

AUGUST 2008

ProAudio Review

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TOUR PROFILE

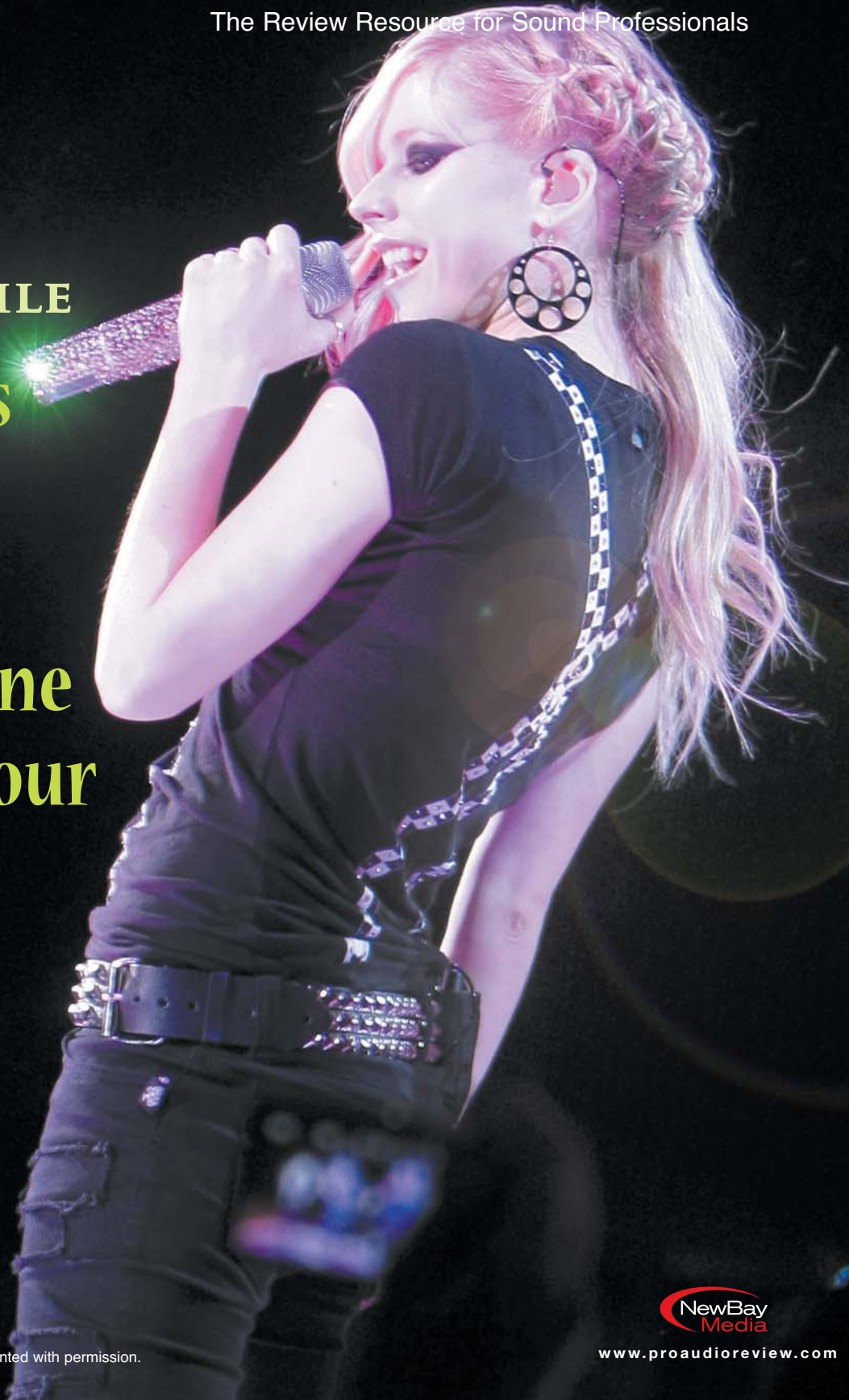
L-Acoustics

V-DOSC

Propels

Avril Lavigne

Summer Tour



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REPRINTED FROM AUGUST 2008

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Avril Lavigne's The Best Damn Thing World Tour

For *The Best Damn Thing* tour, Avril Lavigne opted for a rhinestone-encrusted Sennheiser SKM 935 G2 with an EM 550 G2 receiver.



Reportedly, when Avril Lavigne was writing the songs for her latest CD offering, *The Best Damn Thing*, she had one very clear goal in mind: to make it fun. And now while touring in North America, Europe and the Far East in support of that project, the Canadian-born punk/pop dynamo is using her favorite sound company to make sure that the singer's brand of infectious fun reaches her loyal audiences. Founded in 1984, Orlando-based LMG Inc. is a national provider of video, audio and lighting support with offices in Las Vegas and Phoenix.

And although Lavigne has morphed during her career from a self-professed skater punk to a newly married pop princess, one thing remains constant: Jim Yakabuski, who has been running sound since midway through her first tour in 2002, serves as FOH Engineer, working with monitor engineer Matthew Peskie. System engineer is Evan Hall, an audio technician with LMG, while Shaun Shuell serves as monitor assistant/stage-patch technician and Marco Giappesi as V-DOSC CVE and PA technician.

James "Marcel" Marcelek and Kevin Simmerman served as technicians on the Canadian/US tours. For Lavigne's *The Best Damn Thing* Tour, LMG supplied an extensive L-Acoustics line-array system with a custom-designed touring package that included two Digidesign VENUE D-Show Profile consoles.

Yakabuski has been mixing headline acts as FOH engineer since 1992. "I started out mixing monitors for Aerosmith, Poison, Van Halen and, before that, a bunch of opening acts. I then took over FOH duties on Van Halen between 1993 and 1998. I've also mixed Matchbox Twenty, Luis Miguel, Mr. Nugent, Julio Iglesias and Englebert Humperdinck." He has also been handling corporate audio for more than a decade and, in 2005, joined LMG as a show and tour technician. In 2007, Yakabuski and LMG built a concert touring division and prepared to put the Avril Lavigne tour on the road.

V-DOSC LINE ARRAYS WITH DV-DOSC AND KUDO CABINETS

"We discussed loudspeaker choices early on with Avril's management," the FOH engi-

neer explains, "and how that would affect quality and coverage. We needed to ensure a great-sounding seat anywhere in the house." For the Spring Leg of the US tour, "we had 15 V-DOSC with three dV-DOSC speakers per side as mains for the larger venues, and then 10 KUDO cabinets per side as side arrays. We also went back to using a center sub-cluster, which in my past experience has proved very successful. There were 12 Meyer Sound 700-HP Ultra High-Power Subwoofers in a single long array in the center - with nothing at all left and right - and only one 700-HP sub per side about 16 feet off-center to hold up two dV-DOSCs that take care of front-fill requirements. Matt Peskie and I also drive the whole system with L-Acoustics' new LA8 amps, which are controlled by LA Network Manager."

Equipment choice was based on both coverage and overall sound quality. "The shape of concert audiences is changing from 10 or 15 years ago," Yakabuski considers. "Even though there is a huge video wall behind the stage that has some fantastic content on it - and a pair of side screens that [feature] the artist's face all night long - concertgoers will

still buy a ticket for the side of the stage where they have no view of these screen elements, long before they'll buy a ticket further back in the venue. Which means that although the flown V-DOSC arrays cover most of the venues, KUDO arrays are required to handle the required additional side coverage."

"You have to cover a very wide amount of seats along the side," Yakabuski continues, "but also a very tall swath. The bottom seats near the stage can sometimes be only 15 or 20 feet from the downstage edge, while the top bowl of an arena may be 150 feet away. Having the flexibility to put a huge J-curve in the array, and then adjust the horizontal coverage from 55 to 80 to 110 degrees, was a big deciding factor in going with the KUDO boxes."

As well as serving as side fills, LMG used the supplied L-Acoustics KBUMP rigging bar to turn three or four KUDO cabinets on their sides for outdoor amphitheatre situations to achieve just 30 or 40 degrees of horizontal coverage; K-Louvers were used to adjust vertical dispersion. "KUDO is a very flexible speaker system and a great choice for the side arrays. They blend very nicely with the V-DOSC, and work great together," Yakabuski considers.

"The side arrays receive swapped input - for example, House Left-Side Array is Stereo Input-Right - so that side seats get a stereo image," the engineer explains, "and to reduce timing and overlap problems. We also reduce the size of the rig proportionally in all arrays as the size of the venue decreases. We spend some time with the tools we have, including inclinometers, laser pointers, tape measures and delta plates, to ensure that the loudspeaker clusters are trimmed at the same height and pointed in the same direction. With line arrays, being off by even a few degrees can mean a substantial difference in tone from Left to Right, so we make sure things are spot on before we begin tuning the PA.

"We have been using the Meyer SIM 3 system to align and tune the system and,

once the entire system is optimized, we use some music to do a walk around and check our work. We usually do a couple level tweaks after that to finalize things. During the performance, our system engineer Evan Hall will walk around the venue and check zone levels and tonality. We use the Meyer Galileo [Galileo loudspeaker management system] for EQ, and to align the PA."

"For stage monitors, there are only a couple of flown L-Acoustics ARCS side-fills and dV-Sub subwoofer cabinets on each side of the stage for the dancers," Yakabuski continues. "That way they don't have to wear IEMs and RF packs, which can slow down the costume changes. We also have a dV-Sub cabinet for Drum Sub. Everyone else is using in-ear monitors. This was Matthew Peskie's first tour as Avril's monitor engineer, although he was on the last tour as the monitor assistant/technician."

The new L-Acoustics LA8 Amplified Controllers used to power the main arrays and side fills combine amplification, DSP, network control and system protection in a single ergonomic package. Packaged in a compact 2U chassis, the LA8 provides a two-input/four-channel amplifier section rated at 1.8 kW into 4 ohms; the DSP section features advanced filter algorithms and an exclusive L-DRIVE protection system for the transducers. The PC-based LA Network Manager software provides GUIs for remote monitoring and control. Networked control

is via conventional Ethernet ports. A preset library features 99 memories that cover all the principal L-Acoustics loudspeaker configurations.

DIGITAL FRONT-OF-HOUSE AND STAGE-MONITOR CONSOLES

A pair of identical VENUE D-Show Profile HD | 64 consoles with three DSP Mix Engine Cards handle FOH and stage monitors, with racks housing 96 analog mic/line inputs with SRO Analog and DSO Digital output cards. Recording was handled by an integral Pro Tools system that includes HD2 Accel cards.

"The music and musicianship are very different on this tour," Yakabuski says. "We had a lot more inputs coming down the snake than on previous tours, especially in the drum department - the amount of sound that comes from this band is unbelievable. We only use a couple of electronic loops in the whole show to fill things in a bit. We also have a keyboard player for the first time and, again, we now have live keys and effects coming from his very high-tech rig, instead of coming from a sequencer, as in past tours.

"The FOH and monitor consoles feature 96 inputs and 32 outputs, although one of the FOH output cards is an eight-channel AES-format digital card. The size of these Profiles is a huge feature to both Matt and me - they have so much packed into such a



The main PA comprised 15 L-Acoustics V-DOSC with three dV-DOSC speakers per side as mains for the larger venues, with 10 KUDO cabinets per side as side arrays.

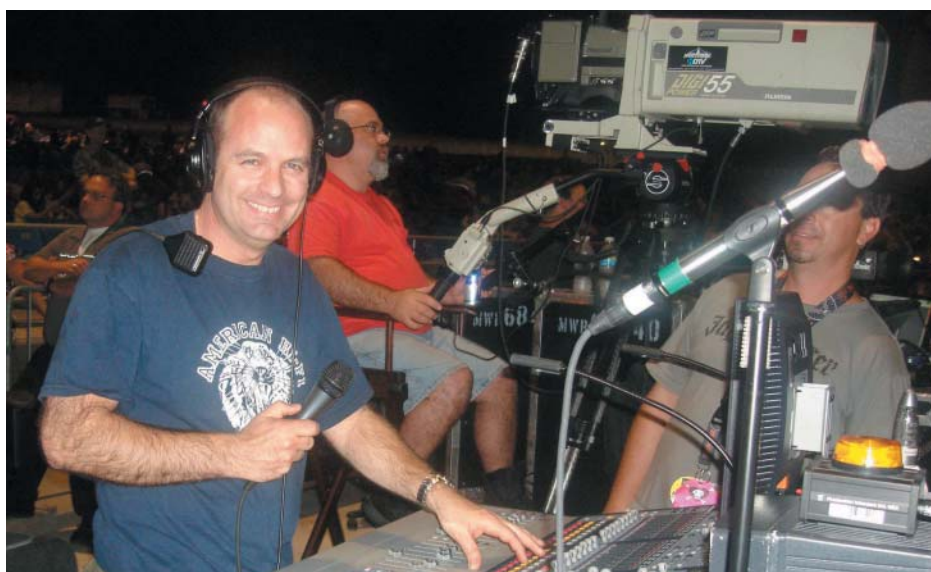
small package. Dave Skaff and the support team at Digidesign are always there to answer questions and help you out of a bind.

“Like most VENUE users do after working on VENUE for a while, both Matt and I use a fair number of plug-ins. I have the Smack! Compressor on vocals, a lot of the Bomb Factory compressor/limiters on acoustic guitars, Purple Comps on bass and Drawmer TourBuss Gates on drums. But the cream of the crop is the CraneSong Phoenix variety of tape-saturation emulators; these things are fantastic. As many of my mixer colleagues like to say: ‘It’s like getting free gain on your input!’ I love using CraneSong on guitars, Avril’s vocal and snare top - it just makes it sound fuller, louder, and more analog. And the meter doesn’t move any higher on the meter bridge. It should be illegal!

“We were not asked to mimic any studio session FX or CD sounds with the plug-ins. I do try to match things up in texture to the CD sound for each album but, depending on the environment of the venue each night, you may or may not notice much of that. We do not regularly record the performances to Pro Tools, although that option is available and I have a system at FOH that is just a patch away from being ready at any time. When we did our DVD shoot in Toronto, I used Pro Tools to back up the audio files in the truck - that came in very handy.

“So far, the VENUE consoles have been very reliable. We don’t have any backup consoles on tour; only a spare parts kit and USB keys to back up the shows. We do have UPS battery back-up systems on the consoles in case we lose AC power.”

To set up for live mixing, Yakabuski utilizes the VENUE’s Channel Safe feature to “bank safe” all four of Avril’s RF vocal mic channels that are rotated throughout the show. “Also locked are the short and long vocal delays on Avril’s vocal,” the FOH engineer continues. “This means that when I switch banks on the console those inputs will always stay available on the top layer, no matter what layer I’ve switched to. By doing this, I had to be aware that channels underneath these channels would be hidden



Front-Of-House Mixer Jim Yakabuski

so, in laying out my console patch, I had to leave ‘holes’ in my patch so that I wouldn’t be missing channels. I am not using any subgroups this time around; auxiliary sends are only used for FX sends.”

The tour is using mainly Sennheiser microphones, “Avril has been using these since the very beginning,” confides Yakabuski. “Some of my favorites are the new [Evolution Series] e901 kick-drum mic, the e908 tom mics and, of course, the e935 cardioid dynamic vocal mic. The 935 is a very natural, true-sounding vocal mic with a nice top-end that isn’t over-accentuated in today’s world of cranked-up, high-end presets in PA systems. We also use the eW935 microphone for Avril’s vocals, and our dancer/BG vocalists, which is the RF version. I also like the AT 2500 mic on guitar, for the flexibility of having a condenser and dynamic capsule in one mic body.” The tour also uses Sennheiser SKM 935G2s with EM 550G2 receivers, plus Neumann KM 184s and TLM 103 models.

Regarding outboards, neither Yakabuski nor Peskie use any external processing. “Matt [Peskie] started out using some Millennia compressors,” the engineer says, “but one started to give him some trouble. When we went to four RF mics on this tour,

he decided to also go with console plug-ins - and he’s never looked back.”

A major difference between the Europe and Asia legs of the tour and North America dates is an inconsistency in venue geometry. “With an artist that sells between 5,000 and 15,000 seats,” Yakabuski says, “in North America you are going to be in some kind of basketball- or hockey-style venue. But in Europe or elsewhere, you never know what type of venue might accommodate that size audience. These venues are not always conducive to music concerts as far as acoustics and production, so they can be very tough to mix in. Also, power in Europe can be very inconsistent from venue to venue. The incoming voltage from day to day can vary quite a bit. We did take our LMG V-DOSC PA system to Europe so, with our KUDO side arrays as well as our V-DOSC mains, we had the flexibility to morph the system to cover the various shapes of the venues.”

Mel Lambert, principal of Media&Marketing, a Los Angeles-based consulting service for the professional audio industry, has been intimately involved with production and broadcast industries on both sides of the Atlantic for more years than he cares to remember.