Can You Hear Me Still?

Humes, Parker

Many people would like their home to be quieter, but few people are willing and capable of paying the high price tag for professional soundproofing materials. I set out to see how well other materials, along with regular materials would perform comparatively. I built a box that eliminated a problem that I ran into last year, which was the sound wasn't going directly through the wall. It put a box inside another insulated box, and tested soundproofing in there. The materials were hit with four frequencies at the same volume from 220 Hz to 1760 Hz, which is four octaves. The sound was recorded via an app on my phone, with nothing else running in the background. Then I emailed the data and analyzed it. I determined that my hypothesis that loose insulation-type materials would absorb the most sound. I found that a soundproof insulation called "Roxul Safe 'n' Sound" worked well for low frequencies, and mass loaded vinyl, or MLV worked well for high frequencies. If I were to put this in my house, given an unlimited budget, I would use MLV along with the Roxul, to deaden both high and low frequencies.

Awards Won: