AC/DC

Electro-Voice X-Array delivers the goods

By Nort Johnson
Photos by Roy Timm, Harry Witz and Nort Johnson

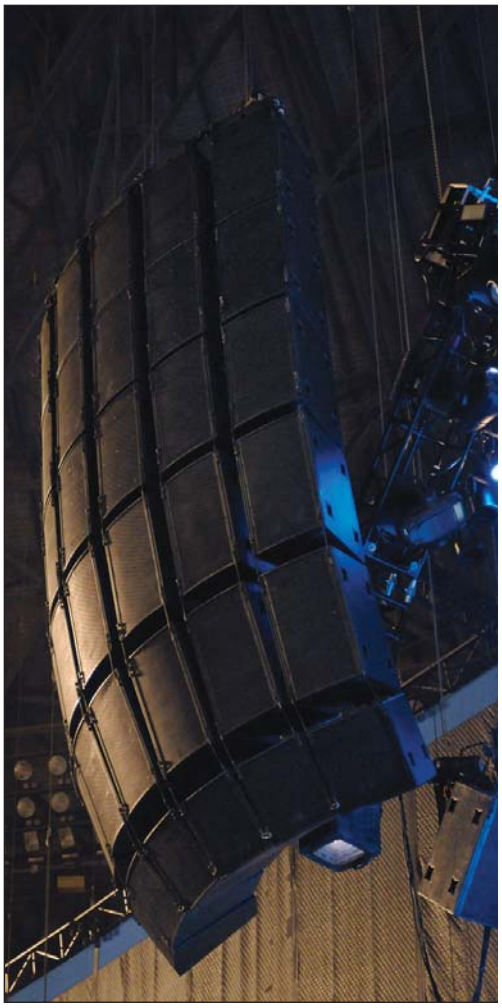
In 1976, I was hired on the local crew to pitch and bail scaffolding and deck for my first stadium show at the historic Comisky Park in Chicago. It was a July 8 truck tip and the day of the show was July 10. The temperature hovered around 100 degrees for the duration. We erected the monster in the left center field bleachers over the seats where Babe Ruth and Nelle Fox used to tear the hides off of well-greased Spauldings.

On the day of show, we were not concerned about Ruth or Fox but rather the headliner of the day – Aerosmith and support bands Rick Derringer, Jeff Beck with Ian Hammer. But first, there would be some band from Australia. The entire crew had never heard of AC/DC.

Fast forward 32 years and on Saturday, November 1, 2008, I found myself standing in the parking lot of the Allstate Arena outside Chicago at about 11 a.m. waiting for the sound crew bus to arrive. This was the third sold out show of AC/DC's Black Ice Tour.

Security was tight. About the tightest tour security I've seen in 30-plus

The Electro-Voice X-Array.



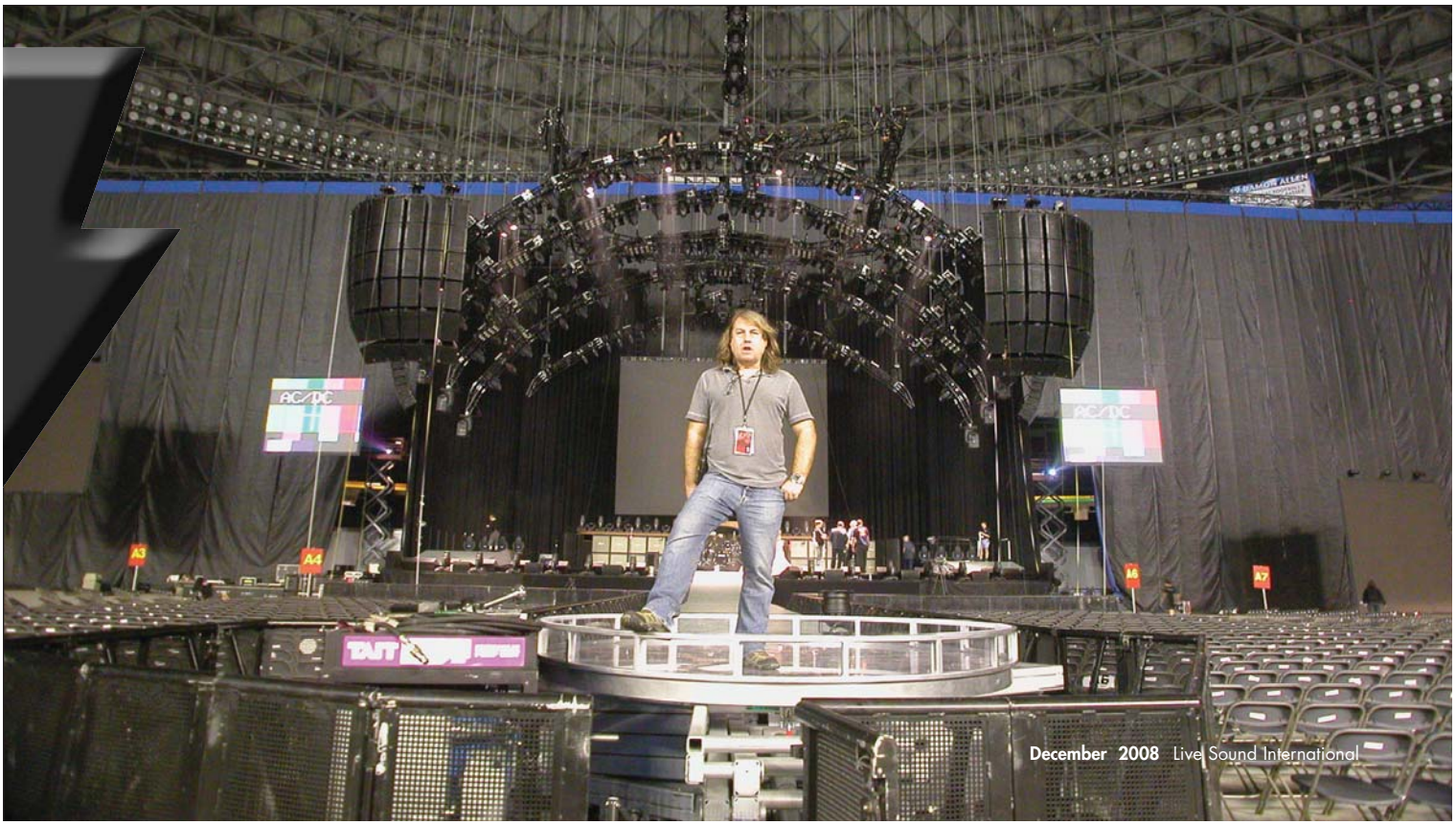
years. Two weeks prior to the show I was told this article would not be possible. Tour security and production would not allow it. Then Harry Witz and Paul "Pab" Boothroyd got involved and explained that I knew most of the crew. Production Manager Dale (Opie) Skjerseth (AC/DC, The Stones etc.) confirmed it.

Harry Witz (Clair Global) has designed and built some of the largest PA systems in history, which include Monsters of Rock in Moscow (1,000,000 people) and several of the Rolling Stones tours among others. He has been a consultant for Electro-Voice for many years and was part of the design team of for X-Array and XLC Line Array. Not only has Witz achieved much success as a designer and engineer, he is also known as an industry innovator. He has been a consultant to JBL, dbx and XTA.

Pab is a mechanical engineer by trade. He's from Birkenhead, England – the other side of the river from Liverpool. He started out in this business when he received a call from girl in a band to fix a van and ended up rigging sound. He worked with basic sound for local bands during the Margaret Thatcher years in clubs and pubs. He has worked with Sir Paul McCartney since late 1980's and AC/DC since the mid-'90s. He recently did his first country tour with Faith Hill last year and it was the first time he did sound in the round.

Pab and Witz both worked together on the design and deployment of this tour's system. As we walked to the FOH, my head was nomadic as usual. I turned around under the stage left fly and the PA system was soaring proudly. "It's about 25 percent bigger than the Stones No Security Tour," stated Witz. "After deploying those things for years, we've learned new tricks on the combination of boxes and where they go into the array. This particular configuration in the array has not been done before and it's working quite well. We are using a Clair/Lake DLP for the front end of the system. The amp racks for the 96-box X-Array system all have XTA processors in them. Clair figured out a way to integrate both of them together so that they

Paul "Pab" Boothroyd on stage in Toronto.



operate off the same tablet. It's a real slick system. Clair has used tablets to control their Lake systems, the Clair IO and Lake DLP's. They run as one now – we're probably the only ones who know how to do that."

When we reached the audio bridge in the large arena, I almost fell over with excitement. There sat a Midas Pro 40! I had not seen one of these deployed on a tour this size in years. I got fired up and when Pab walked up behind me and we started to talk about it. I needed to know how old it was and where it had been. In its day, it was the staple of touring consoles.

"The drawings show that the desk was hand built in 1985 or 1987… somewhere in that period," recalled Pab. "It originates as a concert sound console in the UK which was marketed after such acts like Dire Straights, so it might have been one of the desks Peter Grainger used to use back in the late '80s. It's a desk I've used many times in my career and it's a beautiful console." It's the proverbial Rolls Royce of FOH consoles. Is what it is!

Pab continued on the highlights of this old road relic and some of his favorite desks. "There's gold connectors in there which are high quality connectors. It's been fault free. A couple of world tours I did with AC/DC were on a XL4, which is probably my favorite analog console still because it has a wealth of features.

"It's a great sounding console and also has a great surface to work on – just to move around the way it's laid out. With this Pro 40, after having spent a few years in the studio with Malcolm and Angus while they wrote this latest album, I'd be sitting in there and I talked to Malcolm as you do about sound we'd listen to – we'd look at all sorts of options of recording stuff. Taking what I've learned from Malcolm with his delight with that kind of Neve sound, I thought well how could I approach this with something that is close to that. Obviously, I'm not going to tour with a Neve console. This console is as close as I'm going to get to a touring Neve. This sounds very, very, good."

This was a big gear swing from the last McCartney tour Pab mixed from 2003 to 2005. "I've been using the Digidesign Profile on McCartney and a lot of the bigger projects I've been doing with him – most recently at the show in Tel Aviv. I used the Profile console with him because it suits the application as far as one minute we may be doing a theater and the next minute we're rehearsing in his rehearsal facility, which is a barn where we literally got a cupboard to squeeze into. It's been great for that job."

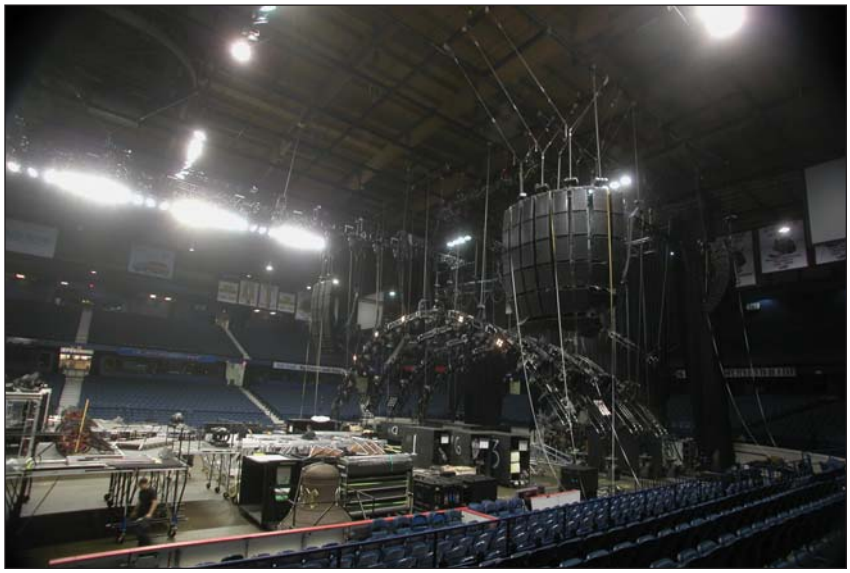
So why employ analog for AC/DC? "AC/DC isn't a big fan of digital," explained Pab. "They never thought the sound of a digital console is equal to an analog console. One of the things that Malcolm and Angus have in their studio facilities where they write is an old Neve 14 channel broadcast console and everything goes through it. They like that old Neve warmer sound. It's not that digital isn't warm, I think what happens with digital consoles is in the past, some of the earlier stuff had smaller sampling rates – it just needed to grow up a little.

"The higher frequencies are super smooth on the Pro 40. We're enjoying that. This console was shipped out to us in rehearsals. It has a number of functions on this tour. It's a back up console. It's an opening act console. We can also record the show because it's tracking directly to the KT DN 9696 high resolution audio recorder made by Klark Teknik."

Pab handles microphone selection, stating, "That decision is based upon a number of factors – what I want the microphones to be doing and then I have to look at how well they are going to work with the monitor engineer who has a whole different battle. Then I look at that particular microphone and the application. With the vocal microphone, there are a number of factors there also. It's what Brian wants off the microphone… even down to how he can stuff it down his trousers if he's running around or climbing the bell or whatever. There are a lot of things that go into the vocal microphone decision process. A lot of microphones are presented to you, new models that come out and you try this and you try that. I'll only make a change when I find a great noticeable difference. I just need a good reliable mic for Brian so if it's dropped or bounced around the stage, I'll have something he can pick up and it's good to go. The late great John Roden and I did a lot of work together and we tried all sorts of mics. For a monitor engineer and a FOH engineer, the Shure 58A suited a lot of acts that Roden and I worked with. It's just a great microphone. I also tried out anything new when it comes out onto the market like the Telefunken M80 you brought me today. I'll put it through the paces and let you know what I think."

The view from FOH.

As time and space would allow, we walked through some of the highlights of outboard in deployment in Pab's trick bag. "Radial sent me a JDX Phaser, a tube leveler for Brian's vocals, GML-8200 with four bands of parametric. Because the console is of an older design, the EQs are very basic." He also employs DMX 160X and Drawmer DS201 gates. "They're simple, functional, and that's it. It's a very simple setup – even with mic'ing seven cymbals, I'm still only pushing 30 inputs. You could probably do this whole show with about 18 inputs. It's not input heavy. It's very straight forward, kick, snare and hat. It's very loud, two guitars, slam a vocal in there, a bass as well – you have AC/DC."



Flying hardware during setup.

MONITORS LOUD AND PROUD

AC/DC's Monitor Engineer Mike Adams started off his career in Denver, CO, and still lives in the area. I asked him how he got into this business he pondered for a moment smiled and answered with a genuine excitement in his mild demeanor. "I started when I was a young teenager and was always fascinated as to what the guys were doing behind the consoles so I started sneaking into night clubs in the Denver Metro area when I was about 16 years of age. I traded my labor out to the guys that were doing shows in the clubs that I thought made it sound really good. So I just offered to hump their PA out the door if they would sort of tutor me. I had a couple of really good mentors at an early age. The year I started actually making a steady paycheck at it would be approximately 1981. I was paid before that but it was only spotty." He's worked with such notables as the Stones and John Mayer. "I did the first spring with John Mayer and then I got the Stones. I did Motley Crew, Pantera, Kiss for years, Third Eye Blind, Luther Vandross, it's been pretty much everything," he says.

For the current tour, he's mixing on a Midas Heritage 4000, about which he states, "Because of the way that I feel about it, even though there are a couple of really solid digital surfaces now, especially with a band that I think that is used to hearing things with a little bit of harmonic distortion and a little bit ultra sagging, it adds a certain depth. It's not that you can't get it with a digital surface. At this point in time I prefer an analog console. I have used digitals before and you can get great results with them. I will say if there were ever an issue, I would rather be sitting with an analog desk than a digital desk. Plus output wise, I've got 40 outputs and I need someone to show me a digital desk that will do that – other than a couple of them. Getting strapped with 16 plus 8 is not really how I want to roll."

"All the mics on stage are definitely picked by Pab – even though Pab welcomed any input, but all the ones he selected I'd used before and they're working just fine. We have Shure products in our vocal line all the way across, Brian's hand-held, 58A, and all the background vocals – everything goes on Shure. We have some Audix products onstage. Everything is sitting real well right now."

The first rack in Adams' arsenal is a PSU rack. He has a dbx IEM processor. "We put a little tweeze on the Brian's ear mix with that," Adam's said. Above that is some Meyer EQ to do a little notching in the drummer's ears as well as in Brian Johnson's. "That's just to relieve a little bit of the pressure," he went on.

The next rack over was a TC 1128's used across all his loudspeaker outputs, it has a single brain control but it is an analog EQ. The next rack is dynamics. He's using Avalon 737s to take care of Brian's ear vocal mic and he's using one as a high-hat. "I'm using a couple of H3000s, one main, one spare, just for a little enhancement in the wedges." Then he has the usual compliment of Apex Gates. "I do have some TC and Lexicon processing but it hasn't been implemented yet because we need to set them in a super dry environment. It's coming," Adam's went on. Next rack over is the RF rack unit. He's using the new Shure LT wireless receivers and transmitters, the new Shure combiners that go from 400 to 900. "Ear-wise, I'm using Sennheiser G2 with an EK 300 belt packs and I'm using a Clair Brothers antenna combiner, And a four banger for my money shot through a Sennheiser vehicle antenna. I'm using a Sennheiser combiner and get the backline guys off another Sennheiser vehicle."

Wailing across the stage was a pack of wedges so I asked Adams who was using what and why? "The singers and the drummer have to have ears and also wedges. The in- ears are the new ultimate ears UE-11s. Down here in monitor world I'm using for cueing Sensaphonics Pro Phonic 2X's in my ears." He added, "I do have the new 3-D and they are bad-ass but I don't really need it in this environ-

Mike Adams mixing monitors under the stage.

Paul "Pab" Boothroyd mixing on his Midas Pro 40.

ment just because it's so loud coming off the stage. Brian and Phil are on UE-11's because we felt we needed a product that would get over the 118 db off the stage. I am monitoring their ears as well as the wedges with a Sensaphonics Promax."

Jason Vrobel (AC/DC Crew Chief) has a list of credits on his resume that would make most 30-year vets stand up in awe. Kiss The Eagles, Eminem, U2, Alan Jackson, Paul McCartney, Green Day and Jackson Browne to just get started. He spent 1993 to 1997 in the navy as an Operations Specialist before going to school at Full Sail in Orlando. A little while later he found himself on a Greyhound bus from Pittsburg to Dallas to interview with Leon Hopkins of Showco. Hopkins is still his boss. His work ethics as crew chief are hard pressed to surpass. He first worked with Mike Adams on the Kiss Farewell Tour and was John Roden's monitor technician 2002-2004 Paul McCartney's Back in the World Tour.

Dave Dixon (System Tech) is from the northwest of England. After working for a long time as a FOH engineer, Dixon decided to "have a go at system tech'ing. It was a conscious decision to go out and start working on systems. Unfortunately it sort of stuck!" he says with a chuckle. Dixon is a vet of The Stones, AC/DC and many others since he stared mixing in 1980.

"On the last tour the X-Array sounded great. So why change it. We could have used a line array I'm sure but a small looking PA the band wouldn't have. They have a big sound, both visually and from an audio standpoint. The X-Array is a good-looking PA and it doesn't take a lot of sight lines out. It's a great system to tech."

When we sat down with Kenny Check for our last interview of the day it was minutes before the bell. I was in his comfort zone in the under world of the AC/DC stage. This is where Check lives for the duration of the tour when he's not mixing monitors for the support act The Answer. He's tech'ing for Mike Adams. He's a vet of many AC/DC tours as well as the Stones, George Bensen and many others. I opened up with a question that seemed to choke Check up. Not what I intended to do minutes before the bell. I asked about John Roden. He was visibly shaken on this subject.

"Wow, the difficultness and the seriousness of the subject are incredible. Never have I before and perhaps again worked with someone that drives such a balance of the art and the technical. John drove me everyday, (but never asked) me to be the best, not only in audio, but in life. Truly one of my finest honors and privileges... After our touring together, I much more enjoyed the friendship with conversation of family and life. I miss John Roden everyday!" Check had a show to do and we had a system performance to check out.

The amazing X-Array is just that. The tweaking that Witz and Clair have done is yet another testament for this industries technology leaps.

The PA sounded as good as any Line Array all night. It's a fast machine, they keep the motors clean and AC/DC was one of the best sounding shows that I've ever seen. ■

Nort Johnson *is an entertainment production and management professional who has been working in the music industry for 30+ years. He has supplied tour management, production management, FOH and monitor duties for some the more prominent entertainers of the last three decades. Nort was the Senior Consulting Editor for* Live Sound International*, writing hundreds of features from the first issue in 1992 until March 2003.*