

# Sound proofing a basement room

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One of our viewers asked about sound proofing a basement room. That is a big topic but here is some information. The QUALITY of sound in a room is the subject of ACOUSTICS, not sound proofing. Acoustical tiles and sponges on the walls do not do much to stop noise movement to or from the rest of the house. Sound PROOFING is the task of stopping the TRANSMISSION of sound through walls, ceilings and floors. The first photo shows a very interesting thing about sound proofing in a basement. Putting fibreglass sound bats in the ceiling is effective but most effective if you only fill the air space 2/3rds of the way full, leaving a good air space. Metal channels called resilient bars or Z-bars put across the floor joists and then drywall panels screwed to the bars help greatly to reduce transmission of base notes or impact sounds. Forced air heating ducts can sabotage all your sound proofing efforts so it is a good idea to wrap them in some kind of sound deadening material when they pass through a room that you want to isolate from some other room. See that heavy black mat that I am holding up in the third photo. That is called a "Limp Mass Barrier". It kind of feels like the x-ray protective jacket that the dentist puts on you during your X-ray session. Although expensive at \$3.50 a square foot, it is attached to the underside of the floor joists as seen in the first photo and is sealed air tight with tape at all the joints. This is a very effective sound barrier when used together with the sound bats in the air space and perhaps a resilient bar before the drywall. You might want to go to this extent to isolate the rock band in the basement, protect the home theatre from outside noises or isolate the bedroom of a shift worker. Other special rubber mats are available to put under various floor finishes, from wooden or tile floors with Regupol QT to poured light weight concrete with Duracoustic, allowing you to work on sound proofing from above. Of course the best is to work from both sides of the wall or floor/ceiling. The last photo is just to point out that whether you use fancy barriers or not, you must seal all the air leaks between the two rooms to be isolated or these "flanking paths" will just let the sound sneak right past all your soundproofing. All these products came from Wilrep. Ltd. in Mississauga, Ontario. Click on this link for more information on "Sound Proofing".

**Keywords:**

Sound Proofing, Quality, Sound, Noise, Acoustics, Basement