

It sounds fine here

The OB van was not designed for critical listening yet it is expected to generate mixes over multiple formats. **DENNIS BAXTER** explains the dilemma.



Visualise this: Master Control calls the Outside Broadcast Van and says, 'There's a problem with the sound!' The sound person who is listening to it responds, 'It sounds fine here!' This dialogue is not fiction — I've said it myself — and I assure you that every sound person who has mixed in an OB van has said it, too. The reality is that the television OB van was not designed for critical listening and generally no one in the OB Van except the audio mixer is listening to a complete mix over multiple formats.

Clearly it was difficult to mix in an OB van in the days of analogue and stereo, but with digital and surround today, it could be said to be impossible. Why? The physical audio booth environment is the culprit because the travelling OB van must comply with weight and size restrictions that ultimately limit workspace, acoustic isolation and room for treatment.

Inside the OB van, audio is regulated to a small space but, even so, it is a micro-study in the science of spatial sound. Room dimensions and limited size affect frequency reproduction. Surfaces, such as the mixing console and racks of equipment, create complex reflections and waveforms that interfere with critical listening. Don't even ask about proper speaker alignment. And then there's a considerable amount of interference and masking from HVAC and equipment noise.

While we all acknowledge that reference monitoring is necessary, it is rarely implemented properly and most OB van designs seriously compromise the critical listening environment. Where is the disconnect?

Given all these issues, it is amazing that live television sounds as good as it does. It is definitely a tribute to the skills and experience of the prime time sound mixing cadre. I have talked to many live audio mixers who say they have developed a sense of confidence in their mixes from experimenting and improving their design, monitoring the results by recording and reviewing their shows, and building on their years of experience. However, the industry's expectation for sound to be delivered in multiple formats to specific engineering standards and loudness parameters without adequate or proper monitoring is unrealistic.

We've all heard lip service acknowledging the monitoring problem, but little has actually been done. Personally, I knew there had to be a solution. Armed

with my trusty decoder ring, I looked at the problem with the two fundamental considerations used when you are designing a listening space; the environment and the speaker performance. Most audio types think they know something about acoustics, so I thought I would seek the advice of an acoustician who has some interesting observations.

Acoustics engineer Russ Berger (www.rbdg.com), describes it as follows: 'With all of the problems inside the OB van audio space, protecting the mix from noise pollution is one of the most overlooked issues. It is critical to control the outside noise and inside noise so the mixer does not have to compensate with greater speaker volume to hear the details of the mix.'

Berger has designed hundreds of facilities around the world and says there are plenty of materials and clever solutions to make a difference for the person who has to try and make a mix. 'I have experience in aircraft sound control,' Russ explains, 'and there are materials that offer great isolation and are very lightweight.'

Berger acknowledges that it is an unusually difficult situation but believes there are solutions. He also says that he has received few inquiries about OB van designs. 'Everything is a matter of trade-offs and compromises, but there has to be an understanding of the sound quality consequences for you to make knowledgeable decisions about critical listening spaces.'

Additionally, driving monitor speakers at excessive levels accelerates listener fatigue and often pushes the speaker far beyond its intended performance. Just like there are options and solutions with acoustics and noise control, there are options with speaker systems. Close monitor speakers have long been considered to be an answer to most monitoring environments in the OB van. Obviously, close and nearfield monitors are a good start but are not a complete solution especially when monitoring surround sound.

Consider this: proper speaker placement in the OB van is nearly impossible, so why not look for a clever solution to an old problem? DSP has been around a long time and is capable of audio miracles — so why not use it for one?

DSP controlled speakers offer unprecedented compensation for misaligned speakers and poor acoustics. Genelec has made significant contributions to speaker design, but given all the acoustic anomalies and lack of proper room design, DSP controlled speakers are a viable offering. (www.genelec.com)

At the end of the day, there is a need for a real solution and not, as Russ Berger says, 'Putting more fuzz on the walls.' The OB van audio solution requires an holistic approach using greater isolation, acoustically tuned listening space, and versatile audio reproduction systems. It is doable but requires fresh attention to be paid to the acoustic details from the ground up.

The live television broadcast industry should lend an ear to the audio person. Give us a realistic listening environment and we will give you superlative sound. ■