

Overnight Sensations Speaker Kit

Thank you for purchasing the Overnight Sensation cabinet 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:

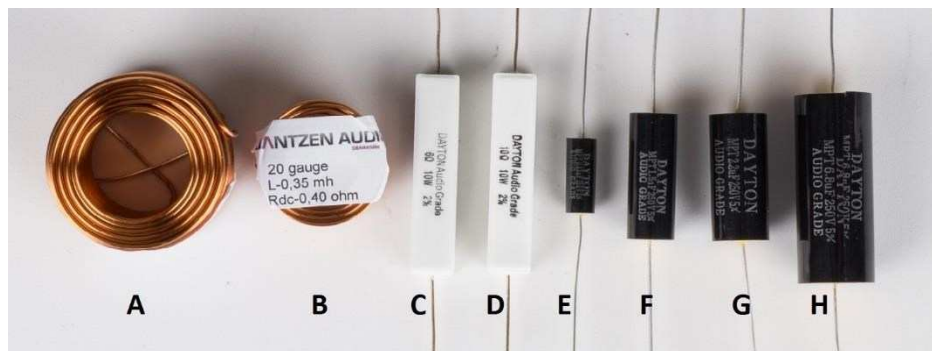
Drill	Rag or paper towels
5/64" drill bit	Solder
Wood clamps (you can never have too many of these)	Soldering iron
Sanding block and/or electric finishing sander	Rubber mallet
Wood glue	Binding post/terminal cup
Speaker or hook-up wire	Polyurethane glue (Gorilla Glue)
0.11" female disconnect terminal	Hot glue gun
#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 or higher quality depending on stock.

Components:

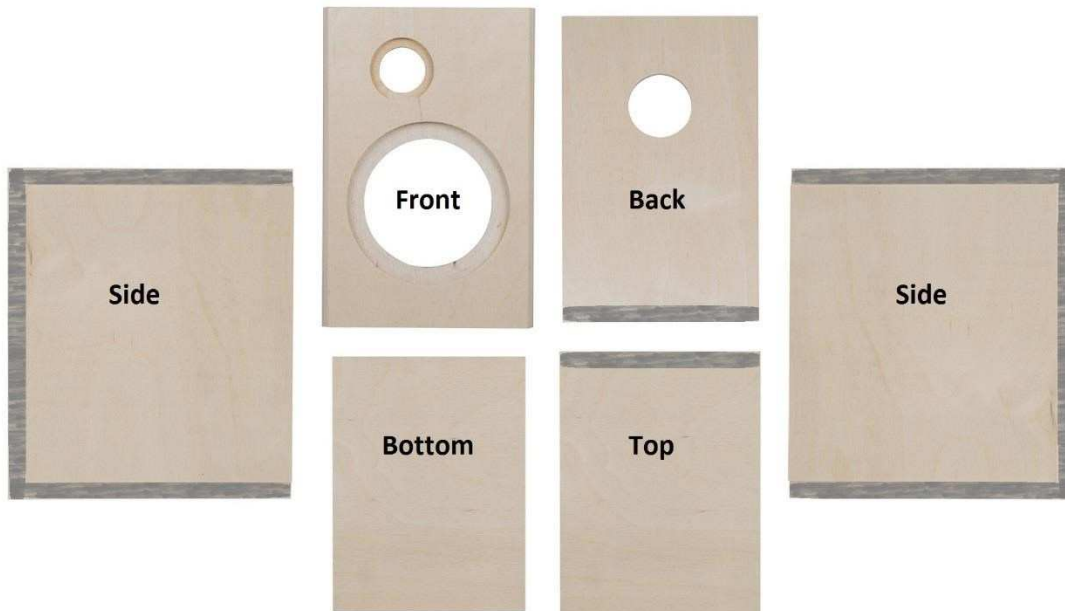


- A) 1.1 mH air core inductor
- B) 0.35 mH air core inductor
- C) 6 ohm resistor
- D) 10 ohm resistor
- E) 0.22 uF capacitor
- F) 1.5 uF capacitor
- G) 2.2 uF capacitor
- H) 6.8 uF capacitor



- I) HiVi B4N 4" aluminum midbass
- J) Dayton Audio ND20FA-6 3/4" neodymium dome tweeter
- K) 1-3/8" ID adjustable port tube

Enclosure:



- L) Front x 2
- M) Back x 2
- N) Top x 2
- O) Bottom x 2
- P) Sides x 4

Enclosure Assembly:

- 1) First, take the back panel and cut or drill holes required for the speaker termination of your choice.
- 2) Next, set the enclosure parts out on a flat level surface and ensure that all pieces are free of dust and debris.
- 3) Apply a thin layer of wood glue to all shaded areas in the enclosure parts diagram above.

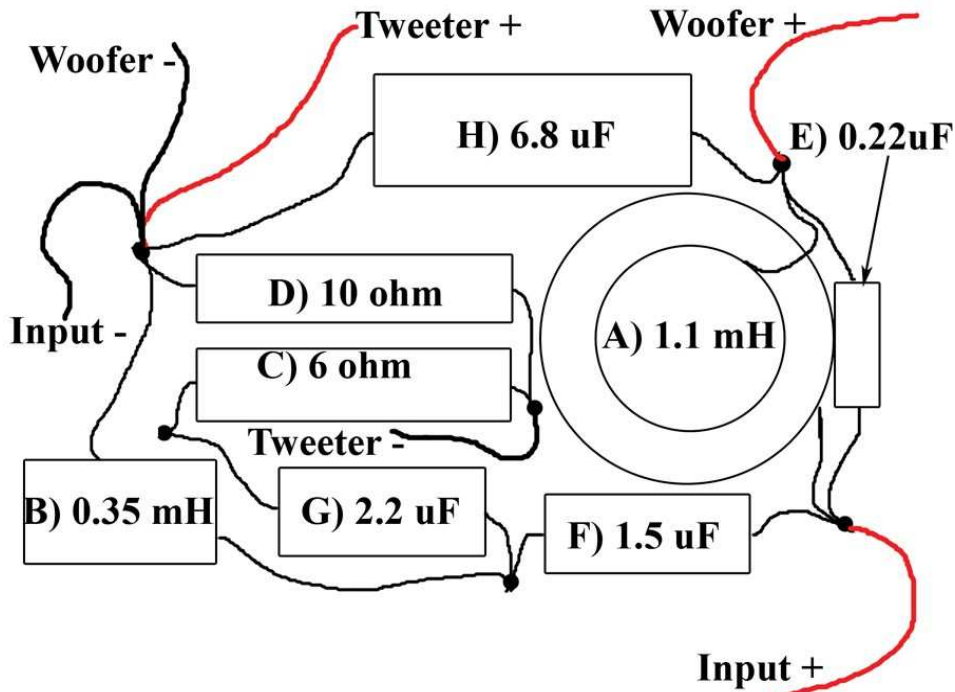


- 4) With the back panel lying flat, place the top, sides and bottom in place and apply clamps so that even pressure is applied to all glued surfaces. Using a damp rag or paper towel wipe away any glue squeeze-out on the outside of the enclosure (excess glue on the inside is fine). Allow to dry according to the glue manufacturer's recommendations.



- 5) Once the glue is dry, remove the clamps. Now apply a thin layer of glue to the front edge of the enclosure. Set the front baffle in place on the glued edge. While ensuring all edges are even and square, space clamps to apply even pressure to all glued surfaces. Wipe away any glue squeeze-out on the outside of the enclosure. At this time double check that all edges are even and square (this cannot be adjusted once the glue is dry). Allow to dry according to the glue manufacturer's recommendations.
- 6) Sand and finish enclosure to your liking. See our web page for examples.

Crossover assembly:



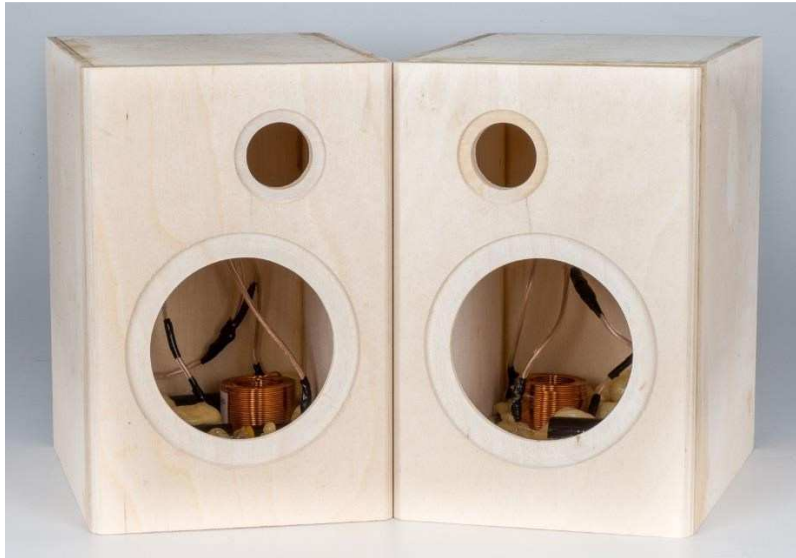
Point-to-point wiring diagram

- 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 3 1/4" x 4 1/2" board 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 10"-16" 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.

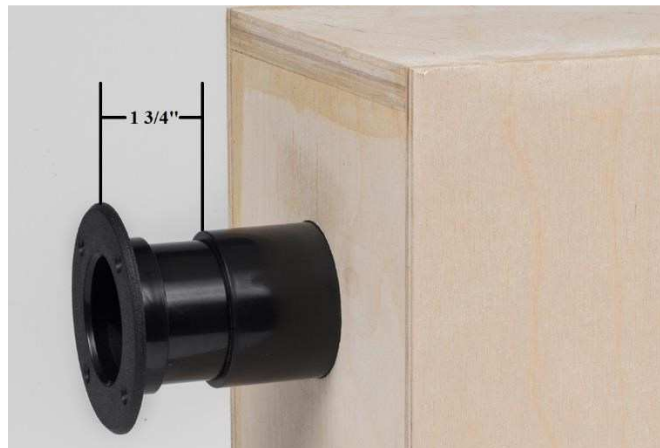
Note: The tweeter is wired out of phase with the woofer. The positive of the tweeter is tied into the negative of the woofer and input.

- 11) Finally, cut one length of 2-conductor speaker wire approximately 6"-10" 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, hot glue gun, or epoxy is recommended). Ensure all crossover components are securely held in place to prevent rattles.



- 13) Port installation is a little tricky as the adjustable end of the port does not completely fit through the hole. Begin by separating the port into two pieces. From inside the enclosure, slide the adjustable end through the port hole (only one side will fit as it has a slight taper). Next slide the flanged end of the port into the adjustable end and glue in place so that the flange is 1-3/4" from the adjustable tube for an overall length of 6". Now insert the port assembly and screw the port in place.

- 14) Install your preferred speaker termination (binding posts, terminal cup, Speakon, etc...), and connect the input wires from the crossover while observing polarity (positive = red, negative = black)
- 15) Connect woofer wires to woofer terminals while observing polarity and 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).
- 16) Connect tweeter wires to tweeter terminals while observing polarity and set tweeter in place. Press tweeter into opening until flange sits flush with the front baffle. If tweeter will not sit flush, set a wooden block on the tweeter flange and gently tap into place with a rubber mallet.
- 17) You are now ready to enjoy your Overnight Sensations.



Additional parts used:

- 260-244 Speaker Terminal Cup Gold Insulated 5-Way Binding Post
- 081-340 M3.5 x 25mm Cap Head Wood Screws Black 100 Pcs
- 095-282 .205" (16-14 gauge) Female Disconnect 50 Pcs
- 095-286 .110" (16-14 gauge) Female Disconnect 50 Pcs

Overnight Sensations Crossover Schematic

