

ASSEMBLY INSTRUCTIONS

Omni Premium loudspeakers

Kit contents:

- 12 precision cut 18mm moisture resistant MDF panels (8 sides, 2 tops, 2 baffles)
- 2 x 32mm bottom panels, rebated for the terminals
- 2 x grille frames
- 2 pieces grille cloth
- 2 x 40mm diameter tuning ports (82mm)
- 2 gold plated speaker terminal blocks
- 30 black Philips head screws
- 7mm felt to line chamber
- 500mL bitumen paint
- 2 x Peerless "Nomex" mid/bass drivers
- 2 x VIFA tweeters
- 2 x crossover components
- 1 metre OFC384 speaker cable
- 8 x rubber feet + 8 screws

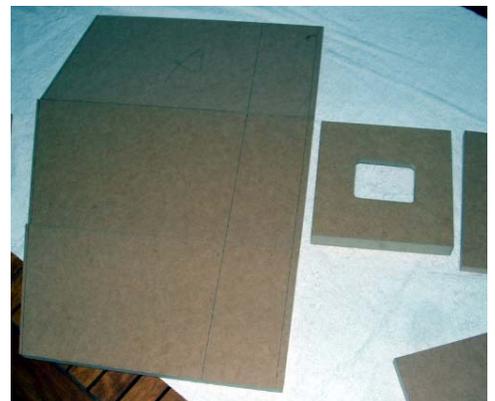


Tools Required:

- PVA wood glue
- Clamps or weights
- Philips head screwdriver
- 80 and 180 grade abrasive paper (power orbital sander makes it easier)
- Damp rags to clean up excess glue
- Hand or power drill with a 2mm drill bit for the screw holes
- Soldering iron to solder wires to the speaker terminals

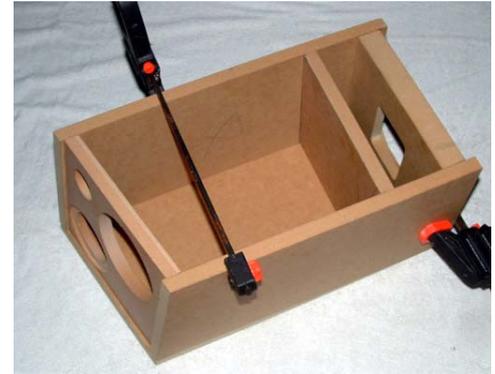
Procedure:

1. Firstly check that you have all the components as listed above. Then have a read of all the instructions below so you have an idea of the sequence to follow.
2. Lay out the panels so that you understand how they fit together. A flat clean surface (not newspapers) eg a drop sheet or old towel on a table is best. The bottom extra thick panel with the rectangular hole is positioned 10mm up from the bottom of the side panels. The baffle is positioned 60mm from the top of the bottom. The angled top will be positioned 5mm down from the top edges of the side panels.
3. Prepare the top panels for the mounting of the drivers. The tweeter hole will need some filing to allow for the terminals. The mid/bass driver should fit OK.
4. The plastic ports may need some filing to make them neat. Push one of the plastic tuning ports into the rear of each top panel's 42mm hole and make sure it goes through flush with the front face. If it is too tight use abrasive paper or a



half round file to slightly enlarge the hole. Then remove the port and smear some glue onto the end then push it back into the hole. Check that the plastic is flush with the front face. It will be angled towards the side panel but that does not matter as long as the internal opening is not obstructed. Once the glue has dried you can use abrasive paper to slightly round both ends of the tube.

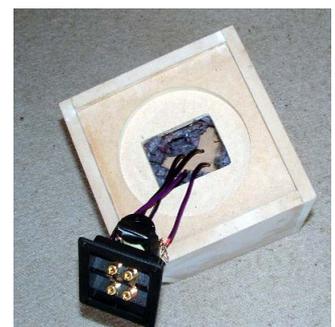
5. Set out three side panels as shown above. The centre panel is the largest one. Stand the two side pieces on the edge of the centre one with the bottom panel between them to make sure you have them round the right way. Then lay them down again and draw lines on the three panels at 10mm from the bottom edges, 120mm from the bottom edges, and 5mm from the top edges. These lines will help you position the bottom, baffle, and top correctly. Use clamps to check that the pieces fit together as shown. If you don't do up the clamps too tight you'll be able to slide the pieces into position so that they line up with the lines you have joined and the panels match exactly at each corner.



6. Now release the clamps, drop the two side panels and apply glue to the three edges of the top, baffle, and bottom, and also to the bottom edges of the two upright sides. Spread the glue thinly on the edges of the three pieces. If you use too much glue you won't be able to see the guide lines. Reposition them as before, using the clamps to hold them until the glue sets. You'll be able to move them into position for quite a while before the glue sets and makes it impossible. If you can't achieve correct positioning take off the clamps, separate the pieces and use a wet rag to clean off the glue before you try again. They should match up perfectly but minor imperfections in the joints can be corrected at the sanding phase.



7. Once the glue has set you can apply more glue liberally to all the joins inside the chamber to ensure an airtight seal.
8. Next you should paint the inside of the main chamber with the supplied bitumen paint. Don't block the holes for the speaker wires. Also paint the underside of the last side panel, but keep away from the areas which are going to have glue applied.
9. Now is a good time to fit the felt lining for the sides. Cut pieces from the 7mm thick felt supplied for the sides. A few staples will help hold them in place. Make sure the vent is not obstructed.
10. The crossovers can now be fitted. They fit neatly onto the back of the terminal block and have been pre-soldered. The four wires which will be soldered to the drivers are labelled.
11. Feed the four 500mm wires through the pre-drilled holes in the baffle. If necessary remove the labels and reattach as you do so. Push some scrap pieces of felt into the crossover cavity to prevent any standing waves being generated in the crossover chamber at high sound pressure levels. Slide the wires through the



holes gradually so that the terminal block goes right into the cut out in the base. Once in place drill pilot holes and screw the terminal block in place with four #6 19mm screws.

12. At this stage the four speaker wires will be poking out of the top panel. Use silicon sealant to seal the wires where they come through the baffle at the bottom of the main chamber.
13. Cut slots into the middle of two 210mm square pieces of felt, and slide over the wires and position on the baffle. Staple into place. Two thicknesses are used here, but only one thickness on the sides.
14. This is your last chance to make sure all the felt lining is flat against the sides of the chamber.
15. Now glue the last side panel in place. When dry you can staple the felt lining to it via the mid/bass driver hole.
16. Once the boxes are dry you can use an electric orbital sander with 80 grit paper to remove all traces of excess glue and any joint imperfections until you are left with a smooth neat box ready for finishing. Use putty or Timber-Fill to fill any gaps and sand smooth. The better you prepare the boxes at this stage the better looking the end result.
17. If you are going to paint the boxes you will need to apply a sealer first to prevent the paint soaking into the edge cuts of the MDF. Then sand again with 180 grit. If you are using timber veneer or vinyl wrap the panels need to be completely clean of dust and dry so that the adhesive can stick properly. There is a PDF of instructions for the vinyl wrap available at <ftp://decibelhifi.com.au/www/files/vinyl.pdf> It is possible to apply veneer or vinyl after completing the assembly if you prefer to be listening to them while you make up your mind about the finish.
18. At this stage you can fit the 4 rubber feet to the base of each enclosure. Turn the boxes upside down, position the feet right into each corner, drill pilot holes, and fix with the supplied screws.
19. Strip and tin the ends of the four wires. Bend them into a little hook so you can squeeze them onto the driver terminals.
20. Tin the driver terminals.
21. Hook each wire onto the appropriate terminal and squeeze tight with pliers.
22. Solder the four wires to the driver terminals, being careful not to overheat the terminals causing the braids to the voice coils becoming unsoldered.
23. The tweeter does not have a gasket so spread a thin layer of silicon sealant onto the rebated tweeter mounting hole.
24. With your hand through the woofer hole bend the tweeter's wires gently as you push the tweeter into position.
25. Once in position drill pilot holes and fix the tweeter with five #6 19mm screws.
26. Now position the mid/bass driver in the same way. It has a gasket so you don't need to use any sealant.
27. Drill pilot holes and use 6 #8 19mm screws to fix the mid/bass unit in place.
28. At this stage the speakers are functional so hook them up to your amp and enjoy while you prepare the grilles. They will require about 30 hours to "run in" before sounding their best. The dual terminal posts are linked by a brass strip so you can connect the speaker cables to either pair. If you want to bi-amplify remove the brass strips and connect the bass amplifier to the bottom pair and the treble amplifier to the top pair.



29. Sit the grille frames on the top of the cabinets so you know which way they fit. Paint the grille frames black if you haven't already done so.
30. Lay a frame upside down onto one of the pieces of grille cloth. The cloth is slightly different on one side compared to the other so choose whichever one you prefer to be showing.
31. Gentle smooth out the cloth under the frame so that there aren't any wrinkles. Wrap the cloth over one edge and staple into position. Don't staple right up to the corners, leave about 3cm.
32. Staple the opposite side, gently stretching the cloth to remove any wrinkles.
33. Staple one of the other sides.
34. Staple the fourth side.
35. Turn over the frame to ensure there are no wrinkles.
36. Now do the corners. This is a bit tricky. You have to stretch and gather the cloth so that you get a nice smooth wrinkle free corner, then staple across with two staples as in the photo.
37. Finally trim off any excess cloth.
38. The grille frames are held in position on top of the enclosures by Velcro. Staple one piece hook side up onto the middle of each side. The grille cloth grabs well enough to keep it in place without needing to use the loop pieces.
39. These speakers are designed to be very versatile in their positioning, but obviously you want to give them a clear "throw" to the ceiling. They can go up against furniture, against walls, in corners, and still give a spacious, room filling sound.
40. The pair shown here have been covered in silver wrap-on vinyl.

