



Devastator 15 MkII by GSG™

**"G-Series"**

**Assembly Instructions**

Skill Level: Intermediate

**WARNING: THE DEVASTATOR IS CAPABLE OF PRODUCING EXTREME LEVELS OF OUTPUT WITH VERY LOW DISTORTION. AS A RESULT, THIS SUBWOOFER IN PARTICULAR (AND ALL SUBWOOFERS GENERALLY) CAN CAUSE PERMANENT HEARING DAMAGE. BE CAREFUL!**

Take this warning seriously guys and guard your hearing diligently.

Thank you and congratulations on your GSG™ purchase. We've tried to make your enclosure as easy to assemble as possible.

This subwoofer is an “intermediate skill level” project. This means that you are expected to have some knowledge working with clamps (and/or a brad nailer), aligning and squaring panels, etc. It is not a complicated build, but if you have never built anything before, this may not be the best project for your first attempt.

Intermediate build directions include mostly just pictures. Each page highlights the panel(s) that will be added to the existing structure at the top of the page and how the unit should look after the panel(s) are added at the bottom of the page.

Panel numbers are included on some panels to help aid in assembly, but the Panel numbers do not indicate the order of assembly.

### Cabinet Orientation During Your Build

As a builder with some skill, it is up to you to choose how to orientate the cabinet at each step of the build. The images are only guidelines. Depending on whether you are using brad nails, clamps, weight, or some combination of all three, you may find that positioning the cabinet in an orientation that is different from the image on the page will make for an easier and/or better fitment. Use your judgment and do what works best for you.

**IF SOMETHING IS NOT CLEAR ABOUT THE ASSEMBLY PROCESS, PLEASE SEND A NOTE TO US AT CUSTOMERCARE@GSGAD.COM BEFORE PROCEEDING.**

**ONCE YOUR PANELS ARE GLUED IN PLACE THEY WILL BE ALMOST IMPOSSIBLE TO ADJUST.**

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

## 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 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 dadoes.

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. Be careful handling the panels, as the edges along the panels can be quite sharp.

## TEAM:

Many GSG subs 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 GSG subs.

DRY FIT:

DRY FIT EACH PIECE BEFORE GLUING IT UP SO THAT YOU WILL KNOW HOW IT GOES TOGETHER.

This will help familiarize you with how it goes together, so you can move quickly once you start applying glue.

GLUE UP:

Titebond III wood glue is recommended for this project. It has the longest “working time” of the Titebond series. PL Premium construction adhesive can also be used and it can fill in any gaps that have resulted, for whatever reason, during your build. With PL, be sure to wear gloves and don’t get it on you or your clothes.

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.

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

If using PL and it squeezes out on the outside of the cabinet, don’t try to wipe it off as this just makes a mess. Let the bead line cure, then come back with a razor blade or chisel and remove the excess.

Ensure that panels are fully seated in dados throughout the build. If the panels are not fully seated, the cabinet will not go together properly.

Note: If you wish to use the Speakon adapter, it is easiest to install it first. Be sure allow the glue to dry (about 2-3 hours) before proceeding with the rest of your build.

To help ensure that everything goes together nice and square (all lined up), we recommend checking your work at each stage with a builder's square.

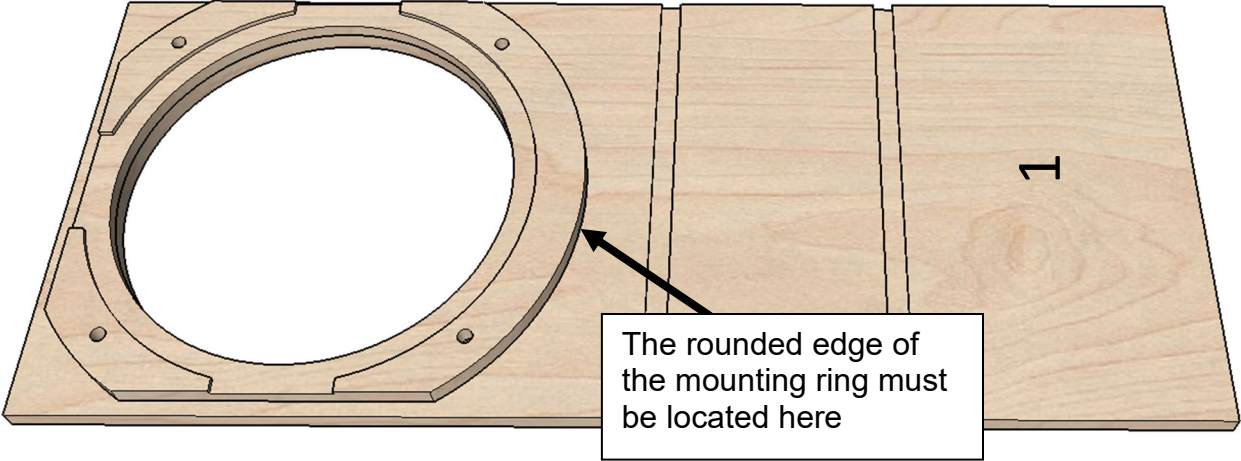
Humidity: It is best not to let your panels sit in a humid environment for an extended period of time as they may begin to swell and will be very tight going into the dados.

Take your time building your subwoofer and enjoy the process!

**Please read through the entire assembly instructions BEFORE building.**

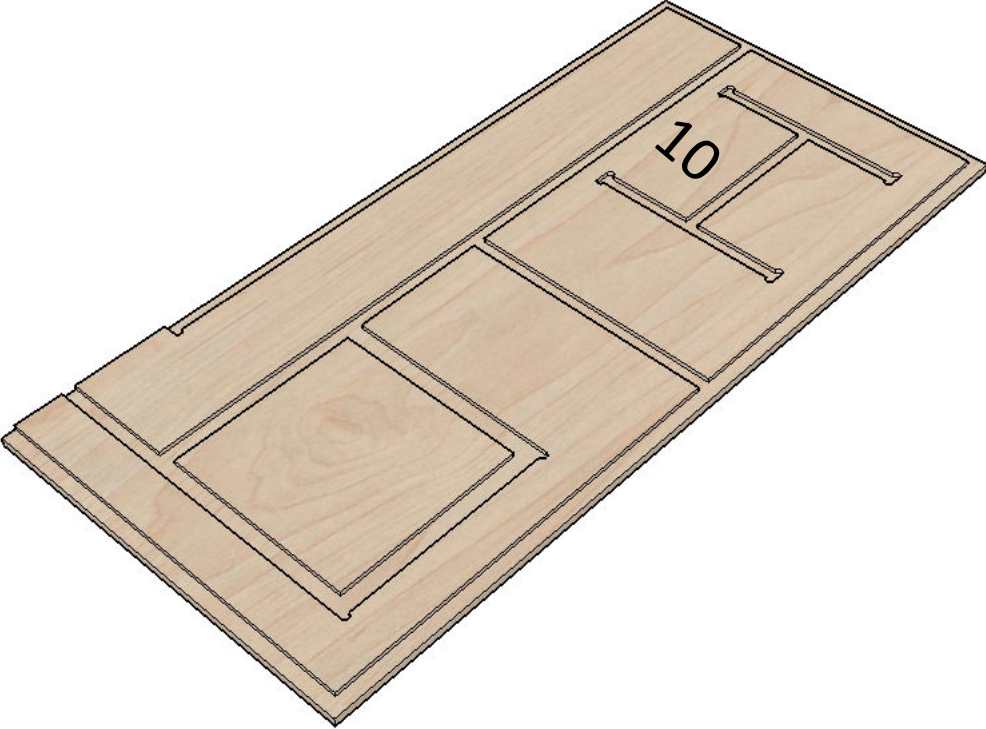
Step 1A: MDF version only. Attach the driver mounting ring.

Using 4 x 1/2" dowels, attach the driver mounting ring. Be sure to get the orientation correct.



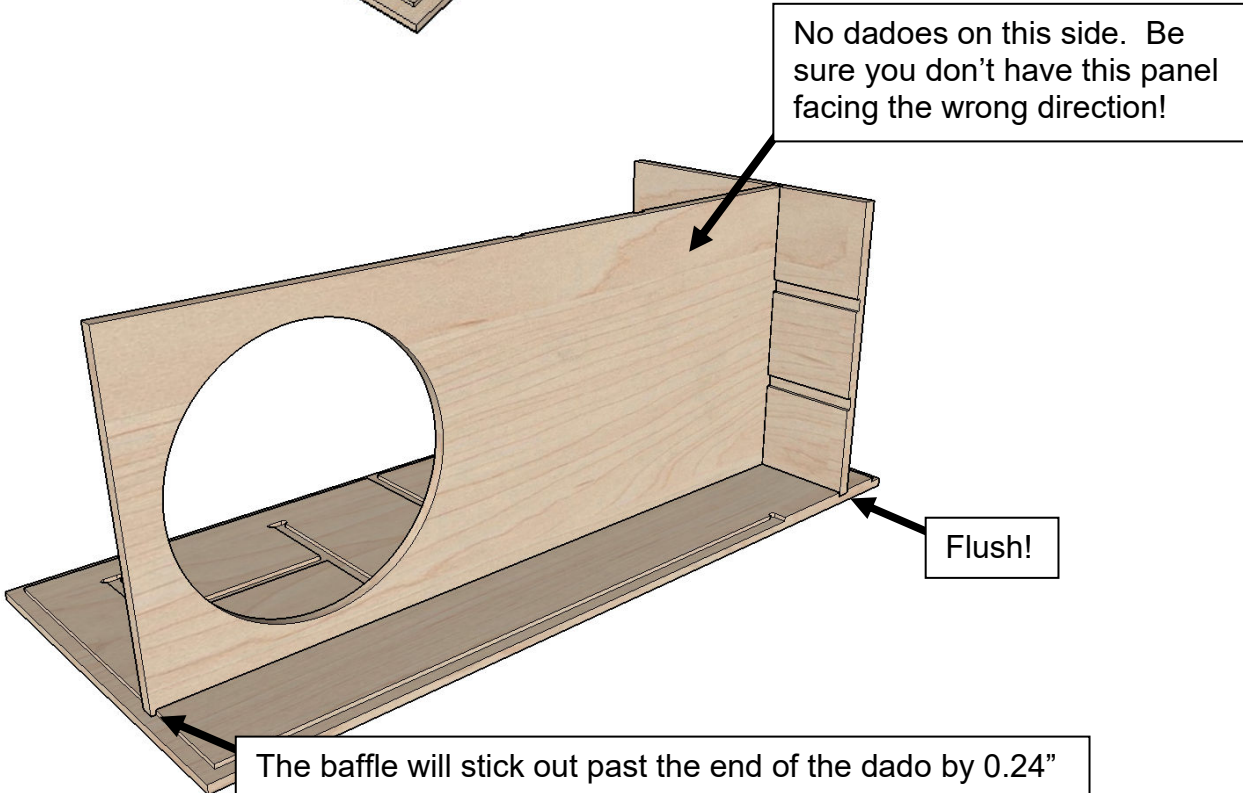
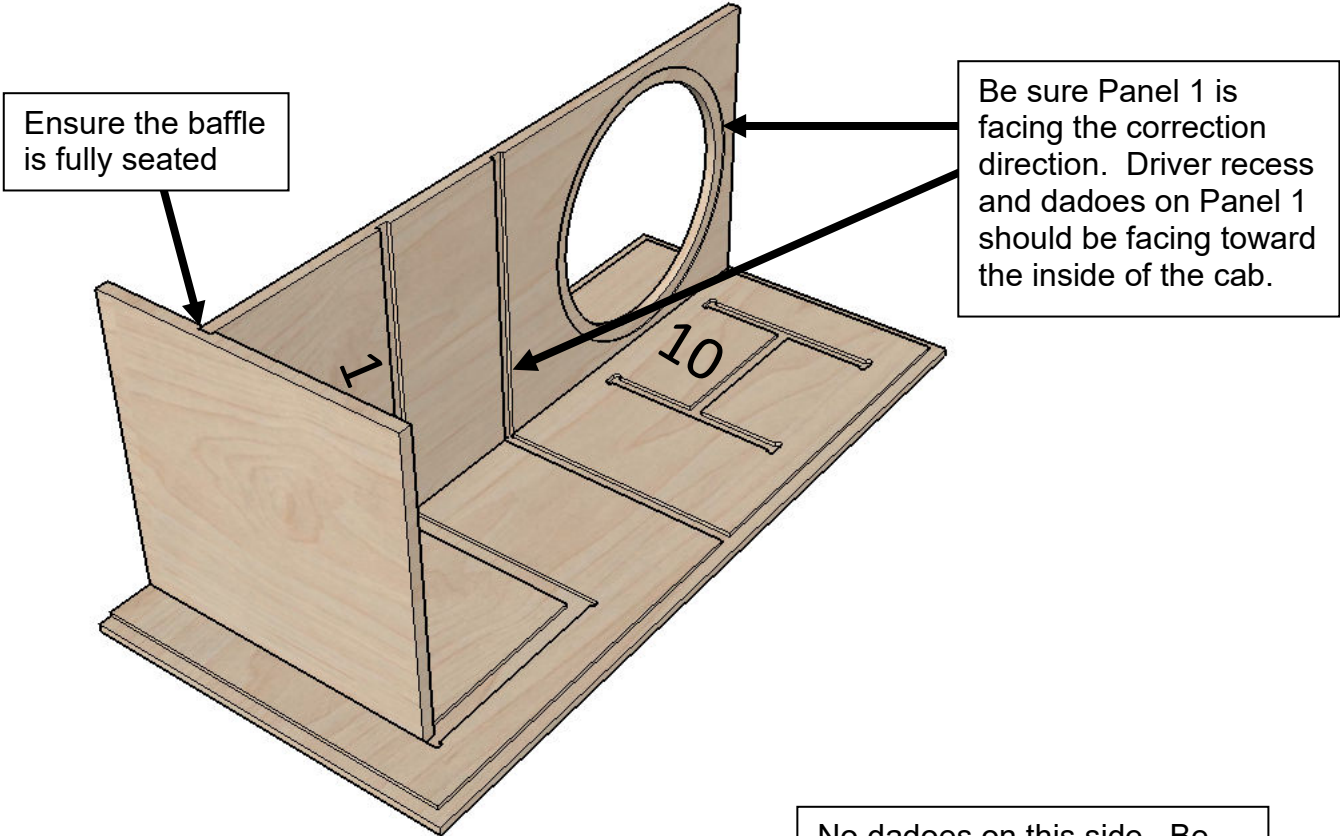
Step 1: Panels 10, 1, 2, 3, and the small mid-brace

Place the right side, Panel 10, on the work surface.



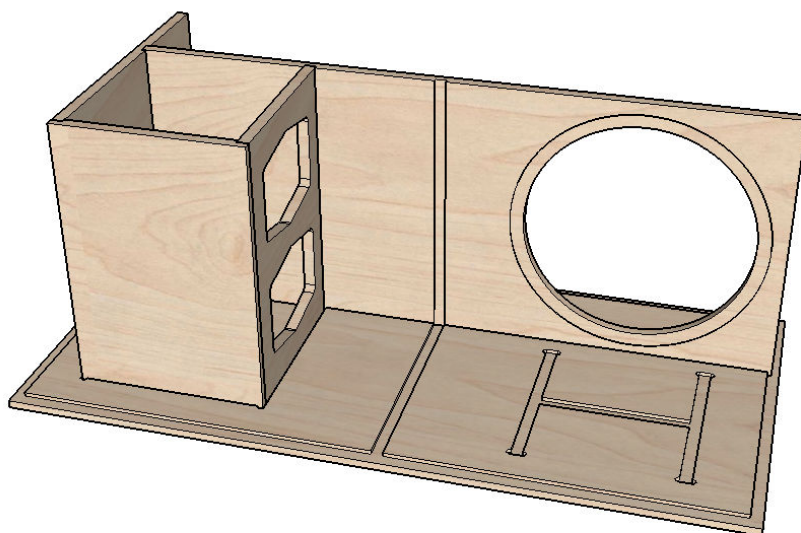
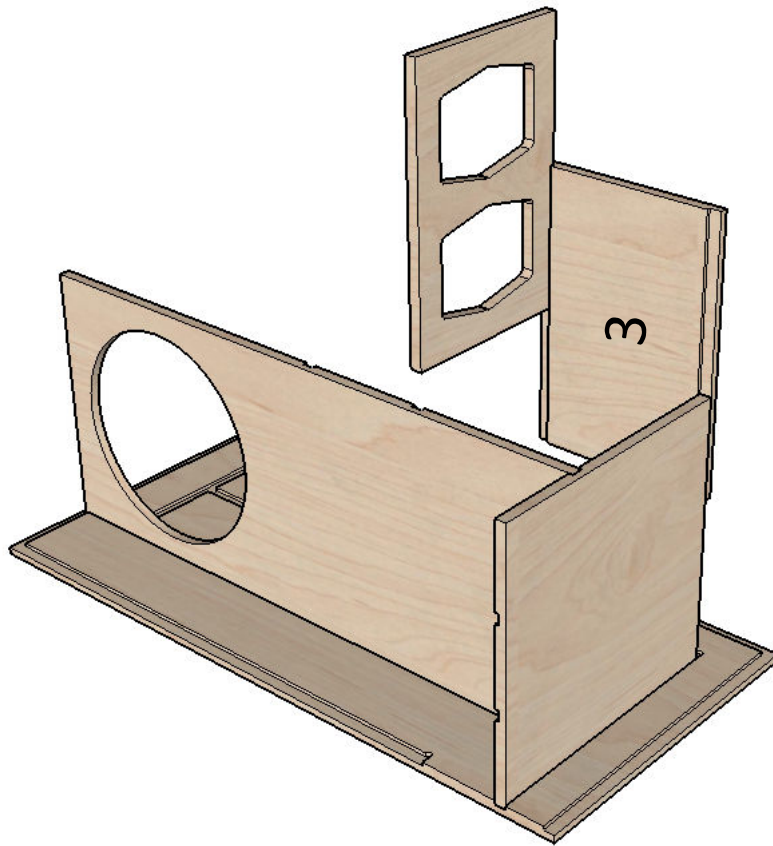


Attach the baffle, Panel 1, and the upper port board, Panel 2, to the side panel.



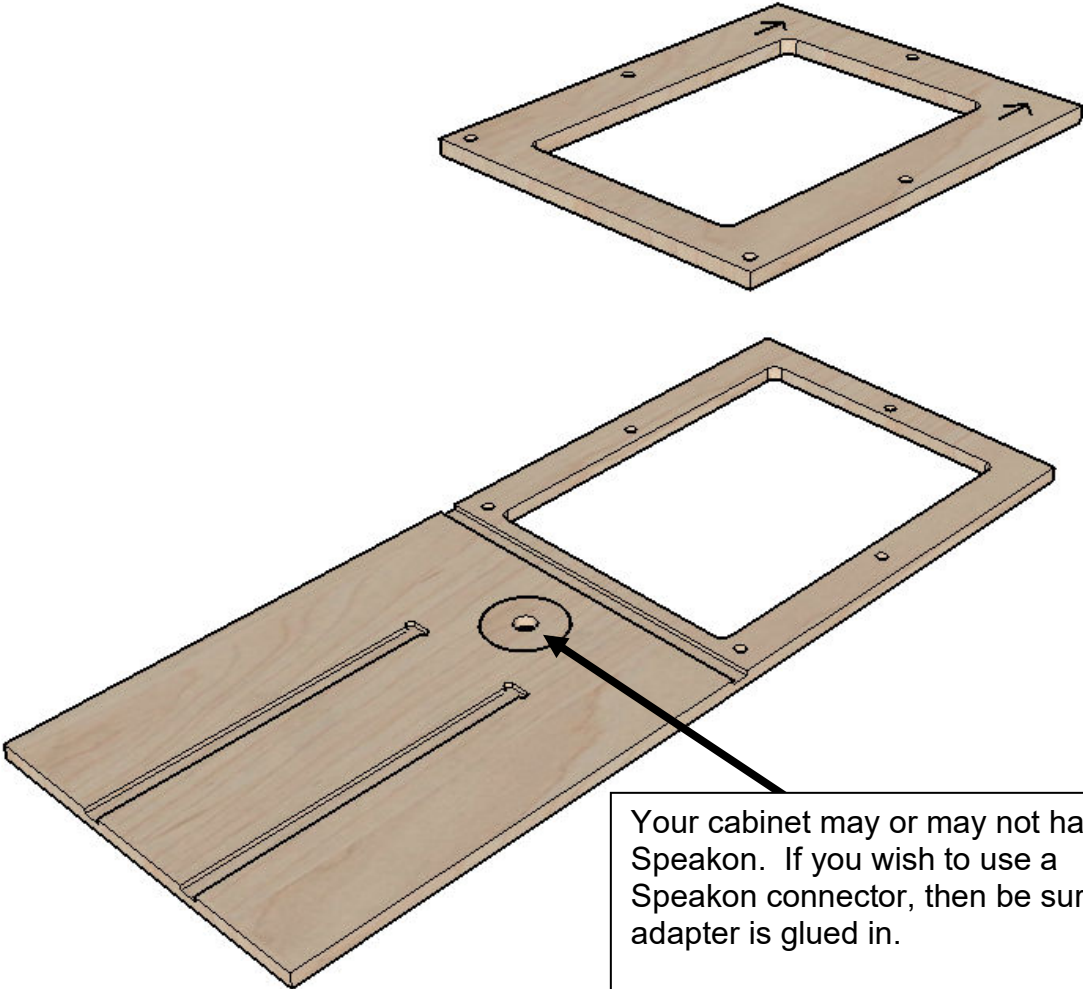
Attach Panel 3 and the small mid-brace.

There is excess space in some of the dados so when the second side goes on it won't get hung up. Only panel 1 and 2 align the side. The port board, Panel 3, and the mid-brace will be "floating" in the dados.



Rear Panel Assembly.

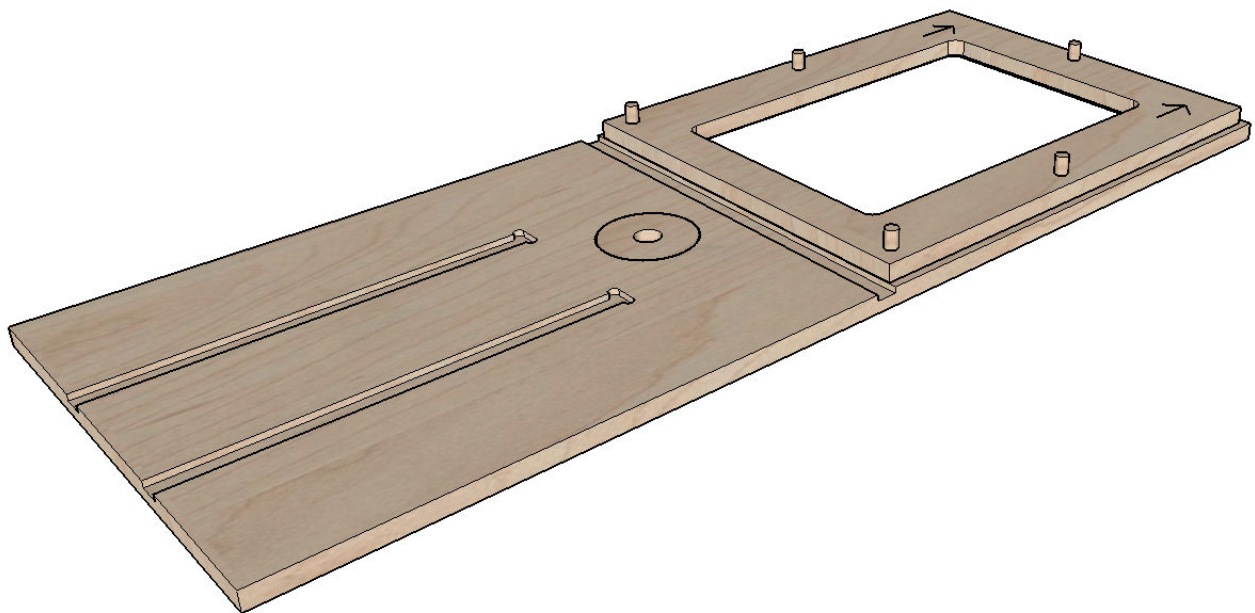
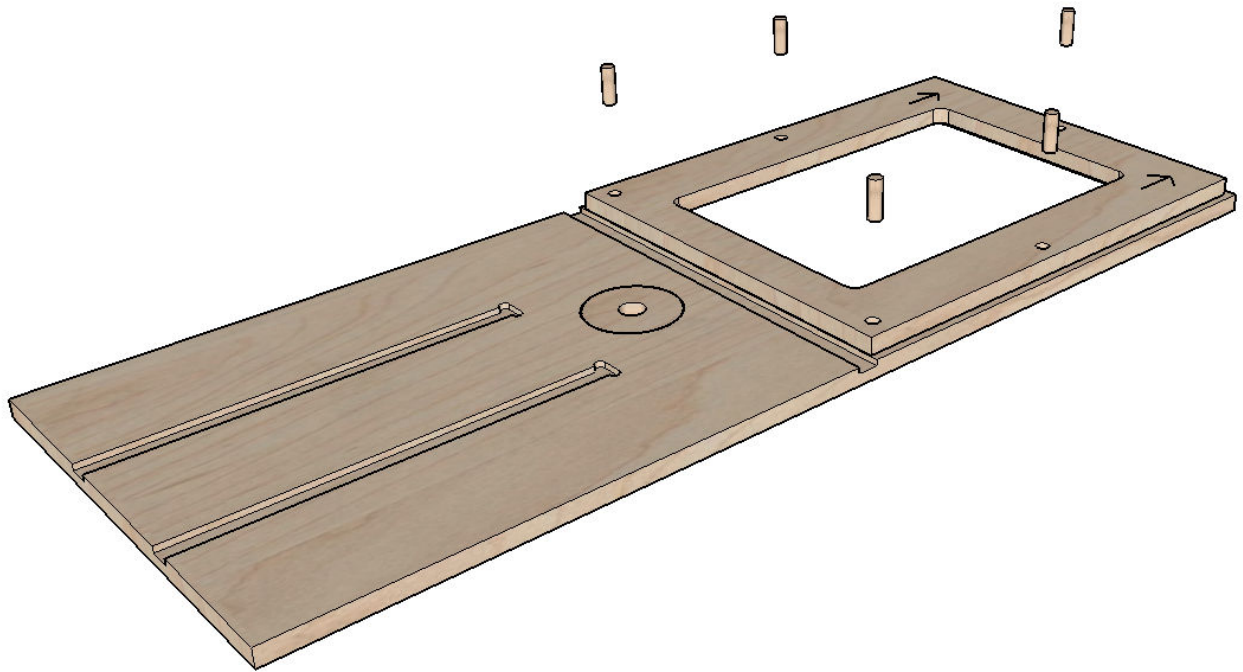
Align the rear panel as shown and the rear panel access hatch mounting brace. There are five holes in the brace that match the five holes in the rear panel.



Your cabinet may or may not have the Speakon. If you wish to use a Speakon connector, then be sure the adapter is glued in.

If you wish to use a terminal cup, then leave the adapter out.

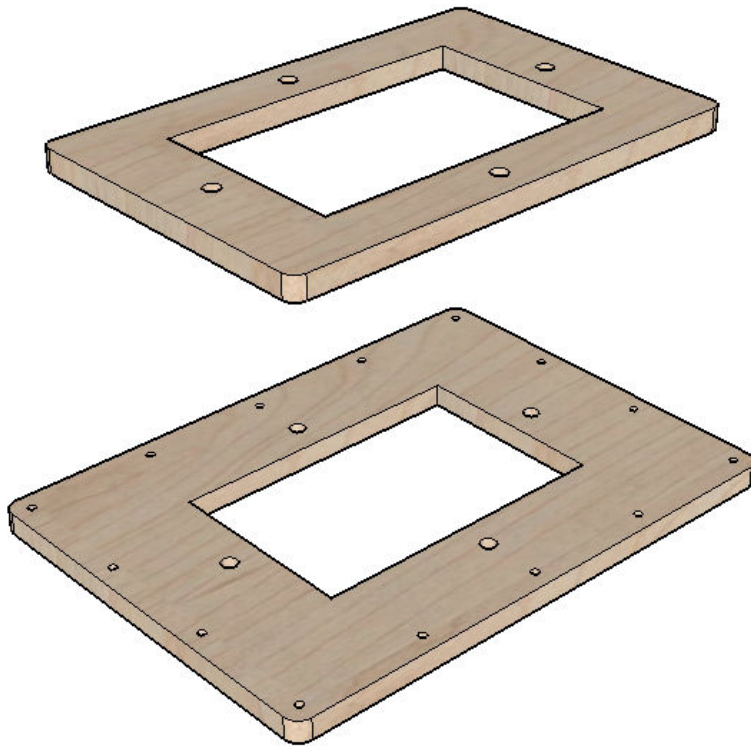
Attach brace and dowel pins.

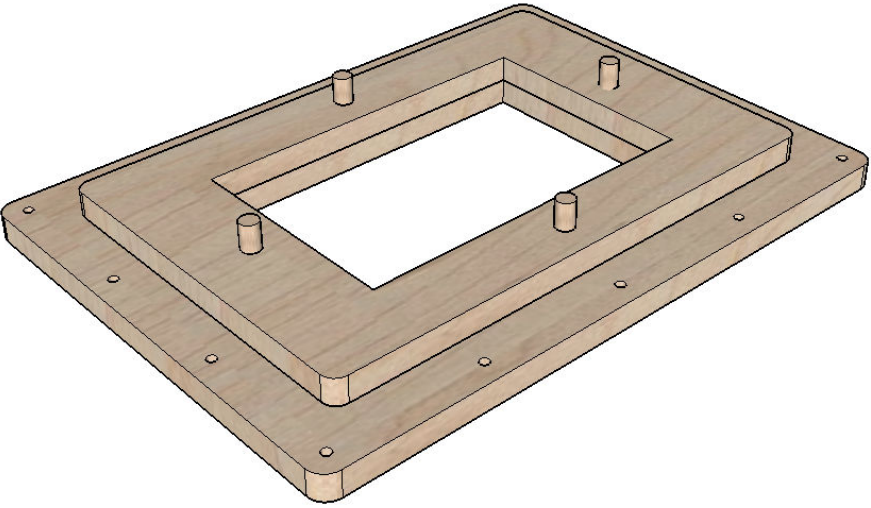
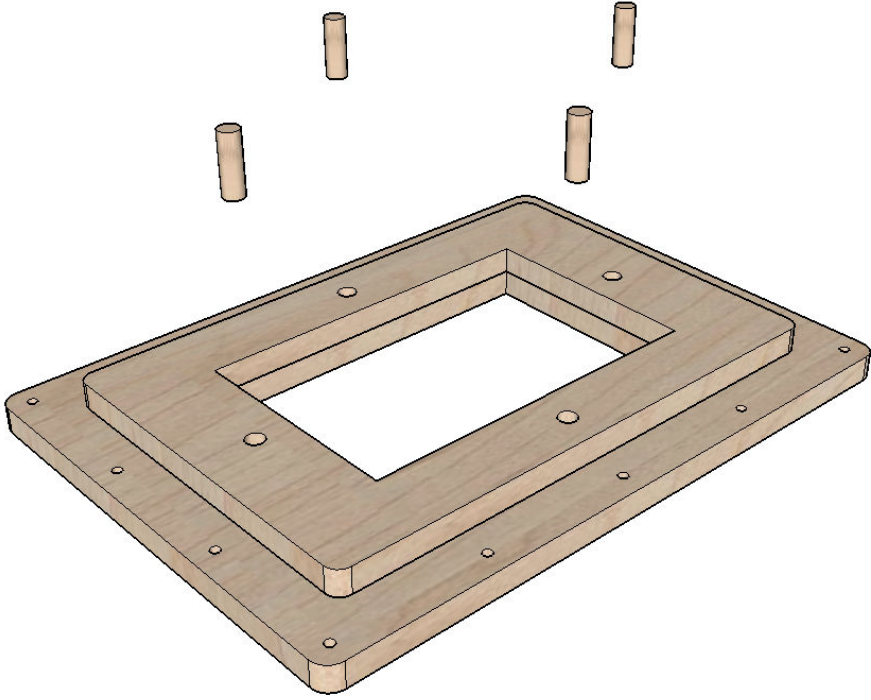


## THIS SECTION FOR BUILDERS USING A PLATE AMPLIFIER

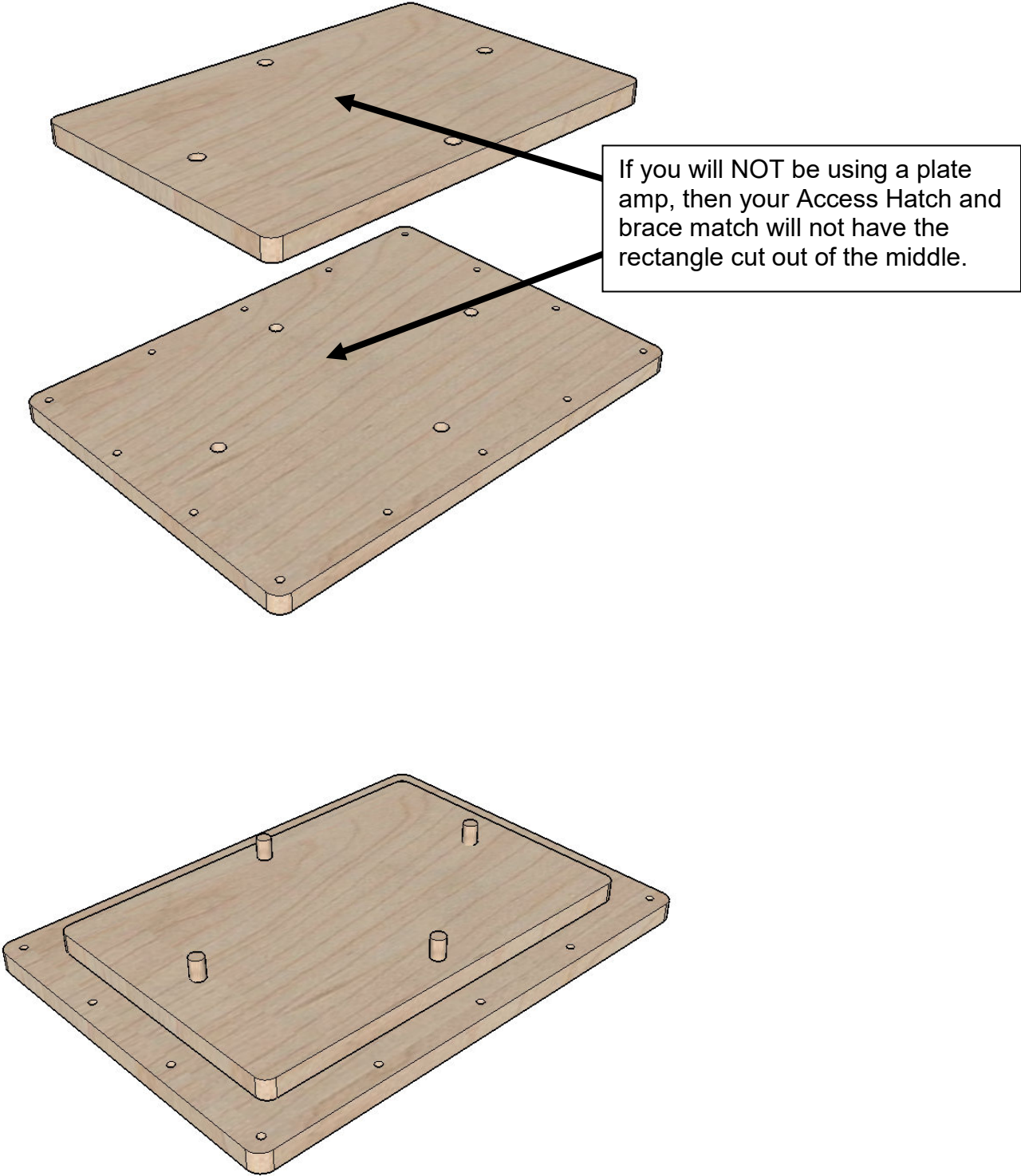
Access hatch and plate amp mounting assembly.

The brace being attached to the access hatch is symmetrical, so it doesn't matter which way it is aligned.

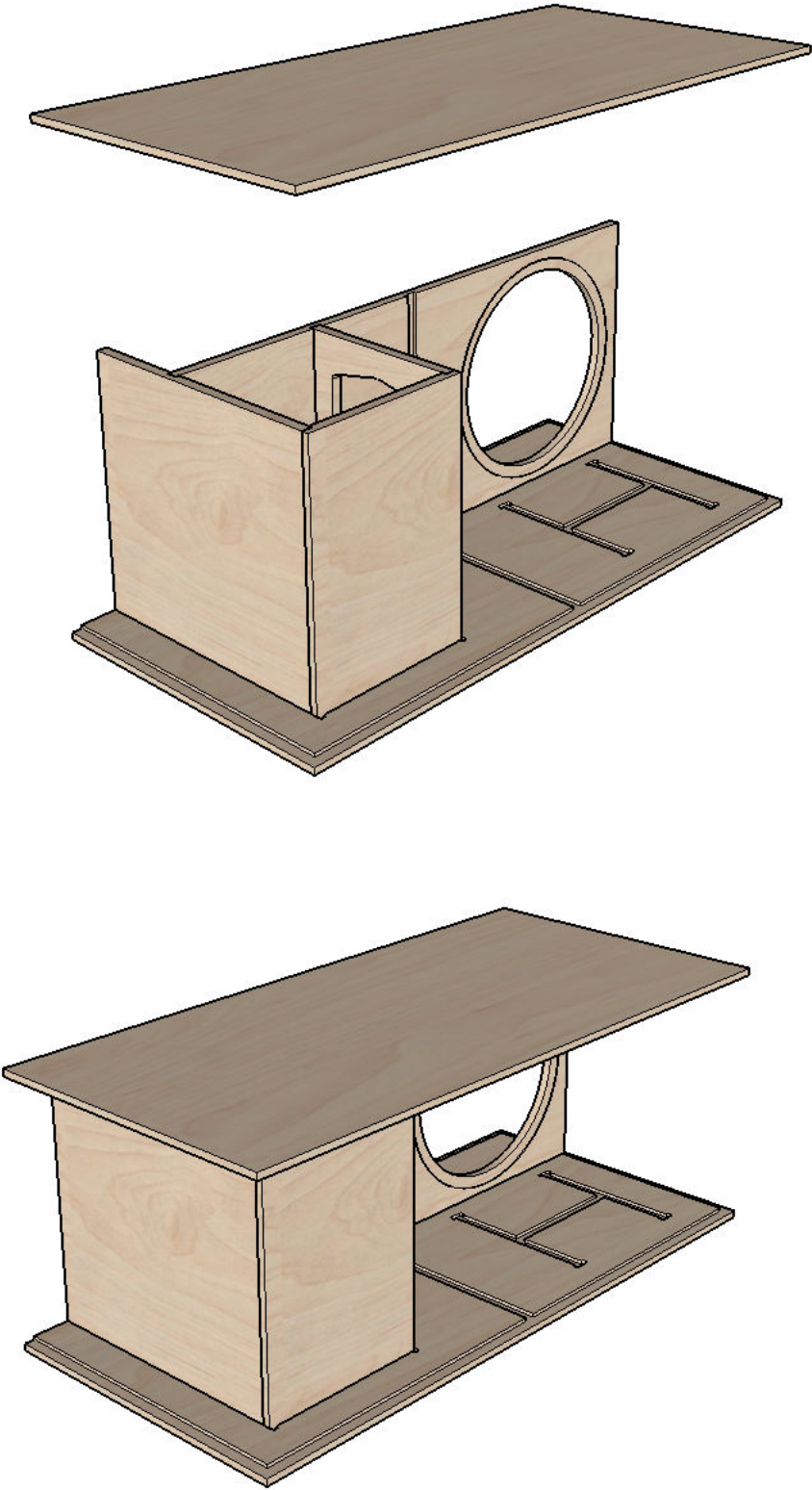




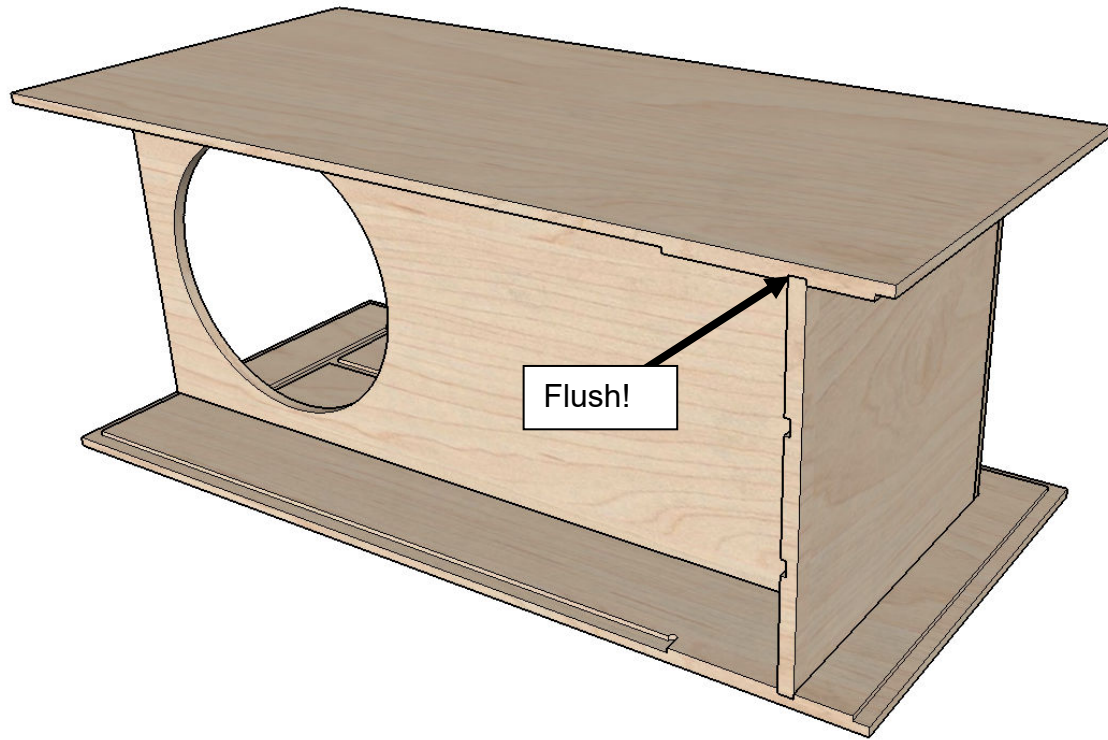
THIS SECTION FOR BUILDERS NOT USING A PLATE AMPLIFIER



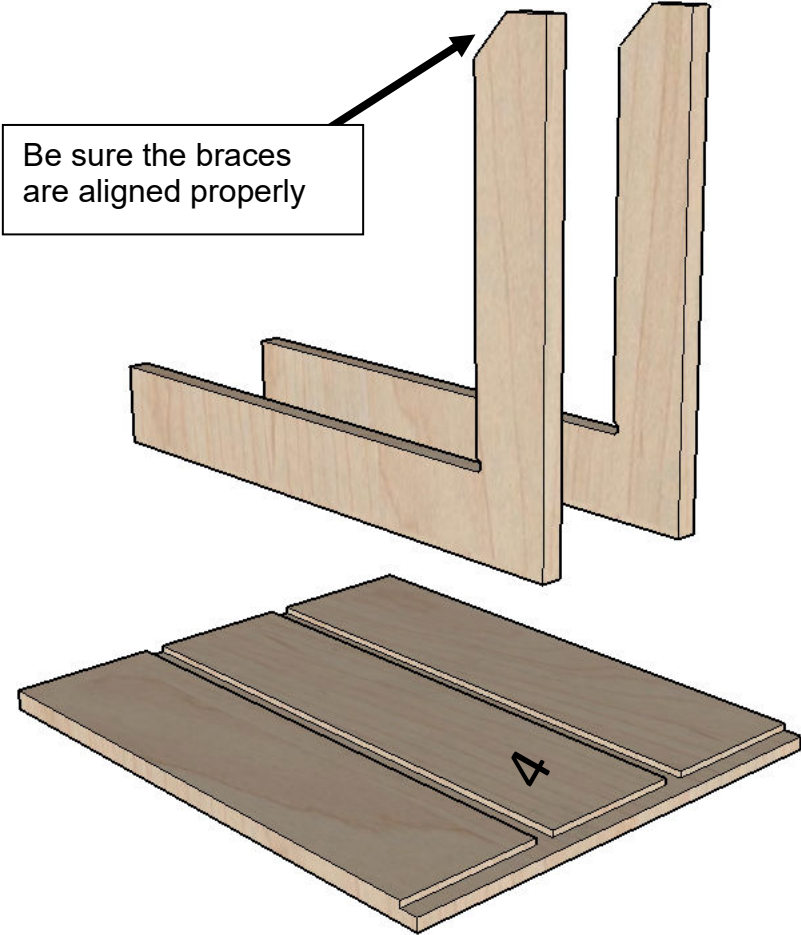
Step 2: Right side, Panel 11.

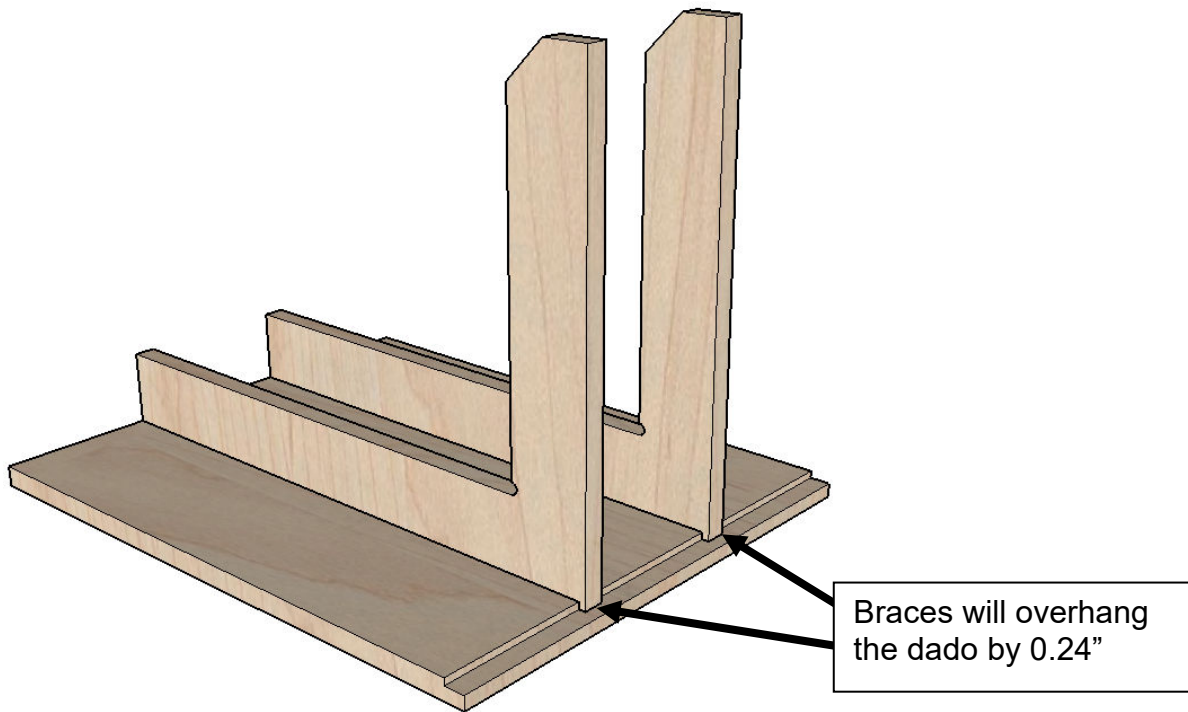
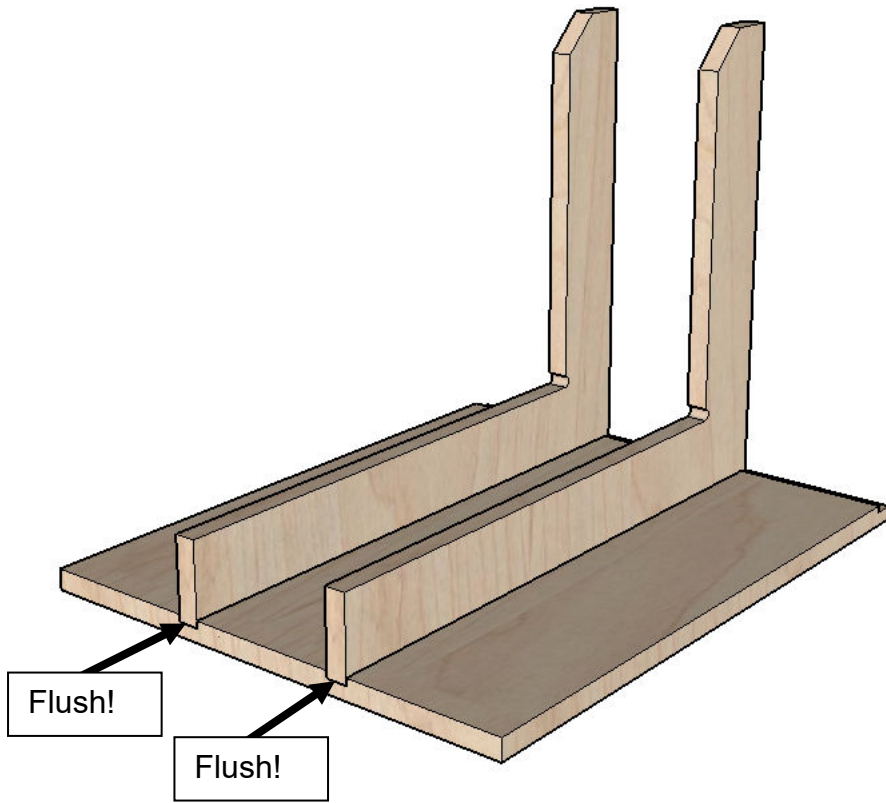




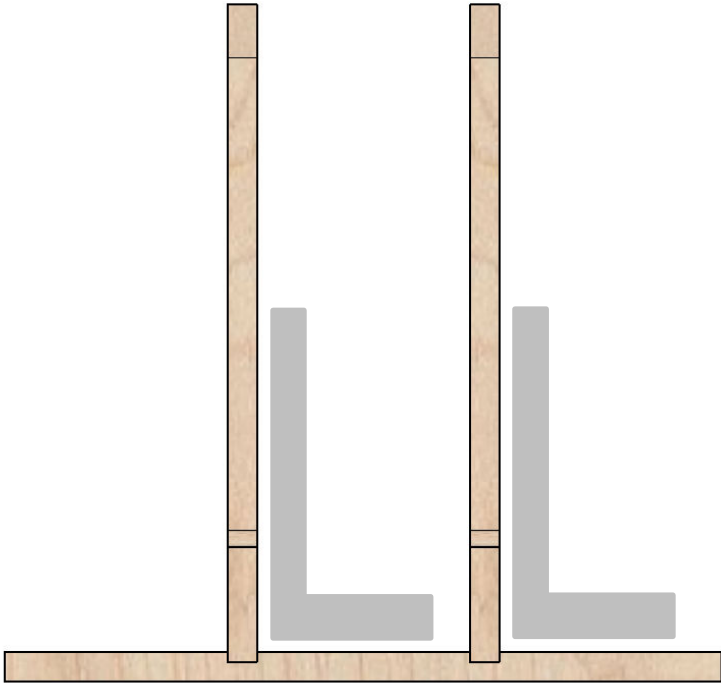


Step 3: Attach braces to bottom panel, Panel 4.



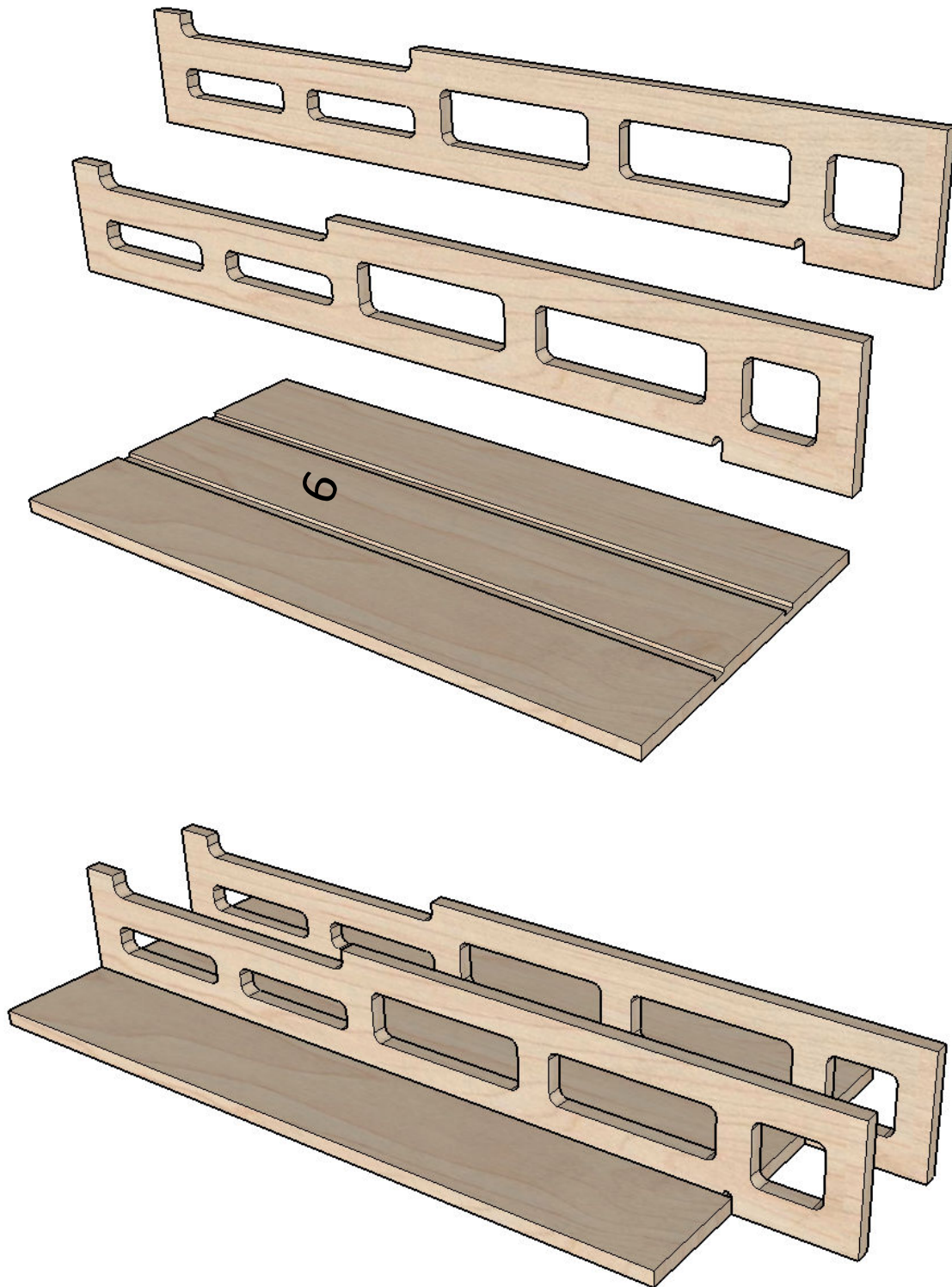


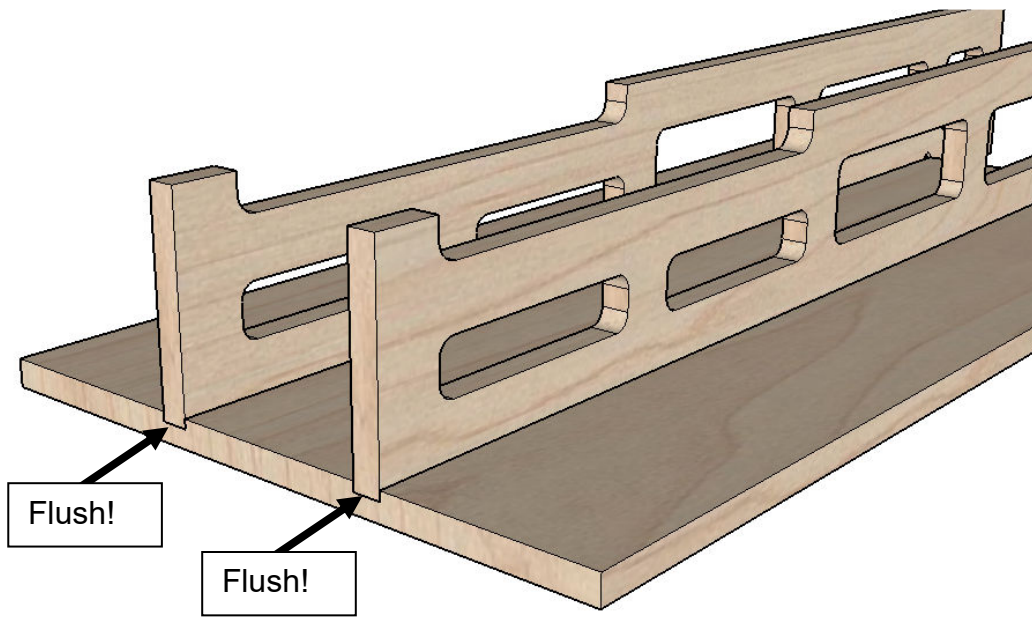
Be sure the braces are at right angles to the bottom panel.



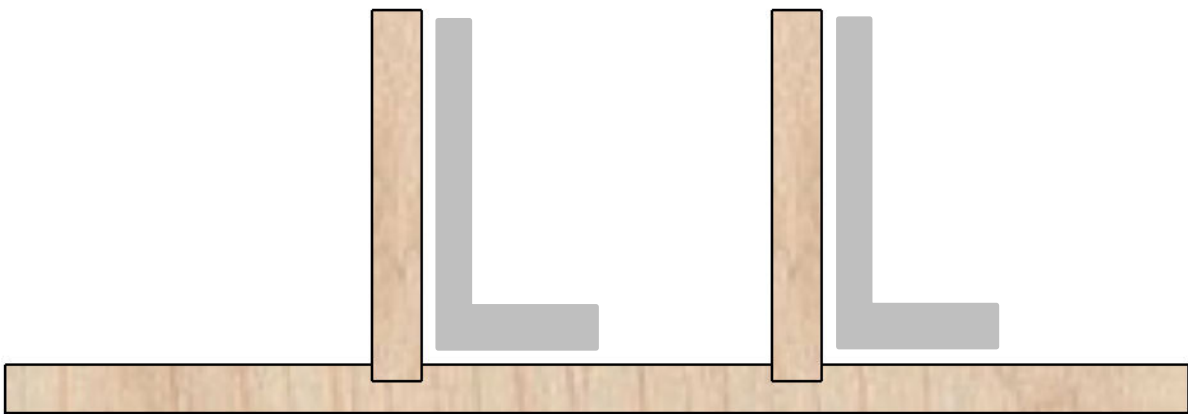
Allow glue to dry.

Attach braces to front panel, Panel 6





Be sure the braces are at right angles to Panel 6.

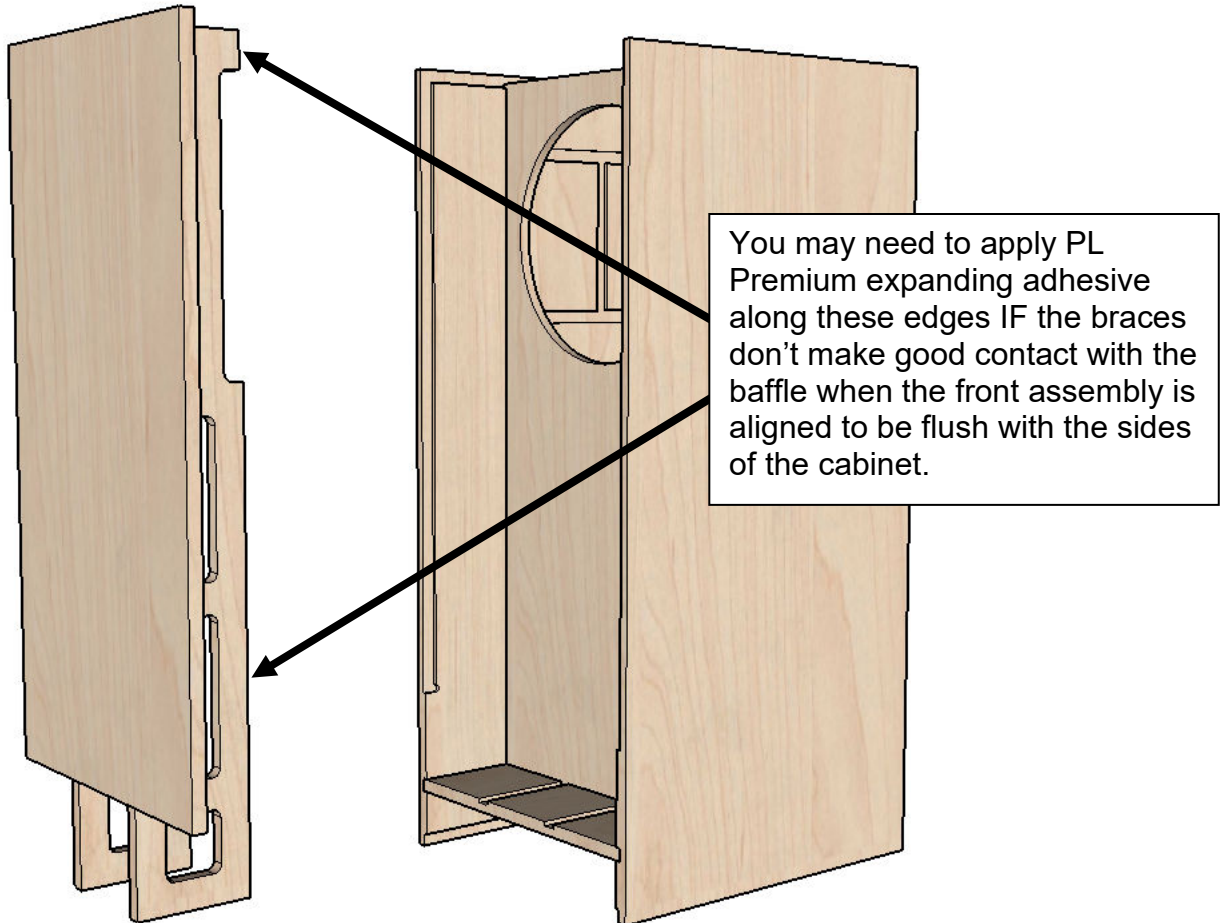


Allow glue to dry.

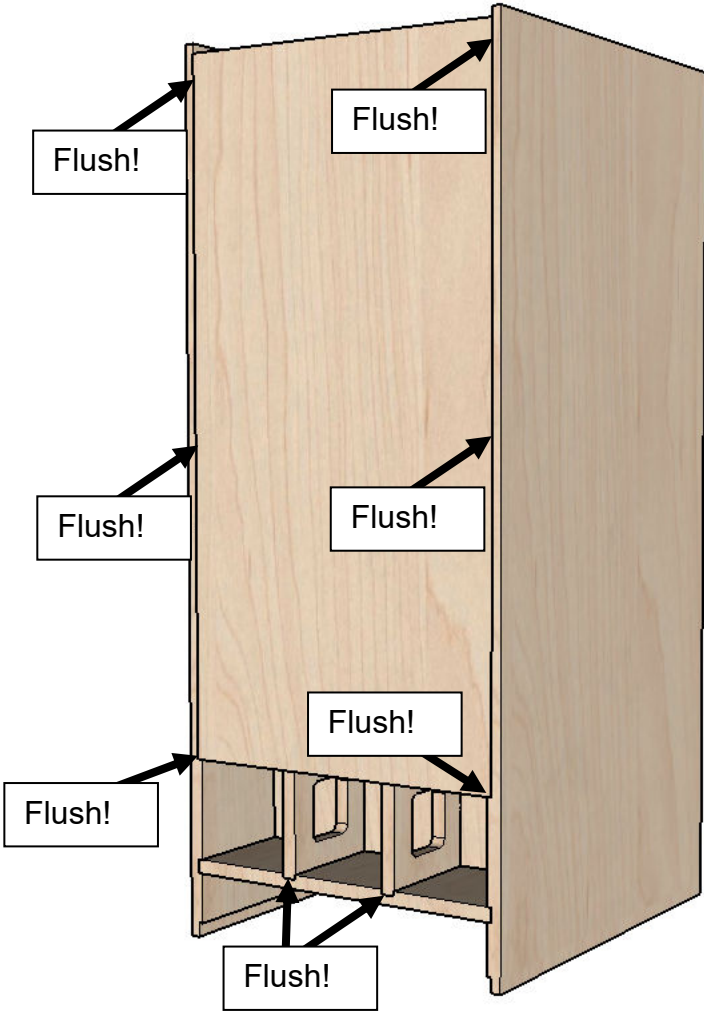
Step 4: Front assembly.

Prior to gluing it up, dry fit the front assembly. If there is any gap between the braces and the baffle (Panel 1) when the front assembly is flush with the front of the cabinet, you may wish to use PL Premium on the braces to bridge any minor gap between the braces and the baffle.

A gap can occur because the baffle (Panel 1) and the front Panel 6 may expand or shrink slightly owing to atmospheric conditions.



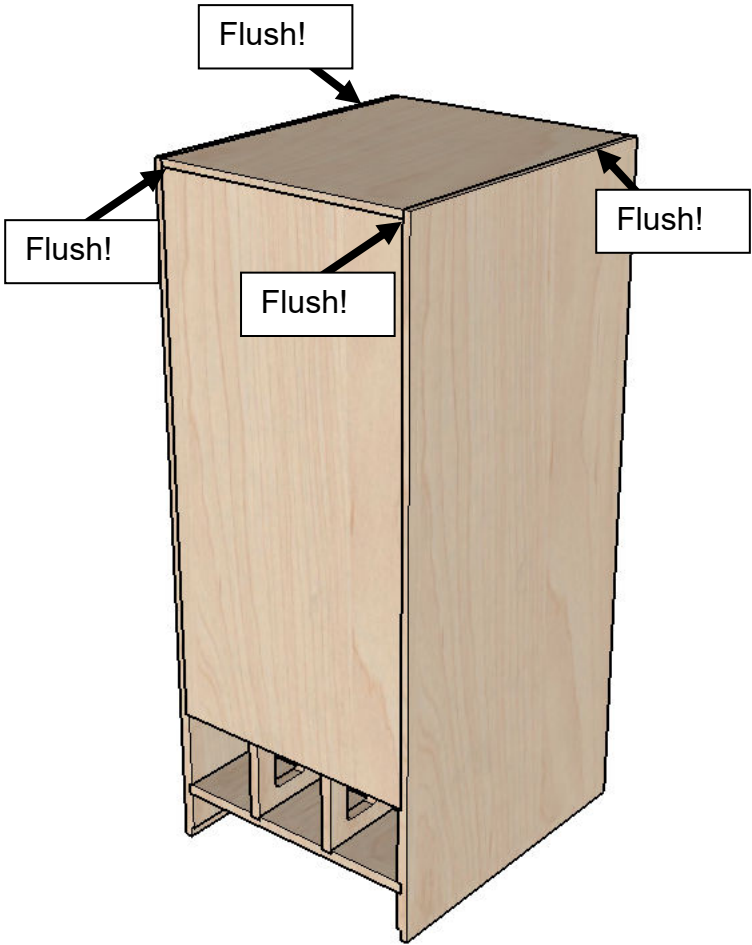
Do your best to get all the front edges lined up nice and flush.





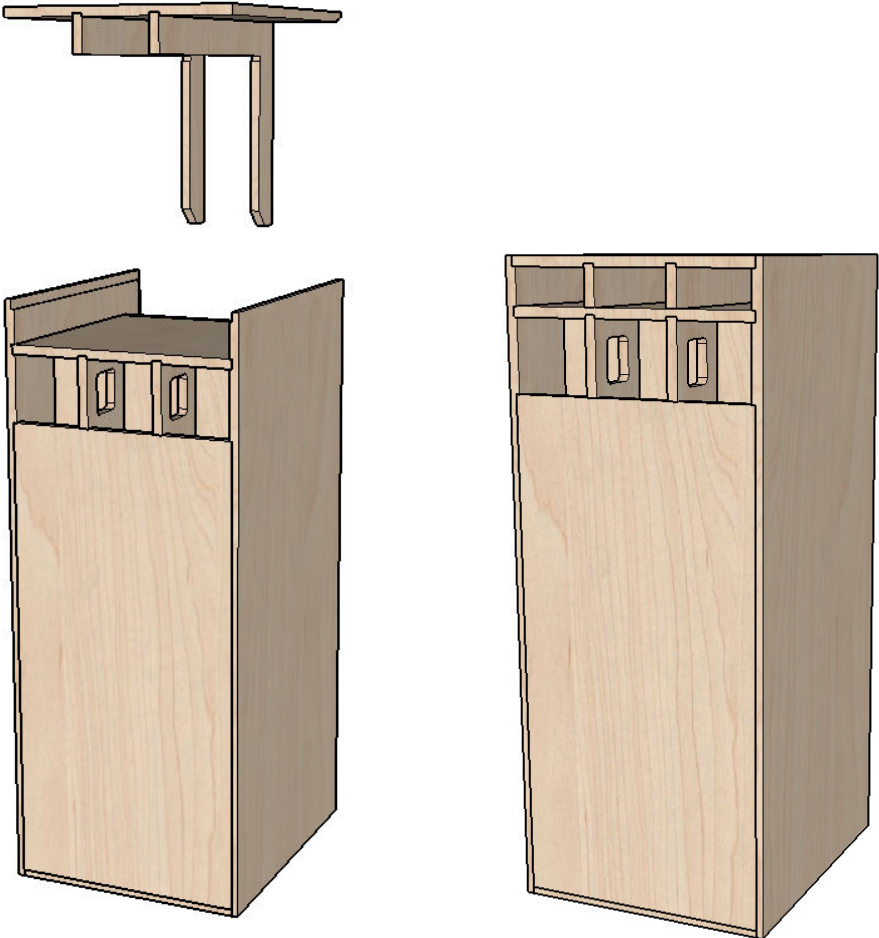
Step 5: Attach top Panel 5.



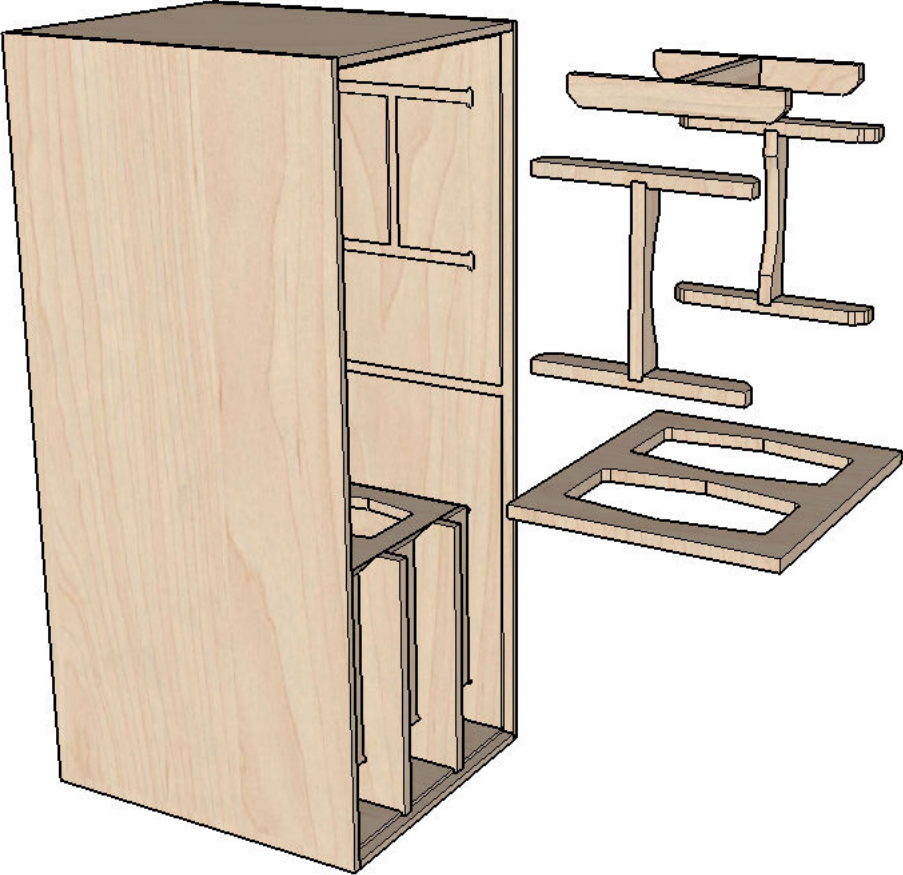


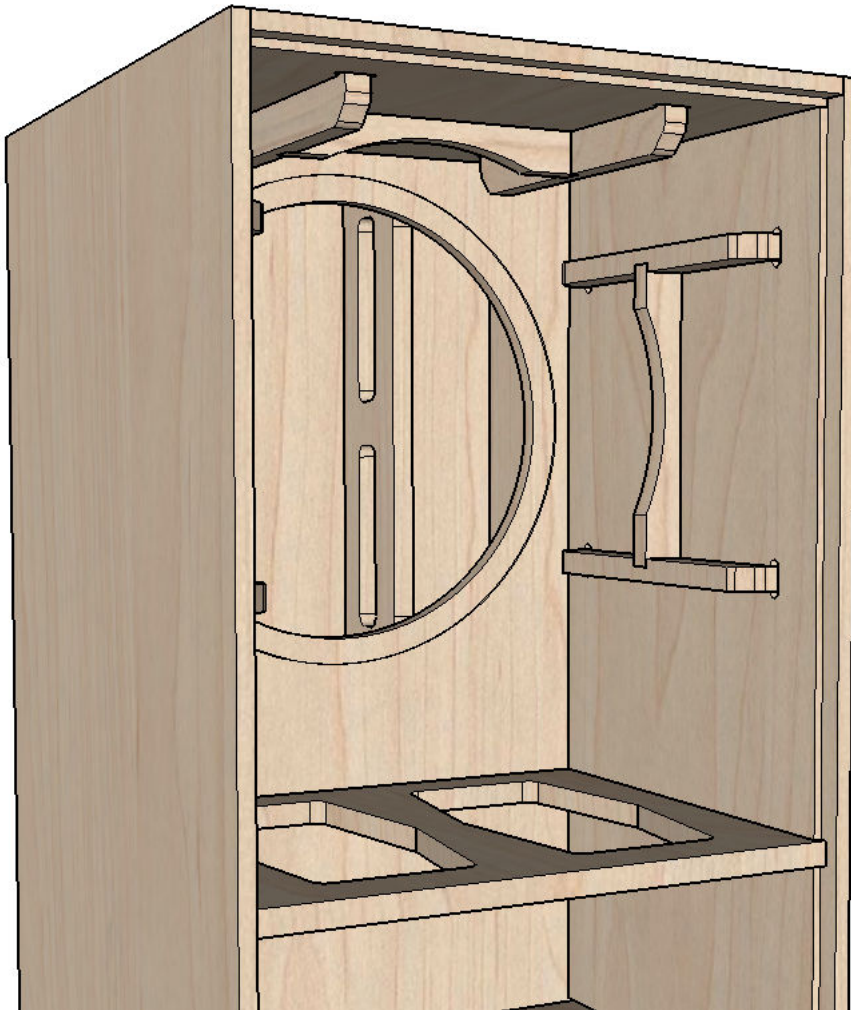
Step 6: Attach bottom assembly.

It may be easiest to flip the cabinet upside down when attaching the bottom assembly (cabinet shown up-side down in the image below).



Step 7: Attach internal bracing.

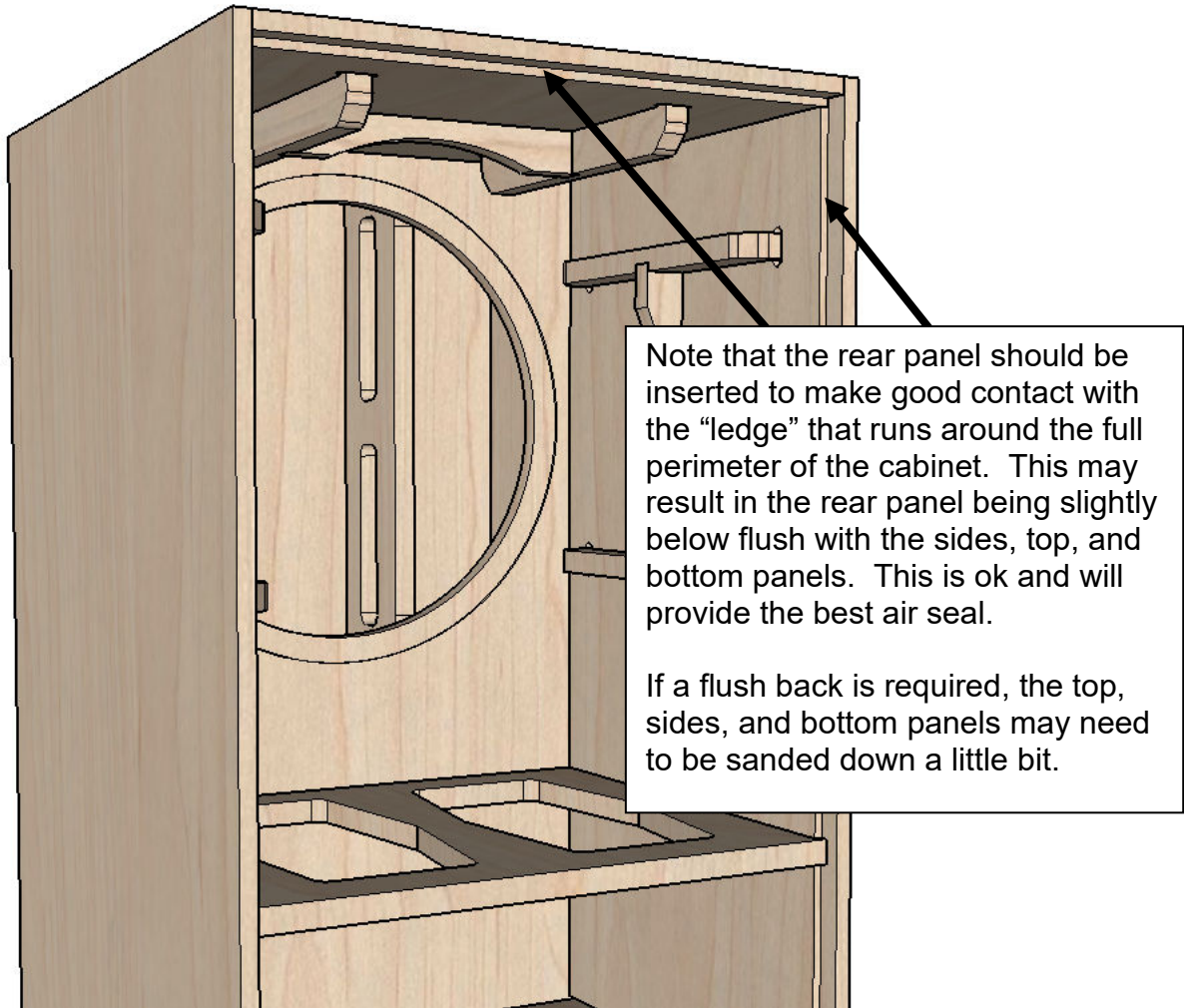




Step 8: Attach rear panel.

Be sure to push it all the way in (see image on next page).





Step 9: Attach Access Hatch.





## **Screws for the access hatch and acoustic stuffing.**

The holes in the access panel are pre-drilled. However, you must drill the pilot holes into the underlying panels that hold the access panel on.

For the access hatch, the screws should have a large, flat, “washer” or “wafer” head. This will pull the access hatch tight without causing the holes in the access hatch to split or “volcano”.

A screw that meets this criterion is the SPAX screw shown on the next page. It is also available in zinc if you prefer that look.

For the #10 SPAX, pre-drill with a 1/8” drill bit.

Be careful not to strip the screws.

Align the access hatch BEFORE putting on the gasket tape. Start with the four corners. Try to hold the drill in the dead-center of the pre-drilled hole so the screw will be centered. Insert screws into the four corners to hold the access panel in place while the rest of the pilot holes are drilled.

## **Acoustic Stuffing.**

The Devastator will have a somewhat cleaner response in the upper end with the use of some acoustic stuffing. Nothing fancy is required here, just three low-cost, standard-size, medium support, polyester pillows (with breathable covers, i.e. not plastic covers), such as may be available at WalMart or other home stores. Cost is typically about \$5-10 each.

Available from Home Depot (choose one or the other based on availability and visual preference; both are plenty strong):

Model # 4281670500606

Internet #301952017

Store SKU #1002698595



SPAX >

#10 x 2-1/2 in. Wafer Head T-STAR High Corrosion Resistant Exterior Screw (1 lb.-Box)

★★★★★ (8) Write a Review Questions & Answers (1)

\$10<sup>27</sup>

#### Overview

Discover the SPAX Advantage. This German engineered SPAX #10 x 2-1/2 in. Wafer head T-Star+ exterior cabinet screw offers a premium quality fastening solution to help ensure professional results in less time. This L... See Full Description

Live Chat

Share Save to Favorites Print

Quantity - 1 +

Internet #206870578

Store SKU #1001728828



SPAX >

#10 x 2-1/2 in. T-Star Drive Washer / Wafer Head Partial Thread Yellow Zinc Coated Cabinet Screw (75 per Box)

★★★★★ (25) Write a Review Questions & Answers (2)

\$8<sup>58</sup>

#### Overview

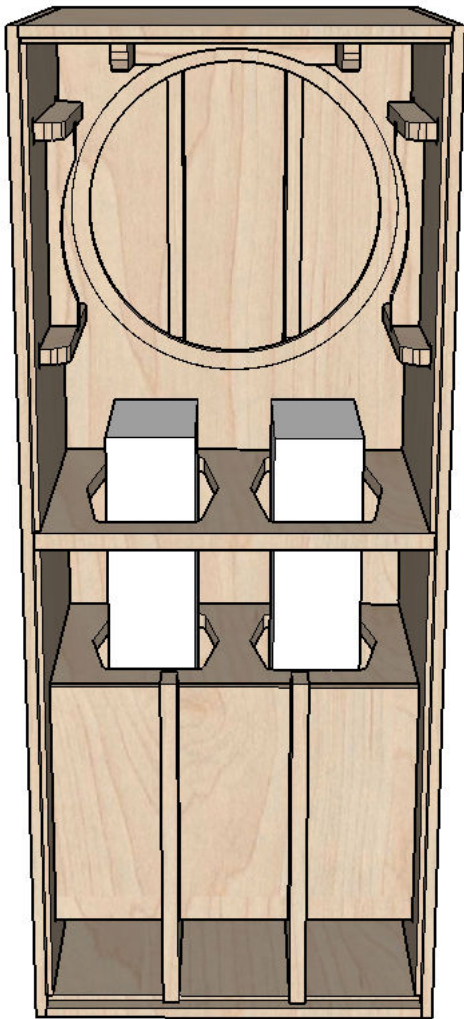
Discover the SPAX Advantage. This German engineered SPAX #10 x 2-1/2 in. T-Star Wafer head cabinet screw offers a premium quality fastening solution to help ensure professional results in less time than inferior imported... See Full Description

Step 10: Wrapping up.

Remove access hatch and install driver, the wire up the plate amp and attach it to the Access Hatch.

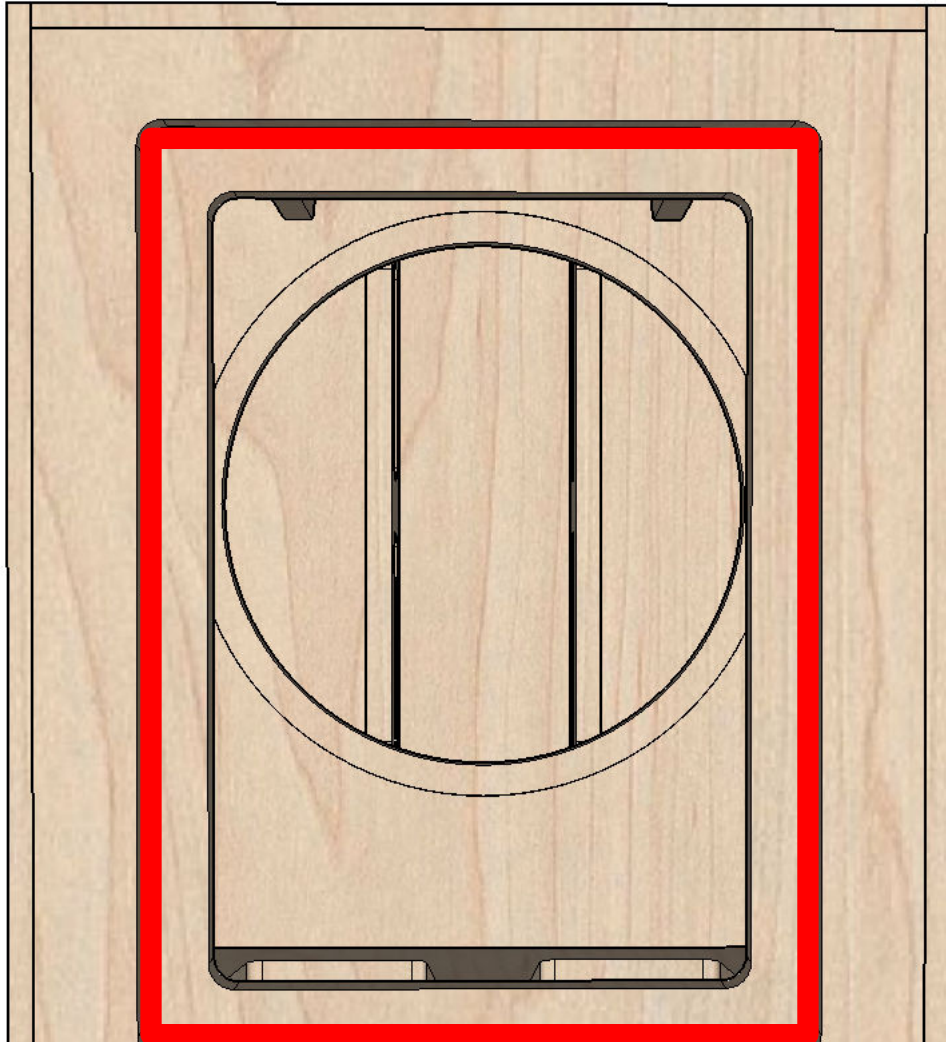
Place pillows in each of the two sections created by the bracing.

Orientate the pillows vertically as in the image (rear panel removed from image to show placement of pillows).



Attach the recommended gasket tape around the perimeter of the access hatch panels. The gasket tape is black, but the image shows a red line as to where it should be placed.

Ensure a good seal along the edges.



Re-attach the access hatch, insert SPAX screws taking care not to strip the wood.



Almost done!



## **Finishing**

We recommend the same finishing techniques for this cab as the MartySubs. The GSG-spec flat black paint over 3X primer works great as does Duratex. Of course, how you finish it is up to you!

## **Before Firing Up Your Sub for the First Time**

Be sure to have your high pass filter set up before 'letting her rip'. 😊

### **Devastator 15 – “G-Series”**

If using a plate amp, the protective high pass filter will be included in the plate amp DSP and the amount of EQ can be adjusted using the “LF Adjust” knob.

If NOT using a plate amp, the protective high pass filter and EQ must be added manually.

2<sup>nd</sup> order Butterworth, 12dB/Octave, frequency=20Hz.

A parametric EQ will help balance the response from this mid-bass monster.

Freq= 70Hz, Q= 1.00, Gain= -6dB (note the gain is minus 6dB).

### **Optimized Tuning for Gaming Systems**

The Devastator 15 “G-Series” has a native tuning of 24Hz, which is optimized for gaming systems that require very low bass, while providing maximum output.

### **Optimized Tuning for Home Theater Systems**

The Devastator 15 can be further optimized for home theater applications by stuffing one port. This will reduce the tuning to 19Hz, which is ideal for high output, home theater systems when running multiple Devastator 15's or when using a Devastator 15 to supplement other low-tuned subwoofers. However, many folks will appreciate the added output of the higher 24Hz native tuning when using only a single Devastator 15 for home theater (for reference, many IMAX theaters have subwoofers tuned to 25Hz for this reason).

Cautionary note: It is generally best to avoid constant, full-power, sine waves as these can burn up even the most expensive drivers.

**Congratulations again and enjoy!**