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Subject: Re: Definimax 4012HO - End of Life

Posted by [Wayne Parham](#) on Sun, 26 Jul 2020 16:01:35 GMT

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I've not noticed listening fatigue when playing 2226H/Delta10/DE250 cornerhorns for extended periods of time. I took this combination to LSAF 2017, and it sounded great all weekend. I left the show feeling fresh. That's one of my "litmus tests" for listening fatigue. It's a long-term, low-level thing.

We all get temporary tinnitus from high SPL levels, even when exposed just for a few hours. Rock concerts and some industrial work environments are the most obvious ways to get it. Riding a motorcycle without a helmet is too.

But low SPL levels can cause it too, when exposed long enough. And so audio shows became one of my "tests" for this, as you saw in that last post you referenced. I guess I cannot say with certainty that the cause is harmonic distortion, but the only times I've experienced it is when using direct radiating speakers that don't have shorting rings. Even when they are played well below their limits, I found that I experienced listening fatigue after the show.

And the clue in that last statement (for me, at least) was "direct radiating speakers that don't have shorting rings." Since I didn't get fatigue from the cornerhorns with Delta 10 drivers, my hypothesis is the distortion reduction from horn loading prevented listening fatigue. Horns do reduce distortion by approximately 15dB, and that's about the same amount that shorting rings do.

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