

Sound Masking Versus White Noise

What is the difference between sound masking and white noise?

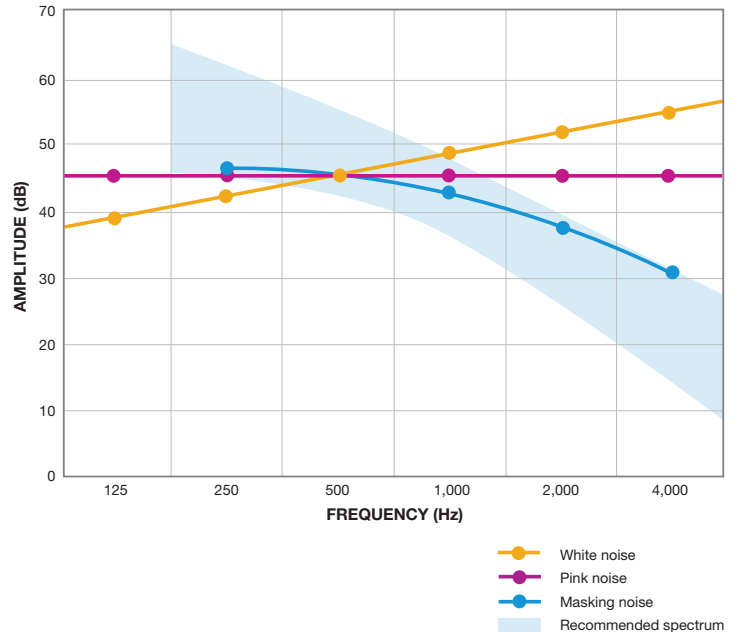
Sound masking is often misunderstood as white noise. White noise sounds similar to loud AM radio static. White noise includes all frequencies at equal energy and can be distracting. Sound masking is different than white noise because it is specifically engineered to overlap only with the frequencies of human speech. By matching this limited band of frequencies, sound masking can mask conversations for greater speech privacy and productivity. Sound masking is more comfortable acoustically because it only produces the frequency spectrum needed to increase privacy and minimize distraction.

Why not just get a white noise machine?

White noise machines are “localizable,” meaning that you can determine the source of the sound. Just like a fan, your ears can spot a white noise machine and it thus becomes a distraction in of itself. A sound masking system is a more immersive experience as the sound is everywhere. When properly tuned and installed, sound masking should fade into the background. There should not be any gaps in sound masking as you walk throughout an office, and a constant sound field should be produced whether you are sitting or standing.

For more information about QtPro Sound Masking, contact your Architectural Sales Consultant.

Source: Cambridge Sound Management (2018). *White Noise Vs Sound Masking*. Retrieved from <https://cambridgesound.com/difference-between-white-noise-sound-masking/>.



The blue area in the graph above shows the frequency spectrum in which sound masking is both effective at providing speech privacy and unobtrusive to the human ear and brain. Acousticians developed this range after studying noises that are not perceived to be distracting.

The amplitude of white noise increases proportionally to frequency, resulting in a distracting static sound due to a larger proportion of high frequencies. Pink noise has equal amplitude in each frequency band, which is closer to human sound perception but not as effective at covering human speech as QtPro sound masking.



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