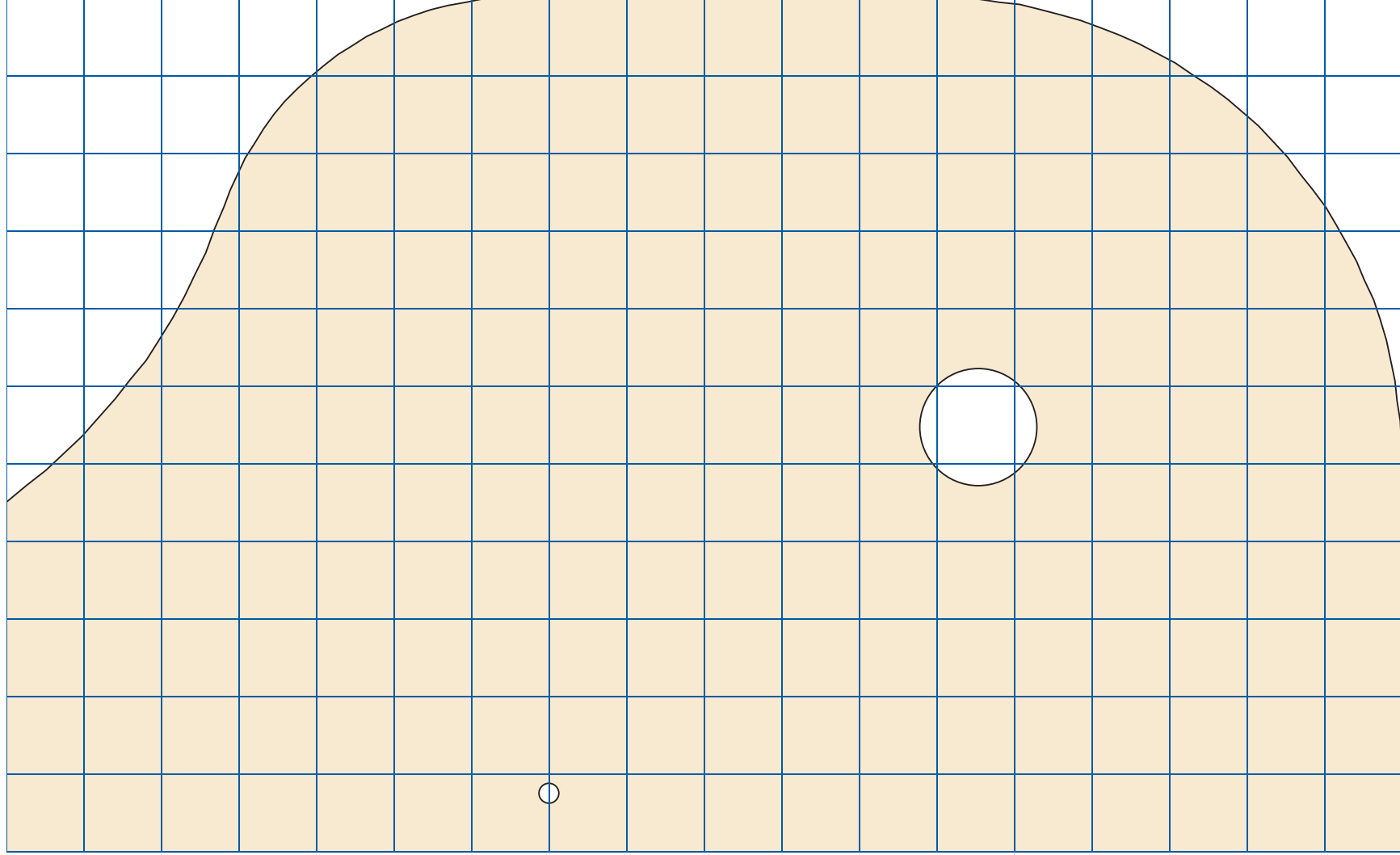
FIGURE 3 Remove the pivoting arm. Now drill a countersink on the outside of the case at the location you just drilled the $\frac{1}{16}$ " hole. Drill the matching countersink in the pivoting arm. The countersinks need to be $\frac{3}{4}$ " diameter and $\frac{9}{16}$ " deep. Glue the hinge into the counterbores.

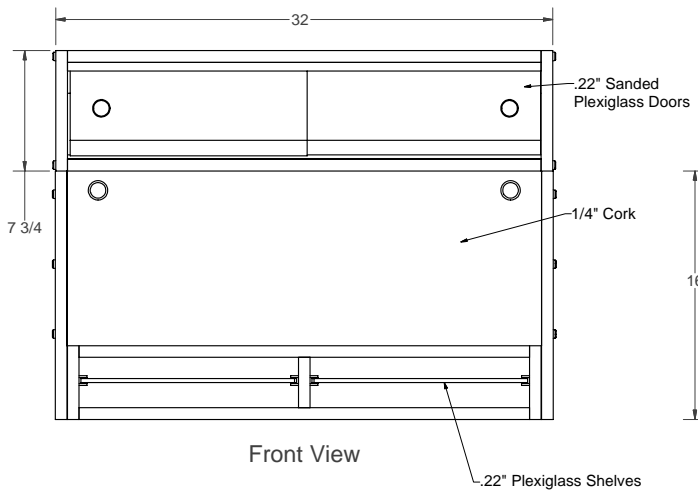
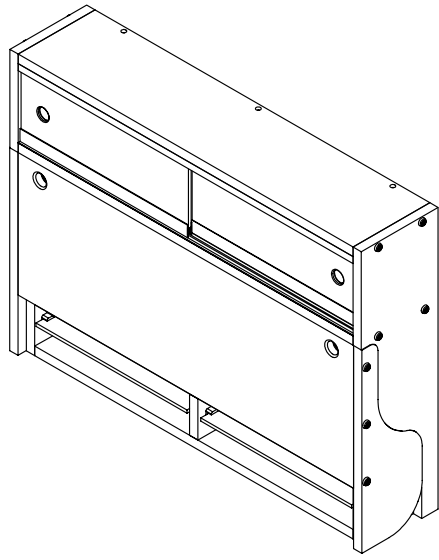


FIGURE 4 With both pivoting arms in place, you can now attach the work surface between them using 2" Fh Woodscrews and finish washers.

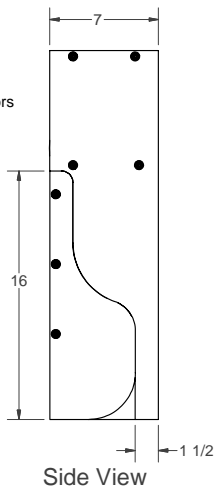
FULL SIZE CUTTING PATTERN



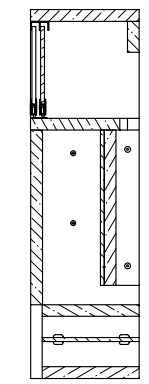




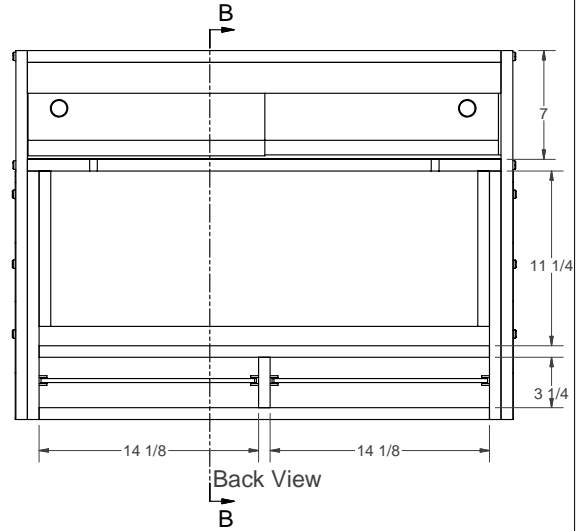
Front View



Side View

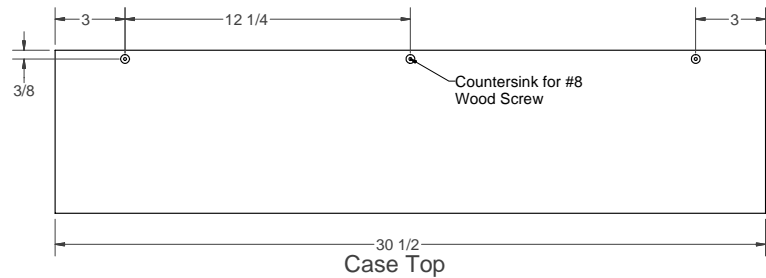


SECTION B-B



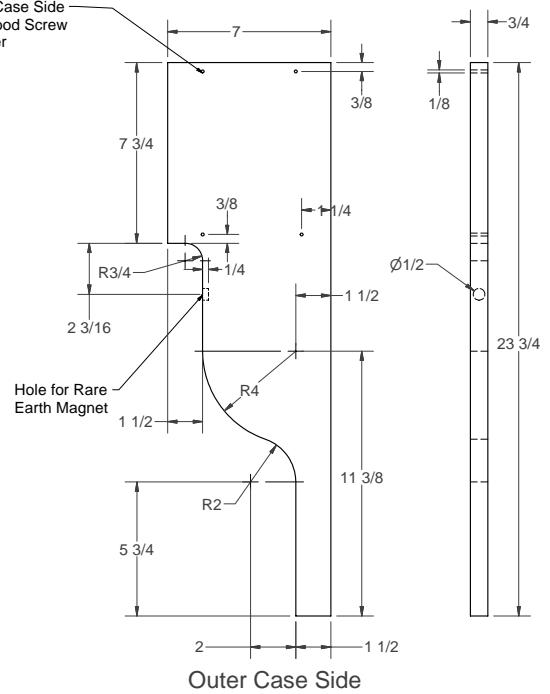
Back View

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| Workbench | 1 eNook | Donovan | DATE 3.29.07 | SHEET 1 |
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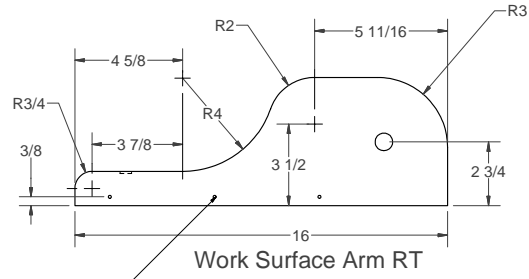
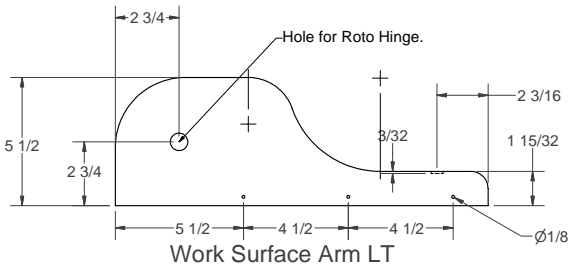


NOTE:
Use #8 x 1 1/4" Woodscrew
Unless Otherwise Specified

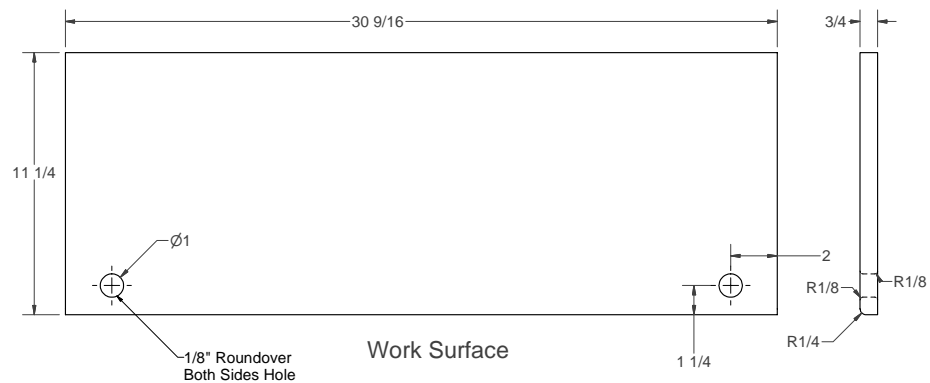
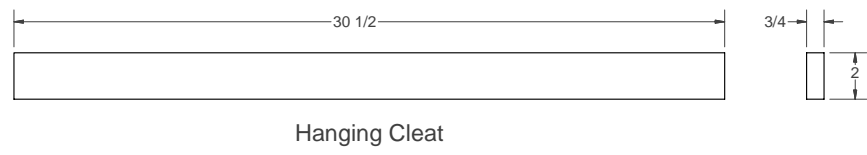
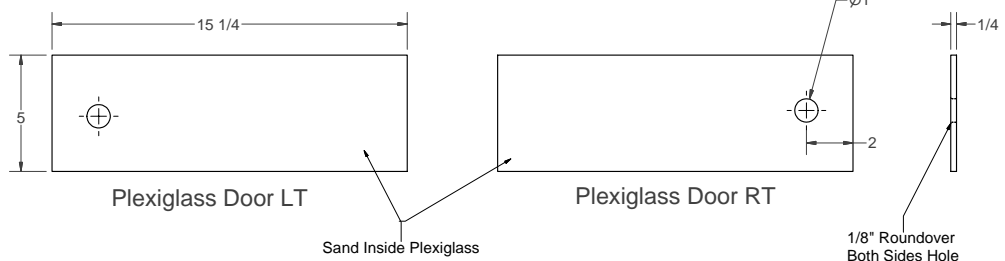
4 Holes on Fixed Case Side
Get #8 x 1 1/4" Wood Screw
With Finish Washer



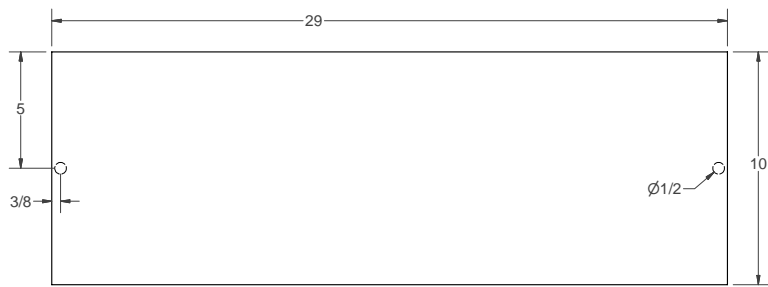
NOTE:
All Material To Be 3/4"
Maple Unless Otherwise
Specified



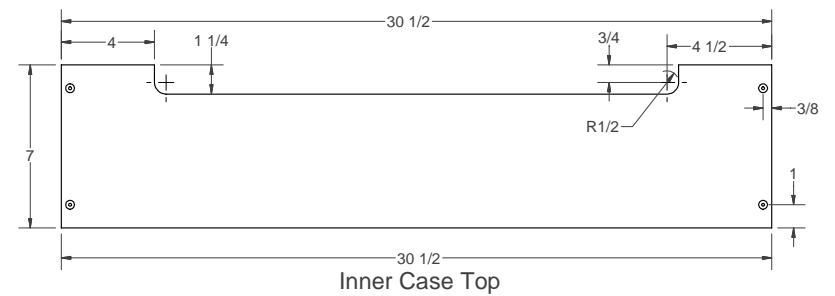
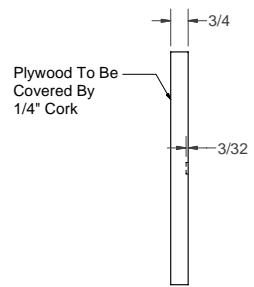
3 Holes On Moving Work Surface
Side Get #8 x 2" Wood Screw
With Finish Washer



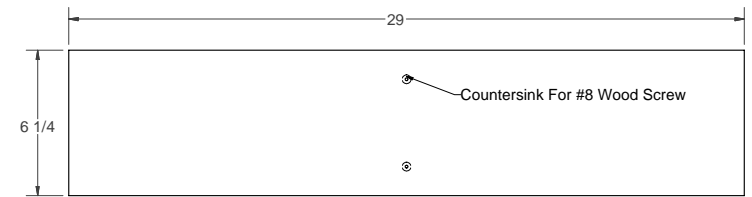
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| Workbench | eNook | Donovan | DATE: 3.29.07 | SHEET: 2 |
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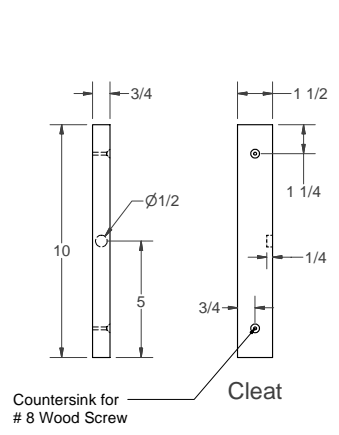
False Back



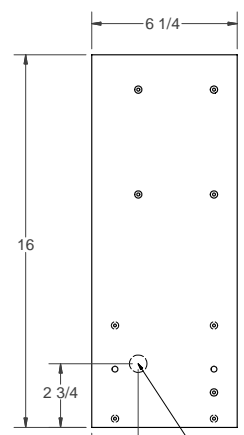
Inner Case Top



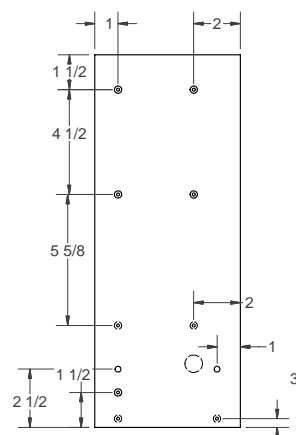
Shelf Top



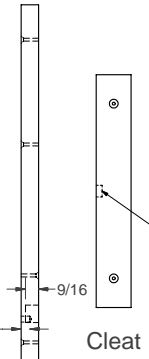
Cleat



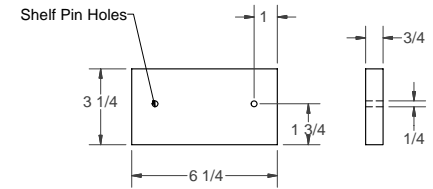
Left Case Side



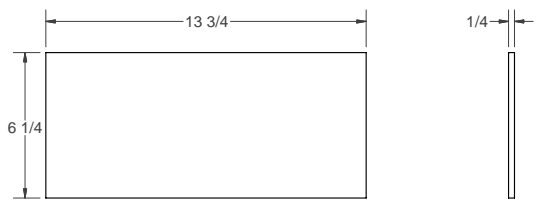
Right Case Side



Cleat

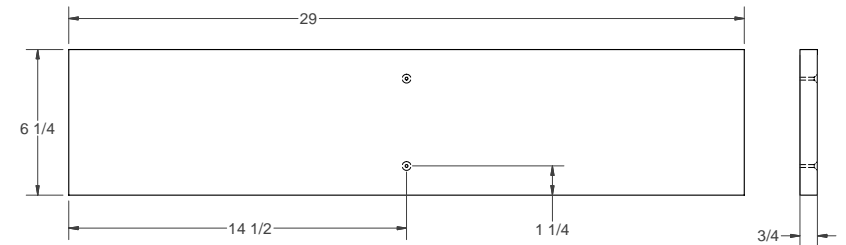


Shelf Divider



Plexiglass Shelf X2

All Material To Be 3/4" Maple Unless Otherwise Specified



Inner Case Bottom