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Baffle Wall Construction
Guide

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Objective: To construct a Front Baffle Wall in a Home Theater to house in-wall speakers, ensuring optimal acoustical performance and structural integrity.

Materials & Tools Needed:

- Utility knife
- Flat bar
- Treated 2x4 lumber (for bottom plate)
- Standard 2x4 lumber (for top plate and studs)
- 1/2" drywall
- 1/2" plywood (AC or BC quality)
- Mass Loaded Vinyl (MLV)
- R-13 non-faced fiberglass insulation
- Green Glue acoustical adhesive
- Screws/nails
- Construction adhesive
- Acoustical caulk
- Level
- Measuring tape
- Circular saw/table saw/compound miter saw
- Drill and impact driver
- Stud finder
- Speed square
- Clamps
- Paint (black)
- 1” SonoFiber black insulation
- Speaker brackets (LCR and subs)
- Fabric wrap material

Construction Steps:

1. Prepping the Space

1. If necessary, use a utility knife to cut caulk and a flat bar to remove any existing trim boards. Keep trim in a safe place and remove nails.
2. If using an existing room with carpet, cut back 4” of carpet from the front wall.
3. Remove any tack strips.

2. Framing the Baffle Wall

4. Cut the bottom plate out of treated 2x4 and the top plate out of standard 2x4 to match the room width.
5. Cut MLV to the width of a 2x4 and run it along the entire front edge so the treated 2x4 sits on top, isolating the wall from the concrete.
6. With the bottom and top plates stacked, measure the required stud length, leaving 1 5/8” at the top.
7. Mark out stud locations on the treated bottom plate and the top plate.
8. Cut all vertical studs to length and bring them into the room.
9. Attach studs to the bottom plate, using a square to ensure they are properly aligned.
10. Attach the studs to the top plate using a speed square to maintain alignment.
11. Lift and push the wall into place to confirm fit.
12. Lay the wall back down and mark stud locations on the floor for the existing wall to help with final attachment.

3. Installing Drywall and Green Glue

13. Cut 1/2” drywall to fit the baffle wall.
14. Attach drywall to the baffle wall while it is still laying down.
15. Test-fit the wall again before proceeding.
16. Apply Green Glue using a caulk gun on all drywall surfaces of the baffle wall.
17. Lift the wall into place and push it against the back wall, allowing the Green Glue to bond between the drywall layers.
18. Secure the wall by screwing through the 1/2” drywall into the studs of the existing wall, avoiding bays designated for speakers.
19. Allow Green Glue to dry.

4. Speaker & Wiring Installation

20. Run front sound stage wiring.
21. Install in-wall subwoofers.
22. Install front LCR speaker brackets.

5. Insulation & Finishing

23. Install R-13 non-faced fiberglass insulation in the front wall.
24. Hang and finish drywall on the front of the baffle wall, cutting out for speaker brackets and subwoofers.
25. Install 1/2” plywood (AC or BC quality), cutting out for speakers and subs using a jigsaw or circular saw.
26. Paint the front wall black.
27. Install 1” SonoFiber black insulation on the front wall.
28. Install the projector screen and fabric wrap the remaining exposed sections of the front wall.

Post-Construction Checks:

- Verify speaker wiring and secure all connections.
- Check for rattling or resonance by playing test tones.
- Confirm screen and speaker alignment with the viewing area.
- Ensure Green Glue has properly dried and bonded.

End of SOP