

# WHY MLA WINS

The Front of House Engineer







## Unite Audiences, Night after Night

The life of a touring FoH engineer is a precarious and demanding one. From the moment you take control of the sound system and mixing desk, all eyes and ears are quickly upon your work with your reputation on the line. But what is your confidence level that the system technician is handing over the optimal solution? Are you spending more time wrestling with the system to where it needs to be, rather than allowing more time for your creativity and finesse? And do you know that the magic you create at the mixing desk will truly be shared with the entire audience? Will the crowd be jumping in unison? Will the artists feel the energy? Will the tour management be asking for a not so quiet word? Make it through the day, and it starts all over again, but this time in a new venue with its own distinct acoustic profile (and probably not a purpose built concert venue), and where yesterday's performance is simply just that.

Wouldn't life be less stressful and more enjoyable if the sound system was designed in such a way where audience coverage and consistency was more predictable, regardless of venue? A system that offers great power, depth and clarity, and responds to the smallest of changes on the desk and allows you to mix the show with the confidence that the entire audience will share that same great experience, night after night?

Well, that's the product promise of Martin Audio's MLA.





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## MLA – Multi-Cellular Loudspeaker Array

The multiple award-winning MLA, MLA Compact and MLA Mini systems represent a new direction in the way loudspeaker arrays are configured and controlled. They deliver much more consistent sound across the audience compared to previous technologies, such as line array.

With line array, sound levels and frequency response can vary widely, depending on the distance from the array. This is because line array technology generally aims to produce coherent wavefronts as they exit from the speaker grilles — often way up in the air in real-world applications. The system-tech then ‘manages’ whatever comes out of the array using simple zoned EQ and by scrolling through preset libraries to find a ‘best-fit’ set-up when the sound arrives on the audience floor.

MLA (Multi-cellular Loudspeaker Array) technology completely reverses the situation specifying exactly what SPL and frequency response is required at the front rows, the mix position and the rear seats, and then using this information to automatically control the array to produce that result.

With MLA technology, cellular drive is combined with fast, automated intelligent software to hold both frequency response and SPL's within a very tight window from the front rows to the rear balconies.

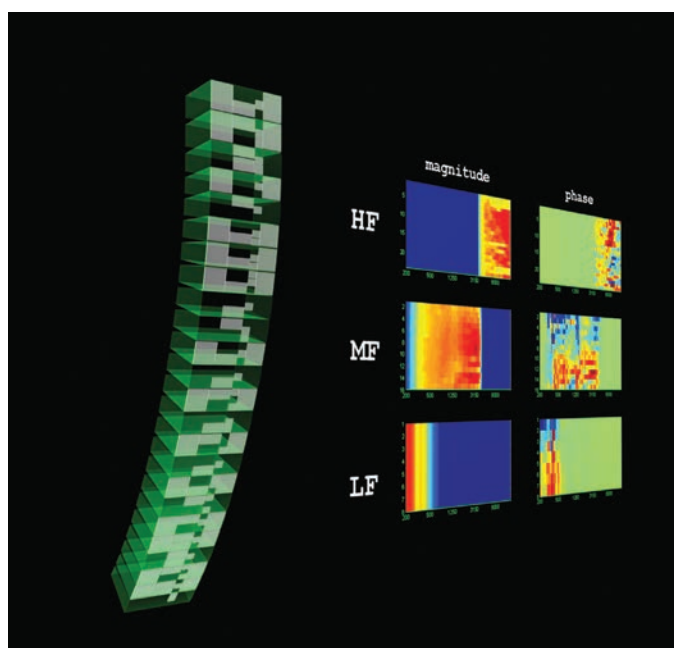
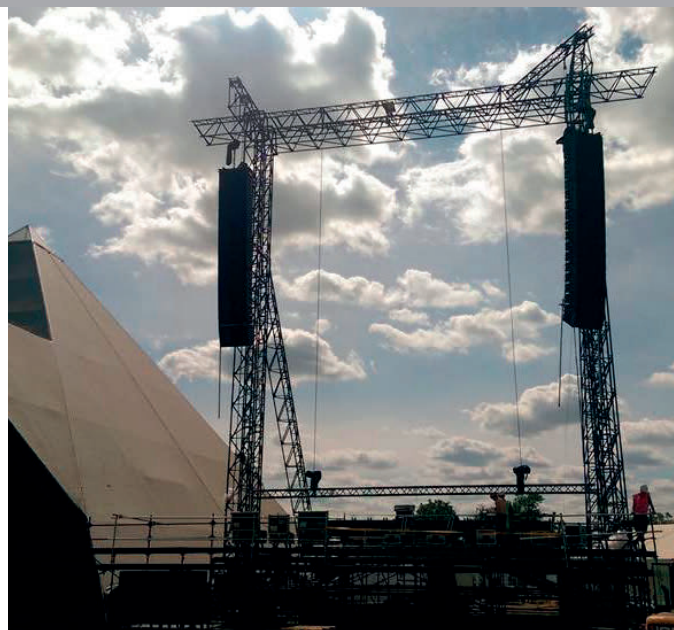
### AUTOMATED SOFTWARE

Each full-size MLA enclosure has 6 separate channels of onboard DSP and Class D amplification — 1 for LF, 2 for midrange and 3 for HF to control and drive each individual cell. An MLA array of 24 enclosures has 144 cells, each independently controlled by DISPLAY2.1™ automated intelligent software.

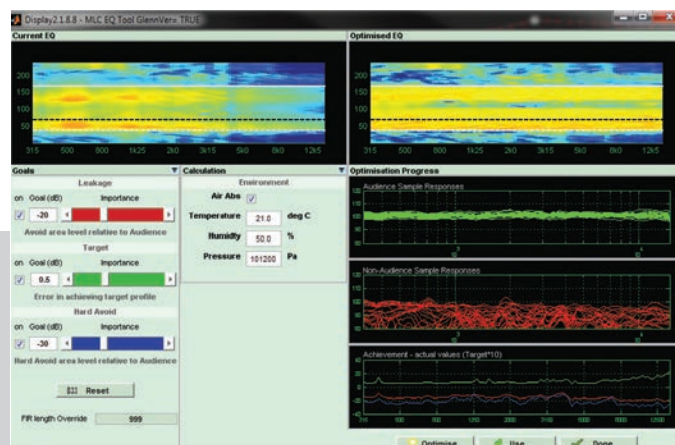
With every cell under computer control, MLA systems are not bound by the 3dB decrease in SPL with doubling of distance that is associated with line array. Normally an MLA array is programmed to be 3-4dB quieter at the rear, compared to the front, but it can achieve exactly the same level throughout if desired.

DISPLAY2.1 calculates the array tilt and splay angles in 2-3 minutes. Whilst the array is being rigged, it calculates the DSP filter coefficients which will achieve the specified result. Once rigged, the DSP parameters 3,600 per MLA enclosure are uploaded via the inbuilt U-NET™ digital network.

‘Hard avoid’ areas such as behind and below the array, ceilings, balcony edges and beyond the venue perimeter can be programmed in. Vertical coverage can also be fine-tuned electronically in-situ to cope with changing environmental conditions and last-minute changes in rigging height.



MLA cellular drive



Automated optimisation

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Mark Dowdle, FOH Engineer, Steely Dan



Across a demanding 56-stop tour, Rock and Roll Hall of Famers Walter Becker and Donald Fagen took Steely Dan's "Jamalot Ever After" tour across the USA and MLA showed its versatility, control and overall sound performance credentials.

FOH engineer, Mark Dowdle pointed out that the MLA provides extremely even front-to-back SPL as well as evenness of frequency response throughout the listening area. "The coverage is very smooth, especially its shading," he said. "You can walk up on the PA in the front and it sounds just like it does in the back of the room."

Dowdle also mentions an improvement to the stereo field. "Everything is more defined, so that automatically translates into the stereo field being more discernible," he said. "MLA gives me dynamic range, clarity and definition so that I'm able to position and layer sounds in the stereo field which you can really hear where they all are." He adds that the MLA's sound is extremely coherent and is very responsive from a mixing standpoint. "You make a small fader move and it's immediately noticeable."

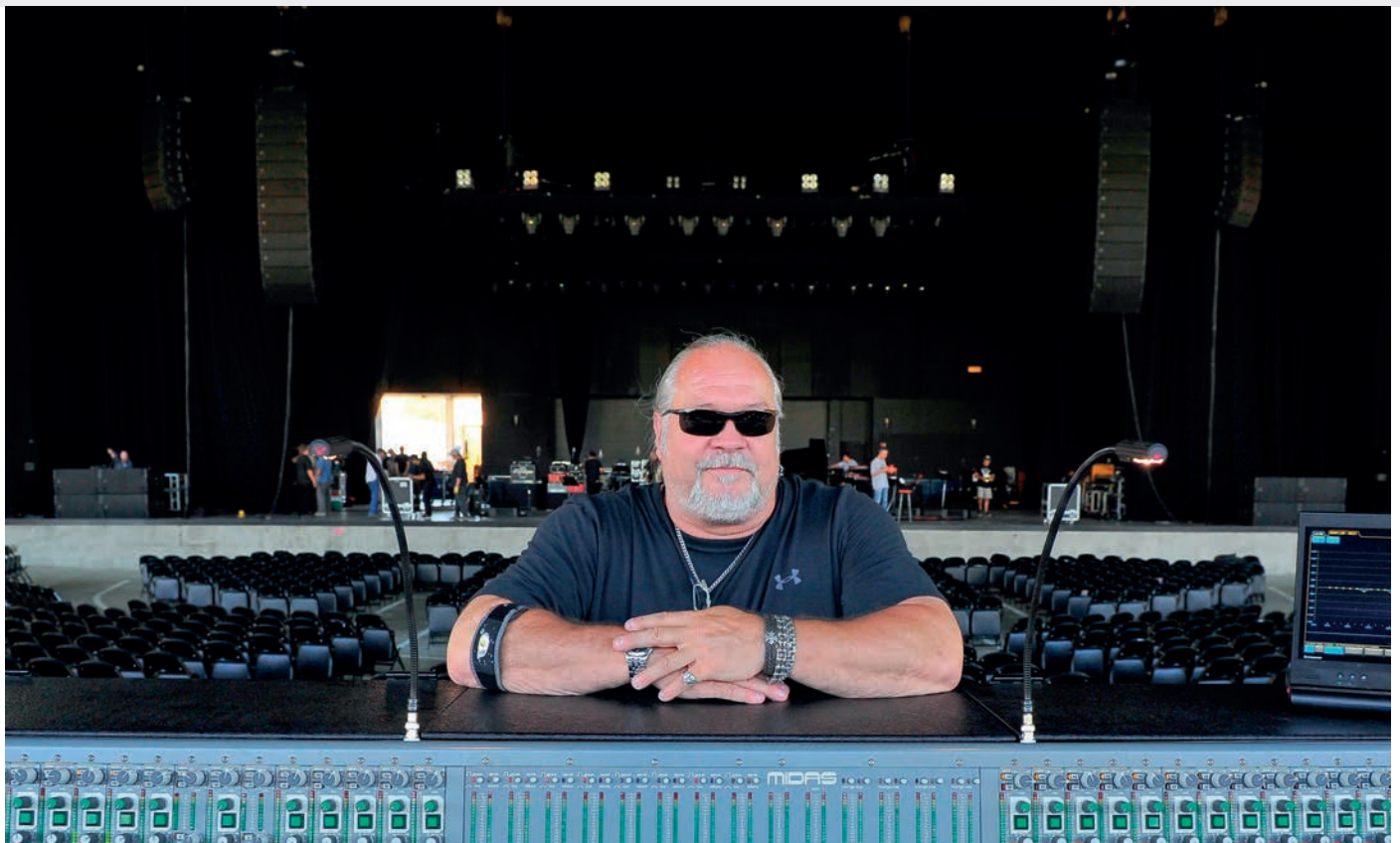
Furthermore, Dowdle is surprised by the constant comments from the audience. "I've been mixing for a long time and usually nobody ever says anything. This particular tour I've had more response from the audience than any tour I've ever done in my entire career, and it's always been very positive and it's always been very poignant. That's in large part because of MLA allowing me to get it exactly how I want everywhere in the room."

And what did Donald Fagen and Walter Becker make of the sound quality? According to Dowdle, "Both have come out into the audience on a number of occasions and have always been positive with their feedback and what was going on."

"More often than not Donald will come out and listen and frequently comments, 'It sounds great,' which is probably the highest compliment that I could ever receive in my career."



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Mark Dowdle, FOH Engineer, Steely Dan



Steely Dan



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## Ken Newman, FOH Engineer, Barry Manilow

Ken Newman took MLA out for Barry Manilow's 'One Last Tour'. According to Newman, "The biggest challenge on the Manilow show has always been gain-before-feedback on Barry's vocal mic, because he's not comfortable putting the mic close to his mouth, and he's not the loudest singer I've ever worked with. Those factors, combined with his desire for every aspect of his dense arrangements to be heard by his audience while keeping his vocal well on top of the mix, combine to make gain on his vocal mic a constant challenge."

"Barry also frequently talks about how the entire audience should hear everything, with no one being offended by the show being overly loud, but at the same time by the show being loud enough to be exciting and moving. So I guess you'd call that the challenge of even coverage."

"But the MLA system allows me to spend less time walking the room because I have confidence that coverage is uniform throughout," continues Newman. "That allows me to concentrate on my main job, which is mixing the show and making sure the mix is everything Barry wants it to be."

"MLA doesn't need much in the way of tuning, because we've already entered our target curve into the system's software. Optimisation mainly consists of adjusting the delay times of the side hangs, subwoofers and front fills. It can be done in as little as 15 minutes."

"With MLA, the level from the front to the rear of the seating area changes considerably less than with a traditional speaker system, and the tonal quality is significantly more uniform. Those are two of the main aspects of MLA that I really love! Knowing that I'm not scorching people in front of me with up to 10 dB more level than at the mix position is very comforting. And knowing that people in the cheap seats are getting the whole mix and at a comfortable listening level is so great!"

Having worked with MLA for a number of shows, Newman really noticed the superiority of MLA when playing one venue where they had a large [industry-leading] house system, remarking, "While it wasn't hard to make the show sound good, it definitely sounded different. Having become accustomed to the MLA system, it simply wasn't the same even coverage throughout the venue that MLA is able to achieve."





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Barry Manilow



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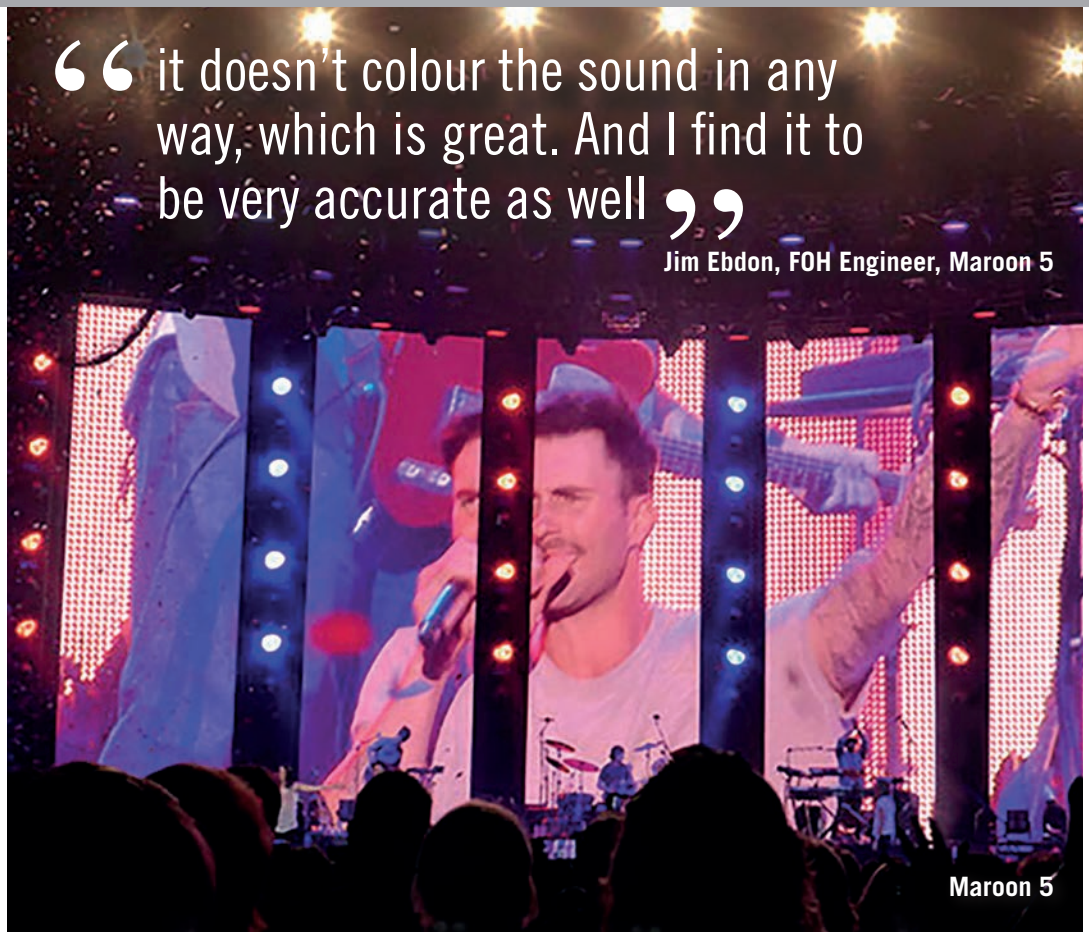


## Jim Ebdon, FOH Engineer, Maroon 5

For Maroon 5's 2014 New Year Eve shows, MLA was once again employed. Jim Ebdon, FOH engineer said, "MLA is a very flat system, it doesn't colour the sound in any way, which is great. And I find it to be very accurate as well; the high frequencies are smooth and extremely easy to listen to. Going down the frequency range, there's a very seamless transition into the subwoofer. With many systems, you hear the main flown PA and then the sub, it sounds like two separate sound sources. Not with MLA. It's a real full-range sound system. I don't even need to get into what kind of drivers or amps Martin Audio uses because it sounds good, and that's all that matters."

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Jim Ebdon, FOH Engineer, Maroon 5



Maroon 5

## Dave Roden, FOH Engineer, Stereophonics



Stereophonics

“ as soon as I heard it I knew I had made the correct decision ”

Dave Roden, FOH Engineer, Stereophonics



The Stereophonics were on tour in late 2013 and MLA was the PA of choice. Dave Roden, FOH Engineer, said, "I sensed that the multiple benefits this product was potentially offering were very exciting — and as soon as I heard it I knew I had made the correct decision. Following a very successful tour, that's now been unquestionably proven."



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Darcy Khan, FOH Engineer, Outkast



“ I was very pleased with it, the system really delivered the goods ”

Darcy Khan, FOH Engineer, Outkast

BottleRock

BottleRock provides an eclectic line up of artists and in 2013, Outkast FOH engineer Darcy Han said, “I enjoyed the system a lot. The most important thing was the clarity at 200 feet. I was sceptical about that because a lot of line arrays claim to have it but don’t deliver. And this is the only system I’ve come across that can produce enough low end with just 24 subs. I was very pleased with it, the system really delivered the goods.”

Andy May, FOH Engineer

“ it means I can actually enjoy mixing ‘music’ ”

Andy May, FOH Engineer



Andy May toured heavily through Europe with MLA & MLA Compact in 2013. He said, “this system performs flawlessly. Without wanting to sound poetic or melancholy, it means I can actually enjoy mixing ‘music’ instead of it becoming a technical endurance test every night.

I started in this career because I love music, and being able to mix it without sound reinforcement compromise has hugely improved the job that I love doing...”



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## Glastonbury Festival 2014, UK

More than 150,000 fans listened to headline acts Metallica, Arcade Fire, and Kasabian, as well as The 1975, Elbow, Rudimental, Nitin Sawhney, and Dolly Parton, mixed on the MLA system.

There was also effervescent praise from the stream of FOH engineers over the weekend.

One of the biggest draws of the weekend was Metallica, engineered by Mick Hughes: “MLA is a new system to me, a new experience. I was surprised how easy it was to get the mix I wanted out of it. When I first used it I thought ‘woah’ there’s some serious horsepower here. It just sounded really alive; I wouldn’t shy away from using it again.”



Mick Hughes, FOH Engineer, Metallica



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Mick Hughes, FOH Engineer, Metallica





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## Max Bisgrove, FOH Engineer, Lana Del Ray

One of the most enigmatic performances was from Lana Del Ray, engineered by Max Bisgrove: "In half a song, I could get out what I needed from the MLA system. Great clarity, great power, it's by far my favourite Glastonbury mixing experience so far."

Dave McEwan, FOH sound engineer for Nitin Sawhney, remarked: "Glastonbury was the first time I've used the big MLA, and I'm really impressed - great imaging, 3D, even 4D sound. You can dive in and enjoy, it's another sort of PA! I'm hoping to use this at the Royal Albert Hall for Nitin in September. I love it; it's a great product, a super sounding system, lush and hi-fi, with lots of depth."



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Max Bisgrove, FOH Engineer,  
Lana Del Ray

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Nitin Sawhney



Arcade Fire



Lily Allen





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## Jamie McLuckie, FOH Engineer, The 1975

The 1975's engineer, Jamie McLuckie, adds: "At some festivals you have to tweak the bottom end, but MLA was nice and easy. The system sounded fat, with nice clarity and nice high end too. I couldn't really fault it."



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Jamie McLuckie, FOH Engineer, The 1975

## Ricky Ricketts, FOH Engineer, Rudimental



“First time I used MLA today, it's very clean sounding, and the subs are really nice”

Ricky Ricketts, FOH Engineer, Rudimental





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Danny Evans, FOH Engineer, Elbow

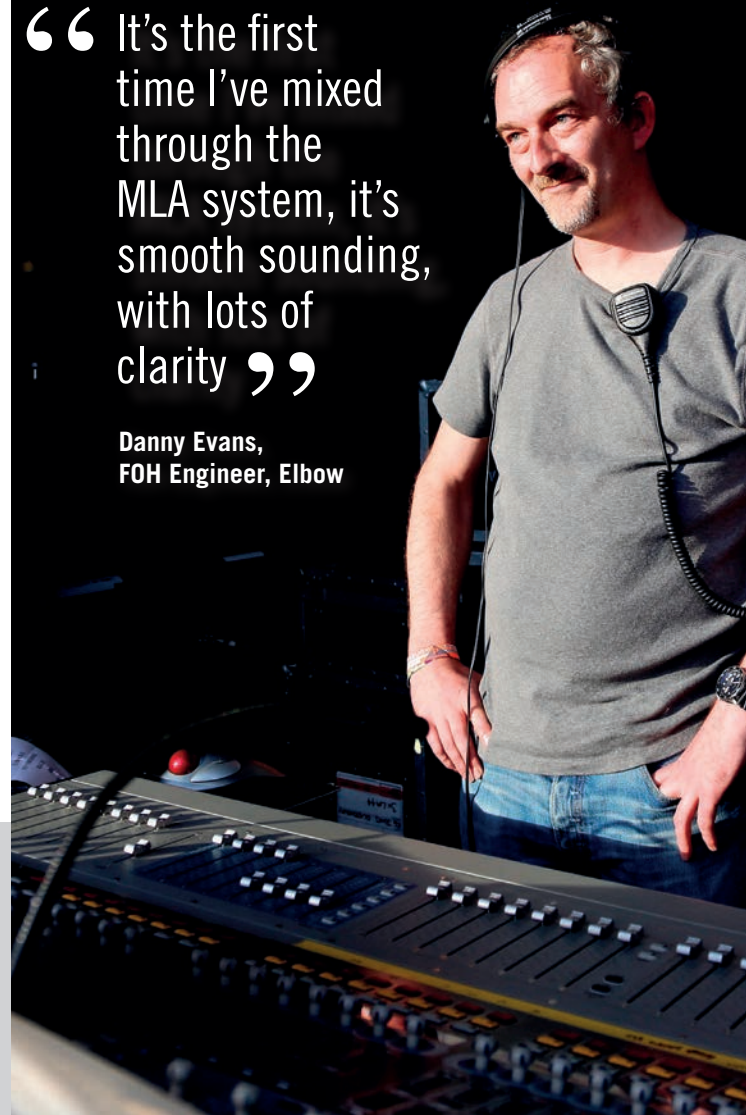


Elbow



“ It’s the first time I’ve mixed through the MLA system, it’s smooth sounding, with lots of clarity ”

Danny Evans,  
FOH Engineer, Elbow





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## Bob Coke, FOH Engineer, Black Crowes

In late 2013, the Black Crowes were on tour and FOH Engineer, Bob Coke was “over the moon about the MLA system.”

“I was initially sceptical about the MLA system. But during my first experience with the MLA Compact at a circular bull fighting arena in the south of France—an acoustically difficult venue—I was truly amazed by the sound quality, colour and coverage. An hour before doors we were told that certain sections of the seated area would be vacant. The system tech, Andy Davies, reprogrammed the venue coverage to exclude that section in five minutes. I walked the section and was amazed to hear the difference. It’s what convinced me that the theory behind the MLA system was accurate and reliable. To be able to reprogram where the sound is being sent in a venue without having to physically change how the system is flown is quite remarkable.”



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Black Crowes



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On the Road with MLA — James Gebhard

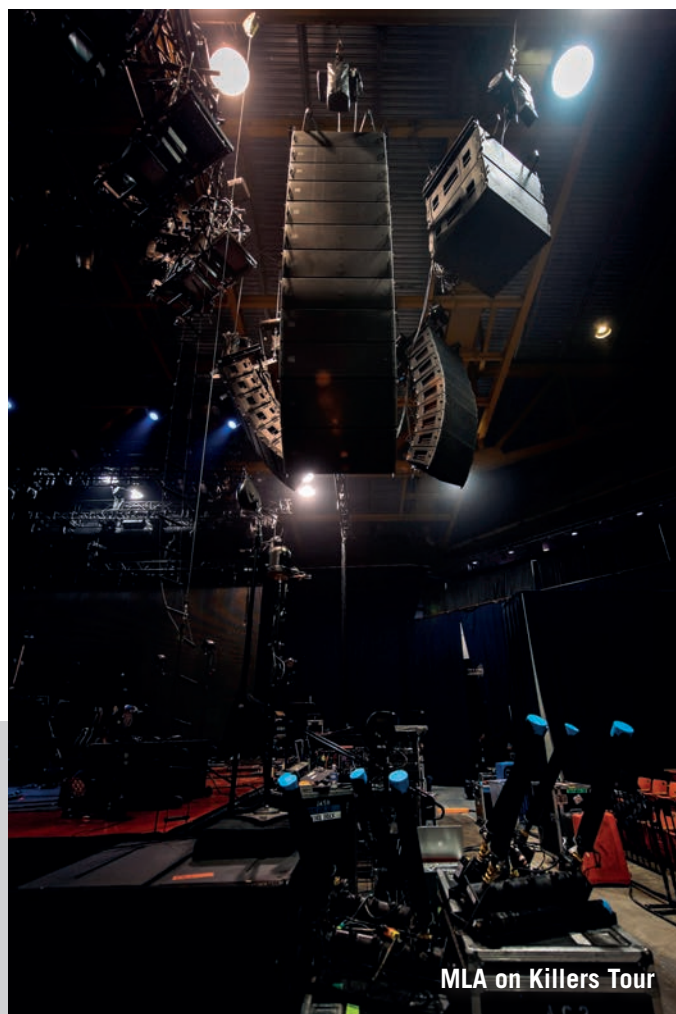
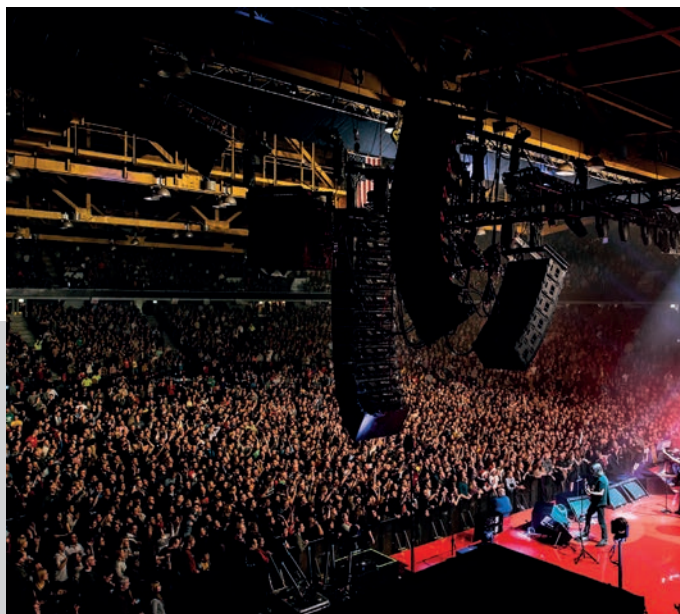
“Martin Audio has reinvented the wheel in terms of PA design with MLA”

James Gebhard, FOH Engineer



James Gebhard was FOH Engineer for The Killers in 2013 and MLA was the tour PA.

“One of the most impressive aspects is the phase coherence. Walk the room and everywhere you go it sounds exactly the same. The pure consistency regardless of the type or size of the room was fantastic. It's like an audio guy's dream. You don't have to start making compromises or second-guessing yourself, searching for holes in the coverage between PA points or the back and front of the room. As far as I'm concerned, Martin Audio has reinvented the wheel in terms of PA design with MLA.”





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## Living with MLA — Simon Honywill



“What I hear at front of house is  
what everybody in the room hears”

Simon Honywill, FOH Engineer

Simon Honywill is Front of House Engineer for Jose Carreras, Katherine Jenkins and Chris Rea, and is a long term user and advocate of MLA.

“The arrival of MLA has meant that no longer do I have to worry about why the supposedly amazing sound system hung in front of me doesn't sound quite so amazing as it should – with MLA it sounds amazing every time, everywhere. I don't have to worry about fighting with production for the 'inconvenience' of putting delays in to try and ensure everybody at least has a chance of hearing a good show. I don't have to worry about the implications of the system having to be flown so high to keep sightlines clean. I don't have to worry about the punters at the front having their ears ripped off. What I hear at front of house is what everybody in the room hears.

MLA has been the single most effective product I have ever encountered that has been specifically designed to make my life easier, at least that's how I view it. When I have to fight with something to get it to sound right, I get grumpy. MLA makes me smile – when I fade up a mix at the start of a show, and there is that moment of realization that this is going to be a great show, I look at Mark Edwards (my regular system engineer and close friend) and he looks at me, and we have a bit of a grin. We feel that we belong to a little bit of an exclusive club, because all the systems we've used and all the shows that we've done between us tell us that this is different, that this is special.”



For more information about MLA, training and relevant contacts please visit [www.martin-audio.com](http://www.martin-audio.com)

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