"Build Your Own" Acoustic Treatment Panels

Make affordable and versatile acoustic panels that can be used as wall panels, ceiling baffles for noise abatement strategies, reducing the effects of reverberation from barking and other noise in the shelter environment. As you will see, anyone with some free time that wants to stretch their budget (the only option for most shelters!) can ABSOLUTELY build their own panels.

I hope this simple project motivates you to build your own noise abatement panels, to reduce stress for your shelter animals, and provide a more pleasant atmosphere for your visitors and staff.

THE PARTS FOR ACOUSTIC PANELS:

Rigid Foam or Fiberglass Panels: Can be purchased at Home Depot (DuroFoam, Owens Corning, or PlastiSpan) for as little as $6 per sheet. Should be at least 1.5"- 3" thick.

Fabric: Washable Vinyl/Marine vinyl. This can be purchased at any fabric store or Walmart. If you're not picky about colour you can usually get it as low as $4.99/sqft.

Wood for frame: Home Depot 1X3-8 furring strip. (Pick the straightest wood possible with the least amount of imperfections)

ONTARIO
SPCA
AND HUMANE SOCIETY
Ontario's animal charity since 1873.

ontariospca.ca

Charitable Registration #88969 1044 RR0002

Other parts from Home Depot, or other hardware store:

- **Rubber screw bumpers:** To hold the panel an extra bit off the wall. This prevents tearing of fabric, marking of the wall and achieves more sound absorption.

- **Picture Hangers:** Best value, Pack of 50 to hang the panels securely to walls

- **Screw Eye Zinc Plated 212:** $4 (Used to attach picture wire to)

- **Picture Wire:** About $10 for 25 feet of 30 lb. rated wire. AVOID any thin cheap 28 gauge wire!

Tools:

- Staple gun with a full pack of 3/8 inch 10mm staples. Electric staple guns work just fine. If possible, buy staples that match the fabric color!
- Miter saw to cut the wood
- Hammer and nails
- Plyers (used to screw in the Screw Eyes)
- Wire cutter (used to cut the picture wire)
- Power screwdriver (used to attach the bumpers)
- Marking pencil (used to mark the wood for cutting)
- Packing tape or duct tape. This holds the fabric in place as you work

PUTTING IT ALL TOGETHER:

1. **Build your frames**
   a. Start by laying down a piece of the Durofoam. Then put the boards around it and measure how long they need to be. You can cut the Durofoam to whatever size panel you want to make.

   b. Cut the pieces for one frame and cover up any imperfections with the electrical tape.

   *When these are cut you can then use them as templates to mark the other pieces of wood. This saves you time in measuring them out.

   c. Once they are all cut nail them together with two nails at each intersection. Then lay the fiberglass down inside the frame.

d. Secure the insulation panel to the frame with a nail on each side of the frame. This keeps it a bit more stable.

2. Fabric

Get out your fabric and cut it to fit around the wood frame, like you would be wrapping a present with it. You can choose to wrap the vinyl completely around, or, if you want to save on vinyl, you can just cut enough to wrap around the edges and corners. The panels will be more durable if you fully wrap the panel.

You can measure how much vinyl you need, based on the size of frame you chose to build.

3. Making the panel

a. IF YOU ARE USING A STRETCHY FABRIC you will need to use tape to secure it tightly as you attach the fabric!
b. Put your framed panel on top of the fabric.
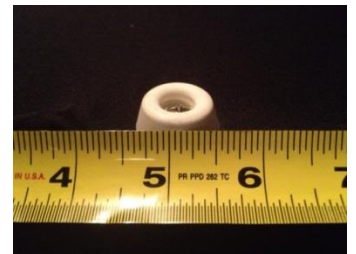c. Fold the fabric doubled up over the frame and staple it across the edge.

d. Crease the fabric and bring it down the panel. Tape it down as it starts to take form. Staple it only after it is pulled very tight and looks clean.

4. Attaching Picture wire and bumpers

a. Get out the bumpers. Attach four bumpers 5" from the top and bottom.

b. Attach two screw holes 13 ¼" from the top of each panel. This measurement is very important so panels stay aligned on your walls

c. Get out the picture wire. Pull it through the eye screw on one side, pull it under, put it back through, then twist it around itself at least 6 times for a secure knot. Then use your plyers to crimp the wire together nice and tight.

d. Pull it out to reach the other side and cut the loose end.
e. Attach this end of the wire the same way. When it's through be sure to use your pliers to pull it as TIGHT as possible. This will ensure the wires are all the same length and look level when hanging on your wall. Once it's pulled tight use your plyers to crimp the wire together tightly.

5. Finishing touches

Use your black electrical tape to cover the frayed picture wire. This makes it look professional and prevents snags.

The finished Sound Abatement Panel!