

Criton 1TD-X Assembly Instructions

What You'll Need

At a minimum:

1. Screw Driver
2. Hammer or Mallet
3. Soldering Iron
4. Wire Cutters/Strippers
5. Wood Glue
6. Tape or Glue for the Port

You might also find beneficial:

1. Clamps
2. Electric Drill



Flat Pack Enclosure Assembly

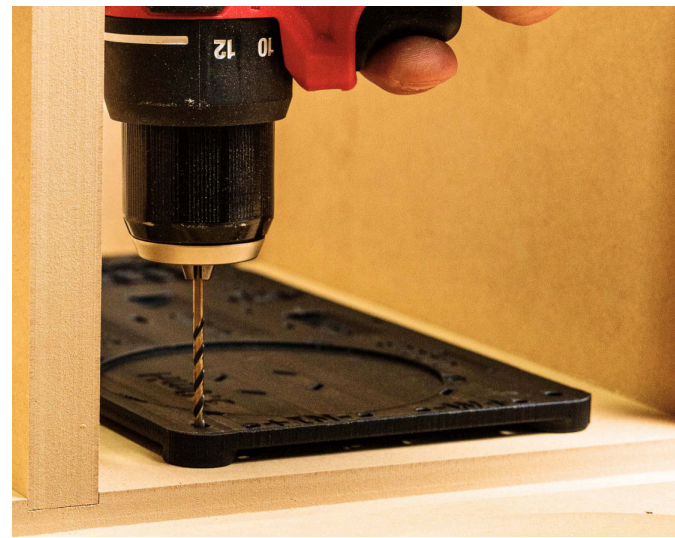
1. Verify all cabinet parts were received.
2. Clear dust from corners of all panels. Any debris in the joints will prevent you from getting a tight, flush surface when gluing up the cabinet.
3. Assemble cabinet WITHOUT glue to ensure all panels fit together

NOTE: Due to regional and seasonal humidity differences, some sanding may be required to insert braces into appropriate slots. This is more common in the Baltic birch cabinets because plywood has slightly less stability than MDF. The front and back panels are oversized by 1 mm to ensure that only the edges need to be sanded. Without this, any issues in glue up or panel swelling due to humidity would potentially require sanding the entire top, bottom, and side panels to flatten the outside of the speaker.

4. Disassemble cabinet and place panels on a clean surface, arranged for easy assembly. Take note of the recommended order of assembly in the visuals that accompany this document.



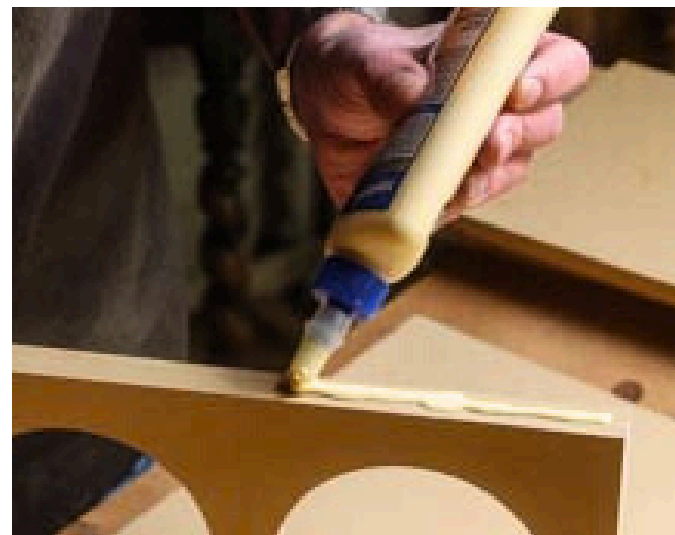
5. (OPTIONAL) Before assembly, you may drill pilot holes for mounting the crossover board using the board as a template. Use caution not to drill through the panel. The board should be mounted on the bottom panel pushed as far back as possible. This step is not necessary, but will make installation of the board easier once your cabinet is fully assembled. Screws can be pressed into the MDF cabinets without drilling if desired.



6. Apply wood glue to mating seams one at a time and assemble using the provided visuals as a guide.

7. After the cabinet is assembled and the glue fully cured, fill any gaps with wood filler or bondo and sand all surfaces flat.

8. Finish as desired using veneer, vinyl, paint, etc. (see CSS blog post for ideas).



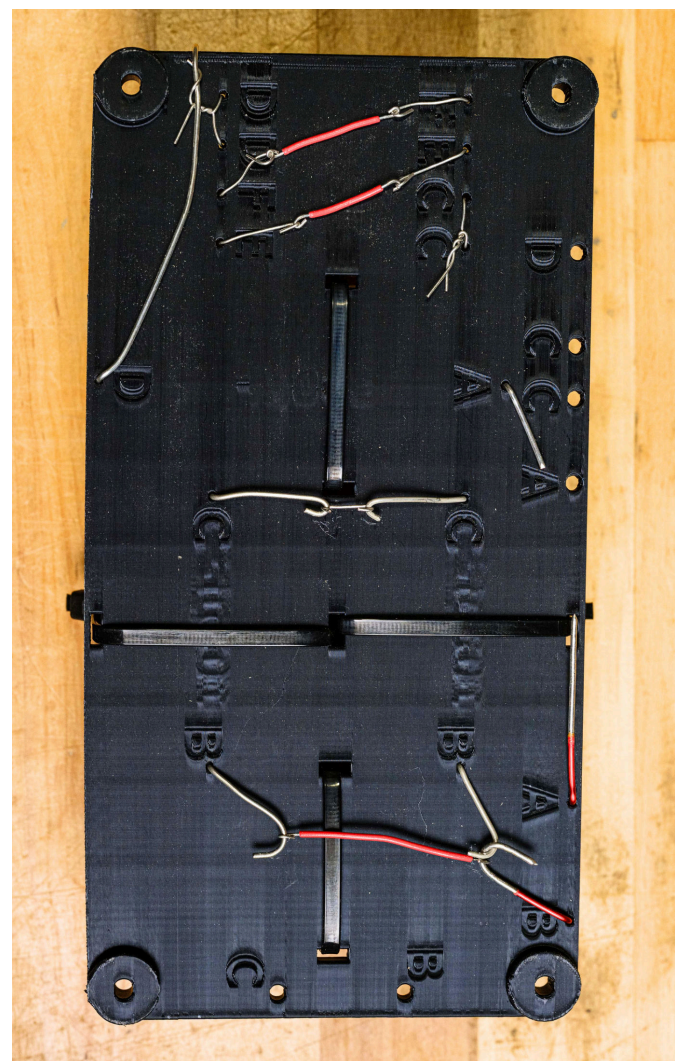
Crossover Assembly

1. Verify all crossover parts were received.
2. Place each component in its labeled location on the SmartNode board by putting the lead wires through the holes for the associated board location. Orientation does not matter as long as you can reach the through-holes
3. Secure the components to the board with the supplied zip ties.
4. On the backside of the board, solder leads together that share common letters (e.g. A to A, or B to B to B) using supplied hookup wire if necessary. Ensure that no bare wires are touching unintentionally.

NOTE: Crossing bare wires from non-matching letters can degrade sound quality and damage the drivers or your amplifier. If you need to run across another wire, ensure you use the insulated hookup wire supplied in your kit.

NOTE: Inductors have an insulating coating on them. You cannot solder directly to the red or orange colored portions of the inductor wire or you will cause an open circuit. You should solder to the pre-tinned leads (silver portion) to ensure proper connection.

5. Cut 3 lengths of wire, long enough to reach from:
 1. The binding posts on the rear panel to the crossover board (12-17")
 2. The woofer terminals to the crossover board (15-17")
 3. The tweeter terminals to the crossover board (17-21")
4. NOTE: Leave enough slack on these lengths to be able to reach from the crossover mounting location to the driver terminals while the driver is outside of the cabinet.



6. Insert the red wire through the T+ hole on the SmartNode board and solder to appropriate letter. Insert black wire through the T- hole on the SmartNode board and solder to the appropriate letter.

7. Insert the red wire through the W+ hole on the Smart Node board and solder to appropriate letter. Insert black wire through the W- hole on the Smart Node board and solder to the appropriate letter.

8. Insert the red wire through the IN+ hole on the Smart Node board and solder to appropriate letter. Insert black wire through the IN- hole on the Smart Node board and solder to the appropriate letter.

9. Identify the red quick-disconnect and black quick-disconnect that match the designated wires. Attach these to one end of the wire you cut for each lead. Strip small amounts of insulation from the matching colored wire and crimp the connector to the exposed portion. Solder can be used to provide a more secure connection.

1. NOTE: Your kit with multiple sizes of quick-connect female terminals for the driver and binding post connections. The black connections are for the negative terminals and the red connections are for the positive terminals. Check all quick connects and match them to their appropriate locations before crimping to any wires. The larger terminal on the driver is positive.

2. Red 0.250" - Positive Binding Post and Positive Tweeter

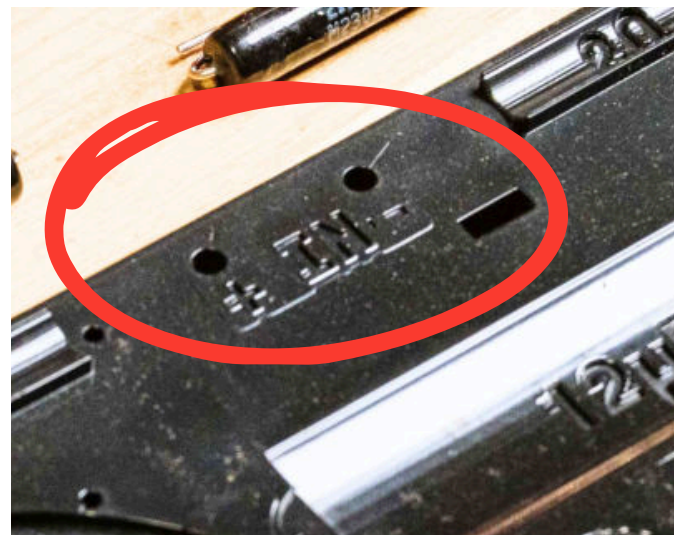
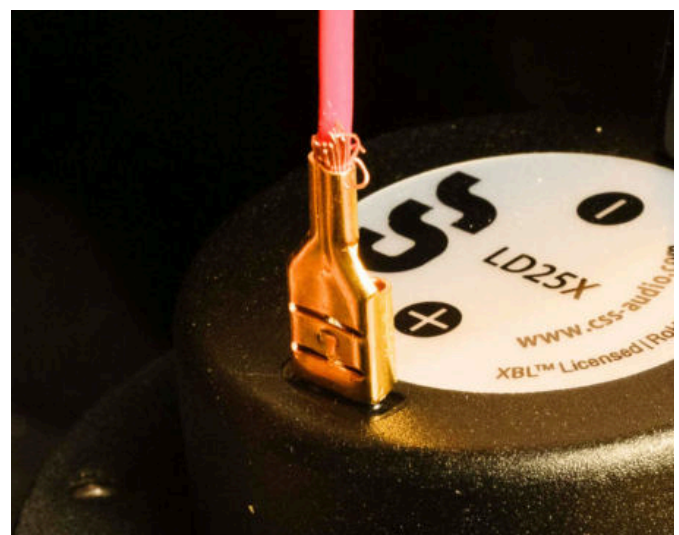
3. Red 0.205" - Positive Woofer

4. Black 0.250" - Negative Binding Post

5. Black 0.205" - Tweeter Negative

6. Black 0.110" - Woofer Negative

7. NOTE: If quick connects do not fit snugly on a terminal, use pliers to squeeze a little at a time until the fit is tight.



10. Pull the tweeter wire (marked "T" in step 3) through the tweeter hole and slide the quick connects on to the tweeter terminals – large to large and small to small. Give a light tug on the wires to check the grip. If they slide off easily, close the opening a little on the quick connects with a pair of pliers and repeat until a snug fit is achieved. Then install the tweeter in the proper place using the included screws.

11. Repeat step 8 for the midrange and woofer drivers.



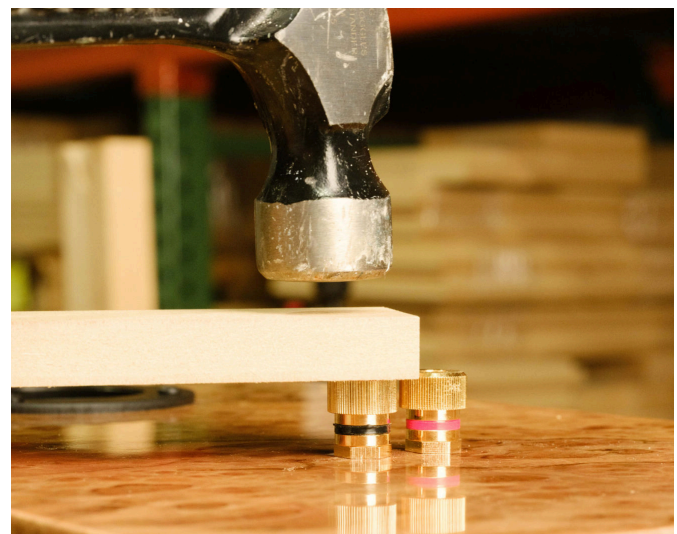
Final Assembly

CAUTION: It is recommended to test your speaker after final assembly by starting at a very low volume and listening to each driver by placing your ear closely. You should hear highs coming from the tweeter and lows from the woofer. You should hear no crackling or static. If everything sounds normal, proceed to turn up the volume and enjoy.

1. Binding Posts

a. Unscrew nuts and remove washers and terminal rings. Unscrew thumbscrew with colored stripes on opposite end of binding post and remove. Insert long threaded end of binding posts into the holes on the rear panel and tap in with a hammer, making sure to orient the through-wire openings up and down for easy accessibility. Re-install the nuts, lock-washers, and terminal ring in the following order: nut, lock-washer, terminal ring, lock washer, nut. Tighten with a small socket or wrench to ensure they do not rattle loose. Re-install the thumbscrews on the outside of the box.

i. NOTE: It is recommended to install binding posts after you have applied finish to your cabinet. They are difficult to remove once installed and might not fit snugly if re-installed. If you want to test your speakers before the final finish is applied, it is recommended to run jumper wires from the positive and negative input wires on the crossover out the port and to place painter's tape over the binding post holes



2. Port(s)

a. Adjust port for an overall length of 9 inches.
b. Glue or tape the extension in place. If using tape, use a single wrap of thin tape so it doesn't snag during insertion in the pre-cut hole. Insert port into opening and screw into place. Drilling pilot holes is recommended, but not necessary.



3. Crossover Boards

- a. Mount SmartNode crossover boards inside the cabinet to the bottom panel of the cabinet, pushed as far back as possible. For the superior boards, place the larger inductor toward the back of the cabinet.
- b. Attach the red input wire to the binding post terminal with the red ring. Attach the black input wire to the binding post terminal with the black ring.



4. Foam

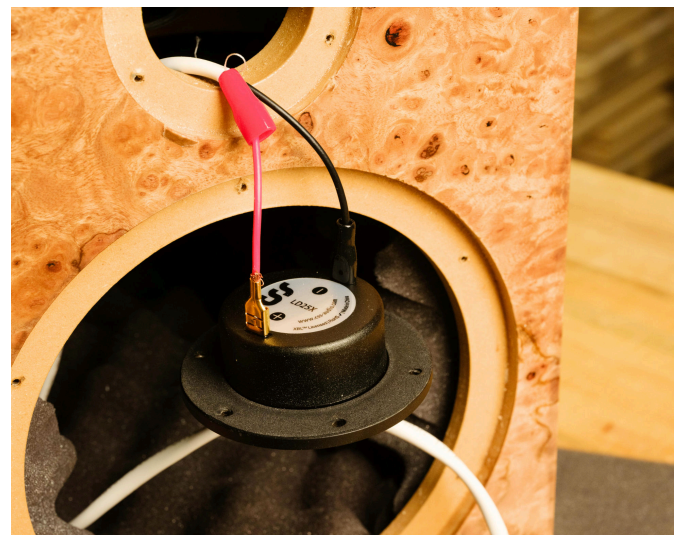
- a. Foam panels should be placed on the back, sides, and bottom of the cabinet below the brace. Foam should be placed directly over the crossovers.

5. Drivers

- a. Pull the tweeter and woofer wires from the crossover board through the appropriate driver holes in the front of the cabinet. Connect the wires to the appropriate driver and install the drivers in the cabinet with the provided screws.



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Troubleshooting

1. No Sound From the Whole Speaker - No sound from one or both speakers typically means you have a problem on the amp input side of the crossover. Check your input wires are properly connected to the crossover (including ground wires coming back to the negative connection) as well as the binding post side. Ensure the input wires and binding posts are not shorted by stray wires or other metal creating a conductive path between the negative and positive.
2. No Sound From One Driver - No sound from a single driver most typically results from a bad connection in the crossover. Review all connections to make sure only similar letters are on the same connection points. Ensure inductors are properly connected on tinned/bare wire and not over the insulation. Ensure there are no loose connections anywhere.
3. Crackling Sound – Crackling sounds are usually the result of a loose connection. Check to make sure you have secure connections on all driver and binding post wiring. Ensure crossover wiring has solid connection and solder welds are tight. You should see no movement in the joint itself. Check crossover wiring for any bare wiring that is inadvertently touching where it shouldn't. If the source cannot be identified, contact us.
4. Amp Shuts Down – An amp shutting down is likely caused by a straight short to ground, meaning your amp is seeing minimal or no resistive load. The most likely cause is wiring touching where it shouldn't be. Check crossover wiring for any bare wiring that is inadvertently touching where it shouldn't. Ensure binding post terminals are not inadvertently touching. An amp shutting down is likely a straight short to ground, meaning your amp is seeing no resistive load. If the source cannot be identified, contact us.
5. Lack of Bass – There are a few things that can cause lack of bass. Check to make sure your connections all have the same polarity on both the inside and outside of the binding post. Inverting the polarity of one speaker will lead to bass cancellations. Ensure there is free airflow around the port openings and it is not being blocked by stuffing material. Ensure the woofer is connected to the woofer W +/- section of the SmartNode board and not the tweeter T +/- section. Ensure the port is adjusted to the correct length. If the source cannot be identified, contact us.