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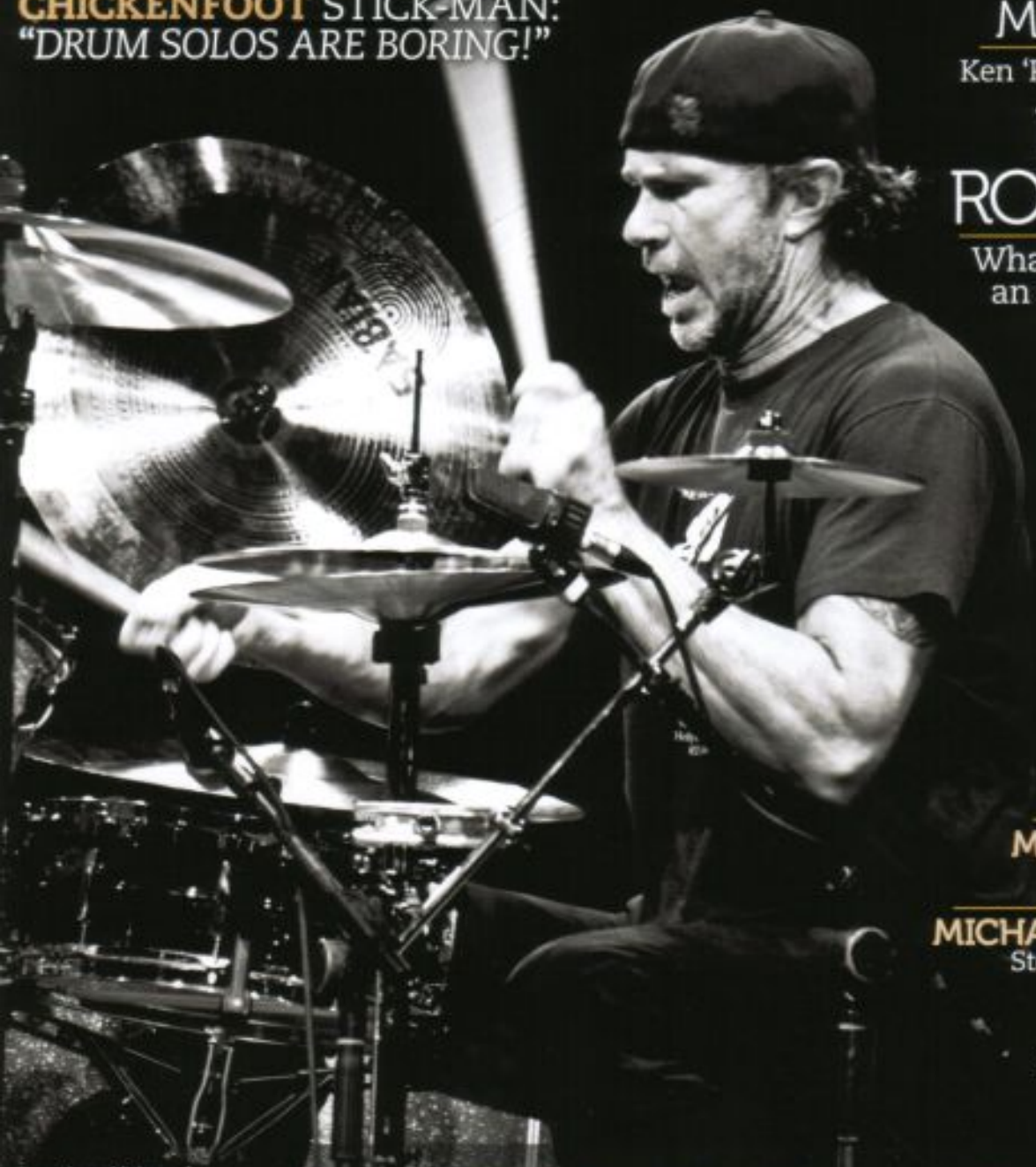

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ACROSS THE BOARD

Ken 'Pooch' Van Druten: FOH engineer for Linkin Park

As a sound engineer, Ken Van Druten boasts an impressive CV. His live sound work with artists such as System Of A Down, Kiss, Kid Rock, Limp Bizkit and Zakk Wylde has earned him a reputation as one of the best and most respected live engineers on the music scene.

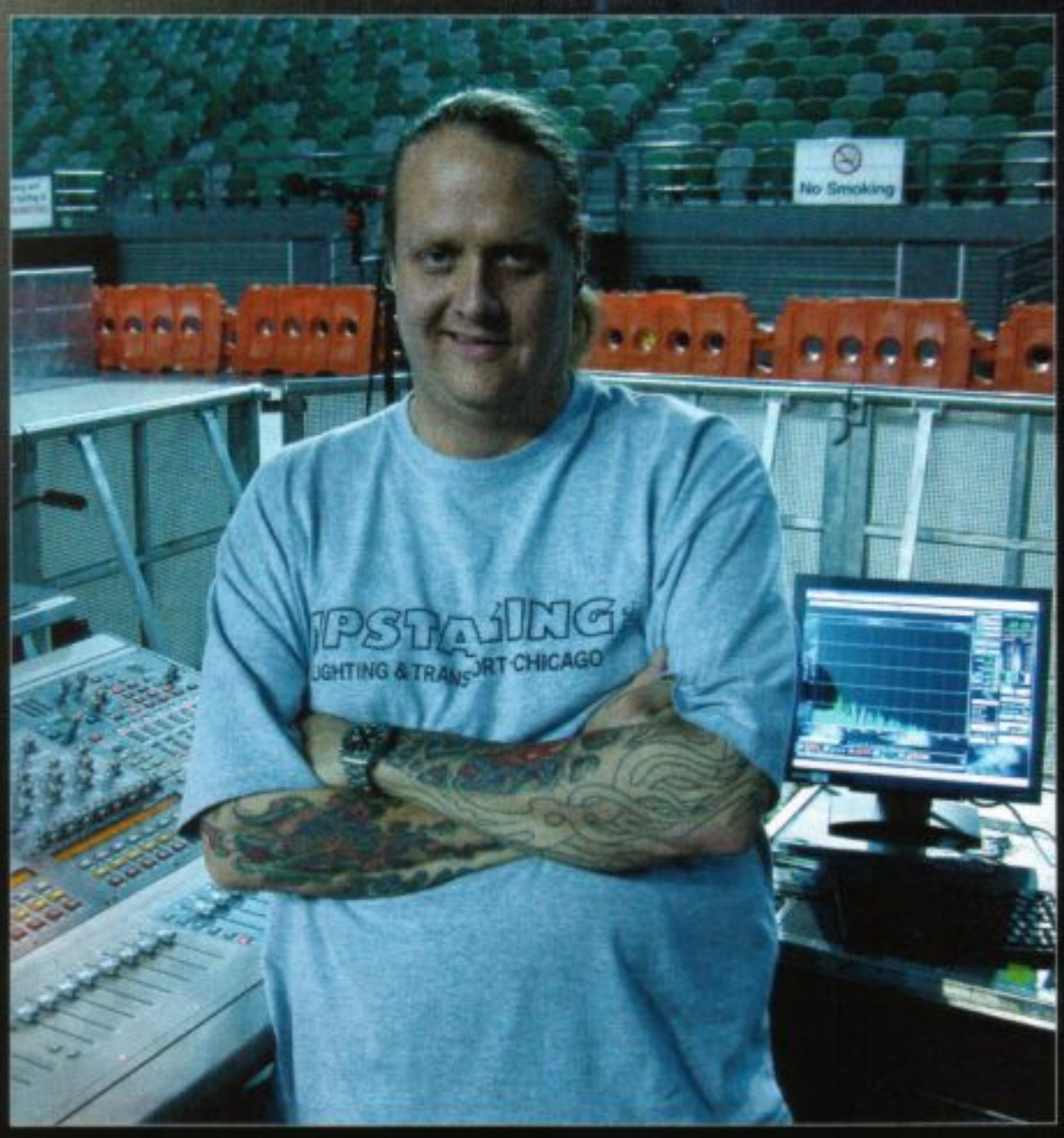
Joe Matera

Van Druten began his life-long love affair with sound engineering whilst still in his teens. It was his first ever venture into a recording studio, as part of his teenage punk band's demo session, that provided the initial spark to ignite his burgeoning interest. This led Van Druten to later enlist at the Berklee College of Music in Boston, where he studied Music Production & Engineering. Upon graduation, he moved to Los Angeles and in 1988 secured a position as recording engineer, working on albums by such names as Sheryl Crow, Kiss, Joe Walsh and Everclear.

After a call from Warrant came in offering Van Druten a stint doing live sound for the band, Van Druten soon found the live environment to be more to his satisfaction and calling, and this is where, to this day, he can be found applying his front-of-house sonic mastery. Currently on tour with Linkin Park, Van Druten took time out to speak to *Performing Musician* about his work.

Performing Musician: You've been behind the board for a bunch of big-name bands. How does mixing a band of very precise musicians like Linkin Park differ from mixing a band like Kiss, whose shows are more about being bombastic, loud and full of explosions?

Ken Van Druten: "Each band spends a great deal of time trying to make their record the best record that it can be for the show. I do quite a bit of homework when I first start working for a band and listen to their entire collection of music, whether that'd be one record or 10 records. My philosophy these days, given the way that equipment is now, is that it's totally possible to make a band sound as good as their record live, or as similar to their record as possible. The focus at my end, as far as bands go, is that I really want their live show to have not only that record quality but also to have a life to it and an impact. Because people go to the show not only to see and hear the music, but also to feel the music, I'm looking for an energy and also to recreate for the band a sound that they got out of their record. And this philosophy is different with each band. But it really has to do with taking a lot of extensive notes on listening to the records, and making sure all the effects are the same and making sure to maintain the correct placement of guitars and drums in the mix."

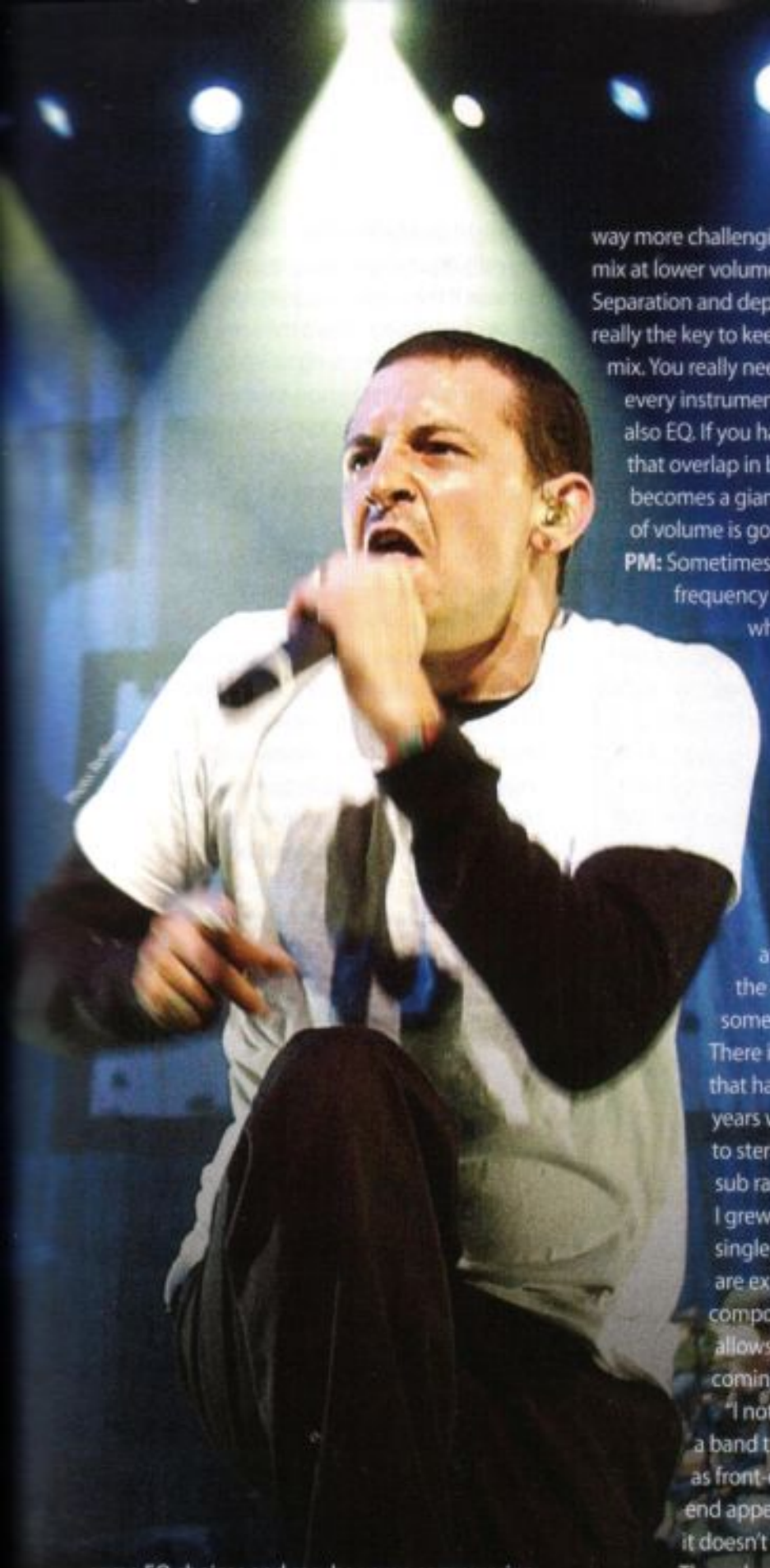


PM: Most live shows that I've been to, I've noticed that the sound and mix tends to slowly get louder as the performance wears on. I've found with some shows that it gets a little overbearing, where the sound is not only too loud but starts to get distorted. Why do some sound guys tend to go down this route of getting louder as the night progresses?

KVD: "I do the same thing at times. I watch other people work sometimes too and it is absolutely frustrating to me. I'm not really sure why that happens, but I think that those guys loose focus and that they allow their ears to close down. Maybe it is because they've just mixed the last 16 nights in a row and so their ears are all shut down. But they don't fix it. It is as frustrating to me, if not more so, than it is for your average layman going to a show. I think in this day and age, that situation, especially with people paying huge amounts of money to come see a show, is completely inexcusable and unacceptable."

PM: How do you go about managing sound and volume in a live show?

KVD: "There are issues, of course, like with a loud rock band such as Kiss, where they have huge-sounding guitars coming off the stage so the difference in the live sound versus the recording is obvious. There are 40-plus open microphones on stage all picking up the same kind of instrument, as opposed to a studio situation where it is very closed and separated. You have to make concessions when the lead singer is standing in front of a guitar rig that is 118dB... You're going to hear a lot of guitar coming through his microphone, so there are



some EQ choices and maybe some compression choices that you make that would be different to what you'd be able to do in a studio situation. This is especially the case in festival situations, where the lead singer might actually run in front of the PA.

"I work very closely with a monitor engineer that I trust — Kevin 'Tater' McCarthy — who has been working with me for a long time. Before we even do a show or a soundcheck with the band, he will take a wireless microphone and actually walk the stage and in front of the speaker stack. He does this to make sure we're not going to run into feedback issues and all of those kinds of things."

Balancing act

PM: Do you find there is a struggle between the vividness and the volume of the sound?

KVD: "Yes and it takes many forms. Each band is its own beast. It's a real challenge to keep the vocals clear, understandable and upfront, while maintaining good separation between all of the instrumentation. More volume doesn't necessarily mean better. In fact, I think it is way more challenging to get a great-sounding mix at lower volumes, as that inspires energy. Separation and depth within the stereo field is really the key to keeping things working in your mix. You really need to find a separate hole for every instrument, in terms of placement and also EQ. If you have too many instruments that overlap in both those areas your mix just becomes a giant smear of crap. No amount of volume is going to fix that in the end."

PM: Sometimes I find that the bass frequency is hitting in your chest while in another show the guitars may be at head level in the mix. Is it hard to get a healthy balance, where all the different instruments are not fighting for their space in the aural spectrum?

KVD: "It is. But the advantage I have is that I'm a little bit older than some of the engineers that are mixing some of these shows these days. There is a whole phenomenon that has happened in the past 15 years where people are listening to stereos that all have an exterior sub rather than the type of stereo I grew up with, where it was all single-source. So kids these days are exposed to this separate component stereo system that allows for more bass energies coming from a separate source.

"I notice that when I go and see a band that is using a younger guy as front-of-house engineer, the low end appears as a separate entity, and it doesn't feel like it is part of the band. The only reason this happens that I can think of is that they grew up listening to sh*t that sounded like that. With today's technology, I can do virtual soundchecking, sit in front of nearfield monitors and make sure that what is coming out of my console is 'record quality', *per se*. Then what happens after my console is my System Engineer and myself work to make it sound just like those nearfields but in a loud, high-energy way."

PM: When it comes to different room acoustics, how do you go about adjusting?

KVD: "The biggest problem we have as sound engineers is that most of the rooms that we play in were never designed to have that kind of high-energy rock band music in it. Most sports venues are designed to reverberate, so that when you get a room full of 10,000 people in there and they're applauding and yelling, the room actually gets louder and bigger. And that is not something we want as sound guys. So when you put in a high-energy rock show in this room that already does that kind of stuff it is very difficult. There are definitely some rooms in the world where you can sit there all day and try and EQ them, and they will still not sound good. But today with the advent of technology we can overcome [*that*].

"Line-array PAs have really brought a whole new set of tools into the arsenal, and we can start to really make every seat in the house sound good. I think a lot about how ticket prices are so high these days, and the pressure placed upon a FOH mixer in providing the best show possible for the audience. I honestly believe that every seat in the house should sound the same and sound good for the prices that promoters are charging consumers. This now can be achieved with the speakers and technology available today. Ten years ago we called a show a success if you could understand the vocal and there was a fair amount of intelligibility. Today I demand more, and I think the people do as well. My favorite line-array PA these days is Adamson. The Y18 in combination with the T21 sub box really shines and eliminates a lot of issues with room acoustics. There are other »

Photos: Redferns

▲ When mixing monitors on very loud stages, Van Druten advises making 'sweet spots' for the performers, where they can always return to if they ever have trouble hearing the mix.

» boxes that are worthy of mention as well. The Clair I5 is a great box. So is the D&B J series. I will say that being a Systems Engineer is an art form in itself. My philosophy is that the stereo bus that is coming out of my console is the best it can be. As I hand it off to my Systems Engineer he takes it to another level with the use of digital zoning in PAs, Smaart, PA box placement and angle, and, most of all, a great pair of ears. We work as a team and I can say that I have had the pleasure of working with some of the best in the business. Chris 'Cookie' Hoff and Brett Stec are some of the best guys in the biz, and I depend on them fully. They walk the venue during the show and make the proper adjustments so that I can honestly say that every seat in the house was a good seat."

Mics

PM: How important is the positioning of mics to achieving the sound you're after?

KVD: "They are absolutely the key to the whole process. The first acoustic to electric change is crucial. Mic placement is really the key to my success. I learned from a lot of great engineers and watched a lot of guys do it over the years. Physically moving a microphone just an inch can make all the difference in the world, and can change the way something sounds unlike EQ or compression. Get off your butt and go move the mic. You'll be happy you did.

PM: Speaking of having many mics on stage, when it comes to the wall of Marshall amps, is it usually only one cab and a mic that provides the main bulk of the guitar sound, while the wall of stacks is there purely for the rock & roll imagery?

KVD: "That is correct, especially with Kiss — you would think that the stage would be ridiculously loud. In fact, they're not one of the loudest stages that I've ever worked with band-wise, and for that very reason. And that is probably not a choice by the band members more than a relationship that I have had as a front-of-house engineer seeing to bands, where I tell bands that rather than have all these speaker stacks, why not trust me and make sure that your guitar sounds sound right. Trust your monitor engineer to make sure it sounds right, and let's use a half stack and mic that up so we can use wedges and in-ear monitors to get it to a level that you need to feel the music."

PM: What was the loudest onstage sound by a band that you have worked with?

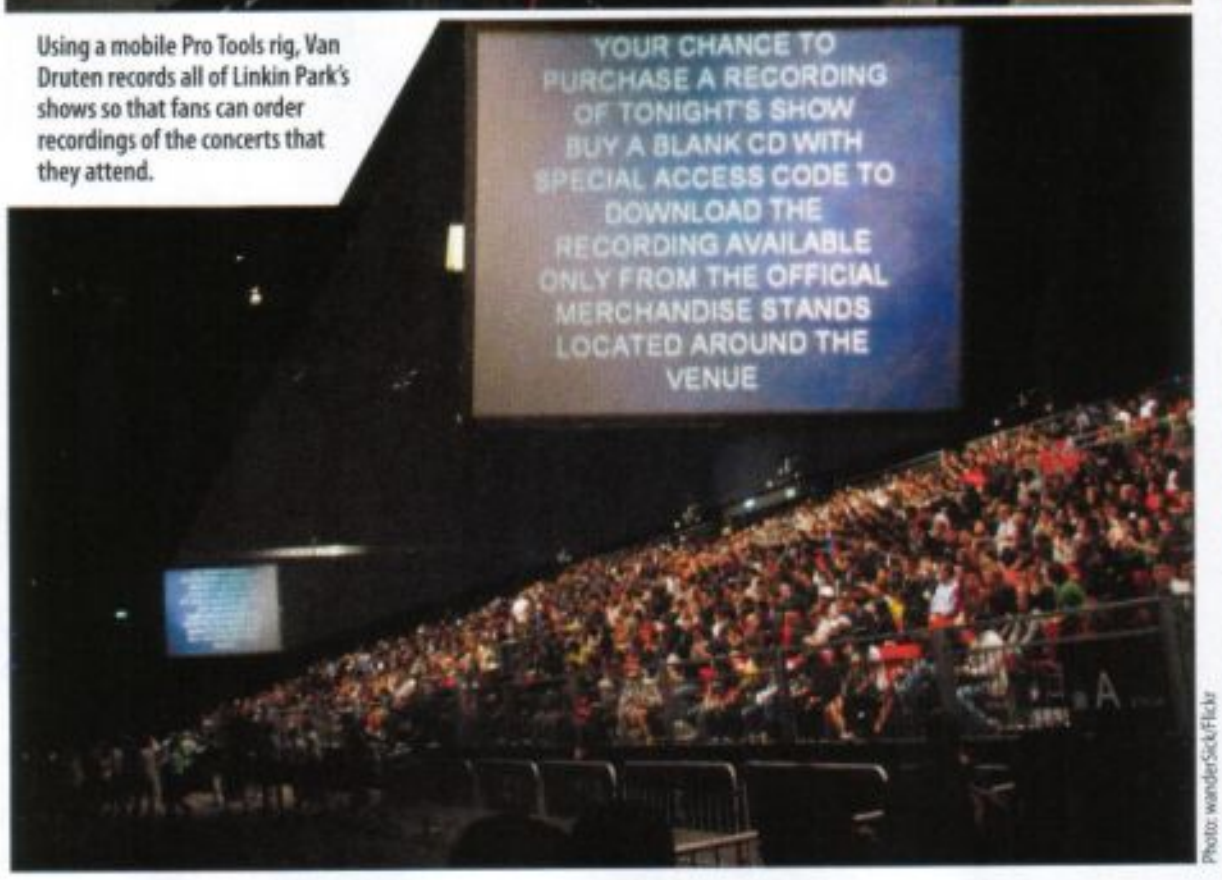
KVD: "It was Pantera by far. I didn't do front of house but I mixed monitors for them as they had a long-standing front-of-house engineer who had worked with them since the very beginning. It was one of the best-sounding stages, not to toot my own horn, but also one of the very loudest, where I would not want to stand there for two hours. But those guys, they had their way and they wanted it to be huge and loud on stage and it worked for them. The way I handled that as a monitor engineer was to create 'pockets' of sound on stage. So no matter where Dime or Rex went on stage, if they came back to their 'pocket' they would be comfortable. Basically we had a small club PA as side-fills and it was loud."

PM: You mentioned the use of a sweet spot for Pantera, so do you always aim for that?

KVD: "Yeah, as a monitor guy you definitely look for that. You want to be able to have a pocket of information especially if you're working with a band that uses loud wedges. Nowadays, because nearly everyone uses in-ears, stages have gone down to half the volume that they used to be. But when I mixed monitors it was always about loud wedges, and in that case, the best case scenario is to create a sweet spot for each musician on stage so that they have a place to go when they feel like they're in trouble or having problems hearing. You can say to them, "If you're having trouble hearing yourself on the other side of stage, run back over here and stand in that place and I'll guarantee you'll hear yourself". With in-ears it's a whole different world for monitor guys, they're basically mixing records! It is unbelievable. I have a lot of respect for really good in-ear monitor engineers, because if they can mix something that makes a musician who has heard the song a million times and knows the song so intimately, and they can make that person happy, they're really doing something. As a front of house guy we have different opinions of what sounds good, but if you can make the musician happy, then you're really on top of it."

PM: What frequencies tend to be the hardest to work with in a live environment?

KVD: "There is a delicate balance between the best in intelligibility and the proper amount of low end. I tend to find the low-mid frequencies (100Hz to 400Hz) are the toughest to get right. They can destroy a good mix if the room resonates around those frequencies, and it is often necessary to cut some of that stuff as a trade off to getting good overall intelligibility and excitement out of your mix. It really depends on the environment. Again, I heavily



Using a mobile Pro Tools rig, Van Druten records all of Linkin Park's shows so that fans can order recordings of the concerts that they attend.

Photo: wanderSick/Flickr

rely on my Systems Engineer to get the right balance in the PA speakers prior to introducing what I believe to be a good mix."

Going digital

PM: I noticed that your gear is comprised mainly of digital gear rather than analogue.

KVD: "I think in this day and age you cannot ignore technology. I started out in the late '80s as a recording engineer in Los Angeles. This was right at the time that the recording world was making a switch from analogue to digital and I was kicking and screaming about it. I remember distinctly when we got the first Mitsubishi X850 digital tape machine at the studio that I was working at, and I remember spending hours debating with my fellow colleagues about which sounded better — the Studer A800 24-track analogue machine, or the Mitsubishi 32-track digital. For me it was no question. I loved the way analogue tape sounded and was bummed that the industry was headed that way. I started mixing live stuff in the early '90s and fell in love with the instant gratification of 20,000 people screaming for something that you are doing. And I never looked back at the studio.

"Now fast-forward to the live-sound industry doing the same thing, and everybody is heading toward the digital era. I was a Midas XL4 user for over 15 years and it was a hard switch to digital. I still think that nothing beats the sound of an XL4, But as technology advances I cannot ignore the fact that I can get my gear to fit in an 8 x 8-foot space that comparably in analogue land would be something like 20 x 20 feet. And I really feel like technology has finally caught up to us. The Digidesign profile, with the right third-party plug-ins and the Apogee Big Ben word clock, *can* sound phenomenal. I have really felt like an old dog learning new tricks in the last five years, but I have adapted and embraced the technology full on.

"The absolute coolest new technology is the virtual soundcheck, where I can record a previous show and sit in front of some nearfields and really get my mix in the zone. I can really relate to this as my background as a recording engineer lends itself to this technology like jam does to a biscuit."

PM: What is your soundchecking procedure using that facility?

KVD: "I am using a Digidesign Profile console, which has the virtual soundcheck feature. Using a Pro Tools rig that is attached to the console I can record the show from the night before and then listen to individual tracks the following day. So my first thing on the day, once the PA is up, all the components have been tested and everything is working right, would be to bring up a session from another show and listen to what it sounds like. We can focus more on individual instruments to try and fix it. And this is all done prior to the band showing up.

"When the band shows up, I let them at it. The soundcheck these days is more about the band making sure they're comfortable in hearing the room and the monitor engineer's mixes. Previously that would have been the only opportunity I would have had to hear the band through the PA. Now with those tools, I have the opportunity even before the band shows up. So it is a lot less stressful these days as a front-of-house guy during the soundcheck period with the band."

Full circle

PM: So what you normally would class as 'sound engineer' goes beyond the scope of the title?

KVD: "Yeah, like with these shows I'm currently doing with Linkin Park, they've asked me to mix shows that they release on-line and also sell at the shows, on USB drives or bracelets that promise people that in several days time they can download the show that they were just at. And with that they also get photos of the show they were at, liner notes and all kinds of stuff — it is a really cool package. So really, they're getting a record-quality bootleg of the show.

"We record every single show, and then over the next couple of days, I spend my entire day with a Pro Tools HD rig buried in a dressing room with nearfield monitors, re-mixing the show and making sure everything all fits in there alright so it is record quality. The majority of my day is spent like that when I'm working with Linkin Park."

PM: Is this something that is changing the way sound engineers are working these days?

KVD: "I have a feeling that more and more bands are heading down this direction, where they're using their live sound engineer to do this kind of thing. This has come full circle for me because I started out as a recording engineer before going on to do live sound, and with this type of work I'm now involved in with Linkin Park, they're asking me to become a recording engineer again."

PM: Can you offer up some advice for those interested in pursuing your line of work?

KVD: "It is a very tough business. And it is definitely not an easy job market as you tend to see a lot of familiar faces over and over again over the course of your working life. The best advice I can give to someone heading on this path is to learn as much as you can from mixers and respect their opinion. Even watch people who you may think are bad at what they do because you can learn the most from someone about what not to do than what to do.

"I think the best way to get into it is to start working for a regional sound company, mixing for small opening bands and then working your way up. Eventually you could do really well for yourself. But there will be a lot of times when times are lean, you're not making any money and the phone isn't ringing, as it is a super-tough business. You will have to have the passion and drive to want to be in the business in the first place to be able to survive it." ■ PM

The Gear

- 96-input/48-output Digidesign Profile D-Show desk.
- Pro Tools HD4 on quad-core Apple Mac with Magma EB7 chassis.
- Apogee Big Ben word-clock generator.
- Four Midas XL42 mic preamps for audience mics.
- Waves Maxx BCL compressor/limiter.
- MacBook Pro with Apogee Duet for recording stereo master bus output.
- M-Audio Profire 2626 audio interface.
- Three Dolby Lake processors with Smaart overlay.
- Two Alesis Masterlink ML9600 hard-disk recorders.
- Genelec 8050A monitors.