



Criton 3TD-X to Veritas Three Conversion Instructions

What You'll Need

At a minimum:

1. Electric Drill (1/2" & 7/64" bit)
2. Soldering Iron
3. Wire Cutters/Strippers
4. Crimping Tool
5. Hammer or Mallet

You might also find it beneficial:

1. Utility Knife (for trimming foam)
2. Pliers



Disassembly

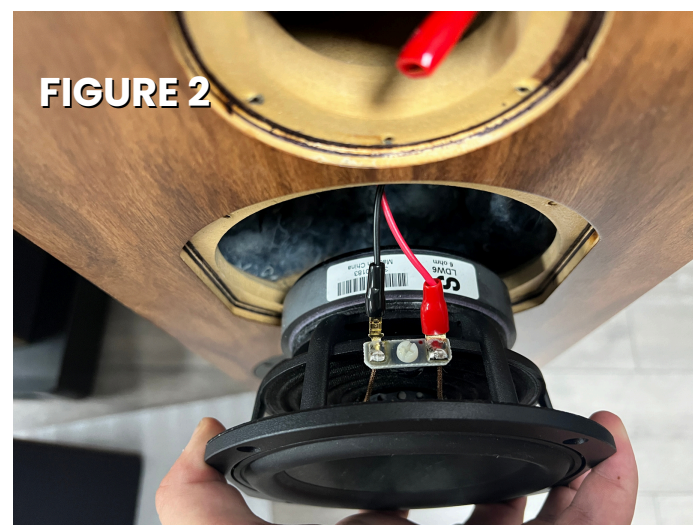
1. Remove the screws securing the tweeter to the cabinet and carefully pull the tweeter out of the baffle. Disconnect the terminals from the tweeter (*figure 1*).

2. Remove the screws securing the woofer to the cabinet and carefully pull the woofer out of the baffle. Disconnect the terminals from the woofer (*figure 2*).

3. Remove the foam panels from inside the cabinet to gain access to the crossover board.

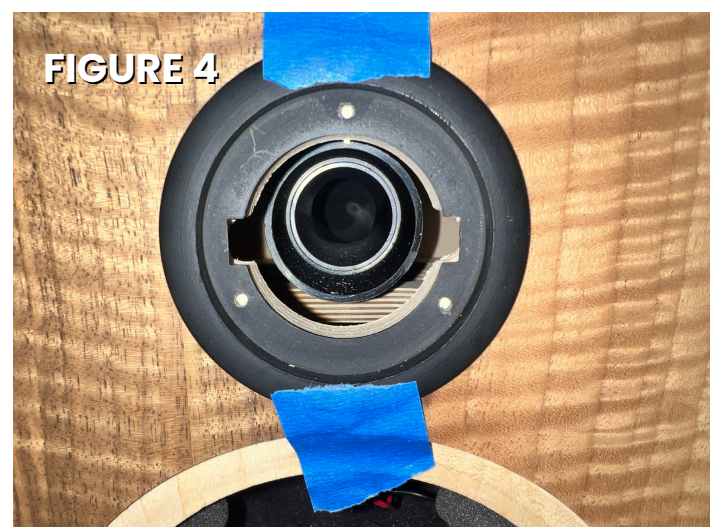
4. Disconnect the crimp terminals from the binding post connectors on the rear panel.

5. Remove the screws securing the crossover board to the bottom panel of the cabinet and carefully remove the board from the enclosure.



Tweeter Modification

1. Attach the tweeter template to the existing tweeter opening using two opposing mounting holes (commonly the 12:00 and 6:00 positions) to ensure proper alignment (*figure 3*).
2. Drill out the two holes with a 1/2" bit so the tweeter terminal connections have enough room to fit.
3. Using the tweeter spacer as a guide, align the notches with the top mounting position and drill the three 7/64" pilot holes for mounting (*figure 4*).



Crossover Assembly

1. Verify all crossover parts were received (*figure 5*).

Tweeter:

- 3Ω Resistor (x4)
- 8Ω Resistor (x4)
- 0.5mH Inductor (x2)
- 0.2mH Inductor (x2)
- 3.3μF Capacitor (x2)
- 8.2μF Capacitor (x2)

Mid:

- 1Ω Resistor (x2)
- 3Ω Resistor (x2)
- 0.75mH Inductor (x2)
- 3mH Inductor (x2)
- 0.47μF Capacitor (x2)
- 8.2μF Capacitor (x2)



FIGURE 5

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 (*figure 6 - tweeter & figure 7 - mid*).



FIGURE 6

Orientation does not matter as long as leads can reach the through-holes.

NOTE: Pull the inductor wires up through its center hole and back down, if needed, to prevent the leads from being crushed against the inductor body. This will prevent a potential short when cinching the zip ties.

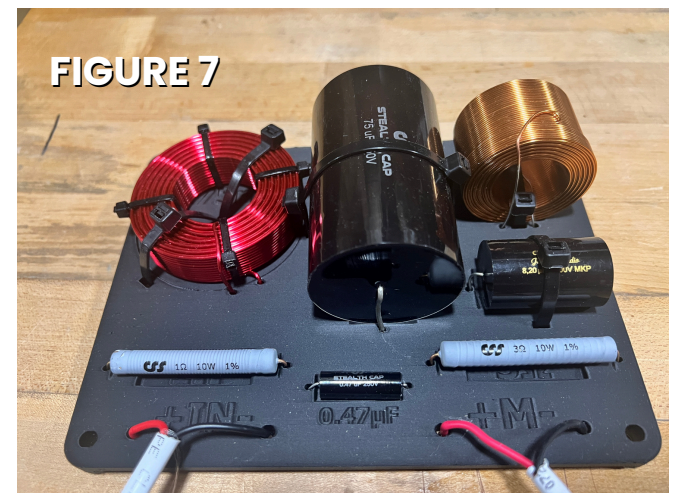


FIGURE 7

3. Secure the components to the board with the supplied zip ties (*figure 8 - 9*).

4. On the back side of the board, twist the leads together that share common letters (e.g., A to A, or B to B to B), using the supplied hookup wire where necessary to jumper between nodes. Ensure that no bare wires are touching unintentionally.

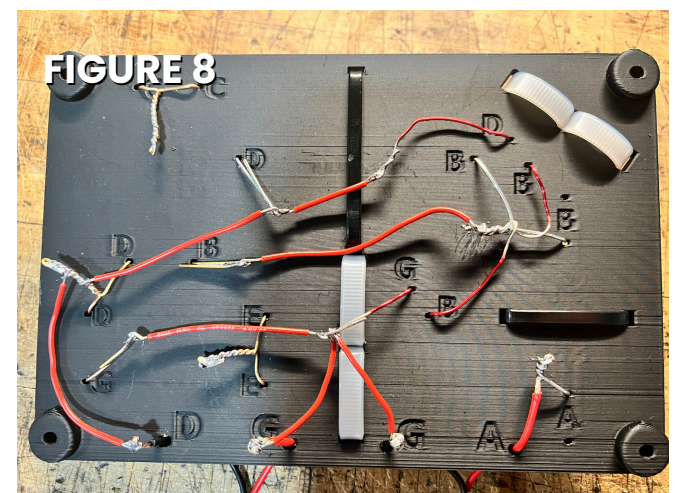


FIGURE 8

NOTE: Crossing bare wires from non-matching letters can degrade sound quality and damage the drivers or amplifier. To make a connection across another wire and prevent issues, ensure you use the red insulated hookup wire supplied in your kit.

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

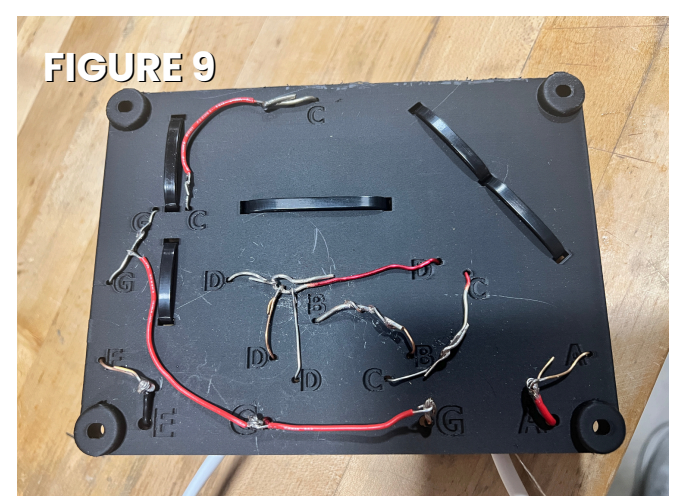
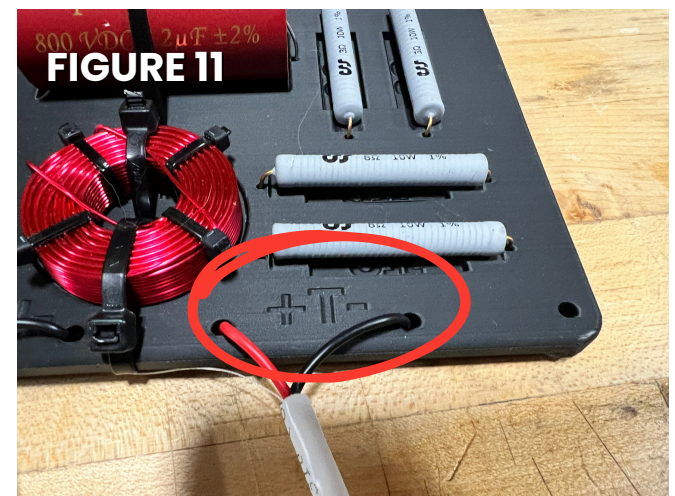
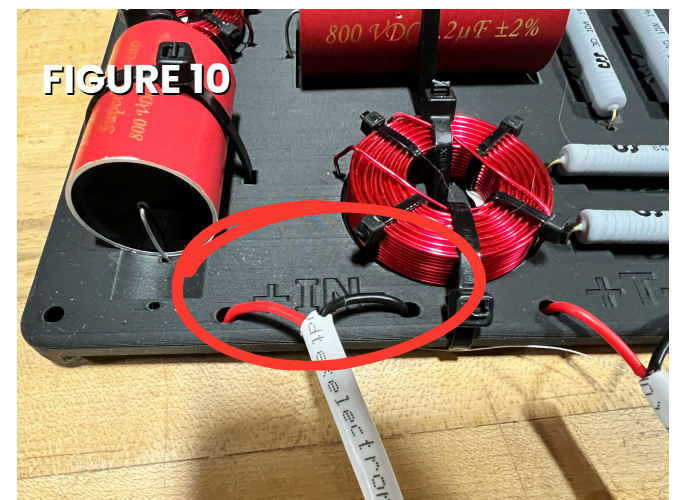


FIGURE 9

5. Cut the following lengths of white wire for the pair of speakers:
 - Qty. 2 – 16" lengths from the tweeter terminals to the T-board
 - Qty. 2 – 26" lengths from the T-board to the binding posts
 - Qty. 2 – 26" lengths from the midrange terminals to the M-board
 - Qty. 2 – 21" lengths from the M-board to the binding posts

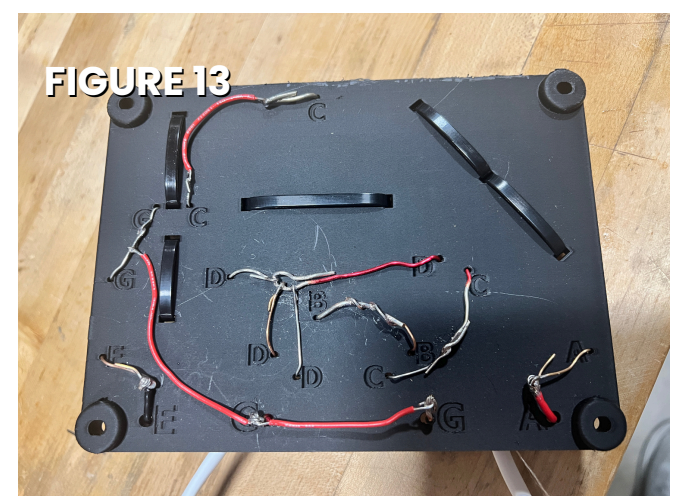
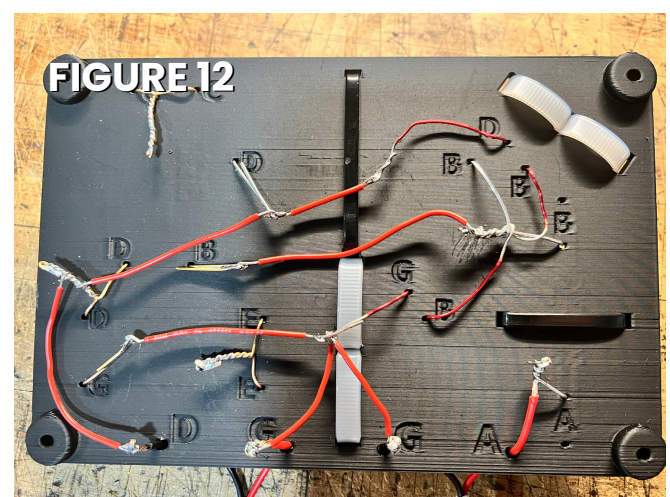


Remove 4" of the outer white insulation from each end of each wire.

6. Strip approximately 3" of outer white insulation from each wire pair and ¼" of insulation from each red and black wire end.

It may be beneficial to strip slightly more insulation on the ends connecting to the SmartNode boards.

7. Insert the appropriate wire lengths through the designated holes on the SmartNode boards, using a red wire for positive and a black wire for negative. Follow the labeled + / – terminal markings on the top side of the board, regardless of the lettered node connections on the underside (*figures 10 & 11*).
8. Connect the inserted wire ends to the appropriate lettered nodes using the supplied jumper wire, as needed.
9. Solder all twisted connections.
(*figure 12: tweeter & figure 13: mid*)



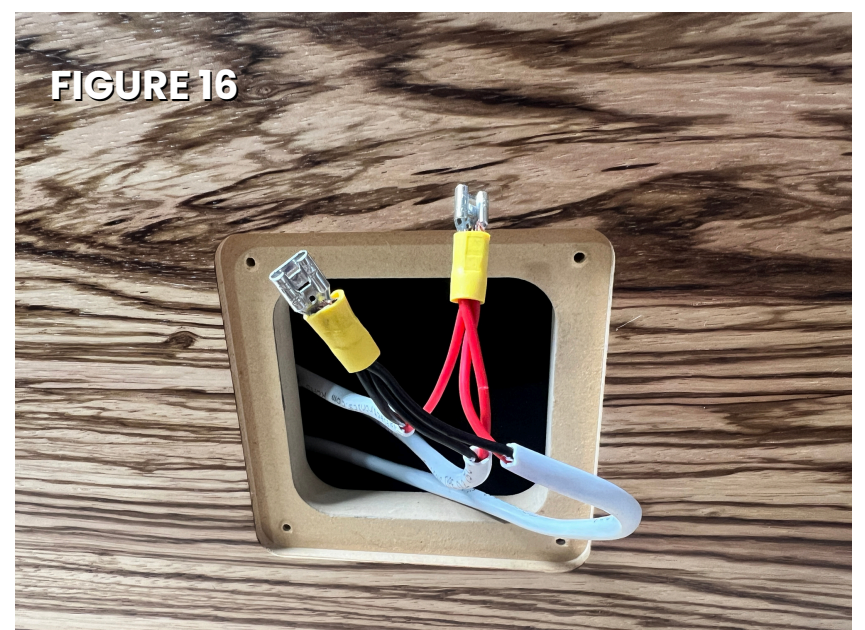
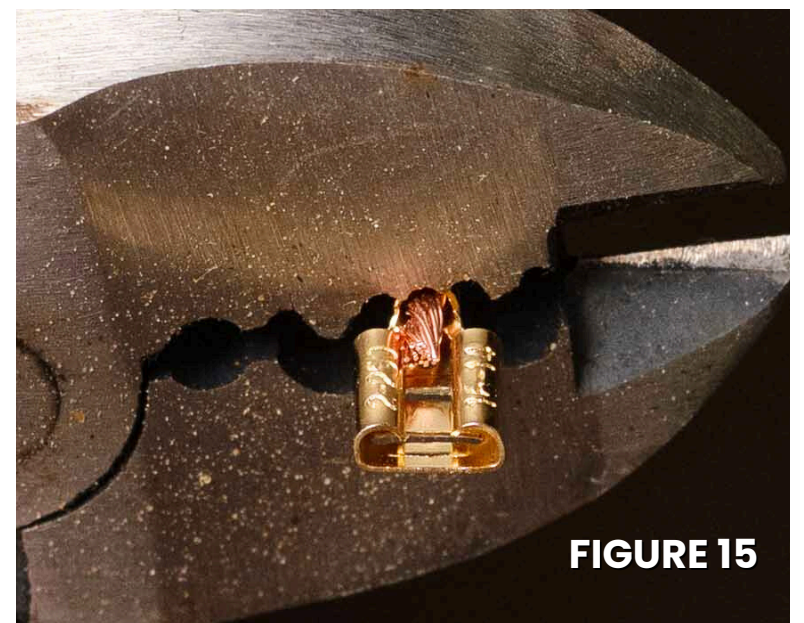
Input Wire Assembly

1. Crimp quick-connect terminals to the driver-end wires from the SmartNode boards.

NOTE: Your kit includes three types of quick-connect terminals: red, black, and yellow. Red terminals are used for all positive driver connections, black terminals are used for all negative driver connections, and yellow terminals are used for both the positive and negative binding post connections. Verify the quick-connects fit securely on their terminals before crimping (*figure 14*).

NOTE: Crimp connectors may need to be slightly opened to accommodate multiple wires. Ensure a tight mechanical connection before crimping. Soldering the connection is not required, but it can strengthen the connection (*figure 15*).

5. The wire pairs coming from the +IN- holes on each SmartNode board should be sent down the back of the cabinet and out the terminal plate hole on the rear of the speaker. Here, the 3 red wires should be twisted together, and a yellow quick-connect crimped to the joined red wires. Likewise, the 3 black wires should be twisted together, and another yellow quick-connect crimped to the joined black wires (*figure 16*).
6. Connect the binding post to the input wires. Keep in mind that the quick connects may need to be compressed a little for a tight slide-on fit with a pair of pliers. Insert the binding post plate into the opening and screw it in place using the supplied #6 x 1" screws (*figure 17*).



Pre-Installation Check

1. Inspect all solder joints to ensure solid mechanical and electrical connections. There should be no movement in the joint itself.
2. Confirm that all components are mounted securely and that no leads are loose or contacting adjacent connections.
3. Ensure all wiring maintains correct polarity (positive to positive, negative to negative).

Crossover Installation

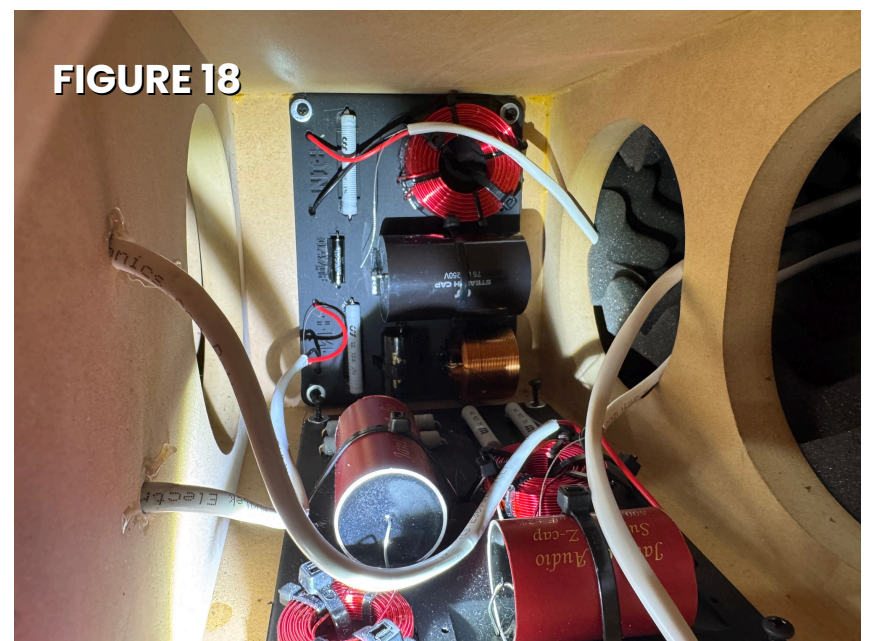
1. Mount the Midrange SmartNode board on the rear panel below the midrange chamber behind the top woofer (*figure 18*). It is recommended to install the Midrange board first, followed by the Tweeter SmartNode board on the left side panel of the same enclosure. Mount the Woofer SmartNode board behind the second woofer on the side panel with the large inductor toward the rear of the cabinet. Position the Woofer board low enough to provide adequate clearance between the large capacitor and the woofer magnet.
2. Route the wire pair from the +M– terminals through one of the holes in the bottom of the midrange enclosure and mark the hole “M” for future reference.
3. Route the wire pair from the +T– terminals through the remaining hole in the bottom of the midrange enclosure and mark the hole “T” for future reference.

Allow slight slack near the crossover boards while keeping most of the wire inside the midrange enclosure.

Foam Installation

1. Reinstall the foam panels inside the cabinet, positioning them around and covering the crossover boards (*figure 19*).
2. Foam may require slight trimming to accommodate the updated board layout.

Ensure foam does not obstruct airflow through the port.



Tweeter Reinstallation

1. Connect the terminals to the new Veritas LD25B-6 tweeter, ensuring the polarity is correct (*figure 20*).
2. Install the Veritas LD25B-6 tweeter into the cabinet and secure it using the appropriate screws.
3. Reconnect the terminals to the mid and woofers, ensuring correct polarity.
4. Install the woofer into the cabinet and secure it using the original screws.

Final Check

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 close. You should hear highs coming from the tweeter and lows from the woofer. You should hear no crackling or static.

1. Verify all wiring connections are secure and properly routed.
2. Ensure no internal components are loose and that foam placement does not interfere with driver operation or airflow.
3. Confirm that no exposed conductors are contacting unintended surfaces before connecting to an amplifier.
4. If everything sounds normal, proceed to gradually increase the volume and enjoy.



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 that your input wires are properly connected to the crossover (including the ground wires returning to the negative connection) and to the binding post side. Ensure the input wires and binding posts are not shorted by stray wires or other metal, which could create 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 to tinned/bare wire, 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 a solid connection, and solder welds are tight. You should see no movement in the joint itself. Check crossover wiring for any bare wires that are inadvertently touching where they 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 wires that are inadvertently touching where they shouldn't. Ensure that binding post terminals are not inadvertently touching. An amp shutting down is likely a straight short to ground, meaning it's seeing no resistive load. If the source cannot be identified, contact us.
5. **Lack of Bass** – There are a few things that can cause a lack of bass. Check to make sure all your connections have the same polarity on both the inside and the outside of the binding post. Inverting the polarity of one speaker will cause bass cancellation. Ensure there is free airflow around the port openings and that they are not 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.