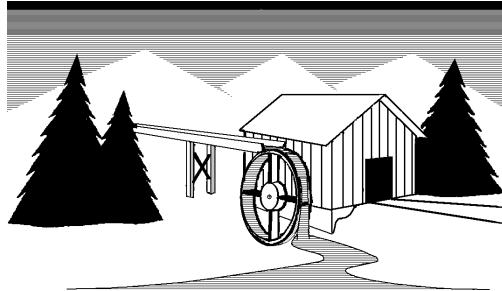


North Creek



Music Systems

Okara II - Ikemo

Loudspeaker Cabinet

**A small loudspeaker featuring the
North D25-06S and Vifa P13WH-00-08
in an EBS vented box.**

Woodworker's Kit Contents:

The woodworker's kit portion of this loudspeaker system was shipped in one carton.

This carton contains:

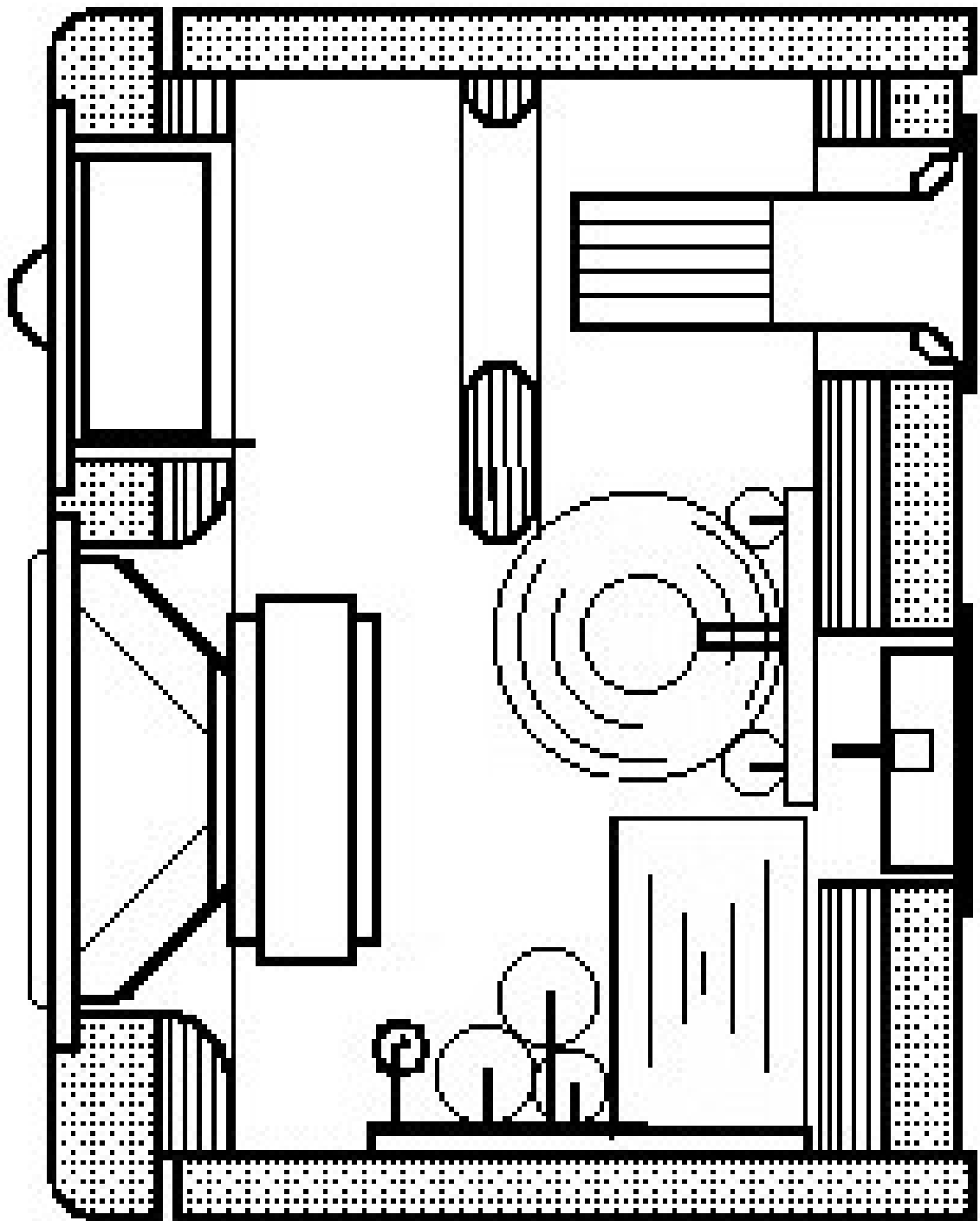
- (1) Instruction package.
 - This Cabinet Assembly Manual
 - Response Curves
 - North Creek *Cabinet Handbook*
 - North Creek Wiring Guide

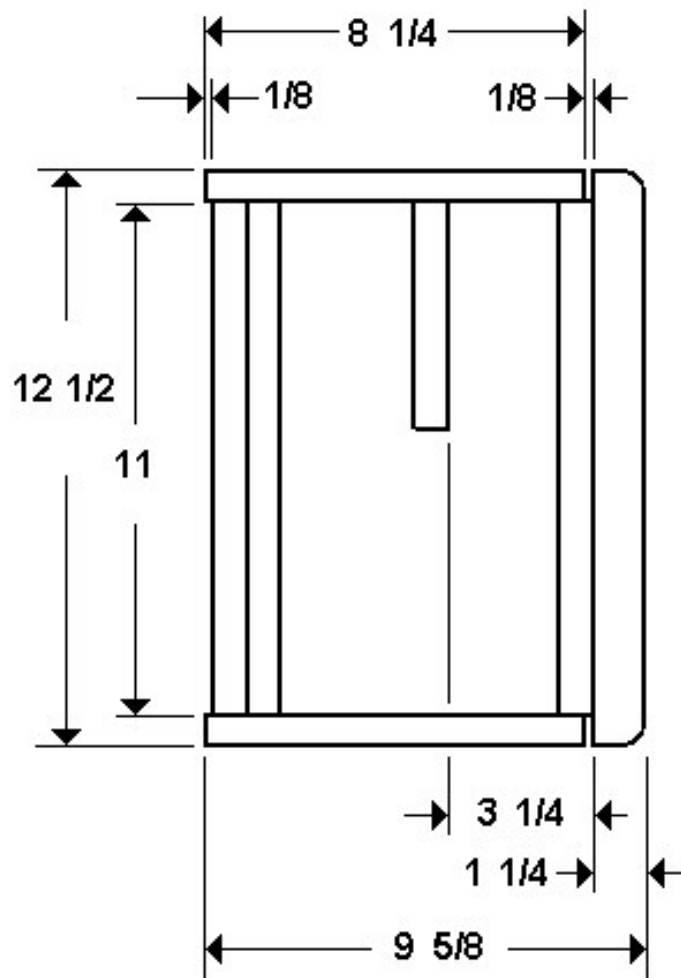
- (2) 1 oz. Rolls of Dacron stuffing.
- (1) Tube of "Liquid Nails" adhesive.
- (2) 2" x 4" Flared Port tubes.
- (80) Straws.

- (1) Roll of gasket tape.
- (8) Mushroom grille fasteners.
- (24) #6-1" black screws.
- (8) back cup screws.
- (2) Single-Wired Back Cups with Gold Plated Binding Posts and Post Pins.

- (2) Assembled woofer crossover networks.
- (2) Assembled tweeter crossover networks.

- (2) North D25-06S Tweeters.
- (2) Vifa P13WH Woofers.

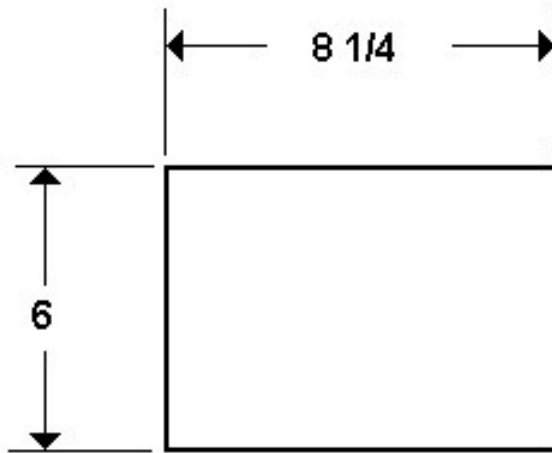




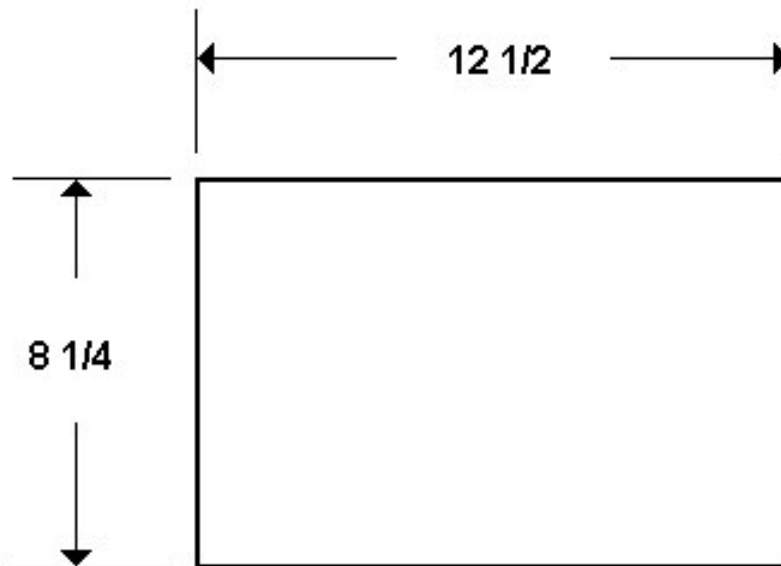
An overall dimensioned side view. Note that the back panel is inset $\frac{1}{8}$ ", whilst the fascia is outset $\frac{1}{8}$ ". This is purely cosmetic; one may eliminate both without affecting the internal box dimensions.

Additionally, the fascia is $1 \frac{1}{4}$ " MDF. This was made with one layer of $\frac{3}{4}$ " and one layer of $\frac{1}{2}$ " MDF, glued together with Titebond. One may use two layers of $\frac{3}{4}$ " if this is more convenient, as this is also cosmetic and will not affect the system performance.

Top and bottom panels: four pieces; 3/4" MDF, 8 1/4" by 6"



Side panels: 4 pieces, 3/4" MDF, 8 1/4" x 12 1/2"

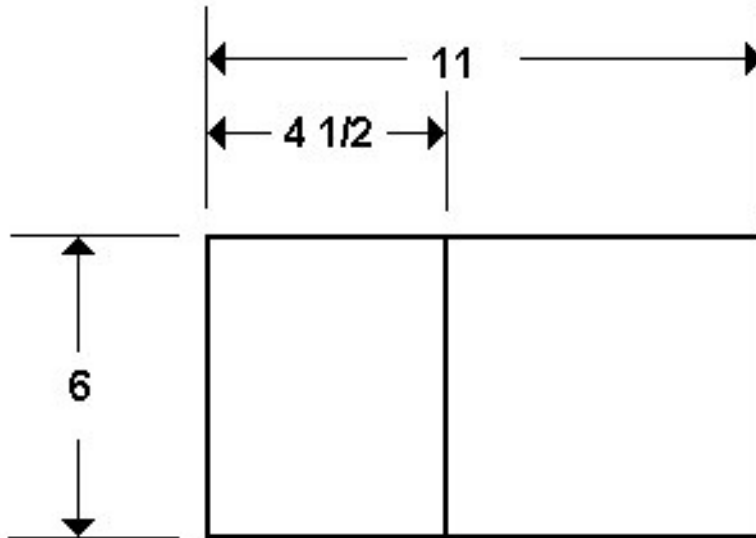


Back, Inner Front and Brace Panels:

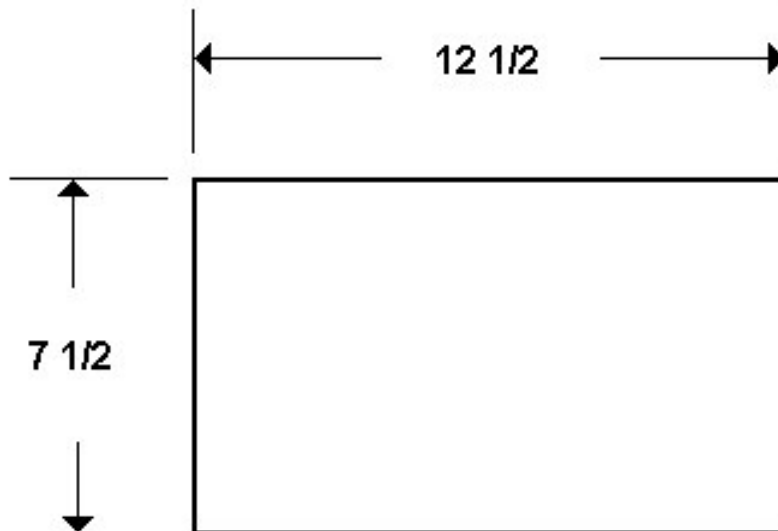
2 pieces 3/4" MDF 6" x 11"

4 pieces 3/4" Birch Plywood 6" x 11"

2 pieces 3/4" Birch Plywood 6" x 4 1/2"



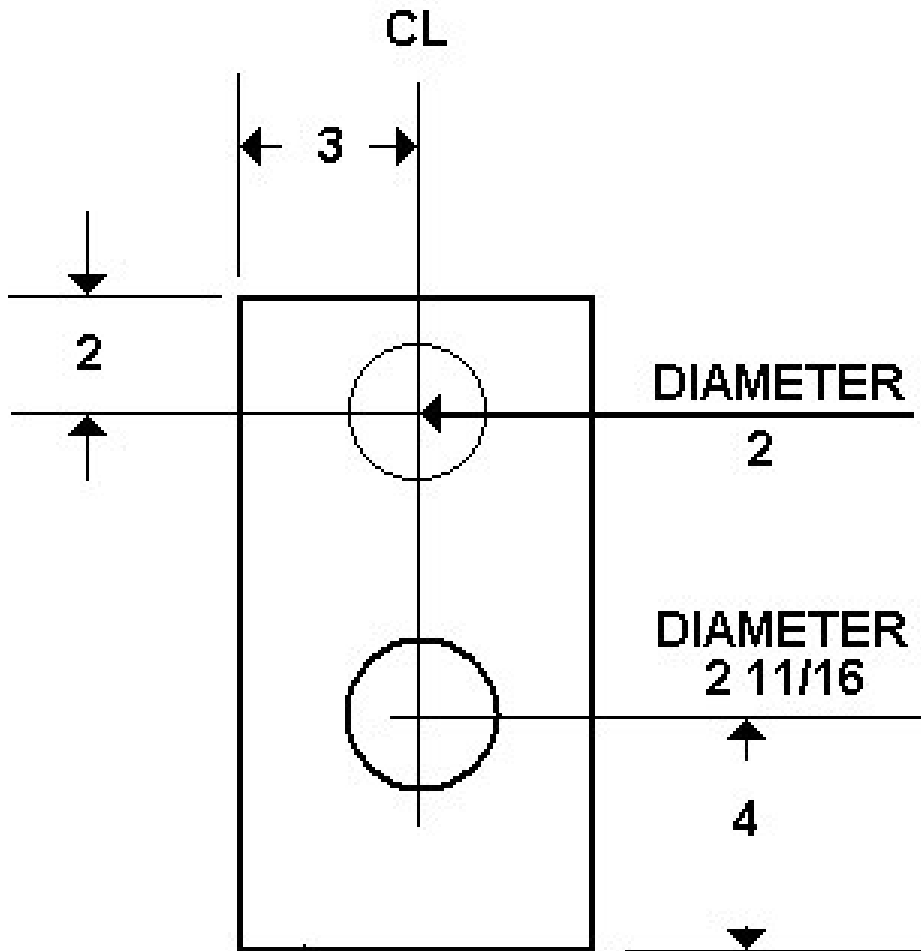
Fascia: 2 pieces 1 1/4" or 1 1/2" MDF (may be a lamination); 7 1/2 x 12 1/2



Back Panel:

This panel is composed of one layer of MDF and one layer of birch plywood, laminated with hard glue such as Titebond.

The vent through hole and binding post cup through hole are cut through both panels.

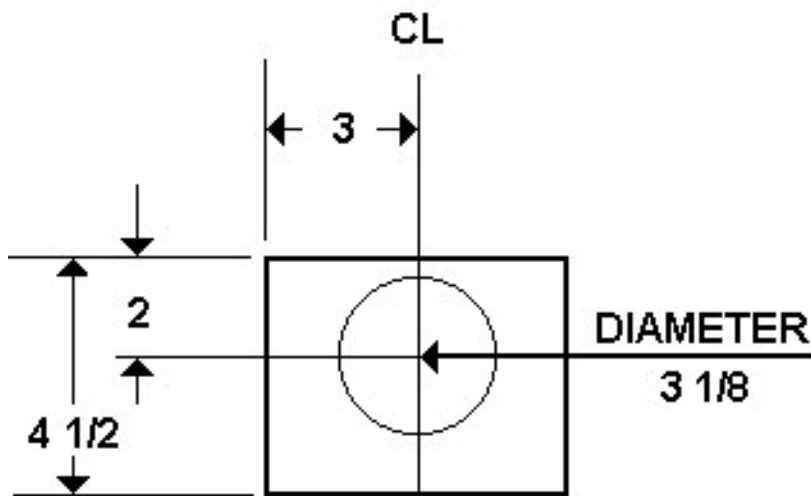


Brace:

This panel is machined from 3/4" birch plywood.

The openings for the port tube and crossover are cut with either a router or saber saw. These openings are then flared on both sides with a 1/2" diameter roundover bit, and sanded smooth.

Note that the port tube opening has the same diameter as the tweeter through hole in the inner front and fascia, so one may machine all of these panels with the same router circle cutter setting.



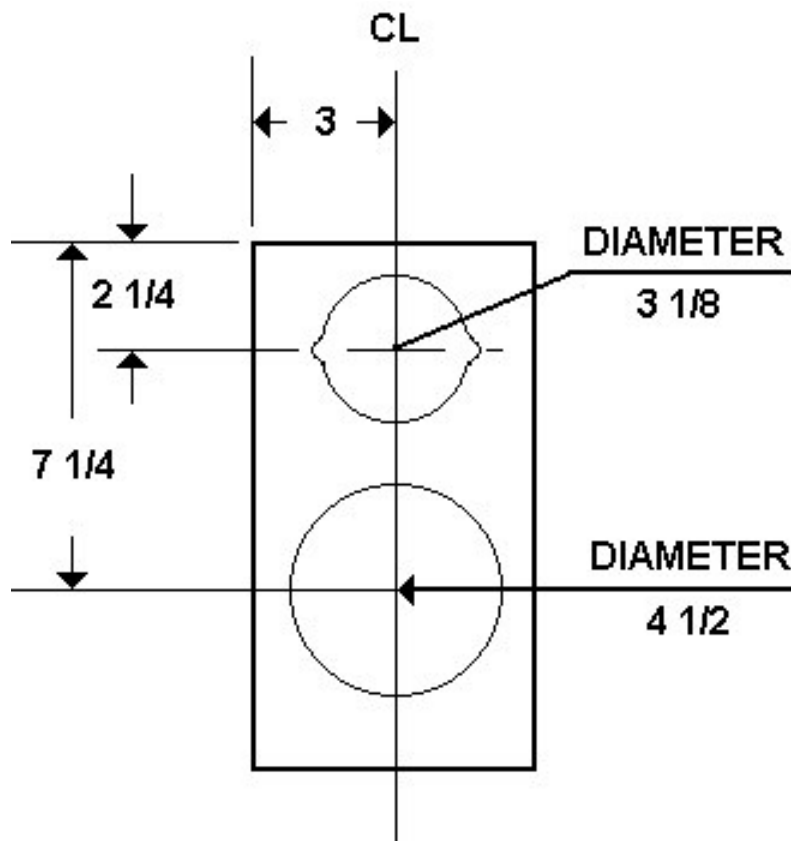
Inner Front:

This panel is machined from 3/4" birch plywood.

After machining, the inside edge of the woofer cut out should be flared by a 1/2" diameter to 1" diameter roundover bit (the larger the diameter of this roundover, the better). The roundover should then be sanded smooth.

Both the woofer and tweeter through holes should be sealed with a very thin layer of hard glue, to prevent any air leak due to the porosity of the plywood.

Note that the through hole for both the woofer and tweeter are the same diameter as the matching openings in the Fascia. All of these panels should be machined with the same setting on a router circle cutter.



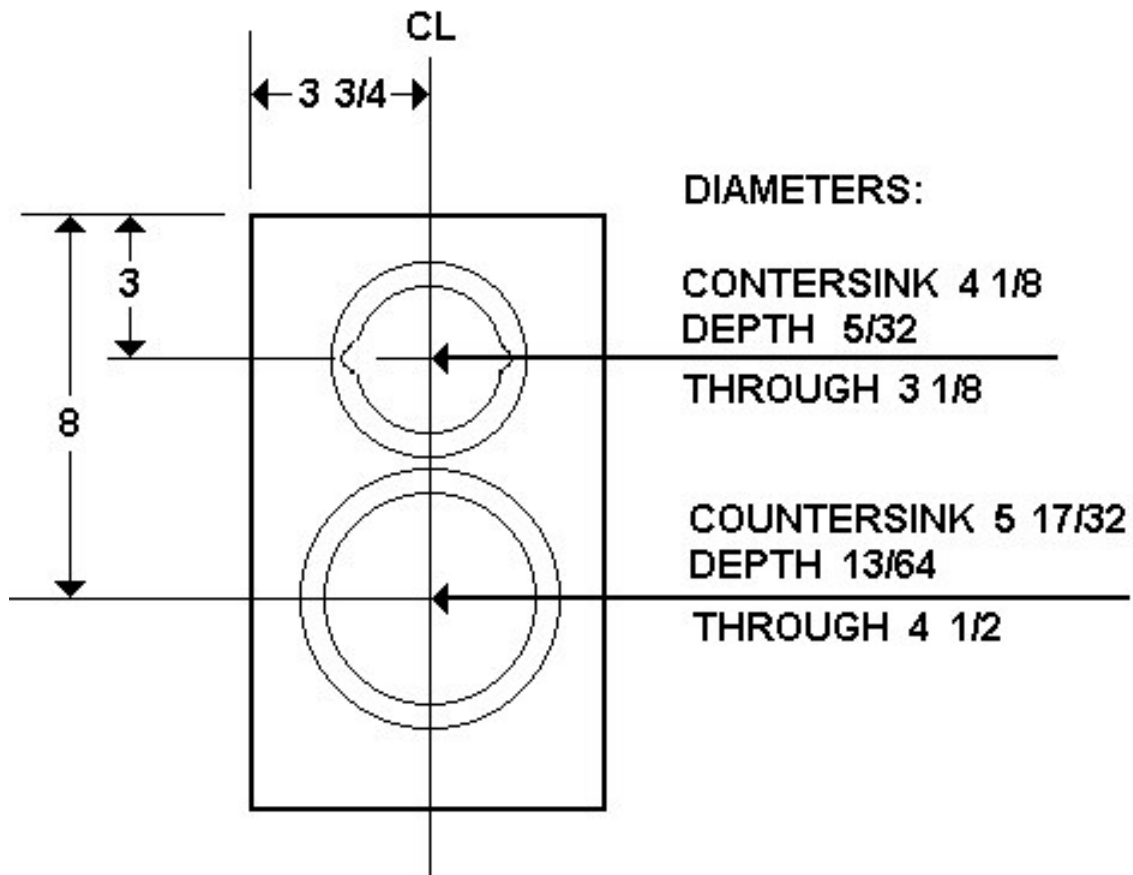
Fascia:

This panel may be either 1 1/4" MDF or 1 1/2" MDF. It may be constructed of a single layer, two layers of 3/4" material, or a layer of 3/4" and a layer of 1/2". If using two layers, the adhesive should be a hard glue such as Titebond.

When machining the woofer and tweeter countersinks, measure carefully to be absolutely certain they are the correct diameter. The diameter we specify is actually very slightly larger than the flange driver flange diameters, to account for the thickness of any paint or surface finish.

Woofer and tweeter mounting holes should be drilled at this point.

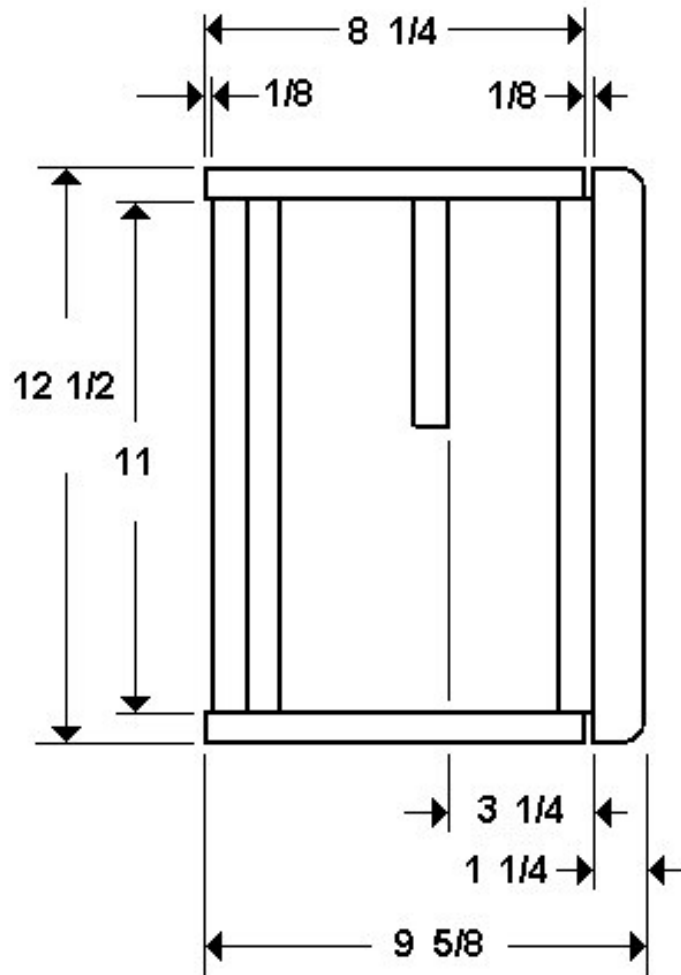
The front edge of the fascia is rounded over with a minimum 3/4" diameter, maximum 1 1/4" diameter, roundover bit. If one chooses to veneer the front, roundover the side edges and leave the top and bottom square.



Assembly order: Side + top + back; brace; inner front; bottom, side. It is assumed the Fascia is finished separately and attached last.

Note the brace is offset $3 \frac{1}{8}$ " from the front edge of the top and side panels. This is $3 \frac{1}{4}$ " from the projecting edge of the "inner front".

Note that the back panel is inset $\frac{1}{8}$ ", whilst the fascia is outset $\frac{1}{8}$ ". This is purely cosmetic; one may eliminate both without affecting the internal box dimensions.



Port Tube, Crossover and Driver installation:

The cabinet is pretty tight, but everything fits together smoothly. It is essential that the installation is done in order:

Without permanently attaching anything, the crossover boards must be inserted into the speaker cabinet.

1) The tweeter crossover is installed through the woofer opening. The crossover is inserted inductor first, rotated under the brace and placed on the back panel against the right side. Move the board out of the way by pushing it up as close to the top of the cabinet as possible.

2) The woofer board is then installed through the woofer hole and rotated until the board lies flat on the bottom of the speaker and the large inductor is against the left side panel.

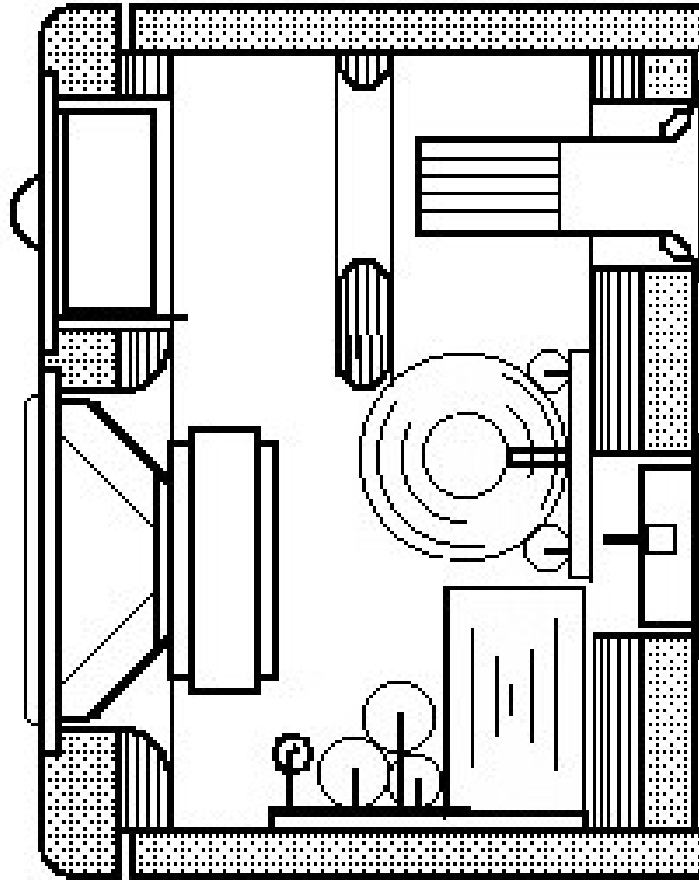
3) Port Tube: Cut the straws into 3" length. Fill each port tube with as many straws as it will accept. The straws will begin to go out of round and into a hexagonal shape. It is VERY IMPORTANT that the port tube be filled with straws. The port tube is also installed by drilling four holes through the flat section of the port flange, slitting gasket tape in half the long way and adhering it to the rear of the flange, and inserting into the cabinet back, drilling pilot holes for the screws and screwing in the port.

4) The tweeter board now is permanently attached by applying Liquid Nails or Hot Melt Glue to the back of the board through the binding post cup opening. The board should be adhered to the back of the cabinet as close to the port tube and as close to the right side of the cabinet as possible. This board will partially overlap the binding post cup opening, but must not completely cover it. Try not to get too much glue on the region of the board that is over the binding post opening. If using Liquid Nails, allow to dry overnight.

5) Once the tweeter board is dried in place, apply adhesive to the bottom of the woofer crossover board through the woofer opening. This board should then be adhered to the bottom of the crossover cabinet with the large coil as close as possible to the left side. Make sure no uninsulated wires from the tweeter board are touching uninsulated wires from the woofer board. Allow the adhesive to dry.

6) Feed the heat-shrunked Red, Black, White and Blue crossover input wires through the binding post cup opening. Turn the cabinet on its face. Attach the crossover input wires to the color coded posts on the cup (red and white to Red Post; black and blue to Black Post). The binding post cup is screwed to the cabinet.

7) The cabinet is then returned to its back, the woofer and tweeter wires pulled through their respective driver openings. Cut the stuffing in half long-ways. Push one piece between the woofer board and the brace. Push the other piece behind the tweeter hole and along the top edge of the woofer hole.



8) Adhere gasket tape to the woofer and tweeter countersinks, and trim off excess. Puncture through the gasket tape to mark the mounting screw positions.

9) The white (+) and blue (-) leads are attached to the tweeter, red (+) and black (-) to the woofer, and the drivers are mounted with #6 screws.

Optimum placement is on a 24" to 30" stand. The cabinet should be angled back 6 to 10 degrees by adjusting the spikes on the top of the stand. The rear of the cabinet should be no closer than six inches from the rear wall, and may be as far as 40 inches out. If used on a bookshelf, the tweeters should be just above ear level.

North Creek Music Systems

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