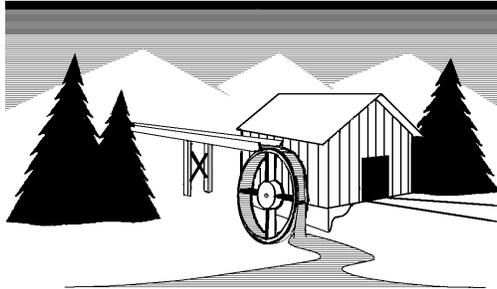


North Creek



Music Systems

Echo

Loudspeaker Kit

**A small loudspeaker featuring the
North D25-06S Tweeter and 13W-06S Woofer
in an acoustic suspension box.**

Woodworker's Kit Contents:

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

This carton contains:

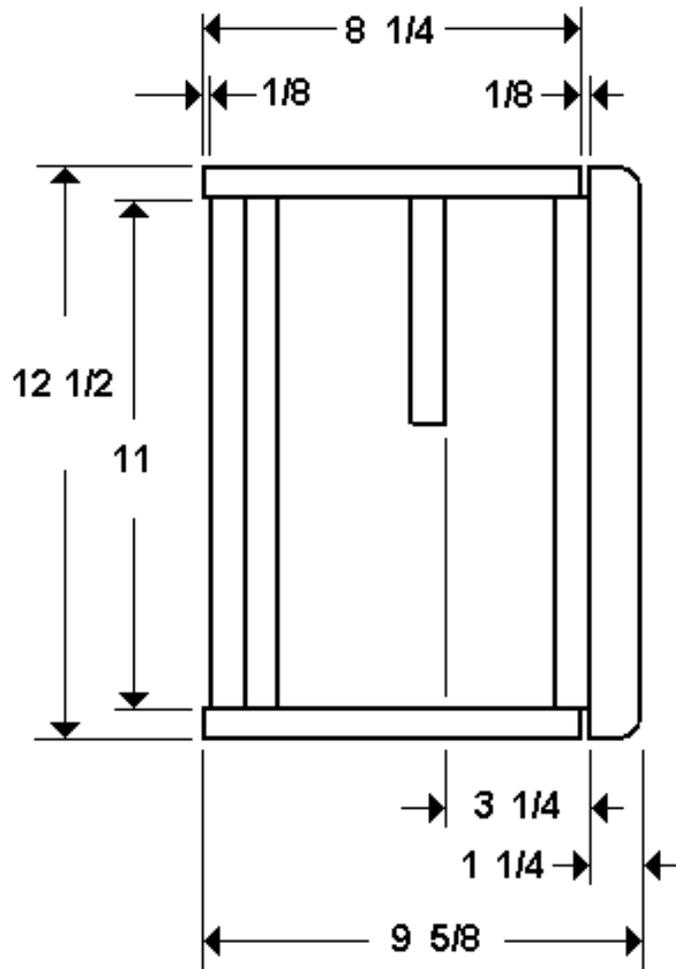
- (1) Instruction package.
 - This Cabinet Assembly Manual
 - Crossover Assembly Manual
 - Response Curves
 - North Creek *Cabinet Handbook*
 - North Creek Wiring Guide

- (2) 1 oz. Rolls of Dacron stuffing.
- (1) Tube of "Liquid Nails" adhesive.

- (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) Bag of Tweeter Crossover Parts.
- (2) Bag of Woofer Crossover Parts.

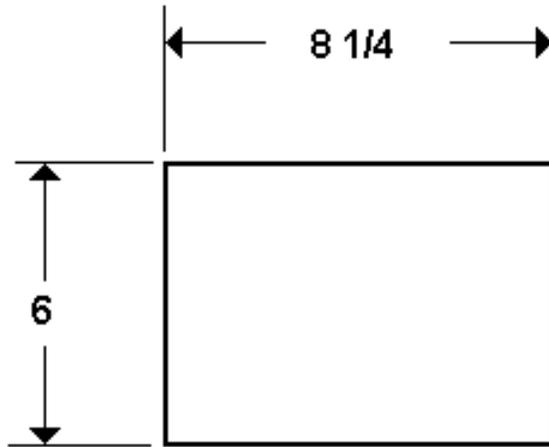
- (2) shielded North D25-06S Tweeters.
- (2) North 13W-06S Woofers.



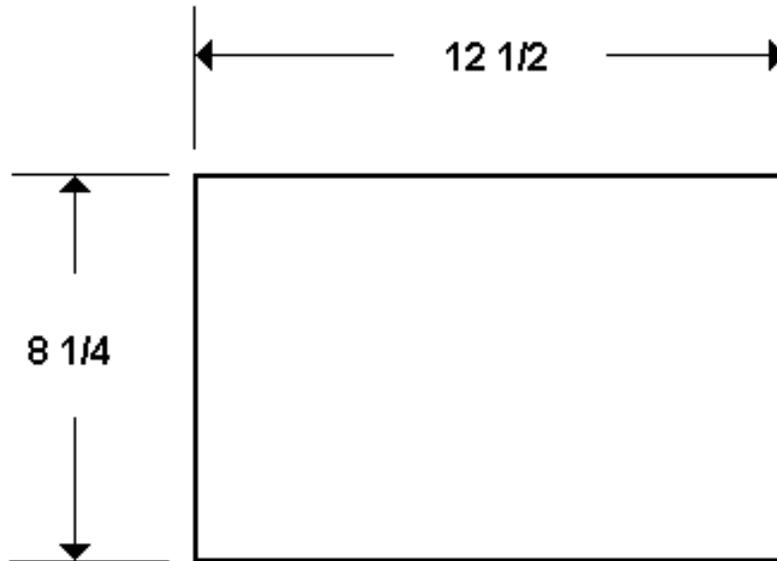
An overall dimensioned side view. Note that the back panel is inset $\frac{1}{8}$ ", whilst the fascia is outset $\frac{1}{8}$ ". This is purely cosmetic; one may eliminate both without affecting the internal box dimensions.

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"

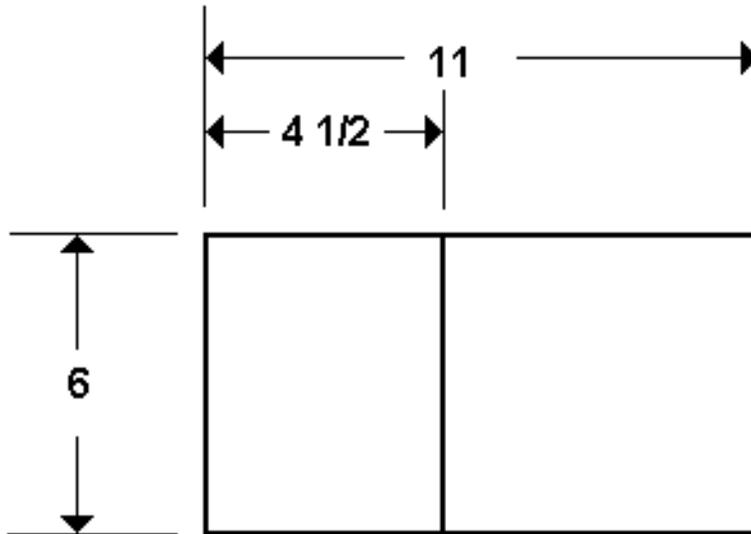


Back, Inner Front and Brace Panels:

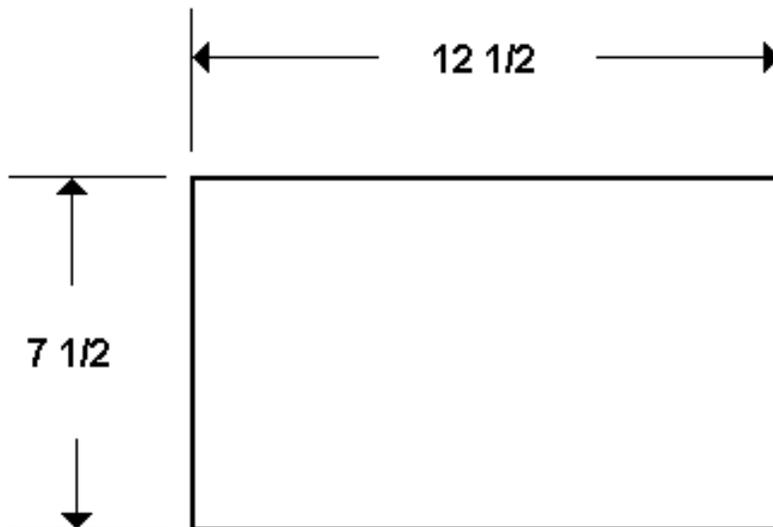
2 pieces 3/4" MDF 6" x 11"

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

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

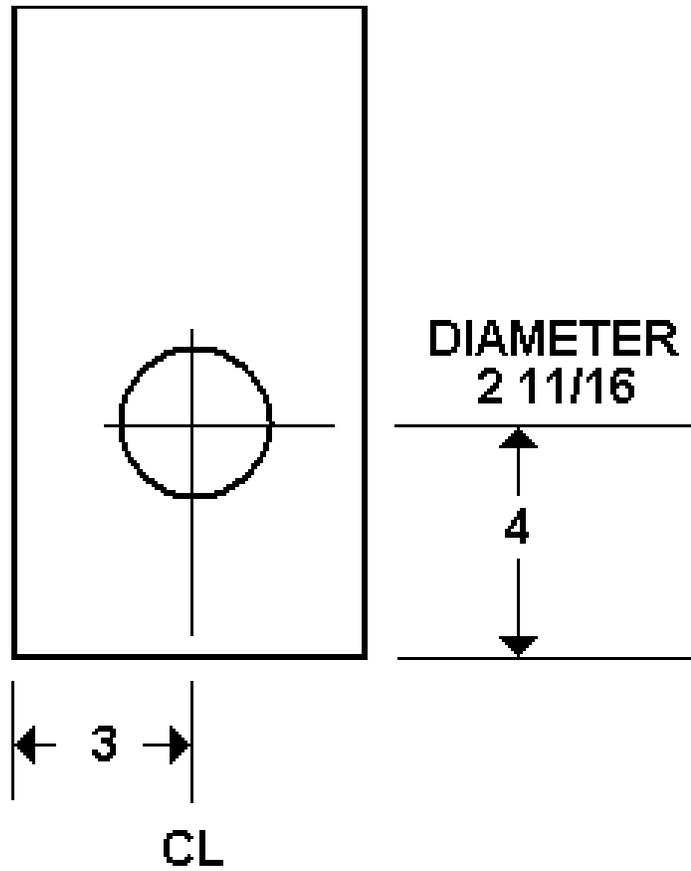


Fascia: 2 pieces 1 1/4" or 1 1/2" MDF (may be a lamination); 7 1/2 x 12 1/2



Back Panel:

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



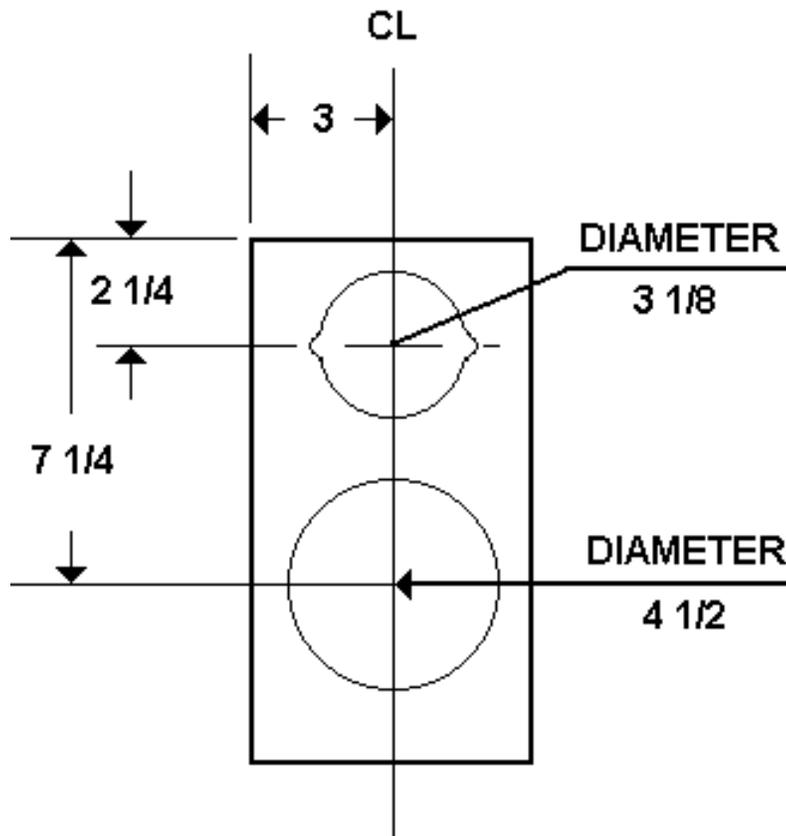
Inner Front:

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.



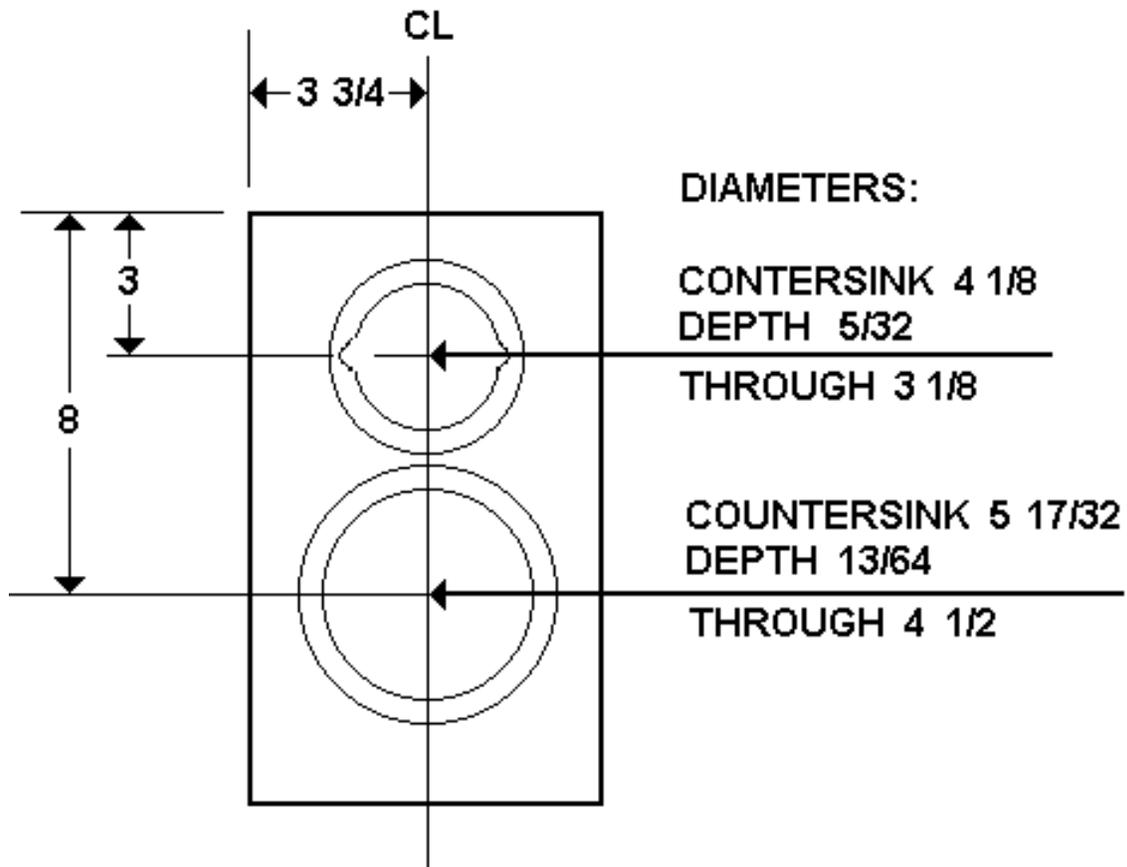
Fascia:

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.

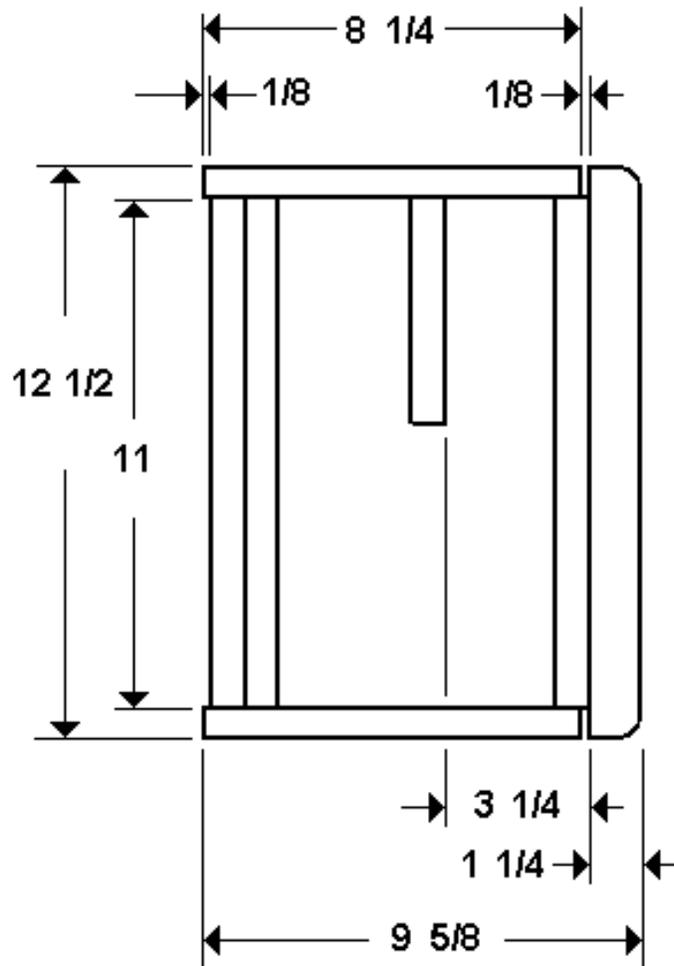
The front edge of the fascia is rounded over with a minimum 3/4" diameter, maximum 1 1/4" diameter, roundover bit. If one chooses to veneer the front, roundover the side edges and leave the top and bottom square.



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:

1) The tweeter crossover is installed through the woofer opening. The crossover is inserted inductor first, then the back of the board coated with Liquid Nails. The board is glued to the upper back corner.

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. The inductor should be glued on two edges and its flat body, so there is three glued surfaces in contact with the cabinet.

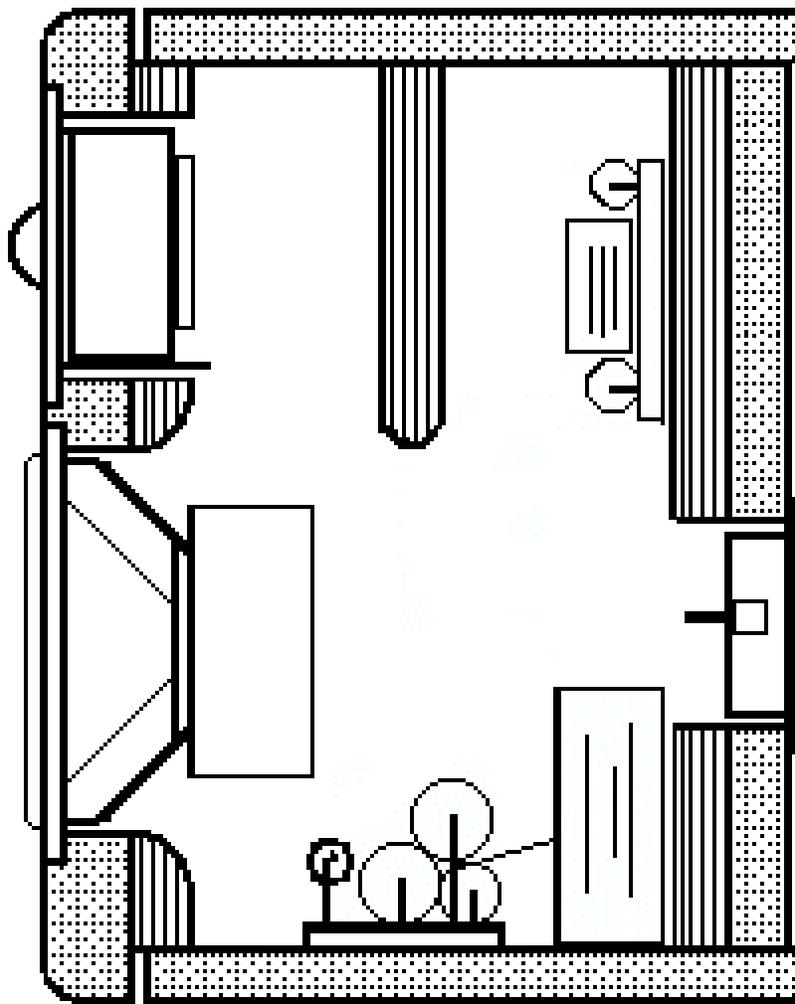
3) Feed the heat-shrunked Red, Black, White and Blue crossover input wires through the binding post cup opening. Turn the cabinet on its face. Attach the crossover input wires to the color coded posts on the cup (red = woofer (+) to Red Post; black = woofer (-) to Black Post; white = tweeter (+) to Red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

4) 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.

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

6) 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 bookshelf within 4" of the wall.



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