

MSR Treats the Grammys to Better Acoustics
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The digital age is changing everything. Nowhere is the change more evident than in the world of television. With the FCC-mandated shutdown of the analog broadcast network set for February 2009, content providers and broadcasters alike are working to implement the vast array of features afforded by the new digital television system. The live national telecast of the Grammy Awards is certainly no exception. With 5.1 surround sound emerging as the new audio standard, the broadcast audio engineers for the 2008 Grammy Awards were well aware of just how high the expectations would be for their 5.1-surround sound mix.

As they prepared for music's biggest night, it was obvious that the sound in the premix trailer left something to be desired. Even after they employed the automatic equalization system in the Genelec monitors, the premix trailer failed to match the sonic environment of the main audio truck. This presented quite a problem, as the purpose of the premix trailer was to mirror the main truck so that projects could be seamlessly transferred between the two. Both spaces were outfitted with identical equipment, so acoustics came to the forefront as the dividing factor. It just so happened that the main truck was outfitted with acoustic treatments, while the premix trailer was not.

At this point, Broadcast Audio Supervisor Hank Neuberger decided to bring in MSR Acoustics to provide the necessary engineering and treatments to solve the acoustic issues in the premix trailer.



Grammy Broadcast Audio Supervisor Hank Neuberger relaxes inside the freshly-treated premix trailer. The design and installation of the acoustic treatments was accomplished in less than 12 hours.

The Plan

When MSR arrived, we were presented with what amounted to the bare interior of a standard Gelco construction trailer. As expected, the trailer suffered from the typical acoustic issues (indistinct imaging, poor timbre match, uneven spectral balance, and rough frequency response) associated with untreated rooms, where the excessive level of reflected sound energy interferes with the direct sound from the speakers. Utilizing years of experience treating hundreds of environments, MSR designed and implemented an acoustic treatment system that reduced the reflected sound energy and

transformed the construction trailer into a world-class 5.1-surround sound mixing studio.

The first step was for MSR to perform acoustical engineering and modeling for the trailer. To ensure the best possible results, we consulted with leading acoustical design firm PMI. We then supplied all the absorbers, diffusers, bass traps, and isolation gobos necessary to make the design a reality.

We began by outfitting the side-walls with a succession of absorbers and diffusers from our ZSound™ line. The diffusion included both 2D and 3D units, which disperse sound in a horizontal plane or a hemispherical pattern, respectively.



The right wall featured a blend of StudioPanel Pro absorbers and diffusers from MSR.

We also mounted two 3D diffuser clouds above and slightly behind the mix position. For the front wall, we used low frequency SōN Acoustics baffles hung 4" from the wall, as well as ZSound mid-bass corner traps and an MSR-exclusive low-bass, spring-loaded corner trap called the SpringTrap™. To break up the long length of the trailer, we placed IsoPanel™ isolation baffles behind the producers' seats. The finishing touch was provided by ZSound 3D diffusers arranged in front of the IsoPanels to create a sense of spaciousness at the back of the soundfield.



3D diffusion clouds were hung from the T-bar ceiling behind the mix position. Also visible are the SōN Acoustics baffles on the front wall.



The back portion of the 53 foot long trailer was divided from the mix area by IsoPanels, visible here above and to the left of the mixing chair.

All the acoustic treatments were hung from the T-bar ceiling in order not to damage the walls of the rental trailer

With the acoustic treatment complete, MSR placed the Genelec 5.1 monitors according to the engineered design and performed the initial aiming.

The Result

When the final tuning of the Genelec monitors was complete, everyone marveled at the sonic match between the pre-mix trailer and the main audio truck. The addition of acoustic treatments also gave the pre-mix trailer a professional look and feel that provided lead broadcast mixer John Harris and artists like Brad Paisley and Daft Punk with a comfortable and enjoyable working environment.

Of course, the true test was the quality of the final broadcast mix, which ultimately met with the approval of both artists and engineers and elicited comments from viewers around the country on the cohesive and immersive soundfield. All in all, it was gratifying to observe the success of the project, particularly given the time constraint and the demanding nature of the application.



Hank Neuberger (left) and broadcast mixer John Harris (right) mixed artists such as Brad Paisley and Daft Punk in the pre-mix trailer.