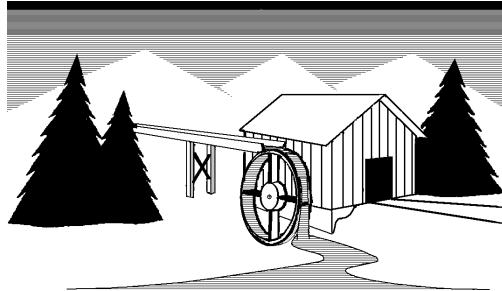


# **North Creek**



## **Music Systems**

# **Eska**

## **MTM Mini-Tower Loudspeaker System**

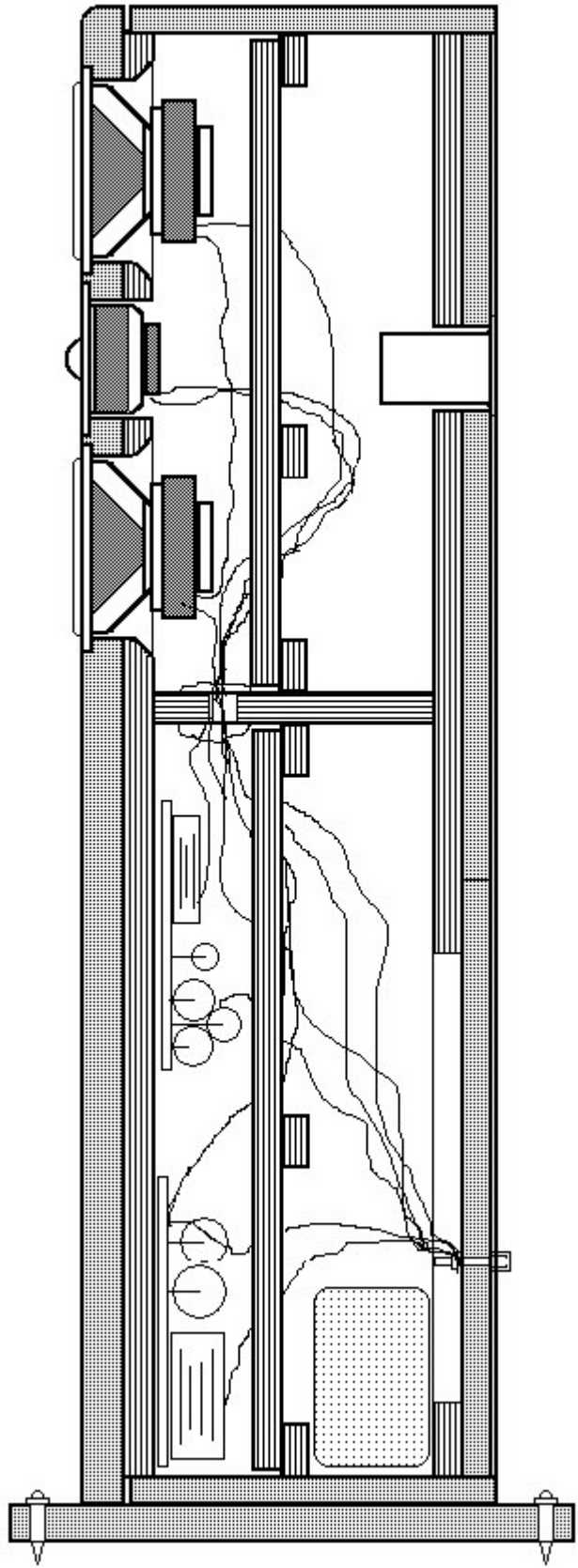
**A small tower loudspeaker featuring the  
North D28-06S and dual Vifa P13WH-00-08 's  
in an EBS vented box.**

### **Woodworker's Kit Contents:**

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

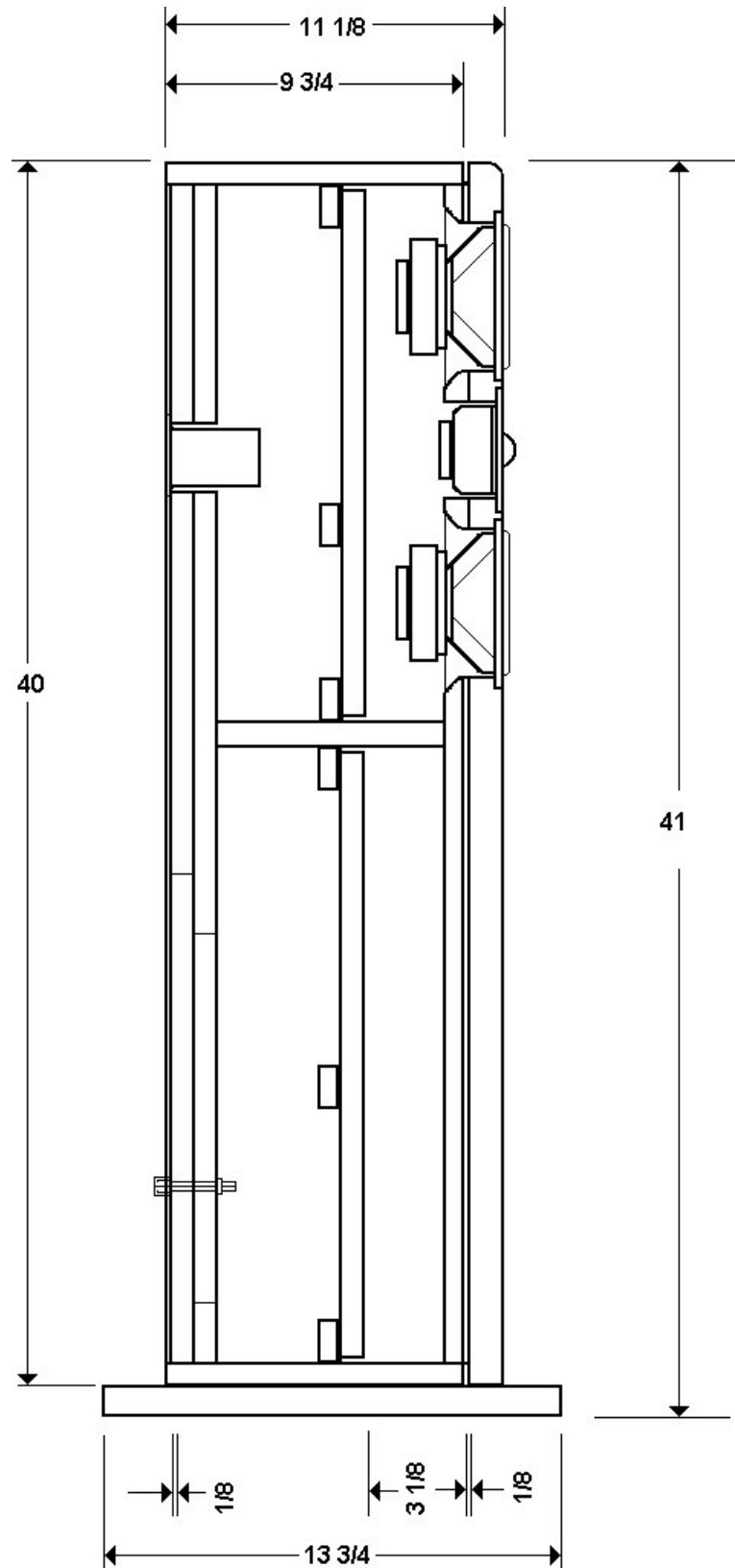
### **This carton contains:**

- (1) Instruction package.
  - Cabinet Assembly Manual
  - Response Curves
  - North Creek *Cabinet Handbook*
  - North Creek Wiring Guide
  
- (4) 1 oz. Rolls of Dacron stuffing.
- (1) Tube of "Liquid Nails" adhesive.
- (2) 2" x 3" Flared Port tubes.
- (40) Straws.
  
- (2) Rolls of gasket tape.
- (16) Mushroom grille fasteners.
- (24) #6 - 1" black screws.
- (16) 1 5/8" black drywall screws
- (8) 2 1/2" steel deck screws
- (2) sets of (4) Big as Texas Binding Posts (4 red, 4 black)
- (1) Set of Big Toe Spikes
- (1) Set of Very Big Toe Spikes
- (2) Plastic Sand Bags with twisties
  
- (2) Assembled woofer crossover network.
- (2) Assembled tweeter crossover network.
- (2) Jumper wire, red on one end and black on the other.
  
- (2) North D28-06S tweeters.
- (4) Vifa P13WH Woofers, shielded.

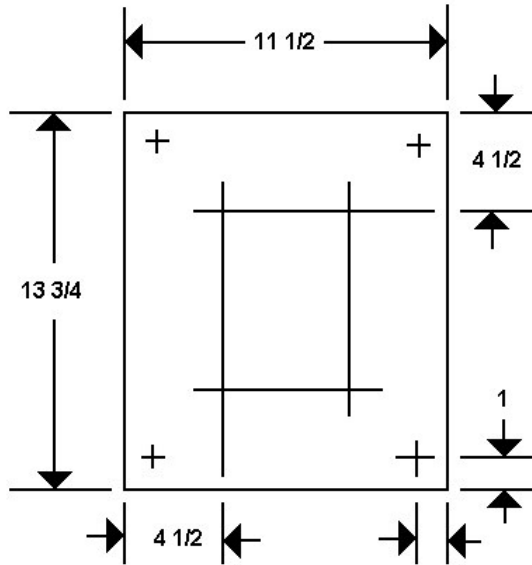


An overall dimensioned side view. Note that the back panel is inset  $1/8$ ", whilst the fascia is outset  $1/8$ ". This is purely cosmetic; one may eliminate both without affecting the internal box dimensions.

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

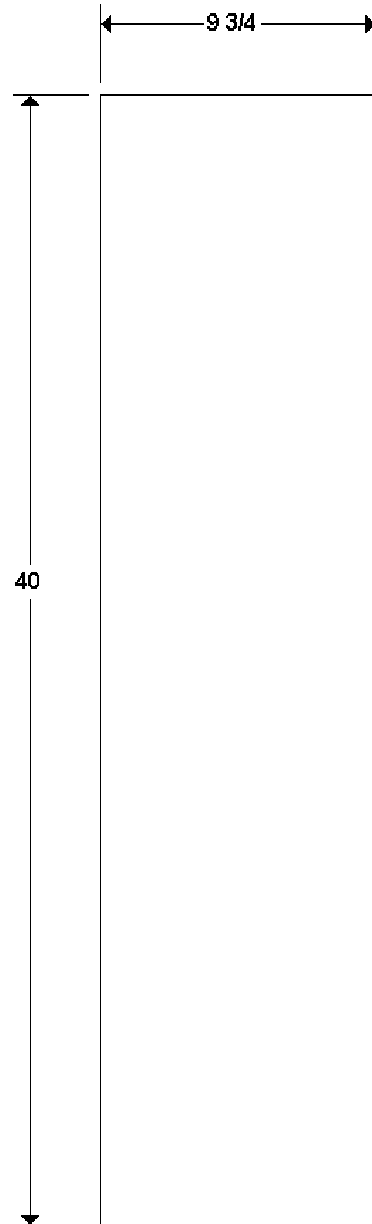
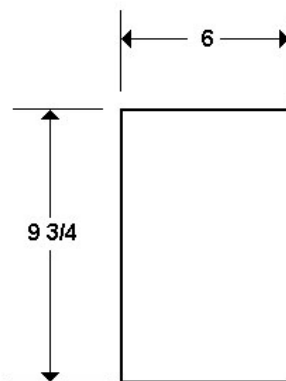


Side Panels: four pieces;  
3/4" MDF, 9 3/4" x 40"



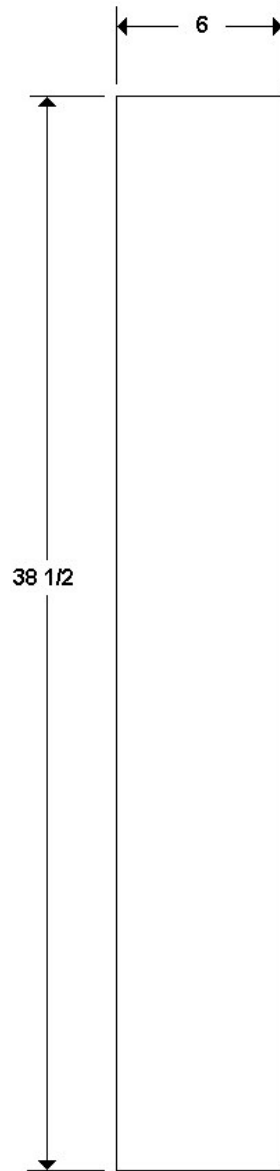
Plinth  
2 pieces, 1" MDF, 11 1/2 x 13 3/4  
Spike holes are 1/2" diameter

Top and Bottom panels:  
4 pieces, 3/4" MDF, 9 3/4" x 6"

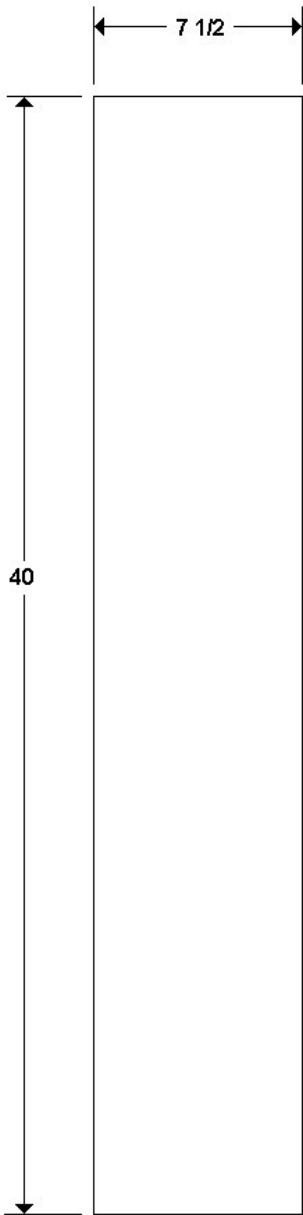


Inner Back, Inner Front Panels:

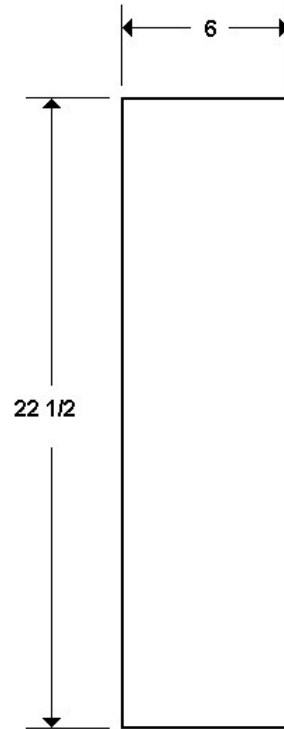
4 pieces 3/4" Birch Plywood  
6 x 38 1/2



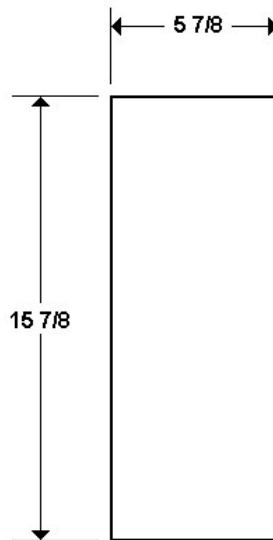
Fascia:  
2 piece 1 1/4" or 1 1/2" MDF  
(may be a lamination);  
7 1/2 x 40



Outside Upper Back  
3/4" MDF  
2 pieces 6 x 22 1/2

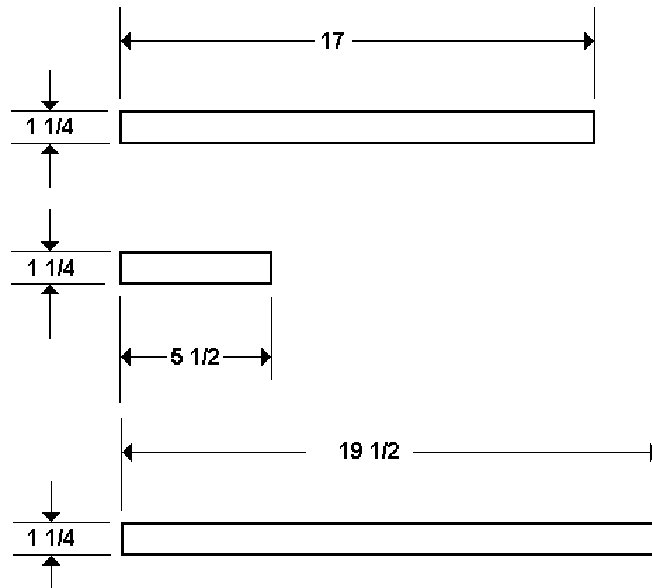


Outside Lower Back  
2 pieces MDF  
6 7/8 x 15 7/8

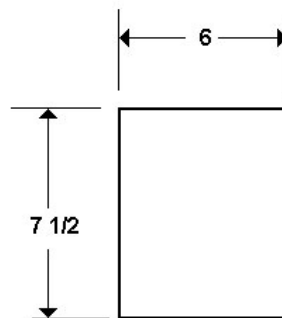


Braces:

3/4" birch plywood,  
4 pieces 1 1/4" x 17"  
12 pieces 1 1/4" x 5 1/2"  
4 pieces 1 1/4" x 19 1/2"



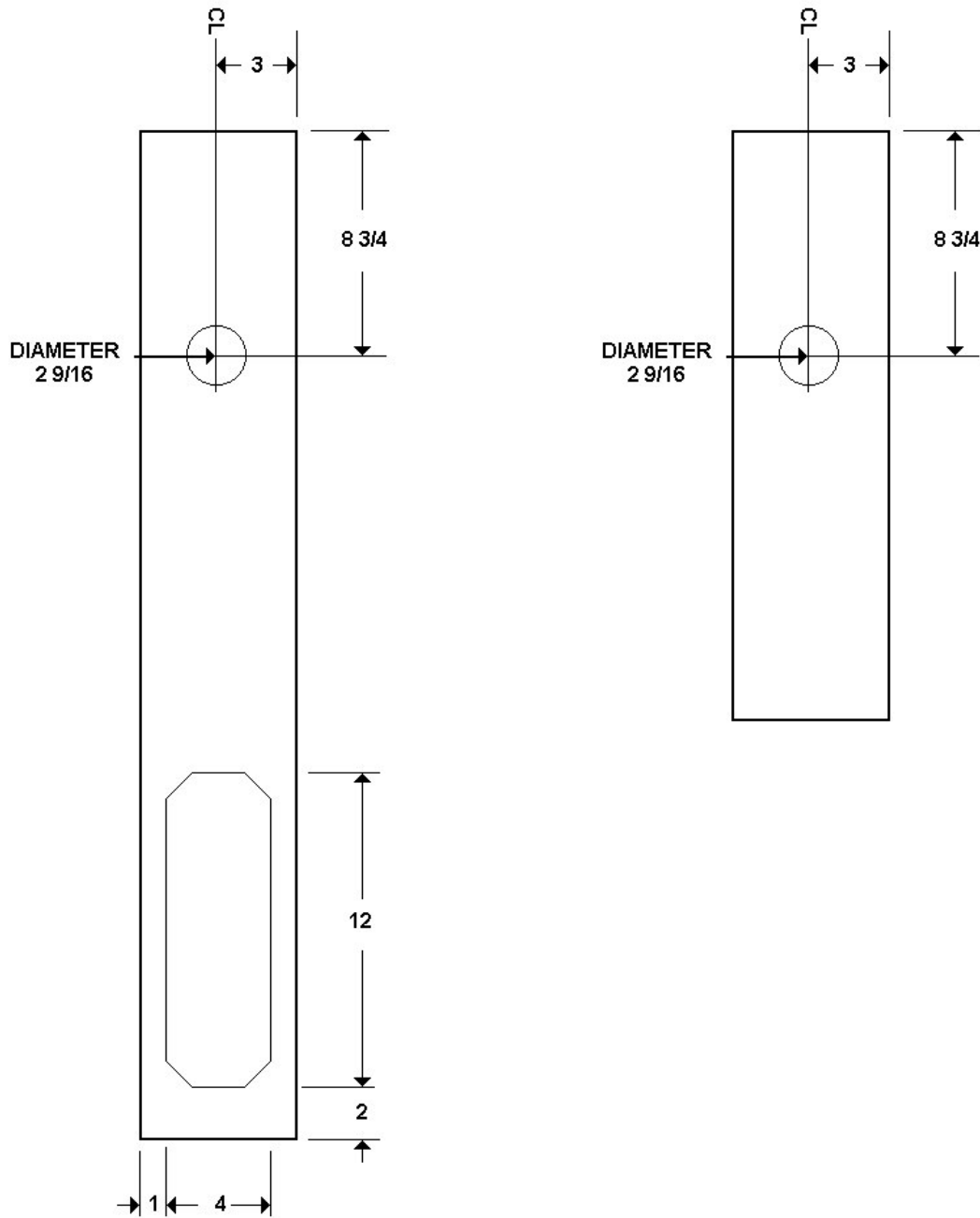
Horizontal Shelf Brace  
3/4" plywood  
2 pieces 6 x 7 1/2"



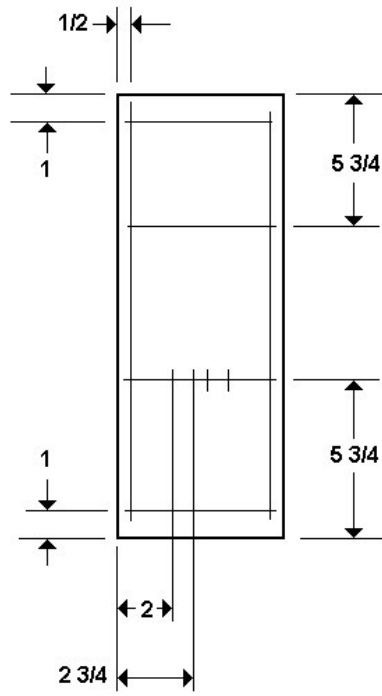
### Back and Upper Back Panel Detail:

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 is cut through both panels

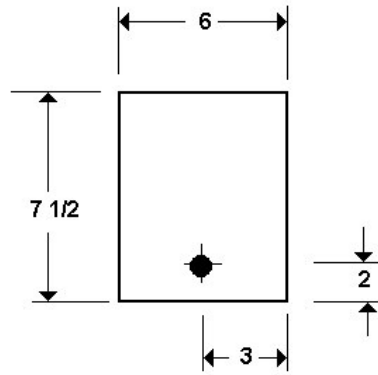


### Outside Lower Back Detail



### Shelf Brace Detail

Wire through-hole is  $\frac{3}{4}$ " diameter



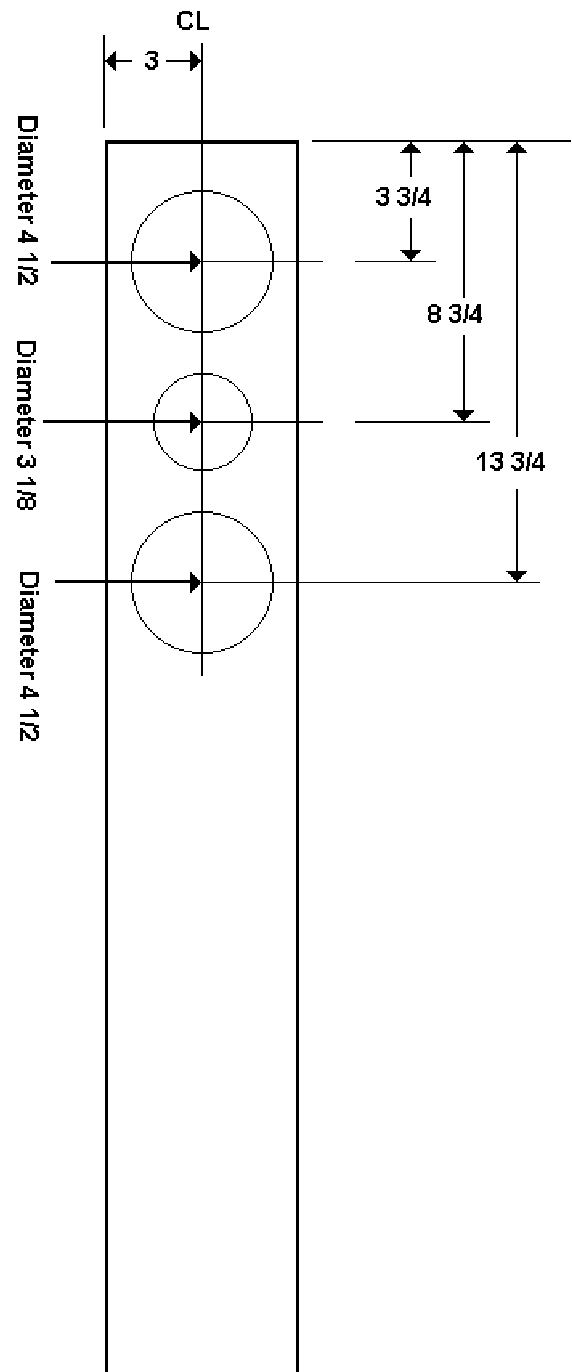
### Inner Front Detail:

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

After machining, the inside edge of the woofer cut out should be flared by a 1/4" radius to 1/2" radius 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.



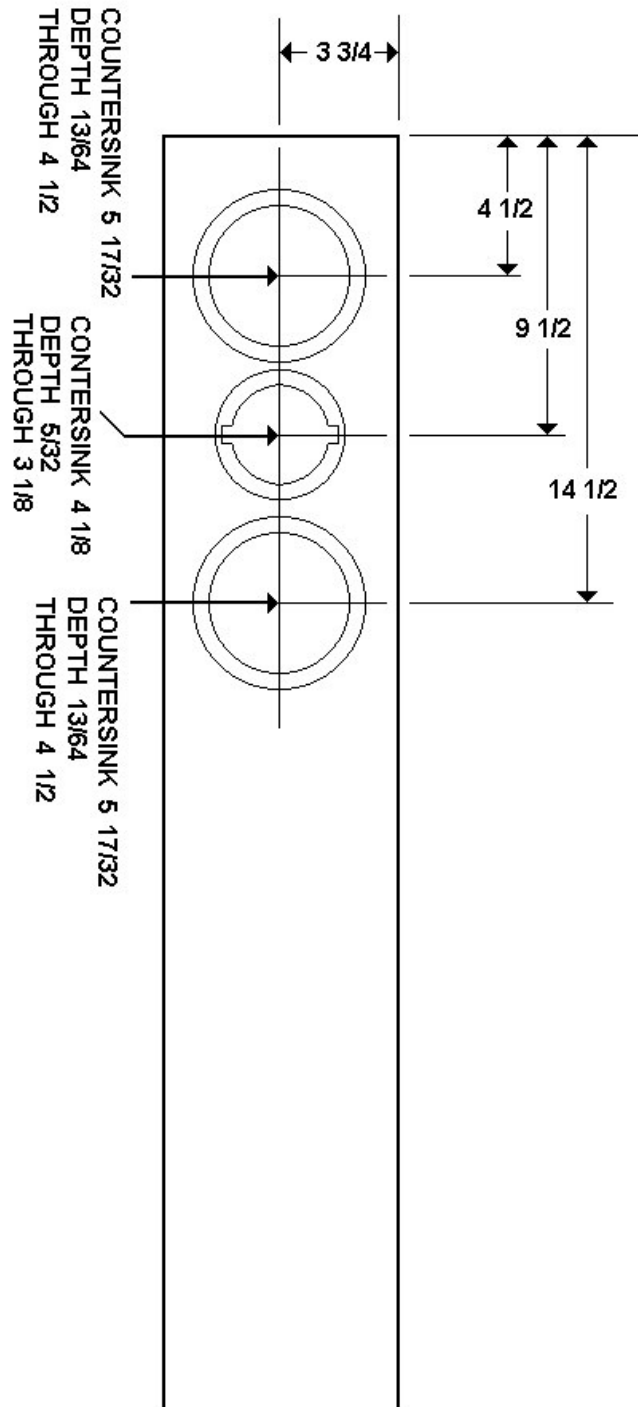
## Fascia Detail:

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 3/8" radius, maximum 5/8" radius roundover bit. If one chooses to veneer the front, roundover the side edges and leave the top and bottom square.



Assembly order:

Brace on sides;  
Lay up inner back and upper back;

Side + top + back; inner front;

Trim the shelf brace for a perfect fit, glue and tap into place;

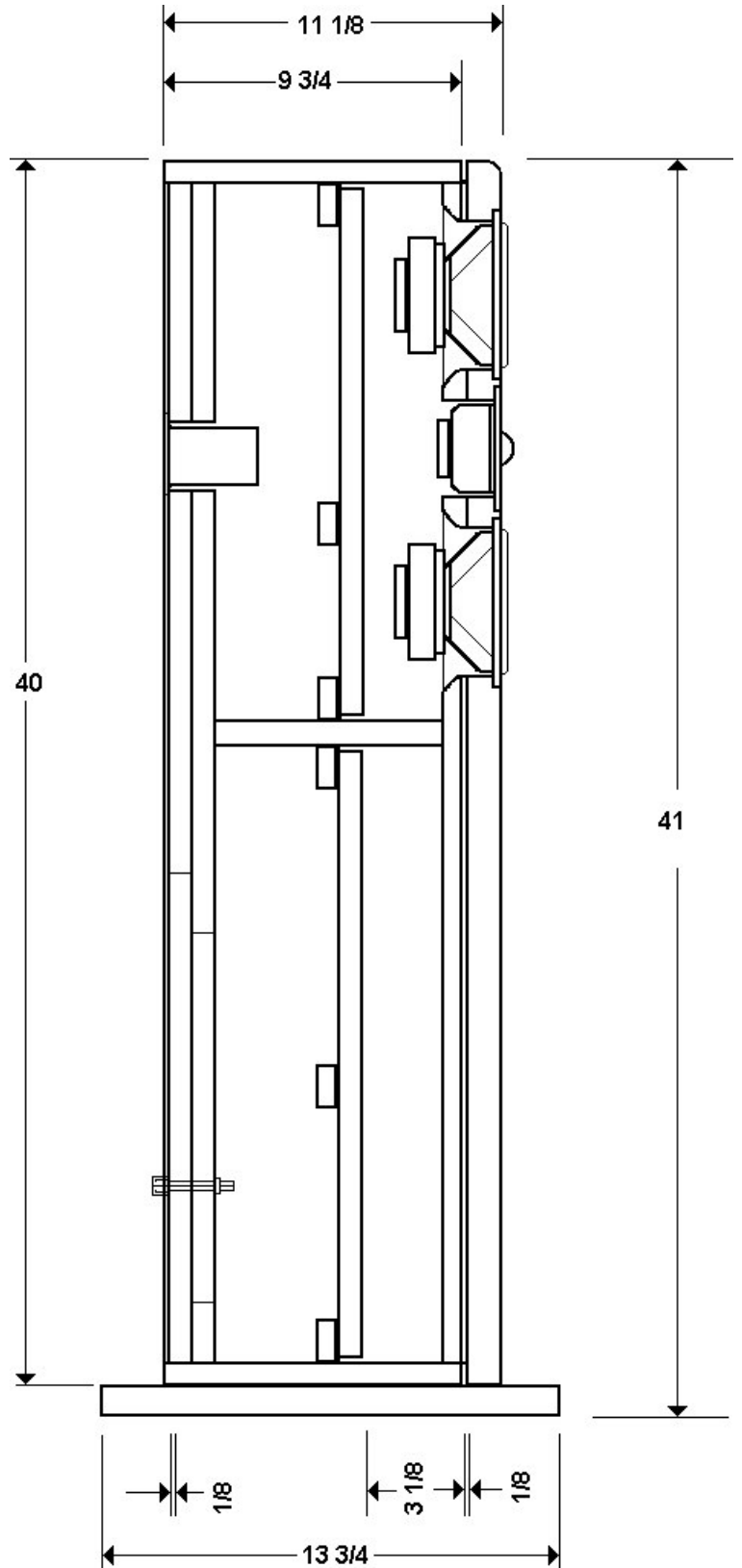
side, bottom, cross-braces.  
It is easiest to attach the cross-braces with pinch clamps.

It is assumed the Fascia is finished separately and attached last.

The plinth is attached with screws 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:

1) With the cabinet on its front, inside the lower chamber, apply several large beads of Liquid Nails adhesive to the plywood inner front. Install the woofer and tweeter networks, being careful not to trap any wires beneath them. Let this dry overnight.

2) Run the driver wiring through the hole in the shelf brace.

3) Attach the binding posts to the rear cover and the crossover leads to the binding posts as follows:

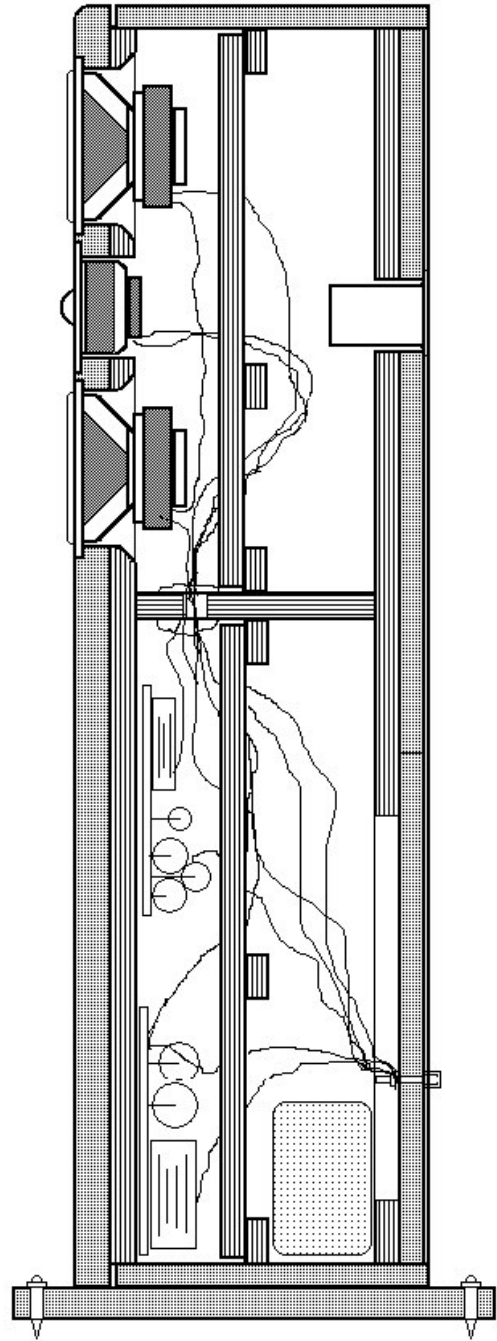
Outside: Hex Head, Slip Ring, Knurl Washer  
Inside: Star Washer, color-coded Nylon seal washer, nut, connection, lock washer, nut.

Red coil lead to red post;  
Black leads to black post;  
White lead to red post with white washer;  
Blue leads to black post with blue washer.

Line the inner back cut out with gasket tape and attach the outer lower back with 1 5/8" black drywall screws.

4) Port Tube: Cut the straws into 2" lengths. 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 at an angle for the screws, and screwing in the port.

5) The cabinet is then placed on its back, the woofer and tweeter wires pulled through the shelf brace and wrapped around the middle cross brace. Seal the hole in the shelf brace with liquid nails or silicone.



- 6) Push half of the stuffing behind each woofer. Be careful not to cover the end of the port tube with stuffing.
- 7) Adhere gasket tape to the woofer and tweeter countersinks, and trim off excess. Puncture through the gasket tape to mark the mounting screw positions.
- 8) The white (+) and blue (-) leads are attached to the tweeter, red (+) from the crossover board and black (-) from the jumper to one woofer, and the black (-) from the crossover board and red (+) to the other woofer. All drivers are mounted with #6 screws.
- 9) Once final placement is determined, the sand bag is installed in the lower chamber and the spikes on the plinth.

## **North Creek Music Systems**

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