



Glow 4c

Build Guide



Introduction:

Thanks for choosing Print Your Speakers! You're about to 3D print and build your very own speaker. This guide will show you how to print each part and put it all together step-by-step. Take your time, enjoy the process, and soon you'll have a speaker you made yourself. Let's get started!

Toolkit Rundown: Everything You Need to Get Started

- **Reliable FDM 3D Printer:** With at least a H175xD205xW140mm build volume.
- **Soldering Iron:** Your trusty tool for creating strong, conductive connections between electronic components.
- **Soldering Tip for Threaded Inserts (Optional):** A specialized tool that can make installing threaded inserts easier. These tips will allow you to heat and embed your inserts into plastic parts with higher precision. You can find a variety of suitable soldering tips [here](#).
- **Hot Glue Gun:** Use this tool to secure wires and lightweight parts in place, preventing movement that could lead to wear, rattles or disconnection.
- **Allen Key:** To drive in your M4 cap head screws
- **Pair of Pliers:** Versatile tool for gripping, cutting and stripping wire.
- **Hammer:** Use carefully to help fit parts together or install certain components that require gentle tapping.
- **2 Woodworking Clamps:** Essential for holding enclosure halves firmly in place during gluing.



3D PRINTING YOUR SPEAKER COMPONENTS

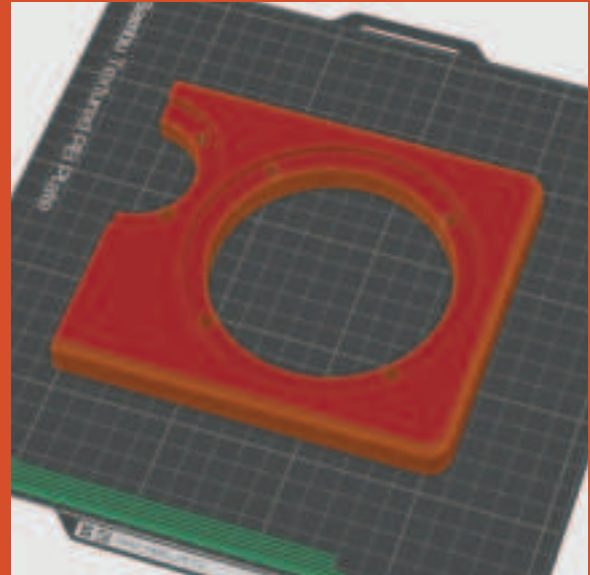
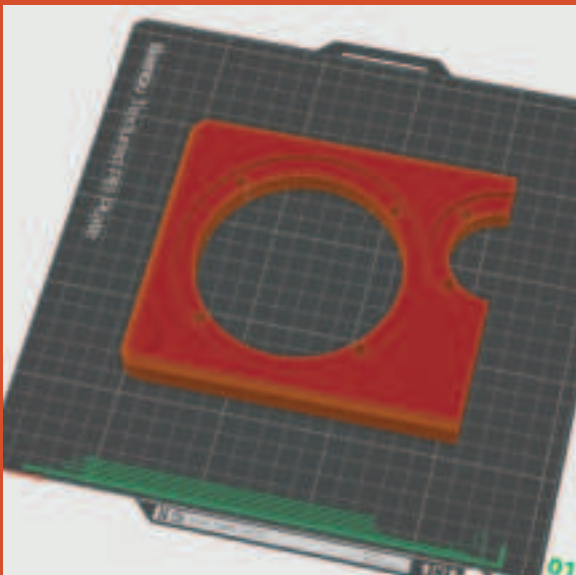
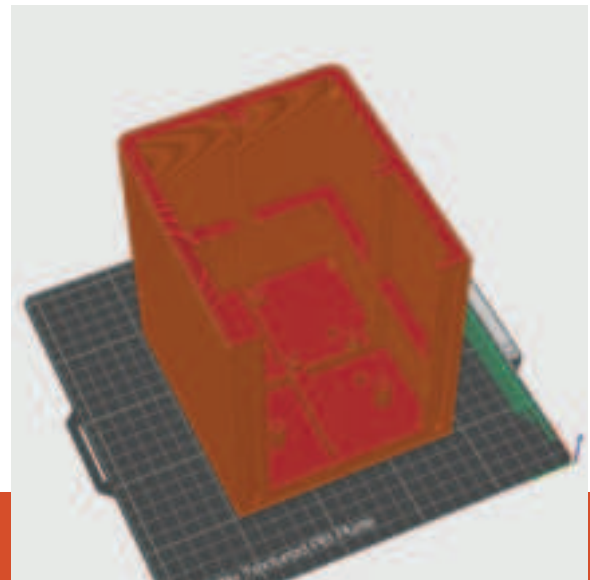
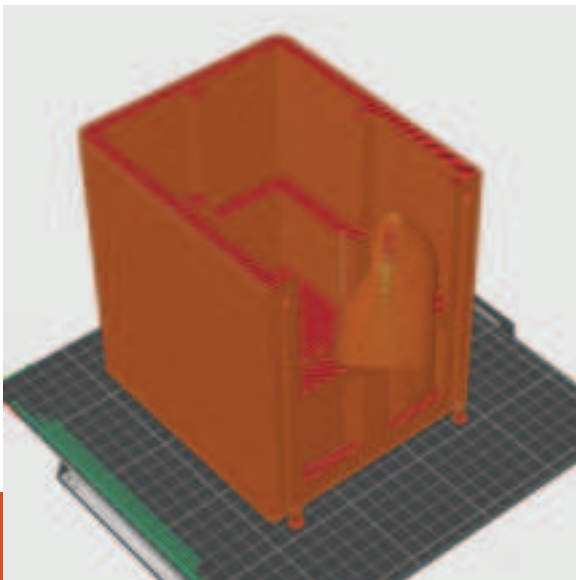


There are lots of different 3D printers and filaments out there, so we're guessing you already know your stuff. But if you're still learning, don't worry—YouTube has heaps of helpful tutorials.

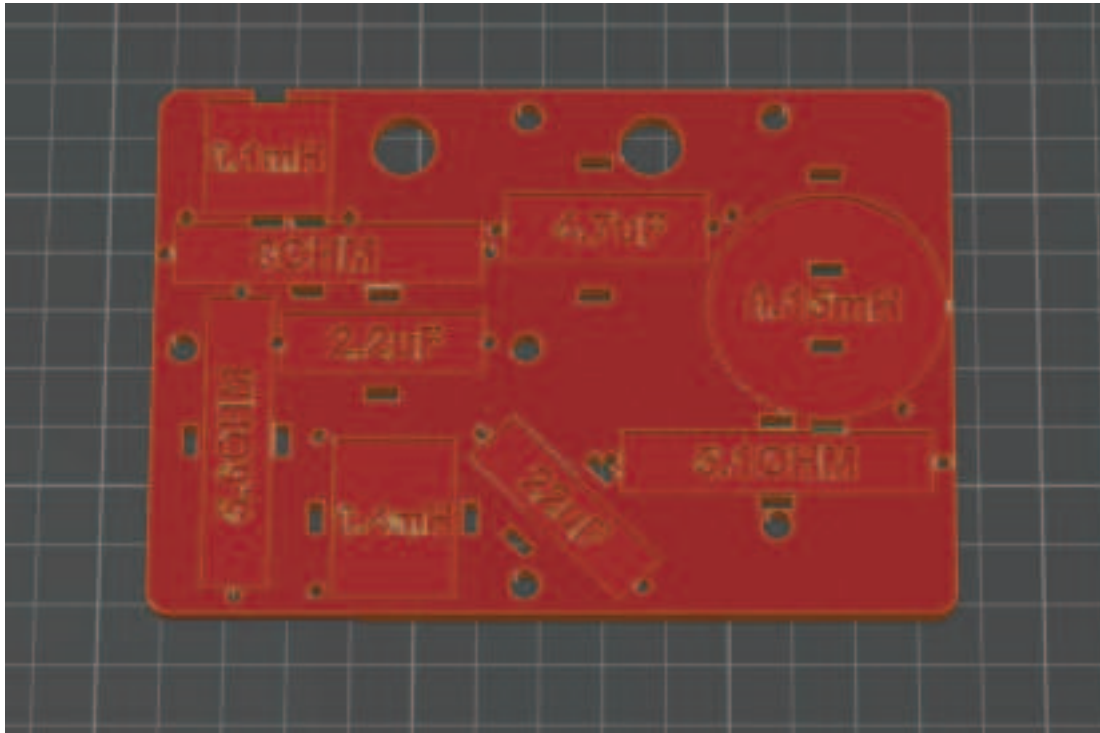
Support: None of the printed parts require slicer generated supports, however, the enclosure has small built-in support panels under the cross braces.

Enclosure Print Settings: Use 4 wall loops, 5 top and bottom shells, and 30% gyroid infill. Don't use less, or you might get unwanted vibrations in your speaker. If you want extra rigidity, you can increase the loops or infill, but don't go higher than 60%. The infill helps dampen vibrations.

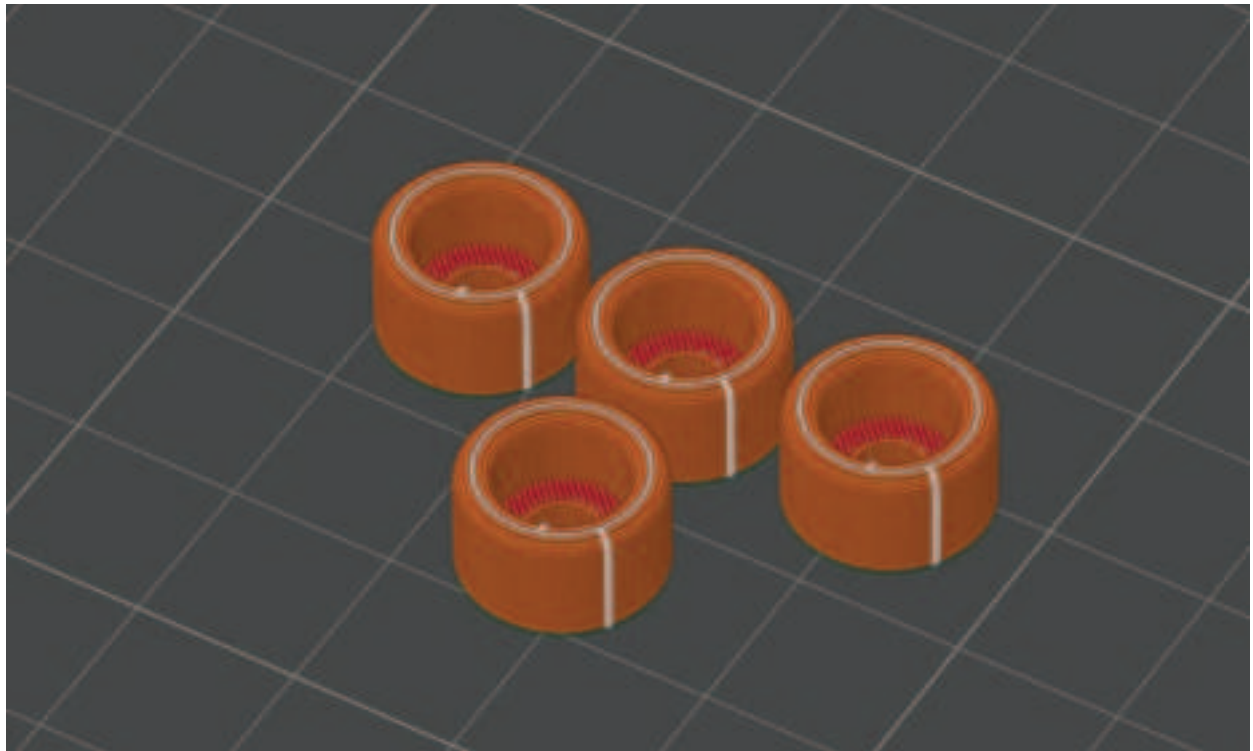
Below is what your enclosure and front baffle should look like in your slicer.



Crossover Board: Go support-free with a solid 100% infill/edgeloops.



Feet: Print support free, two edge loops and 10% infill, don't forget to use a flexible filament like TPU. Alternatively you can purchase **rubber feet**.

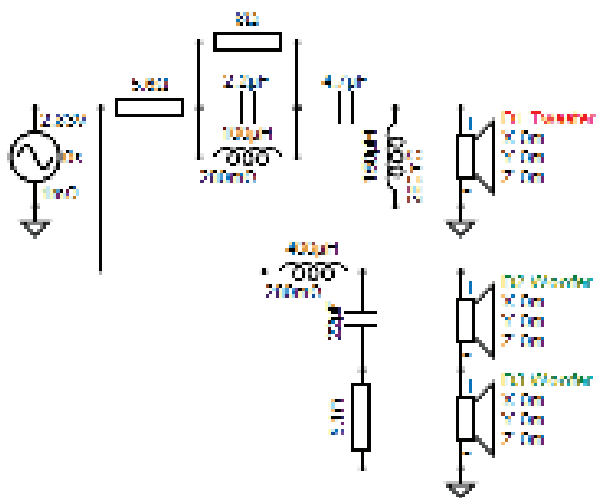


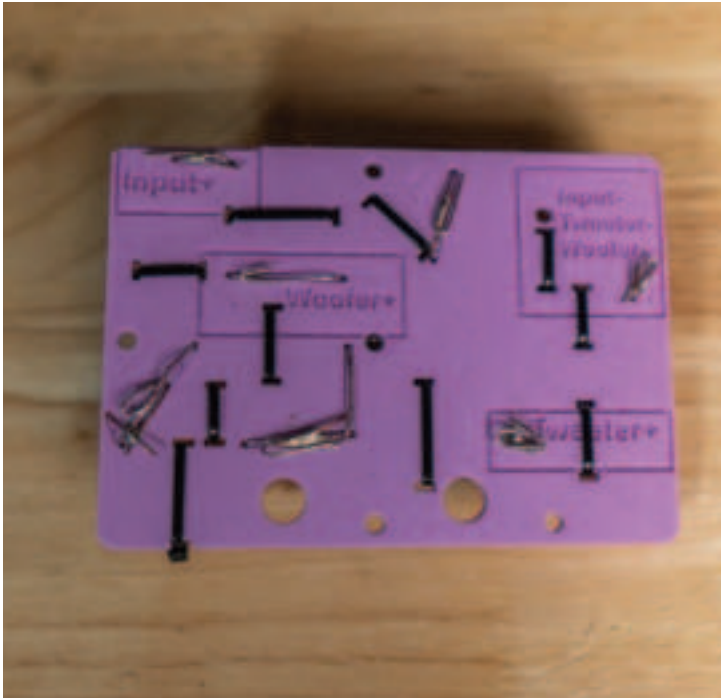
There you have it! With these settings and a bit of patience, you're all set to print parts that look good and sound even better.

- **Check Your Components:** Got everything? Double-check the checklist to make sure no bits are missing.

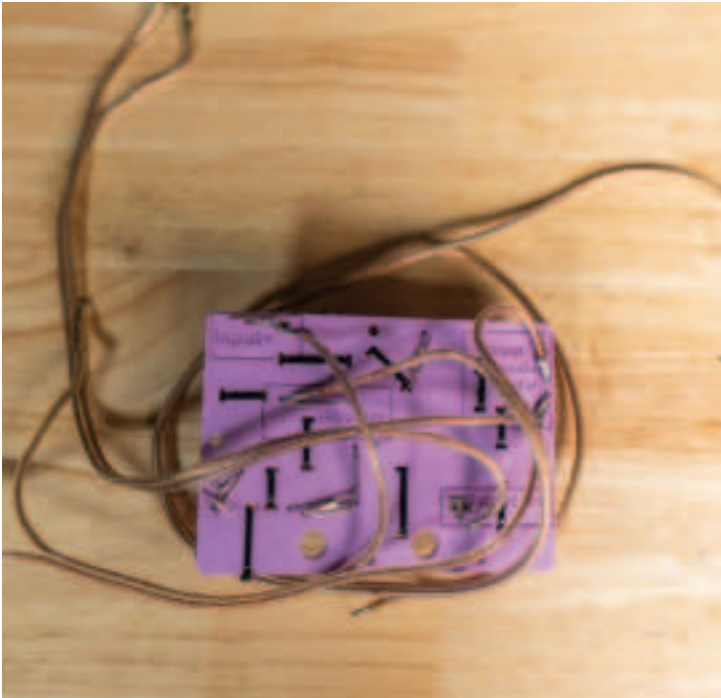


- **Lay It Out:** Pop those components on the crossover board, right where they need to be based on their values. Thread those wires through the wire holes, don't skimp on the hot glue and cable ties to keep everything snug as a bug. Snip the cable ties to prevent them from rattling inside the speaker.





- **Solder Time:** Flip the board over and get soldering. Trace the paths marked on the board. Wires don't reach? Grab some extra speaker wire to make those connections happen.



- **More Soldering Fun:** Solder those speaker and input wires where they are labelled on the board. Start with about 35cm of wire and adjust as needed.



- **Soldering Done (for now):** Solder the shiny spade connectors from the binding posts onto the ends of your input wires.



- **Remove Supports:** Snap off the small support panels under the cross braces.



- **Threaded Inserts:** Stick in your threaded inserts using a soldering iron—six for each woofer, four for the tweeter, four for the feet, and four for the crossover board.



- **Binding Posts Time:** Carefully hammer the binding posts into the cabinet's back. Make sure they're the right way up.



- **Seal the Deal:** Add a dab of hot glue around the inside of the binding posts will keep the air where it should be.



- **Connect the Dots:** Hook up those spade connectors to the binding posts and double-check your wiring to make sure everything's in phase.



- **Tidy Up:** Tuck those wires neatly at the back of the board and screw it down. Keep the input, tweeter and woofer wires labeled, handy but out of the way.



- **Fluff It Up:** Glue a single layer of Dacron around each port tube and the top of the crossover. Make sure you don't block the back of the woofer or cover the port opening.



- **Glue it Good:** Mix your epoxy glue, then carefully spread it onto the mating surfaces where the baffles meet the enclosure halves. Don't put glue in the groove—it's designed to catch extra glue and stop it from oozing out. **DO NOT** glue the enclosure halves together yet.



- **Woofers in Series Part 1:** Run a single wire through both woofer cutouts. Solder the negative (-) terminal of the first woofer to the positive (+) terminal of the second woofer.

- **Woofers in Series Part 2:** Connect the Woofer+ wire from the crossover board to the unused positive (+) terminal on the first woofer.

Connect the Woofer- wire from the crossover board to the unused negative (-) terminal on the second woofer.



- **Driver's Seat Part 1:** Screw the woofers in place, nice and secure. Ensure not to over tighten the screws.

- **Epoxy Glue:** Apply epoxy glue to the mating surfaces of the enclosure halves, do not fill the groove with glue, this is intended to prevent oozing.



• **The Clamps:** Clamp the two enclosure halves together and set aside while the glue sets.



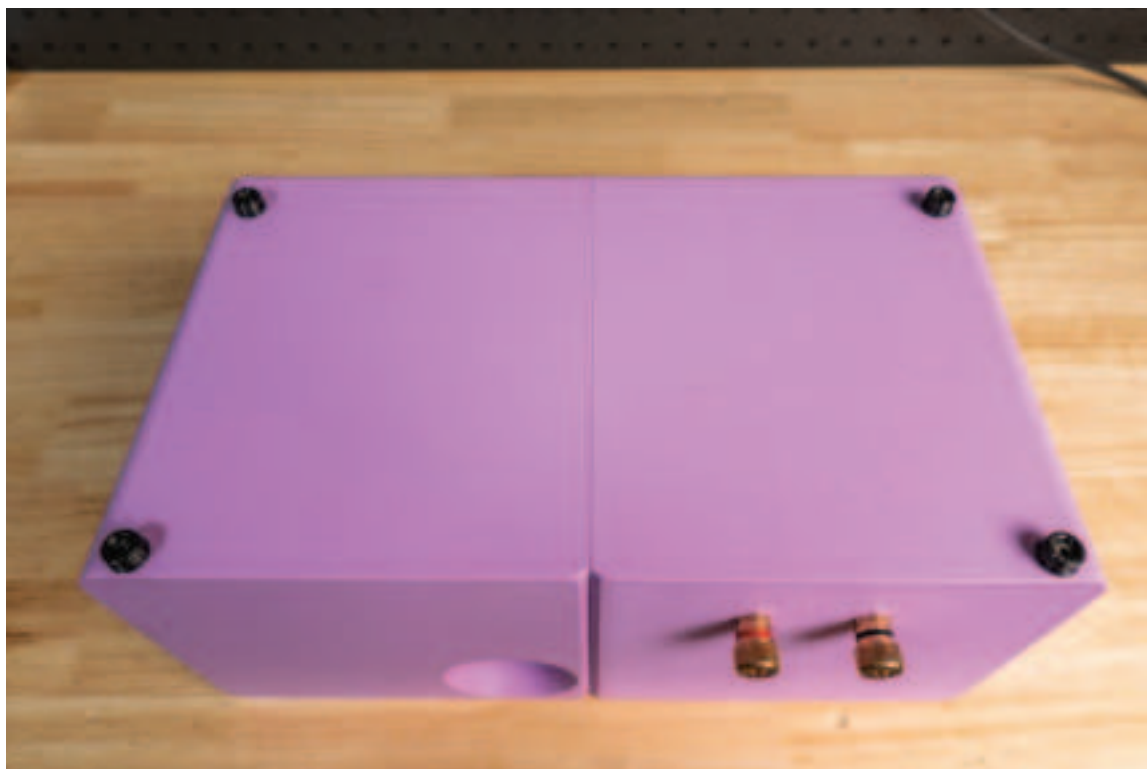
• **Tape It Up:** Looks like Dayton skimped on the gasketing tape! Layer up the back of the mounting surface of the tweeter with some extra. Without a tight seal, the sound suffers big time.



• **Make the Connection:** Solder the wires to the contacts on the tweeter. Pay close attention to polarity.



• **Driver's Seat:** Screw the tweeter in place, nice and secure. Ensure not to over tighten the screws.



- **Stand on its Own:** Screw those feet on. No wobbles allowed.



Final Once-Over: Take a good look at your masterpiece. Everything snug? Brilliant. Now kick back and enjoy the sweet sound of success.



Links to Useful Guides

- **Soldering:** [Instructables How-to Solder Guide](#)
- **Threaded Inserts:** [CNC Kitchen's Tips & Tricks](#)

Encounter a hiccup? Here's how to solve common issues:

- **Silence from Both Speakers:** Check your connections at the crossover and binding posts.
- **Single Driver Not Working:** Ensure all crossover connections are correct and secure.
- **Crackling Noises:** Tighten all connections and check for any loose solder joints.
- **Amplifier Powering Off:** Inspect for any shorts in the wiring, particularly around the crossover and binding posts.
- **Weak Bass Response:** Verify polarity at all connections, check your wiring against the wiring diagram and ensure the port is unobstructed and correctly adjusted.

For any persistent issues or if you need more guidance, don't hesitate to get in touch with our support team at help@printyourspeakers.com. We're committed to helping you achieve the best sound experience possible!

Join Our Maker Community!

Got your speakers up and running? We'd love to see them in action! Share your build on [Instagram](#), and don't forget to tag us @Print.Your.Speakers. Join the community and inspire others with your creation!

We Value Your Feedback!

Thanks for building with Print Your Speakers! We're always looking to improve, and your thoughts can help us do just that. If you have a moment, we'd love for you to fill out our quick survey: <https://forms.gle/vGdJ8ECs8qqVMPcH6>.

Have more to share? Feel free to email us directly at feedback@printyourspeakers.com. Your input is what helps us keep getting better!