

PERDUE ACOUSTICS
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What Does a 1.5 Sec Reverb Time Room Mean To Me?

In the field of acoustics, we all strive to create rooms of various reverb times without any echo whatsoever. You see any echo robs a room of clarity; no matter how distant, or slow the echo is or how close, and fast the echo is. Slow echoes can double double everything everything you you say say, while fast echoes can double a certain consonant such as a “t” or “d.” I tease pastors all the time that echoes can start whole new doctrines in the church. “Did he say Jesus did or didn’t die for our sins? “T-T-Tell me if you c-c-can!”

Now let’s take reverb. I have experienced 10-second reverbs in tile shower rooms where I couldn’t understand a man talking to me from 3 feet away. Many have experienced bad gymnasiums of 6 seconds reverb where you can’t understand someone from 20 feet away. In these environments, don’t kid yourself; you are not coaching or instructing, you are just yelling and the kids are nodding as though they understood.

We give three levels of treatment in such cases. Three seconds is a budget proposal. This is a great help and achieves clear communication from 50 to 75 feet. Not really nearly what it should be, but great compared to the 20 feet of the untreated 6-second room. Our 2.25- second guarantee allows clear communication at all distances from a human or amplified voice. At 1.5 seconds, we feel the higher volumes of amplified voices and bands at 100 to 110dB will be clear. Basically, anything you want to do can be done in a 1.5 second reverb time room – truly a multi-purpose.

Now, just briefly, how are reverb times determined? A reverb time or RT-60 is the time it takes for a sound burst to decay 60dB in a room. Since 40 dB of ambient room noise is common, I like to say “the time it takes for a sound burst to decay from 100dB to 40dB”. In some cases, 90dB down to 30dB is adequate. Time consuming and costly tests can be performed to see exactly what frequencies are reverberating and at what times, but with a study of the interior finishes we can closely predict this anyway. So, what do I propose? A loud hard clap, starter pistol, or snare drum whack and a stopwatch will tell you most of what you need to know (or just go with the loud hard clap and count slowly). Acoustical materials are generally broad banding absorption available for fine-tuning.

If you need more help or explanation, just call us. We are always glad to help. In some cases we cannot sell you a thing, but you will always get an honest answer!

PERDUE ACOUSTICS – *Honesty, Integrity, Innovation, & Value!*