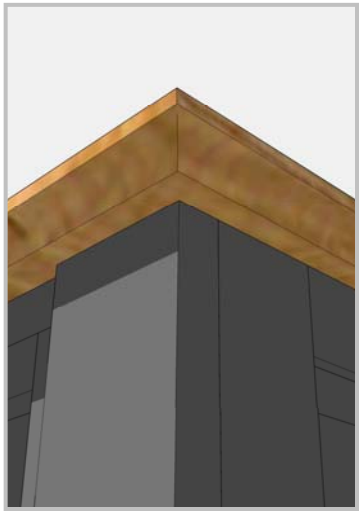
YOU CAN BUILD

The Versatile Media Cabinet



Jeff Branch WOODWORKING

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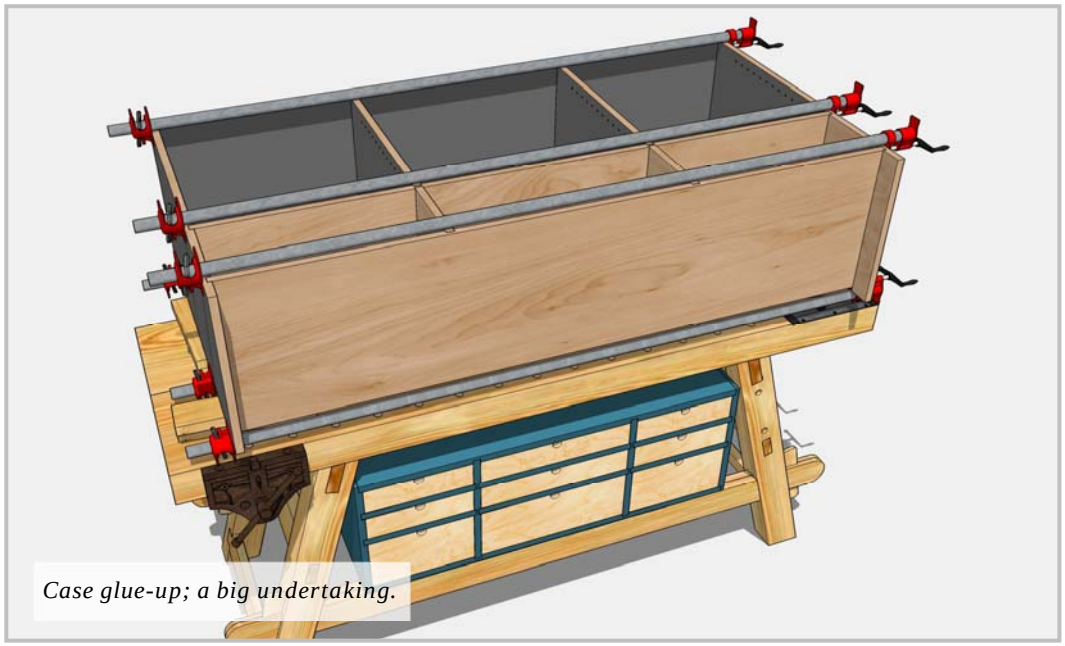

Case glue-up; a big undertaking.

Jeff Branch WOODWORKING

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Basically, I designed the media cabinet and created all of this publication by myself.

❖ ❖ ❖

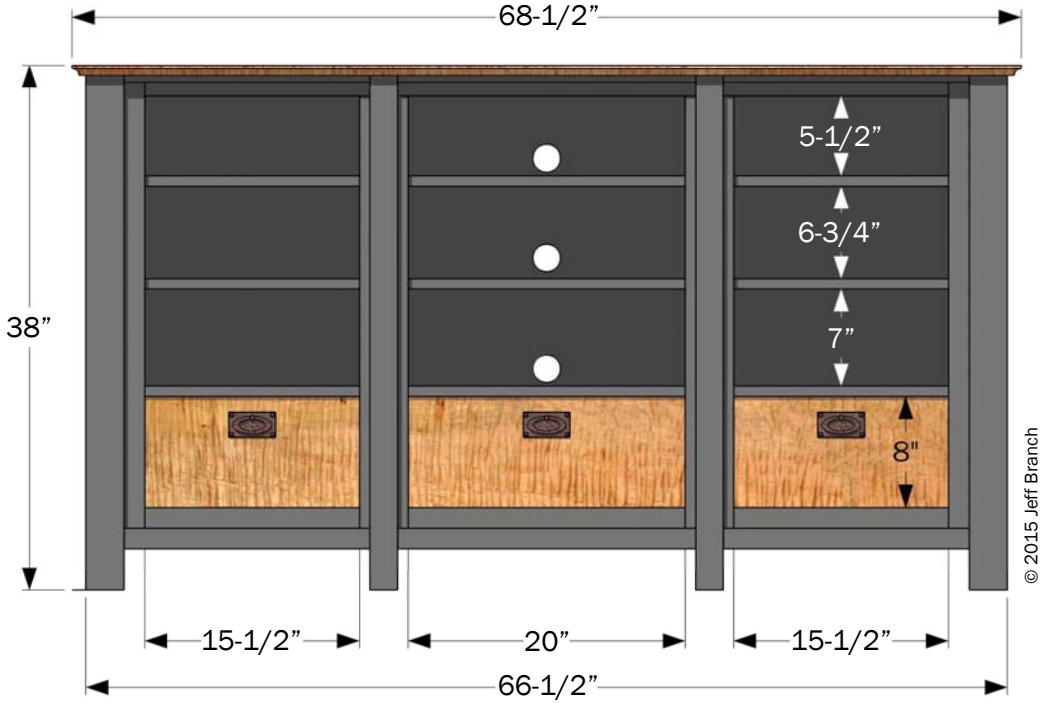
On the cover: The versatile media cabinet offers a lot of variety. It's modular layout means you can alter the cabinet design as you wish. Want more drawers? You can do that. Want all shelves? That works too. You can add or take away drawers to fit your needs.

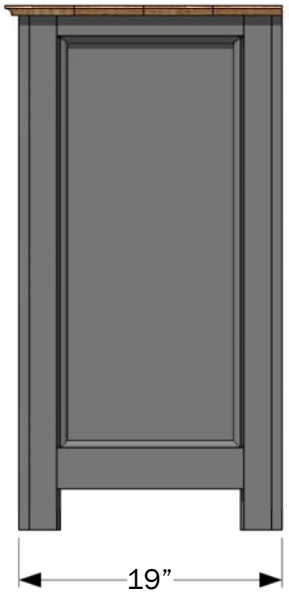
The cover shows four different versions of the versatile media cabinet: all shelves which are adjustable, three drawers, five drawers and eight drawers. This woodworking plan shows the step-by-step process for building the three drawer version. The three drawers option leaves plenty of room for future A/V equipment and other items which can be displayed on the cabinet shelves.

If you have questions, you can contact me via the about page on my blog.

MAIN DIMENSIONS

NOTE: The interior cabinet depth is 15-1/2”. This is the maximum depth of A/V components.





CUT LIST

Case Components

Item, Quantity, Description	Length, Width, Thickness
Ⓐ 2 Case Side	34-1/4 x 16 x 3/4”
Ⓑ 3 Case Top/Bottom/Middle	64-1/4 x 15-1/2 x 3/4”
Ⓒ 2 Case Upper Divider	21-5/8 x 15-1/2 x 3/4”
Ⓓ 2 Case Lower Divider	8-5/8 x 15-1/2 x 3/4”
Ⓔ 1 Case Back	64-1/4 x 32 x 1/2”

Front/Back Face Frames

Ⓕ 4 End Stile	34-1/4 x 3-1/2 x 3/4”
Ⓖ 4 Middle Stile	29-1/2 x 3-1/2 x 3/4”
Ⓗ 2 Upper Rail	58 x 1-3/4 x 3/4”
Ⓘ 2 Lower Rail	58 x 3 x 3/4”
Ⓙ 2 Middle Rail - Side	15-1/2 x 3/4 x 3/4”
Ⓚ 1 Middle Rail - Center	20 x 3/4 x 3/4”

Legs

Ⓛ 4 Corner Leg 1	37-1/4 x 2-3/4 x 3/4”
Ⓜ 4 Corner Leg 2	37-1/4 x 2 x 3/4”
Ⓝ 8 Corner Leg Blocking 1	3 x 2 x 3/4”
Ⓞ 4 Corner Leg Blocking 2	3 x 2 x 1/2”
Ⓟ 4 Interior Leg	37-1/4 x 2 x 3/4”
Ⓠ 8 Interior Leg Blocking	3 x 2 x 3/4”

Drawers

Ⓡ 2 Drawer Blocking 1	15-1/2 x 2 x 3/4”
Ⓢ 4 Drawer Blocking 2	15-1/2 x 5/8 x 3/4”
Ⓣ 6 Drawer Guide	15-1/2 x 1-3/8 x 3/4”
Ⓤ 6 Drawer Side	15-1/4 x 8 x 1/2”
Ⓥ 2 L & R Drawer Box Front	14-1/2 x 8 x 3/4”
Ⓦ 2 L & R Drawer Back	15 x 7 x 3/4”
Ⓧ 2 L & R Drawer Bottom	15 x 14 x 1/4”
Ⓨ 2 L & R Drawer Face	15-1/2 x 8 x 3/4”
Ⓩ 1 Center Drawer Box Front	19 x 8 x 3/4”
ⒶⒶ 1 Center Drawer Back	19-1/4 x 7 x 3/4”
ⒶⒷ 1 Center Drawer Bottom	19-1/4 x 14 x 1/4”
ⒶⒸ 1 Center Drawer Face	20 x 8 x 3/4”
ⒶⒹ 24 Drawer Pins	1/4 x 1”
ⒶⒺ 3 Drawer Pulls	See notes

Top and Moldings

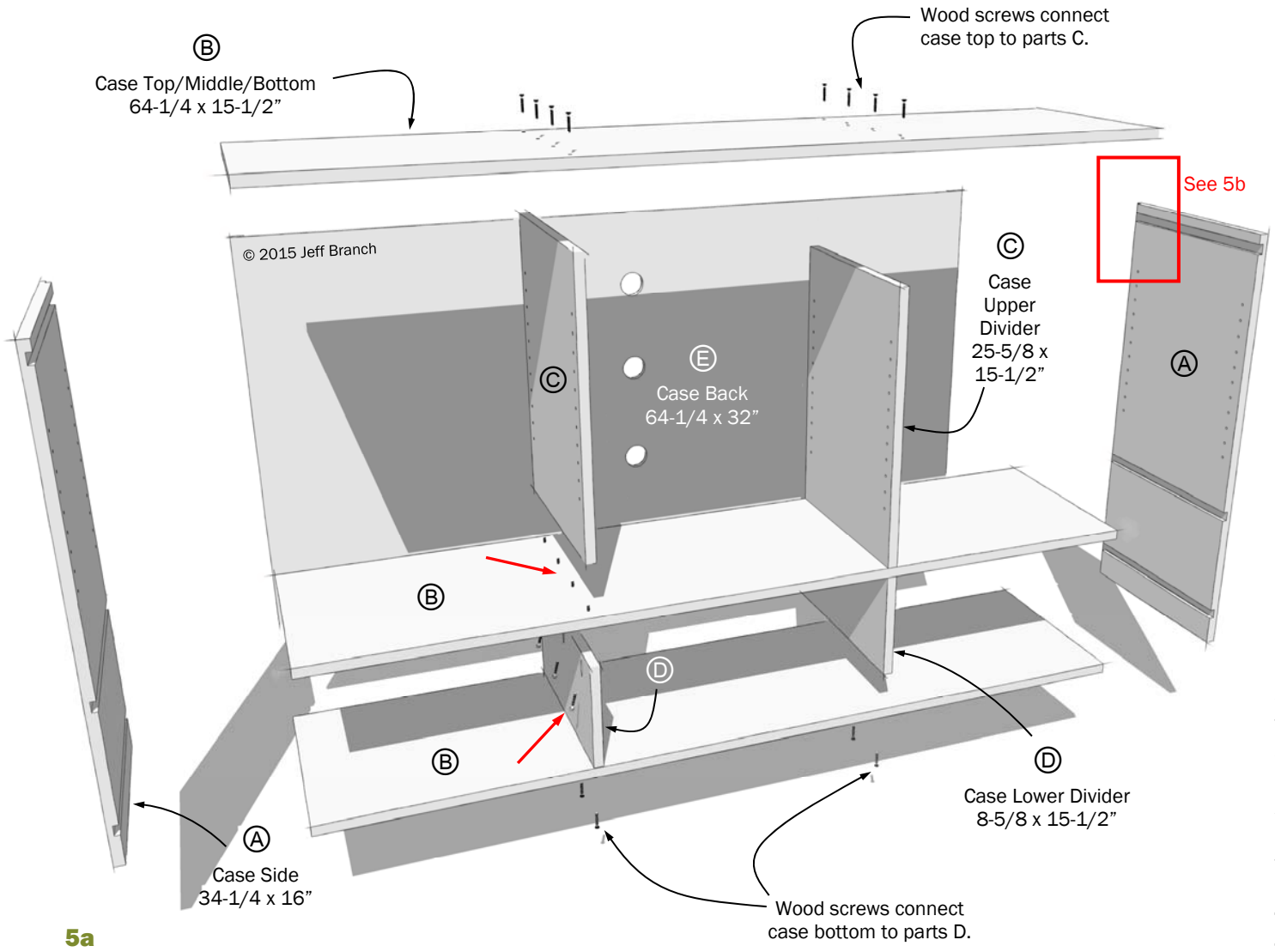
ⒶⒻ 4 Cabinet Top	68-1/2 x 5 x 3/4”
ⒶⒼ 8 Top Blocking	6 x 2 x 3/4”
ⒶⒽ 4 Side Quarter Round Long	29-3/4 x 1/2 x 1/2”
ⒶⒾ 4 Side Quarter Round Short	13-1/2 x 1/2 x 1/2”
ⒶⒿ 2 Side Lower Rail	13-1/2 x 3 x 3/4”
ⒶⓀ 2 Side Upper Rail	13-1/2 x 1-1/2 x 3/4”
ⒶⓁ 4 Quarter Round Upper L & R	17-3/4 x 1/2 x 1/2”
ⒶⓂ 2 Quarter Round Upper Center	21-1/2 x 1/2 x 1/2”
ⒶⓃ 4 Base Molding L & R	17-3/4 x 1-1/2 x 1/2”
ⒶⓄ 2 Base Molding Center	21-1/2 x 1-1/2 x 1/2”
ⒶⓅ 4 Adjustable Shelf L & R	19-5/8 x 15-1/2 x 3/4”
ⒶⓆ 2 Adjustable Shelf Center	22-3/4 x 15-1/2 x 3/4”

Notes

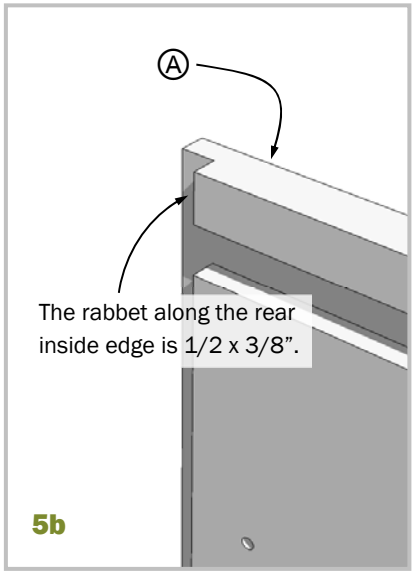
See page 21 for comments on the number and width of boards needed for the cabinet top.

The drawer pulls are Arts and Craft style pulls found at House of Antique Hardware.com. Look for item #R-08BM-1015-AC. There are a number of different styles of pulls available and other options will look just as good.

CREATING THE CASE



5a



5b

Note the red arrows - the middle shelf shows screws being driven from below to attach parts **C**. And the adjustable shelves are hidden from view.

Also note the pocket screws driven from parts **D** into the middle shelf to join these parts together.

Throughout the plan, all stock is 3/4” thick unless otherwise indicated.

CREATING THE CASE

Lets begin this project by working on the skeleton of the media cabinet. The skeleton is box which makes up the case. We will add the legs, drawers, and the figured cabinet top later.

The case includes the sides, parts **A**, the top and bottom along with the middle, all labelled as parts **C**.

Cut part **A** to final size following the dimensions given in the cutting diagram. Cut dadoes as shown in illustration 6a and add the rabbet along the inside rear edge.

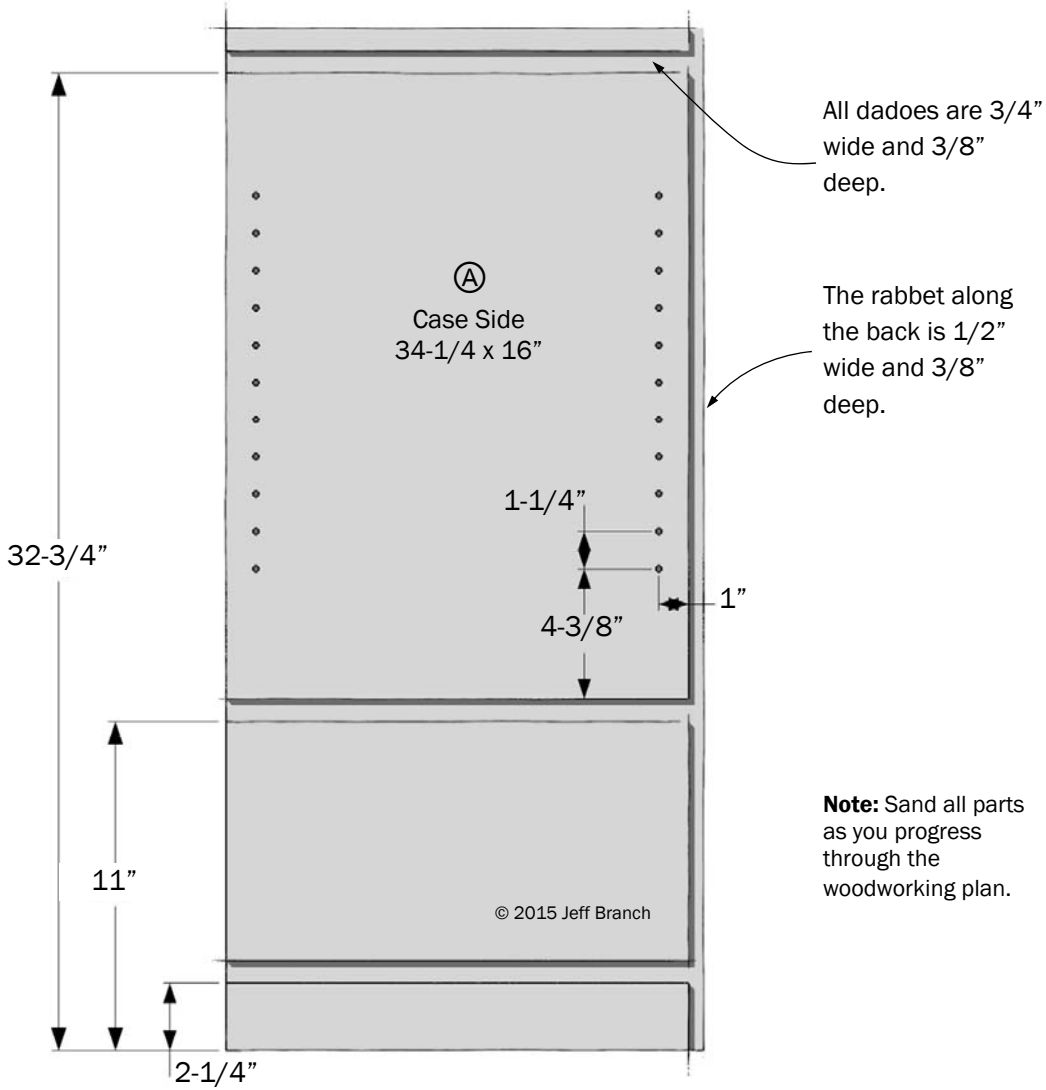
Note: most of the case components are made of 3/4" birch plywood which typically is less than 3/4" thick. Make adjustments to the dadoes as needed.

Add shelf support holes to the interior of the case sides as shown. Over the years, I have used two methods for creating shelf support holes. 1) A home made jig used in conjunction with my plunge router . 2) Most recently, I have switched to a Kreg shelf pin jig which works in combination with my cordless drill.

A Note About Safety

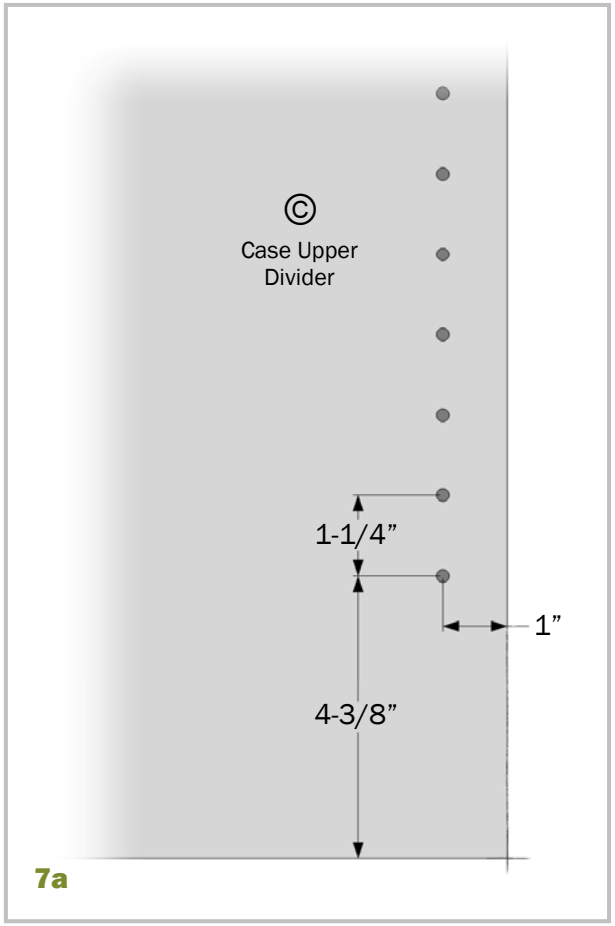
Be sure to understand and practice safe workshop proceedures. Know the safety instructions provided by your tool manufacturer. Wear eye and ear protection when appropriate and protect yourself from the fine dust generated by woodworking tools.

Never become complacent with your tools. Remember your tools are potentially dangerous and to use them with respect.



6a

CREATING THE CASE

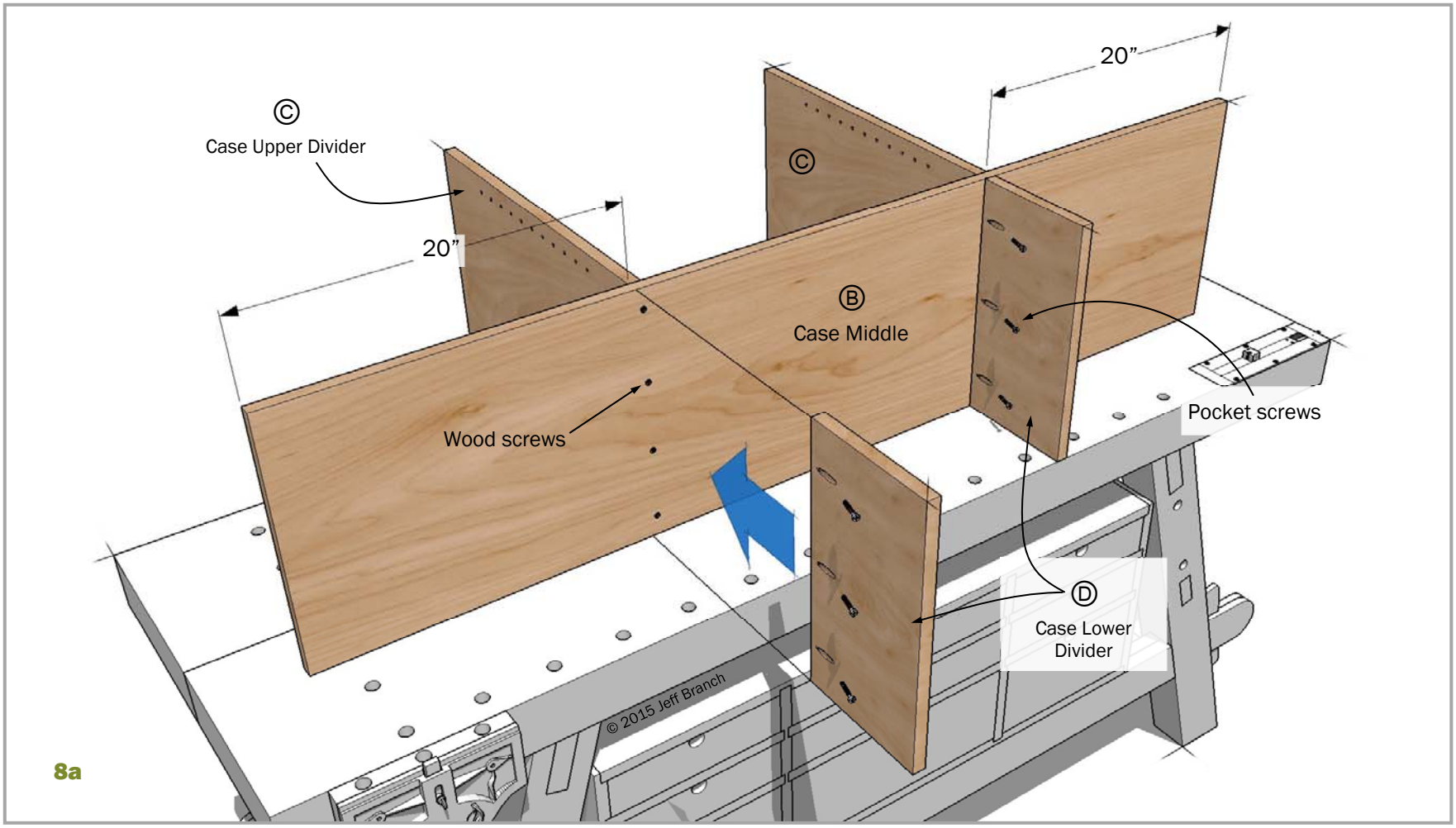


7a

7b

Create the horizontal case components along with the interior dividers next. The case top, middle and bottom (parts **B**) are identical birch plywood parts. Cut them to final size and set them aside. You will need two case upper dividers, parts **C**; cut them to final size. Add shelf support holes just like you created in part **A**, page 6. There are holes along each edge of the upper divider. Note their location in illustration 7a. Drill holes on both sides of the divider. Form the case lower divider, parts **D** and set them aside (no shelf support holes for parts **D**).

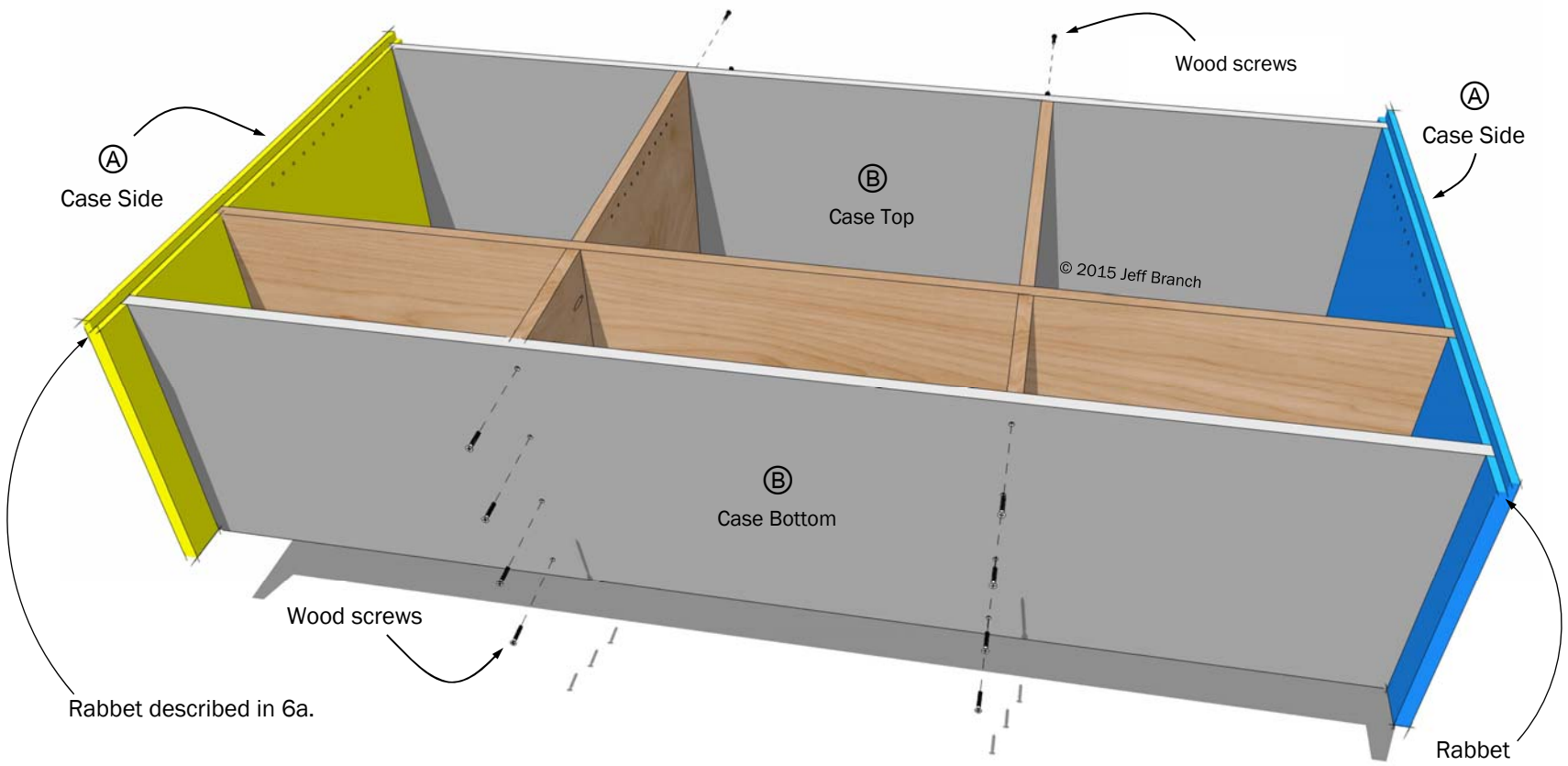
CREATING THE CASE



Begin case assembly by locating the case upper dividers, parts **C**, twenty inches in from each edge of the case middle, part **B**. Attach with glue and screws as shown. Space the screws so they don't interfere with the pocket screws used to attach the case lower dividers, parts **D**. Make sure parts **B** and **C** are perpendicular to each other.

Align the case lower dividers with the case upper dividers as shown and attach to the case middle with glue and pocket screws. Make sure these parts are perpendicular to each other.

CREATING THE CASE

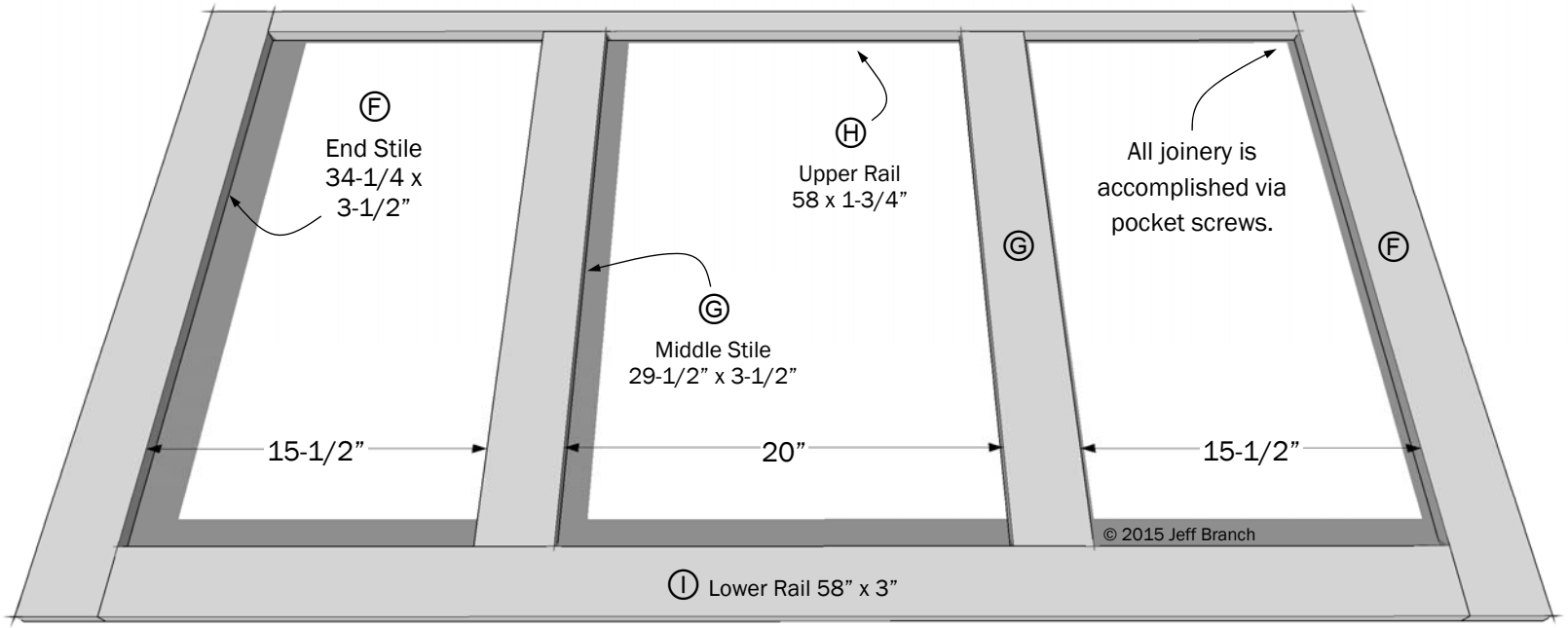


9a - View from the back

A big glue-up can be a stressful endeavor. There are six dado joints to apply glue and align boards; add clamps, all before the glue starts to set up. To keep this glue-up manageable, I recommend completing it in steps. First, do a dry run (no glue) and fit the sides along with the case top and bottom in place. Add clamps making sure everything fits correctly and is square. Pre-drill for wood screws used in the case bottom and top. Once you are satisfied that everything is good, remove the clamps and sides. Attach the case bottom and top with screws as shown in 9a. Apply glue to the dadoes in the side highlighted in yellow; position it in place. Add the opposite, blue side, but do not apply glue. Clamp up and allow the glue to dry. Once dry, remove clamps, apply glue to the dadoes in the blue side; position in place and add clamps. Allow the glue to dry.

ADD THE FACE FRAMES

There are two main face frames for this project: one for the front and one for the back. They are identical in construction. Cut parts **F**, **G**, **H** and **I** based on the size given in the cut list. Position the parts as shown and join them with pocket screws and glue. Attach the face frame to the case with brads and glue.

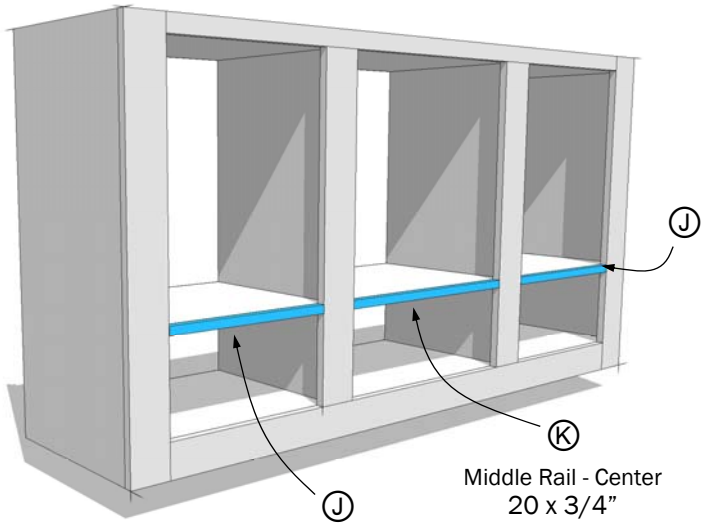


10a

TIP: Making a Face Frame Fit

As you will see in more detail on pages 12 through 14, the corner legs fit tight to the corner of the cabinet. This means the face frame needs to fit flush with the case sides. This can be tricky to pull off if either the case sides or the face frame are not straight or square (or both). A helpful tip is to cut the end stiles, parts **F**, slightly wider than 3-1/2” and then trim them flush to the case side using a router and equipped with a flush trim bit. A flush trim bit will do just that: trim the edge of the face frame flush with the case side. Follow this with a little sanding and you will end up with a near seamless fit between the face frame stiles and the case sides.

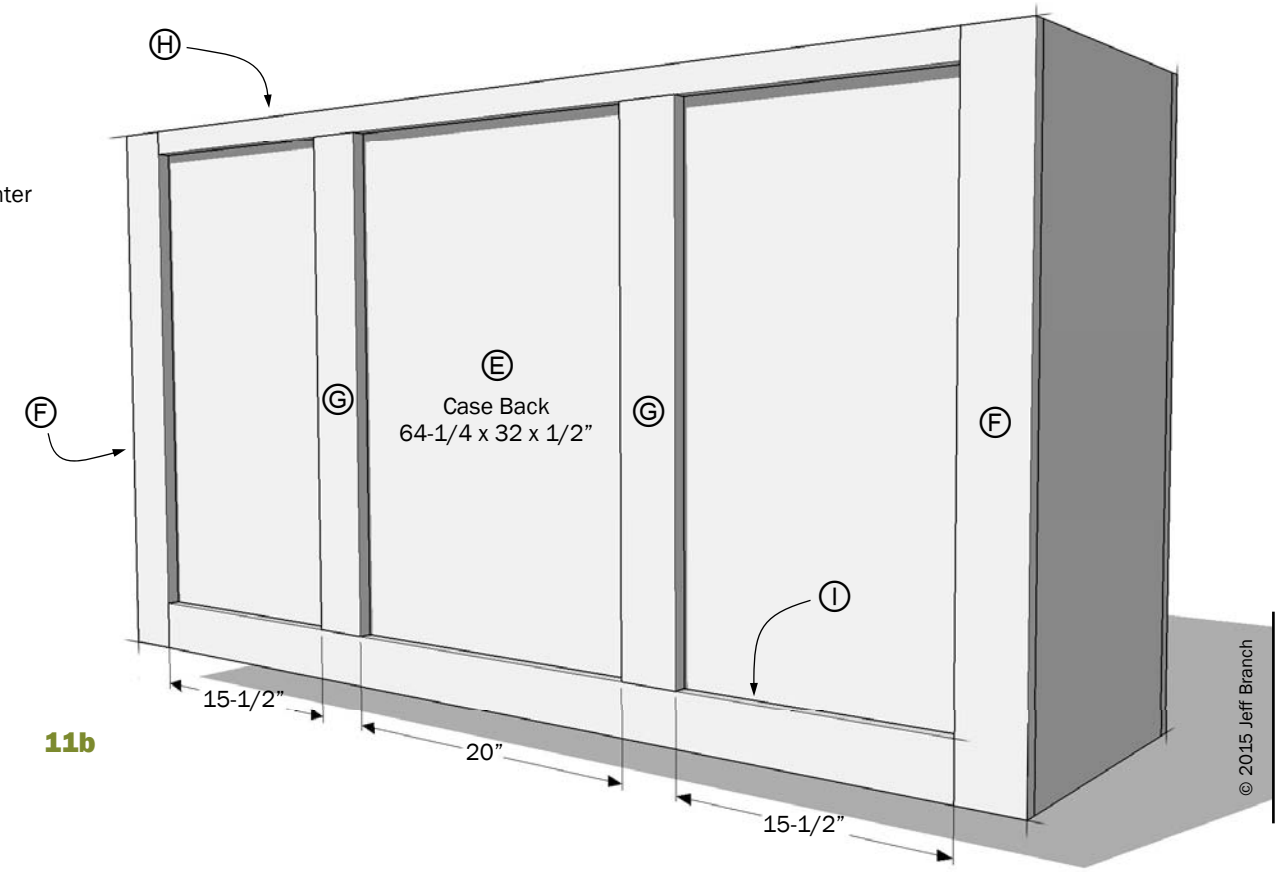
ADD THE FACE FRAMES



11a

Finish the front face frame by attaching three middle rails, **J** and **K**, to the case middle using brads and glue.

The first step for the back is to attach the case back, part **E** by fitting within the rabbets in the case sides, part **A** (see illustration 5b on page 5). Attach with brads and glue. Create the rear face frame just as you did with the front face frame. Form the needed parts, assemble the face frame using pocket screws and attach to the back using brads and glue.



11b

CREATE THE LEGS

The legs for the cabinet are important since they help carry the weight of all the audio/video equipment. The legs span the full height of the cabinet ensuring they provide the needed support. Near the floor, the legs also fit under the cabinet.

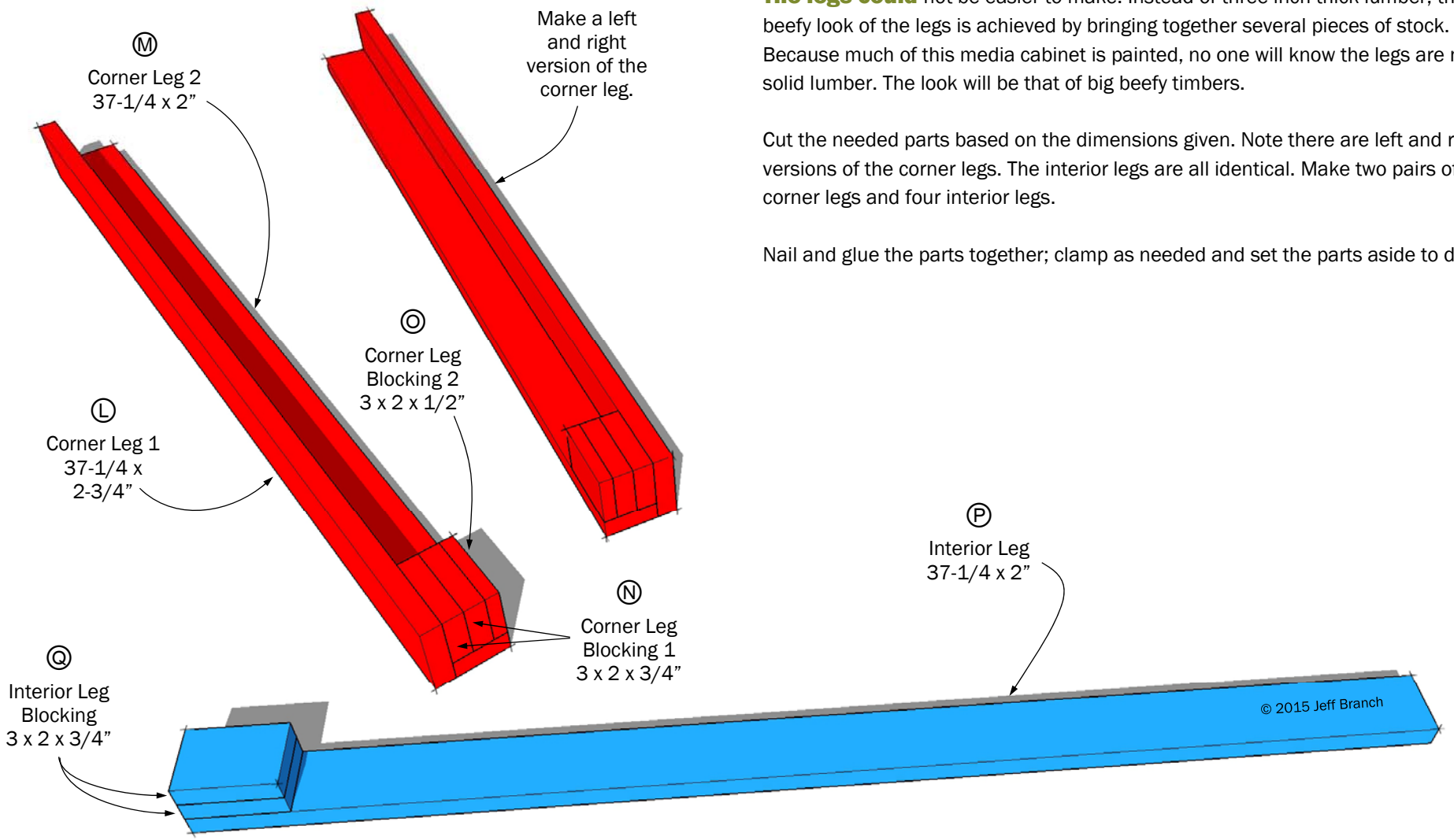
The eight legs have two designs. Here and on page 13, I have highlighted the corner legs in red and the interior legs in blue.

The leg layout you see on the front of the cabinet is mirrored on the back.

Let's get started building the legs.

12a

CREATE THE LEGS



The legs could not be easier to make. Instead of three inch thick lumber, the beefy look of the legs is achieved by bringing together several pieces of stock. Because much of this media cabinet is painted, no one will know the legs are not solid lumber. The look will be that of big beefy timbers.

Cut the needed parts based on the dimensions given. Note there are left and right versions of the corner legs. The interior legs are all identical. Make two pairs of corner legs and four interior legs.

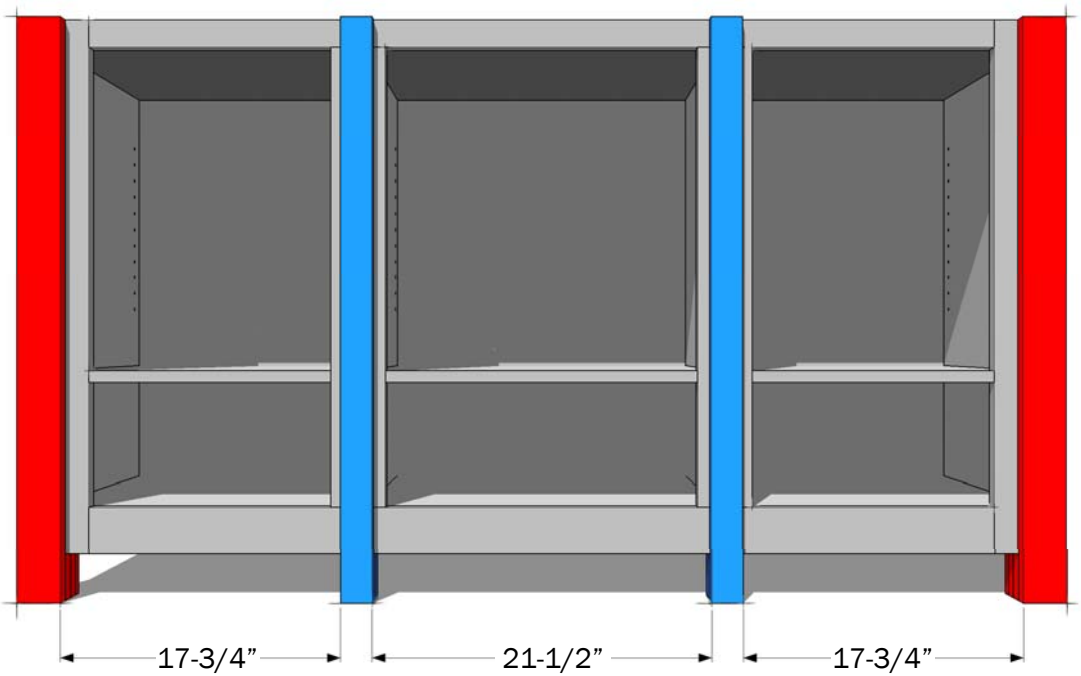
Nail and glue the parts together; clamp as needed and set the parts aside to dry.

13a

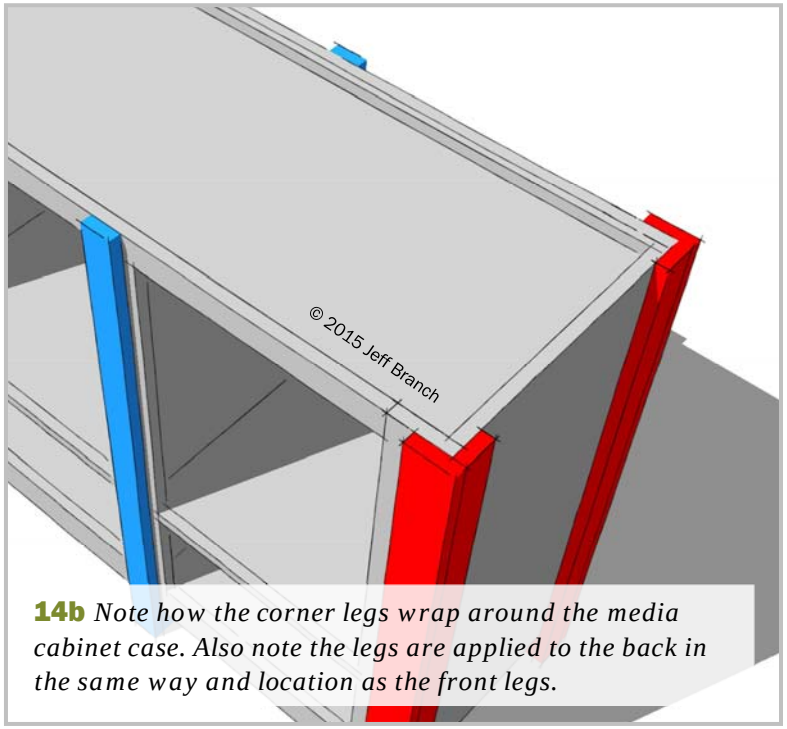
CREATE THE LEGS

Time to attach the legs - another big step in construction. Locate the legs on the case as shown in 14a and 14b - a leg at each corner and two interior legs on the front and two more on the back. With the cabinet resting on the blocking added to each leg, the top of the legs should be flush with the upper edges of the face frame.

Since these components will be painted, you can simply attach the eight legs with glue and brads. Use clamps to pull legs tight to the cabinet case as needed. Allow the glue to dry.

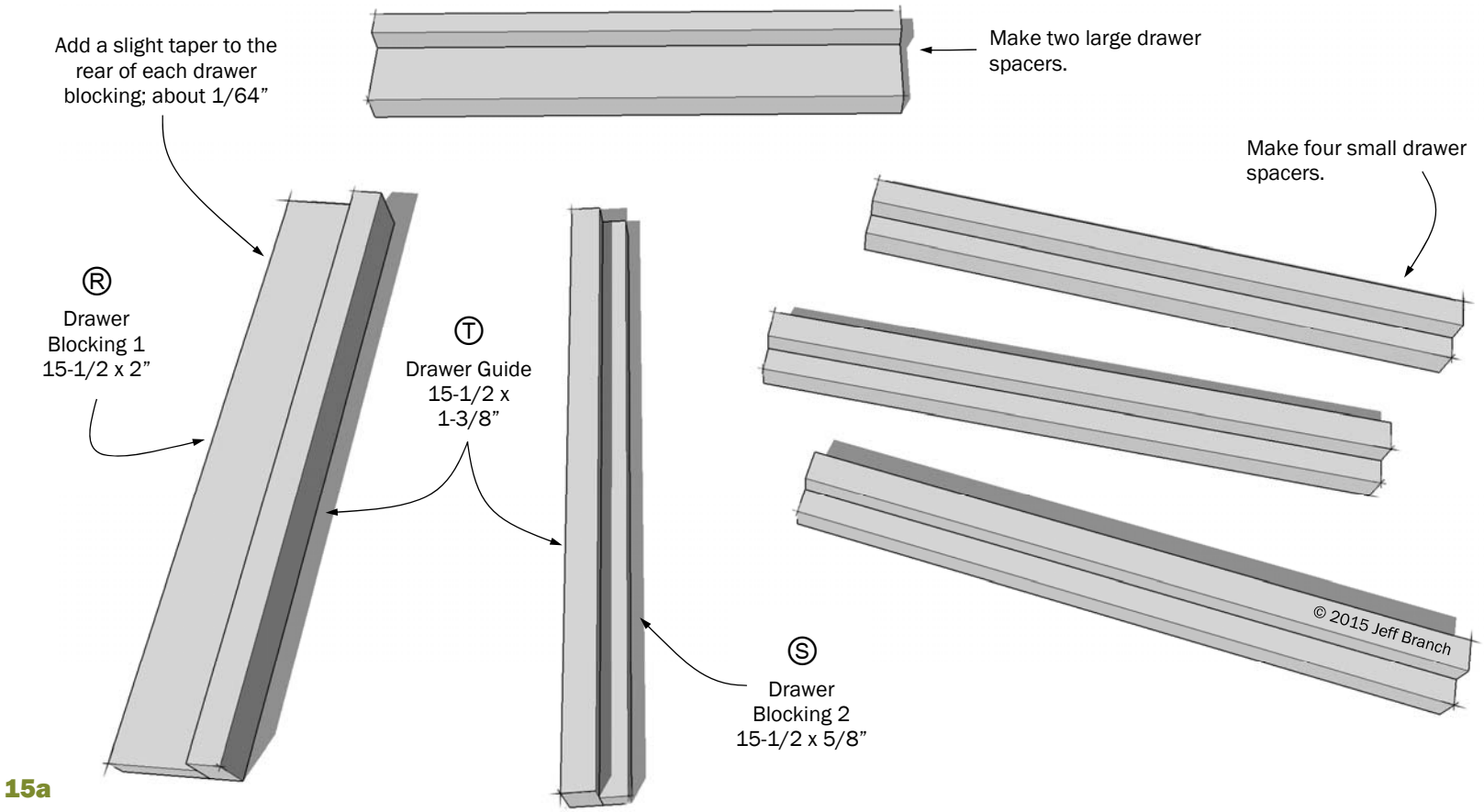


14a



14b *Note how the corner legs wrap around the media cabinet case. Also note the legs are applied to the back in the same way and location as the front legs.*

MAKE THE DRAWERS

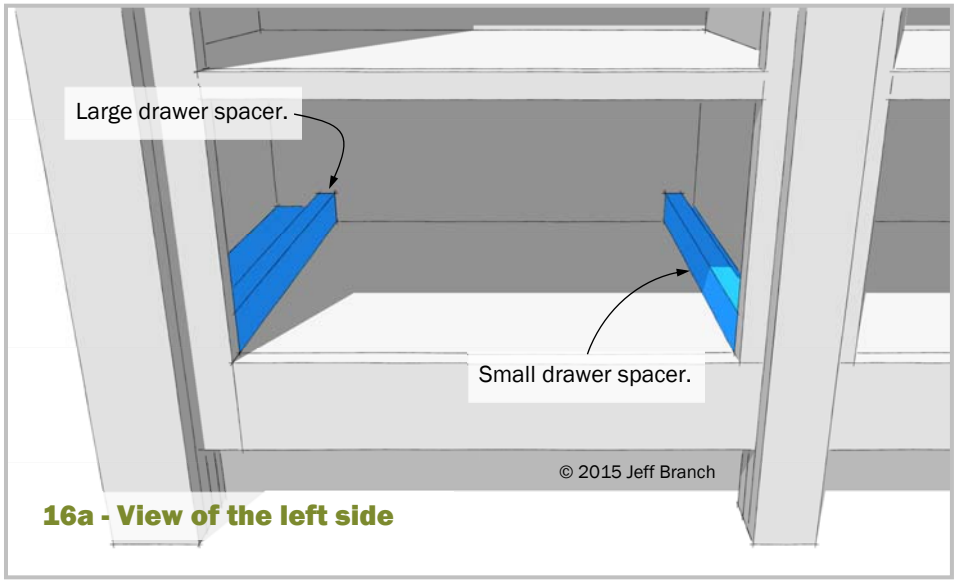


15a

Begin making the drawers by creating the components which will help determine the drawer sizes. I’m talking about the “drawer spacers”; the parts which sit to the left and right of the drawer sides and help the drawers slide into place.

Each drawer spacer is comprised of a drawer guide, part **T** and blocking, parts **R** and **S**. The blocking helps position the drawer guides in the right place. There are two styles of drawer spacers as shown above. You will need to make two of the larger sets and four of the smaller sets. Cut the parts to size following the quantity and sizes given in the cut list. Glue and nail the blocking and guide as shown above.

MAKE THE DRAWERS

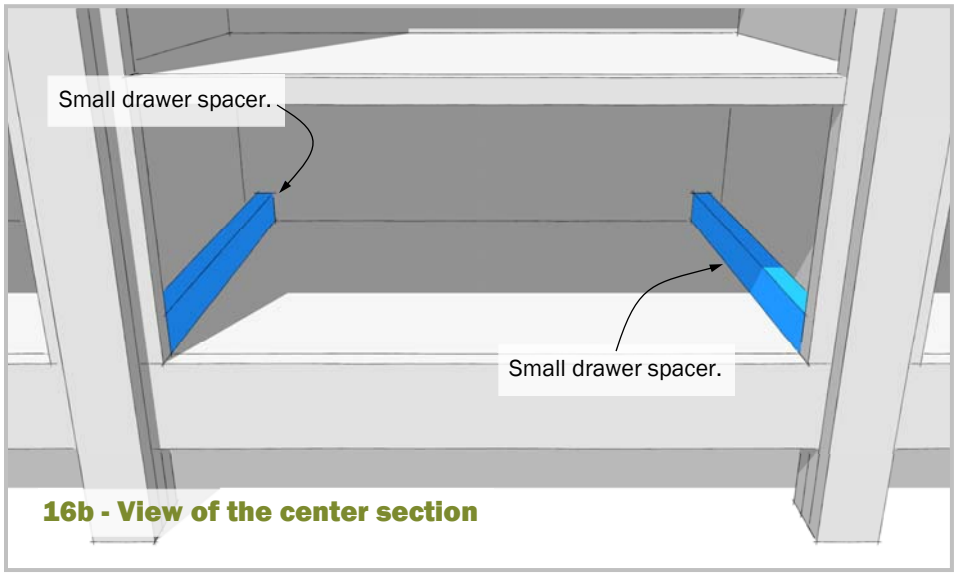


16a - View of the left side

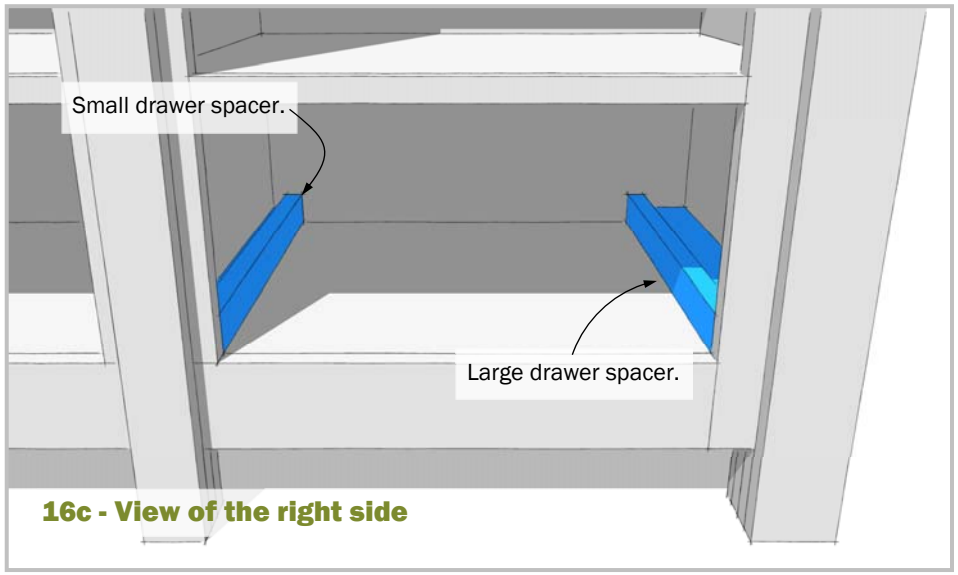
Install the drawer spacers as shown in 16a, 16b and 16c. The left side drawer cavity gets a large spacer on the left and a small spacer on the right (16a). The middle cavity, shown in 16b gets two small spacers, and the right drawer cavity, shown in 16c, gets a small spacer and a large spacer.

Getting a nail gun in the cavity can be tricky. I recommend these spacers be glued in place and either nailed or screwed in place from below.

NOTE: Install the drawer spacers flush with the drawer opening and tight against the front face frame. Trim as needed to get a good fit.

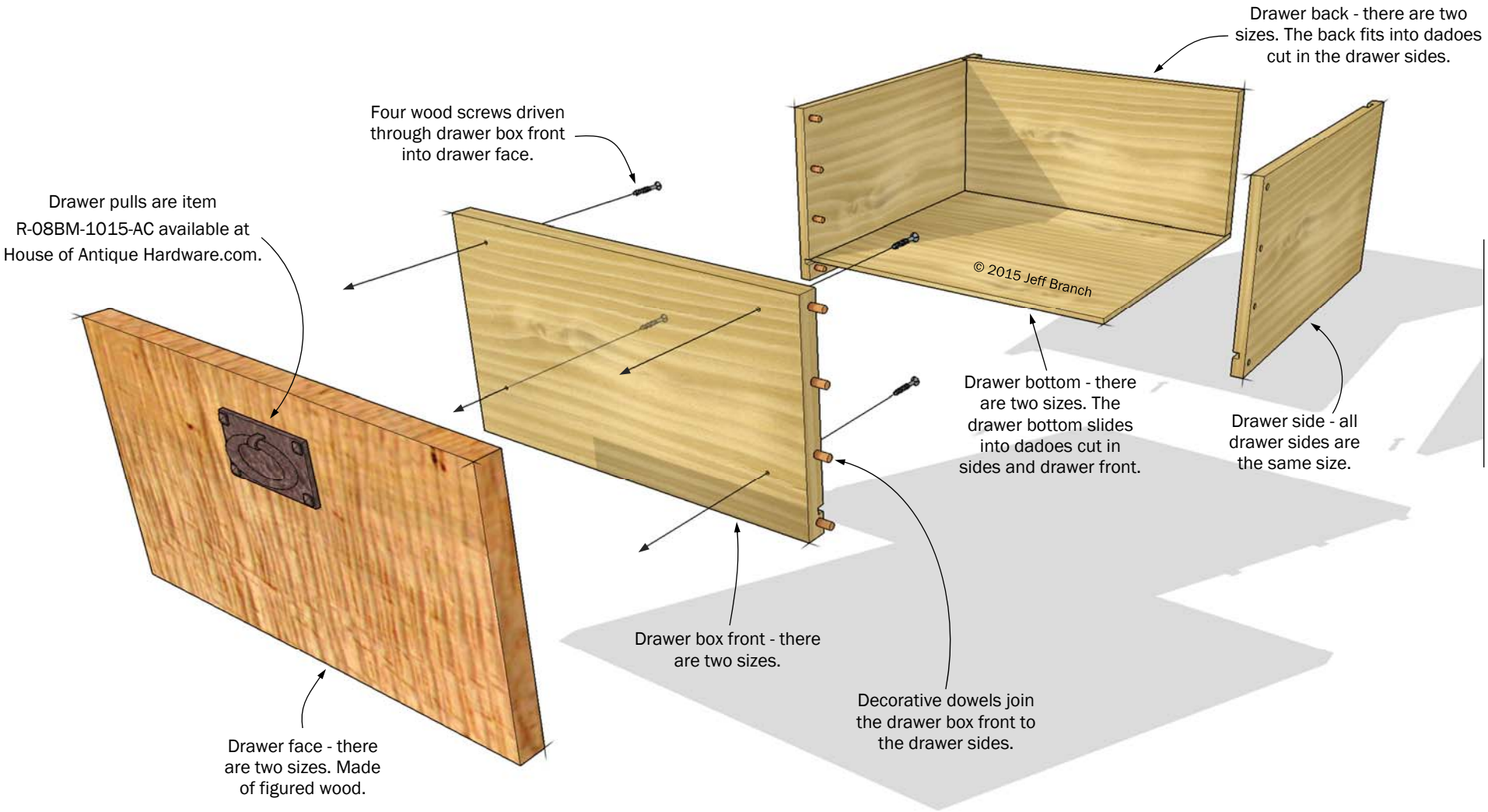


16b - View of the center section



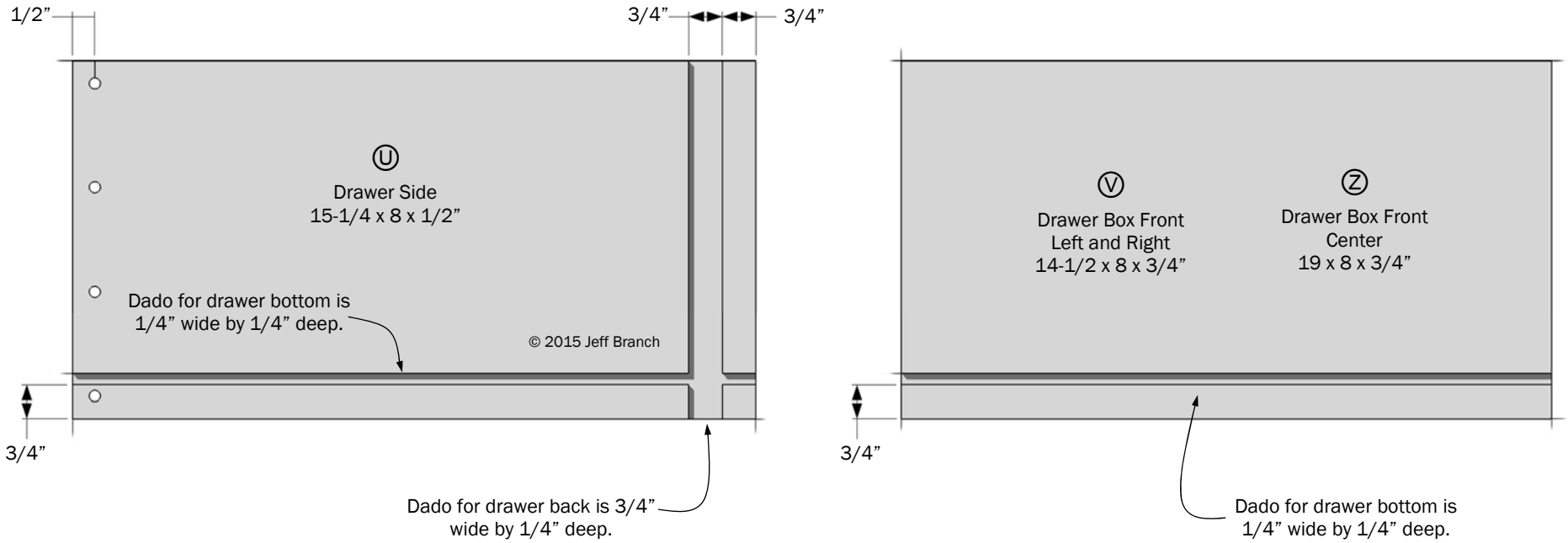
16c - View of the right side

MAKE THE DRAWERS



17a - Drawer exploded view

MAKE THE DRAWERS



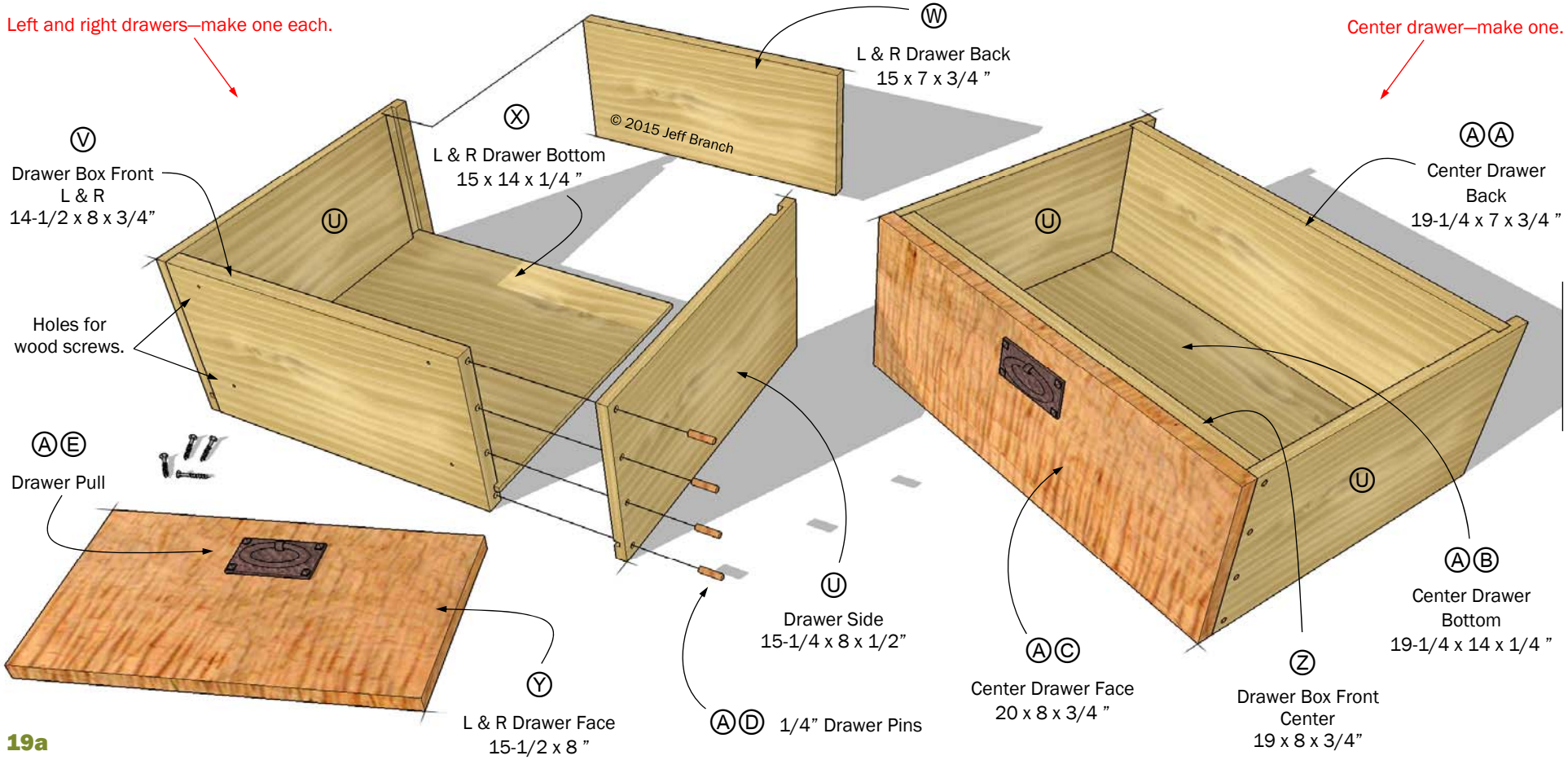
18a

Certain drawer components will need some fabrication prior to assembly. The drawer sides and the drawer box front have dadoes which receive mating components. Each dado is 1/4” deep. Cut the drawer sides (parts **U**) to size following the cut list. Do the same for the drawer backs, parts **V** and **Z**. Here, I am showing the location of the drawer pins (space them horizontally as you wish), parts **AD**, but we will actually drill them with assembly on page 19.

Cut a 1/4” by 1/4” dado for the drawer bottom. Verify the thickness of the dado by confirming the thickness of the drawer bottom. It is made from 1/4” birch plywood and often times such plywood is actually thinner than 1/4”. You want a snug fit, but not one where a lot of force is needed to get the drawer bottom to slide into place.

Form a dado at the rear of the drawer sides. This dado is 1/4” deep and 3/4” wide. Just as with the drawer bottom, verify the width of the dado by matching the thickness of the drawer backs, parts **W** and **AA**. Cut the drawer backs to size following the cut list.

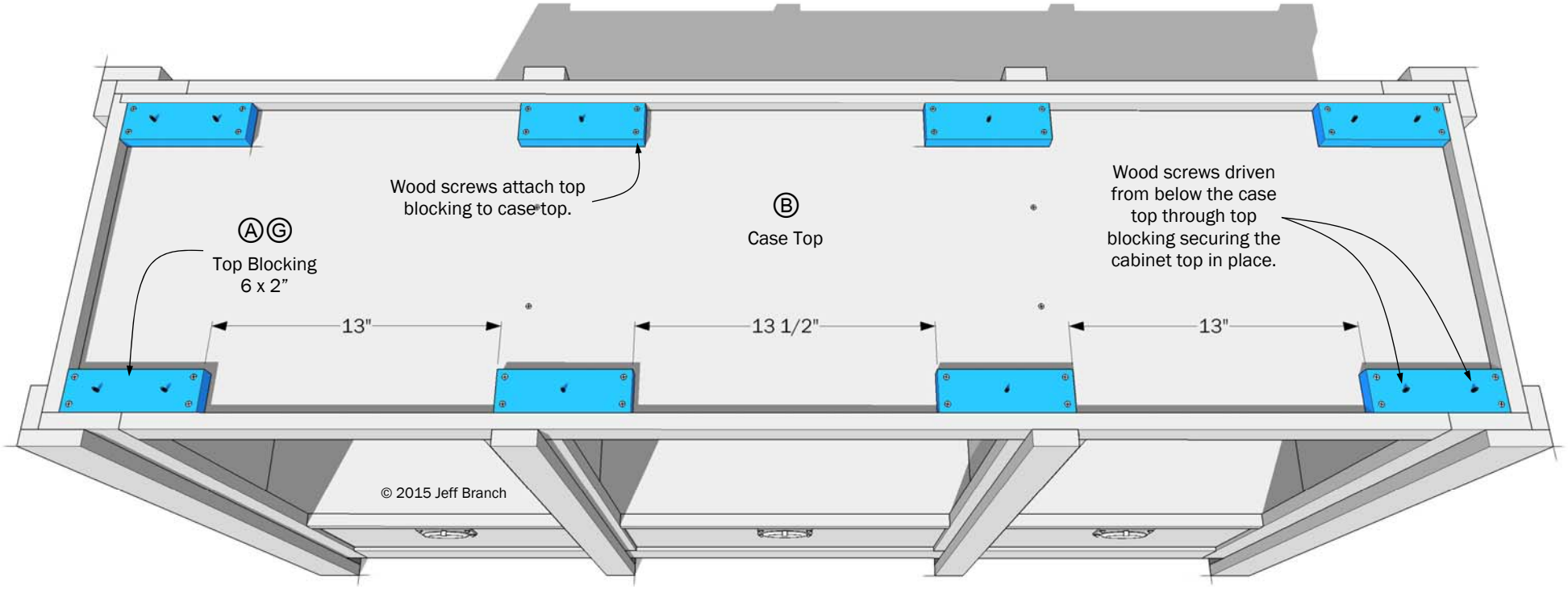
MAKE THE DRAWERS



19a

Assemble the drawers by first pre-drilling holes for wood screws in the drawer box front, parts **V** and **Z**. Position the L & R drawer box front flush with a drawer side, part **U** and drill holes for 1/4” drawer pins, parts **AD**. Starting with the left drawer side, add glue to the pins and drive four in place. Position the L & R drawer back, part **W**, add glue and tack in place with brads. Slide the L & R drawer bottom (part **X**) in place; no glue. Add glue to the right edge of the drawer back; position the right drawer side and with glue, drive four dowels pins in place. Tack the drawer back with brads. Trim all dowel pins flush with the sides. Add clamps along the front and back and set aside to dry. Position the drawer pull based on your personal preference and secure it in place. Position the L & R drawer face (part **Y**) and attach with four wood screws driven from the back of the drawer box front into the drawer face (shown in 18a). Repeat this process for the remaining two drawers.

ADD THE TOP



20a

Prior to adding the top, lets install the blocking used to attach the top in place. Form the top blocking, parts **AG**, following the size given in the cut list. The top blocking should be flush with the face frame. Attach the top blocking with glue and screws spacing them as shown in 20a. Use clamps to ensure a good bond with the case top.

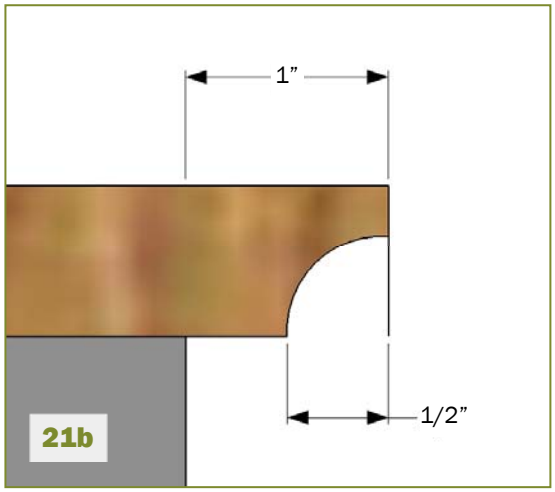
Pre-drill holes for the wood screws used to attach the cabinet top, part **AF** (we will create the cabinet top on page 21). Elongate these holes in the blocking which runs along the back of the case. We want any potential expansion of the top to occur at the rear of the cabinet. Pre-drill only, we will add the screws in the next step.

ADD THE TOP

21a

Twenty inch wide figured hardwood boards do exist, but they are hard to find. That is why this plan calls for five inch wide planks. Most hardwood dealers will have boards which when milled will be at least five inches.

If you can find wider boards, adjust the number of planks as you are able.



21b

Form the cabinet top, parts **AF**, you will need to bring each board close to its final thickness and width. Leave these boards about an inch long on each end for now. Joint each edge flat and bring each board to its final five inch width. Using clamps, begin gluing them together. With all four boards glued up, plane and sand away any imperfections in the top surface. Cut the cabinet top to final length. With a router, cut a cove similar to that shown in 21b. Attach the top with screws as described on page 20. The top should be flush with the back and over-hang the sides and front one inch.

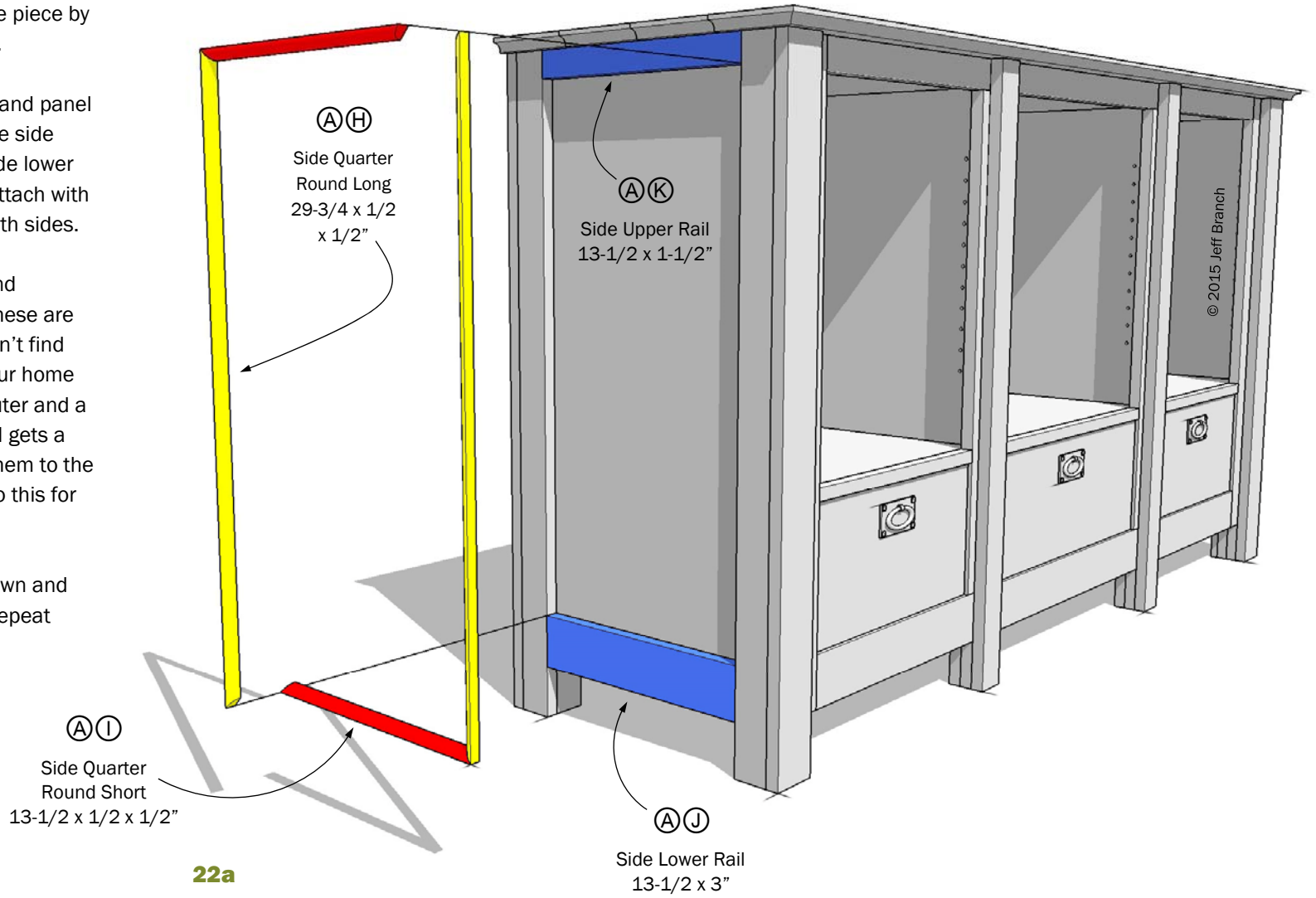
FINAL CONSTRUCTION

Adding moldings to the media cabinet is an especially fun part of the project. Moldings enhance the piece by providing more shadow lines.

First lets complete the frame and panel look to the sides by adding the side upper rail, part **AK** and the side lower rail, part **AJ**. Cut to size and attach with brads and glue. Do this for both sides.

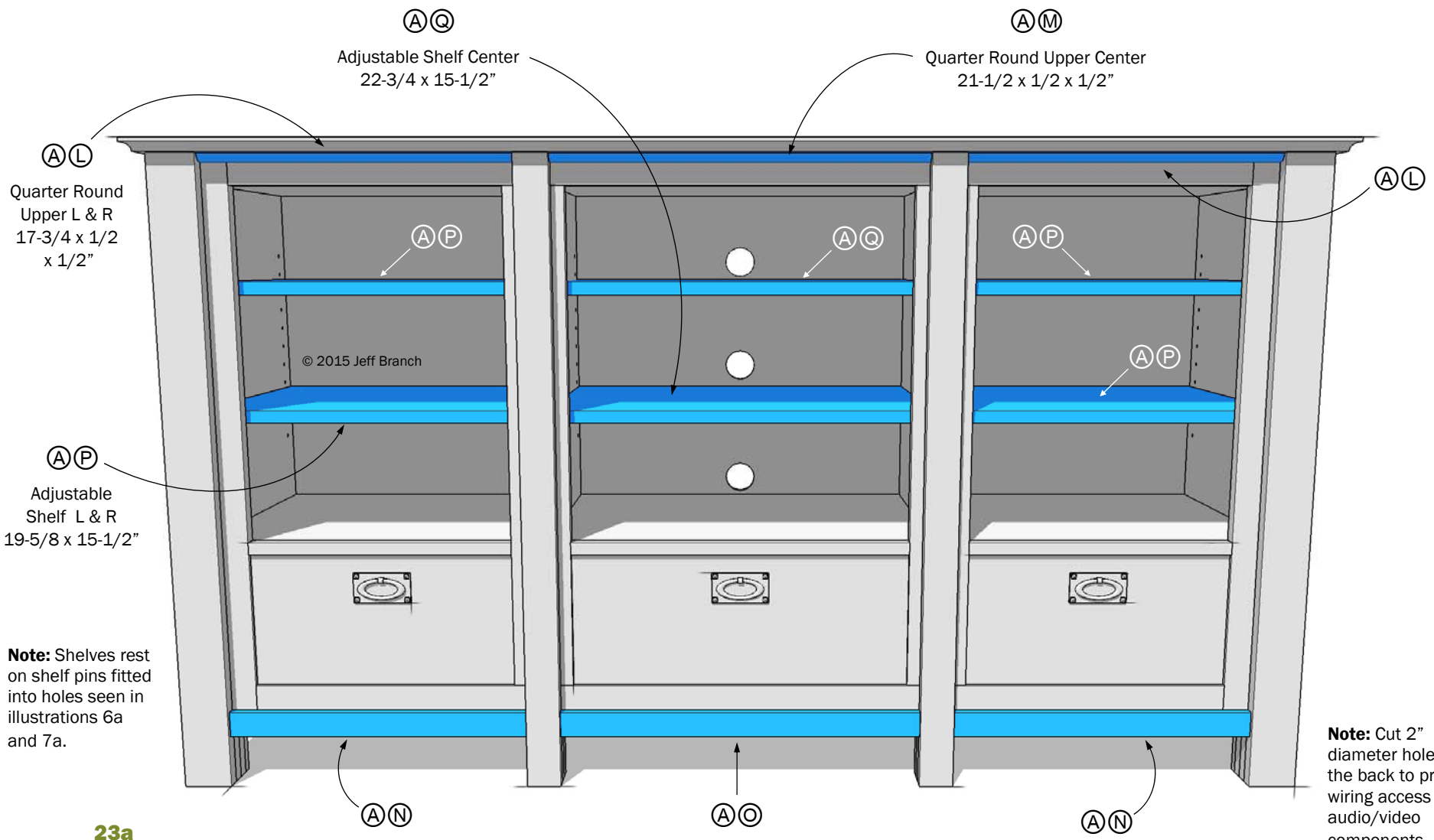
Next up: the side quarter round moldings, parts **AH** and **AI**. These are 1/2" thick and wide. If you can't find stock moldings this size at your home center, make these with a router and a 1/2" round over bit. Each end gets a 45 degree miter cut. Attach them to the case using brads and glue. Do this for the both sides.

PAGE 23: Cut all parts as shown and attach with brads and glue. Repeat the same steps for the back of the cabinet.



22a

FINAL CONSTRUCTION



23a

FINAL CONSTRUCTION

The only thing left to do is prep for and apply the finish to the cabinet. Fill all nail holes with putty and sand one last time as needed.

The cabinet is shown with a medium gray paint and clear finish over curly maple. I am a big fan of high quality paint applied with a high quality brush. My favorite finish is a wipe-on satin polyurethane.

But, finish your cabinet as you like and I hope you get many years of enjoyment from having this media cabinet in your home.