

www.professional-sound.com

Professional SOUND



DEPT. 9 STUDIOS

EDMONTON'S NEW FULL-SERVICE RECORDING
DESTINATION FOR MUSIC, FILM & TV, THE WEB & MORE

**CURRENTS:
NIAGARA'S
POWER
TRANSFORMED**
A Spellbinding
Immersive Attraction

**THE GOVERNOR
GENERAL'S
PERFORMING
ARTS AWARDS**
Mixing the NAC
Orchestra

**TALKING
LOCATION
SOUND**
5 Pros Discuss This
Unique, Exhilarating
Niche of Recording

PLUS:
The CCMA
Recording Studio of
the Year; Is Pro Audio
Coming Home?

Minuendo Adjustable Lossless Earplugs

By Andrew Leyenhorst

You hear it often that the most valuable asset to an audio engineer or musician is their ears, and as such, it's important to treat them with care and a long-term view. As such, Norwegian designer and manufacturer Minuendo is offering up what they dub as "lossless" earplugs for audio and performing professionals, as well as concert-goers with a more discerning taste when it comes to hearing protection.

"Lossless" in this case obviously differs from the terms' typical use in relation to digital fidelity, but the same general principle applies; Minuendo earplugs are designed to retain auditory fidelity while greatly mitigating SPL at the ear. With their adjustable earplugs, each plug bears a small, stepless, sliding lever tab that controls the filter, allowing the wearer to select the amount of attenuation with a flat, natural response across all volumes – with no electronics or batteries required, as these are passive plugs. The attenuation levels range from an average of 7dB fully open to 25dB fully closed; but it's important to reiterate that the attenuator can be set to any level in between as well.

The Minuendos' passive, stepless attenuation is made possible by the company's patented membrane system. According to the Minuendo website's FAQ section, "a variably tensioned membrane does not by itself provide a good frequency response across the adjustable range. A secondary part of the acoustic filter must be adjusted in a synchronized manner to compensate and adjust for the varying resonance of the membrane. The Minuendo earplug lever simultaneously controls a combination of slit thickness, volumes, and membrane tensioning to achieve natural sound across the adjustable range." The website also says that the corrugated membrane reduces that annoying clicking sound you can get when moving your jaw.

What this boils down to, is that Minuendo's earplugs are manufactured using similar principles to that of premium, custom-molded earplugs rather than the more basic stepless plugs, which simply use small ports to filter certain frequencies through and out.

Included with the Minuendos are the plugs themselves and a small carrying case, a neck leash, and a pleasantly large selection of eartips in a variety of materials, sizes, and shapes. Plus, the rings on the outside of the plugs are magnetized, so they can be stuck together for storage.

I had the opportunity to try out the Minuendos in a couple different situations, both with and without a full-band PA. In any case, I found them to be very effective; finding a comfortable fit was made easy by the wealth of eartip choices, the attenuation levers are very smooth and easily accessible while being worn, and most importantly, the sound is excellent.

In a fully amplified setting (in the audience at a small outdoor rock show), I found myself going about halfway in terms of reduction, just to take off some of the harshness of the cymbals through the overheads, while still retaining clarity in the vocals and guitars. The earplugs were barely noticeable, delivering surprising transparency at all levels of attenuation, while remaining unobtrusive in my ears. The convenience of being able to make at-will adjustments is superb, and the response curve when moving the lever is remarkably smooth. Overall, an enhancement to the concert-going experience; naturally it's hard to resist the urge to pull them out anyway and face the music



head-on, but we all know that's a terrible idea – as fun as it is. These will keep you safe at the gig, and so long as the mix is good, may well enhance the experience depending on your taste.

I also brought them into the rehearsal space with a band during pre-production, allowing me to safely get up in the room with them while they played through the songs we'd selected. I found them to be immensely helpful in this context as a producer, as I was able to focus more on the details of the performances and songs rather than just being blasted with a wall of rock and roll. It's one of those interesting "addition by subtraction" situations, a lot like turning down the volume to gain perspective on a mix.

In the "in-the-room" situation, I preferred to keep the attenuation nearly wide open, as – surprise, surprise – cymbals and guitar amps don't hurt nearly as much when they're not being pushed through a big concert PA. The levels of ducking needed in rehearsal-type situations isn't quite as high, unless you're the drummer, I suppose. But, of course, it also depends on taste.

That said, I would highly recommend these to any studio personnel, including interns – you never know what kind of sessions you'll be working or sitting in on, and a lot of producers, and especially artists, like to crank the mains up *loud*. Same deal with drums on the live floor and amps in iso booths – loud and dangerous. Spare yourself from death-by-trap-hat.

My ultimate take is that Minuendo's Adjustable Lossless earplugs are a great grab for those looking for high-quality hearing protection quickly and affordably, with a highly satisfactory end result. For my part, they'll continue to make the trip with me to shows and the studio alike.

Andrew Leyenhorst is a Niagara-based freelance producer, engineer, mixer, and the Assistant Editor of Professional Sound.