



# A Day in the Life of an Acoustician

By May Hanna

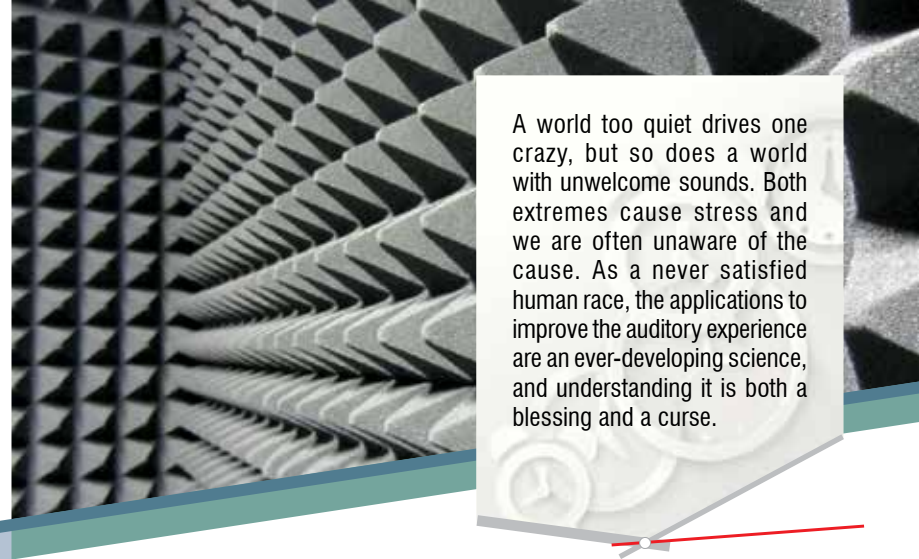


**W**ait, a what? That's the most frequently asked question when an acoustician is introduced. To avoid asking perhaps, the notion of a sound technician is immediately conceived in the imagination. Well, asking the question would have certainly saved the embarrassment. While it could often be true that an acoustician is also a sound technician/engineer/"man," it's not necessarily the case for all.

An acoustician is an expert in the physics of sound as acoustic waves or signals, and mainly tries to make sounds less harmful and more pleasant. A bit sensitive to sounds, he/she might not have a perfect pitch, might not play any musical instrument either, but is very accurate in the description and understanding of sounds in space, matter, and the digital form.

Awareness is both a blessing and a curse. It's a blessing because the world of sounds is so immense, so versatile, and a never-ending learning adventure. But it's also a curse because not only do harmful noises start to get on the nerves, but there are annoying sounds which don't seem to cause the slightest inconvenience to Muggles! The story of the laundry room begins...

The world of sounds has always fascinated me. Coming from a musical background it was very natural to pay attention to sounds, to analyze them, and appreciate them. After my bachelor's degree in interior design, "soundscapes" started to provoke me even further, which is why I decided to learn acoustics.



A world too quiet drives one crazy, but so does a world with unwelcome sounds. Both extremes cause stress and we are often unaware of the cause. As a never satisfied human race, the applications to improve the auditory experience are an ever-developing science, and understanding it is both a blessing and a curse.

During my master's studies in sound and vibration in Sweden, I lived in a student flat which shared a wall with the public laundry room. At the beginning I couldn't identify the sounds I was hearing across the wall, sounds that I could only guesstimate by an "educated" imagination. The noise was neither the washing machine nor the tumble dryer; it was rather of a metallic character, pushed then stopped and over again—there was human interaction involved! My investigation started to get serious when the sound got louder, more repetitive and intrusive.

To my surprise, it was the laundry trolleys, which were made of thin, gangling steel. They had unhitched wheels and were scraped continuously on the tile floor. (Can you hear it already?) Stress, anxiety, lack of concentration, inability to sleep and anger were all symptoms building up in my body from the irritating noise.

The structural vibrations traveled from the trolleys into the floor, passing the junction with the badly insulated wall and were transformed into airborne sound waves which were amplified in my bare, square room. It was time to put my education into practice. There were a few things that I could do. I could buy some mineral wool, layers

of gypsum boards and studs and fiddle with home depot appliances, or I could fix it with duct tape! Of course, I chose the latter and spent the evening taping the jangling edges and the awry legs of the trolleys, increasing the stiffness of the structures and adding damping at the contact points with the floor. The next day, my problem was solved! I didn't hear a single decibel (dB)—that is, until the users decided that the duct tape was impeding the "smooth" motion of the trolleys (note the irony). They removed the tape, despite my frequent instructions on the correct method of "rolling" the trolleys around, without inducing too much friction. Alas, I ended up wearing my earplugs until the landlord responded to my complaint and bought new and more efficient trolleys.

You see, in some cases sounds can be quite annoying, but staying optimistic will help you see that there are always applications to make them less bothersome.

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