Samba MT Speaker Kit

Thank you for purchasing the Samba MT speaker kit. This speaker kit was 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. Please follow the following instructions for the best possible results.

Suggested tools and consumables:

Drill
5/64" drill bit
Wood clamps (you can never have too many of these)
Sanding block and/or electric finishing sander
Wood glue
Speaker or hook-up wire
0.11" female disconnect terminal
0.205" female disconnect terminal
Rag or paper towels
Solder
Soldering iron
Hot glue gun
Binding post/terminal cup
Polyurethane glue (Gorilla Glue)
Cyanoacrylate Adhesive (super glue)
#6 x 3/4" Pan head wood screws

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 may be substituted with parts of equal of higher quality depending on stock.

Components:

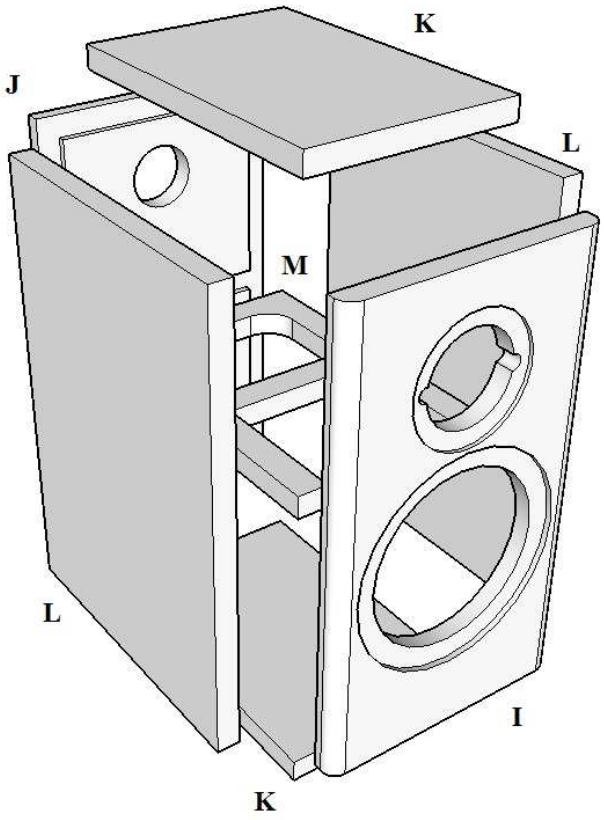
A B C

A) 1 x Dayton Audio RS180P-4 7" Reference Paper Woofer 4 Ohm
B) 1 x Dayton Audio RST28F-4 1-1/8" Reference Series Fabric Dome Tweeter 4 Ohm
C) 1 x Port Tube 2" ID Adjustable

D E F G H

D) 1 x 0.25 mH air core inductor
E) 1 x 1.2 mH air core inductor
F) 2 x 7.5 uF capacitor
G) 1 x 4.7 ohm resistor
H) 1 x 1 ohm resistor

Enclosures:



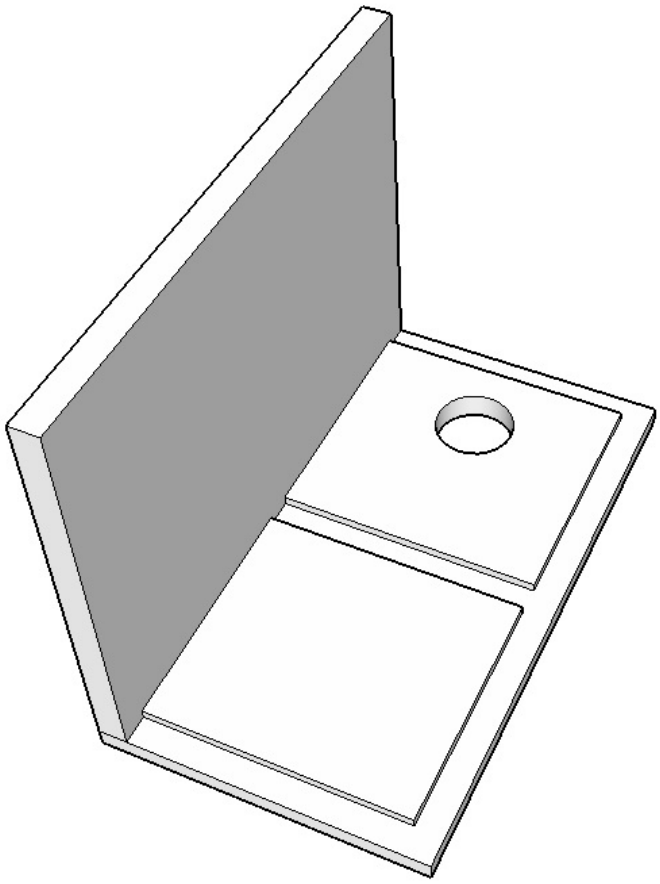
I) 1 x Front
J) 1 x Back
K) 2 x Top/Bottom
L) 2 x Sides
M) 1 x Brace

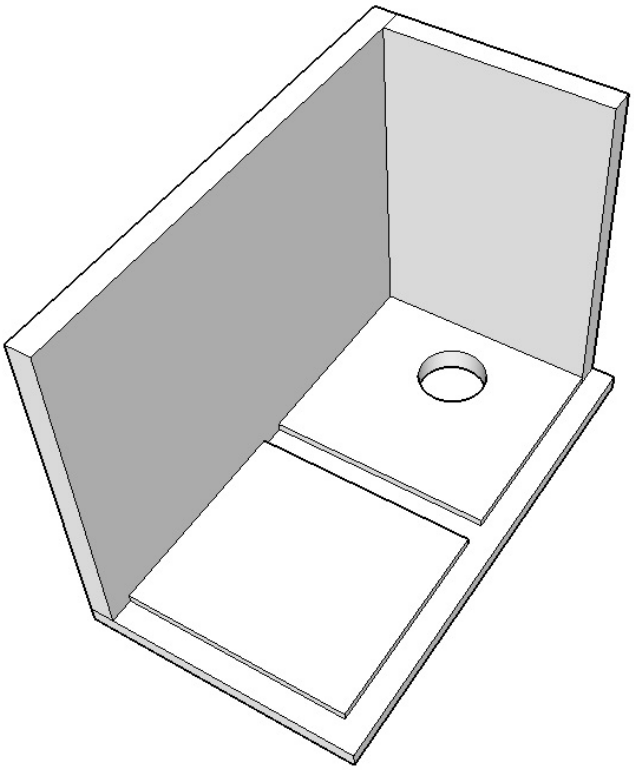
Enclosure Assembly:

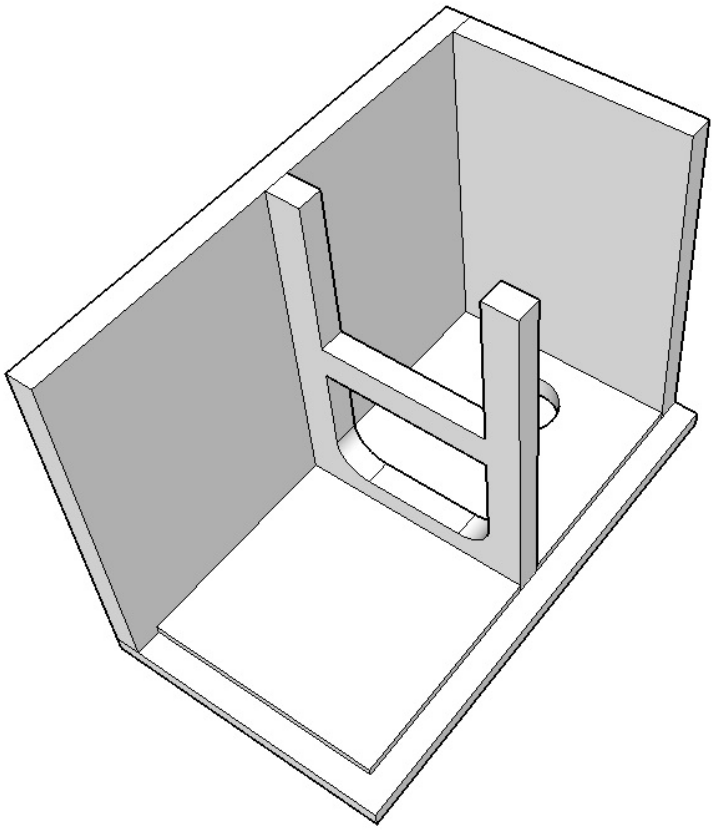
1) First, take the back panel and cut or drill holes required for the speaker termination of your choice (binding posts, terminal cup, Speakon, etc…).

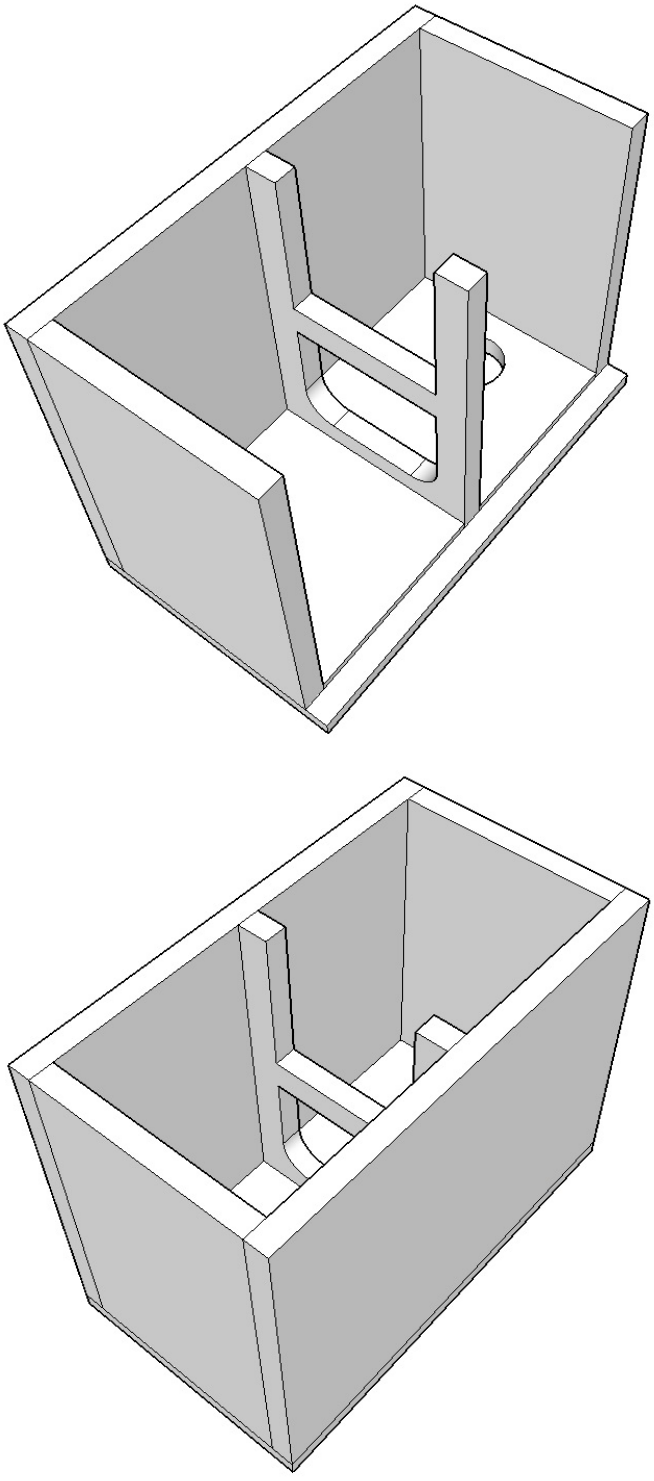
2) Next, set the enclosure parts out on a flat level surface and ensure that all pieces are free of dust and debris.

3) With the back panel lying flat, glue all mating surfaces of each panel in the order shown below.



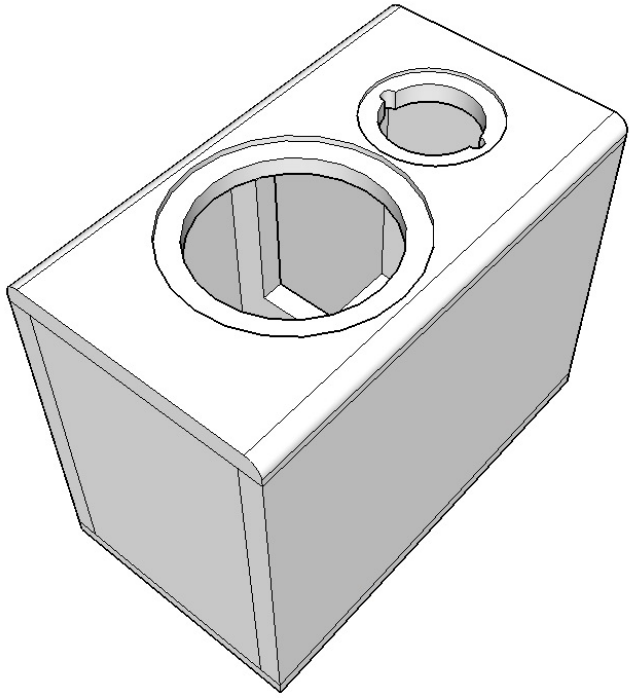






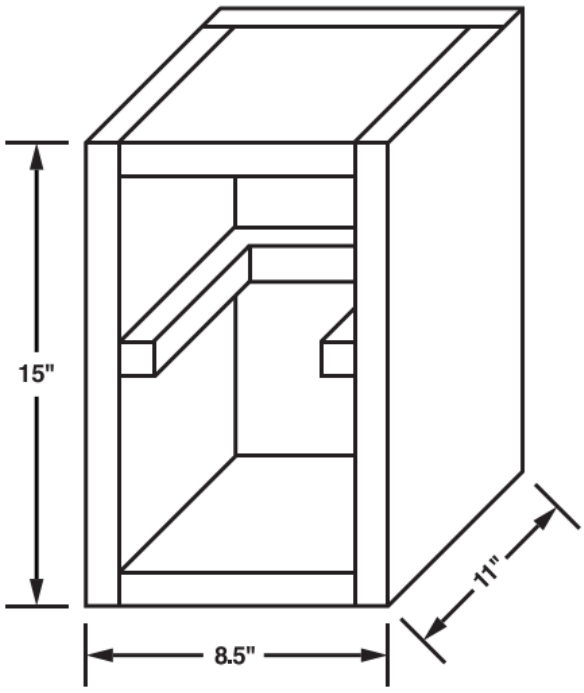
4) Make sure all mating surfaces are flush with each other and clamp glued joints together. Using a damp rag or paper towel, wipe away any glue squeeze-out on the outside of the enclosure (excess glue on the inside is fine). Allow to dry according to the glue manufacturer's recommendations and remove clamps.

5) Glue front baffle on being careful to line up all edges. Make sure the port opening in the rear is at the top of the enclosure (behind the tweeter opening). Repeat step 4.

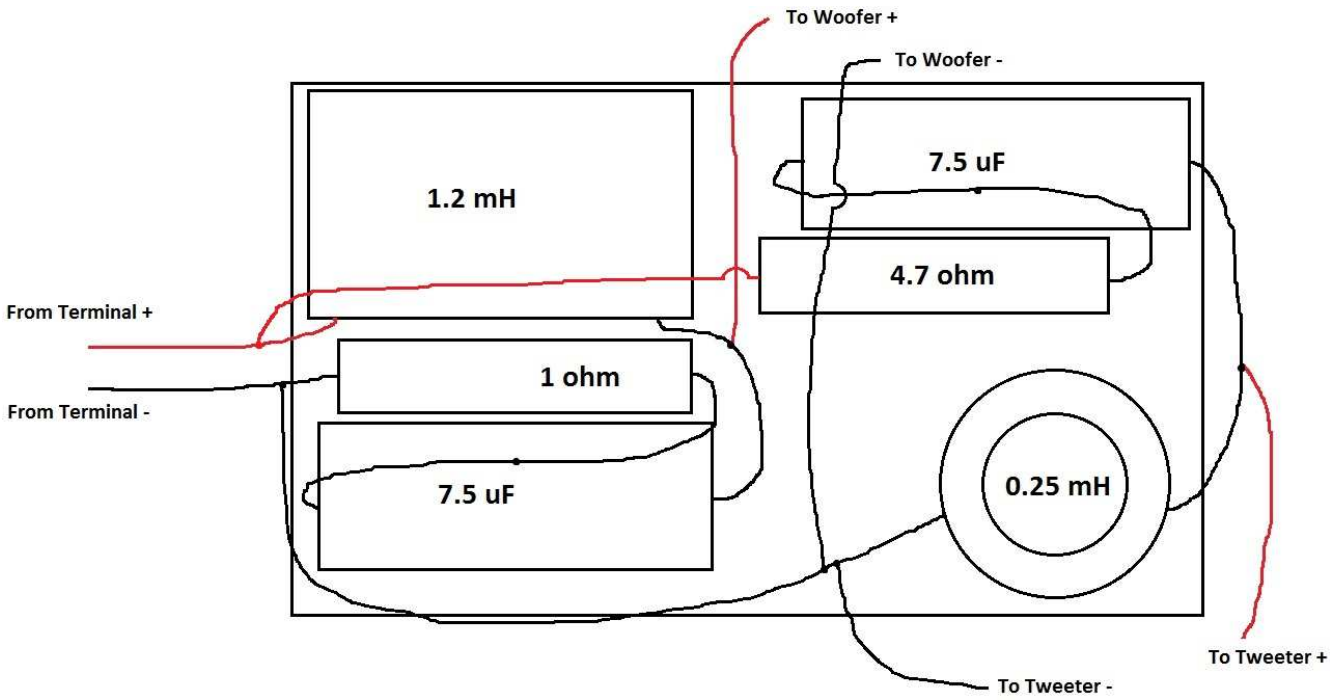


6) Sand and finish enclosure to your liking. See our web page for examples.

Note: For the baffle only version of this kit, build your enclosure to the following dimensions.



Crossover assembly:



7) 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. (The crossover schematic is provided at the end of this assembly guide.) If you would like, the crossover can be mounted to a scrap piece of wood or cardboard using hot glue to make handling it a little easier.

8) 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.

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

10) Cut two lengths of 2-conductor speaker wire approximately 8"-12" in length, then solder them at the outputs of the crossover network as shown in the schematic so that the marked polarity of the wire matches the driver polarity shown in the schematic. Label each wire "woofer" or "tweeter" corresponding to the schematic.

11) Finally, cut one length of 2-conductor speaker wire approximately 6"-8" in length, and label the length of wire "Input".

Final Assembly:

12) Insert crossover through woofer hole and glue crossover to the bottom of the enclosure (polyurethane glue, high temperature hot glue gun, or epoxy is recommended). Ensure all crossover components are securely held in place to prevent rattles.

13) Install port tubes in the back panel. Depending on port length, the tuning frequency will be between 40-45 Hz. The longer the port, the lower the tuning frequency.

14) Install the rear binding posts and connect the input wires from the crossover while observing polarity (positive = red, negative = black)

15) Connect tweeter wires to tweeter terminals while observing polarity (the positive terminal is marked with red marker).

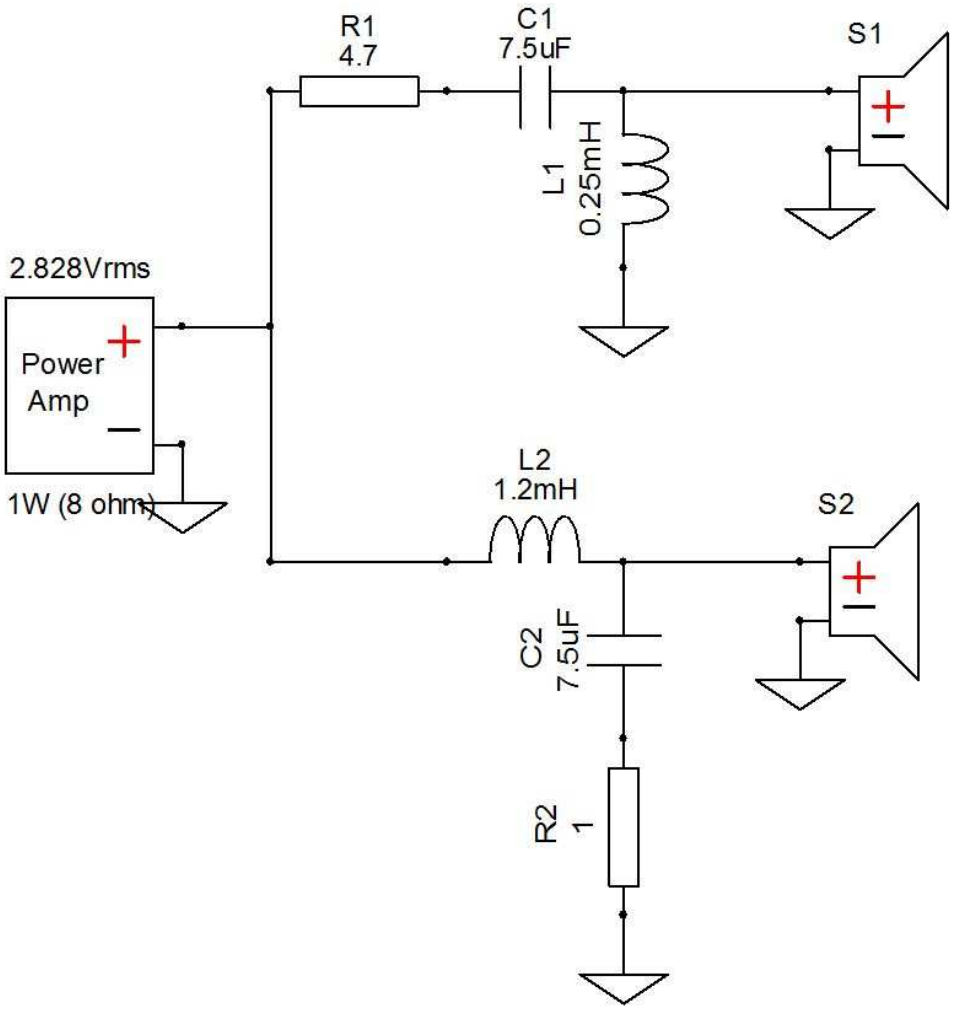
16) Connect woofer wires to woofer terminals while observing polarity. Set woofer in place. Using a screwdriver, secure woofer with screws just until tight being careful not to strip out the holes (a power drill is not recommended).

You are now ready to enjoy your finished speakers!

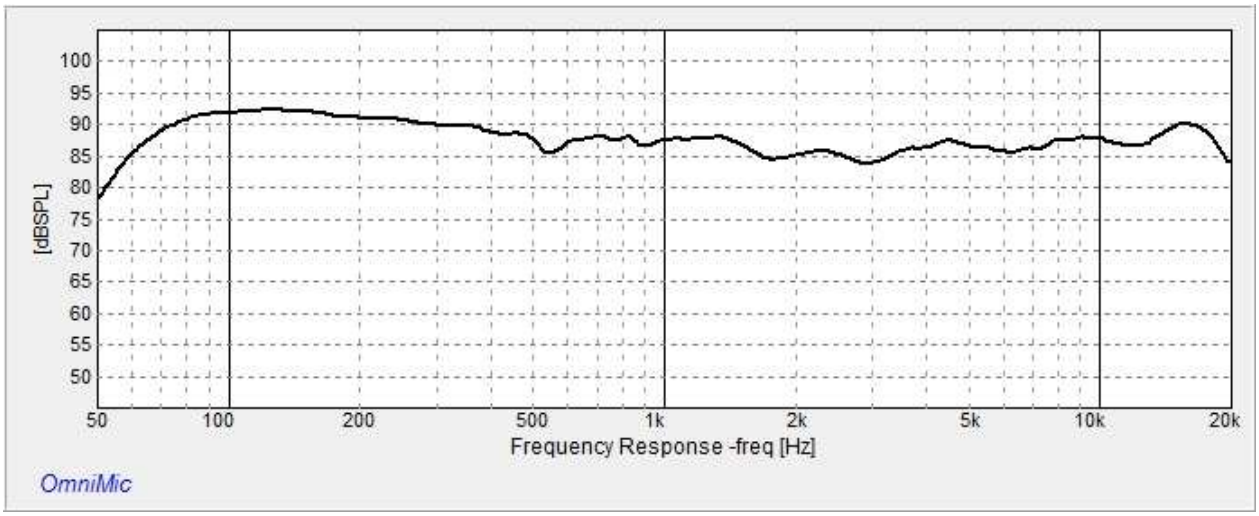
Additional parts used:

260-309	Gold Recessed 5-Way Banana Speaker Terminal Rectangle
081-422	#8 x 3/4" Deep Thread Pan Head Screws Black 100 Pcs.

Crossover Schematic:



Measured Frequency Response:



Impedance and Phase: