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# METALLICA



## Metallica are on the road again, with their World Magnetic Tour selling out across Europe. L&S caught up with the production team at Sheffield Arena - and with LD John Broderick post-show . . .

words & pictures by Steve Moles

I was touring Europe at the time the news came in: I don't recall the band I was with, but I do remember the shock we all felt to learn of the bus crash up in Scandinavia in which Metallica's bassist Cliff Burton was killed. Apart from drowning in their own drug soiled puke, rock stars didn't die, they were immortal. For Metallica to lose one of their number at such an early age must have been truly devastating.

In less traumatic fashion, the band suffered another loss this January. If you subscribe to the view that all performers have one major crutch when up on the concert stage, and that crutch is the monitor man, then you'll understand. Their anchor in stormy seas, their life raft of continuity: good monitor men are hard to find for such is the mysterious argot of the rock star that only a very few can fully interpret those strange signals and fleeting looks of panic in the eyes of the performer, and translate them into positive and proper adjustments to their audio world.

So to part company with Paul Owen, monitor man for the past 22 years, some might call careless. "It's a very human story," explained Mick Hughes, who has sat at the house desk for this band for even longer, some 25 years, so he's well placed to observe the impact. "We came across Thunder Audio in Detroit I don't know, some few years ago. There was something about them, something that got Paul's attention, and it wasn't long before he was fully engaged and became part of the company. His attention to detail is acute, that's what's made Thunder an even better company, but inevitably his responsibilities there grew to the point where neither he, nor the company, could afford for him to be away on the road for months at a time. He did a final show for Metallica in Detroit just recently, and it was very emotional. Then band pulled him up on stage and thanked him in front of 30,00 people. We all had a tear in our eyes." Hughes voice cracks slightly at the recollection. The wound is still fresh two months later, sat chatting in a bus backstage at Sheffield Arena. "When you have a relationship which lasts that long it takes time to adjust."

### Sound

Bearing all that in mind, we can immediately visualise the enormous burden of responsibility that fell upon the shoulders of Bob Cowan when he slid into Owens' seat. "And of course, I knew of Mick's reputation as well," said Cowan. "I'd been hearing about him for years and always wanted to work with him, but . . ." The two men exchanged glances. But the relationship between house and monitors is a further burden? I proffered. "I felt for him," said Hughes with a smile. Put the jolly Hagrid image out of your mind for a moment, Hughes is a consummate professional; he didn't get 2007's Led Zep' gig for nothing. He isn't just a fine engineer; he considers every aspect of the job, not least the big shoes Cowan had to fill.

Cowan had been personally selected for the monitor role by Owen, no surprise there, "but until this tour we'd never worked together." Cowan was not without pedigree, having bailed out failing monitor men on tours by Springsteen and Megadeth - though the less said about the latter the better. "But this was way different, I was not jumping into a fire as such, but it was intimidating. After 22 years Paul had the entire repertoire in his head."

Cowan, in fairness, had been an ardent teenage fan of the band (see his High School graduation photo), so in that respect he was intimate with much of the material. "I had to get in unnoticed and until I get the confidence of the band I have to do what Paul did."

Every monitor man has their own chops: has Cowan had to adjust in any profound way to someone else's methods? "Only on the little things, Paul would do Right before Left, I always do the opposite, that doesn't really change anything but, for example, if I want to do something for Kirk I have to think which knob I'm grabbing." For a monitor man that 'grab' is instinctive, so it must be tough for Cowan to kick the habit.

Hardware-wise, Cowan has taken over what at first glance looks fairly straightforward: "Midas XL4 with a bunch of KT DN370 graphic







EQs. There's no effects in the monitors at all. Sennheiser 3000 for in-ear system. For limiters I have Aphex Dominators in front. The band use Westone UE7 ear moulds, except Hetfield who prefers UE5s. Then there are 24 Meyer MJF 212 (2 x 12") wedges all round the stage perimeter."

The stage is a big rectangle in the middle of the arena and there's a lot of territory to cover, but Cowan is fortunate in that the band love their audience, want the contact, and limit the stage height to just three feet, so from his perch at one of the narrow ends, no band member is ever out of eye shot, except very briefly behind the drummer centre stage. "There are things that are active all the time, vocals and bass especially; there are also some very specific cues I bring in. Thing is, it's never really the same twice: James kinda goes to the same places, Kirk and Rob just run up to the mic that's the nearest at the time."

Hughes, Cowan and I had a brief discussion about pressure pads, proximity switches and personalised IR identifiers - these things have been considered as an automated response to the random wandering of musicians and their vocal demands. "But there's nothing yet we're really confident about," said Hughes. So what's the answer?

"Paul came up with the idea of putting the backing vocals in eight channels at the end of the console; Jonathan Winkler, who was Paul's tech for those 22 years, is still with us, he rides those mutes and faders for me, so it's a two-handed operation. The only thing that worries me is DTV [digital TV emissions] but that hasn't been a problem so far."

Cowan is enjoying the XL4: "I used a real old board for Phil Lesh & Friends [the barely alive remnants of the Grateful Dead] a few years ago - a Gamble EX56, then for Tokyo Hotel and Megadeth I had PM5Ds. They're good because you can pick them up anywhere, but they don't sound like this

board. Mix outs 22 in total, 16 stereo; I've got two spare in the matrix but when we get to stadiums and fly side-fills it'll all be full."

And how have the band been in these first two months? "They've been really receptive to me, James has been especially nice. We talk and right now it's just been things like tightening up a really close cue." The sort of thing that you'd expect? "Yeah, and not too many of them. I graduated High School in '88 and I still hear most of those songs in my head so it's really just the newer material."

Out in the house, Hughes is presented with an altogether different dilemma, though for him at least it's a familiar one. "This band play in the round more than most. I've lost count of the number of tours we've done in this format." The large rectangle of stage is surrounded by hangs of Meyer Milo. Looking from a narrow end there's a single line array on centre, with another on each corner with a line of subs alongside. Then if you look to the long sides you see something similar, though the centre hang has Mica for the bottom four cabinets (all columns of Milo have a single 120° box at the bottom, for obvious reasons). Excepting Subs, that's eight hangs in total, all in mono.

Below: Coffins in the lighting rig.

"It's all shipped over from Thunder Audio," began Hughes when we sojourned from the bus to the FOH position. This is the first time I've heard Hughes at the helm of a Meyer system: why the switch from Nexo?

"I tried it for the first time maybe a couple of years ago now, we were in Reykjavik and took a locally supplied PA. I suppose I like the fact it's 12" more than anything, for the guitars and vocals. It just makes perfect sense for me. And this system has a very smooth high end. Every time we put one of these shows together we talk to Meyer and they give us massive support."

I had been tipped off that Thomas Mundorf from Meyer had come up with a neat Subs solution for Metallica. "We just got sick and tired of lobe'ing so we asked them to have a look at it afresh for this tour. We'd looked at placing them under the stage but it's too much energy for the band so we knew the only place was overhead. Thomas developed the idea of four hangs on centre, tightly back to back, ten cabinets deep. With delay adjustments the sound can be neatly steered to just clip the edge of stage, giving the audience the best of it without disturbing the musicians."

The subs are the 700-HP units, at 259lb apiece (including rigging) that's a fair bit of weight to concentrate right on centre above a large in-the-round light rig. Fortunately, there's no LED video, so generally they get away with it, "though not here."

Keith Jex is Hughes' system tech. He did a good job here at Sheffield, even if the Subs weren't where they wanted. I must confess, Metallica's music leaves me cold, so I spent more time than usual walking the room this night and found it loud yet comfortable everywhere. Transitions between stacks the combing was almost indiscernible, and one of the best snare sounds I've heard in a long time (more on that later).







Top: Big Mick Hughes with the Midas XL8 console.

Above, left: Destiny - Robert Cowan in the 9th Grade!

Above, right: System tech Keith Jex with Hughes.

Hughes is very good at building a powerful sound without deafening us all. That smoothness at the top end he mentioned is, I feel, a problem for a band like this. Meyer has always had that about it; the processing is so controlled you can never make it sound dirty. It's great on the ears in that high SPLs don't translate into whistling ears three hours later - it's that clean. But the compromise is a lack of awareness of level: you don't realise just how loud it is till you try and talk to someone. The subs were very effective, even if not in their ideal configuration here. Considering the reach of the HP-700s (down to 28Hz) my bowels were still intact when I left and more to the point, they never once muddled the image of all that sweeter information going on above.

The rectangle stage forces multiple mixes upon Hughes. "If you consider the narrow ends as north and south, then what back line we have on stage all faces east-west. So I have to build guitars into the north-south mix, while on the east-west sides I use the Mica on centre to provide an extra vocal fill to compensate for the back-line. So I'm presenting two mixes."

You'll recognise immediately that even with the 120° boxes at the bottom of the Milo the flown system can't quite cover everyone, so despite the band wanting the stage as clear as possible that they might reach out and touch their audience, there are a few M1D cabinets around the stage perimeter for front-fill.

To transport signal up onto the rig, Thunder Audio has chosen a LightViper fibre optic system, converting D/A and A/D through Apogee AD-16X converters - "splendid stuff," said Hughes. Jex has 48 lines of control from Galileo to address all the discrete parts of the total system he needs to define system zone delays and EQs.

On stage there's a couple of interesting mic choices readers may not have tried. "I'm using an Audix D6 fitted to a Kellyshoe on the Kick, plus a Sennheiser 901 flat plate. I experiment between the flat plates; I used

An advertisement for OHM (UK) LTD. The central image shows a pair of tan leather boots with thick white smoke rising from the soles. The background is dark with white line-art schematics of audio equipment. At the top, the text "Great British audio still smoking after thirty years" is written in a stylized, bold font. At the bottom, there is a large blue stylized logo, followed by the company name "OHM(UK) LTD", contact information, and the website "www.ohm.co.uk".

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to use the Shure 91, but didn't like the Beta91, so went to the 901. Now I'm thinking about giving the Beta another try. I've also got a few Earthworks mics - SR25s on the snare bottom and hi-hat. They're very crisp and open, especially through the XL8, it just adds to it all. Top snare is [Audio-Technica] AT-M23 with an AT Sidefire on the side," (meaning the AT3035 Side Address microphone). "That condenser crispness really complements what I get from the mid-weight dynamics of the 23."

The onstage backline is devoid of microphones. "I have cabinets in isolation chambers below stage, the guitars all have AT E2500s, the dual capsule condenser/dynamic from Audio-Technica - phase corrected - you don't have to dick around at all."

And then there's the Midas XL8: "The positives are endless. Here's a good example; I use triggers to open the gates on the Toms. I can bring the triggers into the channels to key input off the Tom itself so it only on/off with the trigger signal. Then I slow the audio by putting a touch of delay on it, which means the Gate is now 'look ahead' opening in anticipation of the Tom sound. It's only a millisecond so you don't hear it, but the openness of the attack is way better. Same on the Kick. I had to research where the delay is on the desk; Midas confirmed it's applied before the gate. I also like the fact I can have 31-band on all outputs and sub-groups, great for applying a bit of global EQ to Guitars; with four guitar mics in two isolation boxes it would be too time-consuming to knock say, a bit of 2.5kHz off each - just call up the Sub-group. Then I use the 6-band Parametric for the overheads - a more sweeping musical response to the sound."

The show is also being recorded each night, and mixed to live Internet

broadcast: "There's a small SSL desk in one of the dressing rooms," says Hughes. There's not really the space to go there, but he made a very valid point: "Because the Midas allows you to patch anything anywhere, sending to the SSL is just so simple. I can grab anything off the network and patch it through. That was the sort of thing you really had to think about in the [analogue] past. Thank fuck I don't have to run all those cables anymore!"

Hughes closes with a cautionary note. "It is easy to disappear up your own arse with this stuff. In fact I would say you have to pay attention more, because there's just much more you can do, and are doing. I'm still learning and I'm still excited. Don't forget to listen."

### Lighting

This is a John Broderick design being run by Rob Koenig. Understandably, Koenig was a reluctant speaker on Broderick's behalf, so I later contacted the man himself in the US (see panel on page 54). However, Koenig did provide a useful overview of what was up there on the rig, if not the reasons behind those technology choices.

"The rig is like the PA, all shipped over from the US. Premier Global Productions (PGP) are based in Nashville. I've done work with PGP before and they're a good company - excellent gear, all in tip-top condition and great crews. But as it happens, this is my first time working for John. I've been here since the start but Troy Eckerman programmed up the show for John, I just run it."

Does that mean you're heavily confined? I don't see Metallica as a tightly-scripted show in say, the way a boy band would be? "Not at all, I'm adapting cues on the road as the band add new songs, but it is all referenced back to John. He does give me notes, and comes out from time



# Encyclopedia Metallica

- Big Mick: "It's had a knock-on effect for me," said Hughes. "Paul used to do the line check in the afternoon, I'd got in the habit of just sitting out front and grabbing the chance as Paul ran through things. If I needed adjustment on something on stage I'd call him. The first day Bob was in the chair we both just sat there, Bob waiting for a cue from me, me waiting for him to start. Eventually one of the back line guys said, 'Are we gonna do this or not?'"
- The laser show was programmed by Jason McEachern using Pangolin Lasershow Designer 2000 software. Le Maitre's Stage Fogger DMX units provide the requisite atmospheric thickening.
- The pyrotechnics are provided by Pyrotek Special Effects of Las Vegas, and created by company president Doug Adams. Propane or alcohol-based, they are virtually smoke-free
- Each of the coffins is 24ft (7.3m) long, 10ft (3m) wide, and is suspended via VarioLift motors from Chainmaster, supplied by Show Distribution.

to time. He likes to keep in touch, he looks at online blogs for fan comment, and reads the reviews in the Press to see what's being said."

Pre-tour publicity in Europe has been very favourable towards the band: how have the reviews been? "All very positive; and the stuff I've worked in has been fun to do."

The lighting system falls into two parts really; a main rig directly above the band comprises four equilateral truss triangles, point to centre, forming a Maltese cross. Between each arm of the cross hangs a coffin, a box structure approximately eight metres long and three metres wide, clad in a brushed metal finish, with a variety of lamps poking through the underside. These fly in and out, tilt and tip, providing some visual relief to the otherwise open and largely featureless stage.

Beyond the realm of the stage are four more coffins, hanging well out into the audience - in Sheffield almost to the extremes of the hockey dasher. These four provide a very interesting effect as, despite the brushed surface, they reflect a considerable amount of light down

onto the audience. Their presence also scales up the whole show: make no mistake, this is a big production, even without video screens. And let me say here, in terms of spectacle it lacked nothing for the absence of video - in fact it was a relief not to see them there.

"The hardware up there falls into two camps," continued Koenig. "We have 56 VL3500 Wash lamps specifically confined to the trusses. The coffins have Coemar Infinity XL Washes, again 56 of them. John wanted wash only for this show - there are no hard edge instruments anywhere. I have another 30 Martin MAC 700 washlights in the air or on the stage: with the other two wash types being relatively large, the 700s provide a different vibe." Often they perform a demarcation role, fixed focus providing a line of lights to define a truss edge; at other times they're brought in simply to augment a wash on stage.

"The coffins also have 5kW Syncrolites [SXB-5], one each for the inner set, a pair each on those out above the audience, and there are Atomic [strobes] with scrollers on them too. The only other significant lighting items are the Martin Stage Bars, an RGB and White LED unit



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# John Broderick: How to Light Metallica

## Can you explain the giant coffins lurking above the stage?

"Originally there was some video in the set design. It was a management idea but I felt there was nothing in it that said 'Metallica' to me. Video is a generic response to concerts - and that's how it looked. There were coffins on the new album's artwork, so that was the stimulus. But I had to be very careful not to look too Goth' or too heavy metal. I wanted them to be seamless on the underside, to resemble the sort of surface you see on Jumbo Jet. They needed to be big and bold and eat up a lot of airspace."

## Show Group in Las Vegas built them for you. Are you happy with the end result?

"One of the things I knew for certain was I didn't want mirror finish; we went to several places but in the end just brushed them up in the shop. I'm happy with three things about them: out in the corners they expand the performance area to include everyone; the rig is not confined to the centre, as is so often the case. Secondly, I like the fact they're not a sledgehammer - that is I only fly them in a couple of times. Finally, I like the fact that they look dangerous, in fact at two tons apiece it still scares me when I see them move."

## They are very large.

"Yes, I spent some time modelling them in CAD. I needed to check where they moved between the PA, and the size was critical in the way they looked - I think they're just on the borderline without looking naff." Broderick has comments from fans on band websites confirming exactly that.

## Wash lights only?

"I've always used wash lights for Metallica shows; with hard-edge lights once you've seen them then the next time you use them it's just the same thing in a different pattern. I like the fact that soft edge blends so you have non-identifiable light. I also like to focus beyond the edge of the stage, to catch the ringside seats, that's much nicer with a soft edge."

"I picked the Coemars for their ability to break the beam into a few columns. The VL3500s are just a powerhouse light - beam spread, punch and colour - they have it all. The SXB-5 Syncrolites in the coffins have scrollers and that gives me texture. The MAC 700s, especially those on the floor, are good because of their size - they're not too uncomfortable when they're in the face of the audience, but punchy enough to light the band. The Martin Stage Bars that I use as up-lighters

on the band are actually double units; our crew chief James Vollhofer built them and managed to use the single yoke that comes with them." A very neat piece of work by Vollhofer: even seen from the camera pit just three feet away, they looked manufactured rather than cobbled together.

"With no video it was essential the band be properly lit, we went high up into the seats to see if the Stage Bars read from the most distant audience position: they didn't, and that's when James suggested he could build a double unit."



## Lasers are used in limited fashion, but they are a big presence.

"Management wanted lasers and I was committed to making them happen in an effective way. What you often see is 30 seconds here, 15 seconds there; that's not really worth it, the impact gets worn out fast. We, myself, Rob [Koenig] and Tory [Eckerman], did some brainstorming and determined that the best way was not to fuck around; a seven-minute session for the opening number with nothing else. Management said go for it. Yes, we've teased in a little floor light and some Congo wash from above, but it's probably a longer laser sequence than what you'd see in total on any other show. This way, they're done."

## Your choices of vendors are relative unknowns in the European market. Can you tell us about them?

"LDP supplied the lasers and pyro and they do an excellent job. Premier Global, the lighting company, do a lot of work for Q Prime management but they still had to make a competitive tender for the tour. As ever, it comes down to staff not gear, and they've got good people."

## Followspots are a big part of the show: the operators up on the rig look in danger of being burnt by the pyro gas flares:

"I needed spot op's up there who could hit the whole stage, but in fact only the operator who covers Lars on drums is in

a vulnerable position. We've done onstage flame work before and already have Nomax suits and goggles so he is well protected. Spots are ultra critical, the band have to do what they want and be where they want to be, so the operators have to be on their game."

## Working a light show in-the-round is never an easy task but you've probably had more experience than most: what goals do you set yourself?

"I'm not a big fan of symmetry, but it is hard to force asymmetry upon an in-the-round rig. I take lights from long range and then shoot them long, diagonally across the stage. I get as many looks out of it as I can, and you don't always have to have the lights overhead on. There are no dedicated audience lights, so I use all parts of the rig at some time to fill that role. Typically I might take a first cue and then take 50% of those lights and reverse the position for the second cue. Inversion is a useful tool, remember, there's not a lot of lights up there, even for an end-on show, so you have to find as many powerful looks as you can."

## Not having video made for a refreshing change in my opinion, but it must have been tempting?

"Yes, we weren't entirely sure, but then the band played special album release shows at The O2 in London and in Berlin, and we did that without video. That was three weeks before we went into rehearsals but it was enough; 20,000 people a night and it worked. It was that experience that allowed me to push the lighting rig beyond the centre of the room. Yes we still experienced some doubts in the first few shows, but we'd go out into the audience each night, and go way up into the high seats; and we'd watch the kids up there. That's when I started reading the blogs. We found that by making it brighter and brighter, and going back to the seventies look of punchy lights and lots of followspots, that forces the viewer to look at the brightest place on stage - and it works"

"The band are a steam-roller of energy right now, the dynamic is immense, yet I might just have one floor light on one band member. There is room for that subtlety, you just better have very good spot operators. There are lots of cues, some songs 350-400 cues; Rob is also calling 14 spots as well as running the console, he can't afford to fall behind, so it's pressured. I hammered him heavily in rehearsal to get him to that point so I knew he'd survive. You have to have the best out there."



which John positioned principally to put up light onto the band at the microphone positions."

The coffins look pretty bulky and time-consuming, and it's a big stage. Is this a tough rig? "Actually no, the stage is from Tait Towers, it just rolls in under the rig once we get it up; takes four carp's just an hour to build." This was confirmed by stage manager Alan Doyle: "Even with the rotating drum riser it's easy, fast and smooth, just like all Tait's stuff."

"The coffins we assemble," continued Koenig. "They're in large chunks, and each has a dozen pieces, all built so they ride on top of each other in the truck. Except for the Syncrolites, all the instruments ride inside them."

Built by Show Group Production Services in Las Vegas, the coffins are Broderick's big effect - potent enough to offset the openness of playing in the round, even if the upper surfaces of the coffins, exposed when lowered in, leave something to be desired.

There are lasers in the show, though not gratuitous: a big seven-minute in your face blast for the opening number, then just one other song. They are supplied by Laser



Design Projects, whose Chris Blair explained: "There are eight 10W Arctos, air-cooled, full-colour lasers, two in the coffins over stage, two on stage, and the other four in the outer coffins." How does a US-based laser company find dealing with the safety regime in Europe? "It's not a problem for us - I have a German laser licence anyway, and the Arctos lasers are built in Germany, so the inspecting authorities are familiar with the devices. They are a very dependable and road-worthy machine: you take care of them and they take of you."

Koenig runs the show off a GrandMA: "I've been using these for about five years and I have to say it's the board for me. I like the versatility - whatever school of desk you come from they're real easy to get around, there's at least two different ways to do just about everything, and the timing function is just fantastic. This is a very cue-heavy show - and yes, John has to put a lot of light into the audience to give some background to what's happening on stage. But he doesn't abuse them. It's comfortable for the audience except when we don't want it to be. There are a lot of John's cues that surprised me, and I see them surprise the crowd too. There's that 'what just happened' look in their eyes."

What just happened indeed.

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