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# METALLICA

## MIXES IT UP

### MONSTERS OF METAL ROAR IN THE ROUND



PHOTOS: ROBERT SEALE

by Sarah Benzuly

**T**he members of Metallica have never been shy about expressing themselves. From assembling the 2003 *St. Anger* out of months of recorded jams to taking on Napster in a highly publicized battle over pirated music, vocalist/guitarist James Hetfield, drummer Lars Ulrich, guitarist Kirk Hammett and bassist Rob Trujillo keep pushing the envelope—in their Sausalito, Calif., studio or in arenas across the world. And on the band's current outing—touring in the round to promote their latest album *Death Magnetic*—they continue to be adventurous: new P.A. setup, new front-of-house board, all-digital signal path. In fact, there are very few elements on this world tour that have been mainstays on Metallica outings.

#### GOING DIGITAL

Longtime front-of-house engineer Big Mick Hughes is mixing on the new Midas XL8—a board he helped design with the company. Asked how he's enjoying making the switch to digital, Big Mick responds, "I am absolutely enamored

with it. It's a wonderful piece of equipment. I was always an analog guy, and I've always said, 'You'd never pry my XL4 from my hands.' The fact that you can carry one mix over to another tour if necessary [is great]. You spend years honing the mix on a world tour—you dial in things, you change things. At the end of that tour, [those changes are] done, except for some mental notes, but you still start from scratch again with an analog system [on the next tour]. Now I'll take the key, and wherever we walk in I can carry on where I left off.

"I'm still learning all the time, but you're only limited by your imagination," he continues. "And there's so much more control compared to the analog systems. It's been a case of learning how to approach things, just with so much more equipment at your disposal. I use subgroups a lot. I'm using the graphics on the subgroups and a global EQ on various things. I have a kick/snare/hi-hat subgroup that I EQ on a graphic, and I have the same with the guitars and the bass, so I have global EQ over several mics together. Like take James:

There are four mics on James that sit together to make his rhythm sound. Well when you sum them all together, if you have one low frequency that pans and sticks out, it can be a little disconcerting because you don't normally have a global EQ; you only have an EQ on each mic. So you have to go through each mic, find out which one has too much of whatever frequency you're after and take a little bit out. Now I can do it on a graphic EQ on the subgroup."

However, monitor engineer Paul Owen (who is also VP at Thunder Audio, the sound company for this tour) has remained in the analog world. "I've always used an XL4 and I always will, I presume," he says. "I have too many scenes I have to get to [with a band on both UE-5 in-ears and Meyer Sound wedges], and I don't want to have to scout through pages. With as many vocals as there are and how they run around onstage, it would be virtually impossible. I don't have time to find the page; I have to do it on the fly."

Both engineers are carrying few items in their



The innovative —and slightly odd-looking— P.A. features Meyer Sound MILO and MICA loudspeakers, with 40 700-HP subs around in four columns of 10, with all boxes turned so that the drivers are sitting together in the middle.



Front-of-house engineer Big Mick Hughes at his FOH “traveling” rig, based around the new Midas XL8



Monitor engineer Paul Owen with “throwing-beer-proof” analog board

outboard racks, with drums seeing the most processing: DM317s and Klark-Teknik Square One on gates; dbx 120A Subharmonic Synthesizer on toms, because Big Mick likes a “big, thunderous floor tom”; and a dB Sonic Maximizer inserted across the tom-tom subgroup, something Big Mick would do normally in the analog world: “I figure I should take some resemblance of some things I used to use.” All mics, as with previous tours, are Audio-Technica, though this tour uses eight perimeter mics for vocals. On vocals, Owen uses Aphex Dominator 2s, as well as on all in-ear channels and wedges.

## SIMULTANEOUS MIXING

Not only has the digital board been useful in paring down the size of FOH, but the engineers have found that it has helped solve recording problems experienced on previous tours, where longtime Metallica studio engineer Mike Gillies would record the show, mix and post online within a week. For this tour, the band was keen

on a simultaneous mix and uploading the next day. According to Owen, “It was taking a couple of days to get the hard drives back to the studio to get them remixed and then booted up [on previous tours]. It was just taking too long, and that is why we decided to go with an SSL console in the tuning room so Mike can mix and get the songs up the next day. It saves a lot of time.”

“In the analog world, we gave the Pro Tools guy a split from the splitter,” Big Mick adds. “We set him up onstage right next to the split, so it was just a case of breaking it from the back of the splitter and feeding it to Pro Tools. Well, he moved—he’s in the dressing room area—and he’s got a small SSL desk that he uses to mix the show as the band plays so it can be put up online as fast as possible. He doesn’t have to record it on Pro Tools and then the next day take it away, mix it and then upload it. He can actually mix it for the Internet at the same time as I’m mixing the show in the house. And so all of a sudden, he’s 100 meters away; he’s not right next to the splitter any-

more. So to get the signal down to him, we took two of the I/O boxes of the XL8, configured them with all analog outputs—there’s 48 channels that we’re using at the moment. So the 48 channels get patched through to the I/O box that are on the network that route with four Cat-5 X/Y networks down to the dressing room area and he’s got the same channels coming straight from the splitter. It was so easy. We have two cables: a 100-meter run and 40-meter extensions that we put out occasionally just to give us the extra distance.”

But recording systems in a live situation can go down, so Big Mick also runs a Midas DN9696 recorder at FOH, placed next to the XL8 splitter. The XL8 splitter is configured so that he takes digital A, Tascam’s analog A and Owen’s analog B (which gives all of the different feeds), and then Gillies’ Pro Tools in the dressing room gets a split straight to the I/O boxes. And if that Tascam system goes down, Big Mick has a *third* system: the built-in XL8 recorder with Glyph drives, which he also uses as a virtual soundcheck machine.

## □ METALLICA MIXES IT UP

### IN-THE-ROUND PROBLEM SOLVING

Although this is not the first tour where the band has performed in the round, it is the first time the engineers have varied from their usual system setup. “We’ve done in-the-round for many years, and anybody that’s done in-the-round will always tell you how difficult it is; it’s just miserable because you have so many different places for boxes that you get so many arrival times; bass cabinets you can never put in one place to get them to couple together to give you extra summation and good low end; phasing places; lobing,” Big Mick says. “And when the band wanted to do it in the round, I said, ‘Here we go again!’ So I said, ‘We’re going to try something a bit different.’ So we proposed the problem to Meyer Sound and went through a few different scenarios.”

The result? A setup that provides clear, controlled sound: Eight equally spaced arrays, each comprising 12 MILO loudspeakers and four MICA loudspeakers. Forty self-powered 700-HP subs are arranged in what Big Mick is calling the “TM” system (named after Meyer Sound’s Thomas Mundorf, who created the system); subs are arranged in four columns of 10, with all the boxes turned so that the drivers are sitting together right in the middle. “So the drivers are as close as possi-

ble without any interference between them,” Big Mick explains. “It also creates a much more controlled bass pattern. So directly below the system, there’s no bass. The band doesn’t have any problems onstage with any big sub-bass things going on, because James doesn’t actually like it; it modulates his voice too much.

“Because the pattern is so controlled, when you make it that tall in an array, we’ve had to delay the lower columns to steer the bass down because otherwise it creates this parallel flashlight beam all around the center of the arena and you don’t get as much punch on the floor,” he continues. “We bring it down so it just touches the edge of the stage. When Paul starts moaning about the amount of bass onstage, then we know we’ve gone just a little too far!” [Laughs]

With this setup, “We were able to steer it down so we are literally steering the sub down now from being blasted at the tops so that it just catches the top of the barricade and misses the stage,” Owen adds. “Underneath the column, there is absolutely no bass under there. We have a choice now; we don’t have to try and turn the bass down. We have to study each day according to the trim margin of the sub and of the arena. I walk around the stage, walk around the barricade



James Hetfield is not a fan of sub-bass on the stage.

and see if we need to have a sub steered down. I’ve done Metallica for nearly 23 years and this is the first time we’re doing it this way,” Owen continues. “We’ve actually been able to achieve equal sub-bass from upper and lower frequencies to the floor and equally all the way around, so it’s quite a feat but it looks totally bizarre because there’s four columns of 10 subs pointing at each other.”

The in-the-round setup creates a bit of a “where is Big Mick sitting tonight?” puzzle. De-



**Kirk Hammett continues to rock the house with his left guitar solos.**



**Big Mick processes Lars Ulrich's kit so that he achieves a thunderous floor tom.**



**Rob Trujillo's signature "stomp the floor" bass-playing stance**

pending on the venue, the engineer can find his XLS at either the side of the stage or on the floor at one end in the corner. "I kind of move around a lit-

tle bit; I'm kind of a variable," Big Mick says. "I'm usually up on the sides," he says. "If you stay in one place all the time, you'd only have an impression of the sound in one area. I'm really busy during the show so I don't have the time to stealthily sneak up in the seats and walk all over the venue. I'm not going to be leaping about like a gazelle in the stands when I should be mixing the show. So the problem is you can only rely on what people tell you what it sounds like."

Thinking of his traveling FOH compound in a positive light, Big Mick says that this setup allows him to get a broader picture of what's occurring around the venue, something most stationary FOH engineers are not able to fully achieve.

What's even more interesting is what you *can't* see: There are no analog cables as everything is digital—including controlling the zones. From FOH, Big Mick uses LightViper optical snake systems into Apogee converters, "and then we break out up in the system all the different zones from the Galileo [loudspeaker-management software that is controlling the processing], so we actually have two fiber optics that run from the driver that control all the zones," he explains. "There are 120 MILO boxes in the round, so that restricted using analog—all the analog patches that would have to be done going between the different zones and all the confusion of that; it's made it really slick."

Owen adds: "And the whole system runs on fiber optic up to the grid. Four Apogee D-to-A converters and there's four Apogee A-to-D converters in the control rack with five Galileos, so we've got about as high tech as you possibly can go on this." [Laughs] ■

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*Sarah Benzuly is the managing editor of Mix, EM and Remix.*