TriTrix MTM TL Tower Speaker Kit Pair

Thank you for purchasing the TriTrix MTM Transmission Line tower speaker kit. This kit has been precision cut using CNC machinery for the best possible fit and finish. With a little time and patience your finished product will provide years of enjoyment and premium quality sound. Please follow the instructions below for the best possible results.

Suggested tools and consumables:

Drill	Rag or paper towels
Screwdriver	Solder
Wood clamps (you can never have too many of these)	Soldering iron
Sanding block and/or electric finishing sander	Hot glue gun
Wood glue	Wood Filler
Wire stripper/crimper	5/64" drill bit

Package contents:

First, empty the contents of the package and review parts to ensure everything has been included and is in good condition. If any parts are missing or damaged, please contact our customer service department at 1-800-338-0531.

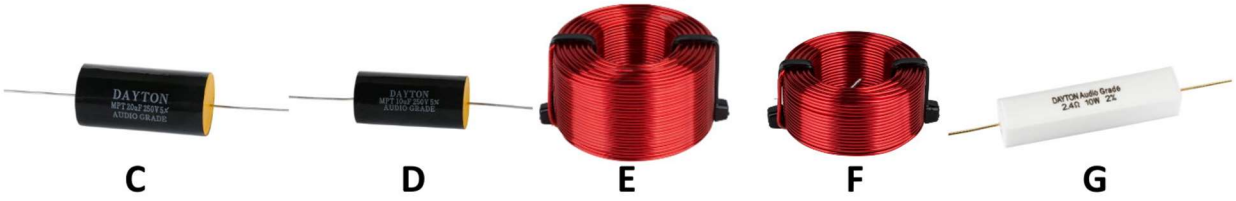
Note: Crossover components, binding posts, or terminals may be substituted with parts of equal or higher quality depending on stock.

Main Components:

A B

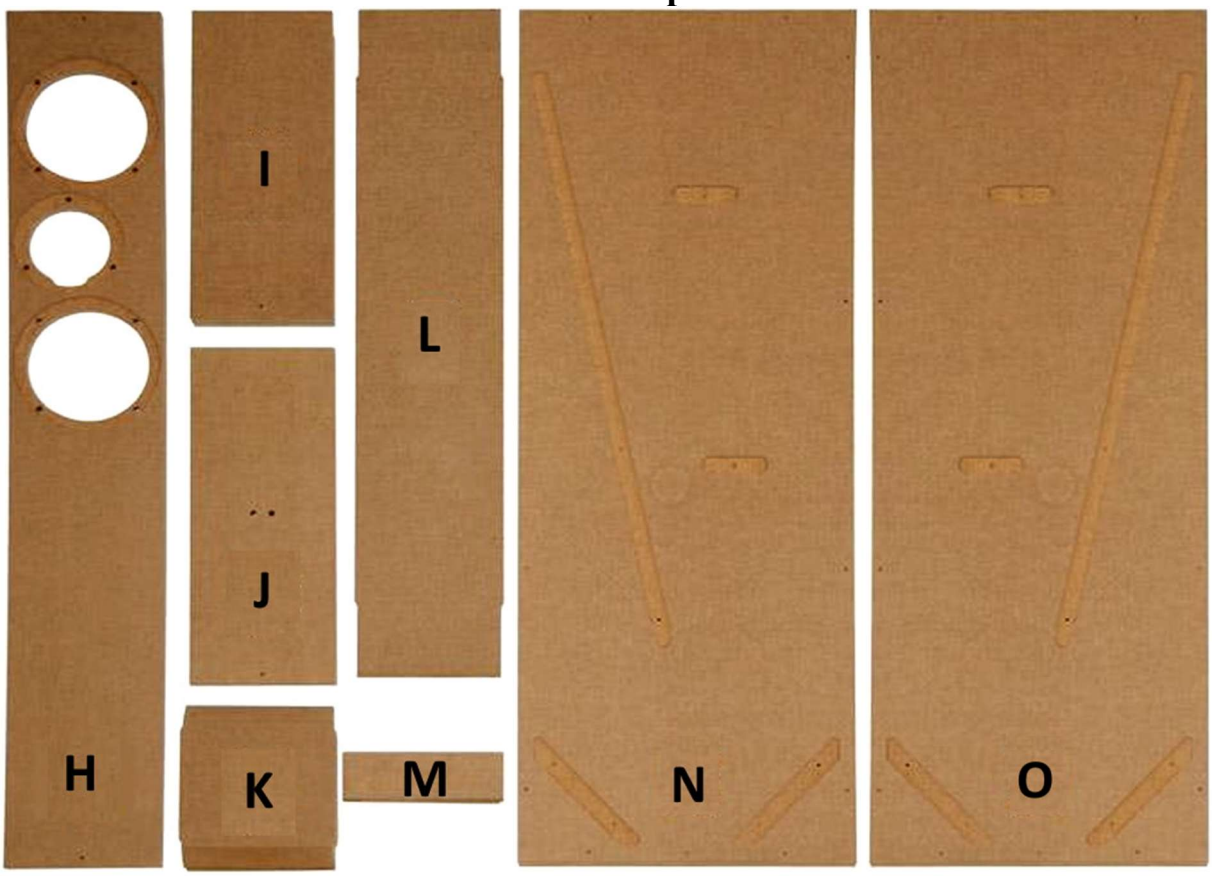
A) 2 x Dayton Audio DC28FS-8 1-1/8" Silk Dome Shielded Tweeter
B) 4 x Dayton Audio DC130BS-4 5-1/4" Classic Shielded Woofer 4 Ohm

Crossover Components:



C) 2 x Dayton Audio DMPC-20 20uF 250V Polypropylene Capacitor
D) 2 x Dayton Audio DMPC-10 10uF 250V Polypropylene Capacitor
E) 2 x Dayton Audio LW182-5 2.5mH 18 AWG Perfect Layer Inductor
F) 2 x Dayton Audio LW18-60 0.60mH 18 AWG Perfect Layer Inductor
G) 2 x Dayton Audio DNR-2.4 2.4 Ohm 10W Precision Audio Grade Resistor

Enclosure Components:



H) 2 x Front Baffles
I) 4 x Top/Bottom Panels
J) 2 x Rear Panels (with predrilled binding post holes)
K) 4 x Bottom Internal Baffles
L) 2 x Internal Center Baffles
M) 4 x Upper Internal Braces
N) 2 x Right Side Panels
O) 2 x Left Side Panels

Hardware, Wire, and Other Components:

P) **2 x** Parts Express Dual-Ended Gold Binding Post Speaker Terminal Pair
Q) **15 x** 0.205" (16-14) Female Disconnect
R) **100 x** #6 x 1-5/8" Trim Head Wood Screws Black
S) **20 feet** 16 AWG 2-conductor Power Speaker Wire (Red/Black)
T) **22 x** #8-32 Hurricane Nuts
U) **22 x** 8-32 x 1-1/4" Button Socket Head Screws Black Oxide
V) **2 x** Acousta-Stuf Polyfill 1 lb. Bag

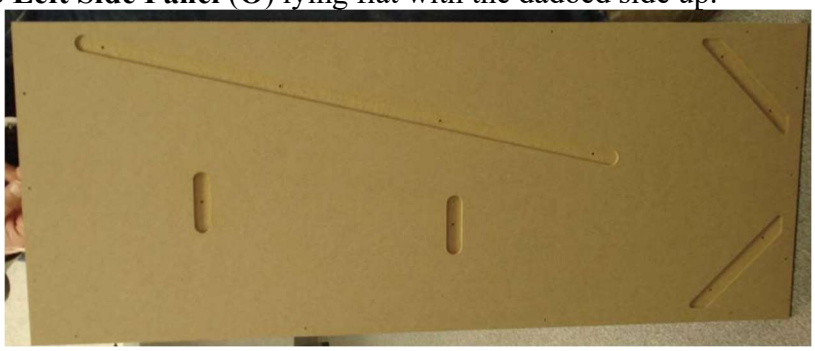
Enclosure Assembly:

1) First, before gluing anything, do a dry fit of the enclosure to familiarize yourself with the parts and assembly. This will also give you a chance to ensure that all pieces have been cut properly.

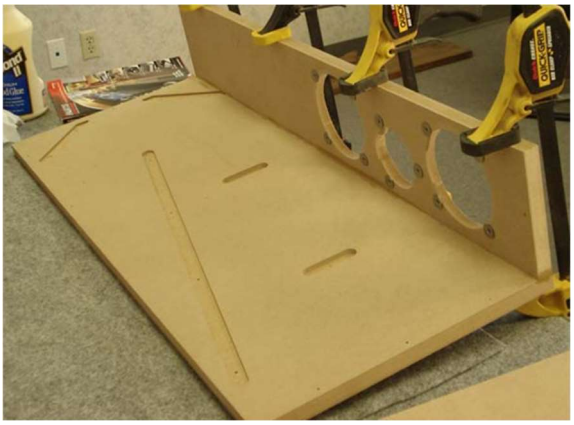
2) Next, set the enclosure parts out on a flat level surface and ensure that all pieces are free of dust and debris.

3) Before beginning assembly, place the **Front Baffle** (**H**) face down on a flat work surface. Install 11 x **#8-32 Hurricane Nuts** (**T**) into the predrilled holes around the driver cutouts. Set the Hurricane Nuts into the holes and tap into place with a mallet or hammer.

4) Start with the **Left Side Panel** (**O**) lying flat with the dadoed side up.



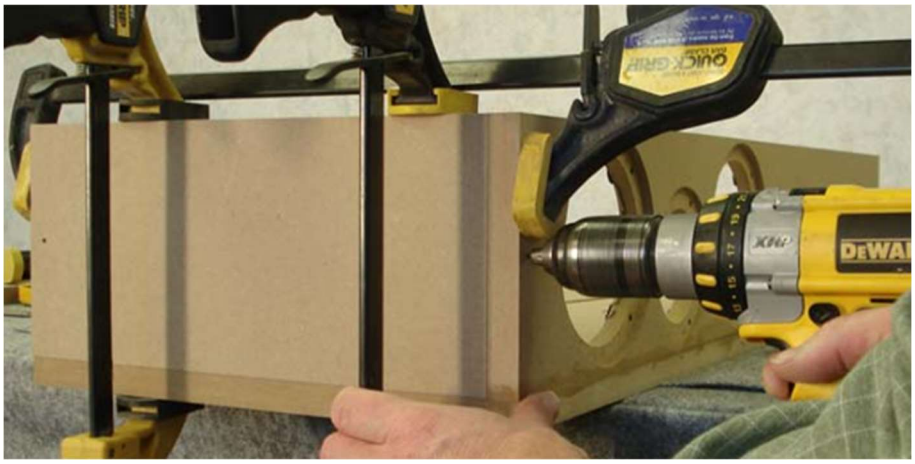
5) Apply a bead of glue to the joining surface of the **Left Side Panel** (**O**) and **Front Baffle** (**H**). Then set Front Baffle in place applying enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). Clamp into place ensuring that the exterior edges are flush. Allow to dry according to the glue manufacturer's recommendations and remove clamps.



6) Using the 4 predrilled holes in the Left Side Panel as a guide, drill pilot holes into the Front Baffle with a 5/64" drill bit. Install 4 x **#6 x 1-5/8" Trim Head Wood Screws** (**R**).

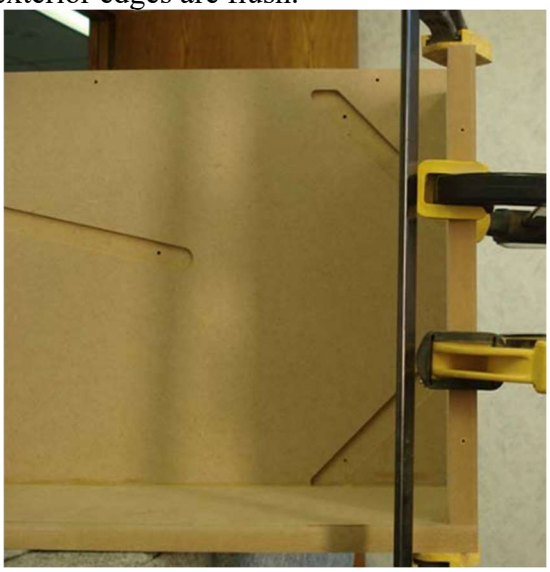
7) Apply a bead of glue to all joining surfaces of one **Top Panel** (**I**) and the Front Baffle/Left Side Panel assembly. Then set in place applying enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). Clamp into place ensuring that the exterior edges are flush.

8) Using the predrilled hole in the top of the Front Baffle as a guide, drill a pilot hole into the Top Panel with a 5/64" drill bit. Install a **#6 x 1-5/8" Trim Head Wood Screw** (**R**).



9) Using the 3 predrilled holes near the top of the Left Side Panel as a guide, drill pilot holes into the Top Panel with a 5/64" drill bit. Install 3 x **#6 x 1-5/8" Trim Head Wood Screw** (**R**). Remove clamps.

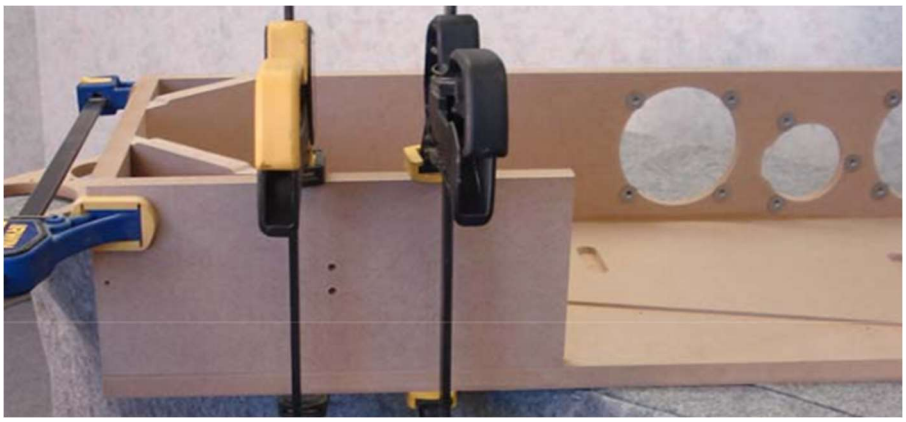
10) Apply a bead of glue to all joining surfaces of one **Bottom Panel** (**I**) and the Front Baffle/Left Side Panel assembly. Then set in place applying enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). Clamp into place ensuring that the exterior edges are flush.



11) Using the predrilled hole in the bottom of the Front Baffle as a guide, drill a pilot hole into the Bottom Panel with a 5/64" drill bit. Install a **#6 x 1-5/8" Trim Head Wood Screw** (**R**).

12) Using the 3 predrilled holes near the bottom of the Left Side Panel as a guide, drill pilot holes into the Bottom Panel with a 5/64" drill bit. Install 3 x **#6 x 1-5/8" Trim Head Wood Screws** (**R**). Remove clamps.

13) Apply a bead of glue to all joining surface of one **Rear Panel (with predrilled binding post holes)** (**J**) and the Bottom Panel/Left Side Panel assembly. Then set in place applying enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). Clamp into place ensuring that the exterior edges are flush.
Note: The Bottom Internal Baffles are in place in this photo, that is not necessary at this point.



14) Using the predrilled hole in the bottom of the Rear Panel as a guide, drill a pilot hole into the Bottom Panel with a 5/64" drill bit. Install a **#6 x 1-5/8" Trim Head Wood Screw** (**R**).

15) Using the 2 predrilled holes in the back of the Left Side Panel as a guide, drill pilot holes into the Rear Panel with a 5/64" drill bit. Install 2 x **#6 x 1-5/8" Trim Head Wood Screws** (**R**). Remove clamps.

16) Apply a bead of glue to all joining surfaces of 2 x **Bottom Internal Baffles** (**K**) and the enclosure assembly. Then set into the dadoes cut in the bottom of the Left Side Panel, applying enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). You may need to tap these into place with a hammer or mallet to fully seat these pieces into their dadoes.
Note: Do **not** screw these into place at this time.

17) Apply a bead of glue to the joining surface of 2 x **Upper Internal Braces** (**M**) and the Left Side Panel. Then set into the dadoes cut in the middle and top of the Left Side Panel, applying enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). You may need to tap these into place with a hammer or mallet to fully seat these pieces into their dadoes.
Note: Do **not** screw these into place at this time.

18) Apply a bead of glue to the joining surface of the **Internal Center Baffles** (**L**) and the Left Side and Top Panels. Then set into the long dado cut in the center of the Left Side Panel and against the Top Panel, applying enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). You may need to tap this into place with a hammer or mallet to fully seat this piece into its dado.
Note: Do **not** screw this into place at this time.

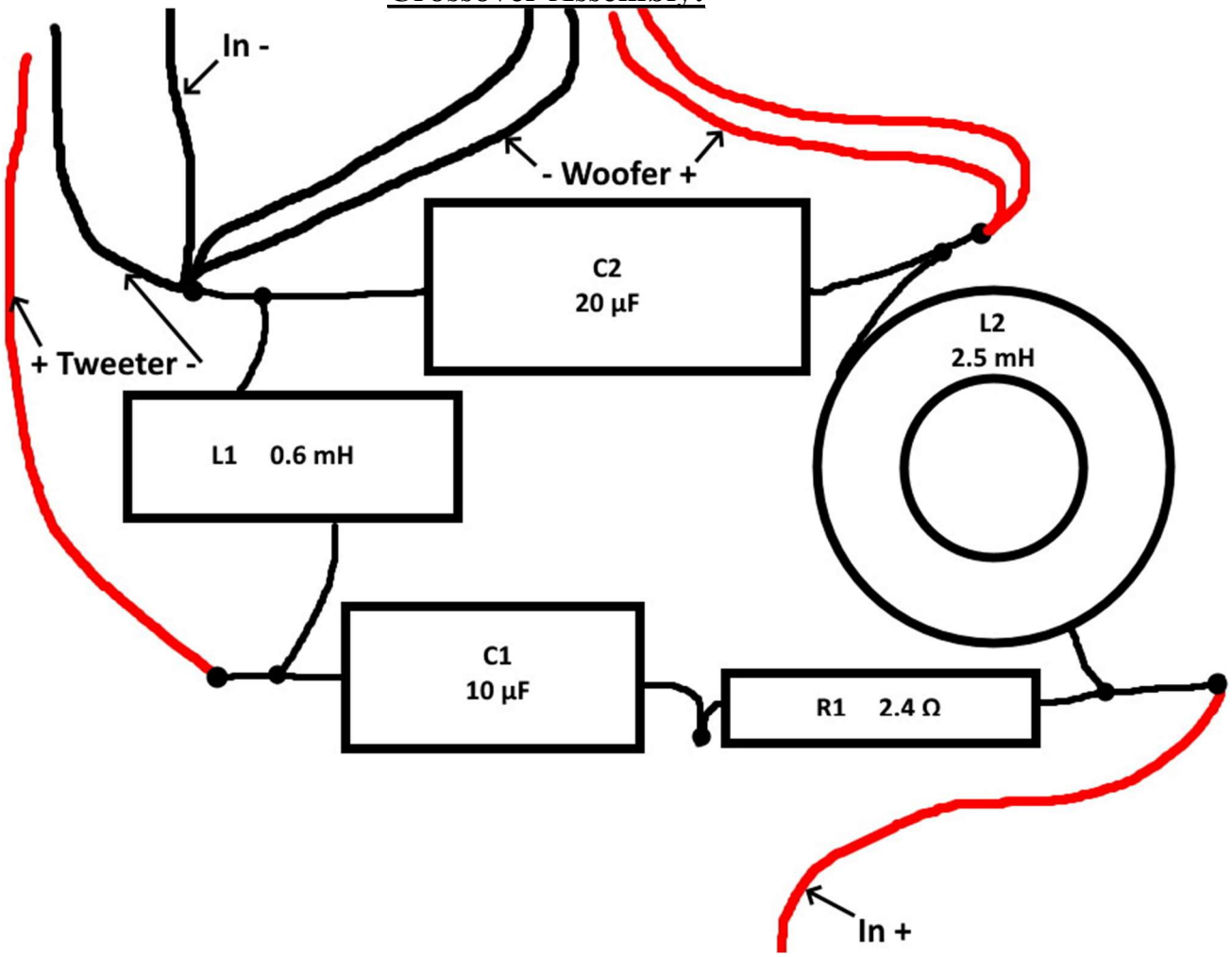
19) Apply a bead of glue to all joining surfaces of the **Right Side Panel** (**N**) and the enclosure assembly. Then set into place taking care to align all internal baffles and braces with their corresponding dadoes in the Right Side Panel. Apply enough pressure to ensure glue is spread through each joint (some glue squeeze-out can be expected). You may need to tap this panel into place with a hammer or mallet to fully seat the baffles and braces into their dadoes. Clamps can also help to get this panel installed properly.

20) Clamp into place ensuring that all exterior edges are flush (top, bottom, front, and back). Allow to dry according to the glue manufacturer's recommendations and remove clamps.

21) Using the remailing 20 predrilled holes in the Side Panels as a guide (10 holes in each side), drill pilot holes into the Internal Baffles and Braces with a 5/64" drill bit. Install 20 x **#6 x 1-5/8" Trim Head Wood Screws** (**R**).
Repeat steps 3 through 21 for second enclosure.

22) Finally, fill all screw holes and any gaps with wood filler (or mixture of sawdust and wood glue) and allow to dry according to the manufacturer's recommendations. Then sand all surfaces and seams until smooth. Finish enclosures to your liking. See our web page for ideas and examples.

Crossover Assembly:



Point-to-Point Wiring Diagram

23) Arrange the components as illustrated in the point-to-point wiring diagram above so the leads can be connected together as shown. Take careful note of the component type and the value of the component.
Note: The crossover schematic is provided at the end of this assembly guide.

24) Connect the leads of the components as shown in the diagram by twisting them together or creating interlocking "hooks" with the leads. Double check your layout to ensure all components are in the proper location and connections are correct.

25) With a hot soldering iron, apply solder to the connections between components. Heat the junctions evenly and verify that the solder flows into the connections rather than forming a "blob" on the surface (cold joint).

26) Cut two pieces of **16 AWG 2-conductor Speaker Wire (Red/Black)** (**S**) approximately 18" – 24" in length and label both of these wires "woofer". Strip 3/4" – 1" of insulation from one end of each wire. Solder the red wires to the output of the crossover network labeled "Woofer +" in the point-to-point wiring diagram.

27) Next cut another piece of **16 AWG 2-conductor Speaker Wire (Red/Black)** (**S**) approximately 18" – 24" in length and label this wire "tweeter". Strip 3/4" – 1" of insulation from one end of this wire. Solder the red wire to the output of the crossover network labeled "Tweeter +" in the point-to-point wiring diagram.

28) Cut one final piece of **16 AWG 2-conductor Speaker Wire (Red/Black)** (**S**) approximately 18" – 24" in length and label this wire "input". Strip 3/4" – 1" of insulation from one end of this wire. Solder the red wire to the output of the crossover network labeled "Input +" in the point-to-point wiring diagram.

29) Solder all the stripped black ends to the negative (-) connection at one time. This connection may require a lot of heat to properly wick the solder, so take your time and be patient when making this connection.

30) We recommend that you mount the completed crossover to a 3" x 5" board for easier installation into the enclosure.

Final Assembly:

Note: We recommend that you temporarily wire everything up at this point to ensure all parts (crossovers and drivers) are performing properly.

31) First install the crossover on the Internal Center Baffle or the Bottom of the enclosure.

32) Next, install the **Dual-Ended Gold Binding Post Speaker Terminal** (**P**) into the predrilled holes in the Rear Panel. Strip ½" – ¾" of insulation from the ends of the "input" wires from the crossover. Connect the "input" wires to the corresponding terminals (red to red, black to black).

33) Rout the woofer and tweeter wires to their approximate location.

34) Open one package of **Acousta-Stuf Polyfill** (**V**) and tease, or fluff up, the material to create a light, fluffy, and consistent texture. Loosely fill the entire front section of the enclosure. We suggest a medium fill behind the drivers, and a light to medium fill from below the drivers to the bottom, leaving the terminus section open. Also, make sure there is some open space directly behind the woofers to allow proper airflow for cooling.

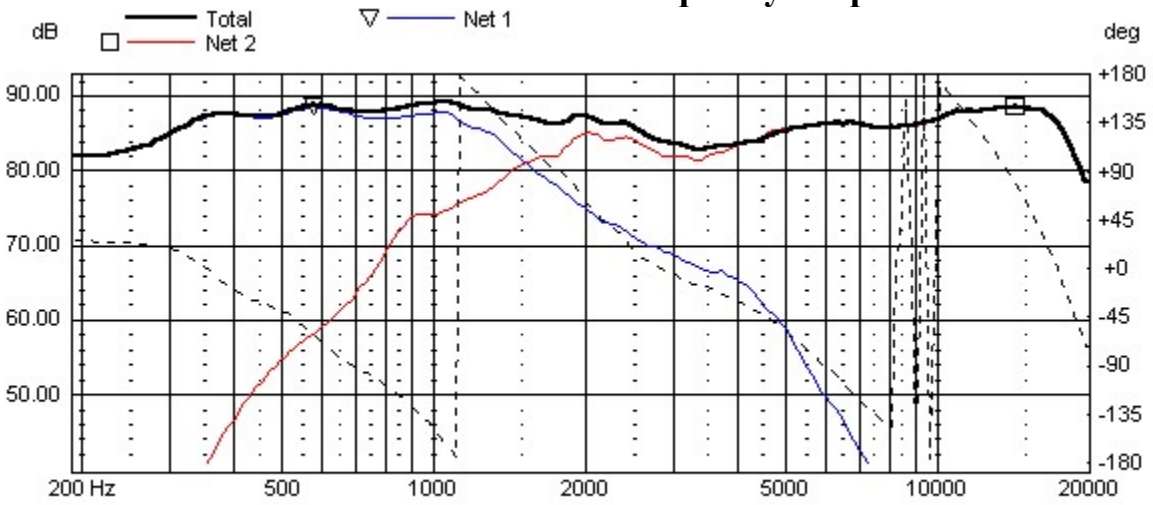
35) Strip approximately ½" of insulation from the ends of each "woofer" and "tweeter" wire. Crimp a **0.205" (16-14) Female Disconnect** (**Q**) to the end of each wire.

36) Connect the wires labeled "woofer" to the 2 x **Dayton Audio DC130BS-4 5-1/4" Classic Shielded Woofers** (**B**). Ensure correct polarity when you make this connection (Red to +, black to -). Set the woofers into their corresponding cutouts and secure using 8 x **8-32 x 1-1/4" Button Socket Head Screws** (**U**).

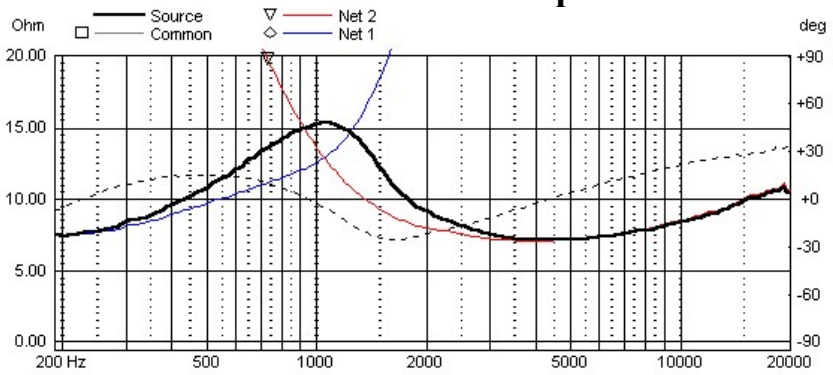
37) Connect the wires labeled "tweeter" to the **Dayton Audio DC28FS-8 1-1/8" Silk Dome Shielded Tweeter** (**A**). Ensure correct polarity when you make this connection (Red to +, black to -). Set the tweeter into its corresponding cutout and secure using 3 x **8-32 x 1-1/4" Button Socket Head Screws** (**U**).

You are now ready to enjoy your finished TriTrix MTM TL Tower speaker!

TriTrix MTM TL On-Axis Frequency Response:



TriTrix MTM TL Final Impedance:



TriTrix MTM TL Crossover Schematic: