



MartySubs v2.1
"Roundover" by GSG™
Assembly Instructions
Skill Level: Intermediate

Thank you and congratulations on your MartySub by GSG™ purchase. We've tried to make your enclosure as easy to assemble as possible. Even though some folks could assemble this cabinet without reading the instructions, please do so.

**IT IS IMPORTANT TO READ THE INSTRUCTIONS
AND FOLLOW THEM CAREFULLY**

NOTE: The build is not as complicated as the instructions make it appear at first glance. We have simply tried to highlight every point along the build where a builder may have questions and provide pictures and explanations. If you have any questions along the way, STOP!! and contact us. We'll help you figure things out. Hopefully, the instructions will help each builder achieve a fantastic result.

INTERMEDIATE BUILD:

MartySubs v2.1 “Roundover” by GSG™ are an intermediate build. It is assumed that the builder has some experience building things before or is confident in his capabilities.

Roundover cabs require the use of clamps and it is assumed that the builder has some experience working with clamps. Roundover cabs also require that the builder pay attention to keeping their cabinets nice and square while building. Roundover cabs are precision machined for fit, so any mis-alignments by the builder are likely to result in small gaps, that won't affect performance for the most-part, may make for a less than ideal aesthetic.

WORKSPACE:

Find a location that is clean, dry, and flat. Make sure there is plenty of room for you to move around your cabinet and that there is plenty of room for sliding in some of the panels. Ideally, the workspace will be about room temperature, but in no case should assembly take place when the temperature or the materials are under 50 degrees. If temperatures are high, the glue may have less working time before it starts to dry. If it is humid, allow extra time for the glue to dry (it turns dark brown when dry).

PANEL PREPARATION:

Your MartySub panels were cut on a precision CNC machine. Before assembling, check over your panels to ensure that they are free of any sawdust or other debris, especially in the dados.

Additionally, the CNC may sometimes leave a little bit of “hair” along some of the edges of the panels. This can be taken off by wiping along the edges with a cotton towel.

TEAM:

MartySubs by GSG are big and heavy by design. They are designed so that they can be assembled by one person working alone. However, some folks find that assembly is easier with the assistance of a helper. If you find that moving the subwoofer or positioning any of the panels seems to be a little too much for a single person, then find someone who can assist you with the build. We always recommend two people when moving MartySubs.

DRY FIT:

At each point along the way, you may find it helpful to “dry fit” the panels in the step prior to applying glue. This will help you see which points need to be lined up without the stress of glue drying.

Once familiar with how your cab goes together, you can move quickly once you start applying glue.

A NOTE ON CLAMPING FORCE:

Research and experimentation has shown that there is no practical benefit to overtightening clamps. In fact, too much pressure on MDF can cause the panels to warp or become mis-aligned. The builder is encouraged to clamp the panels only as tight is as necessary to hold the panels together snugly with no gaps.

GLUE UP:

Be sure to apply glue to ALL the edges where panels touch each other, not just in the dados (“dado” is a woodworking term for the grooves in the panels).

When the panels are sandwiched together, the glue should “squeeze out” along the entire length of the panels being joined together. Squeeze out on the inside of the cabinet doesn’t need to be cleaned up.

Seeing the glue squeeze out is important as it ensures that there will be no air leaks when the glue dries.

On the inside of the cabinet, where drips don’t matter, it is better to use too much glue vs. not enough glue.

Have a damp cloth ready to wipe up any runs or drips off the outside of the cabinet as you go along.

WORKING TIME:

We recommend working at a pace that allows getting through each step in less than 10 minutes, which is when the glue will start to dry at room temperature (this is the approximate working time of Titebond III, which has the longest working time of the Titebond glue line). If you are outdoors or in a hot garage, drying time will be even less.

By using “extra glue” on the panels, you will have more working time before it begins to set up.

A couple of notes on the design and the instructions:

You may notice there are several places around your subwoofer where there are gaps along the panels; this is by design. All 0.75” MDF does not come from the factory at precise size and it can expand or contract somewhat with temperature and humidity. Don’t worry though, we have machined down every mating surface on the MartySub v2.1 Roundover Series to have a precise fit (allowing for necessary tolerances) on the outside of the cabinet where joints will be seen!

The instructions show the assembly of the MartyCube, but the general approach (including Panel numbers) is the same for the MiniMarty as well as the Full Marty.

Additional notes for the MiniMarty and the Full Marty are provided along the way where panels may look different than the Cube.

The MBM-18 and MBM-21 follow the same general build plan as the Marty Subs.

MBMs do not have a vertical port board in the rear of the cabinet, so there is NO PANEL 4 INCLUDED in the MBM flat packs. Otherwise, assembly is the same as the Marty Subs.

ASSEMBLY

After you have read the entire instructions and are confident in your understanding of the process...*begin!*

Panels 1, 2, and 3:

On a flat surface arrange Panel 1, 2, 3 as in the picture.

It is very important to ensure that Panel 1 goes **IN BETWEEN** Panel 2 and Panel 3. See next page for detail.



Note that Panel 1 goes IN BETWEEN Panel 2 and 3.

THIS IS VERY IMPORTANT!!!

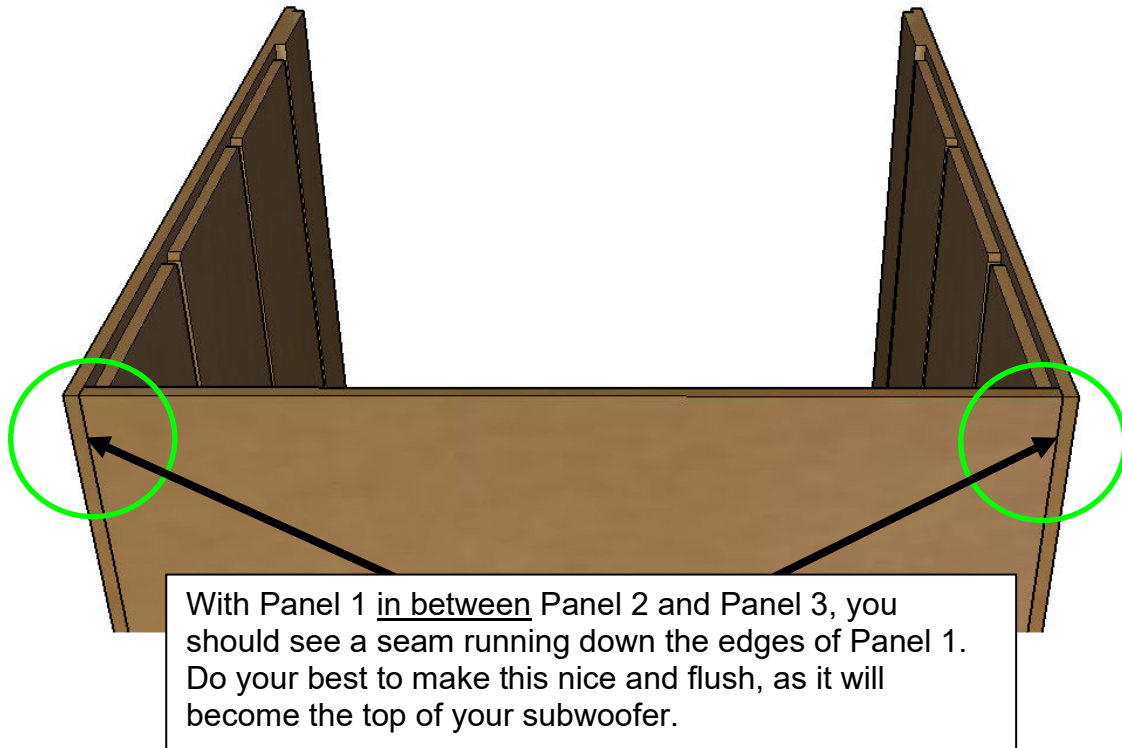


IF PANEL 1 IS SITTING ON TOP OF 2 AND 3,
REDO IT NOW OR YOUR CAB WILL NOT GO TOGETHER!!!



This is how it should look from the other vantage point.

Double check it one more time before it dries!



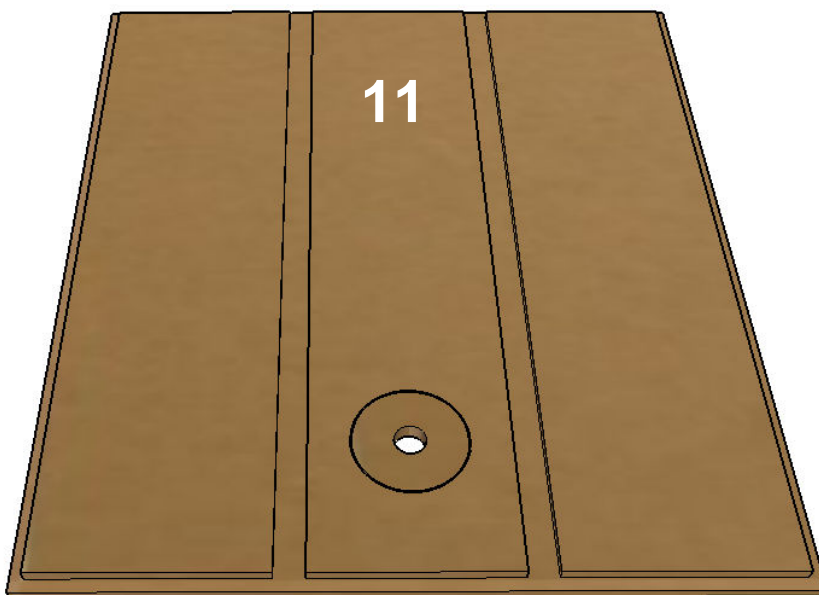
Apply your clamps and allow the glue to dry.

Hint: You may wish to temporarily insert one of the other panels into the dados at the other end of the cabinet to help hold the free ends of Panels 2 and 3 nice and square.

Speakon Adapter

If you wish to use the Speakon adapter, you may wish to go ahead and insert it into Panel 11 while waiting for the glue to dry on Panels 1, 2, and 3.

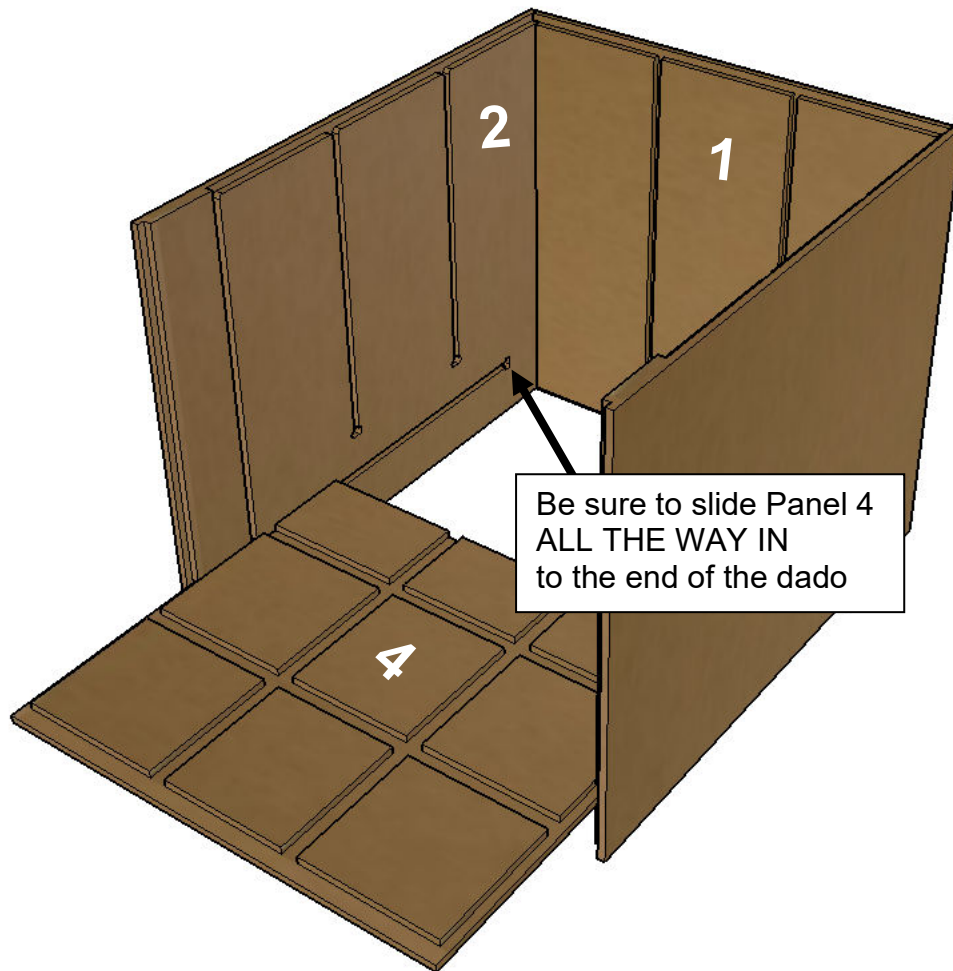
If you want to use a traditional terminal cup, skip this step.

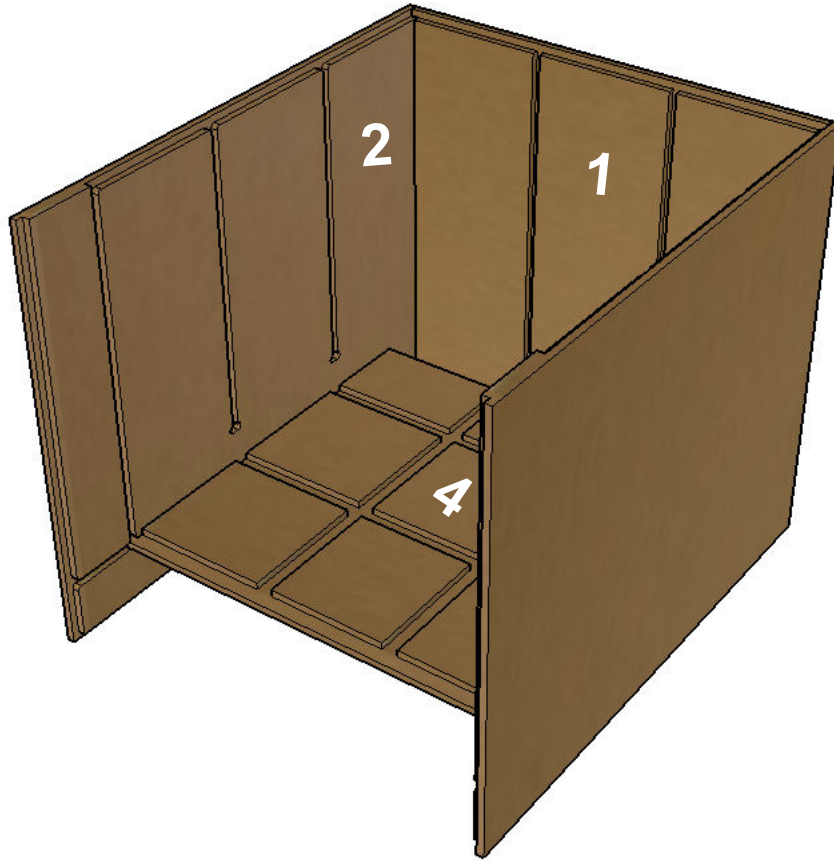


Panels 4, 5, 6, 7, 8, and 9

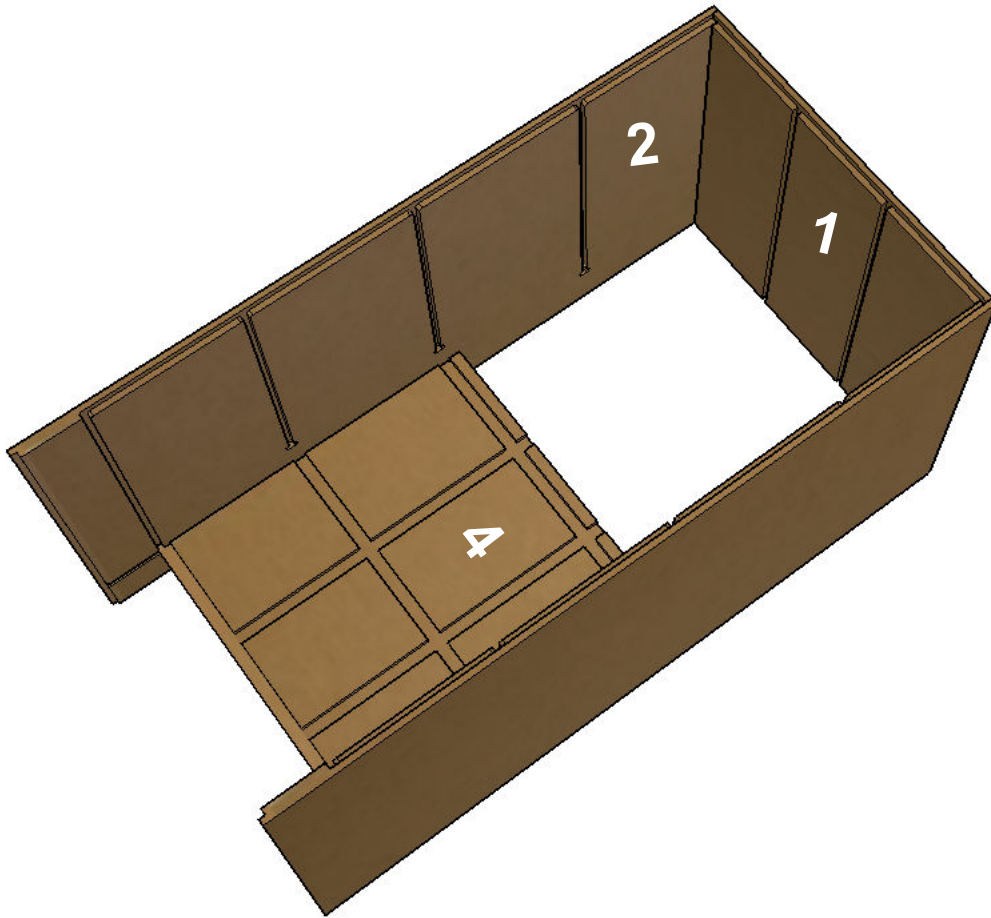
Ideally, Panels 4-9 can be inserted all in one step.

As always, you may wish to dry fit first, so you will be confident in how the parts go together.





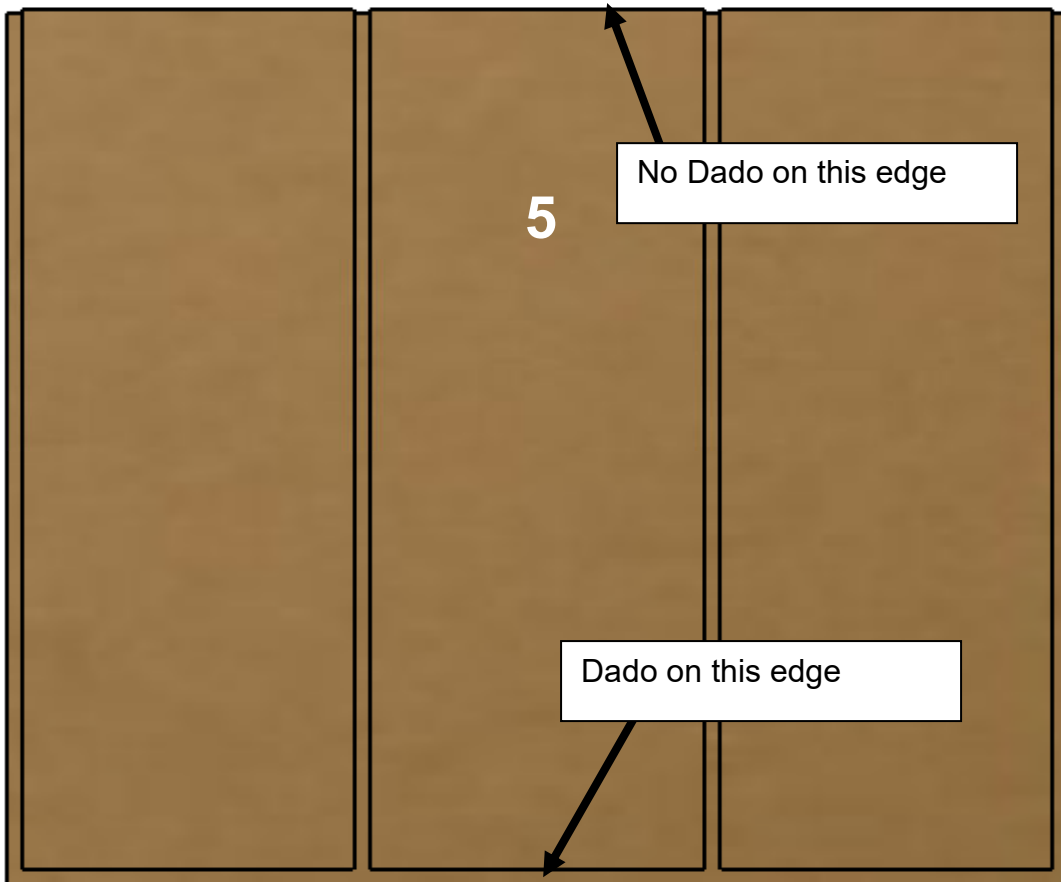
Full Marty Only: While the process is the same, it does look a little different since Panel 4 only goes partially toward Panel 1.

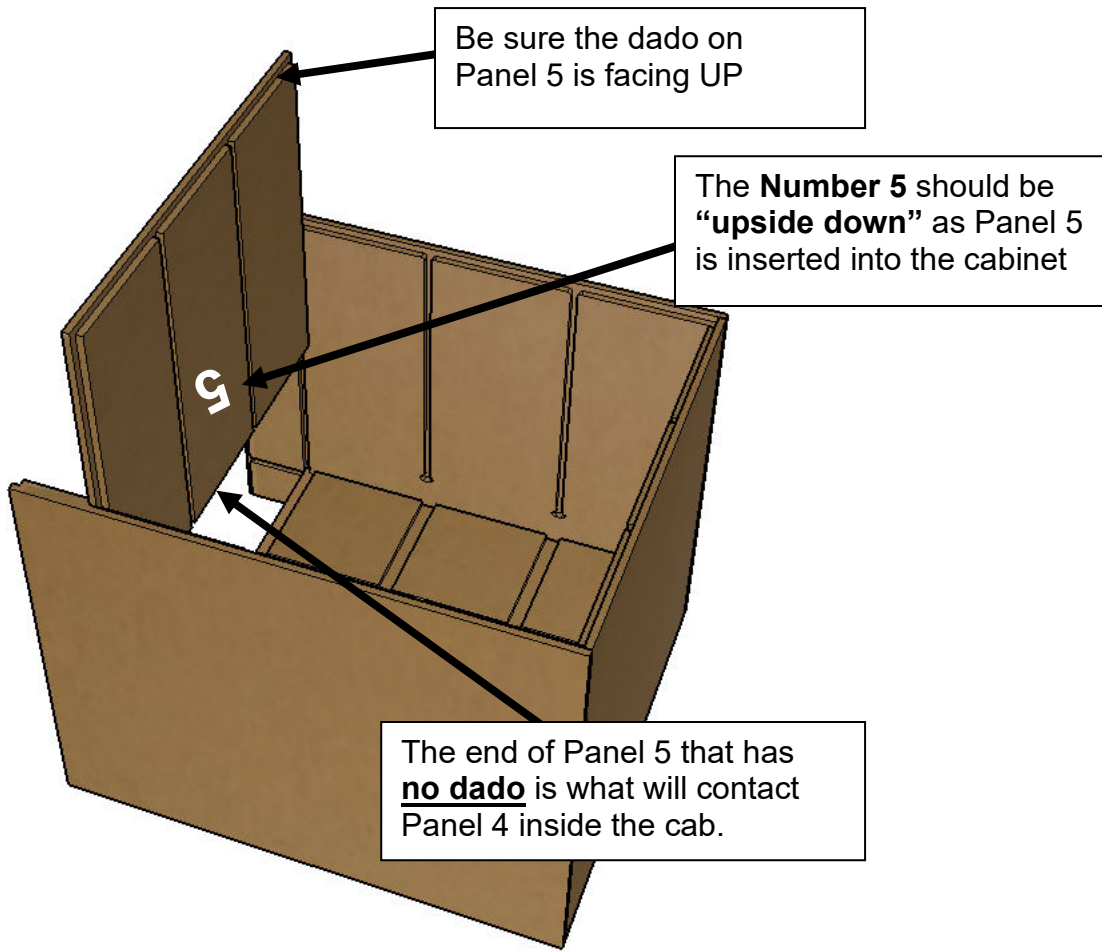


Familiarize yourself with Panel 5.

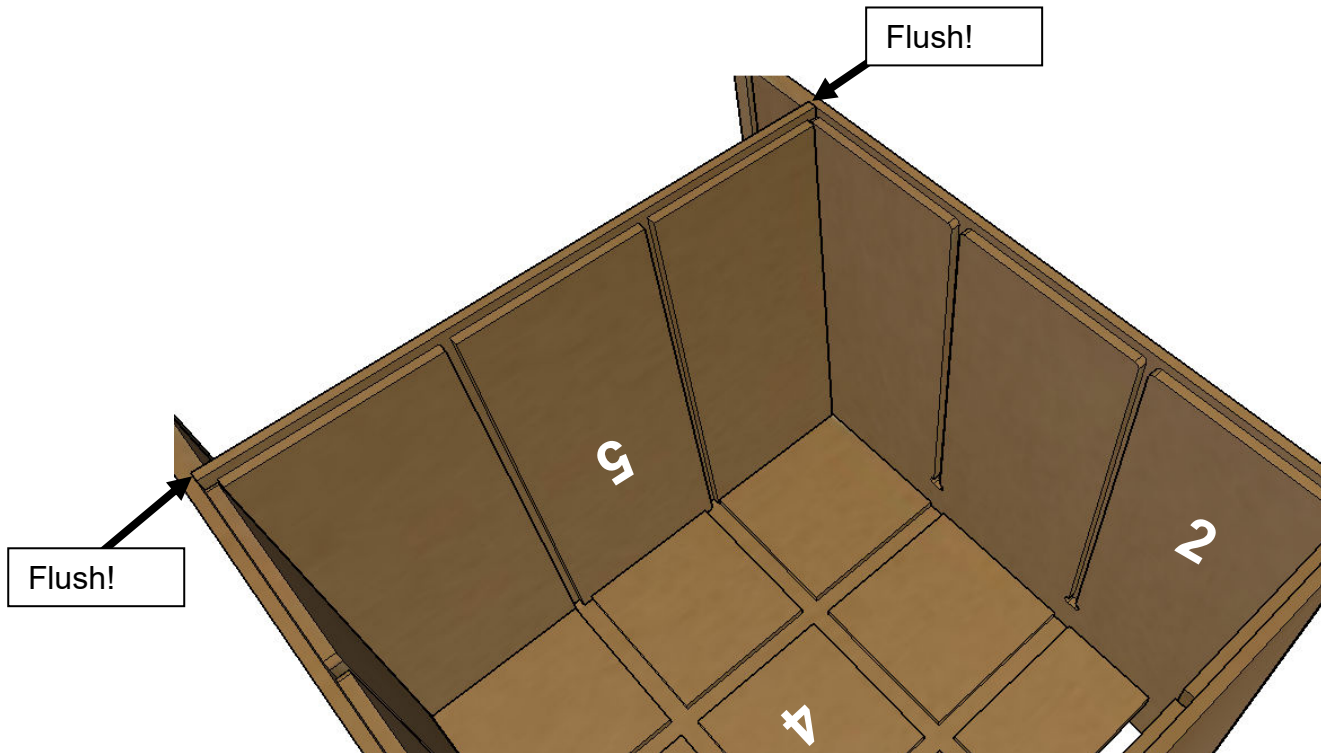
Note that the edge closest to the number has no dado.

The edge furthest from the number DOES have a dado.





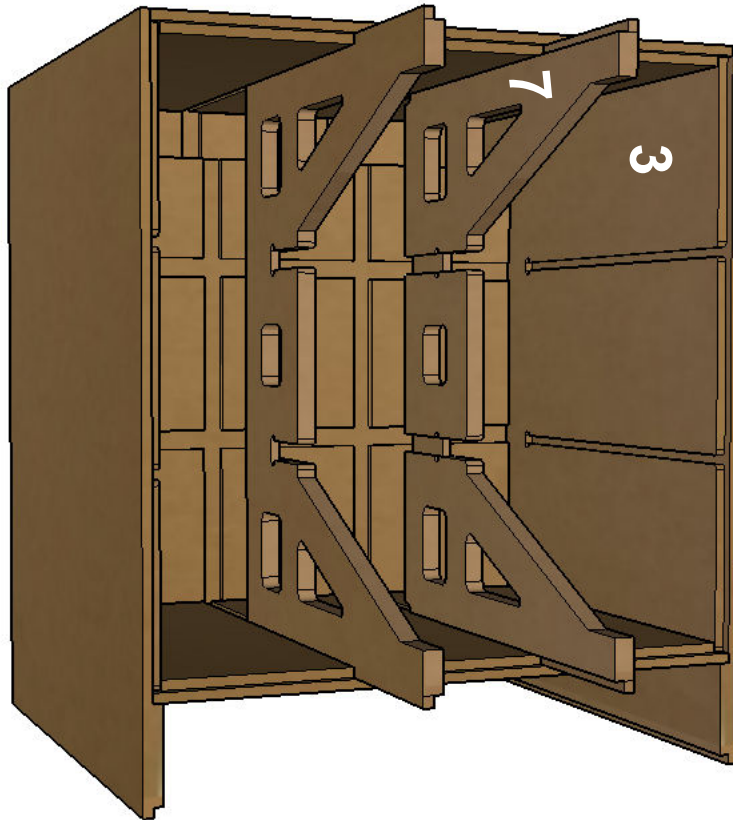
Ensure that Panel 5 is properly seated. It should be FLUSH with Panel 2 and Panel 3.



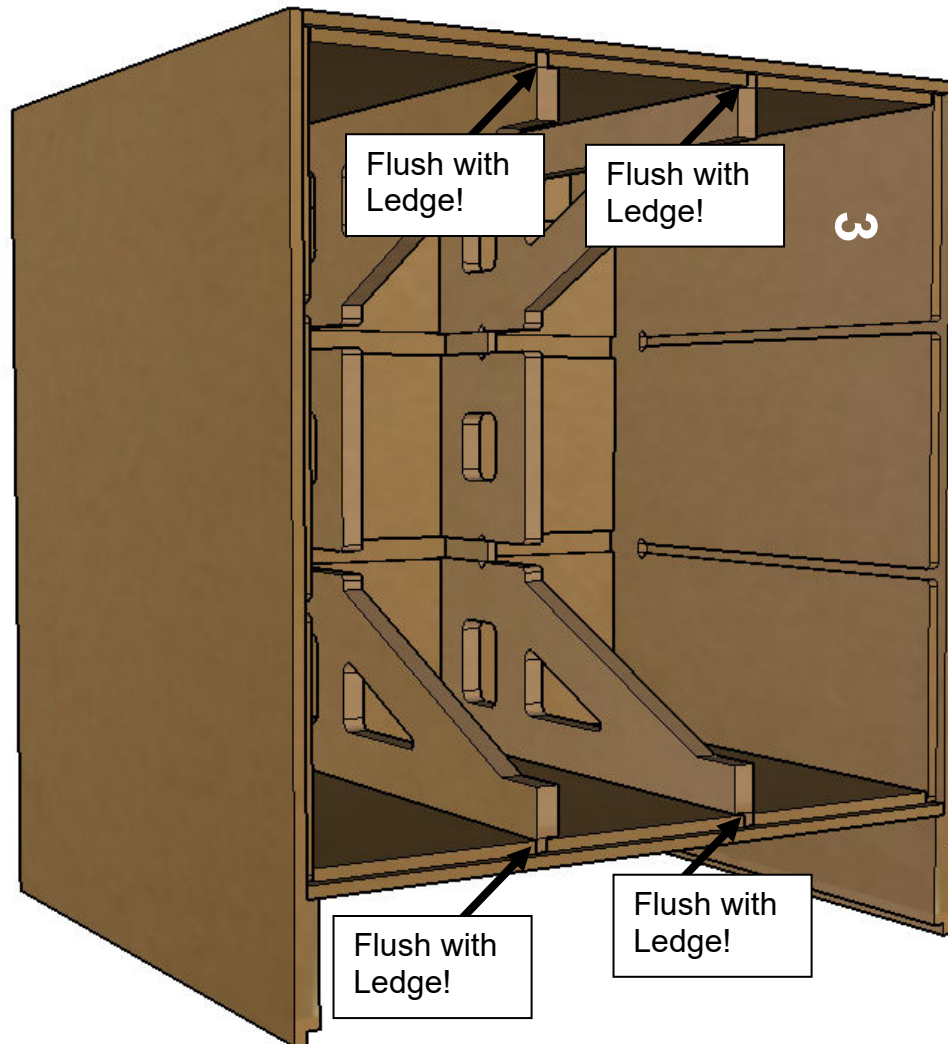
Braces 6 & 7.

Stand cabinet up vertically.

Insert braces 6 and 7 with the numbers facing each other.

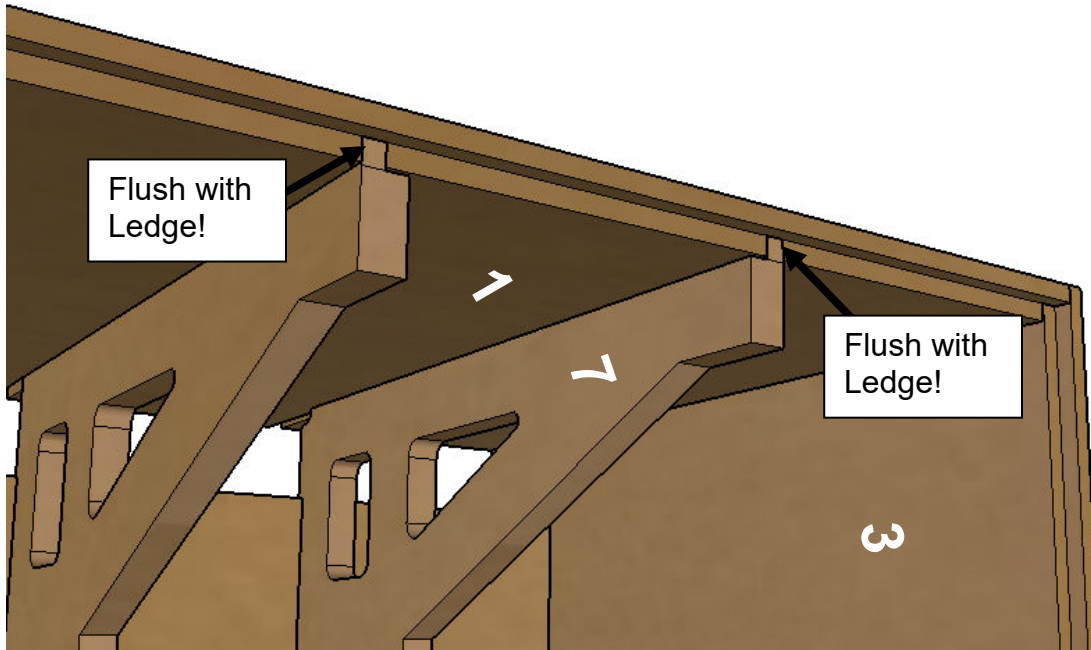


Important: The “brace tips” should be flush with the LEDGE on Panels 1 and 5. Do not force them in any further than the ledge itself. Try to position them to be exact!

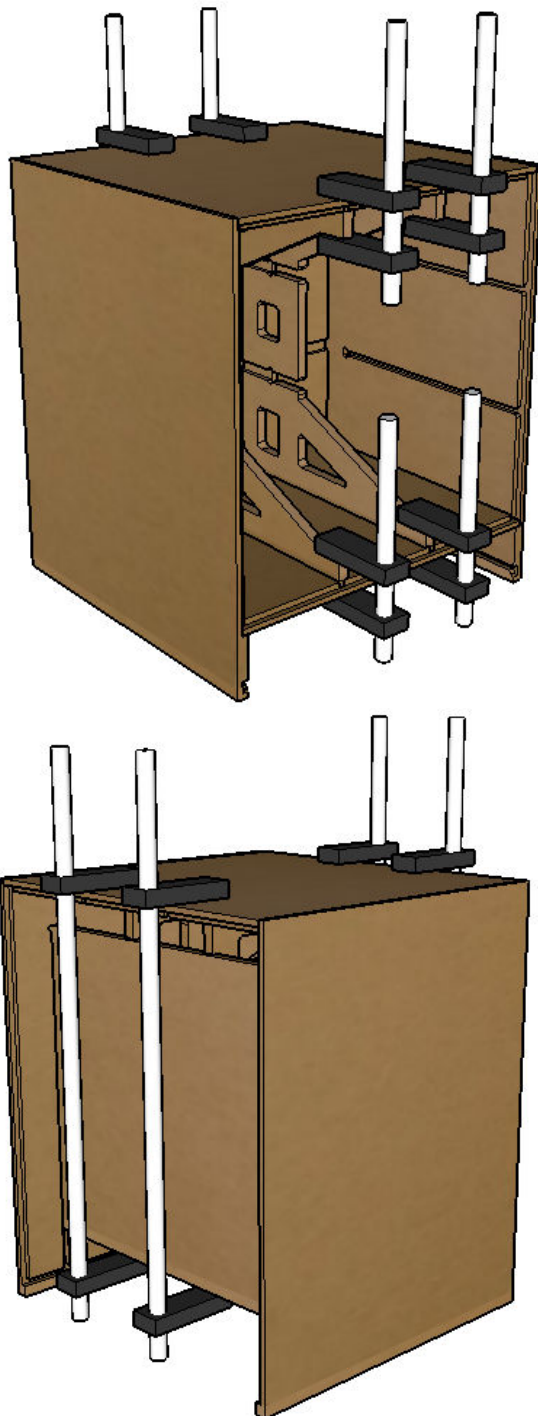


Detailed view of brace tips flush with the LEDGE.

Do not force the braces in any further than flush with the LEDGE.

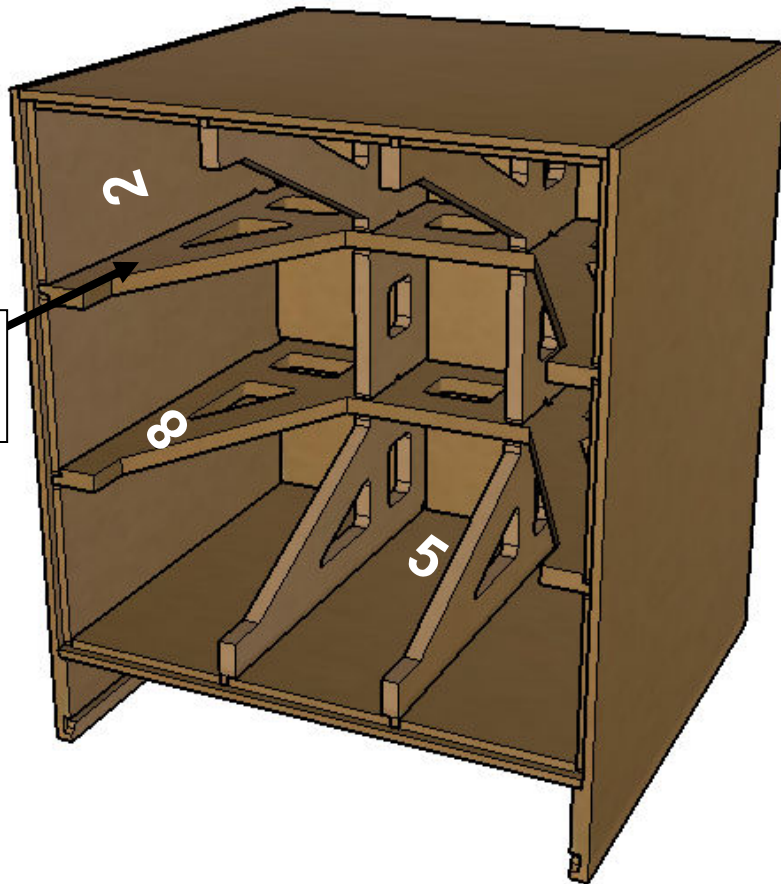


Clamping tip: It is generally best not to clamp over large unsupported distances. For the front of the cabinet, clamp the “tips” of the braces to the #1 and #5 instead of extending the clamp all the way from panel #1 to #5. If you do use that method, just don’t apply too much pressure or panels #1 and #5 can be bowed. Always check the panels AFTER clamping them up to ensure that they have not moved!



Insert Braces 8 and 9 as in the picture.

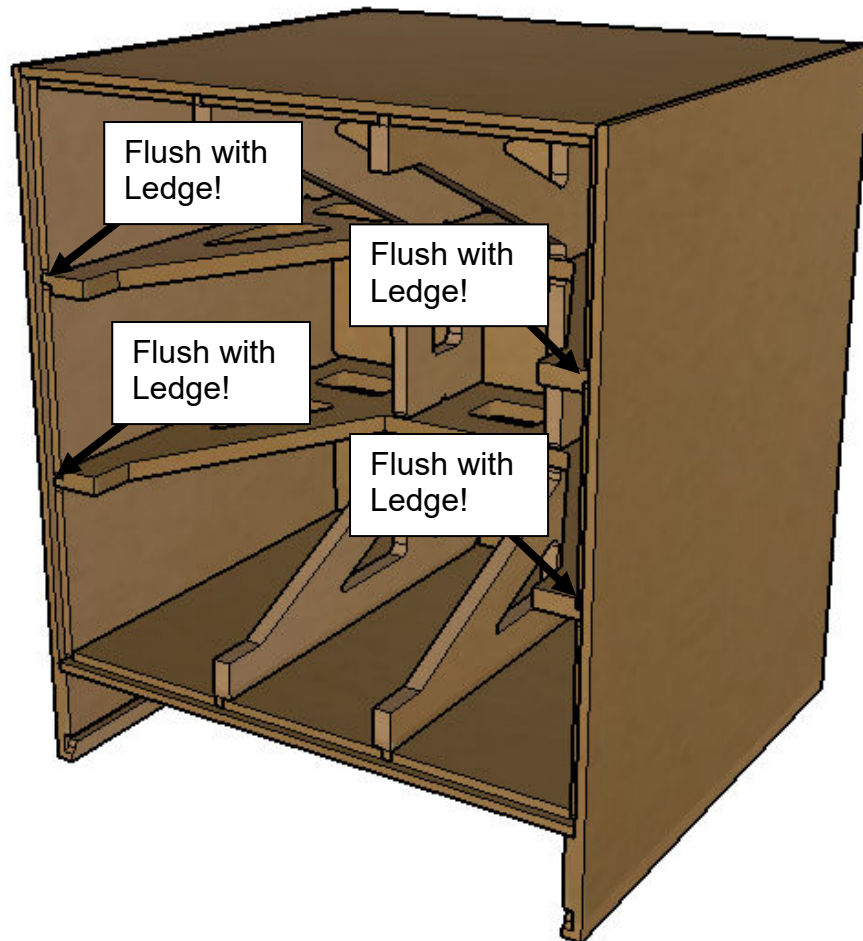
The numbers face each other.



Panel 9,
the "9" is visible
from the bottom

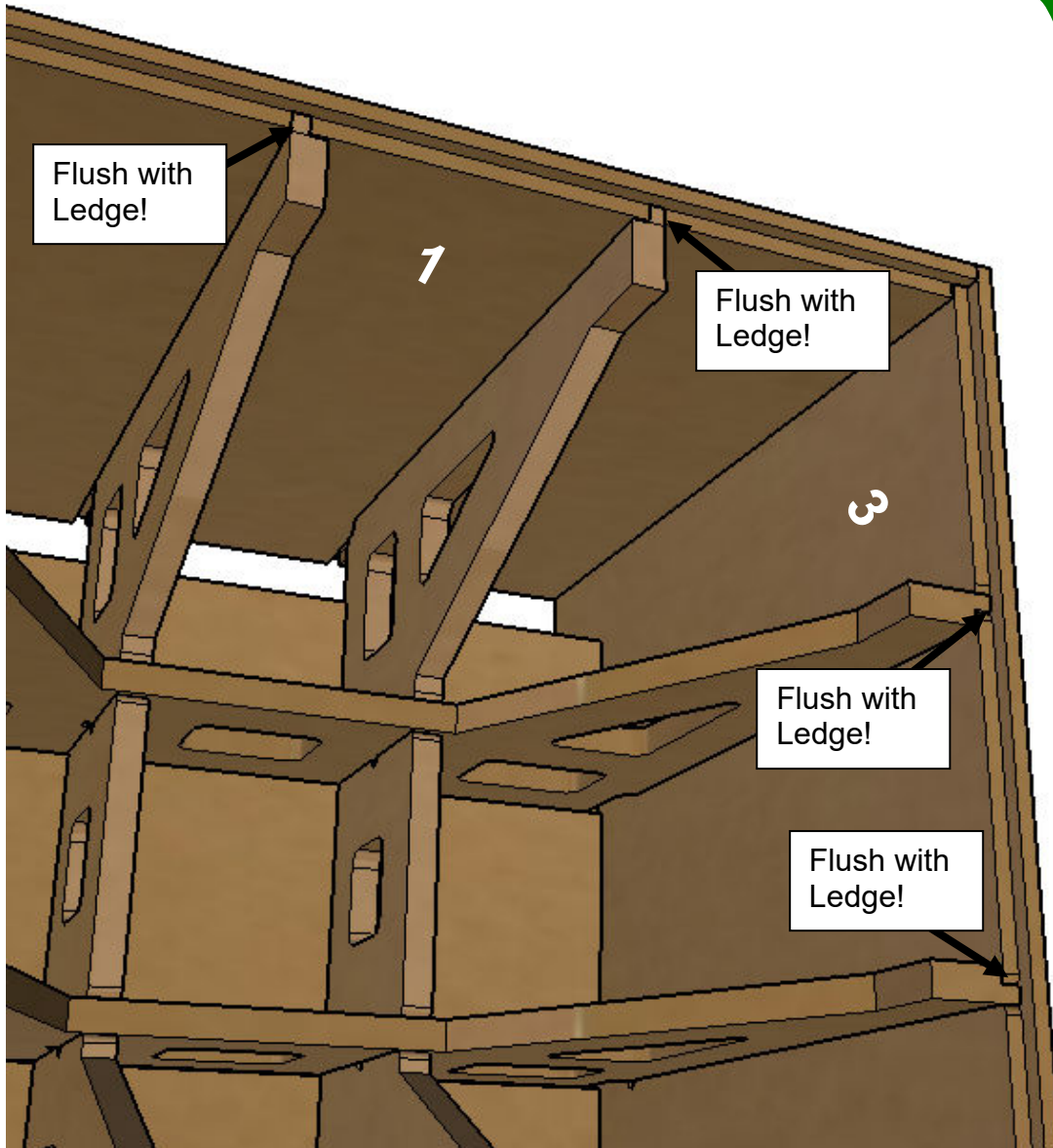
Push braces 8 and 9 all the way in.

The dados end on the sides of the cabinet will position braces 8 and 9 perfectly flush with the LEDGE on Panel 2 and 3 when braces 8 and 9 are pushed all the way in.



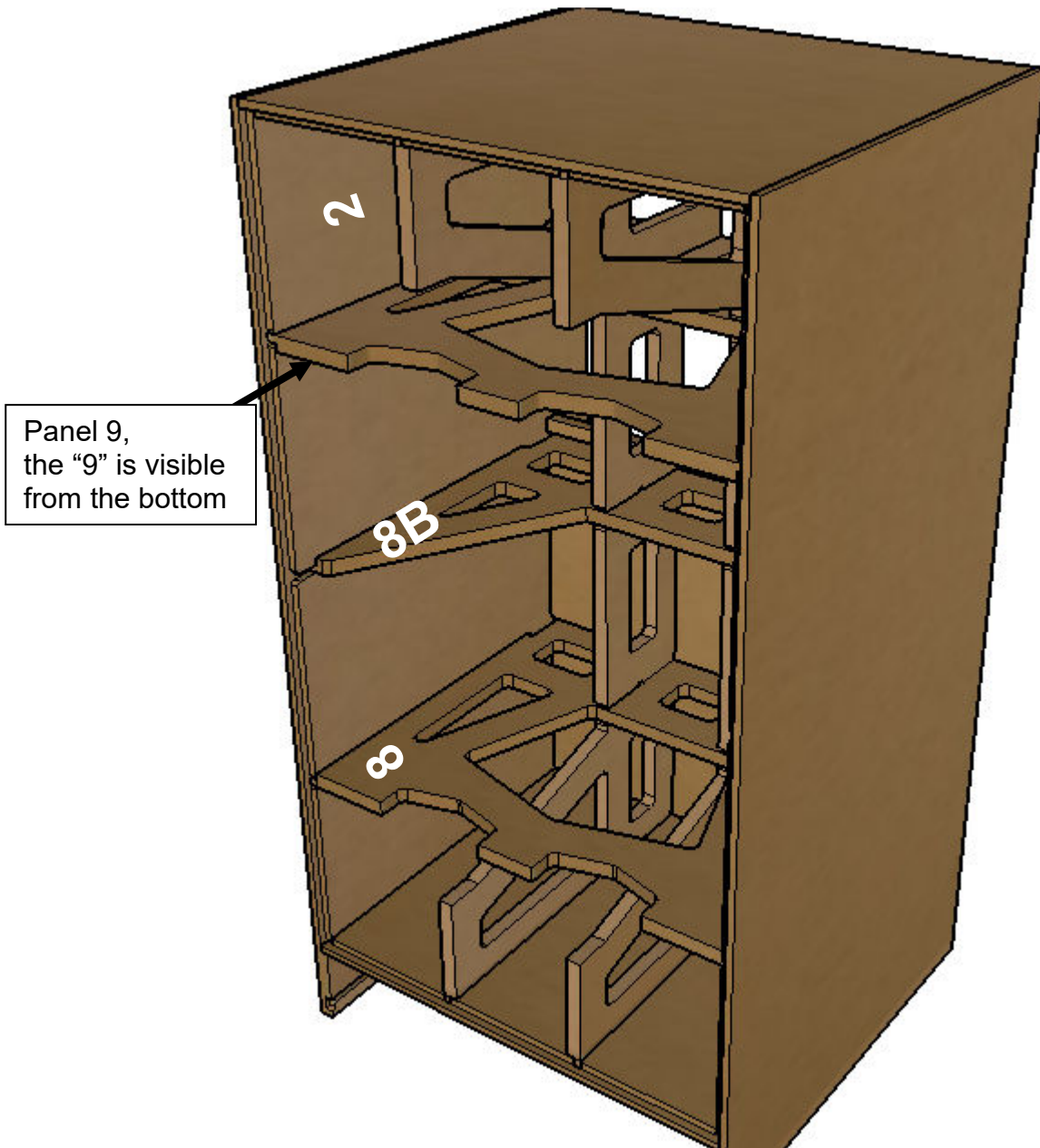
Detailed view of the “brace tips”.

Be sure that they are flush with the LEDGE on Panels 2 and 3, in the same way that the brace tips on braces 6 and 7 are flush with the ledges on Panels 1 and 5.



Full Marty Only

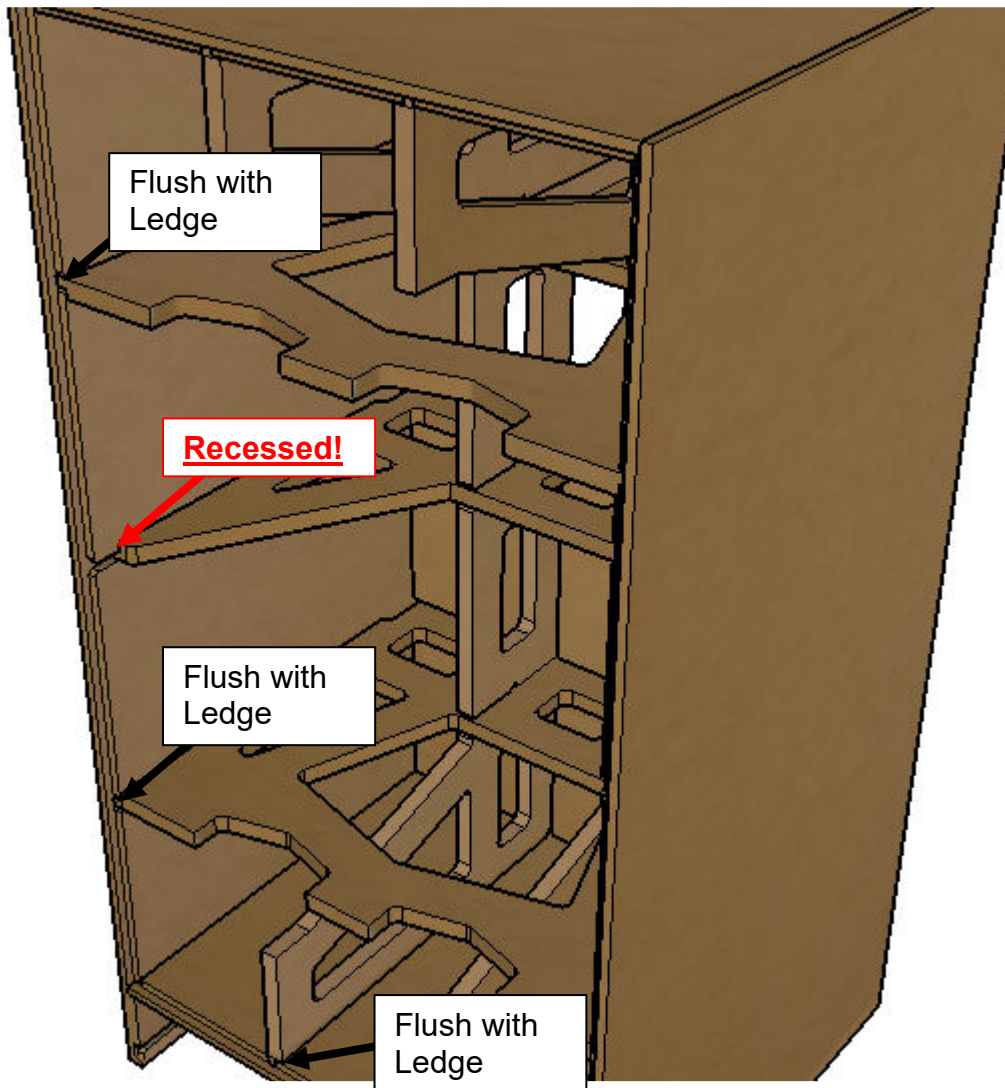
The Full Marty has 3 horizontal braces. Brace "8B" goes in the middle with the "8B" facing the top of the cabinet. The "8B" will be facing the number "9" on Panel 9.



Full Marty Only

Note that on the Full Marty, Panel 8B is recessed. Push Panel 8B all the way in as far as it will go. The tip of the brace will be approximately 1.21 inches below the level of the ledge.

No measuring is required, just ensure that the brace is all the way in.

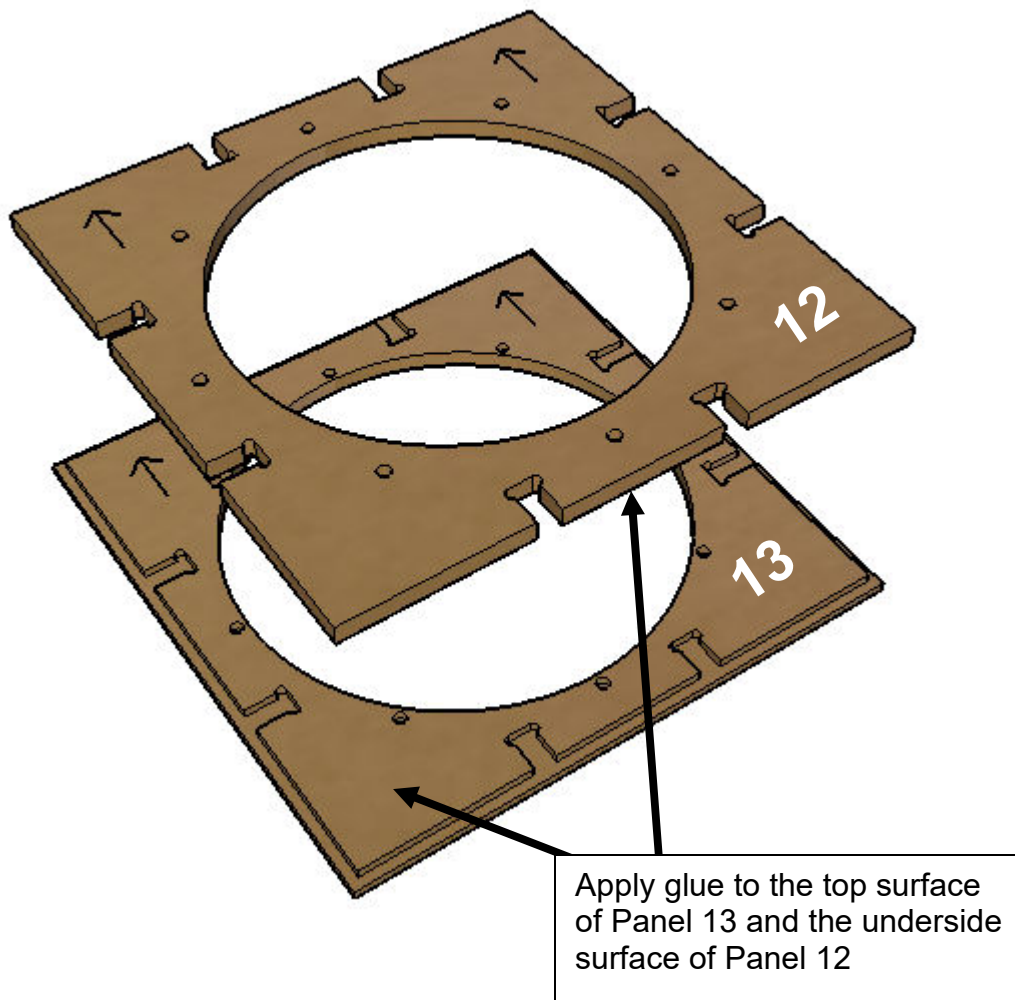


Glue-up of the baffle assembly and the bottom assembly.

Place Panel 13 on a flat surface and apply glue to the top of Panel 13 as well as to the bottom of Panel 12.

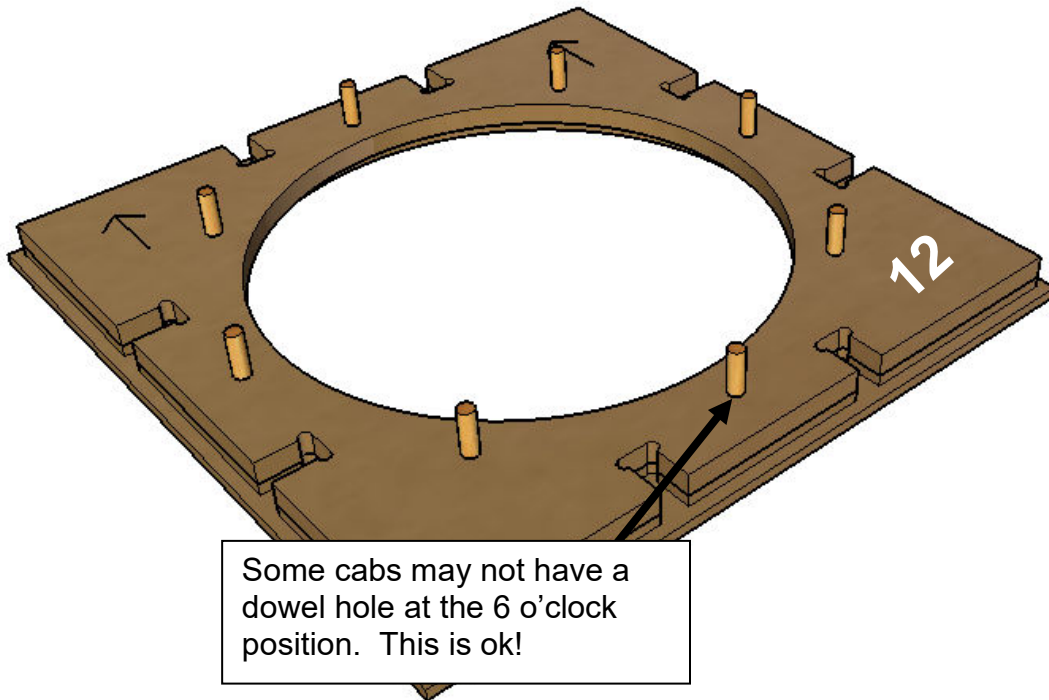
Ensure arrows are all facing in the same direction as in the picture.

Glue the surface area only. Do not apply glue in the dadoes.



Apply glue to the holes and insert the wooden dowel pins.

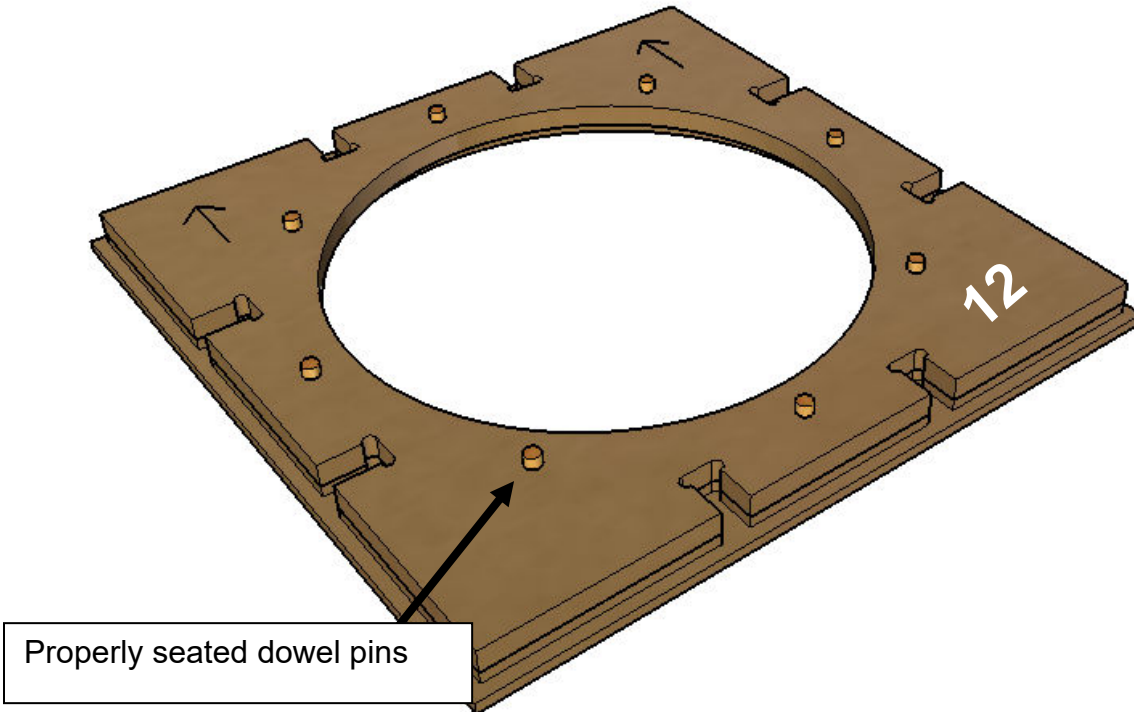
Not all cabinet will have a dowel hole at the 6 o'clock position. This is ok!



Ensure that the dowel pins are fully seated in Panel 13.

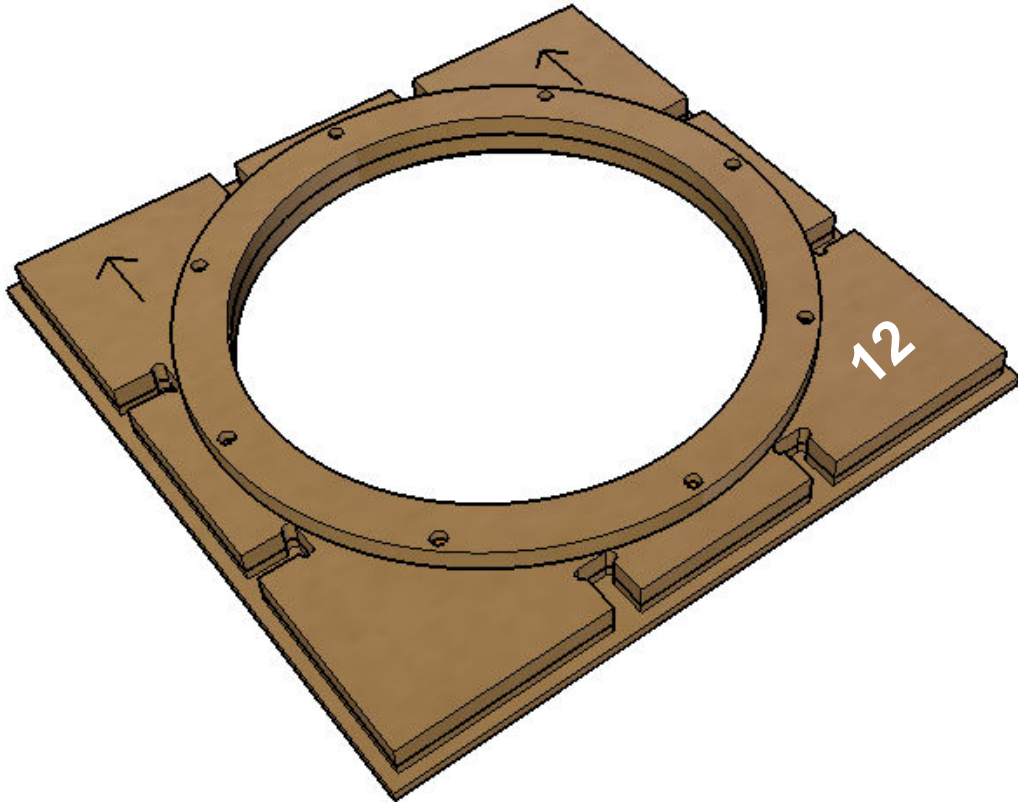
Tap in in carefully with a hammer.

If using the 1.5" dowel pins recommended, approximately 3/8" will remain sticking out when fully seated.



Then apply glue to the supplemental driver mounting ring and mount over the dowel tips.

Clamp and allow the entire assembly to dry overnight.

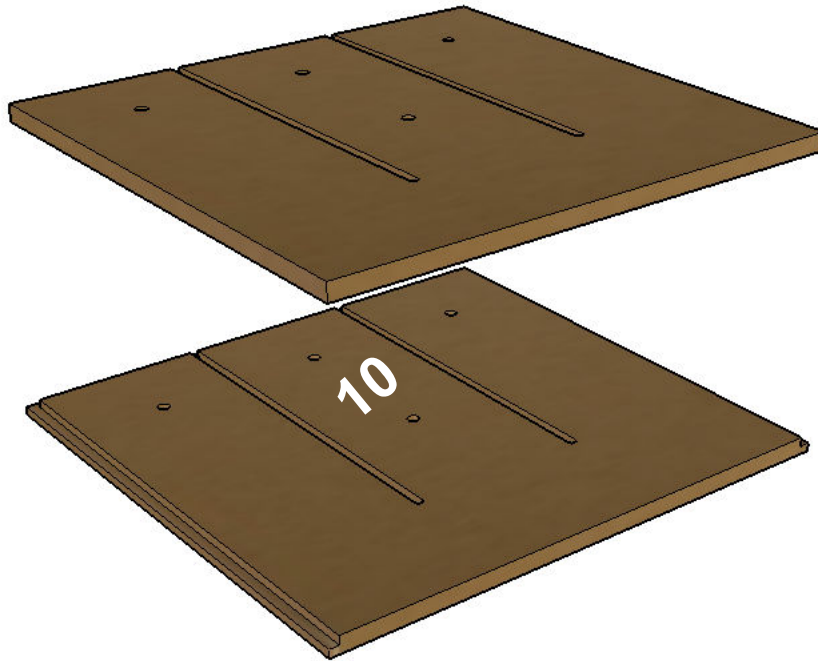


The dowel pins help keep Panel 12, 13, and the extra mounting ring all perfectly aligned while gluing up. They also add extra strength to your baffle.

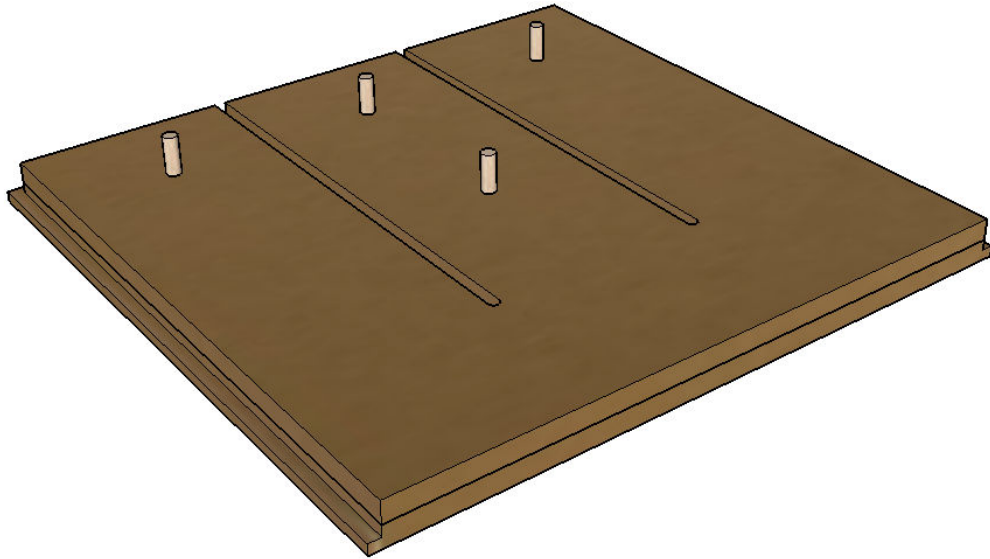
Place Panel 10 on a flat surface and apply glue to the top of Panel 10 as well as to the bottom of the matching panel.

Align the slots and dowel pin holes as in the picture.

Glue the surface area only. Do not apply glue in the slots.

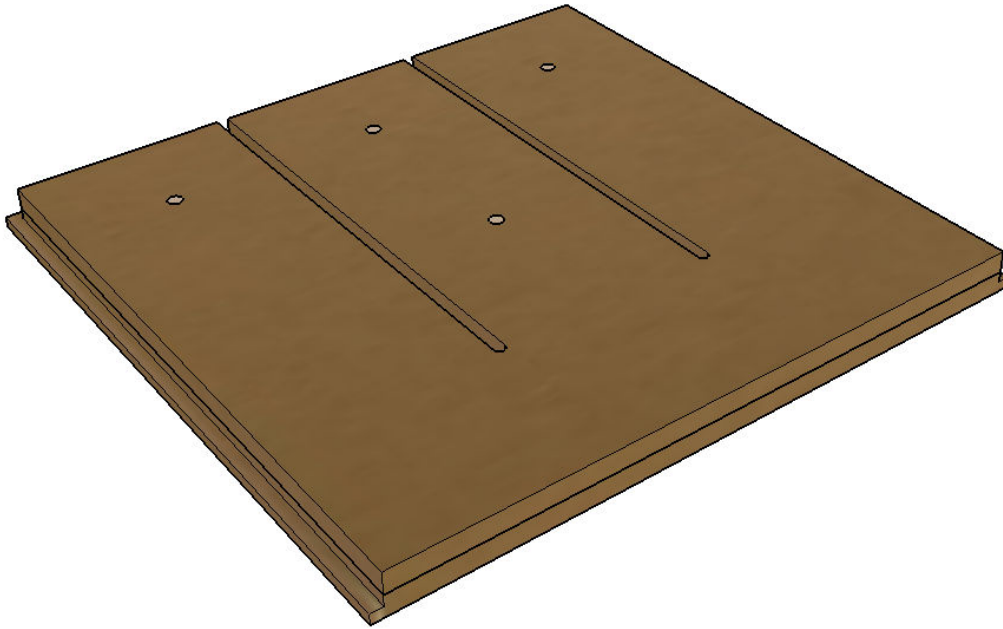


Apply glue to the holes and insert the wooden dowel pins.



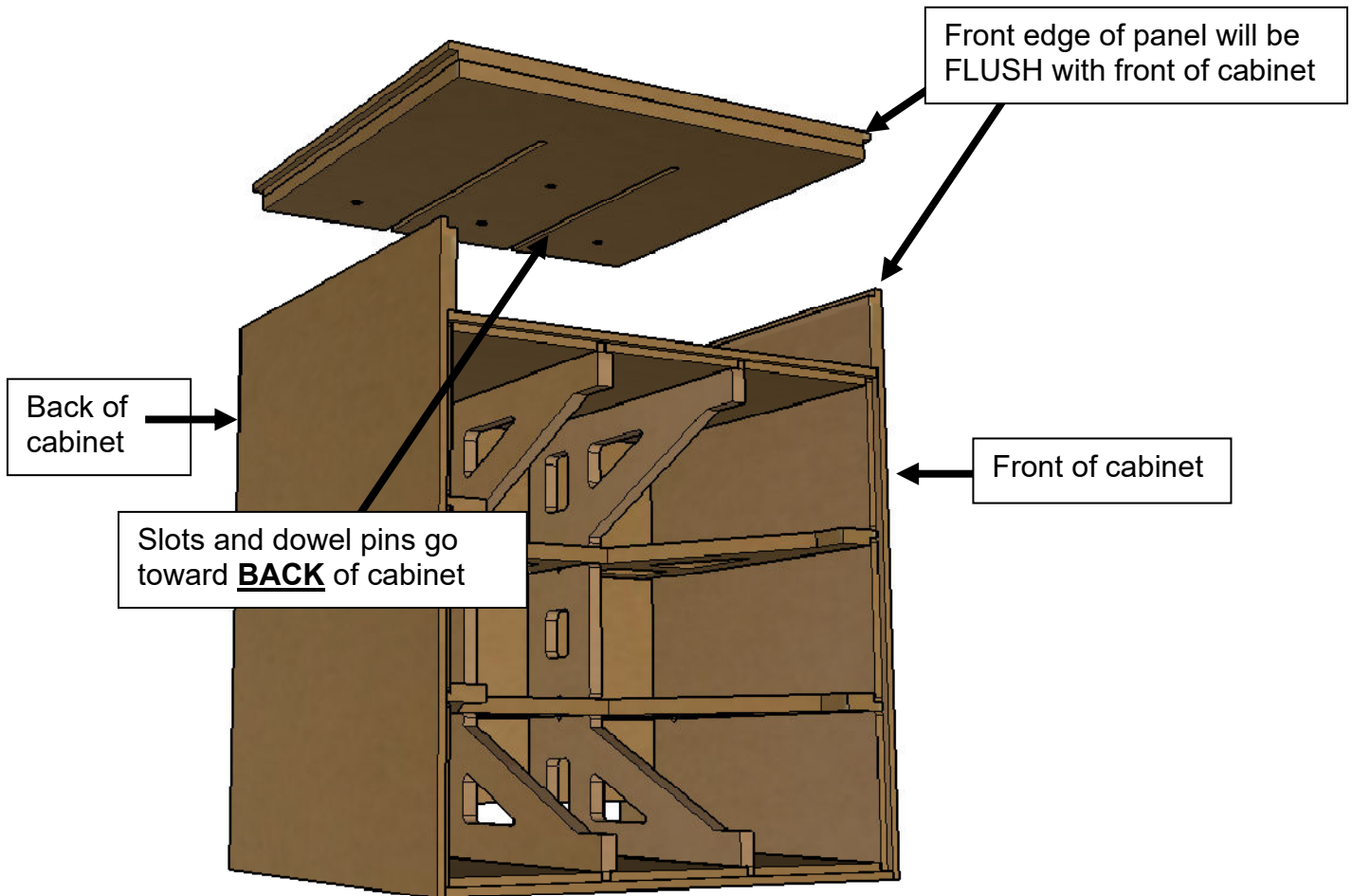
Clamp and allow the assembly to dry.

Optional: If you don't want to see the dowel pins in the port, cut/saw them down to be flush.

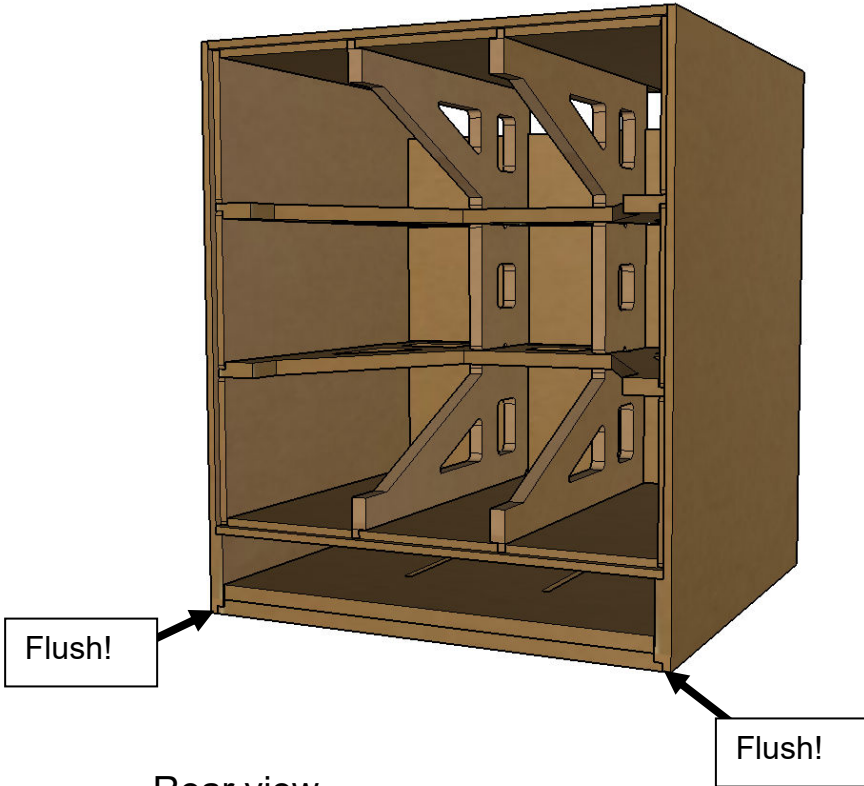


Rotate the cab to be upside down, then glue on the Panel 10 assembly.

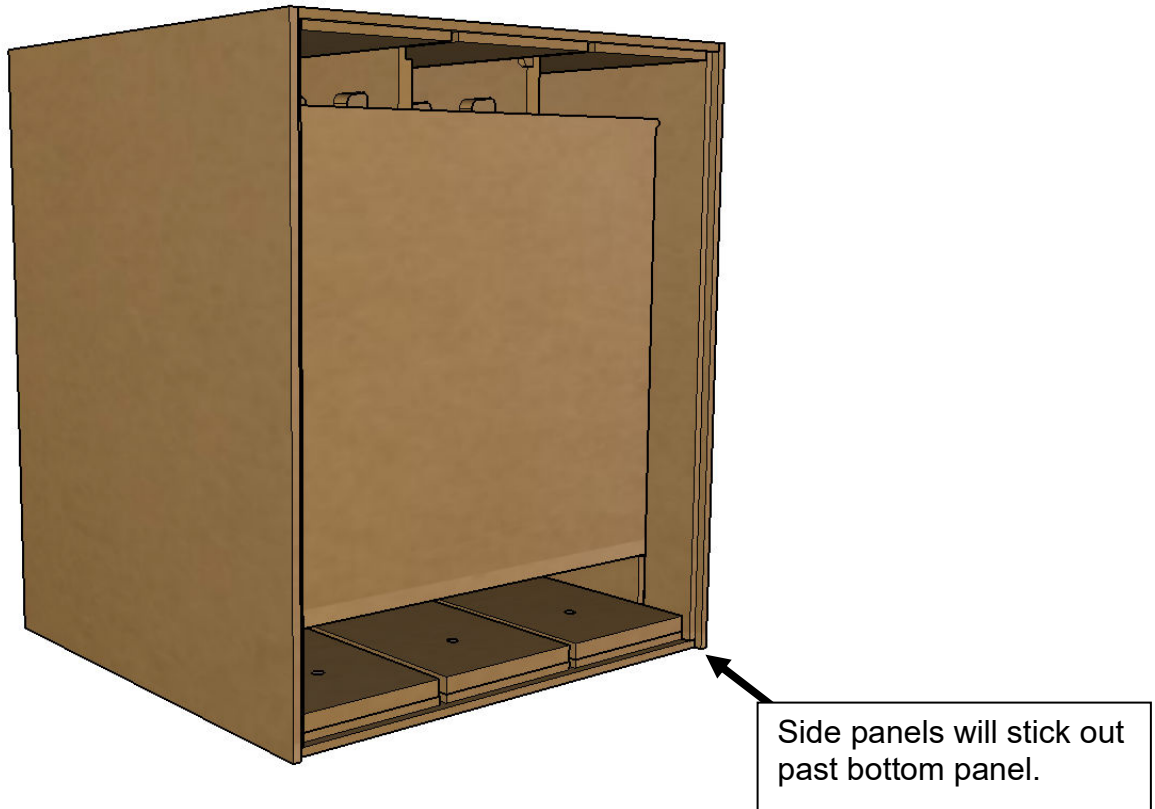
Be careful to make sure the slots are pointing toward the back of the cabinet!



Front view:



Rear view



Port braces. *****READ CAREFULLY*****

Turn the cabinet face down.

Position the braces as shown in the picture.

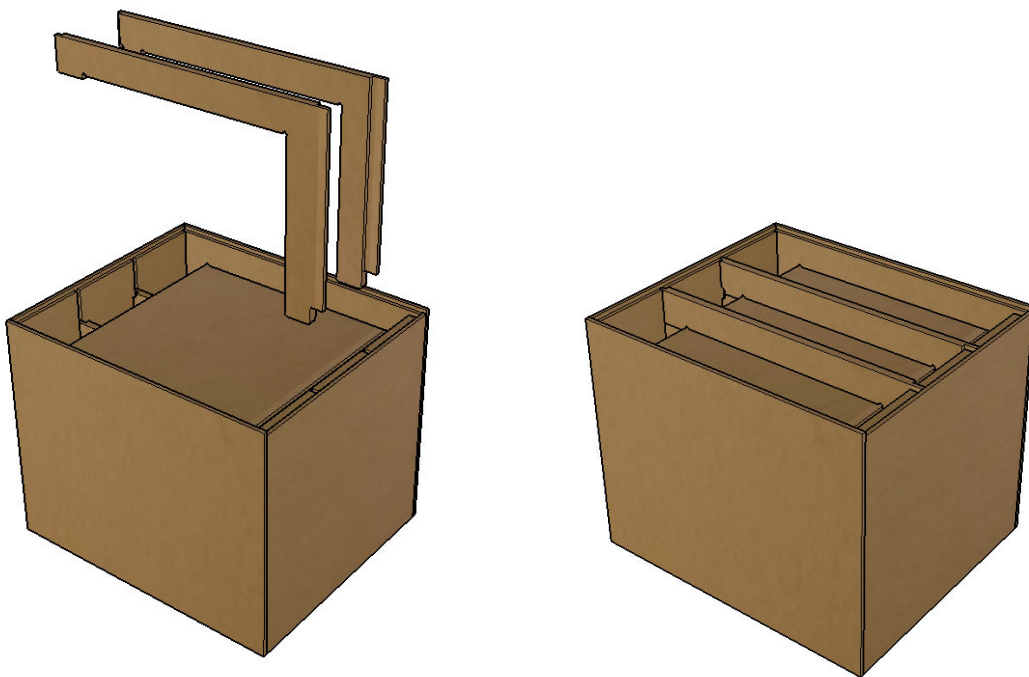
GENTLY insert the braces into the cabinet.

SOME BUILDERS HAVE REPORTED THAT PANELS 5 & 10 (ABOVE AND BELOW THE BRACES) MAY BECOME SLIGHTLY BOWED DURING TRANSIT AND/OR BUILDING.

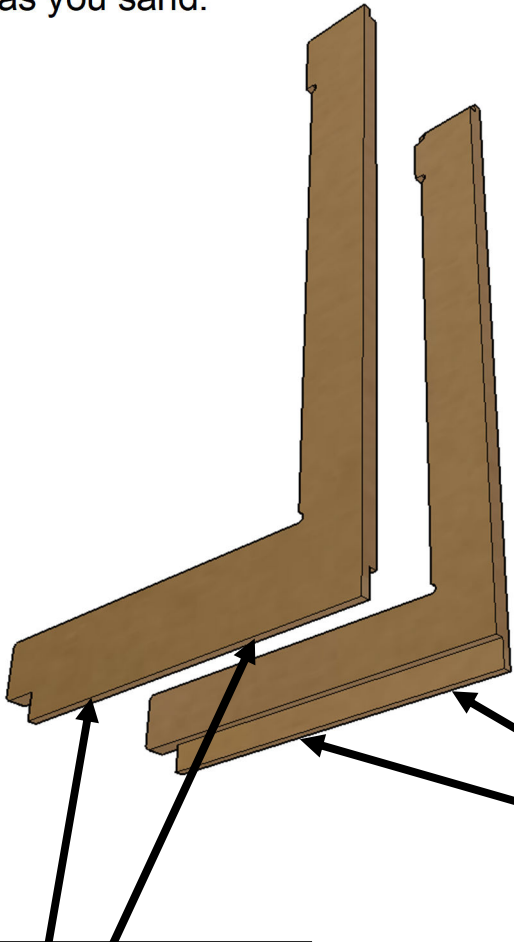
IF THIS IS THE CASE, THEN THE BRACES WILL FEEL TOO TIGHT AND WILL NEED TO BE SANDED DOWN UNTIL THEY SLIDE IN WITHOUT SIGNIFICANT HAMMERING.

DO NOT JUST POUND THE BRACES WITH A HAMMER OR THEY MAY BREAK!!

IF YOUR BRACES ARE TOO TIGHT, SEE NEXT PAGE.

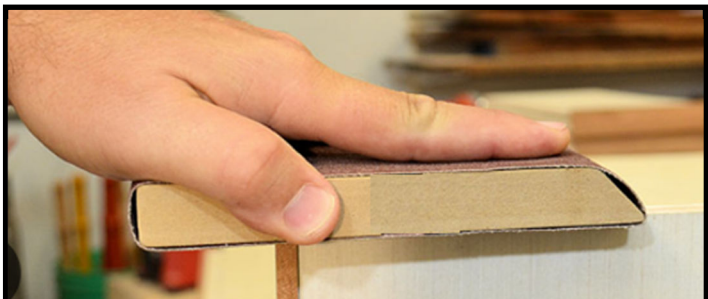


If the braces are too tight, sand down the bottom edge of the brace using sandpaper – 60 grit sandpaper will grind the edge down quickly. A sanding block will help keep the bottom edge of the brace nice and flat as you sand.



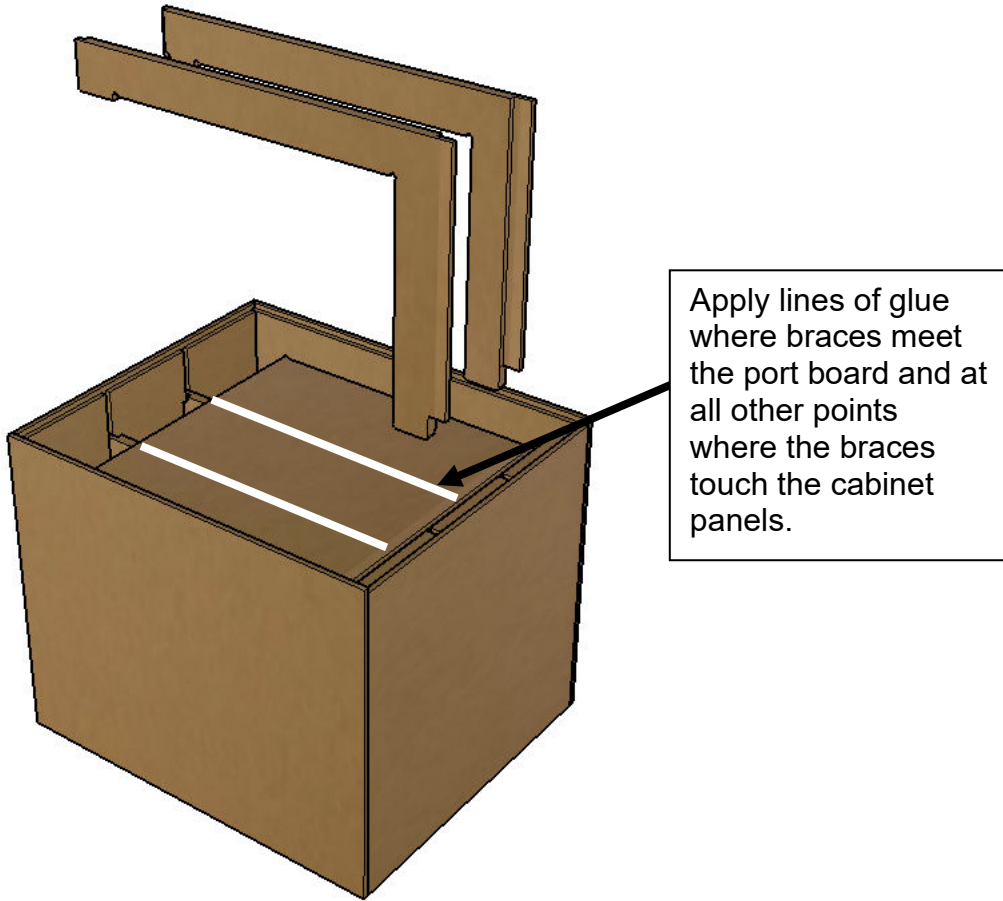
Using 60 grit sandpaper and a sanding block, sand down the **BOTTOM-EDGE** of the brace until it slides into the cab with hammering. It should fit snug in the cabinet, but not super tight.

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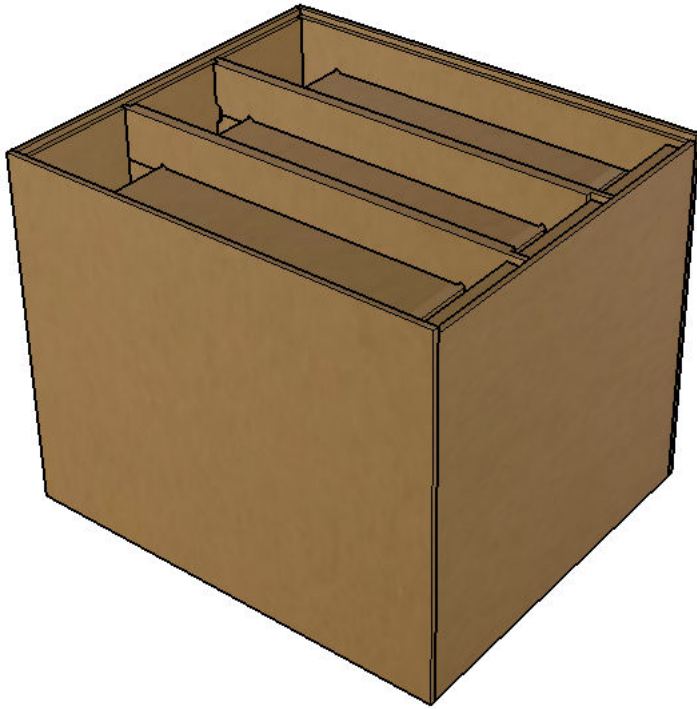


If you don't have a sanding block, just wrap your sandpaper around a scrap piece of wood so that the bottom-edge of the brace can be sanded down relatively flat.

Once the L-braces have been successfully dry fit, proceed to glue them in.

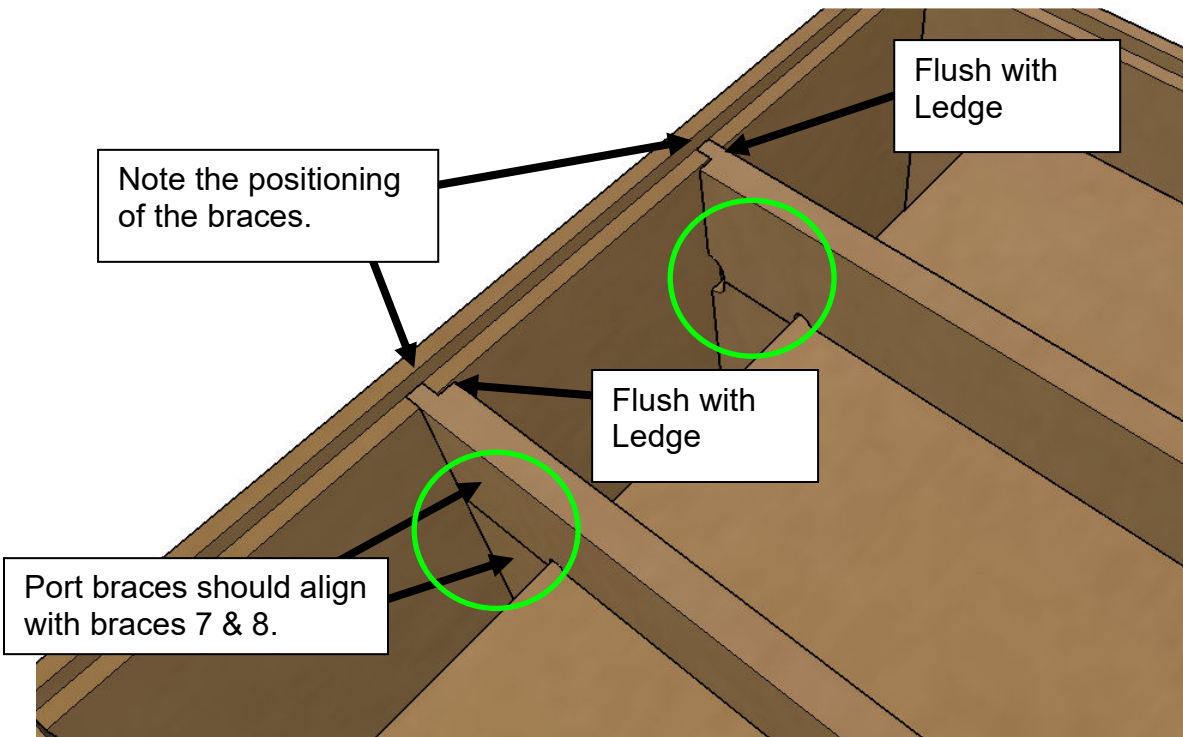


Insert into the cabinet.



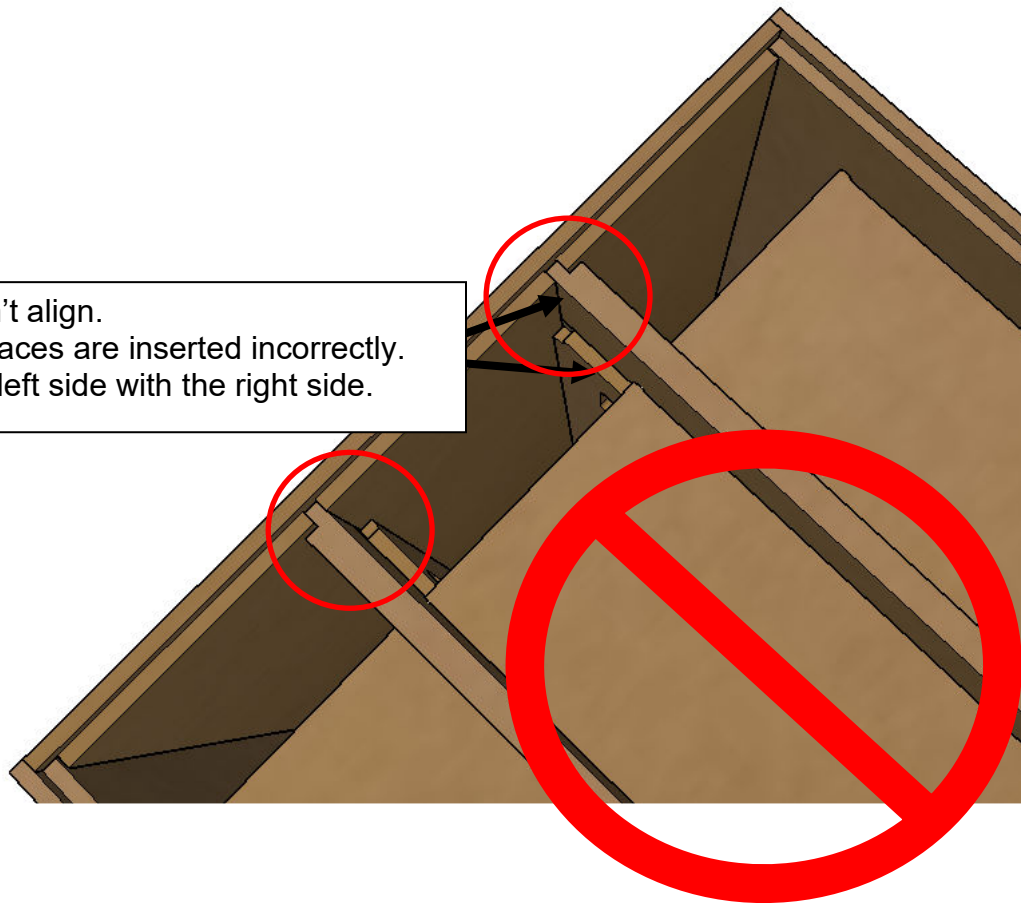
Detailed view of the top-rear of the cabinet.

Braces should be flush with the LEDGE.

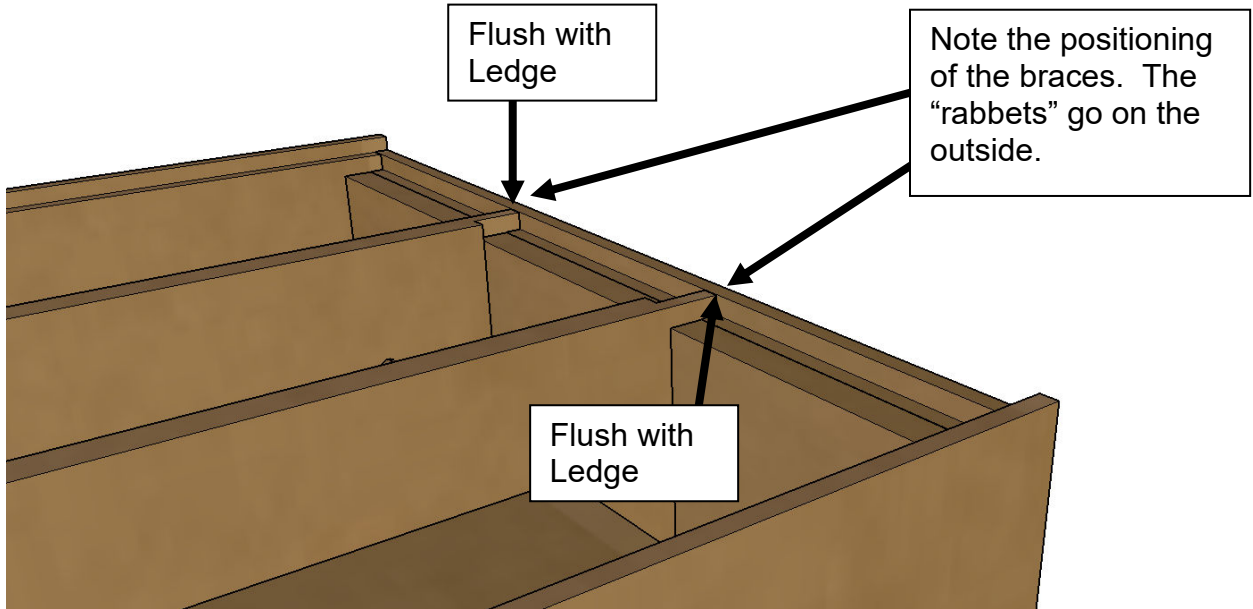


Incorrect mounting. Left side and right side braces are backwards and need to be swapped.

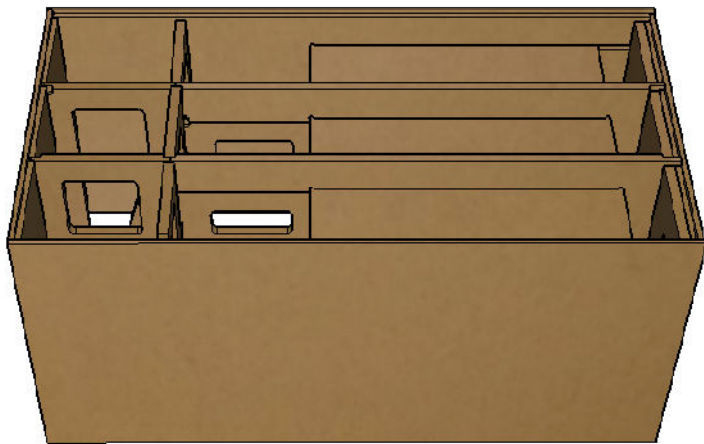
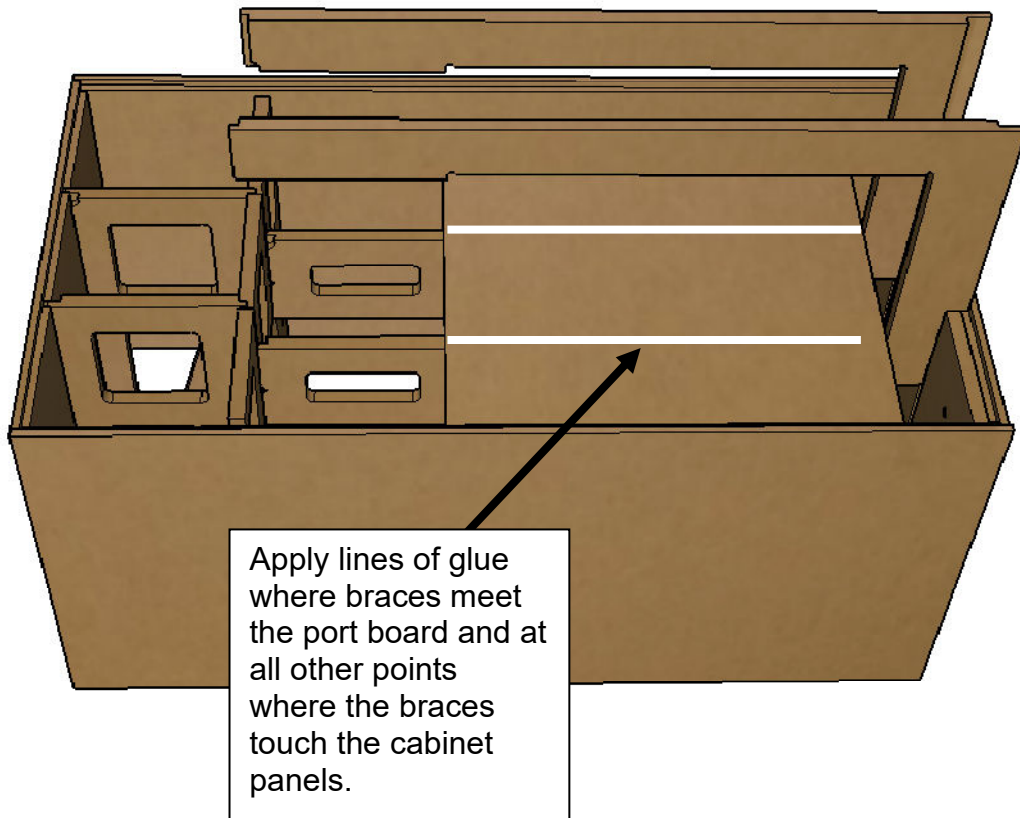
Braces don't align.
The port braces are inserted incorrectly.
Switch the left side with the right side.



Detailed view of bottom of cabinet:

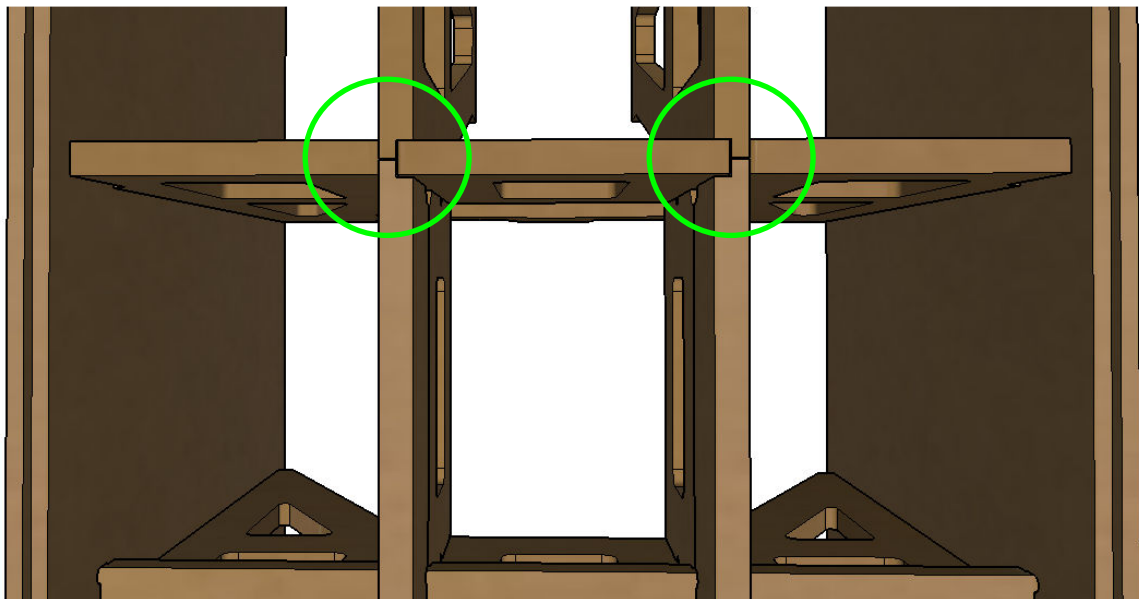
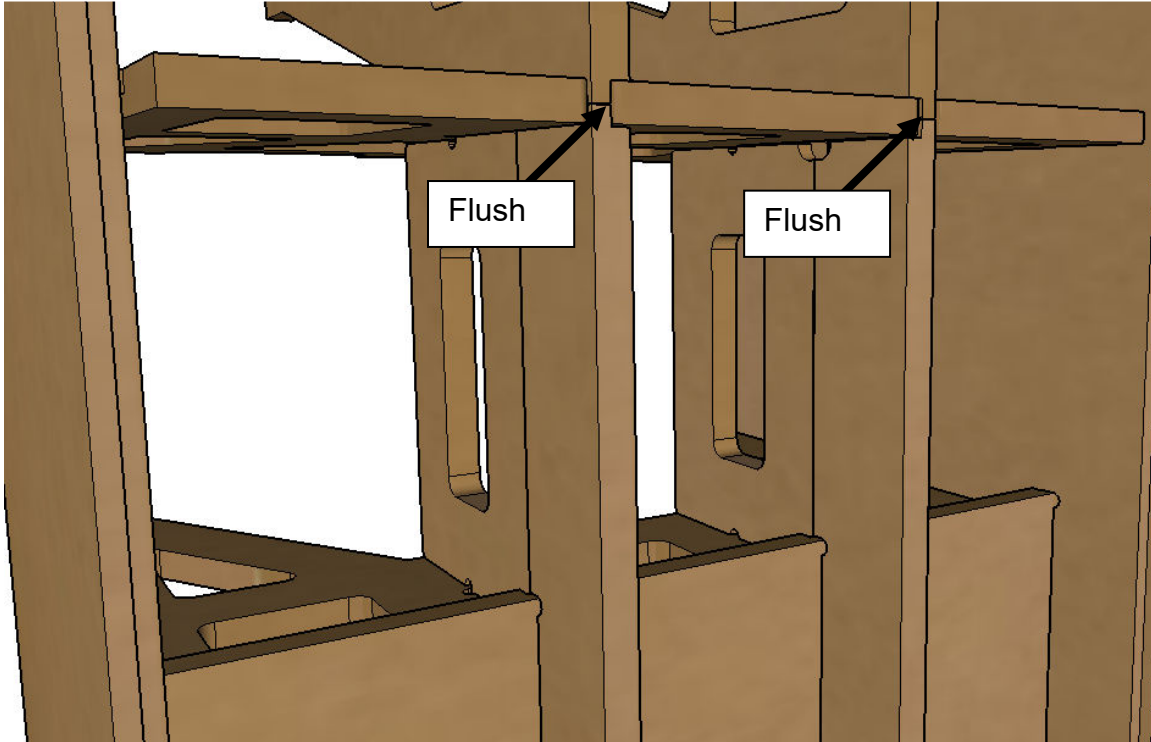


Full Marty and MiniMarty only



Full Marty and MiniMarty only

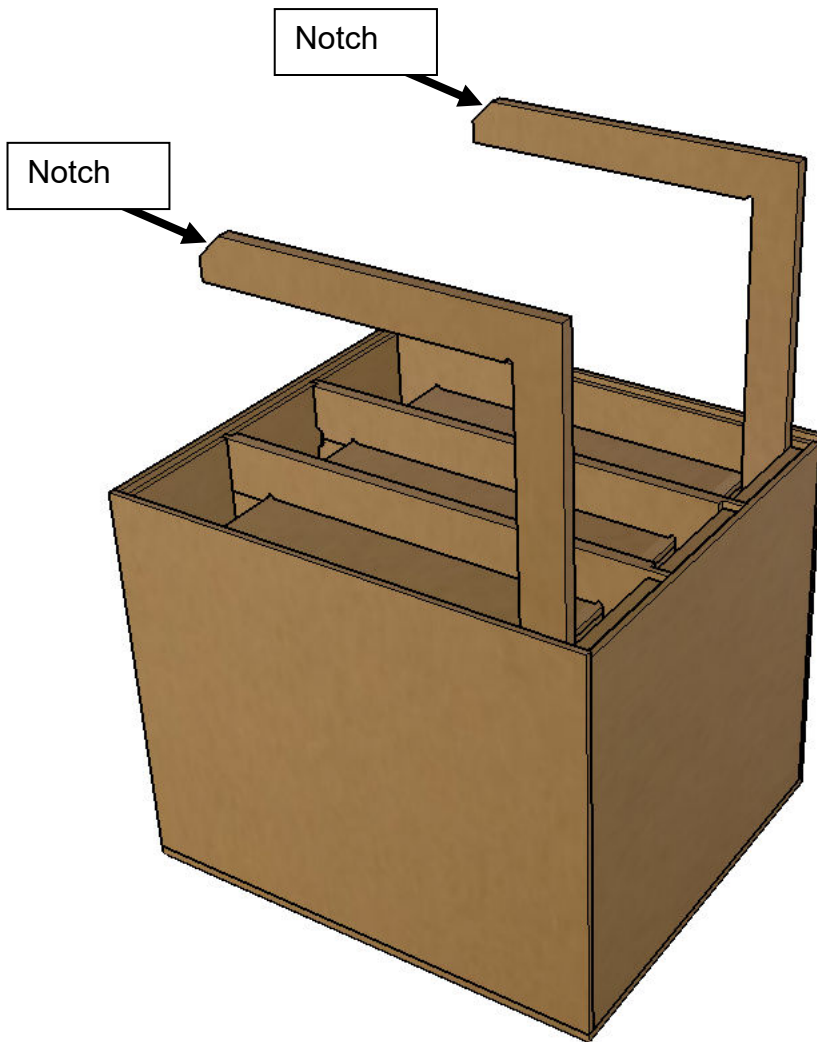
Detailed views:



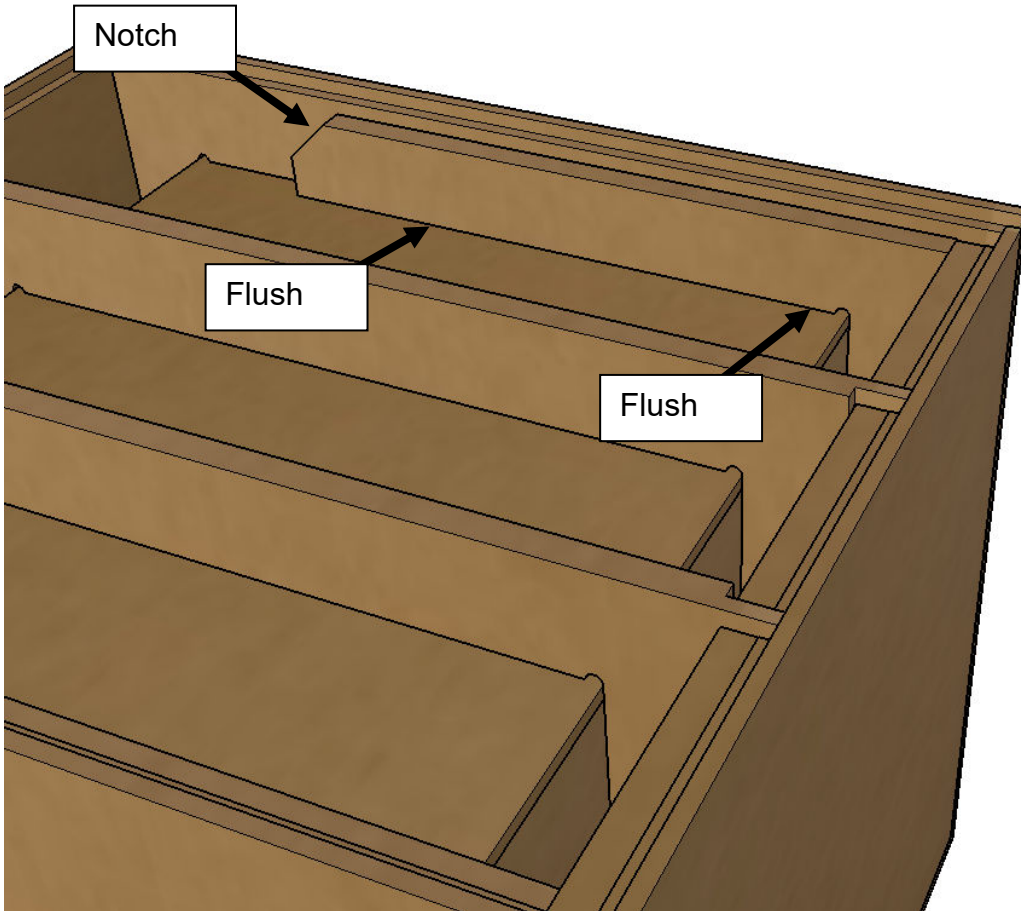
Port side braces.

Position the port side braces as shown in the picture. Both braces are identical. There is no left or right side with these braces.

Insert the SQUARE END into the port

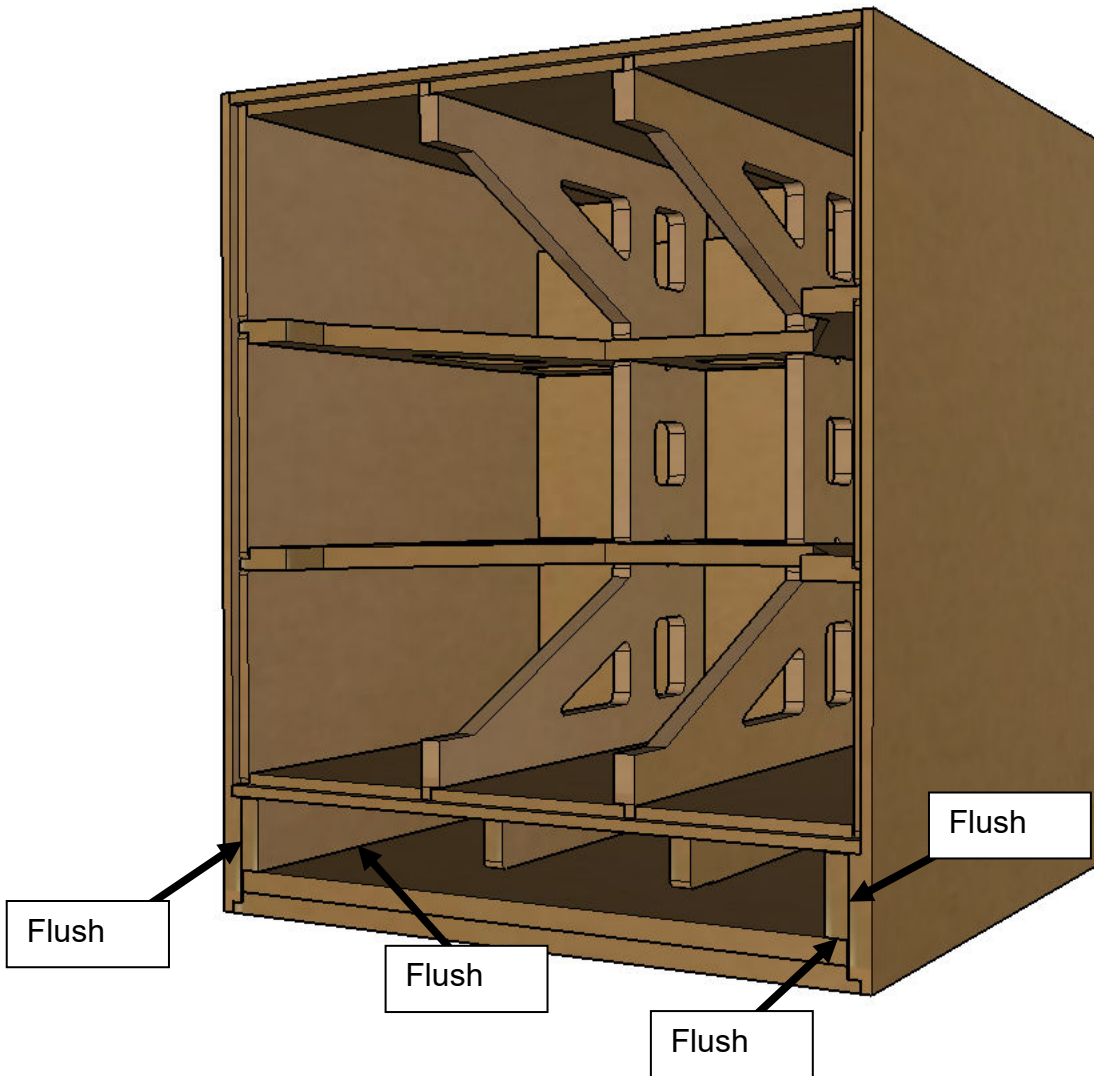


Glue the side braces to the sides of the cab.



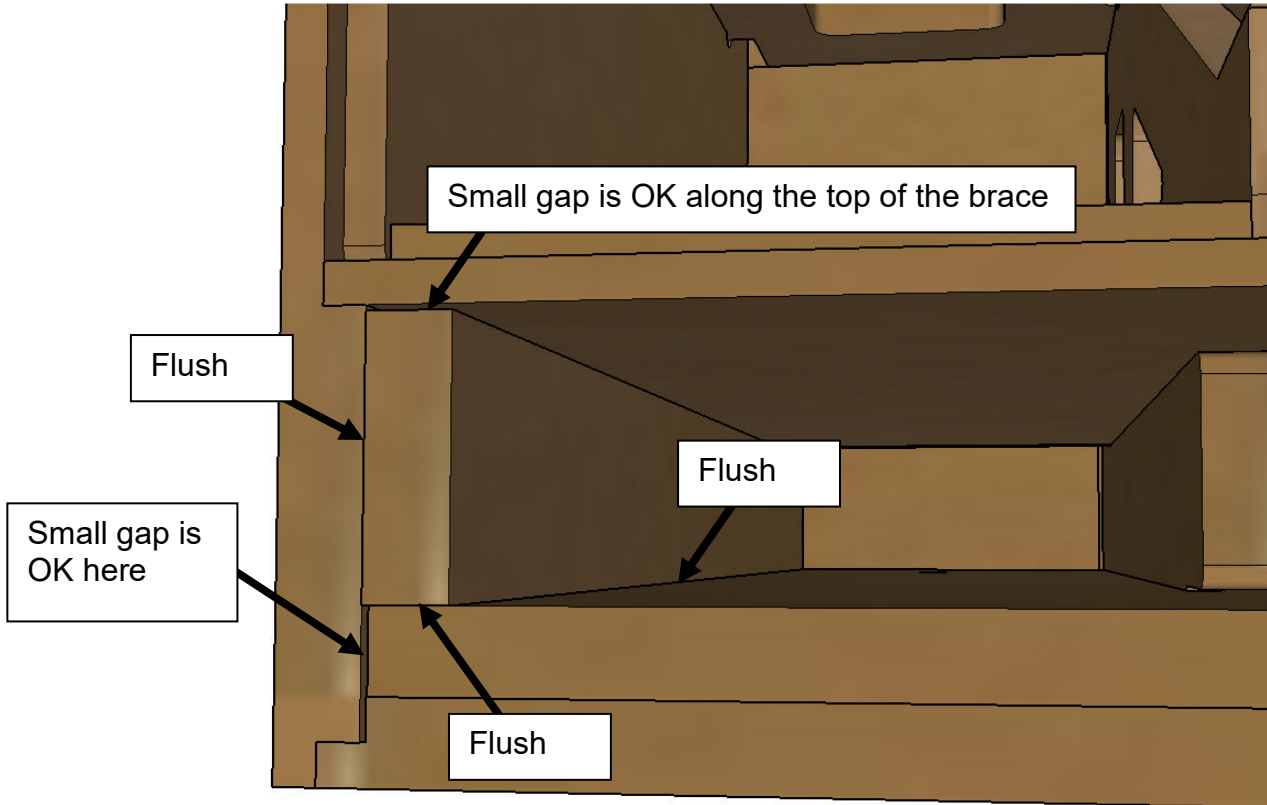
From the front of the cabinet, the side braces should be FLUSH with the BOTTOM port board and should be FLUSH with the side of the cabinet.

Clamp the side braces to the sides of the cab and allow to dry.



Detailed view:

A small gap on the *underside* of Panel 5 is OK.



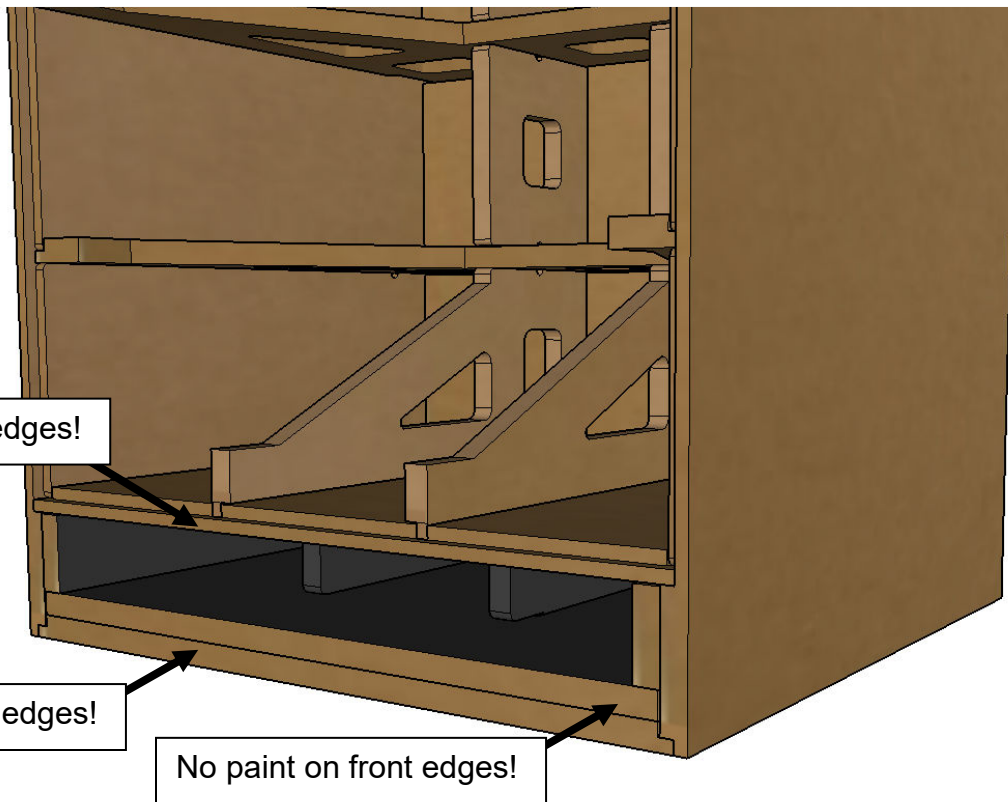
Paint port area now.
Optional (but recommended)

At this point, it is easy to paint the port since it can still be accessed from the front as well as the back.

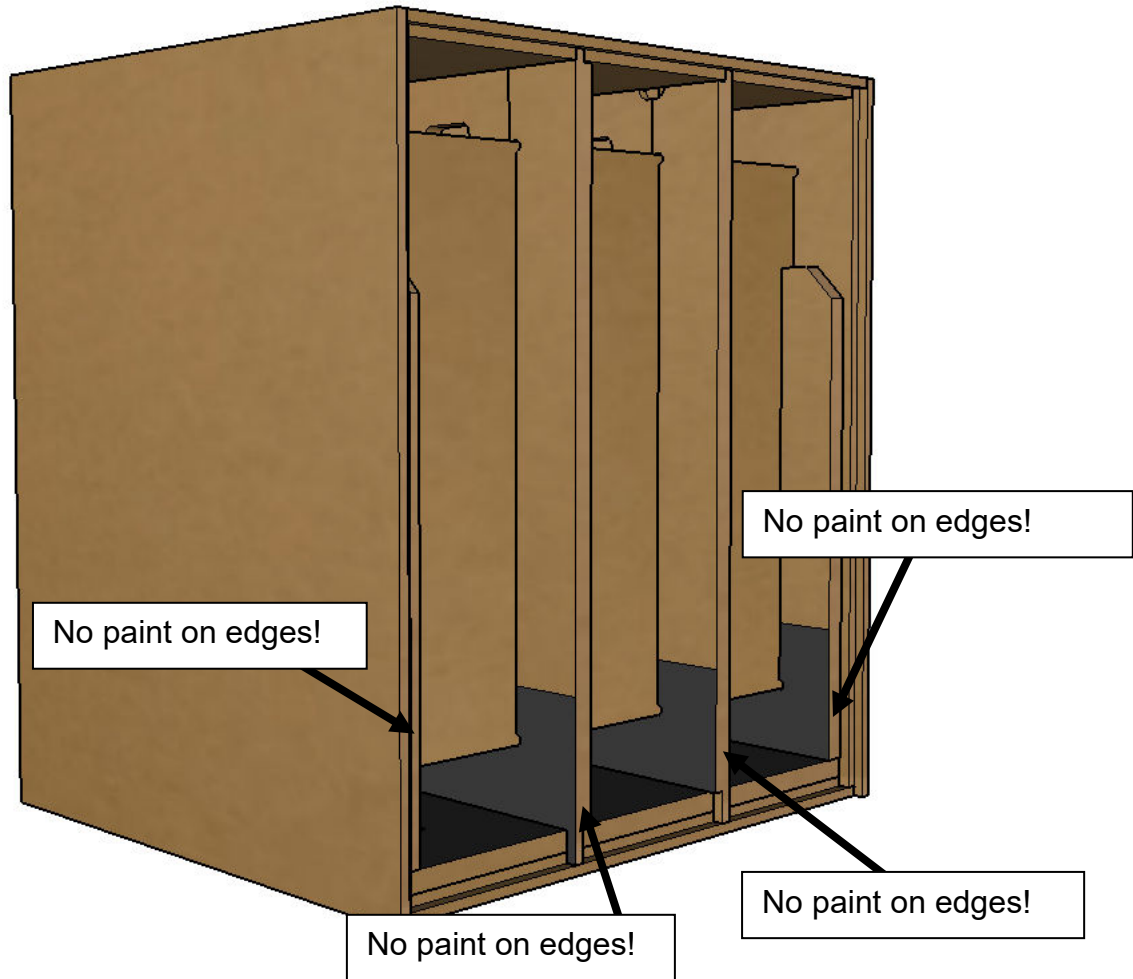
When painting, **DO NOT GET ANY PAINT ON THE FRONT OR BACK EDGES OF THE CAB.** This will cause glue to not adhere and your cabinet may not work properly. Just keep the paint inside the port it will be OK.

The area in dark gray can be painted.

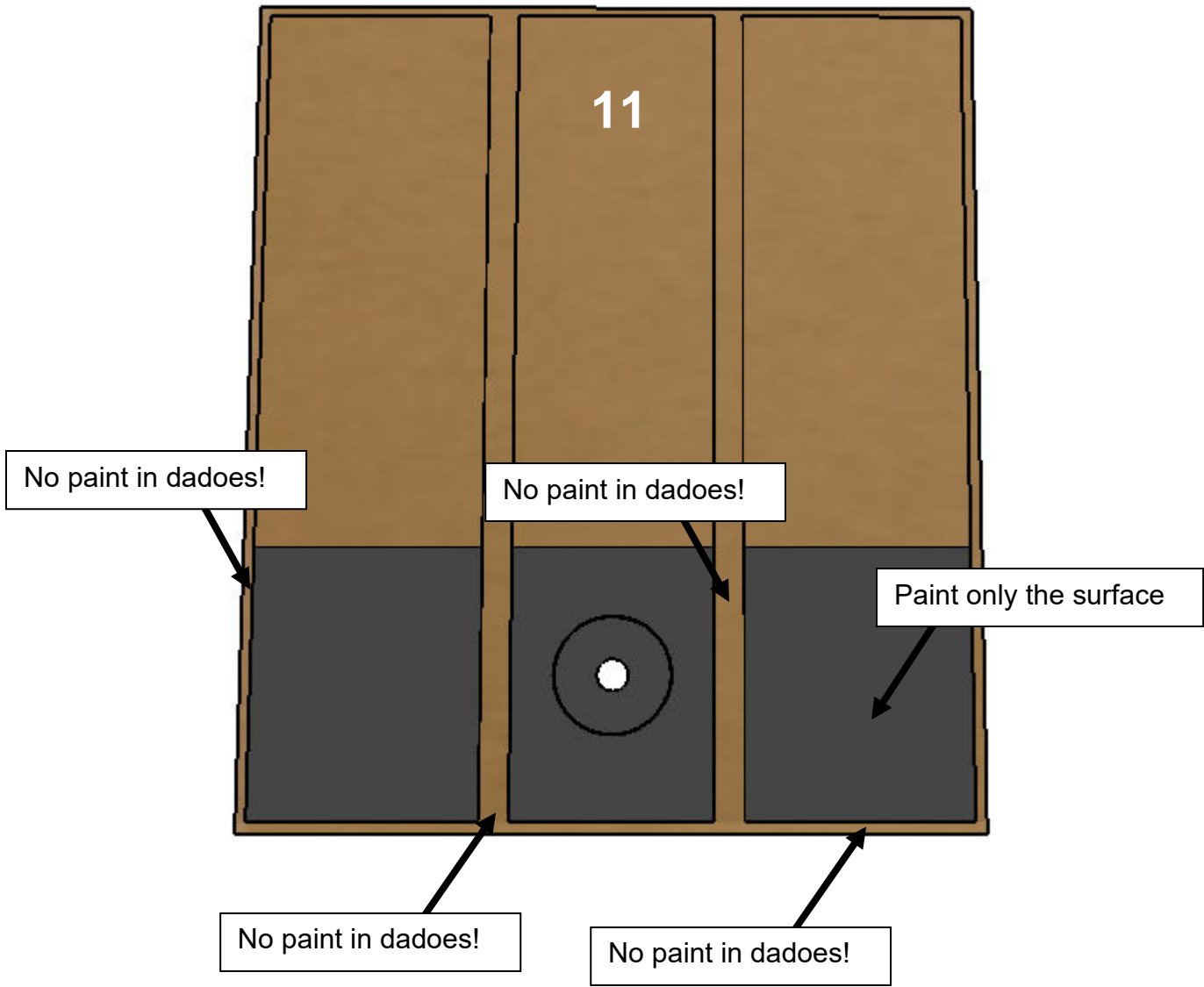
Front view (port painting):



Rear view (port painting):



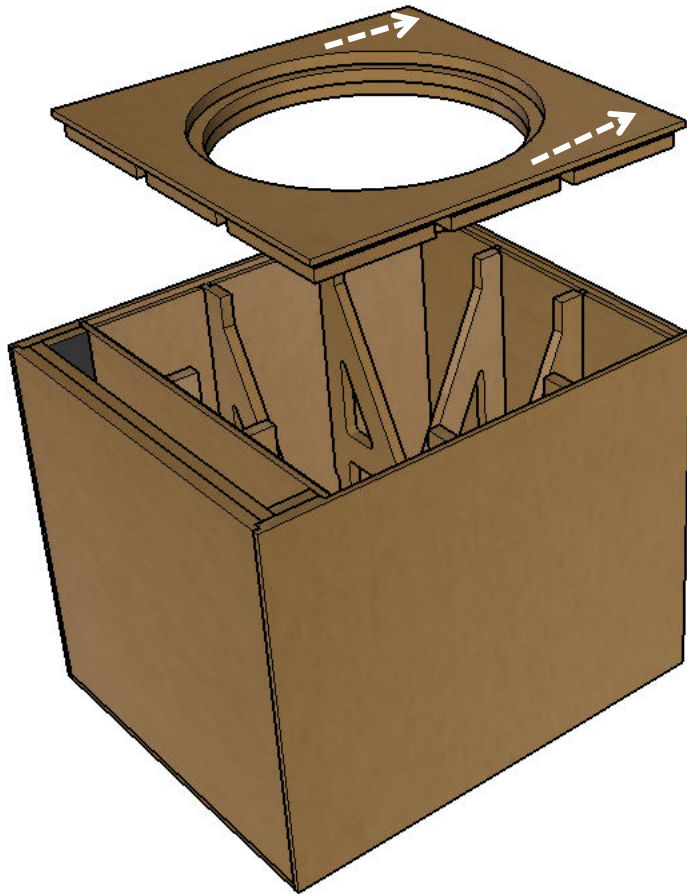
Painting Panel 11



Baffle assembly mount.

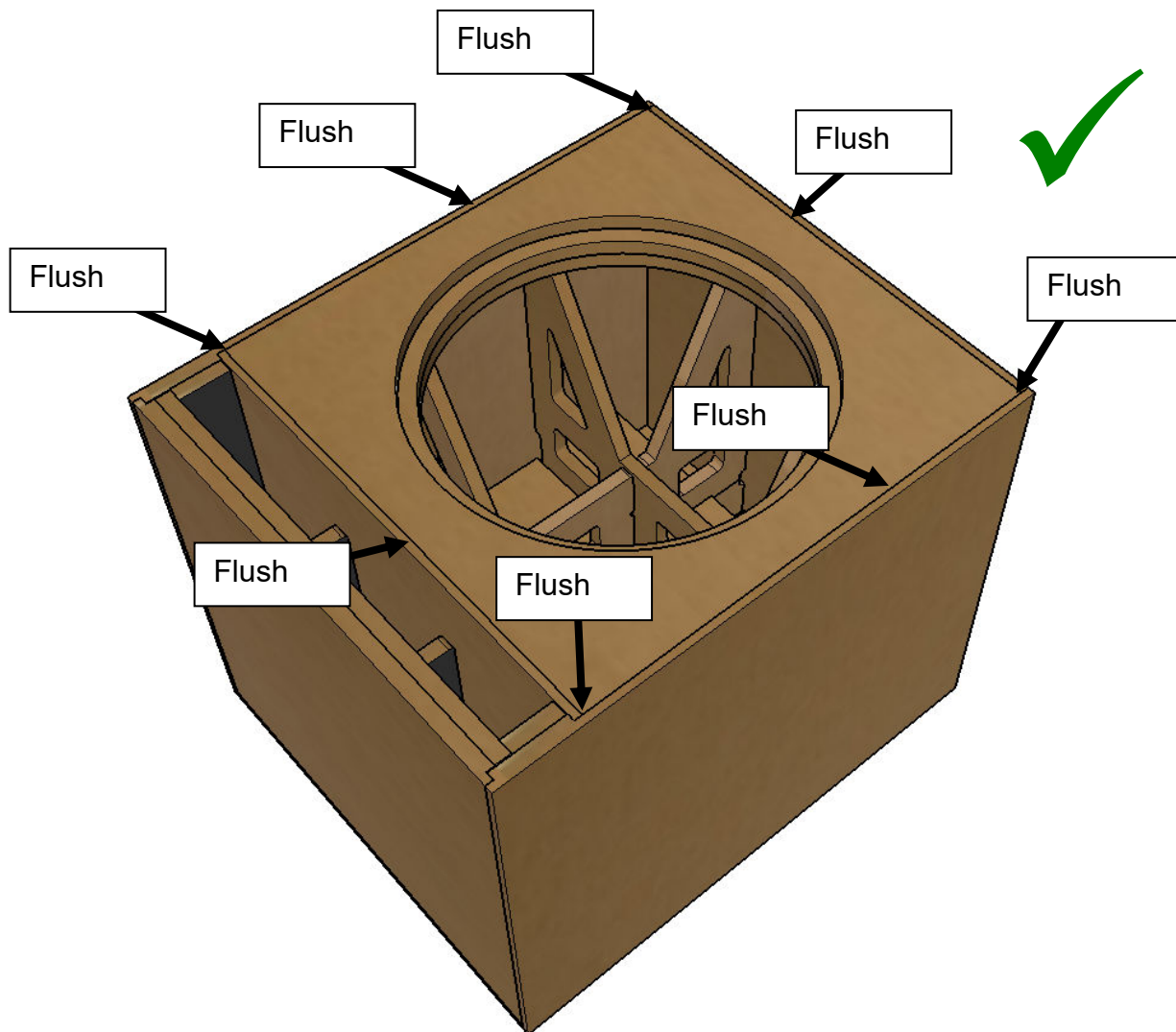
First, TEST FIT the baffle.

The arrows on Panel 12 are not visible from the front of the cabinet, but point toward the top of the cabinet. Dashed lines in the picture point “up”.



The baffle should be flush the whole way around.

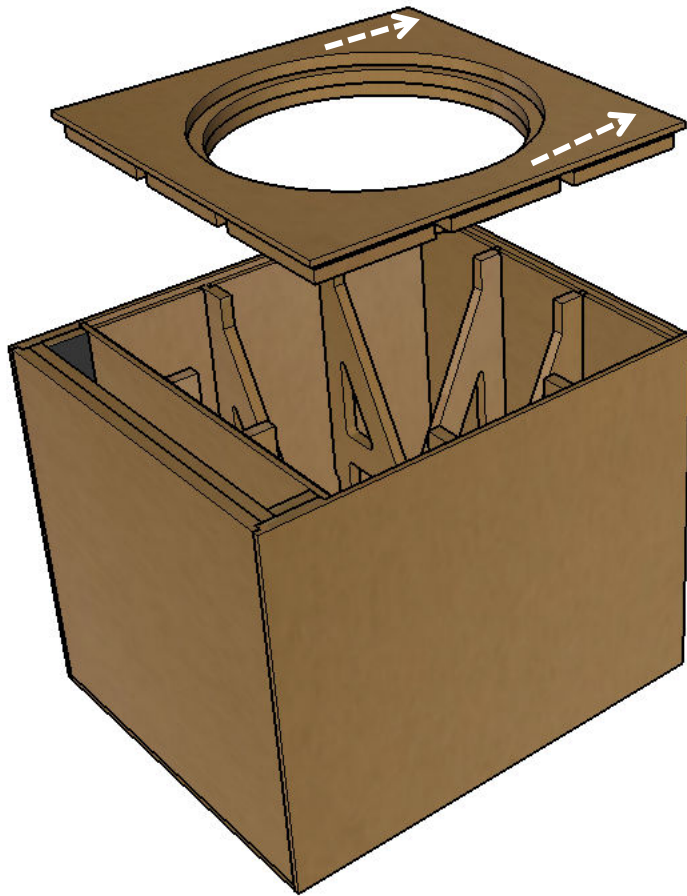
If it is not flush, you probably have a brace tip that is sticking up past the ledge and it must be sanded down to flush with the ledge. Pull your baffle and sand it down now (60-80 grit will grind it down fast). Do not glue on your baffle until you are sure that it fits flush!



Baffle glue up.

Only after ensuring that your baffle will mount flush, apply a generous amount of glue around the perimeter and on all the brace tips. Much better to go “heavy” than “light” for this step!!

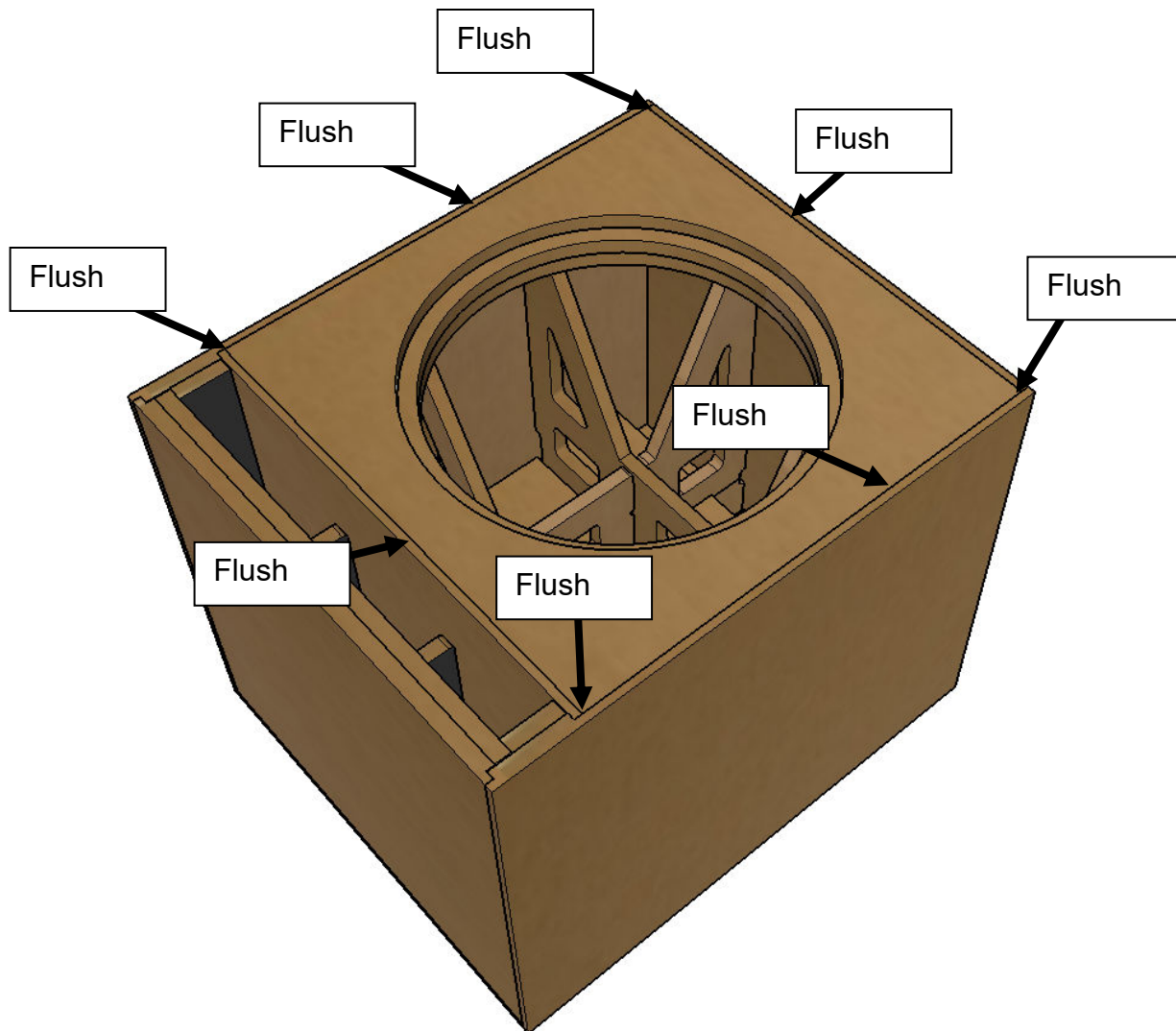
The arrows on Panel 12 are not visible from the front of the cabinet, but point toward the top of the cabinet. Dashed lines in the picture point “up”.



Drop in baffle assembly. It should be FLUSH the whole way around.

You may even wish to go back around the perimeter drizzling glue into the tiny gap before clamping it all up to dry.

Then, wipe off all the excess glue so the roundover baffle will sit nice and flush on the cabinet when it is attached later in the build process.



Rear Panel 11.

Apply generous glue to the LEDGE around the perimeter as well as to all four braces.

Insert the Rear Panel so that it touches the Top Panel, then lower it into place.

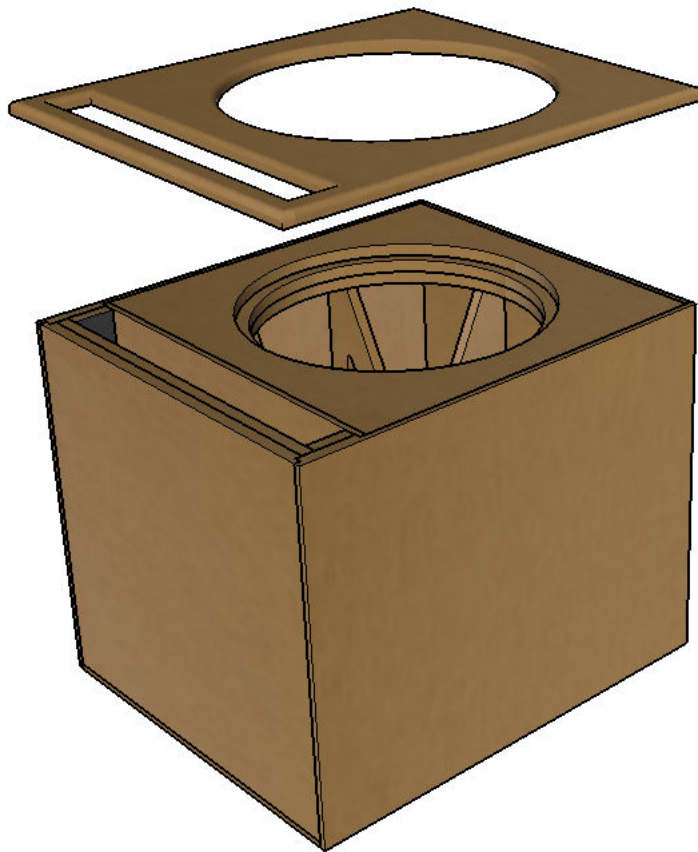


Clamp and allow to dry.

Test fit roundover baffle.

Ensure the roundover baffle will be flush. It may require some clamping or weight. If there are any glue blobs or imperfections that are causing the roundover baffle to not be flush, fix them now!!

You only get to glue the baffle on once!!

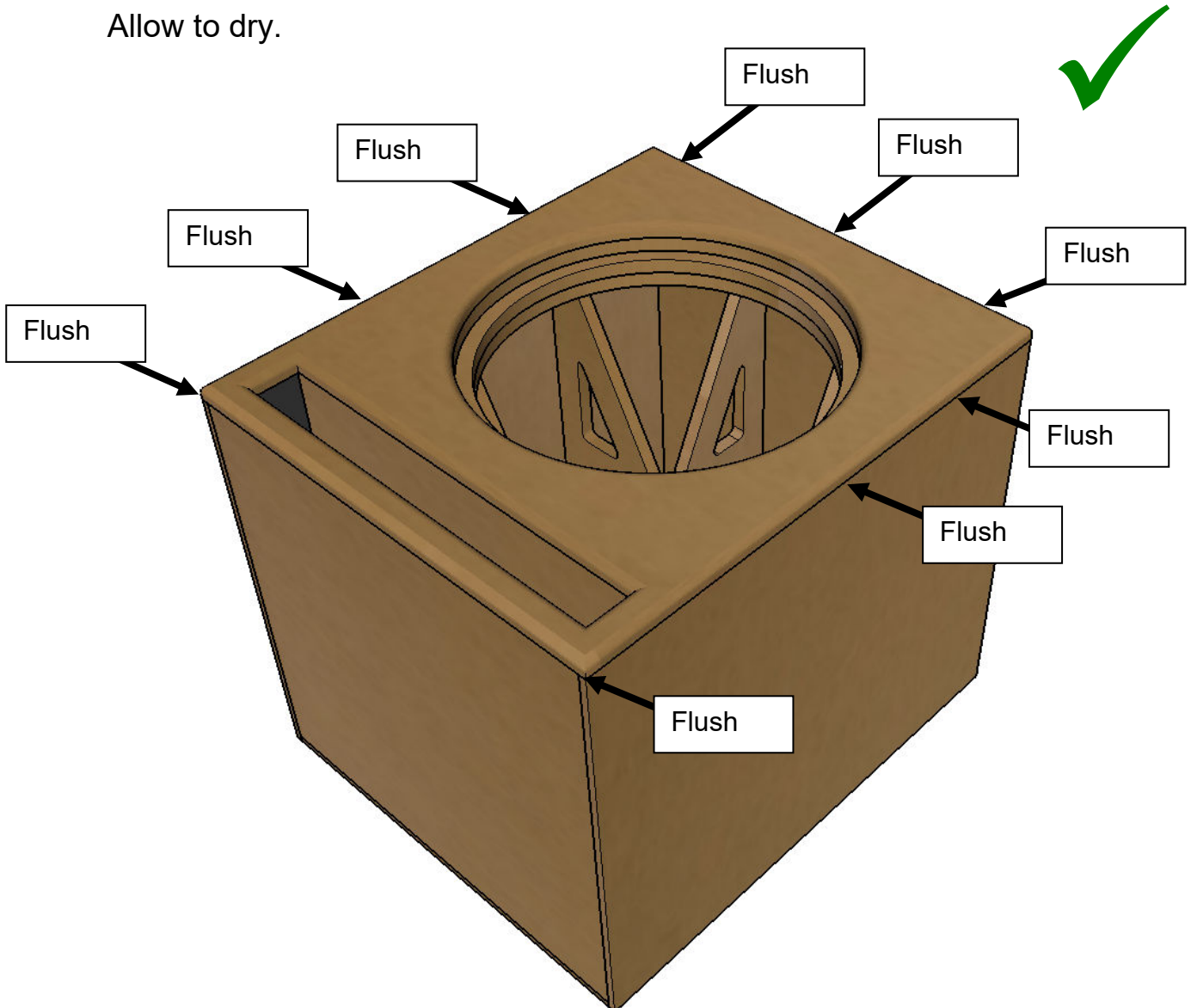


When you are absolutely sure the baffle will mount flush, apply generous glue to the baffle and the cabinet. Smooth the glue out for complete coverage.

Align all edges and corners of the roundover baffle.

Attach the roundover baffle, clamp, and **ensure that the baffle did not slide out of position during final clamping and adjustment.**

Allow to dry.



FINISHING

If you are shooting for a super smooth seamless look, you may wish to apply spackle around the perimeter of the baffle and along the two seams on the top of the cabinet prior to painting.

Best practice is to lay it on thick, wait for it to fully dry, then sand it down to be perfectly flush.

We recommend this one, which turns white when dry.

If using spackle, do not attempt to paint until it is fully dry or the paint may not adhere properly.

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Now it is time to begin applying the finish of your choice.

Recommendations for primer and paint are included in the Shopping List (Builder's Guide). **IF YOU ARE RELATIVELY NEW TO FINISHING, WE STRONGLY RECOMMEND USING THE PRIMER AND PAINT RECOMMENDED IN THE SHOPPING CHECKLIST.**

If going with the paint option, use a brush to go over all the corners and seams, around the driver cutout, and along the dadoes on the bottom panel, then use the recommended roller for achieving a smooth finish on the panels. Start with the Primer coat, then proceed to apply 2-3 coats of paint. (Two coats should be sufficient, but sometimes a third can help if full coverage was not achieved with the second coat).

For the more adventurous, veneer can give amazing results!

Once your finish has dried, then proceed to the final steps.

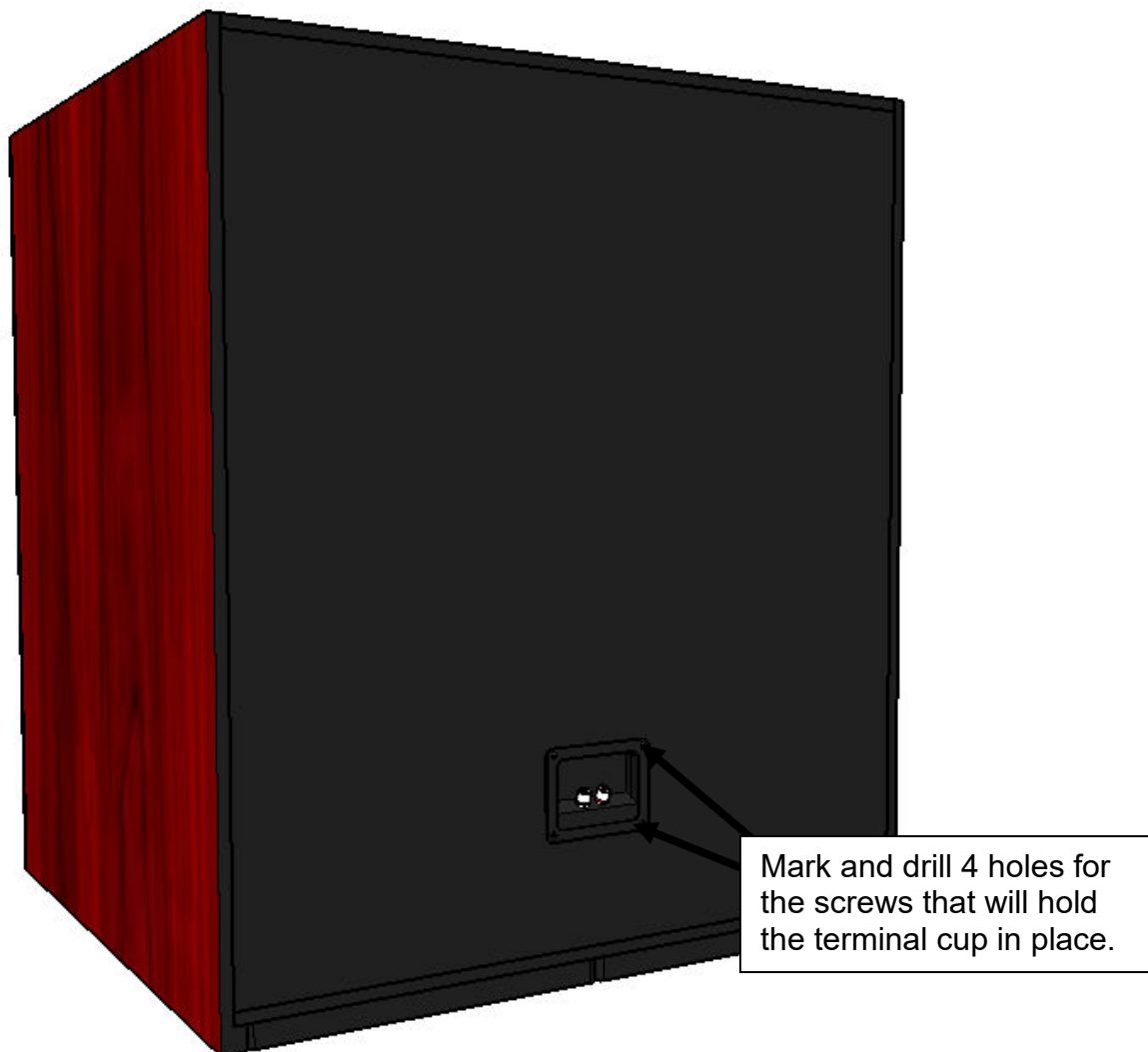
FINAL STEPS

ATTACH TERMINAL CUP:

Attach 4 feet of speaker wire to your terminal cup. Thread the wire into the subwoofer, up over the port and then pull it toward the front of the cabinet. This wire will be used to connect to the driver.

On the back of the cabinet, insert the terminal cup into the cutout. Mark the locations of the screw holes on the cabinet. Remove the terminal cup. Using the 7/64" drill bit, carefully drill holes for the screws. Place the terminal cup back in the cutout, insert the screws, and gently tighten them down. The terminal cup is plastic so be careful not to damage it by going too tight with the screws.

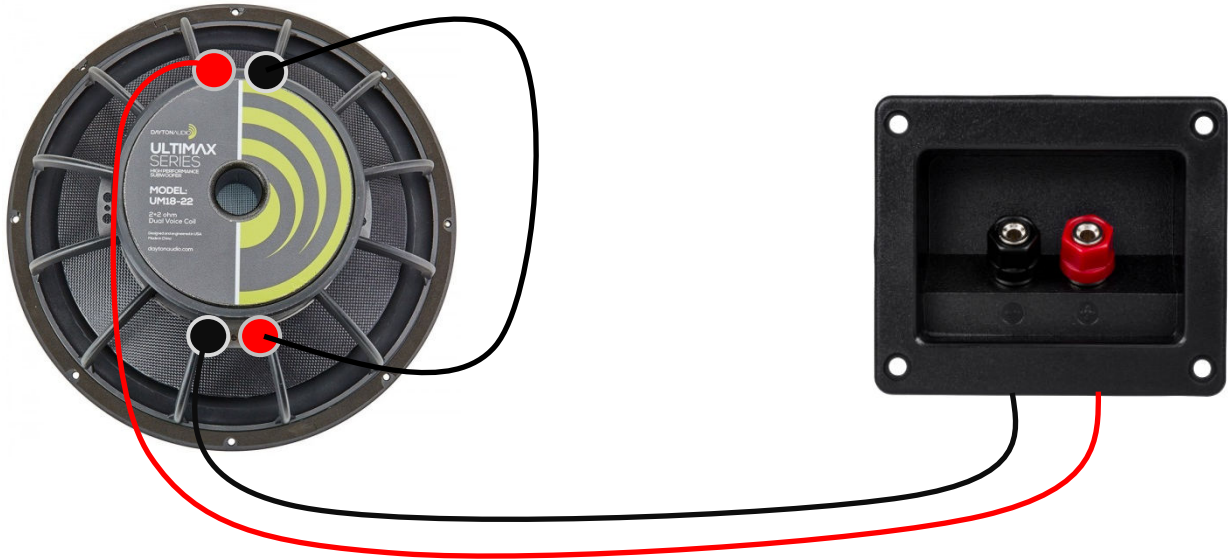
Rear view of cabinet with terminal cup inserted.



MOUNT THE DRIVER

Attach the speaker wire in your cabinet to the driver, following the convention of red(+) to positive and black(-) to negative.

If using the UM-18, it is a “dual voice coil” subwoofer, so wiring the coils in series will provide 4 ohms.

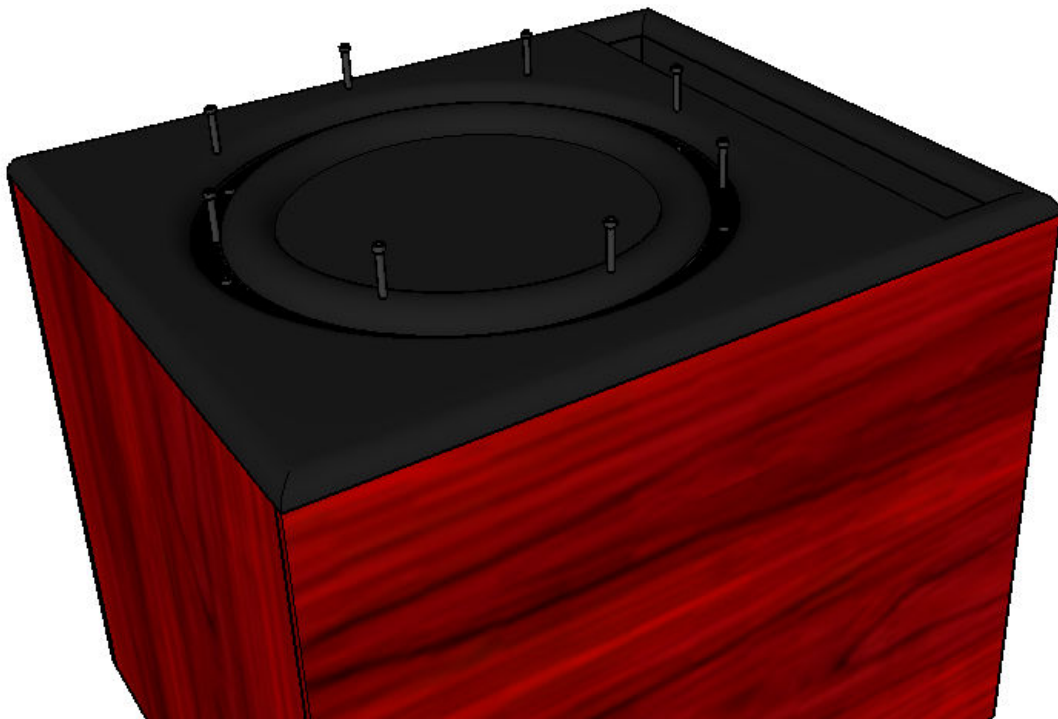


If using the 460HO, it is a “single voice coil”, so simply connect the black-to-black and red-to-red on the terminal cup.



Attach the gasket tape to the back of the rim of your driver (if you are having trouble with the gasket tape adhering to the driver, it's okay to attach it directly to the driver recess on the cabinet). The gasket that comes on the UM18 is sufficient and doesn't require additional gasket tape.

Lower your driver into position, ensuring that your screw holes are lined up the way that you would like. Try to get it lined up before you "drop it in" as it may be difficult to rotate the driver once it is in the recess.



Using the 7/64" drill bit, drill the 8 driver mounting holes. The supplementary driver mounting ring provides two layers of MDF for the screws to attach to. This provides maximum holding power and minimizes the chances of stripping even one screw.

Insert the screws and tighten them down USING A SCREWDRIVER.

The screws should be snug, but not overly tight. MDF may be stripped if using a power drill. This is unlikely in two layers of MDF with the recommended screws and pilot holes (we actually tried and couldn't do it!). But still, be cautious when inserting the driver mounting screws.

If you have rubber (or metal) feet and want to use them, attach them now. The new footer provides two layers of MDF for mounting decorative feet should you wish to really spruce up your new subwoofer.

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Note: Be sure to see the FAQ on our website to get your amplifier
settings before firing up your new sub. Enjoy!

